South African
NATIONAL PARKS

United Nations
Educational, Scientific and
Cultural Organization

Cape Floral Region Protected Areas
inscribed on the World
Heritage List in 2004

BONTEBOK NATIONAL PARK

part of the
Cape Floral Region Protected
Areas World Heritage Site

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 Bontebok National Park (BNP) 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 15 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: Ms Lauren Howard-Clayton

Section 1: Authorisation

The Bontebok National Park (BNP) Management Plan is hereby internally accepted and authorised as required for managing the BNP in terms of Sections 39, 40 and 41 of the National Environmental Management: Protected Areas Act (NEM: PAA) (Act No. 57 of 2003 and chapter 4 of the World Heritage Convention Act WHCA) (Act No. 49 of 1999).

Ms. B. Msengi
Park Manager: Bontebok National Park — Date: 01 February 2024

Mr. J. Taljaard
General Manager: Cape Cluster — Date: 01 February 2024

Mr. P.S. Mokoena
Managing Executive: Parks — Date: 01 February 2024

Ms H. Sello
Chief Executive: SANParks — Date

Ms. P. Yako
Chair: SANParks Board — Date:

Approved by the Minister of Forestry, Fisheries and the Environment

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

Table of contents

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

AMSL	Above Mean Sea Level
APP	Annual Performance Plan
APO	Annual Plan of Operations
BNP	Bontebok National Park
BSP	Biodiversity Social Projects
CAPEX	Capital Expenditure
CBA	Critical Biodiversity Area
CBD	Convention on Biological Diversity
CDF	Conservation Development Framework
CFRPA WHS	Cape Floral Region Protected Areas World Heritage Site
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
EIA	Environmental Impact Assessment
EPWP	Expanded Public Works Programme
ESA	Ecological Support Area
FEPA	Freshwater Ecosystem Priority Area
GOFPA	Greater Overberg Fire Protection Association
HIL	High Intensity Leisure
HOD	Head of Department
HSM	Hospitality Services Manager
IAP	Invasive and Alien Plants
IAS	Invasive and Alien Species
IDP	Integrated Development Plan
IUCN	International Union for the Conservation of Nature
KBA	Key Biodiversity Area
km	Kilometer
LIL	Low Intensity Leisure
LLP	Lower-Level Plan
LUMS	Land use Management Scheme
METT	Management Effectiveness Tracking Tool
m	meter
mm	millimetre

NGO	Non-Governmental Organisation
NBSAP	National Biodiversity Strategy and Action Plan
NEMA	National Environmental Management Act (Act No. 107 of 1998)
NEM: BA	National Environmental Management: Biodiversity Act (Act No. 10 of 2004)
NEM: ICMA	National Environmental Management: Integrated Coastal Management Amendment Act (Act No. 36 of 2014)
NEM: PAA	National Environmental Management: Protected Areas Act (Act No. 57 of 2003)
NFEPA	National Freshwater Ecosystem Priority Area
NTSS	National Tourism Sector Strategy
NPAES	National Protected Area Expansion Strategy
ODM	Overberg District Municipality
OHS	Occupational Health and Safety
OPEX	Operational Expenditure
PES	Present Ecological State
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
RT	Responsible Tourism
SAM	Strategic Adaptive Management
SANBI	South African National Biodiversity Institute
SANParks	South African National Parks
SANS	South African National Standard
SAPIA	South African Plant Invader Atlas
SAPS	South African Police Service
SASS 5	South African Scoring System version 5
SCM	Supply Chain Management
SDF	Spatial Development Framework
SET	Socio-Economic Transformation
SHEQ	Safety, Health, Environment and Quality
SLM	Swellendam Local Municipality
SMME	Small, Medium and Micro Enterprise
SoAIM	State of Area Integrity Management
SOP	Standard Operating Procedure
SPARC	Stratosphere-troposphere Processes And their Role in Climate
SR	Section Ranger
SS	Scientific Services
SSC	Species and habitats of Special Concern
SWSA	Strategic Water Source Area
TPC	Threshold of Potential Concern
UNESCO	United Nations Educational, Scientific and Cultural Organisation
V-STEEP	Values - Social, Technological, Ecological, Economic and Political

WfE	Working for Ecosystems
WfW	Working for Water
WWF-SA	World Wildlife Fund South Africa

List of figures and tables

Executive summary

In compliance with the NEM: PAA, SANParks is required to develop a management plan for each of its protected areas. The object 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 and also provides 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. Bioregional Integration, Biodiversity Conservation, RT, Cultural Heritage, Engagement, Access and Benefits and Effective Park Management.

The focus on integrated land use over the next ten years will seek to deliver on the management of the unique biodiversity in pursuit of resilient ecosystems associated with the park in a fragmented region. Focus will also be placed on unlocking some socio-economic benefits, as well as to strengthen the park's position as a drawcard for tourism in the region. 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 management will strive to improve access to the park and diversified benefit in the region resulting from the park's existence in the Overberg region. There exist limited heritage tourism opportunities, including natural and cultural, but the park will endeavour to improve the current products and activities over the next ten years.

The first management plan for this 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 landscape and 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 groups meetings, and written inputs (see Appendix 2).

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.

Intentionally left blank

Section 2 – Legal status

2.1 Name of the area

The Bontebok National Park (hereafter referred to as the park) was initially proclaimed near Bredasdorp in 1931, with the park later being relocated to its current location just outside of Swellendam in 1961 (Barnard & van der Walt, 1961; Van Rensburg, 1975). A chronological list of the declarations is given in Appendix 1.

2.2 Location

The park (34º02' S, 20º25' E) is situated 223 kilometer (km) from Cape Town and five km from Swellendam. It is situated on the coastal plateau between the Langeberg Mountain range (eight km away) and the Indian Ocean (50 km away) (Appendix 5, Map 1).

2.3 History of establishment

The original park was established in 1931 near Bredasdorp specifically to save the few remaining bontebok from extinction (Barnard & Van der Walt, 1961). At the time, a mere 17 bontebok *Damaliscus pygargus* spp*. pygargus* remained from a known population of 20 animals in the area. Initially the bontebok thrived under this protection, but later inadequate grazing (Novellie, 1986), parasite infestations, trace element deficiencies and the wet marshy conditions in the area again threatened the survival of this species. The animals were subsequently transferred to the park at its current location in the Swellendam District in 1960, and the new park was formally proclaimed on 24 March 1961 (Barnard & Van der Walt, 1961; Van Rensburg, 1975). In December 1965 two additional pieces of land were acquired and declared by the government, bringing the park to a total of 2,797 hectare (ha) (van der Merwe, 1968). In 2004, two contractual areas, known as 'Die Stroom' (Erf 5338) and the 'airfield' (Erf 5339), in total approximately 639 ha, were proclaimed as part of the park. In 2021 the remaining extent of Erf 4492 (0.6 ha) was declared as part of the park to consolidate the boundary along the N2 national road.

2.4 Description of the Cape Floral Region Protected Areas World Heritage Site

In 2004, the Cape Floral Region Protected Areas World Heritage Site (CFRPA WHS) was inscribed in the United Nations Educational, Scientific and Cultural Organisation (UNESCO) World Heritage List based on natural criteria (ii) and (iv). The CFRPA WHS covers much of the Western Cape Province, extending eastwards into the Eastern Cape Province and reaching marginally into the Northern Cape. In the south and west, the region is restricted by the ocean while the interior margins are formed eastwards by the Thicket, Succulent Karoo and Nama Karoo biomes. The Succulent Karoo and the Maputaland-Pondoland-Albany (thicket) region are internationally recognised biodiversity hotspots. The CFRPA WHS is recognised as one of the most special places for plants in the world in terms of diversity, density and number of endemic species. The area is a highly distinctive phytogeographic unit which is regarded as one of the six floral kingdoms of the world and is by far the smallest and relatively the most diverse.

The CFRPA WHS was inscribed in 2004 on the UNESCO World Heritage List for the natural Outstanding Universal Value of the site of criteria (ii) and (iv):

Criterion (ii): Ecological processes: The CFRPA WHS is considered of outstanding universal value for representing ongoing ecological and biological processes associated with the evolution of the unique fynbos biome. These processes are represented generally within the CFRPA WHS and captured in the eight nominated clusters. Of particular scientific interest are the plant reproductive strategies including the adaptive responses to fire of the flora and the patterns of seed dispersal by insects. The pollination biology and nutrient cycling are other distinctive ecological processes found in the site. The CFRPA WHS forms a centre of active speciation where interesting patterns

of endemism and adaptive radiation are found in the flora. The International Union for the Conservation of Nature (IUCN) decided that the nominated site meets this criterion.

Criterion (iv): Biodiversity and Threatened Species: The CFRPA WHS is one of the richest areas for plants than for any similar sized area in the world. The number of species per genus within the CFRPA WHS (9:1) and per family (52) are among the highest given for various species-rich regions in the world. The species density in the CFRPA WHS is also amongst the highest in the world. It displays the highest levels of endemism at 31.9 % and it has been identified as one of the world's 35 biodiversity hot spots. The IUCN decided that the nominated site meets this criterion. The CFRPA WHS has areas of high natural beauty and aesthetic importance, including Table Mountain, Cape Point and the coast of the De Hoop Nature Reserve. However, these are secondary values to its floral ones.

In 2015 the World Heritage Centre of UNESCO approved the extension of the CFRPA WHS to include amongst others, the park, based on criteria (ix) and (x)**.** It is one of the world's great centres of terrestrial biodiversity. The extended CFRPA WHS includes national parks, nature reserves, wilderness areas, state forests and mountain catchment areas. These elements add a significant number of endemic species associated with the fynbos vegetation, a fine-leaved sclerophyllic shrubland adapted to both a Mediterranean climate and periodic fires, which is unique to the CFRPA WHS.

The CFRPA WHS has been extended under natural criteria namely (ix) and (x):

Criterion (ix): Ongoing biological and ecological processes: The CFRPA WHS forms a centre of active speciation where interesting patterns of endemism and adaptive radiation are found in the flora. In addition to the natural processes of primary production, nutrient recycling, climatic extremes, predation and herbivory, competition, specialized pollination guilds and major natural episodic events such as severe floods and droughts, the Cape flora is dependent on natural fire regimes.

Criterion (x): Biological diversity and threatened species: The CFRPA WHS has exceptionally high plant species richness and endemism. Some 68 % of the estimated 9,000 plant species in the region are endemic, with 1,799 species identified as threatened and with 3,250 species of conservation concern. The CFRPA WHS has been identified as one of the world's 35 biodiversity hot spots.

Integrity

The originally inscribed CFRPA WHS comprised eight protected areas covering a total area of 557,584 ha and included a buffer zone of 1,315,000 ha. The extended CFRPA WHS comprises 1,094,742 ha of protected areas and is surrounded by a buffer zone of 798,514 ha. The buffer zone is made up of privately owned, declared mountain catchment areas and other protected areas, further supported by other buffering mechanisms that are together designed to facilitate functional connectivity and mitigate for the effects of global climate change and other anthropogenic influences.

The collection of protected areas adds up in a synergistic manner to present the biological richness and evolutionary story of the CFRPA WHS. All the protected areas included in the property, except for some of the privately owned, declared mountain catchment areas, have existing dedicated management plans, which have been revised, or are in the process of revision in terms of the NEM: PAA. Mountain catchment areas are managed in terms of the Mountain Catchment Areas Act. Progress with increased protection through public awareness and social programmes to combat poverty, improved management of mountain catchment areas and stewardship programmes is being made.

Requirements for protection and management

The 1972 Convention Concerning the Protection of the World Cultural and Natural Heritage (World Heritage Convention) and the associated Operational Guidelines for the Implementation of the World Heritage Convention provide the overarching framework. The relevant environmental legislation is the NEM: PAA and National Environmental Management: Biodiversity Act, No 10 of 2004. All archaeological sites within the property are protected under the National Heritage Resource Act No 25 of 1999 and World Heritage Convention Act, 1999 (Act No. 49 of 1999).

The property is surrounded by extensive buffer zones (made up of privately owned, declared mountain catchment areas and other protected areas) and supported by various buffering mechanisms in the region. Together, these provide good connectivity and landscape integration for most of the protected area clusters, especially in the mountain areas. The protected areas that make up the property are managed by three authorities: SANParks, Western Cape Nature Conservation Board (CapeNature) and Eastern Cape Parks and Tourism Agency. These authorities, together with the national Department of Environment, Forestry and

Fisheries (DFFE) make up the Joint Management Committee of the property. All of the sites are managed in accordance with agreed management plans, however, there is a recognised need for a property-wide management strategy in the form of an Environmental Management Framework.

Knowledge management systems are expanded to contribute to improved planning and management decision-making, thus facilitating the efficient use of limited, but increasing, resources relating in particular to the management of fire and invasive alien species. The provision of long-term, adequate funding to all of the agencies responsible for managing the property is essential to ensure effective management of the multiple components across this complex serial site.

Invasive alien species and fire pose the greatest management challenges to the park at present. Longer-term threats include climate change and development pressures caused by a growing population, particularly in the Cape Peninsula and along some coastal areas. These threats are well understood and addressed in the planning and management of the protected areas and their buffer zones. Invasive species are dealt with through manual control programmes that have been used as a reference for other parts of the world.

2.5 Contractual agreements

No property has been contractually included into the park.

2.6 Co-management agreements

There are no co-management agreements in effect.

2.7 Total area

The current park size is 3,389.5261 ha, all of which is declared (Appendix 5, Map 3).

2.8 Highest point

The highest point in the park is known as “die Skietbaan” at 198 m (649 feet) above mean sea level (AMSL) (Appendix 5, Map 2). The latter is of note, as the airspace above the park up to 2,500 feet above the highest point, is also deemed national park (section 47 of NEM: PAA). Therefore, the park’s airspace ranges from ground level to 3,149 feet AMSL.

2.9 Municipalities within which the park falls

The park is situated within the Swellendam Local Municipality (SLM) and the Overberg District Municipality (ODM).

2.10 Land claims

There are no land claims registered against any of the properties constituting the park.

2.11 International, national and provincial listings

The CFRPA WHS was added to the World Heritage List in 2004 based on natural criteria (ii) and (iv) and was extended in 2015 to include, amongst others, the park**,** based on criteria (ix) and (x)**.**

2.12 Environmental authorisations

No environmental authorisations have been issued for developments.

2.13 Biophysical description

The habitat types of the park are primarily distinguished by the geology and associated soil, as well as the distribution of above-ground (pans, water courses) and below-ground (drainage lines) water sources (Strauss, 2015). Soil heterogeneity is affected by the landscape's geological template, the exposure to long-term fire regimes, the effects of allelopathic and/or nitrogen-fixing alien plants, the physical effects of hoof-action and nutrient redistribution via urinary and faecal deposits by large mammal populations. The soil heterogeneity in the park supports a high botanical diversity with many rare and endemic plants in the fynbos and renosterveld vegetation dominated landscape (i.e. 29 plant species recorded and categorised as being threatened with extinction at a global scale, of which one is critically endangered, 15 endangered and 13 vulnerable). Another 23 species are of conservation concern, of which 11 are Near Threatened, six Declining and six Data Deficient – taxonomically problematic (Strauss, 2015; Kraaij, 2011).

Both the fynbos and renosterveld vegetation require fire for regeneration, the vegetation is not dependent on herbivory, and can be negatively impacted by excessive trampling of large herbivores. Too frequent fires and high intensity trampling negatively affect botanical diversity in these vegetation types (Kraaij, 2011). Large herbivores including bontebok *Damaliscus pygargus,* red hartebeest *Alcelaphus buselaphus caama* and Cape mountain zebra *Equus zebra zebra* depend largely on grazing lawns and recently burnt (<5 years) veld for nutritional needs (Kraaij & Novellie, 2010). However, plant attributes such as growth form, plant species, plant part, seasonal state and plant volume also determine herbivore spatial use (Strauss, 2015).

Grazing lawns are created, maintained and/or enlarged by continuous high-intensity use, grazing and trampling by grazers. They are not directly affected by fire, as fuel loads on the lawns remain consistently low (Archibald, 2008; McNaughton, 1984; Scholes & Walker, 1993). Recently burnt veld disperses grazing pressure from herbivores across the landscape, potentially halting the proliferation of grazing lawns (Archibald, 2008; Kraaij & Novellie, 2010). Increases in grazing lawns, will result in the loss of important fynbos and renosterveld vegetation in the park.

From 1960 to 2004, the fire frequency of burn blocks had return intervals of approximately six years (renosterveld) and eight years (fynbos) to provide grazing for Bontebok. In 2004, to comply with standard practices based on the requirements of serotinous plants in mountain fynbos, the fire frequency has been reduced to eight years for renosterveld, and 16 years for fynbos. This change has reduced the amount of post-fire veld available per annum and therefore increased the grazing pressure on grazing lawns, which could result in their proliferation (Kraaij, 2004). Studies in the spread of grazing lawns in savanna systems indicate that decreased fire frequencies and higher grazer densities could more than double the proportion of grazing lawns (Archibald, 2008). Increases of grazing lawns reduce available habitats for botanical species and habitats of special concern (SSC) in fynbos and renosterveld vegetation types.

Fire, is therefore, indirectly linked to grazing lawns through large herbivores by dispersing grazing pressure across the landscape in post-fire veld. Similarly, grazing lawns are linked to botanical diversity, as they form focal points that concentrate herbivory impacts and therefore reduce trampling effects on fynbos / renosterveld vegetation. However, sustained herbivory may establish more, or extend the range of current grazing lawns. Knowledge of herbivore densities and how these affect grazing lawn proliferations are key to understanding the subtle linkages to botanical diversity in the park (Kraaij, 2010).

A comprehensive State of Knowledge Report is available for the park that can be download by following this link www.sanparks.org/scientific-services/data-information-resources/state-of-knowledge-reports

2.13.1 Climate

2.13.1.1 Historic

The annual rainfall is 511 millimetre (mm) of which most (59%) falls during the winter months (April to October). Two main peak rainfall periods are evident, one in April-May and the other in August, while the driest months are normally December and January (Novellie, 1986). Temperature extremes range between a winter minimum of around 0ºC and a summer maximum of around 40ºC, whereas average winter minimums are around 17ºC and average summer maxima around 30ºC. Snow occurs on the Langeberg Mountains. Prevailing winds are southeasterly in summer and northwesterly (dry warm bergwinds) or southwesterly (associated with cyclonic systems) in winter (Grobler & Marais, 1967). Though there have been several changes in weather stations in the park over time that complicate the assessment of local weather patterns, there is now a weather station at the park office and a rain gauge at a second location.

2.13.1.2 Future

Trends in temperature have not been analysed locally, though average temperatures at Agulhas showed an increase of roughly 1°C between 1960 and 2009. Increases of between 1.3°C and 2°C are predicted for Bontebok by 2050 (Le Roux *et al*., 2019). While the predicted changes seem small, they will elevate the number of hot days (with roughly seven additional days above 35ºC annually) and associated effects on the fire danger index, as well as the ability of fire fighters to control wildfires. Other climate change concerns include drought and associated impacts on biodiversity, as well as livelihoods and agriculture (Le Roux *et al*., 2019). In addition, some infrastructure is in the flood plains of the Breede River (Coldrey *et al*., 2022).

2.13.2 Topography

The park lies between 60 and 152 AMSL on the coastal plains between the Langeberg mountain range and the Indian Ocean. According to the Land Type Survey Staff (2004), the topography comprises of three major landscape terrain units, namely (1) slightly undulating midslopes; (2) midslopes-plateau and (3) valley bottomland and river.

- The slightly undulating midslopes landscape terrain unit occurring in the northwestern section of the park;
- The largest midslopes-plateau landscape terrain unit occurring in the central and northern sections of the park; and
- Valley bottomlands and perennial Breede Rivier landscape terrain unit of the park. It is found in the southwestern section of the park. The Breede River forming the southern boundary of the park.

2.14.3 Geology and soils

The Enon Formation, the Bidouw Subgroup and the Witteberg Group occurs in and around the park. The geology is important to assist with the understanding of the geomorphology landscapes and the process of soil genesis (soil formation or pedogenesis). The terrain form and the soil have a significant determining factor on the different plant communities (plant species composition and vegetation structure) and fauna that are found in the park (Bezuidenhout, 1993).

The Enon Formation is part of the Uitenhage Group that represents the earliest deposits that filled the Mesozoic rift basin in the southern Cape of South Africa during the fragmentation of the supercontinent Gondwana. The sedimentology of the Enon Formation records the development of alluvial systems that drained the region since the onset of the Gondwana rifting (Penn-Clarke *et al*., 2018). The major rocks of the Enon Formation in the park are conglomerate, subordinate lenticular sandstones and claystones closely associated with the Breede River and floodplains (Muir *et al*., 2017).

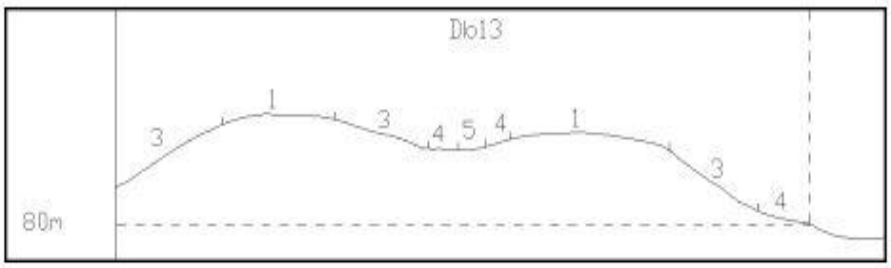
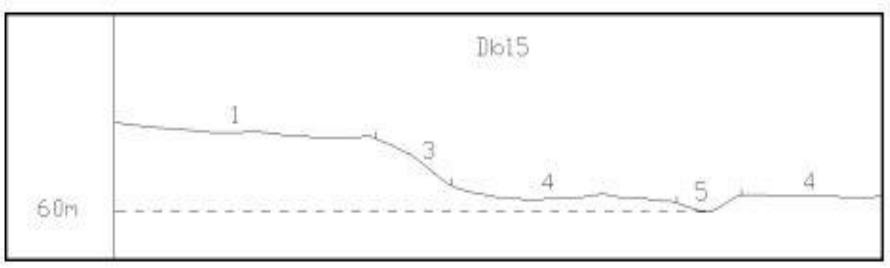
The Bidouw Subgroup is part of the Bokkeveld Group (the other two subgroups, the Ceres and Traka Subgroups, are not found in the park). The Bokkeveld Group is distinguished by the alternating sediment layers of three different shales separated by two sandstone rock layers (Penn-Clarke *et al*., 2018).

The Witteberg Group of the Cape Supergroup occur in the southeastern part of the park while quarzitic sandstone outcrops, as well as siltstones and shales, are also observed (Oliver, 2010). The Bokkeveld and Witteberg Groups rocks were deposited in cool shallow seas that flooded the margins of the Gondwana continent in the Devonian period. These sedimentary rocks, especially the coarser grained rocks, signify that episodic powerful storms at sea were the major agent of sediment transport and deposition in the park and surrounding areas. Rhythms of 100,000 years to about 3 million years ago, indicate the cyclical pattern of the deposition of these sediments,

reflecting the cyclical changes in the global sea levels. According to Penn-Clarke *et al*. (2018), the Devonian period is often referred to as the “Age of Fish”. It was also the first-time interval when complex plant communities (including the first trees) and the four-legged vertebrates (tetrapods) became established on land.

The geomorphology landscape of the park can be divided into three distinctive landscape terrain units (Land Type Survey Staff, 2004), summarised in the Table 1 below. Four land types (Fb44, Ia11, Db13 &, Db15) occur in park. According to the Land Type Survey Staff (2004), "A land type denotes an area that can be shown at 1:250 000 scale and that displays a marked degree of uniformity with respect to terrain form, soil pattern and climate".

Table 1. Landscape terrain units occurring in the park.

Slightly undulating midslopes of Bontebok The Db13 land type representing the slightly undulating midslopes landscape terrain units.	
The Db land type refers to land where duplex soils have been recorded. The slightly undulating midslopes landscape terrain units occurring in the northwestern section are associated with the slightly rolling plateau (1), midslopes (3) and drainage lines (4) associated with the Breede River (5). The soil is mainly coarse gravel deposits with Mispah and Glenrosa soil forms dominant (Figures 1) (Land Type Survey Staff 2004).	 Figure 1: The terrain form sketch of the dominant Db13 of the slightly undulating midslopes landscape terrain units.
Midslopes-plateau of Bontebok The Db15 land type is the largest land type in Bontebok representing the midslopes-plateau landscape terrain units.	
The Db land type refers to land where duplex soils have been recorded. The midslopes-plateau landscape terrain units occurring in the central and northern sections of Bontebok. The plateau terrain unit (1) is on the higher lying areas of the park. The soil of the steep midslopes (3) is dominated by the Estcourt soil form not deeper than 0.4 m but with a high clay content of more than 40%. The floodplain (4), which is associated with the Breede River, is dominated by the dominant Oakleaf and Valsrivier soil forms which are deeper than 1.2 m with a low clay content of 6-15% (Figures 2) (Land Type Survey Staff 2004).	 Figure 2: The terrain form sketch of the Db15 land type of the midslopes-plateau landscape terrain units.

Valley bottomlands and River of Bontebok

The Fb44 (valley bottomlands) and Ia11 (Breede River) land types representing valley bottomland and river landscape terrain units.

The valley bottomlands and river landscape terrain units refer to pedologically young landscapes, where lime occurs regularly, that are not the predominantly rock and in which the soil forming processes have been mainly rock weathering. It is found in the southwestern section of the park. The Breede River forming the southern boundary. The midslopes (3) of the Fb44 land type is the dominant terrain unit, with a shallow (<0.4m), relative low clay content (15-25%) soil properties of the dominant Mispah and Glenrosa soil forms. The Ia11 land type (similar terrain form sketch) refers to youthful, deeper than 1,2 m unconsolidated deposits, which is strongly associated with the Breede River and its floodplains (terrain units 4 & 5). The Dundee soil form is the dominant soil (Figures 3) (Land Type Survey Staff 2004).

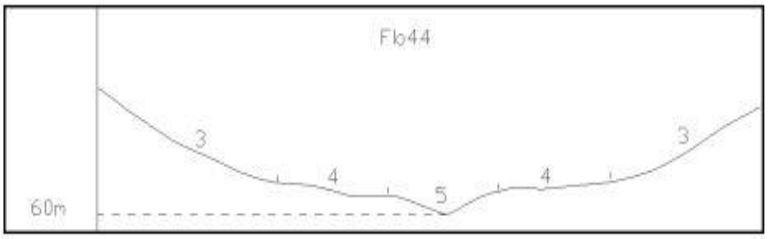


Figure 3: The terrain form sketch of the dominant Fb44 land type of the valley bottomlands and River landscape terrain units.

The Land Type concept has frequently provided a useful basis for description of terrain landscape units, with the soil and vegetation closely associated with it (Bezuidenhout, 1993).

2.13.4 Freshwater ecosystem

The location of the park within the winter rainfall region and broad vegetation types set the scene for the freshwater ecosystems inside the park. A small section of the Breede River is conserved inside the park and this is the main river system. The amount of flow and water quality of the river are influenced by upstream agricultural activities (River Health Programme, 2011). The wetland types are influenced by the vegetation types and topography of the park. There are no boreholes inside the park to characterise the groundwater ecosystems.

Rivers

The Breede River is a wide meandering system within the park. A series of long (>1 km), broad (50 m – 150 m) channels with deep (>2 m) pools, separated by narrow rapids and stony runs are found. The substratum in channels and pools consists predominantly of sand and silt, with some small stony patches. In rapids and runs the substratum consists predominantly of cobble and sand, with the bedrock exposed in places (Russell, 2001). The park conserves three river ecosystem types with a combined length of 12.9 km within its boundaries (Table 2) (Roux *et al*., 2023).

Table 2. Extent of river ecosystem types within the park (Roux *et al*., 2023).

River ecosystem type	Level 1 ecoregion	Flow variability	Slope category	Length (km)
22_P_F	Southern Coastal Belt	Permanent/ Seasonal	Lowland river	2.2
22_P_L	Southern Coastal Belt	Permanent/ Seasonal	Lower foothill	8.8
22_P_L	Southern Coastal Belt	Permanent/ Seasonal	Upper foothill	1.9

The Breede River within the park falls within the Lower Breede catchment. The surrounding land use is predominantly agriculture. There is a historical river health monitoring site within the park at Die Stroom with code H7BREE-BONTE. The ecological state of the river inside the park is classified as good ecological state (Good = Biodiversity and integrity largely intact). The ecological state, referred to as the present ecological state of the river (PES) was determined using data collected from 2004 until 2008. Water quality (for ecological purposes) was also in a Good PES (River Health Programme, 2011). Unfortunately, the national river health monitoring programme was ceased after the release of the 2011 report. In 2018 SANParks included the historical river health monitoring sites within the boundaries of the national parks into their Freshwater and Estuarine Ecosystem Monitoring Programme (Fisher *et al*., in prep). The river health programme used various indices, specifically freshwater macroinvertebrates to determine the ecological state of rivers. The freshwater macroinvertebrates are assessed using the South African scoring system version 5 (SASS 5) method (Dickens & Graham, 2002). The long-term summer SASS 5 surveys showed that the river was mainly in a Category B ecological state. This means that the river's ecology was largely intact with minimal disturbance.

Wetlands

The national freshwater ecosystem priority area (NFEPA) atlas wetlands layer (Nel *et al*., 2011) was ground-truthed during 2015 and 2016. The ground truthing resulted in the reclassification of some of the hydrogeomorphic types (classification according to Ollis *et al.,* 2013), the boundaries of the wetlands corrected, and the addition of wetlands not previously mapped for the park. Overall, the ground truthing resulted in the total of 622.15 ha of wetlands conserved inside the park (Table 3). The wetlands were mapped, and the GIS shapefiles were updated accordingly (Fisher *et al.,* in prep).

Table 3. Wetland hydrogeomorphic types and their cover (ha) found within the park as shown by the NFEPA atlas (Nel *et al*., 2011) wetland layers in 2011 and after the ground truthing of the wetland layers in 2017 and 2023 (Fisher *et al.,* in prep).

Hydrogeomorphic types	2011	2023
Floodplain	154.06	106.03
Unchannelled valley bottom	61.05	0.15
Channelled valley bottom	23.46	54.30
Depression	-	2.57
Flat	180.39	266.67
Valley head seep	79.89	191.89
Seep	-	
Dam (artificial)	-	0.54
Size (ha) of wetlands protected in the park	**498.84**	**622.15**

There are eight wetland ecosystem types spanning three bioregions found inside the park (Fisher *et al*, in prep). All the wetland ecosystem types have a conservation status of endangered and all the wetland ecosystem types are poorly protected nationally (Van Deventer *et al.,* 2018).

2.13.5 Terrestrial flora

The park is situated within the global biodiversity hotspot of the Cape Floristic Region (Kraaij, 2011; Frye *et al.,* 2021; Manning & Goldblatt, 2012). Vegetation and habitat destruction outside the park has led to an increased priority to conserve the vegetation within the park (Kraaij, 2011). The South African national vegetation map classifies the vegetation of BNP as Cape Lowland Alluvial vegetation (Aza2), Eastern Ruens Shale Renosterveld (FRs13) and Swellendam Silcrete Fynbos (FFc1) (Kraaij *et al.,* 2011; Mucina *et al.,* 2006; Rebelo *et al.,* 2006; Table 4; Appendix 5, Map 8). The park holds several rare and/or threatened plant species,

including, Diosma (buchu), and Gladiolus species. However, no single comprehensive publication exists on the park's rare / endangered flora. The park has many Aspalathus species, which are listed on the South African Red List. This particular fynbos genus, one of few fynbos taxa that possess spines, also has nitrogen fixing symbionts and may therefore have higher leave nitrogen levels and palatability thus making it more susceptible to herbivory (Johnson, 1992).

Alluvial vegetation has many common floristic and ecological characteristics resulting from the selection of plant functional types. Disturbance in these habitats, whether natural or man-induced, creates a set of conditions allowing and promoting the rapid spread of highly responsive native, ruderal flora. Cape lowland alluvial vegetation occurs within small areas of the park and is associated with the Breede River and its tributaries. This vegetation type is listed as endangered as it is narrowly distributed with high rates of habitat loss in the past 28 years (1990 - 2018), placing the ecosystem type at risk of collapse (NEMBA, 2004).

The Eastern Rûens Shale Renosterveld supports cupressoid and small-leaved, low to moderately tall grassy shrubland, dominated by renosterbos. The southern limits of this vegetation type are often covered by a thin layer of calcrete. Thicker calcrete deposits support mesotrophic Asteraceous fynbos. Habitat loss observed between 1990 and 2018 indicate that by 2040 the geographic distribution of Eastern Rûens Shale Renosterveld will have declined by approximately 58%. Outside of the park there is very little that remains as this ecosystem is narrowly distributed with high rates of habitat loss in the past 28 years. This vegetation type is listed as endangered. Shale renosterveld of the Rûens region - the largest continuous block of renosterveld - is characterised by undulated hills in the west and deeply dissected hills in the east, at a general elevation of 200–300 m. Eastern Rûens Shale Renosterveld is part of the Shale renosterveld of the Rûens region, the largest continuous block of renosterveld. It is characterised by undulated hills in the west and deeply dissected hills in the east. In the park (primarily FFc 1 Swellendam Silcrete Fynbos, with patches of FRs 13 Eastern Rûens Shale Renosterveld), published research on the grey rhebok *Pelea capreolus* ecology, bontebok behaviour and bontebok population dynamics were conducted that looked into the interrelations between fire, herbivory and vegetation cover. *Aspalathus grobleri* (EN) and *Aspalathus incompta* (NT) are endemic species to this vegetation type and occur in the park (NEMBA, 2004).

The Swellendam Silcrete Fynbos displays features of both fynbos and renosterveld (Rebelo *et al.,* 2006). This vegetation type is structurally defined as a medium-tall evergreen shrubland or grassland, with predominantly Asteraceous fynbos and graminoid Fynbos occurring on summits and in disturbed areas on the northern slopes. This vegetation type is listed as endangered as it is narrowly distributed with high rates of habitat loss in the past 28 years (1990 - 2018), placing the ecosystem type at risk of collapse.

Proteoids are characterised by a high cover of dominant, reseeding overstorey plants. These plants are usually tall, but in silcrete fynbos they may be smaller than one metre. Overgrazing can result in Swellendam Silcrete Fynbos being converted to Mossel Bay Shale Renosterveld. *Erica filamentosa* (VU) *Acmadenia laxa* (EN) *Cyrtanthus leptosiphon* (CR) and *Haworthia heidelbergensis* var. *heidelbergensis* (EN) are endemic to this vegetation and are found in the park (NEMBA, 2004). Swellendam Silcrete Fynbos is narrowly distributed with high rates of habitat loss in the past 28 years (1990 - 2018), placing the ecosystem type at risk of collapse.

The park is the smallest of the national parks but has the highest plant species richness per unit area in South Africa (Strauss, 2015). Six hundred and fifty plant species and infraspecific taxa from 280 genera and 85 families have been recorded in the park (Kraaij, 2011). Two hundred and fifty floral species endemic to the Cape Floristic Region are found in the park. Twenty-nine plant

species are recorded as threatened with extinction at a global scale, of which one is critically endangered, 15 endangered and 13 vulnerable. Another 23 species are of conservation concern, of which 11 are near threatened, six declining and six data deficient – Taxonomically Problematic (Strauss, 2015; Kraaij, 2011).

The most speciose families recorded in the park are the Asteraceae, Iridaceae, Poaceae and Fabaceae (Kraaij, 2011). Of all floral species recorded in the park, 23% are geophytes, 20% dwarf shrubs, 16% herbs, 15% graminoids, 13% shrubs, 8% succulents, 3% trees, 2% climbers and 40 alien plant species (Groenewald, 2014; Kraaij, 2011). *Aspalathus burchelliana*, *Diosma fallax*, and *Erica filamentosa* are three plant species endemic to the park (Strauss, 2015; Groenewald, 2014; Kraaij, 2011).

Table 4. Vegetation units occurring in the park.

Biome	Fynbos
Bioregion	**East Coast Renosterveld**
Vegetation type	**FFc 1 Swellendam Silcrete Fynbos**
Vegetation and landscape features	Mainly undulating hills on the coastal forelands, the remains of the old African surface. Structurally it is a medium-tall evergreen shrubland or grassland. Predominantly asteraceous fynbos, but graminoid fynbos on summits and northern slopes where disturbed. Proteoid fynbos occurs on southern slopes and ericaceous fynbos is found in wetter habitats. Afrotemperate forest occurs in firesafe alluvial areas, such as, along perennial rivers. It is uncertain whether proteoid fynbos, renosterveld or thicket was the dominant type in some of the eastern plateaus - it has all been converted to pasture.
Conservation value	Endangered
Vegetation type	**FRs 13 Eastern Rûens Shale Renosterveld**
Vegetation and landscape features	Moderately undulating hills and plains supporting cupressoid and small-leaved, low to moderately tall grassy shrubland, dominated by renosterbos. The southern limits are often covered by a thin layer of calcrete. Little of this vegetation remains, but some thicker calcrete deposits, too thick to be ploughed, support mesotrophic asteraceous fynbos. It is not known whether the thinner deposits supported renosterveld or intermediate communities.
Conservation value	Critically endangered
Vegetation type	**AZa 2 Cape Lowland Alluvial Vegetation**
Vegetation and landscape features	Flat landscape with slow flowing (in place meandering) lowland rivers fringed on banks by extensive tall reeds dominated by Phragmites australis and Typha capensis as well as by flooded grasslands and herblands and tall riparian thickets (gallery forests) with Salix mucronata subsp. capensis on the river terraces.
Conservation value	Critically endangered

2.13.6 Terrestrial fauna

Bontebok National Park poses several constraints in the management of wildlife. Before European farmers settled into the region, the renosterveld and surrounding Swellendam area supported large numbers of big game including black rhino *Diceros bicornis*, eland *Taurotragus oryx*, now extinct blue buck *Hippotragus leucophaeus* and the quagga *Equus quagga quagga*. It was also possibly a far grassier system with a much higher plant diversity (Curtis, 2016). Renosterveld originally covered the entire clay-/shale-based lowlands of the Overberg. These comprise the most fertile soils of the region and were seen as extremely suitable for agricultural activities by early European settlers. The replacement of large game animals with small selective feeders, such as cattle and sheep, combined with years of poor management practices (over-grazing and inappropriate fire regime) has allowed extensive areas to become severely degraded and transformed (Curtis, 2016). Only small pieces of natural land are still available, and the park today is a small island in the middle of development and agricultural activities. Small population sizes, the absence of predators, disease and large boundary effects, increase the challenges and risks to all faunal populations and may require adaptive management interventions.

Amphibians
Citizen scientist observations and routine sampling have resulted in the discovery of 10 frog species inhabiting the park (Braak, 1981, iNaturalist; GBIF). It is unknown how many *Breviceps* species occur in the park itself,

but four species occur in the region. Three are upland mountainous species, while the coastal and riverine species, *Breviceps rosei*, most likely also occurs in the park (Braak, 1981).

Birds

A first preliminary bird list for the park comprising of 103 species (Baron, 1981) underwent additions and revisions with the most recent one (Lepage, 2023) listing 274 bird species of which 13 are classified as endemic to the region. The common starling *Sturnus vulgaris* and the house sparrow *Passer domesticus* are recognised as two introduced species to the area. Endangered birds that occasionally appear in the park are the black stork *Ciconia nigra* (Birdlife South Africa, 2023) and Cape vulture *Gyps coprotheres* (Birdlife International, 2023, Greyling & Huntley, 1984). The park's birds have also been publicised in the popular literature. A strip-count survey of bird densities in the renosterveld of the park gave an average density of 151 birds per 40 ha with the grey-backed cisticola *Cisticola subruficapilla* being the most numerous species, accounting for 23% of all birds counted (Winterbottom, 1968).

Fish

A total of 12 species was recorded during sampling of six sites in the Breede River in the park during 1999 and 2000 (Russell, 2001). Fish species collected included one indigenous freshwater species, two indigenous catodromous species, three indigenous estuarine species, two species translocated from other South African rivers, and four alien species. Among these were the red-data listed *Barbus andrewi* (vulnerable) and the previously red-data listed *Pseudobarbus capensis* (rare). A further two indigenous species (*Sandelia capensis, Pseudobarbus burchelli*) could potentially occur within the park, though the high abundance of alien predators means that there is little chance for recolonisation from tributaries higher in the Breede River system (Russel, 2001). Alien and translocated species are difficult to manage in the Breede River and recreational fishing of these alien species are supported in the park. Braack's (1981) records of surveys done between 1961 and 1977 add one indigenous and two alien fish species to Russell's (2001) list. At the regional scale, Barnard (1943) has done a revision of the indigenous freshwater fish of the southwestern Cape region which included the Breede River.

Invertebrates

Ongoing surveys of aquatic invertebrates of the Breede River for use as an indicator of river health status and SASS5 assessments are conducted (Coetzer, 1986; Fisher pers. comm.). In terms of relative abundance of invertebrate functional feeding groups, collector-filterers were most abundant, followed by comparable numbers of collector-gatherers and scrapers, with very few shredders and predators/piercers (Coetzer, 1986). The high proportion of collector-filterers in the lower reaches of the Breede River was attributed to large amounts of return-flow of irrigation water because erosion-zone features occurred at sampling localities in this section (Coetzer, 1986). Coates (1970) compiled a checklist of the *Collembola* of South African parks, listing three Seira species (*S. mathewsi, S. grisea*, and *S. marephila*) for the park and the plants on which they occur. A research study in 2021 on the saturniids, a family of Lepidoptera including the emperor month, has found several new moth species and life-history discoveries in the park (Dr Siliva Mecenero, pers. comm).

Mammals

There are various accounts of historical mammal occurrences in the Swellendam area, listing predators such as lion *Panthera leo*, leopard *Panthera pardus*, hyena *Crocuta crocuta*, jackal *Canis mesomelas*, wild dog *Lycaon pictus* and wild cat *Felis lybica*. Ungulates within their historical range and currently present in the park include: bontebok, grey duiker *Sylvicapra grimmia*, Cape grysbok *Raphicerus melanotis*, red hartebeest, grey rhebok, steenbok *Raphicerus campestris*, and Cape mountain zebra. Buffalo *Syncerus caffer*, bushpig *Potamochoerus larvatus*, eland, elephant *Loxodonta africana*, hippopotamus *Hippopotamus amphibius*, black rhinoceros *Diceros bicornis*, and klipspringer *Oreotragus oreotragus* were also historically present in the area but currently absent from the park (Boshoff & Kerley, 2001).

Extralimital species such as the common reedbuck *Redunca arundinum* and springbok *Antidorcas marsupialis* were removed from the park (Novellie & Knight, 1994). De Graaff (1974) compiled a comprehensive list of rodents for the area.

As indicated by the name of the park, bontebok is one of the iconic species of the park and there is a wealth of knowledge on the species ecology and historical conservation actions (Skinner *et al.,* 1980; Beukes, 1984; Bothma, 1986; Novellie, 1986). Although bontebok numbers outside their natural distribution range are increasing, the core population within the natural range has not increased since 2004. Protected area expansion possibilities are limited within the natural range, thereby limiting core population growth. The major threats to bontebok are the uncertainty around the number of hybrids within the existing population (outside the park), lack of habitat availability within its natural range (thus limiting population expansion), and the slow implementation of a metapopulation plan to sustain genetic diversity (Cowell & Birss, 2017). The park plays an important role in the conservation of the species.

Reptiles

Of the 30 reptiles found in the park, 22 are snake species, including the well-known puff adder *Bitis sarientans*, Cape cobra *Naja nivea* and boomslang *Dispholidus typus*. Other reptile species include six lizards species, three tortoise species and one terrapin species, the Cape terrapin *Pelomedusa galeata*. (Braack 1981, iNaturalist).

2.14 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 does not possess many cultural heritage sites and a significant factor is the relatively small size of the park. There has been limited archaeological research undertaken within the park. This contrasts with many other studies of fauna and flora that have been conducted. The first known archaeological study within the park was co-ordinated by the South African Museum (now part of Iziko Museums) between the late 1970s and mid-1980s. The broad focus of this study was on locating graves of 'pure' Hottentots. Because of such specified research interest, researchers did not bother to record the archaeological context of the graves they discovered. Instead, they only focused on the human bones for physical analysis to determine how 'pure' they were. Besides this largely unsuccessful attempt, there are a number of Early Stone Age and limited Late Stone Age artefacts (i.e. bored stones) that were collected from the gravel terraces and are today curated at the Iziko Museums.

Other archaeological explorations in the Swellendam area were those undertaken by students from the University of Cape Town. These were done by Peter Robertshaw and Timothy Hart (survey of the Berg River Valley), in 1979 and 1984 respectively (Arthur, 2008). However, neither of the researchers found any evidence of cattle bones or settlements – which would have confirmed the archival evidence that points to the presence of herders in the area. There is an extensive archival record of business relationship between the colonial settlers and the herders in the Swellendam area. Despite the archival record, there has not been equally extensive archaeological evidence discovered from the locality. The challenge with discovering archaeological evidence that can be directly linked to the Khoe Khoe could be the reason why there has generally been a lack of survey in the area. This substantiated the highly generalised hypothesis that herders are generally difficult to identify in the archaeological record, because they did not leave much evidence behind (Arthur, 2008).

Archaeologists have generally argued that the general absence of physical remains from the open landscape that can be convincingly linked to the herders who occupied various areas of the Western Cape over a period of approximately 1,500 years can be explained by the high mobility of these pastoralist societies. They made use of highly transportable and organic material culture (Robertshaw, 1978; 1979; Deacon *et al.,* 1978; Smith, 2005). High levels of mobility can be explained by the need to move across the landscape quickly and regularly in search of new pastures, thus leaving little evidence behind that can later be analysed by archaeologists (Byrne, 2003). However, there are archaeologists, in both southern Africa and beyond, who have questioned this interpretation, arguing that some of these claims of invisibility have been overestimated (Beaumont & Vogel, 1984; Cribb, 1991; Rosen, 1992; Banning, 1993; Kinahan, 2001; Rowley-Conwy, 2004). What has commonly occurred in South African archaeology is that researchers have ordinarily focused on certain types of sites and landscapes. It is this approach that has often led to the bias towards what is perceived to be the most visible and better-preserved archaeology in caves, rock shelters, and shell middens. Most of these preferred locations are likely to preserve deep deposits of archaeological record – unlike open-air sites. As a direct result, there has been a general neglect of open landscapes, where pastoralists are known to have lived with their livestock. This is even though there are many archival records that refer to the presence of Khoe Khoe 'kraals' at the point of contact with colonial settlers (Moodie, 1838; Thom, 1952, 1954, 1958; Kolb, 1968; Boonzaier *et al.,* 1996: Kinahan, 2000; Kinahan, 2001; Mitchell, 2002; Reid & Lane, 2004). Sadr (2003), challenging the argument of

archaeological invisibility because of the high mobility of herders, questioned why we have discovered many open-air hunter-gatherer sites in the Cape when the same has not been applicable to the supposedly invisible herders. Hunters were just as mobile and equally using transportable materials (Cribb, 1991; Rosen, 1992; Banning, 1993).

In a more recent study, Arthur (2008) recorded 24 archaeological sites located within the park. These were concentrations that he deemed to be 'sites' characterised by diagnostic artefacts – which can generally be deemed to be scatters with archaeological artefacts. Eleven of these sites were found during the 15 meter transect survey in a specified section of the park – which illustrates how close to each other these sites are. Test excavations were conducted at four sites at Lang Elsie's Kraal (11 excavations in total) and Ou Tuin (two excavations in total). Excavations at the former did not return much archaeological artefacts compared to the two test-pits that were opened at Ou Tuin which had a significant number of materials – 921 artefacts at test pit 2 and 167 artefacts at test pit 1. The materials from test excavations at Ou Tuin could not, however, be confidently linked to those who occupied Nougha Saree's kraal. While these test excavations were largely successful in providing an insight into the archaeological history of the area – with most artefacts probably being found *in-situ*, it cannot be disputed that much of the locality has been affected by ploughing activities. Test pit excavations were particularly significant in the identification of a high density of pottery in the upper 100 mm of the deposit, which was not visible on the surface because of densely vegetated areas.

Besides these limited archaeological investigations, much of the history of the current park has been evidenced through the rich archival records gathered by colonial settlers. While there are many gaps in these historical records, mainly because they were not gathered for the purpose they are being used for today, archival records have provided insights on the human occupation by the Khoe Khoe communities of the area where the park is now located (Marks, 1972; Elphick & Malherbe, 1989; Elphick & Shell, 1989; Guelke & Shell, 1992; Sleigh, 1993; Viljoen, 1997, 2001). There are legendary stories told of the two Hassequa Khoe Khoe groups that lived in the area in the 18th century. Through analysing such records, we have learnt of, among others, Lang Elsie and Nouga Saree – two Khoe Khoe contemporaries who lived with their followers supposedly between 1734 and 1800 (Schapera, 1931, Tomlinson, 1943; Van Rensburg, 1975). The rest camp within the park is named in honour of the remarkable female 'captain' – Lang Elsie. The location of Lang Elsie's Kraal Rest Camp is thought to be where she settled and lived with followers, looking after their livestock that grazed in the local area, towards the Buffeljags River. Nouga Saree and his followers lived in the western part of the park – in an area that is now called the Ou Tuin. Their livestock grazed at the Old Resies Baan (Racetrack) – named as such following its use by the Swellendam Turf Club for their highly popular race meetings. There were previous reports of graves most probably belonging to Nouga Saree and a few of his subjects found at the foot of the small ridge above Ou Tuin (Brett, 2012). However, these graves that were apparently covered with 'blue mountain stones' have never been relocated. There were the efforts of the South African Museum when they were attempting to locate graves of 'pure' Hottentots. Their land is now incorporated into the park (Moodie, 1838; Thorn ,1952, 1954, 1958; Raven-Hart, 1967; Kolb, 1968; Elphick, 1985).

An initiative to preserve the cultural heritage linked to the Hassequa within the park led to the reconstruction of huts that were used by the group led by Lang Elsie. Visitors could then go on a trail that provided insights into the history of the Indigenous people who lived in the area. One of the structures that were incorporated into the trail was a stone house that was perceived to have been occupied by Lang Elsie (Tomlinson, 1943). The authenticity of this interpretation of the house was questioned by a curator from the local museum. However, while this structure may not fit the preconceived image of a 'Hottentot' home, there should be no reason to challenge the potential link between the Hassequa and stone-built houses. That noted, it is much more likely that this structure is that of a house that was used in a more recent past by farmers. We discovered pieces of glass that probably came from a kitchen utensil and glass as well as a stone tool. The trail has

since been discontinued and the reconstructed huts taken down based on the criticism received. The demarcation for the trail and the boards that had been used to present information remains.

2.15 Socio-economic context

The park and local tourism offerings complement each other and contribute towards making tourism a significant factor in the regional economy. It strives to be in line with the Swellendam Local Municipality's draft Integrated Development Plan (2022 - 2027), of which the vision is to be: 'A robust and inclusive local economy addressing local needs and exploiting local opportunities, real, potential and competitive advantages'.

The Swellendam economy has been performing well in recent years, although there are concerns over an observed contraction in the agricultural sector which is a very important employer in the region. According to the current five-year Integrated Development Plan, the ongoing stages of load shedding also pose a threat on economic recovery after the COVID 19 pandemic.

Swellendam is now the second-least populated municipal area in the Overberg District Municipality, with a projected population of 39,474 in 2022, according to the national Department of Social Development. The Municipal Economic Review and Outlook (2020) predict that this total will rise to 41,195 by 2026 with a growth rate of 0.9% (https://www.elsenburg.com/wp-content/uploads/2022/03/2019-Swellendam-Municipality-Overview.pdf).

Young people semi-migrating and foreigners leaving their country of birth in search of employment, a perceived better quality of life in small towns compared to larger cities, and changes in work culture are the main factors driving population increase. Due to this, Swellendam's informal settlement has grown significantly. The increase in population in the informal settlement leads to an unsustainable situation with pressures on service delivery that are not budgeted for, creating a growing and persistent risk not only for service delivery but also for socio-economic factors like declining environmental health, rising unemployment, an increase in crime, and escalating tensions within the community. The rapid growth of the informal settlement has given rise to encroachment on the park boundary, pollution, poaching and the theft of the park's fence.

Eighteen thousand people were employed in Swellendam in 2018, which accounted for 13.4% of the district's total workforce. It should be noted that this is greater than the share in 2008, which was 12.9%, due to the local municipality's significant employment growth during the previous ten years. Less than 15,000 people were employed in the municipality in 2008, therefore there were roughly 3,000 jobs added up to 2018, a 20% increase, or an average of 300 jobs per year. The 20% growth rate was the highest ever seen in the Overberg District Municipality and was much higher than the 13% and 10% regional and national averages (https://www.elsenburg.com/wp-content/uploads/2022/03/2019-Swellendam-Municipality-Overview.pdf).

In 2018, there were 4,900 low-skilled people employed in Swellendam, making up 28% of the municipal workforce. A further 27%, or 4,800 people, were employed informally. The percentage of the labour force made up of low-skilled and informal jobs has decreased from 31% and 32%, respectively, in 2008 due to a minor shift in the skills composition of the workforce over the past 10 years (https://www.elsenburg.com/wp-content/uploads/2022/03/2019-Swellendam-Municipality-Overview.pdf).

The park contributes to skills development and capacity building by involving communities in relevant Expanded Public Works Programmes (EPWP). It supports local Small, Medium and Micro Enterprises (SMMEs) whenever there are business or maintenance opportunities available. In the period 2014 - 2023, the park contributed to the employment of the Swellendam community by employing 19 permanent staff members as well as temporary jobs through the EPWP. The EPWP projects include the upgrading and ongoing maintenance of chalets, as well as management of alien invasive plant species. In the 2020/21 financial year the park contributed to temporary job creation through the Presidential Employment Stimulus Fund and also appointed two contracting teams for Municipal Cleaning and Greening Project.

2.16 Tourism

The park can be described as a place of simplistic beauty and peaceful charm, bordered by the winding Breede River to the south with the majestic Langeberg mountain range as the backdrop to the north. The park has a range of accommodation facilities at the Lang Elsie's Kraal rest camp. This includes family and single unit chalets and camping, some with spectacular views of the river and within a walking distance thereof.

The park also offers various outdoor activities that can be enjoyed at leisure, ranging from game viewing, hiking, mountain biking, swimming and canoeing / kayaking in the river and birding. A day visitor facility is also

available to host small events like, birthday parties, small weddings, functions etc. at Die Stroom. Table 5 summarises the overnight facilities available as well as the unit / room occupancy for the previous year.

Table 5. Overnight facilities and unit / room occupancy figures.

Accommodation summary as of 31 March 2023						
Camp	Description	Number of			Category	Unit occupancy (2022 / 2023 financial year)
		Units	Beds	Total beds person capacity		
Lang Elsies	Chalets (2 bed)	10	2	20	Economy	42%
	Family cottage (4 bed)	4	4	16	Economy	32%
	Camping	20	6	120	Budget	26%
Total inventory	Units accommodation	34		156		31%
Overall occupancy		Accommodation				39%
		Camping				26%

During the 2022 / 2023 financial year, the park achieved a unit occupancy of 38.7 % which is significantly lower than the SANParks average of 63.1%. The park does not presently offer any guided activities. There was a total of 16,675 visitors in 2022 / 2023, of whom 48.9% were day visitors and 51.7% overnight visitors. Of these, 24.7% were international visitors, 0.43% from the Southern African Development Community countries and 74.1% local. The South African visitors are mostly from the Western Cape, Gauteng and Eastern Cape, and 7.4% of South African visitors were black. Of the 4,117 international visitors, most were from Germany, the United Kingdom, the United States of America, Austria and France.

Intentionally left blank

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 (by means of the balanced scorecard), and its approach to strategic adaptive management; and
- Policies and guiding principles:
    - 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.

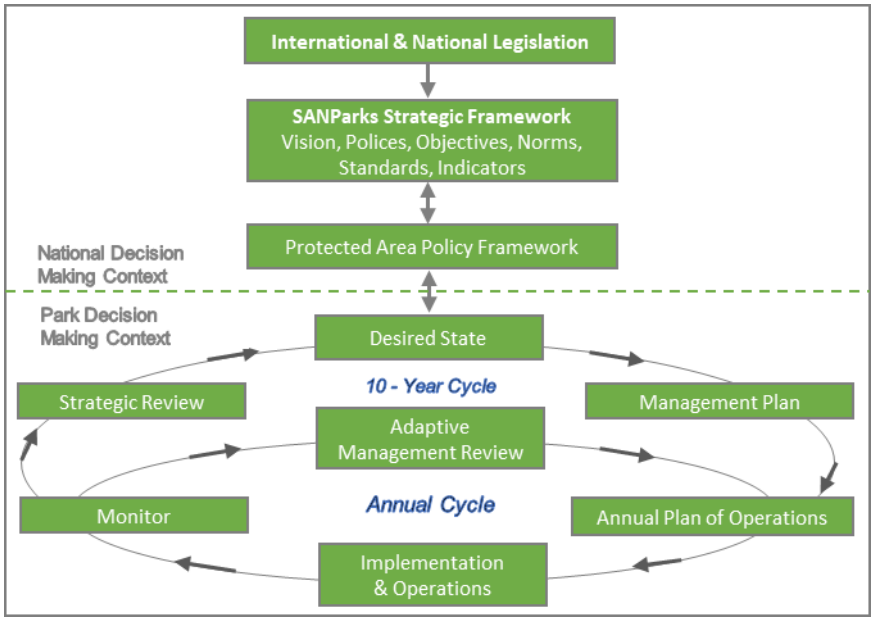


Figure 4. SANParks protected area planning framework.

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 NEM: PAA, 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 governs the management of protected areas for which SANParks is responsible and the associated management plans.

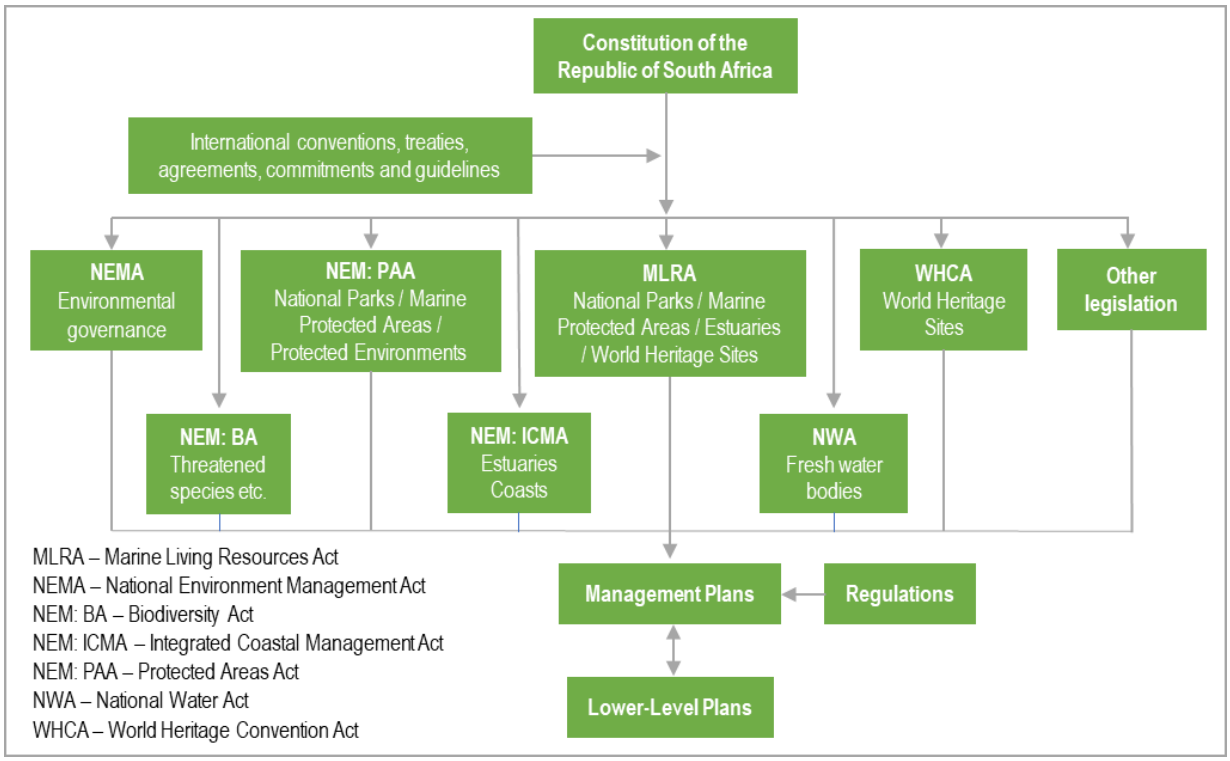


Figure 5. The relationship between the key legislation that governs the management of protected areas for which SANParks is responsible and the associated management plans.

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 remedy 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 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 in a small part to Goal 1 Enhance Biodiversity Conservation through the limited expansion of the protected area system and buffer zone management that is planned for the park. This management plan will also result in improved management effectiveness of the park overall. Bioregional integration 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. This 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 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). Strategic Adaptive Management 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).

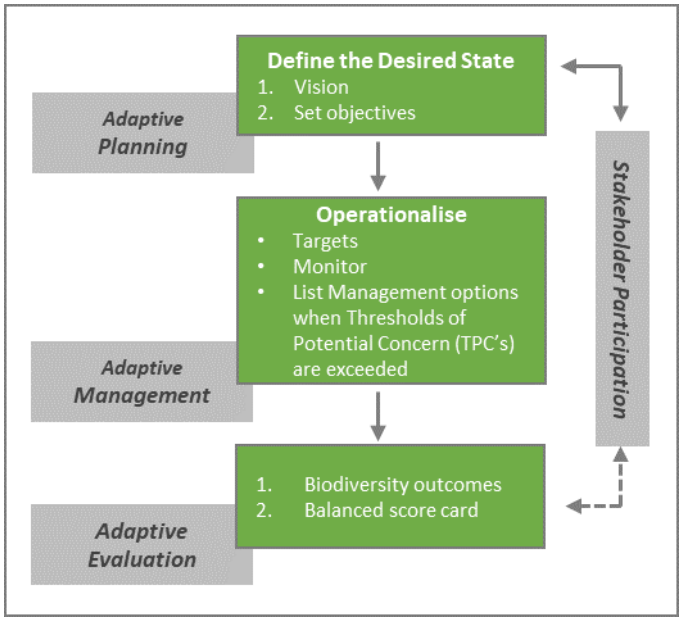


Figure 6. Steps in the adaptive management cycle as used by SANParks.

Strategic Adaptive Management 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 influences. The description of the future state is further enriched by deliberating the distinctive and special features (called vital attributes) of the park.

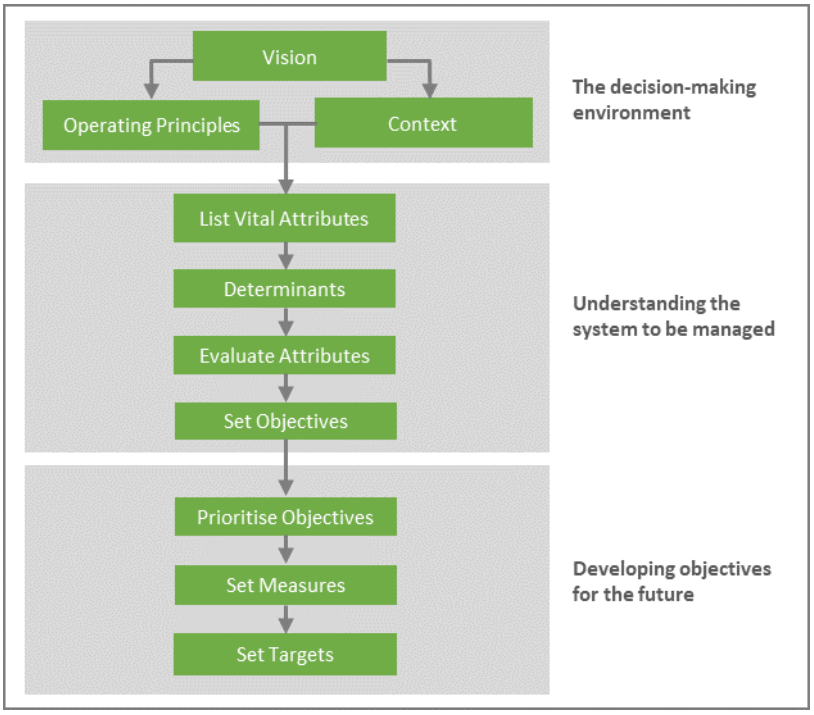


Figure 7. The adaptive planning process as used by SANParks.

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 examining 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 4).

3.6 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, technical services etc.

3.7 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 Cape Cluster. The park's future organogram (Figure 8) sets out the reporting structure in the park.

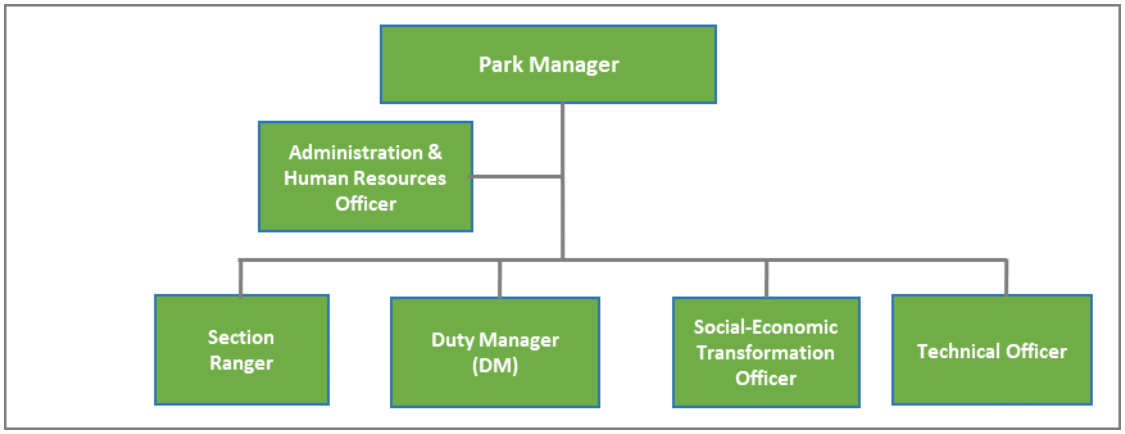


Figure 8. Bontebok National Park organogram.

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.

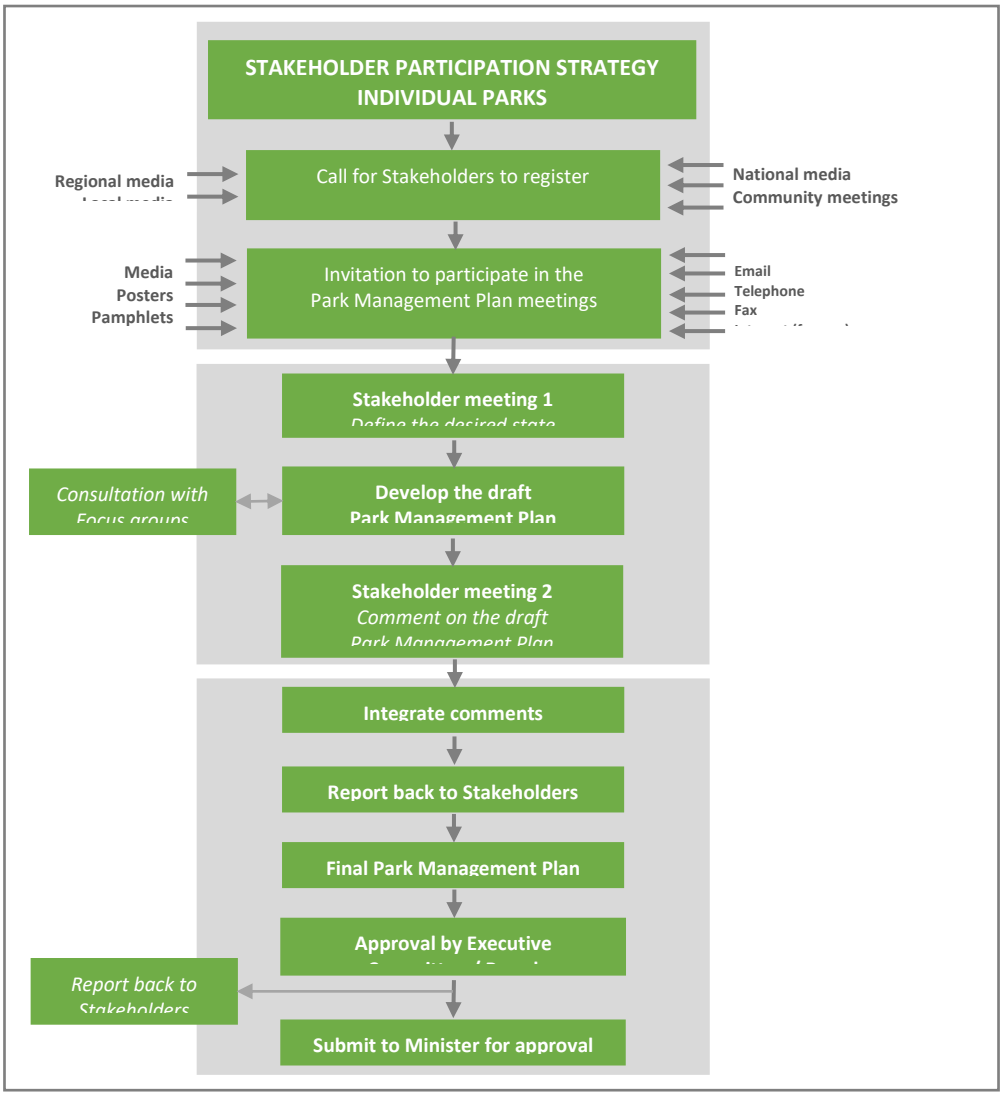


Figure 9. SANParks stakeholder participation process as applied in the BNP management plan revision process.

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

Section 5 – Purpose and vision

5.1 Purpose of the park

The NEM: PAA requires that the park be managed in accordance with the purpose for which it was declared. The original purpose of the park was not officially specified, neither in the first gazetted declaration nor in any subsequent addition. However, the initial motivation for establishing the park was to protect and conserve the bontebok. SANParks will manage the park, firstly in accordance with its organisational vision and secondly in accordance with the mission and objectives hierarchy that were derived through consultation with stakeholders, as set out in this section.

5.2 Desired state for the park

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-STEEP values - 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 two decades 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 BNP, revised in 2022, 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 18 April 2023:

MISSION

"To conserve the internationally recognised biodiversity and cultural heritage in the Overberg region as part of the Cape Floral Region Protected Areas World Heritage Site, while contributing to learning, recreation, responsible tourism and facilitating benefits and cohesion between the park and broader community."

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 the 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:

It is anticipated that the next 20 years will see an increased impact on biodiversity because of global environmental change. The biodiversity risk profile is relatively high, the danger areas being water quality, fire impact, inappropriate tourism and developments in the buffer zone. The scope for improvement in the diversity of tourism products, or to increase income generation, is relatively limited. Infrastructure development is also limited. However, despite the limitations, there is potential to increase the cultural heritage value and environmental education depending on the availability of interpretation.

5.2.4 Operating principles or values

SANParks has adopted six corporate values which serve as guiding principles shaping and governing 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.

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 2.16.

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. Bontebok in its natural habitat;
2. Lowland Fynbos and renosterveld and its associated high biodiversity and endemics as part of the Cape Floral Region Protected Areas World Heritage Site;
3. The Breede River – a large and relatively unmodified perennial lowland river as an accessible feature;
4. Cultural value associated with the Khoi heritage;
5. Favourable geographical position adjacent to Swellendam halfway between Cape Town and the Garden Route;
6. Safe outdoor recreational activities and quality tourism products; and
7. Tranquility allowing for solitude, reconnection and identification with nature; stargazing, sense of place, spectacular viewsheds.

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. Bontebok in its natural habitat	
Determinants: Comparatively large renosterveld component, dedicated established park to prevent extinction, geology, active wildlife management, Bontebok biodiversity management plan, grazing lawns, lack of predators	
Threats	
• Lamb mortality by dogs • Disease • Inappropriate development • Climate change	• Inappropriate population management (inbreeding, inappropriate sex ratio, overpopulation, overgrazing) • Poaching

2. Lowland Fynbos and renosterveld and its associated high biodiversity and endemics as part of the Cape Floral Region Protected Areas World Heritage Site	
Determinants: Geology, geomorphology, topography, climate, appropriate fire regime, herbivory, pollination, seed dispersal, UNESCO World Heritage Site listing	
Threats	
• Inappropriate internal development • Climate change (floods, droughts, heat waves, disease) • Erosion • Inappropriate wildlife management linked to lack of research and monitoring • Urban encroachment • Incompatible land uses • Poaching	• Inappropriate World Heritage Site signage • Unauthorised plant harvesting • Inappropriate fire regime • Alien and invasive species (plants / animals) • Limited expansion opportunities • Incompatible land use practices (pesticides, herbicides)

3. The Breede River – a large and relatively unmodified perennial lowland river as an accessible feature	
Determinants: Catchment, topography, geology, rainfall, climate, good water quality, collaboration between user groups, recreational activities, easily accessible	
Threats	
• Pollution • Climate change (floods / droughts) • Alien and invasive species (plants / animals) • Erosion • Overabstraction	• Lack of research and monitoring • Inappropriate land use in catchment • Impoundments • Lack of collaboration amongst user groups / neighbours

4. Cultural value associated with the Khoi heritage	
Determinants: Intangible heritage (Lang Elsie's kraal, Nouga Saree kraal), Khoi descendants, interpretation, educational programmes, archival records	
Threats	
• Loss of elders • Loss of oral history • Lack of evidence	• Loss of interest • Lack of interpretation / education

5. Favourable geographical position adjacent to Swellendam halfway between Cape Town and the Garden Route	
Determinants: Easy access via the N2 highway, signage, marketing	
Threats	
• Rerouting the N2; • Lack of maintenance of the N2; • Crime and unrest • Urban encroachment • Pollution • Lack of marketing	• Lack of collaboration and support from management agencies • Inappropriate industrial development at entrance gate • Uncontrolled man-made fires

6. Safe outdoor recreational activities and quality tourism products	
Determinants: Moderate climate, Breede River, fishing, open recreation space, swimming pool and braai sites at Die Stroom, tourism facilities, no dangerous game, tracks and trails	
Threats	
• Lack of maintenance • Limited budget • Lack of marketing • Inappropriate internal development	• Climate change (floods, droughts, heat waves) • Overpricing • Uncontrolled fire

7. Tranquility allowing for solitude, reconnection and identification with nature; stargazing, sense of place, spectacular viewsheds	
Determinants: Landscape, safety, Breede River, river sound, relatively undeveloped, habituated bontebok and red hartebeest inside unfenced camp, bird sounds, limited artificial night light, clean air	
Threats	
• Encroachment • Light pollution • Noise pollution • Wind farms in viewshed • Inappropriate change in land use • Crime	• Inappropriate industrialisation • Power boating • Increased internal tourism product development • Unruly and noisy visitors

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:

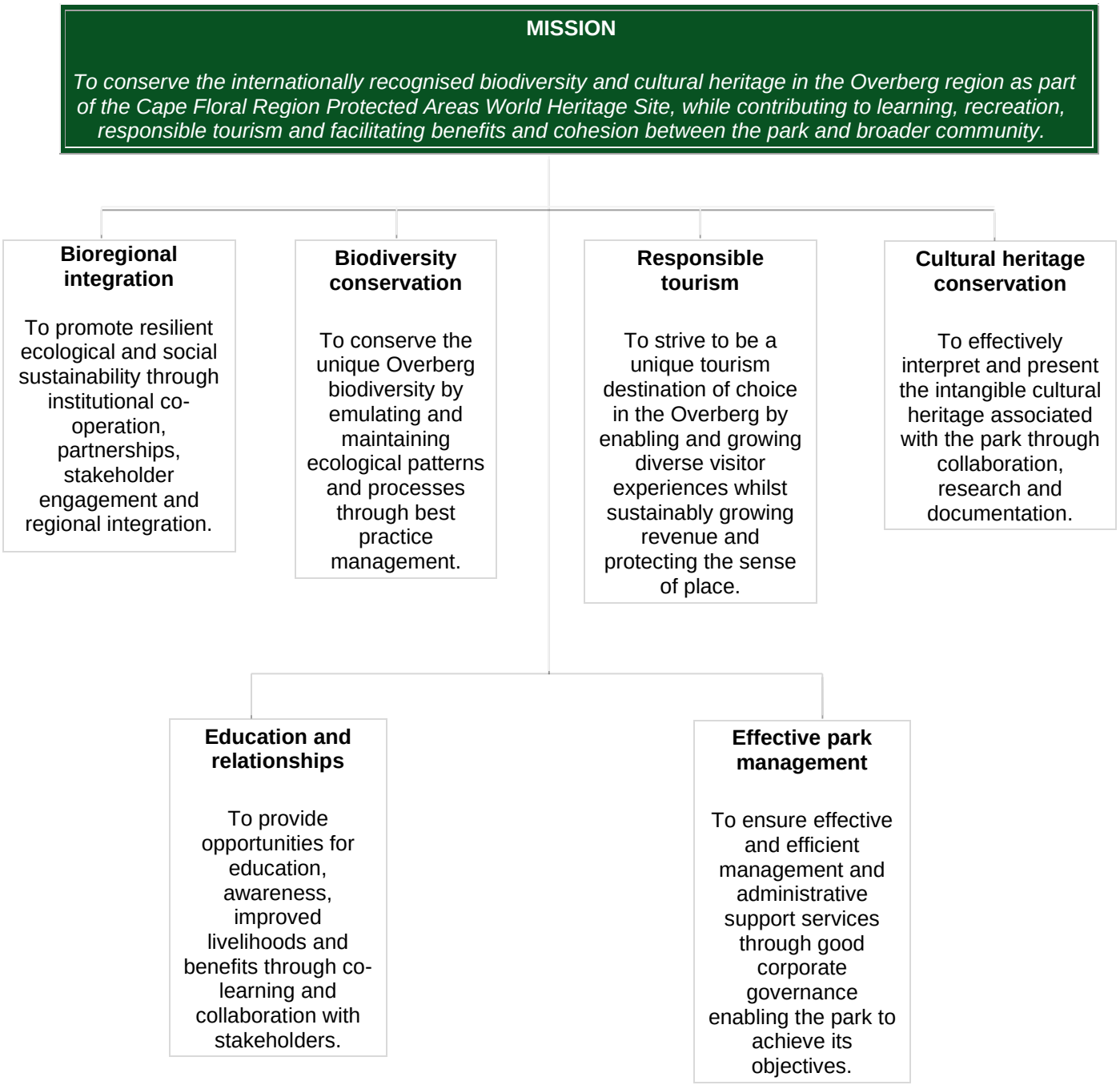


Figure 10. Park high-level objectives.

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 – 16 below.

1. **Bioregional integration high-level objective:** To promote resilient ecological linkages and minimise potential impacts that arise from incompatible land uses through engagement, regional integration and targeted park expansion

- **1.1 Park expansion objective:** To consolidate and expand the park by acquiring and supporting conservation-worthy or strategically important properties
- **1.2 Landscape integration objective:** To integrate biodiversity into local and other planning frameworks by active engagement with governmental and non-governmental partners

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

2. **Biodiversity conservation high-level objective:** To conserve the unique Overberg biodiversity by emulating and maintaining ecological patterns and processes through research and best practice

- **2.1 Fire management objective:** To maintain a natural fire regime by conducting prescribed burns and wildfire suppression where appropriate
- **2.2 Fresh water ecosystems objective:** To ensure the persistence and functioning of aquatic systems through research, monitoring, maintenance, rehabilitation and active engagement with appropriate forums
- **2.3 Species and habitats of special concern objective:** To conserve viable and representative populations of species and habitats of special concern through monitoring, research and management
- **2.4 Wildlife management objective:** To maintain genetically healthy populations of game and understand herbivory impact through monitoring and active wildlife management
- **2.5 Degradation and restoration objective:** To conserve natural habitat by rehabilitating degraded land and monitoring recovery
- **2.6 Alien and invasive species objective:** To anticipate, prevent entry, and control or eradicate alien and invasive species, where feasible, by implementing an effective alien species management plan

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

3. **Responsible tourism high-level objective:** To strive to be a unique tourism destination of choice in the Overberg by enabling and growing diverse visitor experiences 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 visitor experience within the park, through effective visitor management, interpretation and quality of facilities offered

3. Responsible tourism high-level objective: To strive to be a unique tourism destination of choice in the Overberg by enabling and growing diverse visitor experiences whilst sustainably growing revenue and protecting the sense of place

- **3.3 Service excellence objective:** To deliver relevant customer-focused service excellence, by understanding and responding appropriately to market expectations and / or preferences
- **3.4 Grow tourism revenue objective:** To sustainably grow income through tourism by providing visitors with an appropriate and diverse range of products and services, whilst protecting the tranquillity and sense of place
- **3.5 Operational effectiveness objective:** To maximise cost savings within tourism operations, by ensuring effective management and controls
- **3.6 Promotion objective:** To promote the unique natural landscapes 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 effectively interpret and present the intangible cultural heritage associated with the park through collaboration, research and documentation

- **4.1 Intangible heritage objective:** To preserve intangible heritage through identification, documentation, presentation, knowledge management and enabling access for cultural practices
- **4.2 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. Education and relationships high-level objective: To provide opportunities for education, awareness, improved livelihoods and benefits through co-learning and collaboration with stakeholders

- **5.1 Environmental education and awareness raising objective:** To promote awareness and participation in educational programmes through outreach and park-based activities
- **5.2 Collaboration and stakeholder engagement objective:** To strengthen relationships with stakeholders through engagement and collaboration
- **5.3 Socio-economic opportunities objective:** To facilitate local socio-economic opportunities through diverse initiatives

Figure 15. Education and relationships high-level objective and supporting objectives.

6. 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

- **6.1 Environmental management objective:** To strive for best practice and ensure compliance with environmental legislation through improved governance and environmental risk management
- **6.2 Risk management objective:** To establish and maintain effective, efficient and transparent risk management systems by creating an enabling environment for the management of risk
- **6.3 Financial management and administration objective:** To ensure sound financial management and administration through proficient budget management, effective internal controls and compliance to corporate governance prescripts
- **6.4 Human capital management objective:** To ensure sufficient and effective staff capacity to achieve management objectives by adhering to legislation, corporate human capital management policies and guidelines
- **6.5 Information and records management objective:** To achieve best practice in the field of information and records management by complying with the Records Management Legislative Framework and policies and thereby ensuring care of all vital records in SANParks
- **6.6 Infrastructure objective:** To maintain, upgrade and develop new park infrastructure through proper planning and efficient management
- **6.7 Safety and security objective:** To provide a safe and secure environment for both visitors and employees and to ensure the protection and integrity of natural, cultural and physical assets and resources, by implementing a Park Safety and Security Plan
- **6.8 Safety, health, environment objective:** To continuously reduce the disabling injury frequency rate through the implementation of an efficient and effective Safety, Health and Environment management system
- **6.9 Communication objective:** To build, maintain and constantly improve relations of the park by engaging and sharing information with internal and external stakeholders
- **6.10 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
- **6.11 Climate change objective:** To adapt and mitigate negative impacts of climate change through monitoring, research and implementing the SANParks climate change preparedness strategy
- **6.12 Outcomes objective:** To evaluate outcomes of management interventions related to protected area management through regular assessment

Figure 16. Effective park management high-level objective and supporting objectives.

Intentionally left blank

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 stipulation 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 4, and summarised in Table 6 below.

6.2 Synopsis of updates to the 2013 zonation

The overall pattern of use zones in the 2013 management plan has been retained, and there has been no major expansion during the 2013 – 2023 period. In some areas changes have been made to the zonation based on updated planning for the next 10 years and the updated sensitivity analysis. These changes include:

- The main change was around the location of the High Intensity Leisure (HIL) zone. The HIL zone is concentrated around the Die Stroom picnic area. This area receives high numbers of visitor traffic as a leisure area. Additionally, a swimming pool is to be developed here during the new management plan cycle, increasing the appeal of this area as a place of leisure, particularly to local residents. The area also has a parking lot and other visitor amenities.
- The office block, reception and parking area, near the current entrance gate, was previously in the HIL category, but this now been changed to the "Low Intensity Leisure" (LIL) zone. This is because this area has low visitor traffic and impact. No new developments are envisaged for this zone.
- The boundary of the zonation was extended to where the Breede River boundary is, as per the declaration gazette. This updated zonation now includes the water area from Die Stroom to the N2. This stretch of the Breede River was not assigned any zonation in 2013 and has now been assigned a LIL zonation.

The buffer zone of the park has been slightly updated:

- It has been amended to ease the outer boundary in the north of the park. The extension past Buffelsjags dam toward Suurbraak was removed as was the protrusion from the N2 to Marloth Nature Reserve. The part of the buffer zone extending down the Breede River was reduced and now ends at the road that joins Voortrekker street;
- The buffer zone was extended in the south to cater for the additional park expansion properties south of Bakleisdrif;
- Buffer zone categories have been aligned with provincial biodiversity plan (Pool-Stanvliet *et al*., 2017); and

- 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).

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

6.4 Rationale for use zones

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

Furthermore, the expectations and recreational objectives of individuals that visit the park may differ. Some individuals visit the park purely to see the wildlife and natural landscapes. Other individuals wish to experience the intangible attributes such as solitude, remoteness, wildness and serenity (which can be grouped as wilderness qualities), whilst some visit to engage in a range of nature-based recreational activities, or to socialise in a rest camp. Different people have different accommodation requirements ranging from 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 including 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); and soil sensitivity (soils that are vulnerable to erosion). In addition, the heritage value and sensitivity of the sites were examined (mostly archaeological and cultural aspects). The visual sensitivity of the landscape was also surveyed to identify sites where infrastructure development could have a strong aesthetic impact. This analysis was used to classify the appropriate use of the different areas of the park, while also assisting 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 6. Use zones and use zone characteristics for the park.

	Quiet	Low intensity leisure
General characteristics	This zone allows non-motorised access to areas which generally retain a natural appearance and character Access is not specifically controlled.	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
Experiential qualities	Wide range of activities; relaxation in a natural environment	Comfortable facilities in a relatively natural environment
Interaction between user groups	Moderate to high	Moderate to high
Types of access	Unaccompanied non-motorised access	Motorised self-drive access
Types of activities	Hiking, walking, rock climbing, where relevant non-motorised aquatic activities, bird watching, possibly mountain biking and horse riding	Motorised self-drive wildlife viewing, picnicking, walking, cycling, rock climbing, hiking, adventure activities
Types of facilities	Hiking trails footpaths, management tracks No accommodation and no tourist access by vehicle	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
Limits of acceptable change: Biophysical	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	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 Some damage to the biophysical environment associated with tourist activities and facilities will be inevitable
Limits of acceptable change: Aesthetics and recreational	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	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
Guidelines for management infrastructure	Ideally, there should be no management infrastructure in this zone	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

	High intensity leisure
General characteristics	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 and sophisticated facilities while retaining a natural ambiance
Interaction between user groups	High
Types of access	Accessible by motorised transport (car/bus) on high volume transport routes, including delivery vehicles
Types of activities	As with LIL. Additional Sophisticated infrastructure Larger, organised adventure activities (orienteering, fun runs) Dining at restaurants
Types of facilities	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 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 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	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 5, Map 5) shows the relationship between the use zoning and the summary of the biodiversity and landscape sensitivity-value analysis. This indicates that in general it has been 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 7 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 none 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 the correlation between the spatial distribution of environmentally sensitive areas and tourism orientated zones. Because there are no conservation orientated zones, all of the highly sensitive areas are within tourism orientated zones, the majority of which is in the Quiet Zone.

Table 7. Park percentage area summary 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
Tourism orientated	Quiet	54.3	64.3
	Low intensity leisure	45.3	32.4
	High intensity leisure	0.4	3.3

6.6 Overview of the use zones

6.6.1 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. It is important to note that this zone may have different interpretations in different parks and the 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 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.

Conservation objectives of the zone (Limits of acceptable change)

The conservation objective is to maintain the zone in a generally natural state, with the proviso that limited impacts on biodiversity patterns and processes are allowed to accommodate park recreational and tourism objectives. The zone should be managed within the following 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 riding and mountain bikes can be accommodated. No access for tourists by vehicle. The only roads are essential two-wheeled management tracks.

Location in park

Quiet areas were designated in the lower-use pedestrian areas. The Quiet zone makes up the majority area of the park (54%). This zone has four distinct regions, separated by LIL zones. The first Quiet zone is situated to the left of the park entrance and stretches westward to the Breede River and south to Die Stroom HIL zone. There are two "Quiet zones" in the middle of the park on either side of the tourist road running from the old park reception. The last, and largest "Quiet zone" area is in the far east of the park to the boundary of the park at Bakleisdrif.

Guidelines on management infrastructure and utilisation

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

6.6.2 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 "feel." Impacts must be mitigated by using infrastructure to direct and manage the movement of park visitors away from the more sensitive areas that may occur within this zone.

Characteristics

The underlying characteristic of this zone is motorised self-drive access, with basic self-catering facilities. Small or seasonal commercial or catered facilities can be accommodated, however, these facilities must be small and aligned to the general ambiance of the zone. Numbers of visitors are higher in the low intensity leisure zone as compared to the remote and primitive zones. Relatively comfortable facilities are positioned in the landscape retaining an inherent natural and visual quality, which enhances the visitor experience of a more natural and mostly self-providing experience. Access roads are low key, preferably gravel roads and 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 ambiance 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 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. In the BNP, this zone is extensive, over 40% of the park. It stretches along all the tourist roads in the park and includes pathways from the current entrance to the old entrance of the park and to where the Breede River can be accessed across the park for leisure related activities. Most of the park infrastructure is in the LIL, except for those associated with Die Stroom.

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 ideally 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.

6.6.3 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 where possible. When inside a park, all industrial type facilities such as laundries, abattoirs, maintenance depots and workshops, must be ideally located nearby to the park boundary or, 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 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. 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 areas are designated at the Die Stroom area, the picnic site at the Breede River. This area could potentially, in future, have increased visitors with plans to add a swimming pool. This HIL area is located approximately 2.5 km south of the main offices and reception, along the tourist road.

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) provide additional protection and guidelines for management. The only special management overlay for the park is the species of special concern conservation overlay. This overlay was designed to provide additional protection for key populations of rare and threatened species in the Quiet and LIL zones. These areas were identified to ensure that management and development activities do not result in any degradation of habitat for these species, and particularly to ensure that no loss of habitat occurs.

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 Impact 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 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. 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 Western Cape (Pool-Standvliet *et al*., 2017). From an aquatic perspective, the buffer zone are aligned with freshwater priority catchments, rivers and wetlands from the NFEPA 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 viewshed protection areas (Appendix 5, Map 6).

6.8.1 Priority natural areas

This category 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 patterns (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 (CBAs) map for the Western Cape (Pool-Stanvliet *et al.*, 2017). 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 sub-categories:

- *Other protected areas.* Protected areas managed by other agencies (e.g. Cape Nature) 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 controlled by their own NEM: PAA management plans, developments may impact on the park and park management should work with the respective mangers of these areas to ensure alignment;
- *Critical biodiversity areas* from the Western Cape CBA map (Pool-Stanvliet *et al.,* 2017). 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 Westen Cape CBA map (Pool-Stanvliet *et al*., 2017). Ecological support areas 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 Western Cape CBA map (Pool-Stanvliet *et al.*, 2017). Park management should ideally co-ordinate 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;
- Other areas of the designated Strategic water source areas (SWSA); and
- Other areas adjacent to the park where impacts on hydrological processes and water quality could affect 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 Viewshed 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.

Section 7 – Access and facilities

7.1 Public access and control

Visitors driving from Cape Town or anywhere along the south and east coast can travel via the N2 to the park. The Cape Town International and George airports are the nearest to the park that accommodate scheduled flights and have car rental facilities.

A vehicular access point to visitors is through a manned access gate and all visitors are required to report to reception about 200 m from the gate. Guests can explore the park in a vehicle, on mountain bicycle, or walking on designated tourist roads and trails. Maps are available at reception. There are four management gates on the northern boundary and two on the eastern boundary.

Only non-motorised boats are permitted on the river.

Park management may from time-to-time close roads for certain types of vehicles, depending on road conditions. Motorbikes are allowed on the entrance road only.

7.2 Areas with restricted access

The management tracks within the park are for management purposes only and indicated with no-entry signs throughout the park. The Lang Elsie's rest camp is for the exclusive use of overnighting guests. Non-vehicle activities could be allowed i.e. mountain biking or walking.

7.3 Airfields and flight corridors

There is an unregistered paved helipad (S28°35.707' E 020°20.392'), close to the technical workshops, for use by SANParks aircraft only. There is a municipal airfield adjacent to the park's northeastern boundary.

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 5, 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 Swellendam airfield (FASX) flight corridor**: The flight corridor has been established for runway 15/33 to accommodate departing and arriving aircraft as well as aircraft in the circuit.

7.4 Administration and other facilities

The facilities listed in Table 8 below are utilised for operational purposes enabling the park to fulfil its legal mandate. Map 7 in Appendix 5 shows all the infrastructure in the park.

Table 8. Current administrative infrastructure in the park.

Infrastructure	Current status	Zone
Administrative office building	Operational	LIL
Boundary fence of 20 km		Various
Carport		LIL
Laundry / storerooms		LIL
Main entrance gate		LIL

Infrastructure	Current status	Zone
Management road network of 36 km	Operational	Various
Staff houses		LIL
Workshop		LIL

7.5 Visitor facilities

Visitor facilities, including all non-commercial facilities and points of interest available to visitors, are set out in Table 9 below.

Table 9. Visitor facilities and points of interest in the park.

Infrastructure / visitor sites	Current status	Zone
Designated fishing spots, at Die Stroom, next to Ou Tuin and at Lang Elsie's kraal rest camp	Operational	LIL
Die Stroom day visitor site, event facility and picnic area		HIL
Tourism road network of 30 km		LIL
Viewing deck close to the starting point of the trails		LIL

7.6 Commercial facilities

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

7.6.1 Accommodation

Accommodation facilities in the park are currently limited. Existing facilities include those listed in Table 10, below.

Table 10. Accommodation facilities available in the park.

Infrastructure	No of units	Current status	Zone
Chalet	10	Self-catering - serviced - economy accommodation	HIL
Family cottage	4	Self-catering - serviced - economy accommodation	HIL
Camping	36	Self-catering - budget accommodation	HIL

7.6.2 Public private partnerships

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

7.6.3 Retail and other facilities

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

7.6.4 Activities

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

- Canoeing – unguided;
- Hiking trails - unguided;
- Mountain bicycle routes on existing tourist roads and dedicated mountain bike tracks – unguided;
- Self-drive game viewing - unguided;
- Participate in annual Around the Pot mountain bike race.

7.7 Cultural heritage sites

There are two cultural heritage sites accessible to visitors namely: the Ou Tuin and Lang Elsie's kraal.

7.8 Community use

Community members access the park to experience their natural and cultural heritage and to gain more knowledge regarding the park ecology and the broader environment. Permits are issued to members of the local community and visitors to catch alien fish species in the Breede River.

7.9 Mining

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

7.10 Servitudes

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

Intentionally left blank

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 5, 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 of expansion is to create a park that represents under-protected ecosystems, climate change linkage priorities and important catchments and wetlands of the Breede River system. The park contains some of the last remaining intact vegetation representative of endangered lowland fynbos vegetation types (Swellendam Silcrete Fynbos and Cape Lowland Alluvial Vegetation) and is considered of global conservation importance (Cowling *et al.,* 1986). As such, the consolidation of the park remains important for SANParks to protect the remaining fragments of the lowland fynbos, despite the fact that the park does not conform to internationally accepted norms for a national park because of its small size (Dudley, 2008). Expansion of the park to its 6,789 ha desired state, from the existing 3,393 ha, would see an addition of one endangered and under-protected ecosystem type not currently found in the park. The landscape is highly fragmented, and all the natural remnants close to the park are identified as either CBA or Ecological Support Area (ESA). The expansion of the park is highly limited due to the agricultural landscape within which it occurs and the lack of remaining natural veld in the area. The National Biodiversity Assessment (2018) highlighted that all of the four vegetation types present in the park are endangered, with very low levels of protection. (Skowno *et al*., 2019). The expansion footprint supports five known threatened and endemic plant and five threatened bird / animal species.

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

- To consolidate and expand the park by acquiring and supporting conservation worthy or strategically important properties;
- Diversifying the tourism experience beyond the iconic bontebok, as an integral part of a broader ecological and cultural landscape;
- To 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

- Developing a park that is socially sustainable.

Climate change is a critical issue for park expansion. The key issues that need to be addressed are corridors / linkages and their importance for allowing species, ecosystems and ecological processes to operate at sufficiently large scales under different climate change scenarios. 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 on ecological connectivity in the landscape is important, hence the increase in the expansion footprint to the south, however, limited options in the landscape due to its fragmented character - this is critical to the long-term climate change adaption capacity of the park. The park is isolated from other protected areas due to the highly fragmented landscape. The closest protected area is the Marloth Nature Reserve, effectively less than 5 km away, but effective connection to the reserve through protected area expansion, is currently very limited given the landscape fragmentation and transformation. However, from a long-term landscape linkage perspective, the key priorities are the southern expansion sections which includes some SPARC identified priorities. The landscape near the park does not have a lot of high priority climate change areas, due to the degree of fragmentation of the landscape. However, a consolidated park would be better able to adapt to expected climate change impacts, even for a park as small as BNP.

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.

Critical Biodiversity Areas in the Western Cape biodiversity plan form an important basis for park expansion (Pool-Standvliet *et al.*, 2017). Together with protected areas, CBAs are required to meet biodiversity targets for ecosystems, species and ecological processes, as identified in a systematic biodiversity plan (SANBI, 2016). The Western Cape CBA Map is divided into CBA 1 and CBA 2 areas. The former represents natural landscapes, with high irreplaceability or no flexibility for meeting biodiversity targets elsewhere. If these are lost, then targets will not be met. Critical Biodiversity Area 2 sites in the Western Cape represent near-natural landscapes with high irreplaceability but would require rehabilitation intervention, as they are degraded landscapes or sites.

The park's expansion footprint strongly focusses on the opportunities for securing CBAs adjacent to the park, however, because of the highly fragmented landscape within which the park is situated, options for expansion are limited. There are some CBAs 2 and additional ESAs, which are crucial for maintaining and supporting the function of CBAs and protected areas. Importantly, the whole expansion footprint is identified in the NPAES as priority focus area (DEA, 2016). Due to the limitations posed by the agricultural and urban activities to the north, east and west from the main section, the only option for broader expansion is toward the south / southeast of the park, to intact vegetation / CBAs adjacent to the Breede River.

Additionally, the expansion would secure nationally identified Freshwater Ecosystem Priority Area (FEPA) rivers, wetlands and catchments, associated with the Breede River system (Nel *et al*., 2011a), especially in the southern expansion.

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 is not considered lightly and is only 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 offer additional products to visitors. The current development plan focuses on ways to attract additional visitors to the park. Currently the park is seen as a seasonal destination. The main tourism focus of park management during the implementation phase is to enhance the existing tourism offerings and where possible, new development will be identified and implemented. To improve operational effectiveness, it is envisioned to convert the old reception building into staff housing.

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 and compliance to legislative prescripts.

From a TR 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 coverage around the park is in a fairly good condition, however, there are certain areas where it needs to be improved. This includes radio network, data network, cellular access, as well as the installation of free and metered Wi-Fi.

9.4 Service supply routes

The main service route to the park is the N2 national tar road.

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

No new administration facilities are required.

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
Upgrade of main entrance gate	Existing	LIL	High	High
Conversion of old reception building to staff housing	Existing	LIL	High	Medium

Infrastructure	Status	Zone	Priority	Probability
Conversion of old garages to tourism stores	Existing	LIL	High	Medium
Upgrade of northern boundary fence	Existing	LIL	High	Medium

9.5.3 Commercial facilities and activities

There are a limited number of commercial activities and products that could be developed in the park, or that are currently in operation that could be optimised through either expansion or upgrading, 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 3).

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
Swimming pool at Die Stroom	New	HIL	High	High

9.5.3.2 Public private partnerships

No public private partnerships have been identified.

9.5.3.3 Retail and other facilities

No retail and other facilities have been identified.

9.5.3.4 Activities

Leisure activities provide a mechanism for income generation, with the potential for community development and without the high capital investment required for accommodation. Key challenges regarding provision of leisure activities in future will be diversity of offering, customer demand and increasing the 'adventure' element of activities in order to engage the younger markets and markets with a high disposable income. Activity development will need to take the visual impact of each activity into account, in order to ensure the unique selling proposition of remoteness of the park is maintained. Certain activities will also need to cater for different product grades and visitor experience levels. No new activities have been identified.

9.5.4 Cultural heritage sites

There is a need to enhance the interpretation of the cultural heritage sites in the park. Signage and interpretative material for all the identified sites will be developed accordingly. No infrastructure development has 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 to the core values and inputs from stakeholders on which they have been based. This approach conforms to the requirements of the NEM: PAA and the 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 Regional 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 this programme is to promote resilient ecological and social sustainability through active engagement with governmental and non-governmental partners, institutional co-operation, stakeholder engagement and regional integration.

The park is an integral part of and contributor to the region's safe recreation, offering tranquillity, tourism and cultural heritage, and its conservation efforts can positively influence processes in its buffer zone and the eastern part of the Overberg region by strengthening integration of activities such as rehabilitation and enhancement of natural processes and critical biodiversity areas. This is achieved by partnering with stakeholders on aspects such as spatial planning, sustainable tourism, development, limit the impact of pollution and the industrial zone on the park, education, innovation, and landscape initiatives.

The park is part of the Langeberg Cluster of the internationally recognised CFRPA WHS, along with various CapeNature reserves, of which Marloth Nature Reserve is a close collaborator of the park.

The park falls within the Swellendam municipal area 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 EPWP programme (Working for Water) and other conservation management programmes such as LANDCARE, the Breede Gouritz Catchment Management Agency (BGCMA), and the Breede-Sonderend Catchment Collaborative including the Upper Breede Catchment Environmental Group. The park has established social linkages with communities through social programmes recognising the rich history and vibrancy of the communities of the greater Overberg. 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.

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 more than 99.5% of the park classified as natural or semi-natural cover. This natural or semi-natural land cover has remained stable between 1990 and 2020, with no noticeable land cover conversion noted within the park's current footprint. Furthermore, land cover in the 10 km buffer around the park is largely transformed with only 37.7% of the 10 km buffer classified as natural or semi-natural. The 62.3% transformed land cover in the park's 10 km buffer comprises mostly of agriculture (60.9%), but also include some built-up areas, mostly as part of the town of Swellendam (1.4%). Although most land cover conversion in the 10 km buffer around the park happened prior to 1990, there was quite a considerable increase in conversion in the years since 1990, which was much higher than around most other national parks or even land cover transformation rates at a national scale (from 57.32% transformation in 1990 to 62.3% transformation in 2020). The only natural or semi-natural vegetation remaining around the park seems to be in the mountains to the north, and slivers of riparian vegetation. The riparian zones are very thin slivers around the smaller streams, with a slightly broader zone around the perennial Breede River. The nearby town of Swellendam has also significantly increased in areal extent on land that was previously covered by agricultural activities or was natural or semi-natural. Although the park is a rural park, it is only rivalled by Table Mountain National Park in terms of the level of land cover transformation surrounding the park. As such, it is a classic example of a conservation island in a sea of transformation.

The park is continually engaging and collaborating with authorities, partners and stakeholders to ensure that potential impacts emanating from developments that might negatively affect the park are mitigated. With all the developmental pressures outside the park, the park is commenting on all the EIA development applications, with the support from scientific services and park planning.

Various organisations, forums and agencies are operating within the landscape, amongst others, the Greater Overberg Fire Protection Association (GOFPA), BGCMA, heritage agencies, and private conservation areas (Swellendam conservancy, within and around the town). The park is either part of, or actively engages these organisations, whilst also serving on several municipal and district level structures. Similarly, these organisations serve on the Park Forum of the park. 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 Swellendam Local Municipality and greater Overberg area.

This underscores the importance of the park's continued active engagement and collaboration with authorities, other stakeholders and partners of the park to ensure important bio-regional aspects are addressed and potential impacts on the park are mitigated. 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.

Through continued collaboration and integration at a local and district level, biodiversity issues, threats, pressures, and opportunities related to the park, such as preventing urban creep and illegal land invasion, enhancing alien clearing, limiting the impact of pollution and the industrial zone, and protecting important ecological processes and ecosystem services, can effectively be addressed.

This programme links with high-level objective 1 and objective 1.2 on page 46. To achieve the purpose of this programme, the actions listed in the table below will be implemented.

BIOREGIONAL INTEGRATION PROGRAMME					
High-level objective: To promote resilient ecological linkages and minimise potential impacts that arise from incompatible land uses through engagement, regional integration and targeted park expansion					
Objective: To integrate biodiversity into local and other planning frameworks by active engagement with governmental and non-governmental partners					
Sub-objective	**Actions**	**Responsibility**	**PoE**	**Timeframe**	**Reference**
To conserve systems and processes within the buffer zone	Collaborate with relevant structures by communicating, participating with and contributing to actions and activities.	PM, SET Officer, PPD	Minutes of meetings	Ongoing	Stakeholder engagement plan document
	Identify and map ecological corridors and buffer zones for conservation according to national criteria	SS, PPD, PM, SR	Map of areas	Year 1	DEA buffer zone policy
	Implement actions that promote conservation outcomes in buffer zone and corridors as agreed for the FPA, CMA, SDF and IDP	PM, PPD, SS	SDF, IDP, FPA, CMA documentation	Ongoing	Stakeholder engagement plan document
To mitigate external threats and pressures to and on the park	Identify possible regional threats, impacts and influence from any activities on the biodiversity of the park including developments, land use changes, etc.	SR, PM, PPD, SS	List of threats	Ongoing	
	Participate in IDP and SDF processes to influence decisions	PM, PPD, HODs	Minutes of meetings	Ongoing	IDP/SDF

LANDSCAPE INTEGRATION PROGRAMME					
High-level objective: To promote resilient ecological linkages and minimise potential impacts that arise from incompatible land uses through engagement, regional integration and targeted park expansion					
Objective: To integrate biodiversity into local and other planning frameworks by active engagement with governmental and non-governmental partners					
Sub-objective	**Actions**	**Responsibility**	**PoE**	**Timeframe**	**Reference**
To mitigate external threats and pressures to and on the park	Engage with and submit comments to relevant forums and participate in EIAs, scoping, etc.	PM, SR, PPD	Scoping, EIA reports	Ongoing	
	Plan and implement appropriate interventions in response to pressures with relevant parties	PM, SET, PPD	Minutes of meetings, plans	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

10.2.2 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 rational for this programme can be found in section 8 on page 68.

The expansion programme is in full congruence with SANParks accepted biodiversity values (SANParks, 2006) and is aligned with the SANParks Land Inclusion Policy (2020). The ecological aspects of the park's mission promote the park as an integral part of a wider functional land use mosaic which delivers sustainable ecosystem services (emphasis on water), to maintain the natural and cultural heritage of the park for the benefit of all, especially local communities. Important heritage sites have been identified and integrated to ensure the conservation of this region's cultural resources.

Expansion is constrained by changes in overall landcover and landscape fragmentation. 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-, medium- and long-term extensions of the expansion footprint include:

- Short-term northern consolidation. Only one property, Erf 1, around 20 ha, is currently a short-term priority in both the northern consolidation and for the park as a whole. One vegetation type is present on this property, namely Swellendam Silcrete Fynbos;
- Medium- and long-term northern consolidation. The medium (241 ha) and long-term (268 ha) consolidation, while small, also comprises of predominantly Swellendam Silcrete Fynbos;
- Medium-term southern consolidation. The medium-term southern consolidation is approximately 246 ha and consists only of intact Eastern Rûens Shale Renosterveld; and
- Long-term southern expansion. The long-term southern expansion is approximately 2,620 ha in size and is the largest expansion section for the park. This section consists of patches of Eastern Rûens Shale Renosterveld and Rûens Silcrete Renosterveld. Some of these properties will require sub-division as they have agricultural fields and natural areas. Both ecosystem types are endangered and assessed as not protected.

The expansion and consolidations are 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 lower-level plan outlining the rationale and operational approach supports this programme. This programme links with high-level objective 1 and objective 1.1 on page 46. To achieve the purpose of this programme, the actions listed in the table below will be implemented.

PARK EXPANSION PROGRAMME					
High-level objective: To promote resilient ecological linkages and minimise potential impacts that arise from incompatible land uses through engagement, regional integration and targeted park expansion					
Objective: To consolidate and expand the park by incorporating and supporting conservation-worthy and strategically important properties					
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	Expansion LLP
	Target the incorporation of ±3,400 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, SR, 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 the SANParks and 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 Fire management programme

The purpose of this programme is to provide guidance on fire management of fire-dependent vegetation types (fynbos, fynbos ecotones and renosterveld) in the park and the protection of habitat types not driven by fire (forest, thicket, sensitive wetland types) and of human life and infrastructure.

The park is legally obligated to promote fire safety and protect infrastructure and lives. The National Veld and Forest Fire Act (Act 101 of 1998) stipulates that landowners must construct firebreaks around their properties to prevent veld fires from either spreading from or into their properties. Furthermore, personnel who are tasked with working with fire are expected to be appropriately equipped and trained to deal with fires. The park is also a member of the GOFPA. The GOFPA consists of conservation agencies and private landowners. Its primary objectives are to empower local communities in assisting them to become more aware of the risks of fire, capacitate them to act proactively to reduce the hazards and vulnerability of assets, and allow them to act as a first response to fire emergencies. Fires in the park, whether planned or unplanned, were historically caused primarily by humans.

The vegetation of the park can be regarded as a fynbos-renosterveld mix characteristic of boulder scree and conglomerates, rather than true renosterveld, which generally occurs on shales (Rebelo, 1988). Accordingly, Rebelo *et al*. (2006) classified the vegetation of the park as Swellendam Silcrete Fynbos, considering it a poorly known vegetation unit exhibiting floristic features of both fynbos and renosterveld. Renosterveld is the most altered vegetation type of the Cape Floral Kingdom with 89% of Overberg Coast Renosterveld having been transformed largely by agriculture (Moll & Bossi, 1984; Kemper *et al*., 1999; Pressey *et al*., 2003). Similarly, Suurbraak Grassy Fynbos is 61 % transformed (Pressey *et al*., 2003). Both these lowland vegetation types therefore are of extreme conservation importance (Cowling *et al*., 1999).

Fynbos and renosterveld are fire-maintained ecosystems and the effects of fire on species composition, vegetation structure and successional patterns depend on the frequency, intensity and season of fire (Kruger & Bigalke, 1984; Van Wilgen *et al*., 1992). Most work on post-fire succession has been conducted in mountain fynbos in the wetter parts of the biome (Kruger & Bigalke, 1984; Cowling *et al.*, 1997) and very little is documented on appropriate fire regimes in fynbos lowlands, and in particular, renosterveld.

Fire regimes according to which fynbos should be managed are mostly determined by the serotinous (e.g. Proteaceae) component of the vegetation. A general rule to determine if fynbos is sufficiently mature to burn is that 50% of Proteas *Protea repens* should have flowered three to four times before the next burn. This period should be roughly equal to the stage where the whole population has flowered once (Kruger & Lamb, 1979). For the fynbos communities of the park, Vlok (in litt. 1991) recommended burning at veld age not less than 11-12 years. On the other hand, fire cycles should not exceed the lifespan of reseeding plants (ca. 40 years). The season of fire that achieves optimal recruitment of fynbos is late summer to early autumn (i.e. February / March) (Midgley, 1989) and fires need to be hot in order to stimulate substantial seed germination and seedling establishment (Bond *et al*., 1990). The natural fire season (late summer to early autumn) usually has weather associated with higher intensity fires.

Similar to fynbos, fire cycles in renosterveld are also determined by the long-lived, non-sprouting plant species (e.g. *Erica* spp., *Aspalathus* spp.) and should not be more frequent than every six to eight years (J.H.J. Vlok in litt. 1984). According to De Villiers *et al*. (2005) the optimum fire cycle for renosterveld in moderate rainfall areas (400 mm/annum; BNP mean = 511 mm) may be in the order of once every 10-15 years, but historically it is likely to have been more random. Renosterveld often burns in patches (as does fynbos) and this aspect is considered to be important for maintaining biodiversity and ensuring system persistence (De Villiers *et al*., 2005). Autumn would have been the normal fire season in South Coast renosterveld in pre-settlement times (Van Wilgen 1984 cited in Cowling *et al*., 1986). Evidence suggests that autumn (February to April) fires in South Coast renosterveld would also be the most effective way of eliminating shrubs and promoting grassiness (Cowling *et al*., 1986).

Although an appropriate fire regime, in terms of frequency, season, intensity and size, is very important in fynbos conservation management, it is worth mentioning that some variability in the fire regime is also required. A block-burning system allows for variability, and in combination should create a patchy landscape with a variety of habitat structure- and age-classes, thereby contributing to overall diversity and species richness (Bond *et al*. 1995; De Villiers *et al*. 2005). Due to its small size, any fires that enter the park are immediately attendded to.

Grazing and fire are important determinants in renosterveld ecosystems (Boucher, 1995; McDowell, 1995; Krug *et al*., 2004; Rebelo *et al*., 2006). Moreover, these factors interact in their effects on the vegetation (Novellie, 1987; Archibald *et al*., 2005). The interaction between fire and grazing may also affect the relative

abundance of grasses versus shrubs – on the one hand fire is suggested as a management tool to promote grassiness (as was done at the park), on the other hand regular burning followed by intense grazing is thought to lead to the destruction of the grass sward and a thickening up of shrubs (Cowling *et al*., 1986; Rebelo, 1995; Raitt, 2005; Radloff, 2008). For these reasons, it was recognised throughout the park's management history that the concentration of grazing animals should not be excessive and should be properly distributed in space and time. It was therefore customary to burn a sufficiently large area at any one time, and to burn a new area every year (Novellie, 1984). At the same time the maximum stocking rate for bontebok was set at 200 in the park's first management plan (Robinson *et al*., 1981). Extending the fire interval to favour plant diversity rather than grazing would result in reduced availability of newly burnt veld for bontebok and would have to be compensated for by a reduction in bontebok stocking rate (Novellie, 1989). It would also not be possible to burn a sufficiently large area every year if the fire interval is prolonged. A limited strip of riparian vegetation occurs within the park along the Breede River. Burning is not prescribed for this vegetation type as it is regarded to be largely fire-free under natural conditions. However, dense *Vachellia karroo*-dominated thicket has developed and expanded over time because of fire having been artificially excluded since the establishment of the park from this zone between the river and tourist road. Limited burning of the fringes of the *V. karroo* thicket should not be suppressed in a completely artificial way. Alternatively, experimental burning of small patches within this zone may be considered.

To maintain patchiness in the landscape and maximise biodiversity, it is important that there is a degree of spatial and temporal variation in all the elements of the fire regime (frequency, season, size and intensity). Implementation of the fire management plan should thus not be too rigid, but instead retain flexibility and adaptability to allow for variation. For example, some unburnt patches following a burn, add to habitat diversity and thus need not be of concern. Similarly, an accidental / natural fire outside the prescribed season does not have to be considered a disaster, provided it is of limited extent.

Our understanding of herbivore-plant dynamics is insufficient to allow accurate prediction, and so it is not possible to determine the population levels of the different ungulate species that may be optimal from the point of view of achieving the conservation objectives. Instead, we follow a process of learning by doing, known as adaptive management. Ranges of permissible population levels are set on the basis of the best available information, whilst adhering to the precautionary principle. The vegetation and distribution of large herbivores are then monitored (see Wildlife Management programme) to check whether these ranges are compatible with the objectives. The bontebok population is the main consideration in terms of stocking rates, as this species makes up the bulk (ca. 50 %) of the total herbivore loading. The relatively large bontebok population further results in a herbivore complement heavily biased towards concentrate grazers. To burn at an acceptable frequency while appropriately distributing grazing pressure in space and time, it was suggested that the bontebok population be reduced to between 130 and 170 animals (Kraaij, 2004).

Veld fires can also have a negative impact on the environment and / or human settlements and therefore, veld fire risk management involves the determination of the level of risk posed by these fires to assets and establishing strategies to protect assets from the adverse effects of veld fires. The purpose of veld fire risk management is to protect the community and its values (which could be social, economic or environmental) from the adverse effects of veld fires. The risk management strategies must be appropriate to the level of risk determined within the GOFPA and must match the options available for managing the risk.

This programme links with high-level objective 2 and objective 2.1 on page 46. To achieve the purpose of this programme, the actions listed in the table below will be implemented.

FIRE MANAGEMENT PROGRAMME					
High-level objective: To conserve the unique Overberg biodiversity by emulating and maintaining ecological patterns and processes through best practice management					
Objective: To maintain a natural fire regime by conducting prescribed burns and wildfire suppression where appropriate					
Sub-objective	**Actions**	**Responsibility**	**PoE**	**Timeframe**	**Reference**
To update prescribed burn schedules and maps by collating historic data and implementation	Collate and consolidate historic data	SS, PM	Historical data, information	Year 1	
	Develop field age fire map	SS, PM	Map	Year 1	
	Conduct prescribed burning according to the established schedule	PM, SS	Burn scar map	As required	
	Conduct post-fire mapping of both wildfires and prescribed burns	PM, SS	Map	As required	
	Conduct post-fire maintenance of sites including secondary fire occurrence and erosion control	PM	Incident reports	As required	
	Record and file all fire incidence reports and send to scientific services for data management	PM, SS	Incident reports, data management	As required	
	Monitor and evaluate post fire vegetation regeneration	SS, PM	Field report	As required	
To ensure an adequate level of fire safety management through training, partnerships and engagements with stakeholders	Maintain firebreaks and maintain all fire related equipment	PM	Inventories, photos, asset register	Annually	
	Train staff in firefighting, safety and protection procedures	PM	Training register	Annually	
	Preparedness and actively participate in wildfire fighting and liaising with the Fire Protection Association and associated programmes	PM	Reports, minutes of meetings	As required	
	Liaise with neighbours and fire services department to reduce fire risks and awareness. Actively engage as a member of the GOFPA	PM	FPA, emails, letters, EE register	Annually	SET
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

10.3.2 Freshwater ecosystem programme

The purpose of the freshwater ecosystem programme is to have an improved understanding of the freshwater ecosystems within the park through collaborative participation, research, monitoring and effective management to ensure the persistence of freshwater ecosystems and associated biota in the park. This programme deals mainly with surface water (i.e. rivers), groundwater and wetlands 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.

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 CBD's post-2020 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 South African National Biodiversity Institute -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 Freshwater Ecosystem Priority Areas (FEPAs), comprise 22% of South Africa's river lengths and 38% of wetland areas (Nel *et al*., 2011). These targets would be the start towards achieving 30% by 2030 as stated in the paragraph above.

The Department of Water and Sanitation 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.

The location of the park within the winter rainfall region and broad vegetation types sets the scene for the freshwater ecosystems inside the park. A small section of the Breede River is conserved inside the park and this is the main river system. The amount of water, ecological health and recreational potential of the river are influenced by various activities, mainly agriculture, upstream of the park (River Health Programme, 2011).

The park conserves three river ecosystem types. Water flow in the river is continually monitored by DWS at a gauging weir station H7H006 upstream of the N2 bridge. The park has a historical river health programme monitoring site established at Die Stroom. Unfortunately, there are gaps in the monitoring data due to lack of capacity and funding from the implementing agencies. In 2019 SANParks Scientific Services embarked on seasonal monitoring of freshwater macroinvertebrates using the SASS 5 method (Dicken & Graham, 2000) and this takes place annually. The river is used extensively for recreational purposes such as swimming, kayaking, and fishing. As such, monitoring water quality for recreational use is important.

The wetlands inside the park were mapped and classified into wetland hydrogeomorphic types according to Ollis *et al*. (2013) during 2015 and 2016 and updated during 2023 (Fisher *et al*., In Prep). The park has eight wetland ecosystem types within its border and all eight have an endangered conservation status. Most of the wetlands do not have open water bodies to measure water quality and quantity, but ecosystem health monitoring will be implemented in the wetland ecosystem types found within the park. Sections of the Breede River and certain wetlands have been rehabilitated to restore ecological functioning. However, the park requires a plan for further rehabilitation.

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.

This programme links with high-level objective 2 and objective 2.2 on page 46. To achieve the purpose of this programme, the actions listed in the table below will be implemented.

FRESHWATER ECOSYSTEM PROGRAMME					
High-level objective: To conserve the unique Overberg biodiversity by emulating and maintaining ecological patterns and processes through research and best practice					
Objective: To ensure the persistence and functioning of aquatic systems through research, monitoring, maintenance, rehabilitation and active engagement with appropriate forums					
Sub-objective	**Actions**	**Responsibility**	**PoE**	**Timeframe**	**Reference**
To improve basic knowledge of freshwater ecosystems within the park through research and monitoring	Update national river and wetland databases	SS, SR, PM, external researchers	Updated GIS layers	Ad hoc	
	Monitor river health of the Breede River inside the park	SS, SR	SASS 5 data, data entered on Freshwater Biodiversity Information System	Annual	
	Develop river monitoring for recreational use programme with relevant stakeholders	SR, PM, SS, Department of Health, DWS, External Researchers	River monitoring for recreation programme for BNP	Year 2	
	Implement wetland health monitoring programme	SS, SR, PM	Updated data to future NWM and NBA	Year 2, annually	
To rehabilitate freshwater ecosystems through structural interventions	Prepare riverbank erosion report for the Breede River at the Lang Elsies Kraal picnic site	SS, BSP, SR, TO	Report for riverbank erosion	Year 1	Internal report
	Implement recommendations of the riverbank erosion report	PM, BSP, SR, TO	Construction work	Year 10	Project report

FRESHWATER ECOSYSTEM PROGRAMME					
High-level objective: To conserve the unique Overberg biodiversity by emulating and maintaining ecological patterns and processes through research and best practice					
Objective: To ensure the persistence and functioning of aquatic systems through research, monitoring, maintenance, rehabilitation and active engagement with appropriate forums					
Sub-objective	**Actions**	**Responsibility**	**PoE**	**Timeframe**	**Reference**
To engage with relevant stakeholders to raise awareness of freshwater ecosystems	Participate in River management Forums- aim to participate in high-level inter-governmental and transboundary forums	PM, SS	Attendance registers	As required	
	Engage with DWS to receive water flow data for the Breede River at station H7H006 upstream of N2 bridge	SS, PM	Data files	Annually	Climate Change Programme
	Incorporate awareness of freshwater ecosystems into education and outreach programmes and activities	SET, SS	Organised education and outreached 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, HODs	Assessment tool	Annually	SOP for the assessment of the implementation of management plans

10.3.3 Species and habitats of special concern programme

The purpose of this programme is to guide the monitoring of SSC (for the purpose of this programme, SSC is inclusive of species and habitats), and to support effective management and successful conservation of these SSC.

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 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 species that are endemic, threatened, locally threatened, in decline, reintroduced or of a management concern (Rebelo *et al*., 2011). Sensitive species, which are species at risk of being harvested, are also considered species of special concern.

Global environmental change drivers, such as habitat change or encroachment, excessive resource use, climate change, pollution, disease and invasive species, play key roles impacting on species becoming threatened and then listed as SSC (Janssen *et al*., 2006) including habitats. Species and habitats of special concern are defined as being threatened or endangered due to a combination of threats or require special attention. This applies to species, sub-species, populations and habitats that are threatened by biological or anthropogenic-induced biological threats and consequently require protection (Janssen *et al*., 2006). Important factors that can threaten the persistence of species are (1) limited availability of suitable habitat, (2) invasive alien species and (3) variable climatic conditions.

The park was initially stablished to save the last few remaining bontebok from extinction. The vegetation in the park, which comprises of renosterveld, and lowland fynbos has become a conservation priority owing to

near complete habitat destruction elsewhere (Watson *et al*., 2011; Novellie & Kraaij, 2010). The park is part of a biodiversity hotspot in the Cape Floristic Region and important in the conservation of viable genetic populations of large herbivores in these habitats. Although it is a small park, it is the last refuge of renosterveld associated species assemblages in a largely transformed surrounding environment, and the park plays an important role in conservation of these species. Table 13 below summarises the number of Red Data list species occurring in the park.

Number of Red Data list species occurring in the park is listed in Table 13 below.

Taxonomic group	Specie number
Birds	13
Fish	2
Mammals	4
Plants	62

Management actions will concentrate on identifying SSC, locate and map their populations, monitor and collect baseline data through annual field surveys of flora and freshwater macro-invertebrates for river habitat monitoring to maintain viable populations of SSC to meet SANParks' mandate and obligations in terms of international conventions. The main challenge of large fauna management is the small size of the park. Herbivore numbers (including SSC such as bontebok and Cape mountain zebra) will have to be actively managed, firstly, to ensure healthy genetic populations of herbivores, and secondly, to prevent overgrazing and degradation of the flora component including sensitive habitats and as part of the Cape Floristic Region with many flora species of high conservation value. The monitoring of fauna species will be limited to large herbivores by way of ground surveys (especially for bontebok, Cape mountain zebra and grey rhebok) for monitoring population dynamics and species-specific reporting purposes.

This programme links with high-level objective 2, and objective 2.3 on page 46. To achieve the purpose of this programme, the actions listed in the table below will be implemented.

SPECIES AND HABITATS OF SPECIAL CONCERN PROGRAMME					
High-level objective: To conserve the unique Overberg biodiversity by emulating and maintaining ecological patterns and processes through research and best practice					
Objective: To conserve viable and representative populations of species and habitats of special concern through monitoring, research and management					
Sub-objective	**Actions**	**Responsibility**	**PoE**	**Timeframe**	**Reference**
To improve our knowledge and understanding of the interactions between species and habitats of BNP	Identify, prioritise, locate and continue data base of plant and animal SSC	SS, SR	Priority list data base	Year 1, Ongoing	GBIF, Brahms, Flora of BNP
	Identify and prioritise habitats of special concern	SS, SR	Priority list	Year 1, Ongoing	
	Schedule field surveys days for monitoring of target fauna of SSC	SR, SS	Field reports, census report, SSC data	Ongoing	Wildlife Management LLP
	Schedule field surveys days for monitoring special habitats of concern	SS, SR	Field reports	Ongoing	
	Monitor, evaluate and recommend new actions (if needed)	SS, PM, SR	Internal report	Year 5	
	Investigate and list potential medicinal plant SSC	SS, SR, SET	Internal report	Year 3	
	Incorporate awareness of SSC programmes and activities	SET	Organised educational and awareness days	Annually	

SPECIES AND HABITATS OF SPECIAL CONCERN PROGRAMME					
High-level objective: To conserve the unique Overberg biodiversity by emulating and maintaining ecological patterns and processes through research and best practice					
Objective: To conserve viable and representative populations of species and habitats of special concern through monitoring, research and management.					
Sub-objective	**Actions**	**Responsibility**	**PoE**	**Timeframe**	**Reference**
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

10.3.4 Wildlife management programme

The purpose of this programme is to assist park management to make informed decisions on wildlife management through continuous monitoring and consultative processes.

Habitat management is crucial 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).

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 Oudtshoorn, 2015; Al-Namazi, 2019). A thorough understanding of the vegetation and the life cycle of the plant species is important. With regards to interactions between plants, woody species generally have the tendency to limit and inhibit the growth of the herbaceous layer (Hagos & Smit, 2005). Soil therefore also plays a key role in habitat management, particularly in arid environments with sandy soil. Although erosion has not been identified as a key concern for the park, understanding the dynamics and integrated relationship is essential.

Herbivores act as disturbance agents. Disturbance predicts maximised biodiversity at intermediate levels of disturbance. 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. Bontebok *Damaliscus pygarus* and other large herbivores red hartebeest *Alcelaphus buselaphus* and Cape mountain zebra *Equus zebra* depend largely on grazing lawns and recently burned (<5 years) veld for nutritional needs (Kraaij & Novellie, 2010). Grazing lawns, which cover 0.5% of the park compete directly for space with fynbos / renosterveld vegetation. Grazing lawns are created, maintained and/or enlarged by continuous, high intensity grazing and trampling, and concentrated fecal and urinary deposition by grazers, and are not directly affected by fire as fuel loads remain consistently low (Archibald, 2008; McNaughton, 1984; Scholes & Walker, 1993). Recently burned veld disperses grazing pressure from herbivores across the landscape, potentially halting the proliferation of grazing lawns (Archibald, 2008; Kraaij & Novellie, 2010).

From 1960 to 2004, fire frequency of the park's burn blocks had return intervals of 5.8 years (remosterveld) and eight years (fynbos) to provide grazing for bontebok. Fire frequency has been reduced since 2004 to eight years (renosterveld) and 16 years (fynbos) to comply with standard practice based on the requirements of serotinous plants in mountain fynbos (Kraaij, 2010). This policy change has reduced the amount of post-fire veld available per annum, increasing the grazing pressure on grazing lawns which could result in their proliferation. Studies in the spread of grazing lawns in savanna systems have indicated that decreased fire frequencies and higher grazer densities could more than double the proportion of grazing lawns in parks. Possible proliferation of grazing lawns reduces net ground area for botanical species of special concern in fynbos and renosterveld vegetation types. In this way, fire is indirectly linked to grazing lawns through large herbivores by dispersing grazing pressure across the landscape in post-fire veld. Similarly, grazing lawns are linked to botanical diversity, by ostensibly reducing trampling on fynbos / renosterveld vegetation as focal points which concentrate herbivore impacts. However, sustained herbivory may establish more, or extend the range of current lawns. Knowledge of herbivore densities and how these affect grazing lawn proliferation are key to understanding the subtle linkages to botanical diversity in the park.

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. Annual veld condition assessments are conducted at regular intervals and annually since 2020 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 and Normalised Difference Vegetation Index enhances the assessment of the veld condition. These vegetation condition indices are common indicators for determining vegetation change associated with drought and overgrazing. The necessity for an ecological landscape unit classification, which describes and maps a conservation area, has been established. A sound understanding of the ecology of the park summarised in a landscape classification map, contributes considerably to the compilation of an effective wildlife management programme and conservation policy. The inclusion of remote sensing provides added perspective from a different spatial and temporal scale.

Small populations are more susceptible to disease and previously sarcoids were prevalent in Cape mountain zebra populations. Passive disease surveillance is essential, and signs of any disease or strange behaviour, as well as sarcoids should be reported immediate to SANParks Veterinary Wildlife Services and the Cape Research Centre.

Bontebok and Cape mountain zebra both have species-specific management plans (Cowell & Birss, 2017; Birrs *et al.* 2016). It is essential to survey population statistics to update national management plans and strategies. Grey rhebuck *Pelea capreolus* numbers remain consistently low and it is recommended that grey rhebuck also be included as an SSC for monitoring purposes that is captured in the action of ground surveys in this document. Regular road surveys with demographic information are critical for the management and reporting of herbivore numbers (see SANParks SOP on conducting aerial surveys in SANParks).

This programme links with high-level objective 2 and objective 2.4 on page 46. To achieve the purpose of this programme, the actions listed in the table below will be implemented.

WILDLIFE MANAGEMENT PROGRAMME				
High-level objective: To conserve the unique Overberg biodiversity by emulating and maintaining ecological patterns and processes through research and best practice				
Objective: To maintain genetically healthy populations of game and understand herbivory impact through monitoring and active wildlife management				
Actions	**Responsibility**	**PoE**	**Timeframe**	**Reference**
Synthesise historical herbivore census data for the park	SS	Data management plan, database	Year 2	
Maintain regular road census surveys of herbivores to maintain diverse and healthy populations in the park	SR, SS	Census data, Census reports	Quarterly	SSC LLP
Regular surveys of Cape mountain zebra and assessment of physical conditions (disease assessment i.e. sarcoids)	SR	Census data	Ongoing	

WILDLIFE MANAGEMENT PROGRAMME				
High-level objective: To conserve the unique Overberg biodiversity by emulating and maintaining ecological patterns and processes through research and best practice				
Objective: To maintain genetically healthy populations of game and understand herbivory impact through monitoring and active wildlife management				
Actions	**Responsibility**	**PoE**	**Timeframe**	**Reference**
Make recommendations and identify actions for herbivore management, proposals to Wildlife Management Committee, when needed	SS, PM	Proposal to Wildlife Management Committee	When needed	
Working with local SPCA authorities and capture and control feral animals entering and within the park	SR	Quarterly report	Ongoing	
Liaise with neighbouring communities and schools on conservation and animal welfare issues	SET	EE register	Annually	
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

10.3.5 Degradation and rehabilitation programme

The purpose of the programme is to understand the potential drivers of degradation within the park to manage risks, posed by features such as hiking trails, roads and mountain bike trails, and to mitigate threats to the biodiversity of the park.

The White Paper on Conservation and Sustainable Use of South Africa's biodiversity (2023), calls for the identification of key sites for rehabilitation based upon biological and socio-economic criteria, and the development and implementation of rehabilitation plans for identified sites. Similarly, the Convention on Biological Diversity lists rehabilitation as an important tool for promoting the conservation of biodiversity.

This programme will focus on mitigating land degradation stemming from anthropogenic activities within and adjacent to the park, primarily focussing on man-made infrustructure and tourism activities. The key drivers of degradation in renosterveld are land fragmentation, inappropriate fire cycles, alien invasive species, overgrazing and climate change. Complexity in managing these drivers in the fragmented landscape increases the cost of conservation, and climate and anthropogenic pressures in the wider landscape along with knowledge gaps are potential further impediments to effective conservation of renosterveld across the Cape Floristic Region (Topp & Loos, 2019). Habitat degradation is closely related to wildlife, fire and alien and invasive plant management; therefore this plan needs to be read and monitored in conjunction with the LLPs for Wildlife Management, Fire and Alien and Invasive Species (AIS). The importance of effective biodiversity management through emulating and/or maintaining ecological patterns and processes is addressed across the different high-level objectives within the management plan.

Currently land degradation that may result from inappropriate development of, or the lack of, tourism-related infrastructures such as boardwalks, trails, viewing decks, accommodation and other facilities and the requirements for the maintenance of these, need to be managed. Further, degradation may stem from roads, firebreaks, fence lines and other park infrastructure, mostly linked to the poor placement or construction and the lack of maintenance. Currently the park has a

well-established tourist road and trail network, this includes a mountain bike trail that runs partly on tourist and management roads with a short section along an old 'jeep-track'. In addition, there is a network of management roads that predominantly facilitate management of fence lines and firebreaks. The effective monitoring and management of the road and trail networks, firebreaks and fence lines are important to mitigate soil erosion being triggered by these areas. One of the major causes of road degradation, especially on unpaved roads, is poor management of water runoff. Water runoff from unpaved roads can result in increased siltation in wetland areas, noting that several of the park's roads run across natural drainage lines and wetland areas. The proper alignment and sloping of roads, avoiding sunken road footprints and well-positioned drainage is critical to mitigate degradation associated with roads. Equally important is the effective management of trails, particularly in ecologically sensitive zones such as riparian areas, wetlands and drainage lines. Well-marked trails, the keeping of trails clear of windfalls and overgrown vegetation, and well-maintained steps along steeper sections of trails are vital. Additionally, construction and maintenance of boardwalks in sensitive areas such as wetlands and drainage lines, where trails realigned, play a fundamental role mitigating the degradation linked to these tourist facilities.

Currently the degradation that stems from AIS, and poor fire and grazing regimes within the park is considered minimal. However, the risk of degradation remains an ever potential threat from both beyond the park's boundary through neigbouring land use, as as well as within the park, where the risk is primarly linked to climate change, altering desirable patterns and processes, as well as anthropogenic activities.

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.

Degradation monitoring in the park will focus 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 predict future distribution of the AIS in the park as influenced by climate change (interlinked to AIS & climate change programmes). The AIS 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 2.5 on page 46. To achieve the purpose of this programme, the actions listed in the table below will be implemented.

DEGRADATION AND REHABILITATION PROGRAMME					
High-level objective: To conserve the unique Overberg biodiversity by emulating and maintaining ecological patterns and processes through research and best practice					
Objective: To conserve natural habitat by rehabilitating degraded land and monitoring recovery					
Sub-objective	**Actions**	**Responsibility**	**PoE**	**Timeframe**	**Reference**
To maintain a knowledge base of the park's degradation, as well as areas where degradation may occur	Update the park's degradation map to reflect the current status	SS, PM	Map and associated reports	Annually	Fire LLP, Wildlife Management LLP
To appropriately manage and maintain all roads, hiking trails and mountain bike trails so that these areas do not trigger land degradation.	Manage water runoff from all roads by ensuring correct placement of 'road-drainage' systems, thus effectively controlling velocity and displacement of water back into the landscape	PM	Monthly reports	Monthly	Zonation

DEGRADATION AND REHABILITATION PROGRAMME					
High-level objective: To conserve the unique Overberg biodiversity by emulating and maintaining ecological patterns and processes through research and best practice					
Objective: To conserve natural habitat by rehabilitating degraded land and monitoring recovery					
Sub-objective	**Actions**	**Responsibility**	**PoE**	**Timeframe**	**Reference**
To appropriately manage and maintain all roads, hiking trails and mountain bike trails so that these areas do not trigger land degradation.	Ensure that all hiking trails and mountain bike routes are appropriately aligned, kept clear of all obstructions, clearly marked, steps correctly placed and maintained, that boardwalks are constructed in sensitive areas where needed	PM	Monthly reports	Monthly	Zonation
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

10.3.6 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 the immediate buffer area. The primary objective is to understand and manage alien and invasive species through monitoring and research; to enable control, extirpation or where possible, eradication of alien and invasive species within the park, as well as suppresing re-infestation within the park, and prevent the emergance of new alien and invasive species from the surounding landscape. There is a low threat of invasive anmimals as well as the free movement of the listed invasive animal species, and as a result, no formal management of non plant invasive species is undertaken in the park. Due to the lack of resources, the Working for Water (WfW) project funding, part of the Biodiversity Social Projects (BSP), is being allocated to the management of invasive plant species.

South Africa, as a signatory to the Convention on Biodiversity as well as other international conventions, is required to manage IAS within its borders. In South Africa, the management of IAS 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 IAS 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 (2017a) provides the context within which all management of IAS is implemented. Within SANParks the context for the management of AIS is set out in the Alien and Invasive Species Regulations (2018) and a framework for the management of invasive alien plants (AIPs) provided in the Standard Operating Procedure (SOP) for the Implementation of Alien and Invasive Plant Management Projects (2017b). 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). Further, invasive alien species negatively impact on ecosyestem services (e.g. water quality and quantity) which potentially impacts directly on human well-being (Orimoloye *et al*., 2021). The impact of AIS on protected areas is not limited to ecological or human well-being: the financial cost of invasions on protected areas can be calculated through the cost of control and erradication 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).

The fragmentation of the broader landscape that surrounds the park, specifically the fragmentation of the Overberg renosterveld, is ongoing (Moncrieff, 2021). Fragmentation of landscapes where land use change (such as agriculture and urbanisation) is incompatable with conservation objectives, increases the park's risk to novel invasions or reinvasion of species previously brought under control. Invasive grass species are considered to be one of the greater risks in renosterveld vegetation types, specifically along fragmented edges. In addition, invasive plant species such as Australian acacias expand ranges and proliferate in fragmented areas, potentially placing additional pressures on the park (Top & Loos, 2019).

The urban/peri-urban interface presents additional challenges for the management of AIS because urban areas are often the source of novel invasions (McLean *et al*., 2017). The Breede River, the Western Cape's longest river, is an important recreational feature of the park, and forms an important component of the park's ecological landscape. The park lies in the lower reaches of the river, only 0.9% of the river flows through the park, bringing with it challenges for the management of alien and invasive species such as banded tilapia *Tilapia sparrmanii* and both large and small mouthed bass *Micropterus* spp., as well as the aquatic weed water hyacinth *Pontederia crassipes*.

Effective management of alien and invasive plants 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 84 AIS have been identified within the park, comprising 73 plant species and 11 animal species (one mammal, four bird, and six fish). Additionally, a total of 23 extralimital species, including 19 plants and four animals (two fish and two bird species) are recorded in the park. Of the 84 listed alien species, 43 fall under the NEM: BA categories, with 32 categorized as Category 1b, eight as Category 2 and three as Category 3 (Foxcroft *et al*., 2017).

Among the listed species, 20 are classified as potential transformer species (Foxcroft *et al*., 2019), and five have registered biocontrol agents. Furthermore, in the broader landscape around the park, 65 alien and invasive plant species have been documented in iNaturalist (https://www.inaturalist.org) (2023) and an additional 18 species in the South African Plant Invader Atlas (SAPIA) database (2020). Despite not yet known to occur in the park and thus not included in the park's published alien and invasive species list, these species are deemed significant enough to be placed on a 'watch list'. While their current status within the broader landscape is uncertain, acknowledging these potential threats is crucial for effective management.

A process of prioritisation has been developed so focusing management efforts on species that potentially have a greater impact on the park's objectives. Three broad classes have been identified, category (A) where species specific management plans are required, (B) those species that require "maintenance and control" and (C) species that require early detection and rapid response. 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), these species 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
water hyacinth[1] - *Pontederia crassipes*	long-leaved wattle - *Acacia longifolia*	pampas grass - *Cortaderia selloana*
	black wattle - *Acacia mearnsii*	showy balloon vine - *Cardiospermum grandiflorum*
	giant reed[2] - *Arundo donax*	cluster pine - *Pinus pinaster*
	red river gum - Eucalyptus camaldulensis	feral pigs[3] - *Sus scrofa*
	Lantana - *Lantana camara*	blue passionflower - *Passiflora caerulea*
	drooping pest pear - *Opuntia monacantha*	Brambles - *Rubus spp*.
	cluster pine - *Pinus pinaster*	
	bug weed - *Solanum mauritianum*	
	bitter apple - *Solanum spp.*	
	cluster pine - *Pinus pinaster*	

[1]To be managed as part of the Breede River water hyacinth project with limited manual control within the Park as required.
[2] Clearing restricted to accessible areas.
[3]The increase of 'pig' farming along the northern boundary of the Park (corner above airfield) is noted, these animals, where they are allowed to escape, can become very destructive and under legislation require control.

Description of land infested and the extent of invasion of AIP

Due to the relatively small area of the park, perimeter area and pathways into the park, susceptibility to invasions is potentially of greater concern than more expansive protected areas. Dominance of alien and invasive plant species is evident along the park's interfaces with surrounding areas, particularly along the urban/peri-urban interface, the N2 interface, and the areas associated with the airfield and municipal refuse dump site (762 ha).

The riparian areas of the Breede River (160 ha), both where it forms a boundary to the park and where the river flows through it, have historically been areas prone to a higher risk of invasion. Furthermore, the wetter areas of the park, particularly the lower lying sections should also be considered as areas with a higher risk of invasion (2,000 ha).

The park interface and nearby agricultural lands, predominantly crop fields, as well as the intensive farming areas in the Buffeljagsrivier area, necessitate continuous monitoring for incursions of both agricultural 'weeds' and novel species associated with intensive agricultural and peri-urban areas. Specifically, implementing monitoring protocols and management strategies to address invasive species in these vulnerable habitats is crucial.

The buffer areas of the park within which the BSP may implement management of alien and invasive species, after appropriate assessment, focus on communal lands followed by municipal open space through collaboration with relevant role-players.

Status report on the efficacy of past control measures

The management of alien and invasive plant species within the park has been managed through SANParks' BSP programme since 2002. A total of R7.5 million has been spent in the implemention of this programme in the park between 2003 / 2004 and 2022 / 2023, R 5.7 million

being spent during the last park management plan cycle (2013 – 2023). During this period, a total of 23,575 person-days of work was achieved, including training, which equates to, on average nine full time employment opportunities per financial year.

Initially the focus of the programme was along the northern boundary interface with the Railton community of Swellendam, the airfield along the northeastern section of the park and areas along the Breede River. The species focus was primarily on woody invaders, specifically Australian acacias. Data from the 2013 / 2014 up to and including the 2022 / 2023 funding cycle show that alien and invasive plant species are considered 'rare'; in accordance with the metrics used by the South African National Status Report on the Management of Invasive and Alien Species. These include the wider-spread species such as the woody Australian acacia species including *Acacia mearnsii* and *A. saligna* that are reported across 1,200 ha of the park, as well as *Ricinus* sp., *Rubus sp.* and *Solanum* spp. that are relatively widespread and predominantly associated with the riparian area. The occurrence of alien plant species across the park, specifically along pathways and corridors such as the Breede River, the boundary adjacent to peri-urban areas fence has been persistent but, historically, at low densities.

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 EPWP programme 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 IAS management policy as well as the SOP for the Implementation of IAP management projects ensure 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, (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 relatively low density, and control along the Breede River and urban edge is effective if there is diligent follow-up. Eradication is not expected in the long-term but will be manageable 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 fragmented landscape and the urban interface of the park, coupled with the riverine links along the Breede River and Appelbos River, the threat of invasive species will remain to be a concern for park management. These factors necessitate the continual monitoring and management of AIS, both within the park as well as in retaining an understanding of threats across the wider landscape. To sustain the gains made in the management of alien and invasive plants, 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. While the occurrence and dynamics of AIS are relatively low, legislation requires continual monitoring, as well as management of AIS within and adjacent to the park. Achieving, and maintaining alien species densities at a low level, although likely to require ongoing management, will be a primary aim. As a result, the monitoring and management of AIS, specifically plants, will remain an ongoing required management action.

A detailed lower-level plan outlining the rationale and operational approach supports this programme. This programme links with high-level objective 2 and objective 2.6 on page 46. To achieve the purpose of this programme, the actions listed in the table below will be implemented.

ALIEN AND INVASIVE SPECIES PROGRAMME					
High-level objective: To conserve the unique Overberg biodiversity by emulating and maintaining ecological patterns and processes through research and best practice					
Objective: To anticipate, prevent entry, control or eradicate alien and invasive species, where feasible, by implementing an effective alien species management plan					
Sub-objective	**Actions**	**Responsibility**	**PoE**	**Timeframe**	**Reference**
To better understand the potential threats of alien and invasive species as well as comply with legislation	Update the alien and invasive plants baseline database	BSP PM, BSP CM, SR	IAP species database (MUCP) with maps	Annually	
	Maintain a database of alien and invasive animal species with locality and species level counts	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 IAS database	Year 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

ALIEN AND INVASIVE SPECIES PROGRAMME					
High-level objective: To conserve the unique Overberg biodiversity by emulating and maintaining ecological patterns and processes through research and best practice					
Objective: To anticipate, prevent entry, control or eradicate alien and invasive species, where feasible, by implementing an effective alien species management plan					
Sub-objective	**Actions**	**Responsibility**	**PoE**	**Timeframe**	**Reference**
To leverage funding for the management of alien and invasive species. To foster a collaborative partnership between National Institutions (SANBI, CIB) as well as private landowners and general public	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 IAS (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 Report	Annually	Funding allocation and NEM: BA CP
	Facilitate involvement in relevant stakeholder meetings and 'environmental days'.	SET, BSP	Presentation and attendance registers	Annually	
	Engage with and encourage interventions to address management or non-management of A&IS in the broader Camdeboo landscape	PM, BSP	Minutes of meetings	Annually	NEM: BA
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

10.4 Responsible tourism programme

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

In March 2011 Cabinet approved the National Tourism Sector Strategy (NTSS) that further entrenched the principles of responsible tourism in the development and operation of businesses in the field of tourism. The NTSS further identified specific areas with the following 15 areas relating to SANParks and influencing its tourism business operations:

- Strengthening collaboration and partnerships within the tourism industry;
- Developing domestic tourism;
- Enhancing quality assurance and universal accessibility;
- Ensuring a co-ordinated approach to product development;
- Facilitating investment, including enterprise development and development finance;
- Ensuring sound environmental management and triple bottom line reporting;
- Growing business and events tourism;
- Developing African tourism;
- Improving general awareness of tourism among South Africans;
- Enhancing domestic airlift;
- Transforming the industry;
- Developing people;
- Ensuring service excellence;
- Improving community benefits from, as well as community participation in tourism; and
- Providing decent work in tourism.

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 local communities.

To this end, 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 considers 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 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 do 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 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, raising their awareness about sustainability issues and promoting sound tourism practices amongst them.

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.

The park is part of the internationally recognised CFRPA WHS, for its unique biodiversity value, by the World Heritage Committee of the UNESCO. As a result, 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 has a favourable geographical position with the National Road (N2) running past both the park and the town, which is halfway between Cape Town and the Garden Route. It is also an integral contributor to the region's safe recreation, offering tranquillity, tourism and cultural heritage and these efforts can offer positive influence in Swellendam area, as well as in the Overberg region.

The park currently hosts 16,675 visitors per year (2022 / 2023). 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, however, this requires effective partnerships to mobilise the necessary resources and attract investment to grow tourism. Various potential developments have been identified, including the swimming pool at Die Stroom area and at Lang Elsie's kraal rest camp for overnight visitors. 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 and tourism infrastructure are particularly vulnerable due to damage caused by heavy rains (flooding), mainly on roads.

The visitor management plan needs to be effectively implemented to mitigate the risk factors posed by unregulated visitor access.

This programme links with high-level objective 3 and objectives 3.1 to 3.7 on pages 46 and 47. To achieve the purpose of this programme, the actions listed in the table below will be implemented.

RESPONSIBLE TOURISM PROGRAMME					
High-level objective: To offer a range of competitive diverse products and experience through maintaining, growing and promoting the park as a safe and responsible tourism destination					
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	DM, PM	Training registers	Year 2, ongoing	
To manage and assess responsible tourism performance	Implement and monitor responsible tourism actions	RTMM, DM, DM	Report	Year 3, ongoing	
	Undertake tourism quality assurance assessments, grading, and UA assessments	Sen M, DM, PM	Reports	Year 1, ongoing	
To promote responsible tourism practice	Identify tourism programmes and projects benefiting communities	PM, DM	Documentation	Year 3	NTTS Strategy
	Implement projects as required	DM, PM	Documentation	As required	

RESPONSIBLE TOURISM PROGRAMME					
High-level objective: To offer a range of competitive diverse products and experience through maintaining, growing and promoting the park as a safe and responsible tourism destination					
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**
Use local resources sustainably, avoid waste and over-consumption	Measure, manage and monitor performance of water and electricity consumption by adhering to targets	TM, DM, PM	Documentation	Annually	
	Set appropriate targets for reduction or recycling of waste produced	DM, SET, TM	Documentation	Annually	
Visitor experiences objective: To continually enhance the visitor experience within the park, through effective visitor management, interpretation and quality of facilities offered					
To ensure effective visitor management in the park	Develop and implement a visitor management plan	GM: Visitor Service, RTMM, DM, PM	Document	Year 1	Visitor management protocol
	Update the visitor management plan taking changes in the environment into account	GM: Visitor Services, DM, RTMM	Updated document	Year 3, 6, 9	Visitor management protocol
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	TM, DM, PM, RTMM	Documentation	Annually	
	Identify events, activities and facilities that may be considered for development within the park	DM, PM, RTMM	List of products	Annually	Product development framework
	Investigate ways to provide affordable tourism products and packages for low- to medium-income earners	RTMM, PM, DM	Documentation	Ongoing	Sales and marketing strategy
Analyse and review pricing to optimise financial returns	Participate in annual review process to determine tariffs	DM, PM	Document	Annually	
Service excellence objective: To deliver relevant customer-focused service excellence, by understanding and responding appropriately to market expectations and preferences					
To ensure adequate, effective and accurate visitor communication within and on approach to the park to enable quality visitor experience	Develop and implement a park interpretation plan	GM: Visitor Services, DM, SR, PM	Document	Year 2	
	Monitor and evaluate the park visitor interpretation plan	DM, PM	Documentation	Year 2	
	Adhere to the corporate signage manual	DM, SR, PM	Updated document	Annually	Branding guideline
	Develop a tourist map/guide document	DM, RTMM, PM	Document	Year 2	Interpretation plan, sales and marketing strategy

RESPONSIBLE TOURISM PROGRAMME					
High-level objective: To offer a range of competitive diverse products and experience through maintaining, growing and promoting the park as a safe and responsible tourism destination					
Service excellence objective: To deliver relevant customer-focused service excellence, by understanding and responding appropriately to market expectations and preferences					
Sub-objectives	**Actions**	**Responsibility**	**PoE**	**Timeframe**	**Reference**
To ensure adequate, effective and accurate visitor communication within and on approach to the park to enable quality visitor experience	Ensure clear and accurate communication of park rules, rates and facilities on all platforms, including within the park, on correspondence, and on the website	DM, SR RTMM, 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
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					
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	DM, PM, RTMM	Documentation	Year 1	
	Review development plan to ensure optimal tourism development priorities without eroding conservation values	PM, DM, SSR	Document	Year 3, 6, 9	
	Develop and implement annual work plans to cover maintenance priorities	DM, TM, PM	Document	Annually	
Operational effectiveness objective: To maximise cost savings within tourism operations, by ensuring effective management and controls					
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, PM, RTMM	Questionnaire responses	Ongoing	Tourism grading standards, SANParks housekeeping standards
	Review and analyse guest feedback to provide targets and improvement	DM, PM	Documentation	Annually	Housekeeping standards
	Conduct customer surveys to understand visitor numbers, expectations, preferences, park use and trends	TRVS- unit, RTMM, PM	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, HC, PM	Registers	Ongoing	
Ensure compliance and achievement of set customer care standards	Continue monitoring and review of processes, ensuring effective service delivery and customer satisfaction, and conduct training programmes to enhance processes	TM, DM, PM	Survey results	Ongoing	

RESPONSIBLE TOURISM PROGRAMME					
High-level objective: To offer a range of competitive diverse products and experience through maintaining, growing and promoting the park as a safe and responsible tourism destination					
Promotion objective: To promote the unique cultural and natural landscapes of the park by developing and implementing a variety of sales, marketing and communication initiatives.					
Sub-objectives	**Actions**	**Responsibility**	**PoE**	**Timeframe**	**Reference**
To market the park's tourism products, facilities and activities	Contribute to the comprehensive tourism marketing strategy that covers all markets and matches up markets and products/experiences with a focus on responsible tourism	RTMM, DM, PM	Document	Annually	
	Identify opportunities for media coverage, enhance coverage in existing editorials, magazines and social media, and maintain high media visibility	RTMM, RCM, DM, PM	Documentation	As required	Sales and marketing strategy
	Explore opportunities for promoting park attractions in conjunction with tourism partners	RTMM, RCM, DM, PM	Minutes of meetings	As required	
Universal access standards objective: To ensure that persons with disabilities have equal rights of access to all tourism infrastructure, products and services, including employment opportunities and benefits that the park can provide					
To provide the same choices for all consumers to ensure the full participation of persons with disabilities, the elderly and parents with young children by creating appropriate facilities and providing dignified service	Comply with the Corporate UA standards	DM, TM, PM	Document	Year 2	SANParks UA Guidelines
	Engage in UA assessments	DM, TM, PM	Documentation	Year 3, 6, 9	UA strategy, UA protocol
	Sensitise staff to UA client expectations/requirements	DM, TM, PM	Documentation	Year 2	
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

10.5 Cultural heritage management programme

The purpose of the programme is to effectively interpret and present the intangible cultural heritage associated with the park through collaboration, research and documentation.

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 significant resources. 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 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) provide further guidance.

There has been limited archaeological research undertaken within the park. Although there are limited heritage resources that are open to visitors for tourism and recreational purposes at this stage, the experience will be improved through interpretation and presentation for educational, traditional and tourism purposes. The park's intangible heritage will be continuously documented, interpreted and presented to enhance visitor experience. Information on intangible heritage will also be available for use in educational programmes as part of the park's environmental education and outreach activities. Communities that are culturally associated with the park's intangible heritage will be part of the collaboration in documenting and promoting intangible heritage practices.

This programme aims to improve and diversify the cultural heritage knowledge of the park. SANParks intends to forge quality and inclusive research partnerships with communities, universities, and researchers that will enhance the identification and promotion of park-related 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. As more research is conducted in the park, it is possible that new sites, that may be of higher significance might be identified and potentially used for tourism purposes.

This programme links with high-level objective 4 and objectives 4.1 and 4.2 on page 47. 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 effectively interpret and present the intangible cultural heritage associated with the park through collaboration, research and documentation				
Objective: To enhance visitor and cultural groups' experience through the interpretation and presentation of intangible cultural heritage				
Actions	**Responsibility**	**PoE**	**Timeframe**	**Reference**
Record and interpret the oral history and information relating to cultural heritage in collaboration with local communities and other relevant sources and stakeholders	SET Officer	Records	As required	
Manage living heritage and facilitate cultural practices in collaboration with local communities, and other relevant stakeholders		Records	As required	
Objective: To improve cultural heritage knowledge through 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	Research report	Year 2, ongoing	
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 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 and to empower people with skills and knowledge, by playing a significant, targeted and effective role in promoting a variety of nature- and/or culture-based educational opportunities and initiatives.

An integrated approach to environmental education, interpretation, and awareness raising has been adopted by SANParks. The SANParks SET Strategy (2017) states that environmental education and awareness, skills training and transfer will be the key in promoting sound environmental management. The strategy emphasises the implementation of environmental education programmes to underline the importance of environmental management and sustainable resource use through community awareness. 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.

Interpretation is a communication process designed to reveal meaning and relationships of our cultural and natural heritage through involvement with objects, artefacts, landscapes and sites. Although several opportunities for both formal and informal interpretation are available, there is a need to develop more signage with relevant information on current conservation issues, as well as cultural heritage.

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 secondary schools in the area, as well as the officials. The park focuses on the schools located in the towns of Barrydale, Buffeljagsrivier, Suurbraak and Swellendam.

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.

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 (KiP) 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.

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 47. 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 provide opportunities for education, awareness, improved livelihoods and benefits through co-learning and collaboration with stakeholders				
Objective: To promote awareness and participation in educational programmes through outreach and park-based activities				
Actions	**Responsibility**	**PoE**	**Timeframe**	**Reference**
Implement environmental education programmes e.g. KiP and Calendar Days	SET Officer	Monthly & quarterly reports	Ongoing	EE Plan
Implement outreach programmes in identified neighbouring communities	SET Officer	Monthly & quarterly reports	Ongoing	EE Plan
Develop new and update existing programme information	SET Officer	Brochures, presentations	As required	EE Plan
Arrange and/or facilitate community awareness programme initiatives targeting specific stakeholders on conservation issues	SET Officer	Monthly & quarterly reports	Ongoing	EE Plan
Facilitate presentations and talks for special interest groups	SET Officer	Monthly reports	Ongoing	
Review and update current programmes	SET Officer	Updated programmes	As required	EE Plan
Facilitate and co-ordinate the publishing of articles on all forms of media	SET Officer, RCM	Published articles	Ongoing	
Objective: To monitor and evaluate the impact of the implementation programmes and adapt as required				
Monitor and evaluate progress and impact against programme objectives and targets	PM, SET Officer	Documentation	Annually	SOP for the assessment of the implementation of management plans

10.6.2 Collaboration and stakeholder engagement programme

The purpose of this programme is to establish and maintain meaningful and beneficial relationships with a wide range of stakeholders from the communities adjacent to the park. To achieve this, the park will engage with all spheres of government, conservation entities, communities, research institutions / NGOs, business partners, etc.

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 communities and their activities. It is acknowledged that the sustained vibrancy and legitimacy of the park depend on 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. 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 to access and to benefit from conservation land and / or associated businesses, remains an important focus within constituency building.

In the context of this programme, the focus is on promoting co-operative governance at a local level through the various park-community engagement structures and processes. The park engages with neighbouring communities primarily through established platforms representing relevant stakeholders. These platforms allow for communication between the park and its neighbours on issues that are of mutual interest. The Park Forum was established in 2006 and is governed by a constitution and an elected committee comprising of a chairperson, deputy chairperson and secretary and meetings take place quarterly. Broader interest groups such as municipalities, schools, churches, local businesses, adjacent conservation areas (e.g. conservancies) and other members of the public, are 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 Agulhas 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 lower-level plan outlining the rationale and operational approach supports this programme. This programme links with high-level objective 5 and objective 5.2 on page 47. To achieve the purpose of this programme, the actions listed in the table below will be implemented.

COLLABORATION AND STAKEHOLDER ENGAGEMENT PROGRAMME				
High-level objective: To provide opportunities for education and awareness, improved livelihoods and benefits through co–learning and collaborations with stakeholders				
Objective: To strengthen relationships with stakeholders through engagement and collaboration				
Actions	**Responsibility**	**PoE**	**Timeframe**	**Reference**
Participate in inter-governmental and local forums, events and campaigns	SET Officer, PM	Attendance registers, quarterly reports	As required	
Participate in the Bontebok / Marloth Advisory Forum	SET Officer, PM	Attendance registers, minutes of meeting, quarterly reports	Quarterly	
Present quarterly Park Forum meetings	PM, SET Officer	Attendance registers, quarterly reports	Quarterly	Terms of reference
Facilitate and participate on collaborative events and campaigns	SET Officer	Attendance registers, quarterly reports	As required	
Engage media locally, regionally, and nationally	Regional Communication Manager (RCM) SET Officer, PM	Internal & external media articles	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

10.6.3 Socio-economic opportunities 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 a significant, 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 Expanded Public Works Programme (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 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 practices and to safeguard the sectors they are involved in.

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 APP, 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 (SANParks, 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 socio-economic development which can be achieved by upholding corporate governance principles and working in unison with intergovernmental programmes such as the EPWP, amongst others, 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, and they thus have a wealth of traditional knowledge in conservation management. 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 SMMEs providing better access to park-related opportunities. Considering that BNP 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.

Empowering young people is a national priority. Acquiring skills will enable young people to drive the reconstruction and development of our country. 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.

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 2002. The WfW programme is currently active in the park. Since inception 23,575 person-days of work were achieved, including training, which equates to, on average nine full time employment opportunities per financial year. Between 2002 and 2023 a total of R7.5 million was spent in the implementation of this programme in the park.

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 exist 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 projects 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 lower-level plan outlining the rationale and operational approach, supports this programme. This programme links with high-level objective 5 and objective 5.3 on page 47. To achieve the purpose of this programme, the actions listed in the table below will be implemented.

SOCIO-ECONOMIC OPPORTUNITIES PROGRAMME				
High-level objective: To provide opportunities for education and awareness, improved livelihoods and benefits through co–learning and collaborations with stakeholders				
Objective: To facilitate local socio-economic opportunities through SMMEs and funded projects				
Actions	**Responsibility**	**PoE**	**Timeframe**	**Reference**
Implement and/or facilitate EPWP Projects	SET Officer, PM, BSP	BSP reports	Ongoing	Project plans, APOs
Facilitate infrastructure development projects for SMMEs	TO, PM	Expenditure reports	Ongoing	APOs, *m*aintenance plan
Facilitate awareness about business opportunities available in the park and business development training	SET Officer, BSP	SET quarterly reports, BSP reports	Ongoing	Quarterly reports, APOs
Support EPWP programmes and enhance knowledge through Calendar Day celebrations.	SET Officer, EPWP Manager	Reports	Ongoing	EA Programmes
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

10.7 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.

10.7.1 Environmental management programme

The purpose of this programme is to mitigate potential negative environmental impacts caused by development and operational activities on the park, 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 DFFE 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 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 practice towards environmental management and with minimum impact on the environment.

This programme links with high-level objective 6 and objective 6.1 on page 48. 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 practice 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	SR	Documents	Ongoing	
	Ensure that EIAs and specialist studies are completed for listed activities		Documents, reports	As required	
	Implement internal environmental management programmes for non-listed activities / developments		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	

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 practice and ensure compliance with environmental legislation through improved governance and environmental risk management.					
Sub-objectives	**Actions**	**Responsibility**	**PoE**	**Timeframe**	**Reference**
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	SR, SS, HODs, PM	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	SR, SS, HODs, PM	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	SED, 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

10.7.2 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 practiced 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 or 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, which 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 6 and objective 6.2 on page 48. 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	PM, HODs	Risk Response Plan	Annually	CRMF
	Implement the risk response initiatives, review and update this as required	PM, HODs	Risk Response Plan	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

10.7.3 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 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 Practice, 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 Cape Region Finance Division reports directly to the General Manager Parks Finance who further reports to the Chief Financial Officer while providing support to the Cape Region Parks

consisting of Agulhas National Park, Bontebok National Park, Table Mountain National Park, Tankwa Karoo National Park and West Coast National Park.

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

- Budget 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 handling and payment of invoices, account reconciliations, managing of debtors' invoices, *etc.*

The park has a moveable asset (non-living) base with a book value of R1,9 million. 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 is 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 theft of poles on the northern boundary (which may be related to increase in informal housing (matjoks) impact on the operational costs to the park; and
- The cost for the in-sourced fleet for the park.

This programme links with high-level objective 6 and objective 6.3 on page 48. 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	PM, Regional Finance Manager, 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 supply chain management	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

10.7.4 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 as per the SANParks policy framework.

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 not only relates to 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 and their families. This assists staff in dealing with the negative effects of lifestyle diseases and other lifestyle challenges (i.e. financial planning). The Human Capital and Administration Officer must report 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. Compilation of training needs starts off 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 ongoing basis.

The park currently (2023) has 19 permanent employees and eight employees that are on fixed-term contracts. In addition, there are also two internships.

This programme links with high-level objective 6 and objective 6.4 on page 48. 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	

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 implement plans and skills development strategies to meet the strategic goals of the organisation	Identify training needs and conduct training interventions within budget allocation	HCM, PM, HODs	Document,	Annually	
	Implement Adult Basic Education and Training Programme for internal employees		Training register	As required	
	Assist employees with applications for study bursaries, staff accommodation bookings, changes in medical status, banking changes and assist with queries to medical aid regarding unpaid medical accounts		Documents	As required	
	Conduct workshops and Imbizos		Minutes	As required	SANParks Policies
	Participate in the internal and independent audit of human capital documentation		Report	As required	
	Address audit findings		Reports	As required	
To implement workplace wellness programmes	Participate in wellness awareness workshops	HCM, HODs	Documents	Annually	Wellness Policy
	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 relations	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

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 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	PM, HODs	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

10.7.5 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 its employees in their official capacities.

This programme links with high-level objective 6 and objective 6.5 on page 48. 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 with 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	PM, HODs	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

10.7.6 Infrastructure programme

The purpose of this programme is to direct the upgrading and maintenance of infrastructure (day-to-day and scheduled). This is primarily to ensure that the park's infrastructure (buildings, roads, fences, provision of water, electricity and waste management) is well maintained and continually improved in order to provide safe, reliable, increasingly environmentally friendly and affordable products to its clients and visitors. The technical department's key responsibility is the delivery and implementation of departmental programmes and 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, staff housing, fences, bulk services, workshops and stores) and tourism (i.e. tourist roads and tracks, viewing points, 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, "green building" and "touch the earth lightly" principles, as well as measures to save water and electricity and to minimise waste.

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 63,016,724. There is a small shortfall in addressing the maintenance backlog, annual maintenance, upgrading and new capital development. The required infrastructure maintenance budget for 2024 / 2025 is R 1,140,435 however, only R 1,094,386 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, 2021). This will be achieved through the implementation of the SANParks Green Energy Strategy (2022a) 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 6 and objective 6.6 on page 48. 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	TO	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)	TO	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 continue with the application of the sustainable Green Building Principles for all design works	Apply specifications that comply with the Green Building Principles on all designs and planning of infrastructure works.	TO	Guidelines	Annually	Sustainable Design Guiding Principles document
To ensure that all 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 work plan		Documents	Annually	
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.	PM, TS	Documents	Annually	Roads Maintenance Plan
	Implement rehabilitation and routine maintenance on roads	TS	Reports	Ongoing	
	Identify sections of the fence to be upgraded or removed	SR	Reports	Annually	
	Upgrade, remove and maintain the fences		Documents	Ongoing	
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	TS	Documents	Annually	
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	TS, SR	Inventory	Year 1	
	Implement the annual work plan	TS, SR	Documents	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 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	TS, SR, PM	Inventory	Year 1	
	Develop and implement annual maintenance schedule and service intervals for all equipment	TS, SR	Schedule	Annually	
	Continuously improve skills, and knowledge of maintenance staff	TS, SR	Register	Annually	
	Ensure that legal inspections / scheduled services are conducted accordingly	TS, SR	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	TS TS, HODs	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, and damage evaluated and repaired as per prescribed documentation	TS, HODs	Reports	Monthly	*Fleet Management Procedure*
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

10.7.7 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. In this regard, the South African Police Services (SAPS) may be observed in the park whilst performing patrols occasionally as part of their normal operating procedures to ensure local area integrity.

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. Issues affecting safety and security in the park have been analysed and the resulting strengths, weaknesses, opportunities and threats have been converted into achievable objectives and actions. Proactive consideration is given to issues such as working hours, law and order, high-risk areas, personnel, infrastructure, resources, equipment, staff training, reporting, data capturing, record-keeping, monitoring, information and intelligence.

Park management has a good working relationship with SAPS, Provincial Traffic and other government agencies. In co-operation with SANParks, joint operations relating to safety and security interventions in the park 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 tourism accommodation facilities. All staff must be familiar with the above procedures and will receive regular training in this regard.

The overall theft and poaching risk is high. Poaching activity involving the use of snares which target indiscriminately and poses a risk to wildlife. Apart from the criminal impact, the increase in the theft of poles on the northern boundary (which may be related to an increase in informal housing (matjoks) also impacts on the operational costs to the park. 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.

A detailed LLP supports this programme. This programme links with high-level objective 6 and objective 6.7 on page 48. 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	
	Ensure that all SANParks personnel involved with law enforcement operations receive the appropriate advanced / specialised training in operational tactics, investigations & crime scene management	SR	Training records, reports	Ongoing	
	Align the safety and security plan with existing park species level implementation strategies and plans	SR	Documentation	Quarterly	Relevant Strategies & Plans
	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	SR, PM	Documentation	As required	Infrastructure LLP
	Report environmental concerns in the adjacent areas	SR, PM	Reports	Monthly	
To provide a safe and secure environment with due regard for the safety and security of people	Implement an effective permit system and control over private visitors to regulate after hours movements	SR, DM	Documentation	Ongoing	
	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	
	Engage in joint operations to curb criminal activities such as theft of poles on fence line	SR	Reports	Ongoing	Joint Operations Plan
	Participate in problem and damage-causing animal investigations	SR	Documentation	As required	DCA policy

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 develop a proactive relationship with safety and security authorities and alliance partners to assure quick and deliberate safety and security response actions	Participate in relevant operational forums such the community police forum	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

10.7.8 Safety, health and environment programme

The purpose of the Safety, Health and Environment (SHE) 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 SHE programme is guided by the SANParks Safety, Health and Environment 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 SHE 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 (2024/25 – 2028/29) focussing on the first three bullets listed above. Phase two (2029/30 – 2033/34), will focus on the last three bullets listed above.

This programme links with high-level objective 6 and objective 6.8 on page 48. 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 Safety, Health and Environment management system					
Sub-objective	**Actions**	**Responsibility**	**PoE**	**Timeframe**	**Reference**
To implement the ISO 45001 standard	To implement the ISO 45001 standard	TO, SHE Chairperson and reps	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	
To implement the ISO 45001 standard	Conduct regular self-audits	TO, SHE Chairperson and reps	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

10.7.9 Communication programme

The purpose of this communication programme is to establish and nurture strong relationships while cultivating favourable and enduring public perceptions of the park. It aims to provide essential stakeholders, local communities, the public and employees with relevant and accurate information pertaining to the park's operations through media interactions and innovative events. This will be achieved through:

- **External communications**
  Media interactions / interventions will ensure that the park is adequately and well-presented across diverse media, including electronic and print. This approach will create and maintain a positive image of the park and the organisation. This will be achieved by managing media coverage of contentious issues. Moreover, the program will focus on educating the public about the park's cultural heritage values and emerging challenges, ensuring that conservation matters receive prominent media coverage.

- **Internal communications**
  Internal communication is a key pillar of the programme to facilitate an effective two-way communication process within an organisation and its employees. Acknowledging employees as a vital internal stakeholder of the park, this facet will ensure that staff members, management and businesses operating within the park, are always well informed about the business, 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 6 and objective 6.9 on page 48. 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		
	Engage on social media platforms		Online interactions		
	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	Communications Plan
	Timely issue internal bulletins and information broadcast		Number of internal bulletins and information broadcasts issued	As required	SANParks Strategic Plan and APP Communications and Marketing Annual Plan
	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	

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 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	Respond timely and accurately to queries both internally and externally	RCM	Reports		
To improve the park's image amongst its stakeholders through the provision of well planned, managed and co-ordinated events	Promote environmental calendar days, corporate and brand awareness events	RCM, SET Officer	Number of events executed	Annually	SANParks Strategic Plan and APP Communications and Marketing Annual Plan
To ensure monitoring and evaluation of the implementation of the programme and its effectiveness	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
	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

10.7.10 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. It focuses 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 address 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 6 and objective 6.10 on page 48. 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 and pre-planned actions					
Sub-objective	**Actions**	**Responsibility**	**PoE**	**Timeframe**	**Reference**
To ensure appropriate preparedness	Develop a Disaster Management Plan	SR, PM	Documents	Year 1	
	Hold annual disaster meetings and drills	HODs, PM	Minutes of meetings	Monthly, quarterly, annually	
	Plan and liaise with provincial structures	PM, SR, 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, HODs	Assessment tool	Annually	SOP for the assessment of the implementation of management plans

10.7.11 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, which 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 annual rainfall for the park is 511 mm of which most (59%) falls during the winter months (April to October). Two main peak rainfall periods are evident, one in April-May and the other in August, while the driest months are normally December and January (Novellie, 1986). Temperature extremes range between a winter minimum of around 0ºC and a summer maximum of around 40ºC, whereas average winter minimums are around 17ºC and average summer maxima around 30ºC. Snow occurs on the Langeberg mountains. Prevailing winds are south-easterly in summer and north-westerly (dry warm bergwinds) or south-westerly (associated with cyclonic systems) in winter (Grobler & Marais, 1967). There have been several changes relating to weather stations in the park over time that complicate the assessment of local weather patterns (e.g. closure of stations, changes in location, addition of rain gauges.

Trends in temperature have not been analysed locally, though average temperatures at Agulhas showed an increase of roughly 1°C between 1960 and 2009. Increases of between 1.3°C and 2°C are predicted for Swellendam by 2050 (Le Roux *et al*., 2019). While the predicted changes seem small, they will increase the number of hot days (with roughly seven additional days above 35ºC annually) and associated effects on the fire danger index, as well as the ability of firefighters to control wildfires. Other climate change concerns include drought and associated impacts on biodiversity, as well as livelihoods and agriculture (Le Roux *et al*., 2019). While future predictions are not clear, a decline in rainfall has been detected from historical records (van Wilgen *et al*., 2016). In addition, some infrastructure (including tourist chalets 1, 7 and 12) is in the floodplains of the Breede River (Coldrey *et al*., 2022).

The Green Book, published by the CSIR, includes a tool to consider local climate change projections for municipalities (https://riskprofiles.greenbook.co.za/). It includes 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 (coastal flooding, inland 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.

The major vulnerability for the park is its small size. The park's size and surrounding transformed landscape mean that traditional corridor creation, park expansion and facilitation of species movement and ecosystem processes are not particularly effective. As a result, active management to restore and retain particular species may be required. 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 about climate change and improve 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 has inter alia been achieved:

- 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 Bontebok National Park produces an average of 159 tons of carbon dioxide equivalent (tCO2e) annually, accounting for only 0.2% of SANParks' total carbon footprint. This is roughly equivalent to 2.1 tanker trucks of petrol or the amount of carbon sequestered by about 2,692 tree seedlings grown for 10 years (https://www.epa.gov/energy/greenhouse-gas-equivalencies-calculator). The largest contribution to Bontebok's carbon footprint came from electricity, accounting for 84.3 tCO2e (53% of the total park emissions), while waste produced accounted for 35%. The focus of the park should be on improving energy efficiency of SANParks infrastructure including offices and tourism facilities;
- Restoration work, which is a key component of climate change adaptation in the park. These restoration efforts are covered in more detail in the Degradation LLP;
- Available rainfall data have been analysed and trends summarised up until 2009. A clear plan for collecting and archiving data is now in place for the weather station at the park offices; and
- A climate change vulnerability assessment will be completed for the park by March 2024.

This programme links with high-level objective 6 and objective 6.11 on page 48. 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 Bontebok 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 monitor and understand how climate change impacts on the park by recording impacts of extreme and unusual weather events	Document impacts of climate change and/or extreme weather events on biodiversity, partner stakeholders, opportunities, park infrastructure and cultural heritage	SRs, TS, SS	Reports, research publications	As required	South African National Climate Change Response White Paper (2011), SANParks Climate change Preparedness Strategy
To identify climate change vulnerabilities through literature and database review and discussion with subject experts	Complete a park-level vulnerability assessment	SS, PM, SR	Document	Year 1	SANParks Climate change Preparedness Strategy
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 herbivore management in relation to available vegetation (especially grazing lawns) and veld condition, 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, South African National Climate Change Response White Paper (2011), Climate change bill, Carbon tax
	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
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	Minutes of meetings	Year 3, ongoing	

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 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, SS, HODs	Assessment tool	Annually	SOP for the assessment of the implementation of management plans

10.7.12 Outcomes programme

The purpose of this programme is to evaluate outcomes of management interventions related to protected area management.

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 10.8). 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 6 and objective 6.12 on page 48. 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, SR, SS, HODs,	Report	Year 1, 3, 5, 7, 9	
Participate in the SoAIM assessment	SR	Report	Biennially	
Assess the implementation of the Management Plan	PM, SS, HODs	Tool	Annually	SOP for the assessment of the implementation of management plans

10.8 Evaluation and learning

10.8.1 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 17).

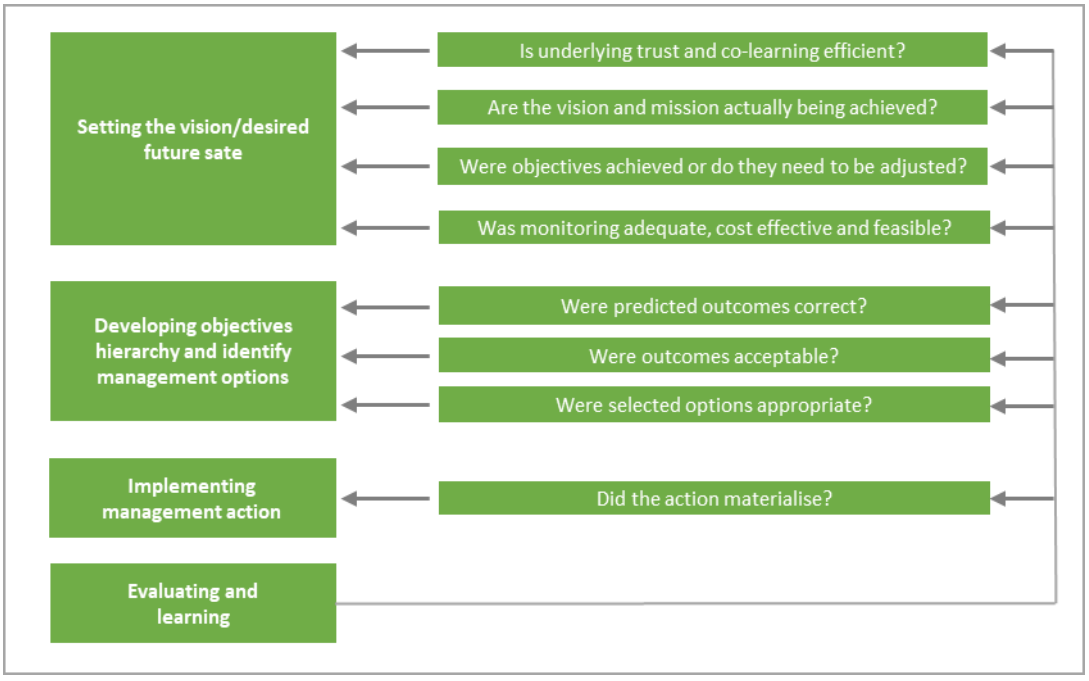


Figure 17. Feedback questions essential for adaptive learning (from Kingsford and Biggs, 2012).

10.8.2 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.

Intentionally left blank

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 take into account any emergency or disaster which could also impact the implementation of this management plan.

11.2 Income

SANParks manages a number of national parks as part of the national park system, currently 22 in total. 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 4,098,868 increasing to an estimated -R 5,174,726 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 4,098,868	-R 4,344,800	-R 4,605,488	-R 4,881,817	-R 5,174,726

11.3 Expenditure

11.3.1 Once-off costs

In addition to the above there is a further once-off cost estimated at R 17,799,500 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 12,799,500
Park expansion	R 5,000,000
Total	**R 17,799,500**

11.3.2 Recurring costs

The annual directly allocated cost (including staff salaries, travel, supplies and tools) is estimated at R 8,008,780 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
Infrastructure	R 2,097,507	26.19%
Alien and invasive species	R 1,118,637	13.97%
Safety and security	R 832,660	10.40%
Fire management	R 557,707	6.96%
Financial administration	R 521,897	6.52%
Environmental interpretation & awareness	R 397,809	4.97%
Human capital development	R 379,937	4.74%
Habitat management	R 311,832	3.89%
Bioregional integration	R 243,546	3.04%
Collaboration and stakeholder engagement	R 214,939	2.68%
Species of special concern	R 212,876	2.66%
Outcomes	R 201,596	2.52%
Rehabilitation	R 172,180	2.15%
Fresh water	R 142,775	1.78%
Safety, health & Environment	R 134,479	1.68%
Information management	R 106,352	1.33%
Climate change	R 90,854	1.13%
Employment, business opportunities & skills development	R 53,889	0.67%
Risk management	R 51,299	0.64%
Disaster management	R 48,182	0.60%

Programme	Amount	Percentage of total
Communication	R 44,404	0.55%
Cultural heritage management	R 30,900	0.39%
Environmental management	R 29,222	0.36%
Park expansion	R 13,300	0.17%
Total	R 8,008,780	**100%**

11.3.3 Unallocated fixed costs

The unallocated fixed costs applicable but not allocated in Table 17 above for 2025 / 2026 amounts to R 1,397,469.

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 1,140,435 in 2025 / 2026. If the new planned infrastructure is developed, it will add a further R 188,676 (at 2025 / 2026 rates) to this annual maintenance budget, increasing it to R 1,329,111. 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	46,743,551	12,020,400	58,763,951	814,972	173,094	988,066
Electricity	0	0	0	0	0	0
Fencing	3,116,400	779,100	3,895,500	62,328	15,582	77,910
Roads and tracks	12,576,900	0	12,576,900	251,538	0	251,538
Sewerage	485,268	0	485,268	9,705	0	9,705
Trails	94,605	0	94,605	1,892	0	1,892
Water system	0	0	0	0	0	0
Total	**63,016,724**	**12,799,500**	**75,816,224**	**1,140,435**	**188,676**	**1,329,111**

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 ?? 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 227,704	R 38,743
Computer equipment	R 210,324	R 50,100
Firearms	R 4,572	R 545
Furniture	R 1,091,010	R 185,630
Mechanical equipment	R 979,619	R 166,677
Office equipment	R 312,325	R 53,141
Vehicles, trailers and watercraft	R 2,554,115	R 608,398
White goods (appliances)	R 198,909	R 33,843
Total	**R 5,598,314.94**	**R 1,141,778**

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 17,799,500				
Annual cost	R 14,666,253	R 15,546,228	R 16,479,002	R 17,467,742	R 18,515,807
SANParks expenditure budget	R12,540,020	R13,095,411	R13,881,135	R14,714,004	R15,596,844
Shortfall	R 2,126,234	Subject to budget allocation			

The shortfall can be broken down as follows:

- An additional amount of R 987,073 is required to cover operational expenses;
- An additional amount of R 247,383 is required for the maintenance of infrastructure; and
- An additional amount of R 891,778 is required for the replacement of assets.

11.5 Implications

Should the park be unsuccessful in securing the shortfall amount of R 2,126,234 the following programmes will be affected:

- Operational expenses: Mainly the tourism programme will be negatively affected. This funding is required mainly for additional personnel and operational expenses;
- Infrastructure programme: The park will be unable to maintain the current infrastructure to a high standard; and

- 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.

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 accept 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.

Intentionally left blank

Section 12 - References

Archibald, S., Bond, W.J., Stock, W.D. and Fairbanks, D.H.K. 2005. Shaping the landscape: fire-grazer interactions in an African savanna. *Ecological Applications* **15**: 96-109.

Archibald, S. 2008. African grazing lawns - how fire, rainfall, and grazer numbers interact to affect grass community states. *Journal of Wildlife Management* 72:492-501.

Arthur, C. I. 2008. *The Khoekhoen of the Breede River Swellendam: an archaeological and historical landscape study* (Master's thesis, University of Cape Town).

Banning, E. B. 1993. Where the wild stones have been gathered aside: pastoralist campsites in Wadi ZiqlAb, Jordan. *Biblical Archaeologist* 56 (4): 212-221.

Barnard, K.H. 1943. Revision of the indigenous freshwater fishes of the S.W. Cape region. *Annals of the South African Museum* **36**:101-262.

Barnard, P.J. & Van der Walt, K. 1961. Translocation of the bontebok *Damaliscus pygargus* from Bredasdorp to Swellendam. *Koedoe* 4:105-109.

Baron, S.T. 1981. An updated list of birds of the Bontebok National Park. *Koedoe* **24**:79-98.

Beaumont, P. B. and Vogel, J. C. 1984. Spatial patterning of the ceramic Later Stone Age in the Northern Cape Province, South Africa. *Hall, M.; Avery, G.; Avery, DM; Wilson, ML & Humphreys, AJB Frontiers: southern African archaeology today. Oxford: BAR International Series*, *207*.

Beukes, P.C. 1984. Sommige aspekte van die ekologie van die vaalribbok (Pelea capreolus Forster 1790) in die Bontebok Nasionale Park. MSc thesis, University of Stellenbosch, Stellenbosch.

Bezuidenhout, H. 1993. Syntaxonomy and synecology of western Transvaal grasslands. PhD. Thesis, Faculty of Science Department of Botany, University of Pretoria.

Biggs, H.C. and Rogers, K.H. 2003. An adaptive system to link science, monitoring and management in practice. In J. du Toit, K. H. Rogers, and H. C. Biggs, editors. *The Kruger experience: ecology and management of savanna heterogeneity*. Island, Washington, D.C., US: pp. 59 – 80.

BirdLife International. 2023. Species factsheet: *Gyps coprotheres*. Downloaded from http://www.birdlife.org on 15/05/2023.

Birdlife South Africa. 2023. Black Stork Project. Downloaded from www.birdlife.org.za on 15/05/2023.

Birss, C., Cowell, C., Hayward, N., Peinke, D., Hrabar, H.H. and Kotze, A. (2016). Biodiversity Management Plan for the Cape mountain zebra in South Africa. Jointly developed by CapeNature, South African National Parks, Eastern Cape Parks and Tourism Agency, National Zoological Gardens, Department of Environmental Affairs, Northern Cape Department of Environment and Nature Conservation, Eastern Cape Department of Economic Development, Environmental Affairs and Tourism and Free State Department of Economic, Small business, Tourism and Environmental Affairs.

Bond, W.J., Le Roux, D. and Ernstzen, R. 1990. Fire intensity and regeneration of myrmecochorous Proteaceae. *South African Journal of Botany* **56**:326-330.

Bond, W.J., Maze, K. and Desmet, P. 1995. Fire life histories and the seeds of chaos. *Ecoscience* **2**:252-260.

Boshoff, A.F. and Kerley, G.I.H. 2001. Potential distributions of the medium- to large-sized mammals in the Cape Floristic Region, based on historical accounts and habitat requirements. *African Zoology* **36**(2):245-273.

Bothma, J. du P. 1986. Die dinamika van wildbevolkings. In Wildplaasbestuur, J. du P. Bothma (ed.), pp. 114-136. Van Schaik, Pretoria.

Bothma, J du P., van Rooyen, N. & van Rooyen, M.W. 2004. Using diet and plant resources to set wildlife stocking densities in African savannas. *Wildlife Society Bulletin* 32(3): pp. 840-851

Boucher, C. 1995. *Overview on management of renosterveld*. In: Low, A.B. & Jones, F.E. (eds) The sustainable use and management of renosterveld remnants in the Cape Floristic Region, FCC Report 1995/4. Flora Conservation Committee, Botanical Society of South Africa, Kirstenbosch, Cape Town, pp. 47-50.

Braack, H.H. 1981. Lower vertebrates of the Bontebok National Park. *Koedoe* **24**:67-77.

Brett, M. 2012. *Touring South Africa's National Parks*. Penguin Random House South Africa.

Byrne, D. 2003. Nervous landscapes: race and space in Australia. *Journal of Social Archaeology* 3: 169-193.

Boonzaier, E., Malherbe, C., Smith, A. and Berens, P. 1996. *The Cape herders: a history of the Khoikhoi of southern Africa*. Cape Town and Johannesburg: David Philip

Coetzer, A.H. 1986. Benthic invertebrate communities and the biological assessment of the water quality of the Breede River during 1975 and 1976. *Bontebok* **5**:42-51.

Coldrey, K.M., Turpie, J.K., Midgley, G., Scheiter, S., Hannah, L., Roehrdanz, P.R., and Foden, W.B. 2022. Assessing protected area vulnerability to climate change in a case study of South African national parks. *Conservation Biology*, 36, e13941. doi: 13910.11111/cobi.13941.

Coates, T.J. 1970. Checklist of the Collembola of South African Parks (Part 1). *Koedoe* **13**:181-184.

Courtois, P., Figuieres, C, Mulier, C. and Joakim, W.A. 2018. C*ost-Benefit Approach for Prioritizing Invasive Species*. 2018. halshs-01591987

Cowan, G. I. and Mpongoma, N. 2010. *Guidelines for the development of a management plan for a protected area in terms of the National Environmental Management: Protected Areas Act, 2003.* Department of Environment Affairs, Pretoria. pp. 17

Cowell, C.R. and Birss, C. 2017. Biodiversity Management Plan for The Bontebok (Damaliscus pygargus pygargus) in South Africa. Unpublished Report, jointly developed by South African National Parks, CapeNature and the National Department of Environmental Affairs.

Cowling, R.M., Pierce, S.M. and Moll, E.J. 1986. Conservation and utilisation of South Coast Renosterveld, an endangered South African vegetation type. *Biological Conservation* **37**:363-377.

Cowling, R.M., Richardson, D.M. and Mustart, P.J. 1997. Fynbos. In *Vegetation of Southern Africa*, Cowling, R.M., Richardson, D.M. and Pierce, S.M. (eds.), pp. 99-130. Cambridge University Press, Cambridge.

Cowling, R.M., Pressey, R.L., Lombard, A.T., Heijnis, C.E., Richardson, D.M. and Cole, N. 1999. Framework for a conservation plan for the Cape Floristic Region. IPC Report 9902 prepared for WWF-SA.

Curtis, O. 2016. The Overberg Rûens Renosterveld. A unique biodiversity hotspot in urgent need of conservation. Overberg Lowlands Conservation Trust.

Cribb, R. 1991. *Nomads in archaeology*. Cambridge: Cambridge University Press.

De Graaff, G. 1974. Notes on the occurrence of rodents in South African national parks. *Koedoe* **17**:173-183.

Deacon, H. J., Deacon, J., Brooker, M. and Wilson, M. 1978. The evidence for herding at Boomplaas Cave in the Southern Cape, South Africa *South African Archaeological Bulletin* 33: 39-65.

Department of Environmental Affairs, 2015. National Biodiversity Strategy and Action Plan, Department of Environmental Affairs, Pretoria.

Department of Environmental Affairs. 2016. National Protected Areas Expansion Strategy for South Africa 2016. Department of Environmental Affairs, Pretoria.

Department of Environmental Affairs and Tourism. 2004. Guidelines for Strategic Environmental Assessment in South Africa, Integrated Environmental Management. Department of Environmental Affairs, Pretoria.

Department of Forestry, Fisheries and the Environment. 2023. White Paper on Conservation and Sustainable Use of South Africa's biodiversity. Pretoria.

De Villiers, C.C., Driver, A., Brownlie, S., Clark, B., Day, E.G., Euston-Brown, D.I.W., Helme, N.A., Holmes, P.M., Job, N., and Rebelo, A.T. 2005. Ecosystem guidelines for environmental assessment in the Western Cape. Fynbos Forum. Botanical Society of South Africa: Conservation Unit, Kirstenbosch, Cape Town.

Dickens, C.W.S. and Graham, P.M. 2002. The South African Scoring System (SASS) Version 5 Rapid Bioassessment Method for Rivers. *African Journal of Aquatic Science* 27(1): 1 — 10

Dudley, N. (Editor). 2008. Guidelines for Applying Protected Area Management Categories. Gland, Switzerland: IUCN. x + 86pp. WITH Stolton, S., P. Shadie and N. Dudley (2013). IUCN WCPA Best Practice Guidance on Recognising Protected Areas and Assigning Management Categories and Governance Types, Best Practice Protected Area Guidelines Series No. 21, Gland, Switzerland: IUCN

Elphick, R. 1985. *Khoikhoi and the founding of white South Africa*. Johannesburg: Ravan Press.

Elphick, R. and Malherbe, V. C. 1989. *The Khoisan to 1828. In: Elphick, R. and Giliomee, H. (ed.). The shaping of South African society*. Cape Town: Maskew Miller Longman. pp. 66-108.

Elphick, R. and Shell, R. 1989. Intergroup relations: Khoikhoi, settlers, slaves and Free Blacks, 1652-1795. In: Elphick, R. and Giliomee, H. (eds.). *The shaping of South African society*. Cape Town: Maskew Miller Longman. pp. 184-239.

Fisher, R.C., Adams, T.D., Ebrahim, Z.C. and Daniels, F. Freshwater Ecosystems in Bontebok National Park. In Prep

Foxcroft, L.C. and McGeoch, M. 2011. *Implementing invasive species management in an adaptive management framework*. Koedoe 53(2), Art. #1006.

Foxcroft, L.C., Petr Pyšek, P., Richardson, D.M., Pergl, J. and Hulme, P.E. 2013. *The Bottom Line: Impacts of Alien Plant Invasions in Protected Areas*. Springer Series in Invasion Ecology 7: pp. 19-41

Foxcroft, L.C., Van Wilgen, N.J., Baard, J.A. and Cole, N.S., 2017. *Biological invasions in South African National Parks*. Bothalia 47(2), a2158. https://doi.org/10.4102/abc. v47i2.2158

Foxcroft, L.C., Spear, D., van Wilgen, N.J. and McGeoch, M.A. 2019. *Assessing the association between pathways of alien plant invaders and their impacts in protected areas*. NeoBiota 43: pp. 1–25. https://doi.org/10.3897/neobiota.43.29644

Frye, H. A., Aiello-Lammens, M. E., Euston-Brown, D., Jones, C. S., Mollmann, H. K., Merow, C., Slingsby, J. A., van der Merwe, H., Wilson, A. M. and Silander, J. A. 2021. Plant spectral diversity as a surrogate for species, functional and phylogenetic diversity across a hyper-diverse biogeographic region. *Global Ecology and Biogeography* 30(7):1403–1417.

Gallardo, B., Bacher, S., Bradley, B., Comín, F.A., Gallien, L., Jeschke, J.M., and Sorte, C.J.B. 2019. *InvasiBES: Understanding and managing the impacts of invasive alien species on biodiversity and ecosystem Services*. NeoBiota; 50: pp. 109–22.

Grant, R., Sherwill, T., Rogers, K., Biggs, H., Freitag, S., Hofmeyr, M. and Joubert, M. 2008. *A framework for developing and implementing management plans for South African National Parks*, South African National Parks, Pretoria.

Greyling, T. and Huntley, B.J. 1984. Directory of southern African conservation areas. South African National Scientific Programmes Report 98, CSIR, Pretoria.

Grobler, P.J. and Marais, J. 1967. Die plantegroei van die Bontebok Nasionale Park, Swellendam (Deel 1). *Koedoe* 10:132-146.

Groenewald, J.P. 2014. Biodiversity and ecology of critically endangered, Ruens Silcrete renosterveld in the Buffeljagsrivier area, Swellendam (Doctoral dissertation, Stellenbosch: Stellenbosch University).

Guelke, L. and Shell, R. 1992. Landscape of conquest: frontier water alienation and Khoikhoi strategies of survival, 1652-1780. *Journal of Southern African Studies* 18 (4): 803-824.

Hagos, M.G. and Smit, G.N. 2005. Soil enrichment by *Acacia mellifera* subsp. *detinens* on nutrient poor sandy soil in a semi-arid southern African savanna. *Journal of Arid Environments*. 61(1): pp. 47 – 59.

Janssen, M., Schoon, M., Ke, W. and & Borner, K. 2006. Scholarly networks on resilience, vulnerability and adaptation within the human dimensions of global environmental change. Global Environmental Change. 16. 240-252. 10.1016/j.gloenvcha.2006.04.001.

Johnson, S.D. 1992. Plant-animal relationships. *The ecology of fynbos: nutrients, fire and diversity. Oxford University Press*, Cape Town, pp.175-205.

Kemper, J., Cowling, R.M. and Richardson, D.M. 1999. Fragmentation of South African renosterveld shrublands: effects on plant community structure and conservation implications. *Biological Conservation* **90**:103-111.

Kinahan, J. H. A. 2000. *Cattle/or beads: the archaeology of historical contact on the Namib Coast.*

Kinahan, J. H. A. 2001. *Pastoral nomads of the central Namib Desert: the people history forgot.* Second edition. Windhoek: Namibia Archaeological Trust.

Kingsford, R. and Biggs, H. 2012. *Strategic adaptive management: guidelines for effective conservation of freshwater ecosystems in and around protected areas of the world*. IUCN WCPA Freshwater Taskforce, Australian Wetlands and Rivers Centre, Sydney.

Kolb, P. 1968. *The present state of the Cape o/Good Hope. Volume* 1. Reprint (originally published in 1731). London: Johnson Reprint Corporation.

Kraaij, T. 2004. Alteration of the burning regime of Bontebok National Park. Internal report, South African National Parks, 9 pp.

Kraaij, T. 2010. Changing the fire management regime in the renosterveld and lowland fynbos of the Bontebok National Park. *South African Journal of Botany* 76(3):550-557.

Kraaij, T. and Novellie, P.A. 2010. Habitat selection by large herbivores in relation to fire at the Bontebok National Park (1974–2009): the effects of management changes. *African Journal of Range and Forage Science* 27(1):21-27.

Kraaij, T. 2011. The flora of the Bontebok National Park in regional perspective. *South African Journal of Botany* 77(2):455-473. doi:10.1016/j.sajb.2010.09.013

Kraaij, T. Randall, R.M., Novellie, P.A., Russel, I.A. and Kruger, N. 2011. Bontebok National Park State of Knowledge. SANParks Scientific Services Report. SANParks, Pretoria

Krug, R.M., Krug, C.B., Iponga, D.M, Newton, I.P., Shiponeni, N.N., Walton, B.A. and Milton, S.J. 2004. Reconstructing ecological processes in West Coast Renosterveld: the grazers, the fires and the humans. Conference abstract, p. 36, Fynbos Forum, 10-13 August 2004, Langebaan.

Kruger, F.J. and Lamb, A.J. 1979. Conservation of the Kogelberg State Forest. Preliminary assessment of the effects of management from 1967 to 1978. Report 79-02, Jonkershoek Forestry Research Centre, Stellenbosch.

Kruger, F.J. and Bigalke, R.C. 1984. Fire in fynbos. In *Ecological effects of fire in South African ecosystems* (Ecological Studies 48), Booysen, P.V. & Tainton, N.M., pp. 67-114. Springer-Verlag, Berlin.

Land Type Survey Staff. 2004. Land types of the maps 3320 Ladismith and 3420 Riversdale. Memoirs on the Agricultural Natural Resources of South Africa. No. 20. ARC-Institute for Soil, Climate and Water, Pretoria.

Lepage, D. 2023. Avibase - Bird Checklists of the World: Bontebok National Park. https://avibase.bsc-eoc.org/checklist.jsp?region=ZAwc0001&list=howardmoore.

Le Roux, A., van Niekerk, W., Arnold, K., Pieterse, A., Ludick, C., Forsyth, G., Le Maitre, D., Lötter, D., du Plessis, P., and Mans, G. 2019. Green Book Risk Profile Tool. Pretoria: CSIR. Available at: riskprofiles.greenbook.co.za

Lukács, K, and Valkó O. 2021. Human-vectored seed dispersal as a threat to protected areas: Prevention, mitigation and policy. *Glob Ecol Conserv* 2021;31, DOI: 10.1016/j.gecco.2021.e01851.

Manning, J. and Goldblatt, P. 2012. Plants of the Greater Cape Floristic Region. 1: The Core Cape flora. Pretoria: South African National Biodiversity Institute

Marks, S. 1972. Khoisan resistance to the Dutch in the seventeenth and eighteenth Centuries. *Journal of African History* 13: 55-80.

McDowell, C. 1995. *Grazing and renosterveld management.* In: Low, A.B. & Jones, F.E. (eds) The sustainable use and management of renosterveld remnants in the Cape Floristic Region, FCC Report 1995/4. Flora Conservation Committee, Botanical Society of South Africa, Kirstenbosch, Cape Town, pp. 63-80.

McGeoch, M.A., Dopolo, M., Novellie, P., Hendriks, H., Freitag, S., Ferreira, S., Grant, R., Kruger, J., Bezuidenhout, H., Randall, R.M., Vermeulen, W., Kraaij, T., Russel, I.A., Knight, M.H., Holness, D. & Oosthuizen, A. 2011. A strategic framework for biodiversity monitoring in South African National Parks. *Koedoe* 53(2), doi:10.4102/koedoe.v53i2.991.

McLean, P., Gallien, L., Wilson, J.R.U., Gaertner, M. and Richardson, D.M. 2017. Small urban centres as launching sites for plant invasions in natural areas: insights from South Africa. Biological Invasions 19, 3541–3555 (2017). https://doi.org/10.1007/s10530-017-1600-4

McNaughton, S.J. 1984. Grazing lawns: Animals in herds, plant form, and coevolution. *The American Naturalist* **124**: 863-886.

Midgley, J.J. 1989. Season of burn of serotinous fynbos Proteaceae: a critical review and further data. *South African Journal of Botany* **55**(2):165-170.

Milton, S.J. and Dean, W.R.J. 2010. Plant invasions in arid areas: Special problems and solutions: A South African perspective. *Biol Invasions* 2010;12:3935–48.

Mitchell, P. J. 2002. *The archaeology of southern Africa.* Cambridge: Cambridge University Press.

McNaughton, S. J. 1984. Grazing lawns: animals in herds, plant form, and coevolution. *The American Naturalist*, 124(6):863-886.

Moll, E.J. and Bossi, L. 1984. Assessment of the extent of the natural vegetation of the fynbos biome of South Africa. *South African Journal of Science* **80**:355-358.

Moncrieff, G.R. 2021. Locating and Dating Land Cover Change Events in the Renosterveld, a Critically Endangered Shrubland Ecosystem. Remote Sens. **2021**, 13, 834. https://dx.doi.org/10.3390/rs13050834

Moodie, D. 1838. *The record of a series of official papers relative to the condition and treatment of native tribes of South Africa. Volume I and III.* Amsterdam: Balkema.

Mucina, L., Rutherford, M.C. and Powrie, L.W. 2006. Inland azonal vegetation. In: Mucina, L. and Rutherford, M. (eds.). The vegetation of South Africa, Lesotho and Swaziland, *Strelitzia* 19. South African National Biodiversity Institute, Pretoria

Muir, R. A., Bordy, F.M., Reddeng, J.S.V. & Viljoen, J.H.A. 2017. Lithostratigraphy of the Enon Formation (Uitenhage Group), South Africa. South African Journal of Geology 120 (2): 273-280.

Nel, J.L., Driver, A., Strydom, W., Maherry, A., Petersen, C., Hill, L., Roux, D.J., Nienaber, S., Van Deventer, H., Swartz, E. and Smith-Aldao, L.B. 2011. *Atlas of Freshwater Ecosystem Priority Areas in South Africa: Maps to support sustainable development of water resources*. Water Research Commission Report No. TT 500/11. Pretoria.

Noss, R.F. 1990. *Indicators for monitoring biodiversity: a hierarchical approach.* Conservation Biology 4: pp. 355-364.

Novellie, P. 1984. The fire regime at the Bontebok National Park: factors to be considered in applying rotational burning and vegetation monitoring. Internal report, South African National Parks, 10 pp.

Novellie, P. 1986. Relationships between rainfall, population density and the size of the bontebok lamb crop in the Bontebok National Park. *South African Journal of Wildlife Research* 16:39-46.

Novellie, P. 1987. Interrelationships between fire, grazing and grass cover at the Bontebok National Park. *Koedoe* **30**:1-17.

Novellie, P. 1989. History of fires in the Bontebok National Park: 1970-1988. Internal report, South African National Parks, 6 pp.

Novellie, P.A. and Knight, M. 1994. Repatriation and translocation of ungulates into South African national parks: an assessment of past attempts. *Koedoe* **37**(1):115-119.

Novellie, P. and Kraaij, T., 2010. Evaluation of Themeda triandra as an indicator for monitoring the effects of grazing and fire in the Bontebok National Park. *Koedoe: African Protected Area Conservation and Science*, *52*(1), pp.1-5.

Olivier, W.C. 2010.The geology of the Witteberg group, Cape Supergroup, with specific focus on the Perdepoort member as a potential silica source. MSc thesis. Faculty of Science, Nelson Mandela Metropolitan University, Port Elizabeth.

Ollis, D.J., Snaddon, C.D., Job, N.M. and Mbona, N. 2013. Classification system for wetlands and other Aquatic Ecosystems in South Africa. User Manual: Inland Systems. *SANBI Biodiversity Series* 22. South African National Biodiversity Institute, Pretoria

Orimoloye, I.R., Zhou, L. and Kalumba, A.M. 2021. Drought disaster risk adaptation through ecosystem services-based solutions: Way forward for South Africa. *Sustain* 2021;13, DOI: 10.3390/su13084132.

Pickett, S.T.A., Ostfeld, R.S., Shachak, M. and Likens G.E. (eds.). 1997. *Enhancing the ecological basis of conservation: heterogeneity, ecosystem function and biodiversity*. Chapman & Hall. New York.

Penn-Clarke, C.R., Rubidge, B.S. and Jinnah, Z.A. 2018. Two hundred years of palaeontological discovery: Review of research on the Early to Middle Devonian Bokkeveld Group (Cape Supergroup) of South Africa. Journal of African Earth Sciences 137: 157-178.

Phophe, P.A. and Masubelele, M.L. 2021. South African National Parks carbon footprint and future energy reduction scenarios, South African National Parks Scientific Services, Cape Town.

Pool-Stanvliet, R., Duffell-Canham, A., Pence, G. and Smart, R. 2017. The Western Cape Biodiversity Spatial Plan Handbook. Stellenbosch: CapeNature

Pressey, R.L., Cowling, R.M. and Rouget, M. 2003. Formulating conservation targets for biodiversity pattern and process in the Cape Floristic Region, South Africa. *Biological Conservation* **112**:99-127.

Radloff, F.G.T. 2008. The ecology of large herbivores native to the coastal lowlands of the Fynbos Biome in the Western Cape, South Africa. PhD thesis, University of Stellenbosch, Stellenbosch, 145 pp.

Raitt, G. 2005. The effect of management on Themeda renosterveld grasslands in the Groot Vaders Bosch Conservancy. MSc thesis, University of Stellenbosch, Stellenbosch, 258pp.

Raven-Hart, R. 1967. *Before Van Riebeeck.* Cape Town: Struik.

Rebelo, A.G. 1988. Comments on the running of the Bontebok National Park. Report produced by delegates of the Fynbos Biome Annual Research Meeting held at Bontebok National Park, August 1988.

Rebelo, A.G. 1995. Renosterveld conservation and research. In: Low, A.B. & Jones, F.E. (eds) *The sustainable use and management of renosterveld remnants in the Cape Floristic Region*, FCC Report 1995/4. Flora Conservation Committee, Botanical Society of South Africa, Kirstenbosch, Cape Town, pp. 32-42.

Rebelo, A.G., Boucher, C., Helme, N., Mucina, L. and Rutherford, M.C. 2006. Fynbos Biome. In: Mucina, L. and Rutherford, M. (eds.). The vegetation of South Africa, Lesotho and Swaziland, *Strelitzia* 19. South African National Biodiversity Institute, Pretoria.

Rebelo, T.G., Freitag, S., Cheney, C. and McGeoch, M.A. 2011. Prioritising species of special concern for monitoring in Table Mountain National Park: The challenge of a species-rich, threatened ecosystem. *Koedoe: African Protected Area Conservation and Science*, 53(2), 1-14. doi: 10.4102/koedoe.v53i2.1019

Reid, A. and Lane, P. 2004. African historical archaeologies: an introductory consideration of scope and potential. In: Reid, A. and Lane, P. (eds.). *African historical archaeologies.* New York: Kluwer Academic! Plenum Publishers. pp. 1-32.

River Health programme. 2011. State of Rivers Report: Rivers of the Breede River Water Management Area. Department of Water Affairs, Western Cape.

Robertshaw, P.T. 1978. The archaeology of an abandoned pastoralist campsite. *South African Journal 0/ Science* 74: 29-31.

Robertshaw, P. T. 1979. Coastal Settlement, freshwater fishing and pastoralism in the later prehistory of the Western Cape, South Africa. Unpublished PhD thesis. University of Cambridge.

Robinson, G.A., Van der Walt, P.T., De Graaf, G. and Pieterse, C.P. 1981. Bestuursplan – Bontebok Nasionale Park. Unpublished document, National Parks Board.

Rogers, K.H. 2003. *A Biodiversity Custodianship Framework for SANParks. A Protected Area Management Planning Framework*. Unpublished document. South African National Parks, Pretoria.

Rosen, S. 1992. Nomads in archaeology: a response to Finkelstein and Perevolotsky. *Bulletin o/the American Schools o/Oriental Research* 287: 75-85.

Roux, D.J., Nel, J.L., MacKay, H.M. and Ashton, P.J. 2006. *Cross-sector policy objectives for conserving South Africa's inland water biodiversity*. WRC Report No TT 276/06, Water Research Commission, Pretoria.

Roux, D.J. and Foxcroft, L.C. 2011. *The development and application of strategic adaptive management within South African National Parks*. Koedoe 53(2), Art. #1049.

Roux, D.J., Nel, J.L., Van Deventer, H., Russell, I., Van Niekerk, L., Simms, C., Job, N., Baard, J., Cole, N., Petersen, R., Riddell, E., Freitag, S., Daniels, F., Fisher, R.C., Ebrahim, Z., Sithole, H. 2023. Mainstreaming freshwater and estuarine ecosystem conservation into South African National Parks: contribution of national parks to freshwater and estuarine conservation targets and strategic options for enhancing this contribution. Scientific Report 01 / 2023, South African National Parks, Skukuza

Rowley-Conwy, P. 2004. How the west was lost: a reconsideration of agricultural origins in Britain, Ireland, and southern Scandinavia. *Current Anthropology* 45: 83-113.

Russell, I.A. 2001. Freshwater fishes of the Bontebok National Park. *Koedoe* 44(2):71-77.

Sadr, K. 2003. The Neolithic of Southern Africa. *Journal of African History* 44: 195-209.

SANParks. 2005a. Sensitivity-Value analysis Manual. Unpublished. South African National Parks, Pretoria.

SANParks. 2005b. CDF Planning Manual. Unpublished. South African National Parks, Pretoria.

SANParks. 2008. Framework for developing and implementing management plans, Pretoria. Available at www.sanparks.org/conservation/park_man/.

SANParks. 2011. Stakeholder participation in developing park management plans. SANParks, Pretoria. Available at www.sanparks.org/conservation/park_man/.

SANParks. 2016. Heritage Objects Collections Management Policy. Unpublished. South African National Parks, Pretoria.

SANParks. 2017a. Policy for the management of invasive alien species. Unpublished. South African National Parks, Pretoria.

SANParks. 2017b. Standard Operating Procedure for the Implementation of Invasive Alien Plant Management Projects. South African National Parks, Pretoria

SANParks. 2017c. Socio-economic development strategy. Unpublished. South African National Parks, Pretoria.

SANParks. 2018. Alien and invasive species regulations. Unpublished. South African National Parks, Pretoria.

SANParks. 2020. Land Inclusion Policy. Unpublished. South African National Parks, Pretoria.

SANParks. 2021a. Cultural Heritage Policy. Unpublished. South African National Parks, Pretoria.

SANParks. 2021b. Guidelines for Burials and Scattering of Ashes. Unpublished. South African National Parks, Pretoria.

SANParks. 2022a. SANParks Green Energy Strategy. Unpublished. South African National Parks, Pretoria.

SANParks. 2022b. SANParks Climate Change Preparedness Strategy. Unpublished. South African National Parks, Pretoria.

SANParks. 2023a. Cultural heritage assessment report and heritage plan for the Bontebok National Park. Unpublished. South African National Parks, Pretoria.

SANParks. 2023b. SANParks Co-ordinated Policy Framework. Unpublished. South African National Parks, Pretoria.

SANParks. 2023c. State of Knowledge Report: Land cover and land cover changes (1990 – 2020) in and around SANParks.

South African National Parks. 2023d. Safety, health and environment management framework. Unpublished. South African National Parks, Pretoria.

Schapera, I. 1931. *The Khoisan peoples of southern Africa: Bushmen and Hottentots.* London.

Scholes, R. J. and Walker, B. H. 1993. An African Savanna: synthesis of the Nylsvley study. Cambridge University Press, Cambridge.

Skinner, J.D., Dott, H.M., De Vos, V. and Millar, R.P. 1980. On the sexual cycle of mature bachelor bontebok rams at the Bontebok National Park, Swellendam. *South African Journal of Zoology* **15**:117-119.

Skowno, A.L., Poole, C., Raimondo, D., Sink, K., van Niekerk, L., van Deventer, H., Smith-Adao, L., Harris, L., Tolley, K., Zengeya, T., Midgley, G. and Driver, A. 2019. National Biodiversity Assessment 2018: An assessment of South Africa's ecosystems, species and genes. Synthesis Report.

Sleigh, D. 1993. *Die Buitepost: VOC-buiteposte onder Kaapse bestuur, 1652-1795.* Pretoria: HAUM.

Smith, A. B. 2005. *African herders: emergence of pastoral traditions*. Walnut Creek, CA: Altamira.

SPARC. 2019a. Spatial Planning for Protected Areas in Response to Climate Change Conservation Biodiversity. SPARC. URL http://www.sparc-website.org (accessed on 06 October 2020).

SPARC. 2019b. Spatial data from Spatial Planning for Area Conservation in Response to Climate Change Project (SPARC).

Strauss, T. 2015. Cape mountain zebra *Equus zebra zebra* habitat use and diet in the Bontebok National Park, South Africa. Master's thesis, Nelson Mandela Metropolitan University, Port Elizabeth, South Africa.

Thom, H. B. 1952. *Journal of Jan Van Riebeeck*. Vol. I. Cape Town: Balkema.

Thom, H. B. 1954. *Journal of Van Riebeeck*. Vol. II. Cape Town: Balkema.

Thom, H. B. 1958. *Journal of Van Riebeeck*. Vol. III. Cape Town: Balkema.

Tomlinson, L. L. 1943. *Geskiedkundige Swellendam*. Cape Town: Nasionale Pers.

Topp, E.N. and Loos, J. 2019. Fragmented Landscape, Fragmented Knowledge: A Synthesis of Renosterveld Ecology and Conservation. Environmental Conservation 46: 171–179. doi: 10.1017/ S0376892918000498

Tu, M. and Robison, R.A. 2013. *Overcoming barriers to the prevention and management of alien plant invasions in protected areas: A practical approach*. In L.C. Foxcroft, P. Pyšek, D.M. Richardson & P. Genovesi (eds.), *Plant invasions in protected areas. Patterns, problems and challenges*, Springer, Dordrecht. pp. 529-547, https://doi.org/10.1007/978-94-007-7750-7_24

Turpie, J.K., Weiss, J., Higgins, S., Wilson, L. & Letley, G. 2021. Climate Change Vulnerability Assessment and Adaptation Strategy for South Africa's Biodiversity and Ecosystems Sector. GIZ Project: DFFE Climate Support Programme (CSP) Final Report for Contract 83360260. Anchor Environmental, Department of Forestry, Fisheries and the Environment & GIZ, Pretoria.

van der Merwe, N.J. 1968. Die bontbok. *Koedoe* 11:161-168.

van Deventer, H., Smith-Adao, L., Mbona, N., Petersen, C., Skowno, A., Collins, N.B., Grenfell, M., Job, N., Lötter, M., Ollis, D., Scherman, P., Sieben, E., Snaddon, K. 2018. South African Inventory of Inland Aquatic Ecosystems. South African National Biodiversity Institute, Pretoria. Report Number: CSIR report number CSIR/NRE/ECOS/IR/2018/0001/A; SANBI report number http://hdl.handle.net/20.500.12143/5847.

van Oudtshoorn, F. 2015. Veld management practices and principles. Briza Publications. South Africa.

van Rensburg, A.P.J. 1975. Die geskiedenis van die Nasionale Bontebokpark, Swellendam. *Koedoe* 18:165-190.

Van Wilgen, B.W. 1984. Fire climates in the southern and western Cape Province and their potential use in fire control management. *South African Journal of Science* 80:358-362.

Van Wilgen, B.W., Bond, W.J. and Richardson, D.M. 1992. Ecosystem management. In *The ecology of fynbos.* Nutrients, fire and diversity, Cowling, R.M. (ed.), pp. 345-371. Oxford University Press, Oxford.

van Wilgen, N.J., Goodall, V., Holness, S., Chown, S.L. and McGeoch, M.A. 2016. Rising temperatures and changing rainfall patterns in South Africa's national parks. *International Journal of Climatology,* 36**,** 706-721.

Viljoen, R. 1997. Making sense of the Khoikhoi cattle killing of 1788: an episode in millenarianism in Khoikhoi society. *Kronos* 24: 1-28.

Viljoen, R. 2001. Aboriginal Khoikhoi servants and their masters in colonial Swellendam, South Africa, 1745-1795. *Agricultural History* 75 (1): 28-51.

Watson, L.H., Kraaij, T. and Novellie, P. 2011. Management of rare ungulates in a small park: habitat use of bontebok and Cape mountain zebra in Bontebok National Park assessed by counts of dung groups. *South African Journal of Wildlife Research-24-month delayed open access*, *41*(2), pp.158-166.

Winterbottom, J.M. 1968. Bird densities in Coastal Renosterbosveld of the Bontebok National Park, Swellendam, Cape Province. *Koedoe* **11**:139-144.

Zylstra, E.R., Swann, D.E. and Steidl, R.J. 2018. Surface-water availability governs survival of an amphibian in arid mountain streams. *Freshwater Biology.* 64(1) pp. 164 – 174.

Appendix 1 - Declarations

1. Land declared

Government Notice 243 / Government Gazette 1963 of 03 July 1931 declared the following land to be part of the Bontebok National Park in terms of the National Parks Act (Act No. 56 of 1926):

1. "Quarrie Bos" portion of "Bushy Park", Bredasdorp Registration Division, measuring 843 morgen and 8,746 square feet in extent.

Government Notice 317 / Government Gazette 1297 of 10 December 1961 declared the following land to be part of the Bontebok National Park in terms of the National Parks Act (Act No. 56 of 1926):

1. Erf No 1699, Swellendam Registration Division, measuring 1,376.8784 ha in extent and held by Title Deed No T14228/1960;
2. Portion 3, a portion of Portion 1, of Farm No 259, Swellendam Registration Division, measuring 10.0524 ha in extent and held by Title Deed No T14030/1960;
3. Portion 8, a portion of Portion 1, of the Farm Weegschaal No 254, Swellendam Registration Division, measuring 31.8628 ha in extent and held by Title Deed No T14030/1960; and
4. A portion of unsurveyed state-owned land, being half the bed of the Breede River adjoining Erf No 1699, Swellendam Registration Division, measuring 7.1306 ha in extent.

Government Notice 317 / Government Gazette 1297 of 10 December 1965 declared the following land to be part of the Bontebok National Park in terms of the National Parks Act (Act No. 42 of 1962):

1. Remaining extent of Erf No 23, Swellendam Registration Division, measuring 949.9769 ha in extent and held by Title Deed No T20337/1964; and
2. Erf No 153, Swellendam Registration Division, measuring 371.4977 ha in extent and held by Title Deed No T23906/1964.

Government Notice 41 / Government Gazette 25924 of 23 January 2004 declared the following land to be part of the Bontebok National Park in terms of the National Parks Act (Act No. 57 of 1976):

1. Erf No 5338, Swellendam Registration Division, measuring 535.5909 ha in extent and held by Title Deed No T5463/2001; and
2. Erf No 5339, Swellendam Registration Division, measuring 95.9582 ha in extent and held by Title Deed No T5463/2001.

Government Notice 2856 / Government Gazette 45352 of 22 October 2021 declared the following land to be part of the Bontebok National Park in terms of the National Environmental Management: Protected Areas Act (Act No. 57 of 2003):

1. Remaining extent of Erf 4492, Swellendam Registration Division, measuring 0.5782 ha in extent and held by Title Deed No T84356/2006.

2. Excluded

Government Notice 275 / Government Gazette 4932 of 19 December 1975 excluded the following land from the Bontebok National Park in terms of the National Parks Act (Act 57 of 1976):

1. Erf 2475, a portion of Erf 23, Swellendam Registration Division, measuring 6.7750 ha in extent; and
2. Erf 2477, a portion of Erf 23, Swellendam Registration Division, measuring 10.7502 ha in extent.

Government Notice 2409 / Government Gazette 11596 of 02 December 1988 excluded the following land from the Bontebok National Park in terms of the National Parks Act (Act 57 of 1976):

1. Erf 3610, a portion of Erf 23, Swellendam Registration Division, measuring 10.8515 ha in extent.

Appendix 2 – Stakeholder participation report

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

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

Appendix 3 – 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 21 is to indicate which products already exist, which new products may be allowed, and in which visitor use zones these may occur.

Table 21: 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
			YES	NO	YES	NO	1	2	3	4	5	6
Over-nigh facilities	Self-catering - limited service (serviced prior to arrival and after departure only)	Accommodation (budget)		√	√					√	√	√
		Accommodation (economy)	√		√			√		√	√	√
		Accommodation (premium) / guest house	√		√			√		√	√	√
		Accommodation backpacking / youth hostels		√		√						√
		Dormitories / school groups / educational facilities	√		√					√	√	√
		Game / bird hide		√	√			√		√	√	√
		Military bunker / fort / gun sites		√		√						√
		Tree houses / platforms		√		√						√
		Fly camp / platform / sleep out		√	√			√		√	√	√
	Self-catering - serviced (serviced daily)	Accommodation (budget)		√	√					√	√	√
		Accommodation (economy)	√		√			√		√	√	√
		Accommodation (premium) / guest house	√		√					√	√	√
		Accommodation backpacking / youth hostels		√		√						√
		Dormitories / school groups / educational facilities		√		√						√
		Houseboat (economy)		√		√						√
		Houseboat (premium)		√		√						√
	Camping	Camping (budget facilities) (power / no power)	√		√					√	√	√
		Camping (premium facilities) (power / no power)		√	√					√	√	√

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
Over-nigh facilities	Camping	Camping bush rustic (protected) (budget facilities)		√	√			√		√	√	√
		Camping bush rustic (protected) (premium facilities / self-sufficient)		√	√			√		√	√	√
		Camping bush rustic (unprotected) (self-sufficient)		√	√			√		√	√	√
	Full service (generally some/all meals and activities included)	Game / bush / safari / boutique lodge - under 20 beds		√	√			√		√	√	√
		Game / bush / safari / boutique lodge - 20 beds plus		√	√			√		√	√	√
		Conference lodge / hotel - 21 - 50 beds		√		√						√
		Conference lodge / hotel - 50 beds plus		√		√						√
		Houseboat		√		√						√
		Luxury tented safaris		√		√						√
		Remote camp / fly camp / platform / sleep Out		√	√			√		√	√	√
		Overnight train rides		√		√						√
	Additional services	Cook and guide provided		√	√			√		√	√	√
		Cook, guide and OSV provided		√	√			√		√	√	√
		Meal packages e.g. breakfast, half board or full board		√	√			√		√	√	√
Leisure / recreational		4x4 Eco-trails (multi-day, self-drive, basic facilities)		√	√			√		√	√	√
		4x4 Eco-trails (multi-day, self-drive, no facilities)		√	√			√		√	√	√
		4x4 trails (full day / half-day / guided or unguided)	√		√			√		√	√	√
		Abseiling / rappelling		√	√			√		√	√	√
		Animal interaction activities (limited)		√		√						√
		Animal tracking activities		√		√						√
		Archery		√		√						√
		Base jumping		√		√						√
		Bird watching	√		√		√	√	√	√	√	√
		Boat cruises		√		√						√
		Boat cruise - birding		√		√						√
		Boat cruises - sunset		√		√						√
		Botanical sightseeing	√		√		√	√	√	√	√	√
		Bouldering		√		√						√
		Bungee / bungee jumping		√		√						√
		Cableway		√		√						√
		Canoe trails (Varying facilities)		√		√						√
		Canoeing		√	√		√	√	√	√	√	√
		Canopy tour (acrobranch)		√		√						√
		Canopy tour (boardwalk)		√		√						√
		Canopy tour / flying fox (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
						1	2	3	4	5	6
		YES	NO	YES	NO						
	Fishing (catch and release)	√		√			√		√	√	√
	Funicular		√		√						√
Leisure / recreational	Game drives - night drive		√	√			√		√	√	√
	Game drives - night drive (Night Vision aided)		√		√						√
	Game drives - premium		√	√			√		√	√	√
	Game drives - standard		√	√			√		√	√	√
	Game drives - UA		√	√			√		√	√	√
	Games facilities (e.g. table tennis, pool, etc.)		√	√					√	√	√
	Geocaching		√	√			√	√	√	√	√
	Golf		√		√						√
	Golf club membership		√		√						√
	Green hunting / darting safaris		√		√						√
	Hang gliding		√		√						√
	Hiking	√		√		√	√	√	√	√	√
	Hiking trails - Wilderness (full service)		√	√		√	√				√
	Hiking trails - Wilderness (no facilities) (backpack)		√	√		√	√				√
	Hiking trails (budget)	√		√		√	√	√	√	√	√
	Hiking trails (premium)		√		√						√
	Horse riding		√		√						√
	Horse riding trails (varying facilities)		√		√						√
	Jet skiing		√		√						√
	Jogging / running	√		√			√	√	√	√	√
	Kayaking / paddling		√	√			√	√	√	√	√
	Kayaking / paddling trails		√		√						√
	Kitesurfing / kiteboarding / fly surfing		√		√						√
	Kloofing (guided)		√		√						√
	Mini golf / putt-putt		√		√						√
	Model aircraft flying		√		√						√
	Motorcycle trails (varying facilities)		√		√						√
	Motorcycling		√		√						√
	Motorcycling - off-road		√		√						√
	Motorised boating		√		√						√
	Mountain bike trails (varying facilities)		√	√			√	√	√	√	√
	Mountain biking	√		√		√	√	√	√	√	√
	Mountain biking - unicycling		√		√						√
	Mountaineering		√		√						√
	Paddle boards		√		√						√
	Paddle boats		√		√						√
	Paddle skiing		√		√						√
	Paragliding		√		√						√
	Parasailing		√		√						√
	Park and ride		√	√			√		√	√	√
	Photography	√		√			√	√	√	√	√
	Picnicking (basic facilities)	√		√			√		√	√	√
	Picnicking (full facilities)		√	√			√		√	√	√

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		√	√		√	√	√	√	√	√

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
		YES	NO	YES	NO						
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		√	√			√		√	√	√

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
		YES	NO	YES	NO						
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 (Kamp Kwena, "summer" camps)	√		√					√	√	√
Business tourism and events	Events - any	√		√			√		√	√	√
	Events - adventure	√		√			√		√	√	√
	Festivals		√	√			√		√	√	√
	Fundraising events e.g. WWF Swim for Nature		√	√			√		√	√	√
	Lapas / bomas (to rent)		√	√					√	√	√
	MICE (Meetings, Incentives, Conventions and Exhibitions)	√		√					√	√	√
	Musical concerts		√	√			√		√	√	√
	Photographic shoots and filming	√		√			√		√	√	√
	Product launches		√	√			√		√	√	√
	Races / competitions - marathons / trail running	√		√			√		√	√	√
	Races / competitions - mountain-biking	√		√			√		√	√	√
	Races / competitions - other	√		√			√		√	√	√
	Races / competitions - adventure / expedition racing		√	√			√		√	√	√
	Scientific conferences		√	√					√	√	√
	Team building		√	√			√		√	√	√
	Weddings	√		√			√		√	√	√
Retail / services	Apparel outlets		√		√				√	√	√
	Airport / aerodrome / airstrip	√		√					√	√	√
	Banking - Bank or ATM		√	√					√	√	√
	Rental - bicycle		√	√					√	√	√
	Camping equipment rental		√	√					√	√	√
	Rental - car		√		√						√
	Car wash	√		√					√	√	√
	Casinos		√		√						√
	Clinics / Doctor/ first aid		√		√						√
	Outlets - community curios	√		√					√	√	√
	Outlets - curios	√		√					√	√	√
	Essential commodities in camps (ice, wood, etc.)	√		√					√	√	√
	Fast moving consumer goods (FMCG) outlets		√		√						√
	Fuel stations	√		√					√	√	√
Retail / services	Gas equipment hire		√	√					√	√	√
	Hop-on guides		√	√			√	√	√	√	√
	Internet café / Wi-Fi hotspot		√	√					√	√	√

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
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	√		√			√		√	√	√

Intentionally left blank

Appendix 4 – Internal rules

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

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. **Indemnity**: Guests entering the park will be required to sign a document indemnifying SANParks against any claim, action, judgment, costs or expenses which may be made against SANParks;
2. **Identification**: Please ensure that acceptable means of identification are taken along when visiting the park. This does not only apply to the drivers of vehicles but could be requested of all adults that enter or visit parks;
3. **Maximum speed limit**: Please take careful note of the speed limits applicable in the various areas of the park. The speed limit inside the park is between 30 km/h and 40 km/h and tourists are therefore urged to abide by the specific speed limit. Note that not all roads are accessible to caravans or vehicles exceeding a certain mass, type or size;
4. **Alcohol**: The consumption of alcohol in public areas is prohibited. Day visitors are prohibited from entering the park with any alcohol in their possession;
5. **Adhere to gate times**: Gate times must be strictly adhered to. Operating times are from 07:00 to 19:00 between October and April, and from 07:30 to 18:00 from May to September. Guests must plan their travelling thoroughly and make adequate provision for contingencies. Afterhours driving is not allowed and could result in a summons being issued. However, guests anticipate that they will be arriving later than the specified gate times, it is the guests' responsibility to inform the park or reception. The park will then make the necessary arrangements to accommodate the guests;
6. **Departure times**: All accommodation and camping sites may be occupied from 14:00 on day of arrival and must be vacated by 10:00 on the day of departure;
7. **Smoking**: Please take note of the smoking regulations applicable in the park;
8. **Bicycles**: Please inform yourself of the rules applicable to the use of roller skates, skateboards, bicycles and motorbikes in the park;
9. **Drones**: The use of drones inside (and over) the park is prohibited;
10. **Fishing in the park**: Fishing inside the national park is allowed. Guests must obtain a specific fishing permit at reception to fish legally. Fishing in the park is only allowed in designated areas stipulated; and
11. **Park specific information**: Kindly familiarise yourself with the general conditions applicable in the park by visiting the website at www.sanparks.org and link onto parks A-Z, as there may be vital information contained therein to assist with your visit.

Intentionally left blank

Appendix 5 - Maps

Map 1: Regional context

Map 2: Physical features

Map 3: Land tenure and park expansion

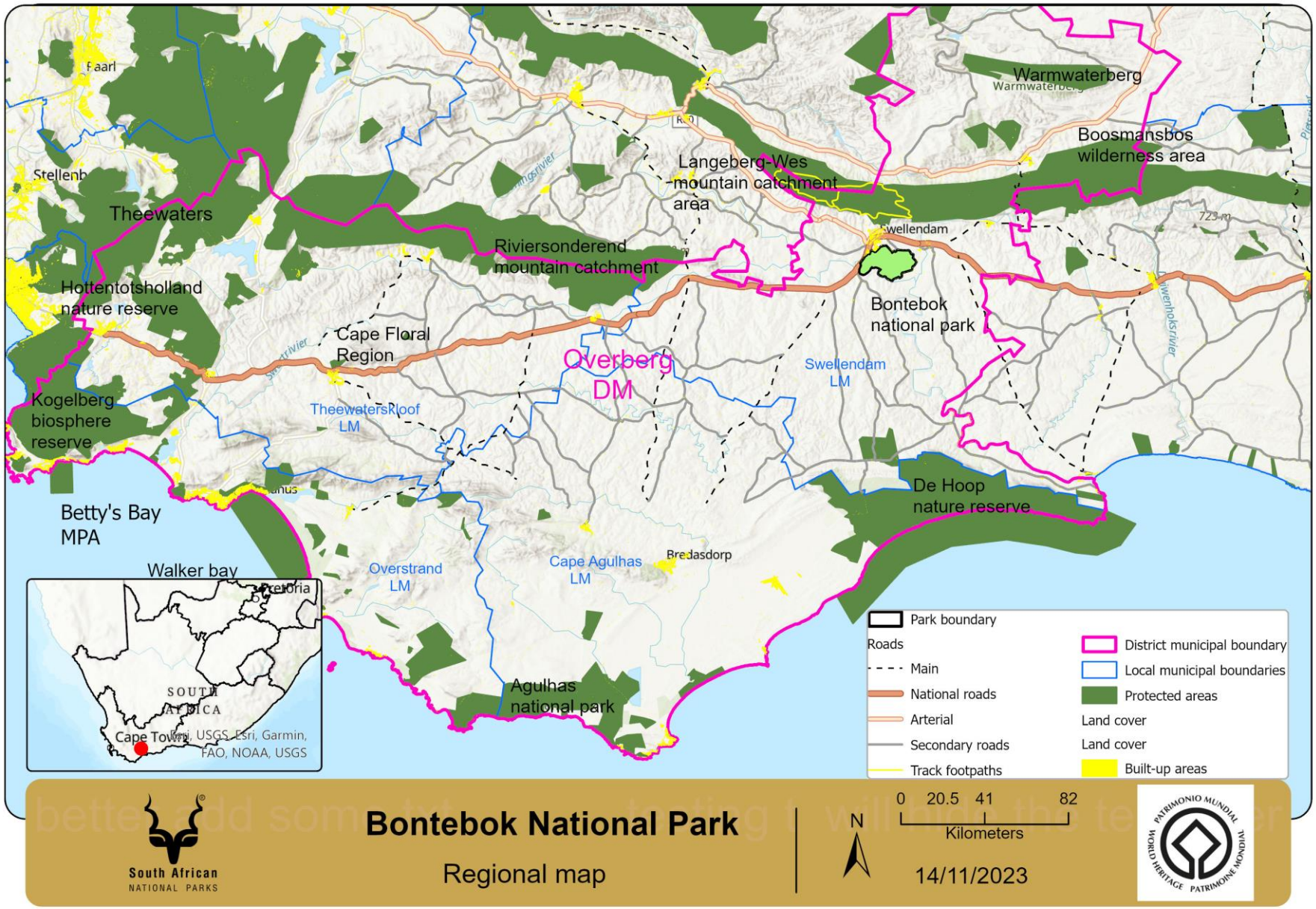
Map 4: Zoning

Map 5: Zoning with sensitivity value

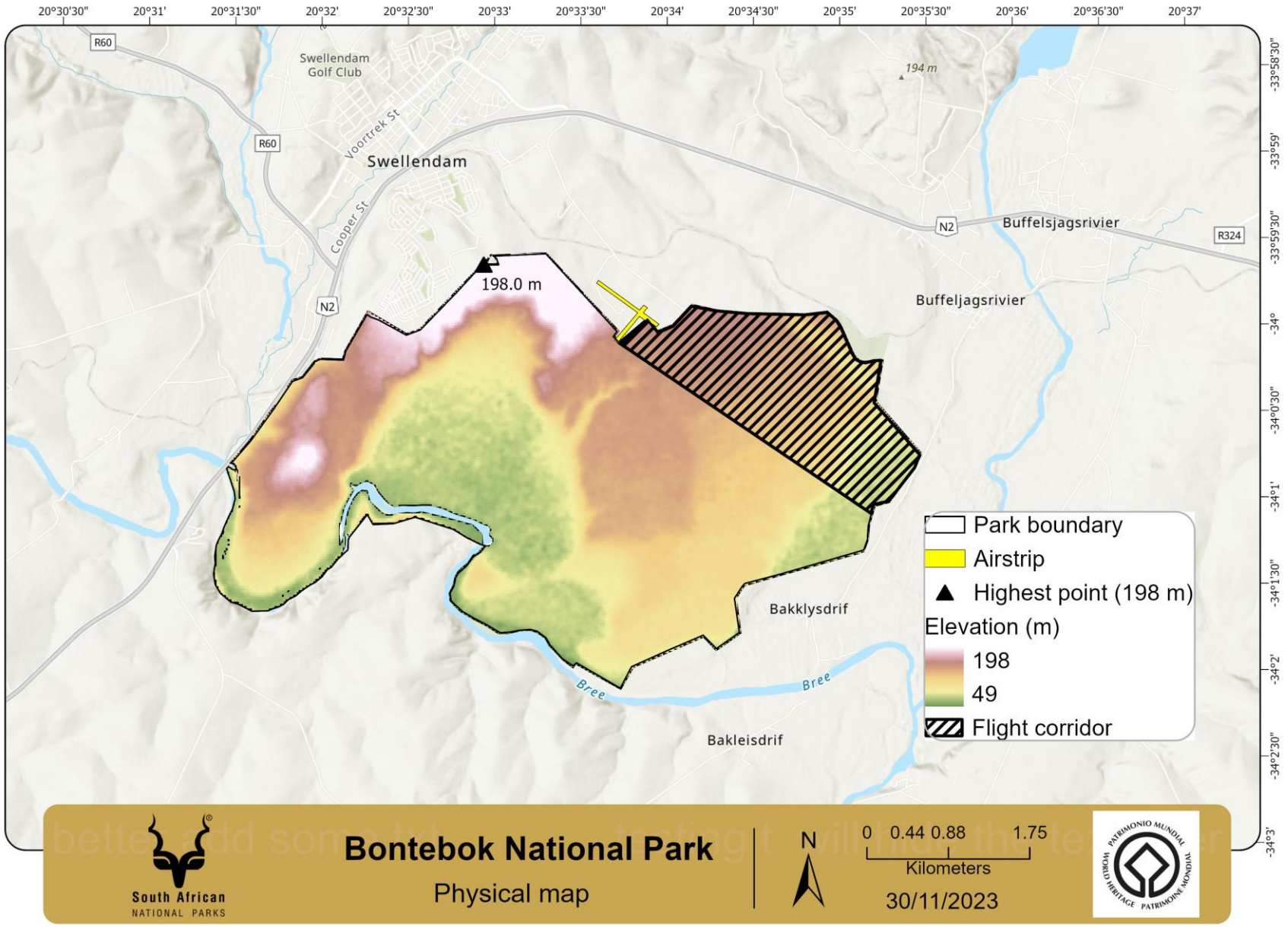
Map 6: Buffer areas

Map 7: Infrastructure

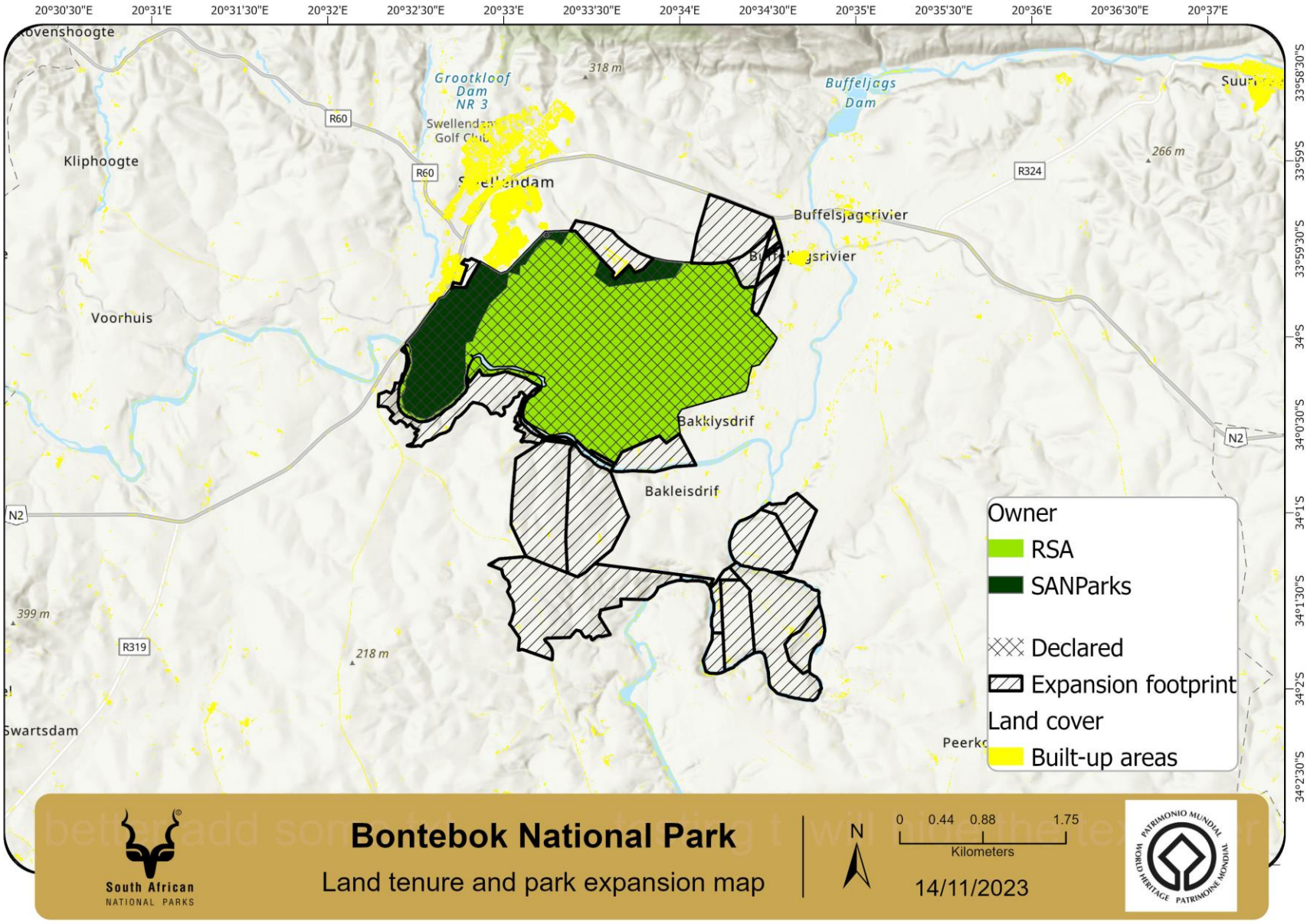
Map 8: Vegetation



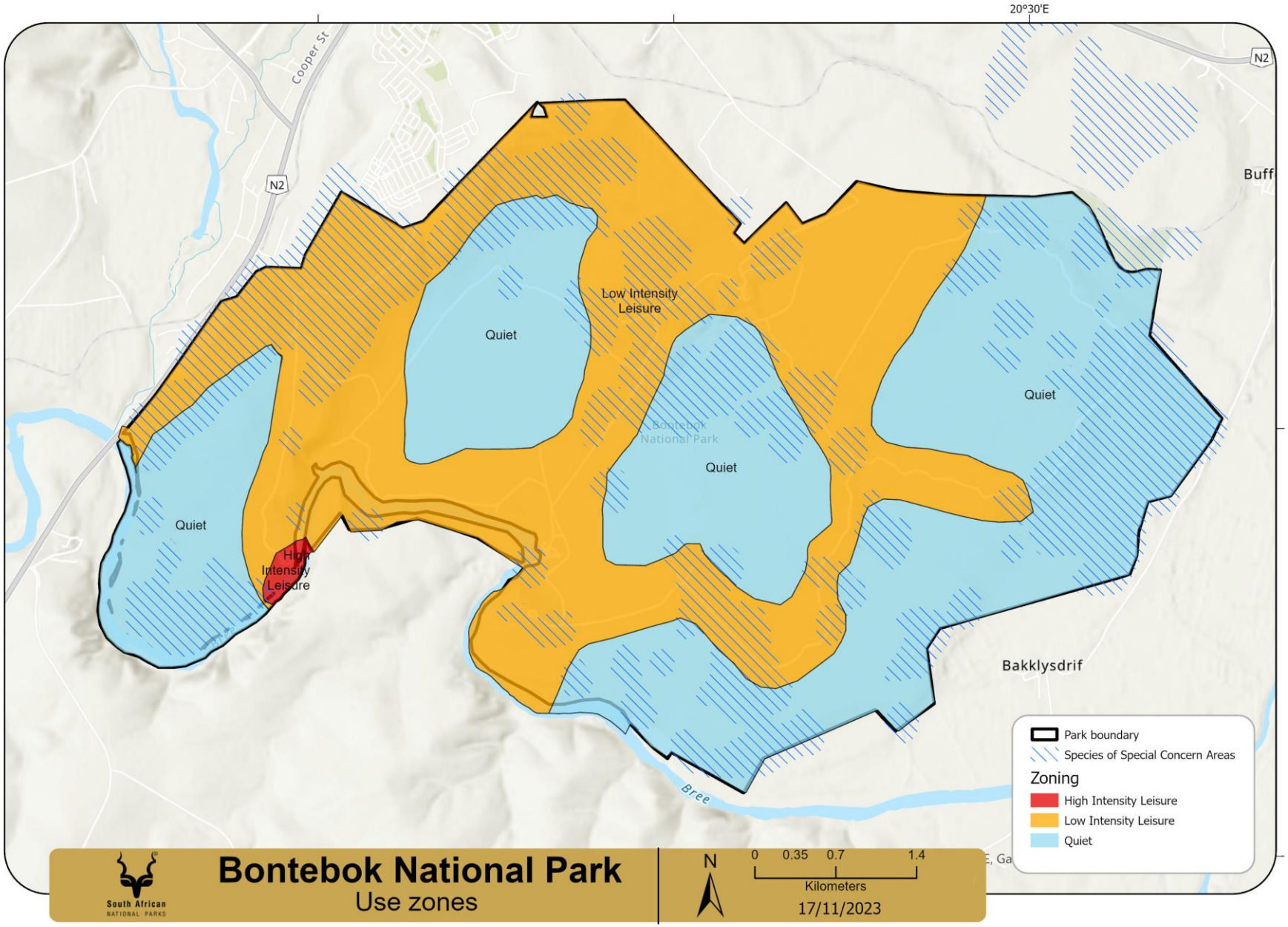
Map 1: Regional context



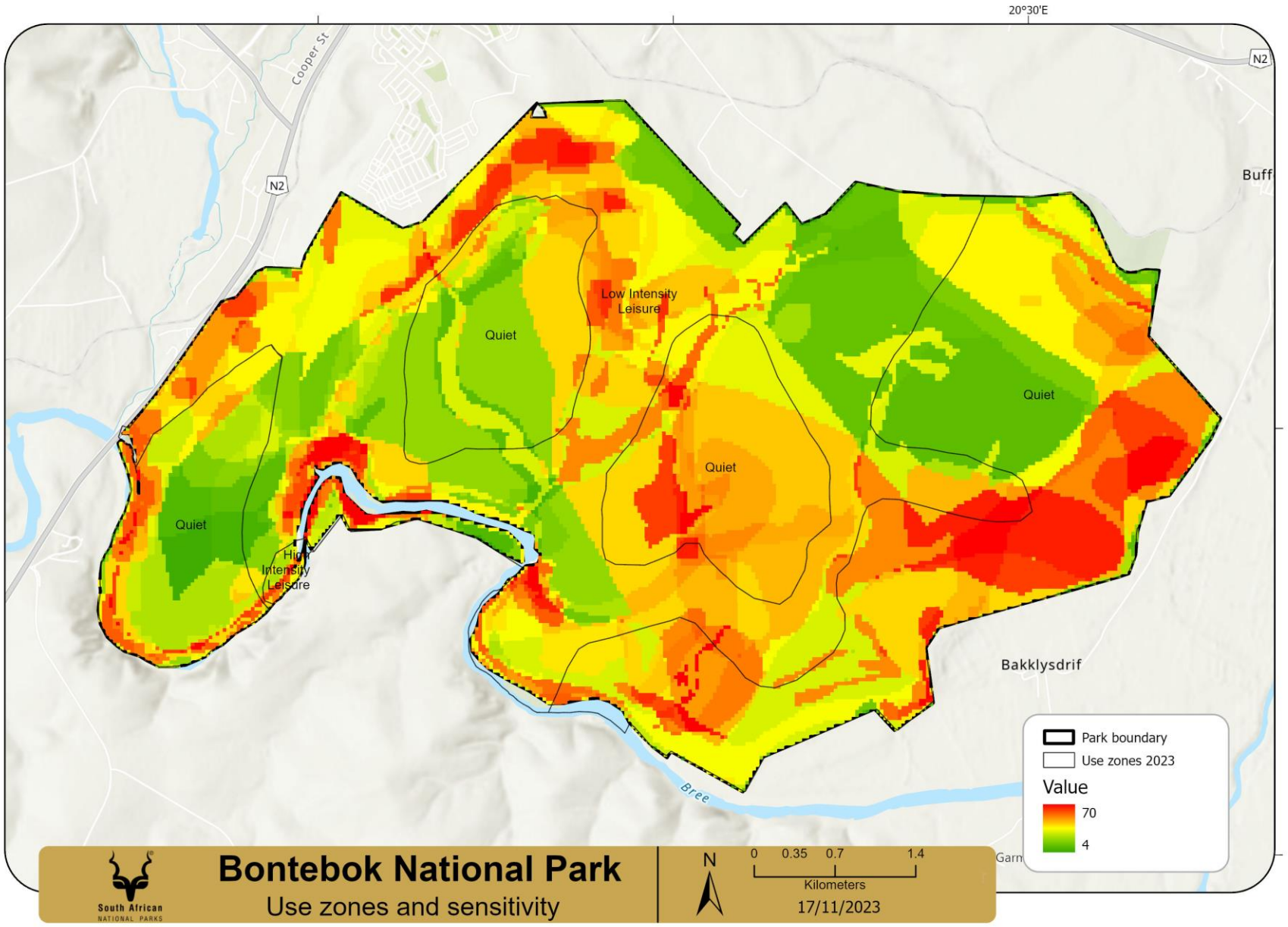
Map 2: Physical features



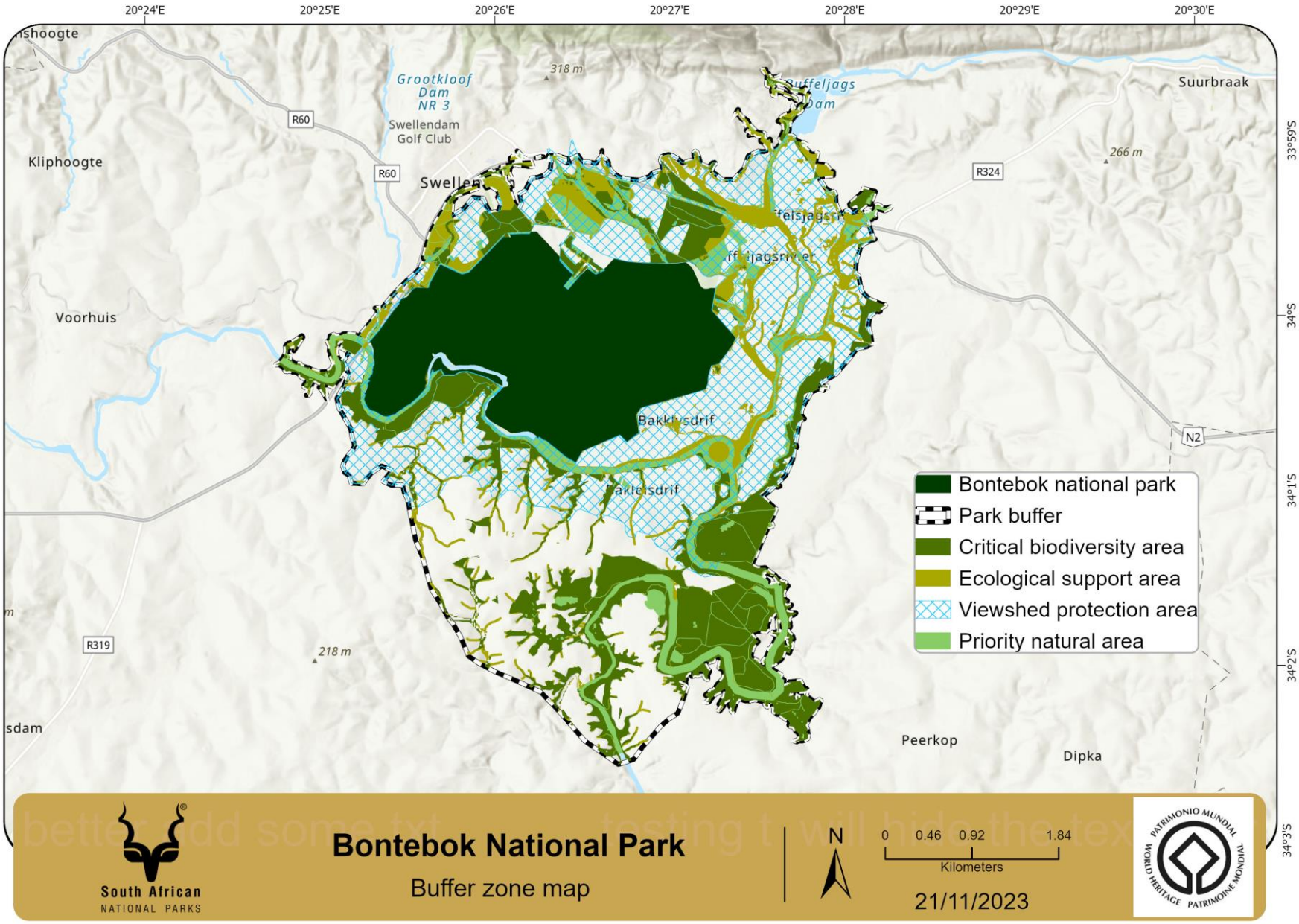
Map 3: Land tenure and park expansion


20°30'E
Cooper St
N2
N2
Buff
Low Intensity Leisure
Quiet
Quiet
Bontebok National Park
Quiet
Quiet
High Intensity Leisure
Bakklysdrif
Bree
Park boundary
Species of Special Concern Areas
Zoning
High Intensity Leisure
Low Intensity Leisure
Quiet
South African NATIONAL PARKS
Bontebok National Park
Use zones
N
0 0.35 0.7 1.4
Kilometers
17/11/2023

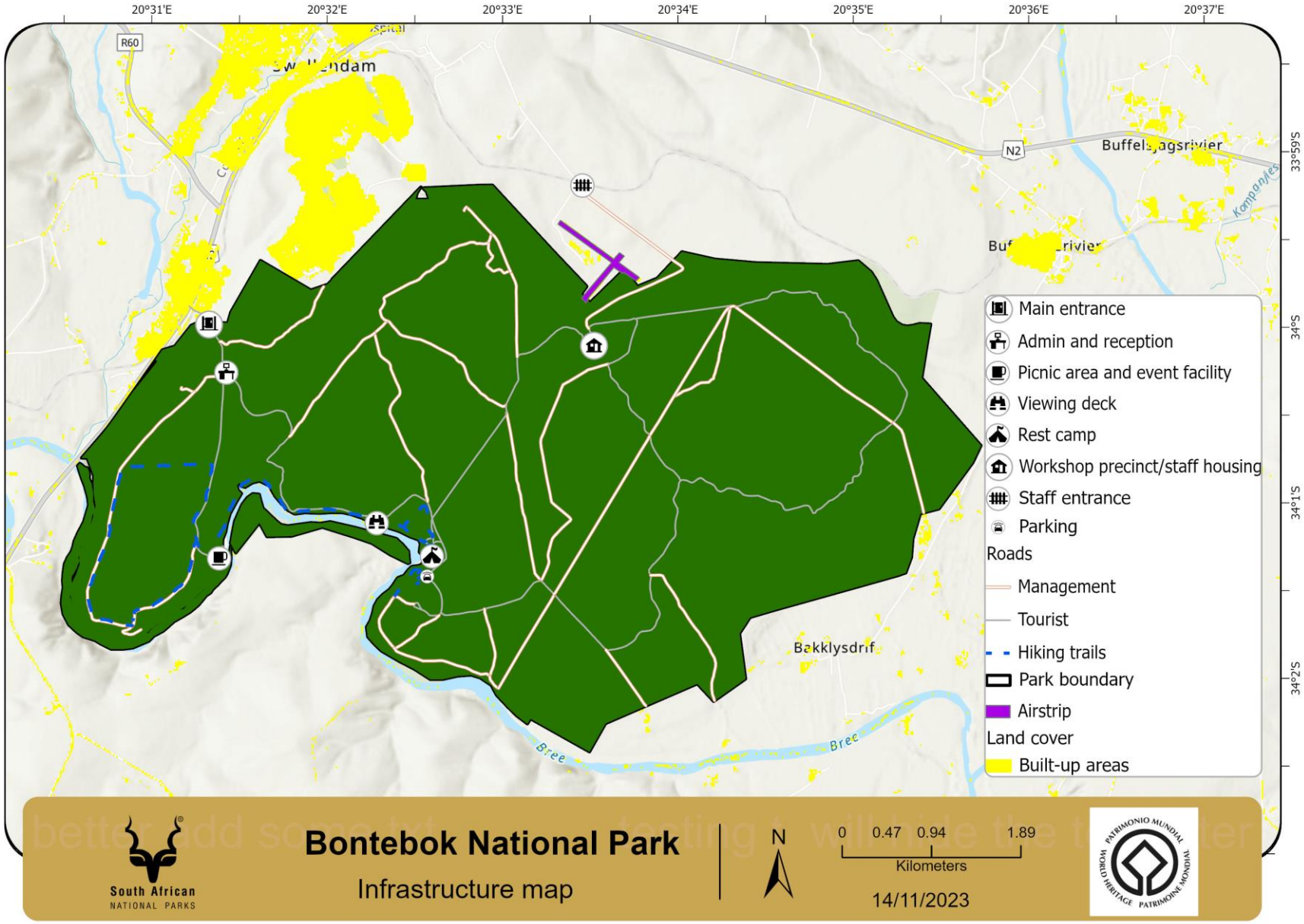
Map 4: Zoning



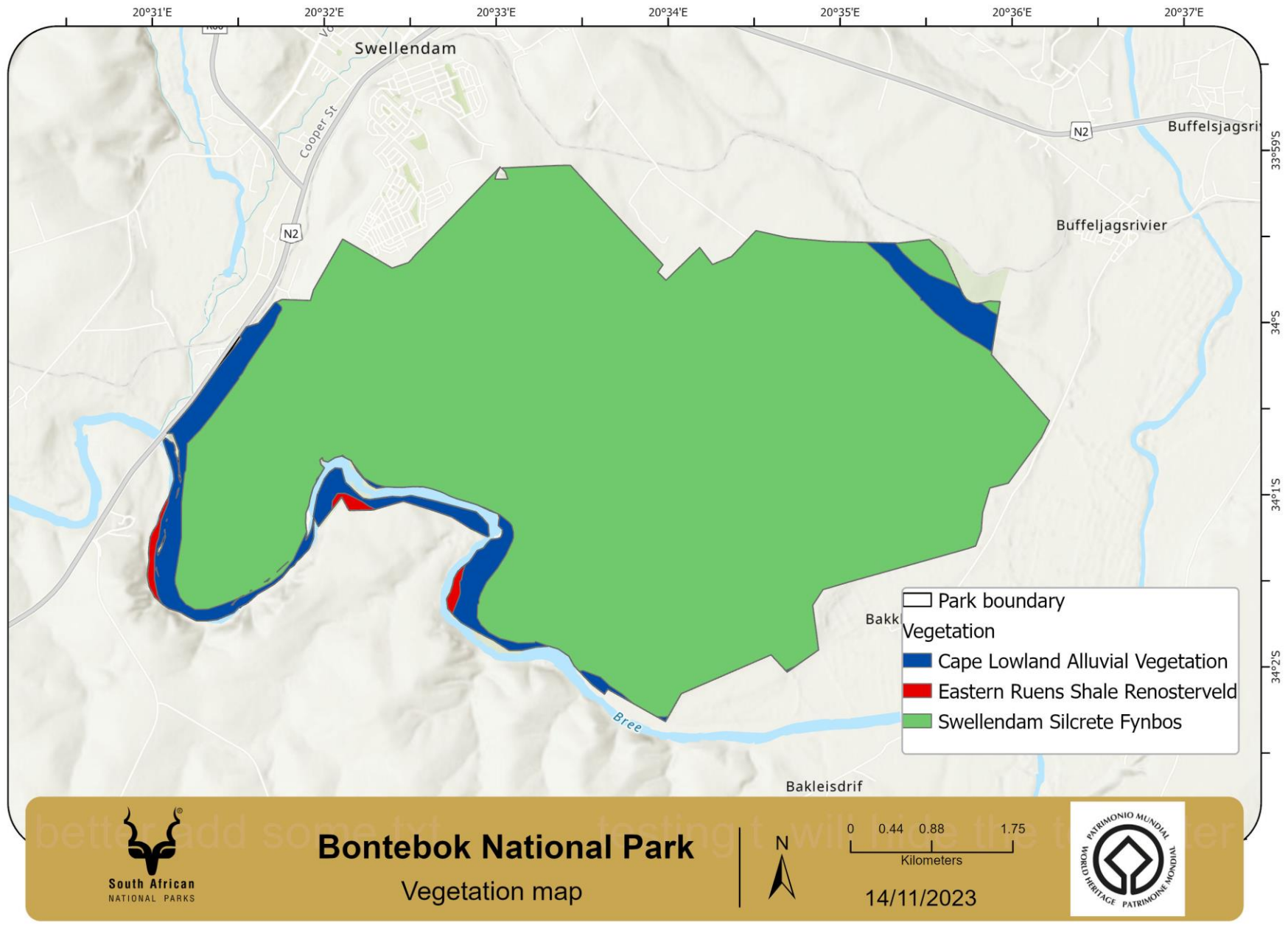
Map 5: Zoning and sensitivity



Map 6: Buffer zone



Map 7: Infrastructure



Map 8: Vegetation