

# **Vulture's Peak Nature Reserve**

**KwaZulu-Natal  
South Africa**

## **Protected Area Management Plan**



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## AUTHORISATION

This Management Plan is proposed for Vulture's Peak Nature Reserve:

TITLE	NAME	SIGNATURE AND DATE
KwaZulu-Natal MEC:  Economic Development, Tourism and Environmental Affairs		

### Recommended:

TITLE	NAME	SIGNATURE AND DATE
Management Authority Oribi Mountain Pty Ltd	Represented by:  Denis McKendry, Anthea Gilfillan, Kristin & Danita Pandither	

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## ABBREVIATIONS

DFFE	Department of Forestry, Fisheries and the Environment
EWT	Endangered Wildlife Trust
EIA	Environmental Impact Assessment
Ezemvelo	Ezemvelo Kwa-Zulu Natal Wildlife
EPCPD	Environmental Planning and Climate Protection Department
ha	Hectare
KZN	KwaZulu-Natal
MEC	Member of the Executive Council
NEM	National Environmental Management
NEMA	National Environmental Management Act
NGO	Non-government organisation
SANBI	South African National Biodiversity Institute
SG	Surveyor General
VPNR	Vulture's Peak Nature Reserve

## **1. BACKGROUND**

### **1.1 Purpose of the plan**

Management plans for protected areas are strategic documents that provide the framework for protected area development and operation. They inform management at all levels, from the landowner / management authority through to support staff within Ezemvelo KZN Wildlife and other NGOs that may support the protected area. The purpose of the management plan is to:

- Provide the primary strategic tool for the management of Vulture's Peak Nature Reserve, informing the need for specific management programmes and operational procedures.
- Provide for capacity building, future thinking, and continuity of management.
- Enable the landowner to develop and manage Vulture's Peak Nature Reserve in such a way that its values and the purpose for which it has been established are protected.

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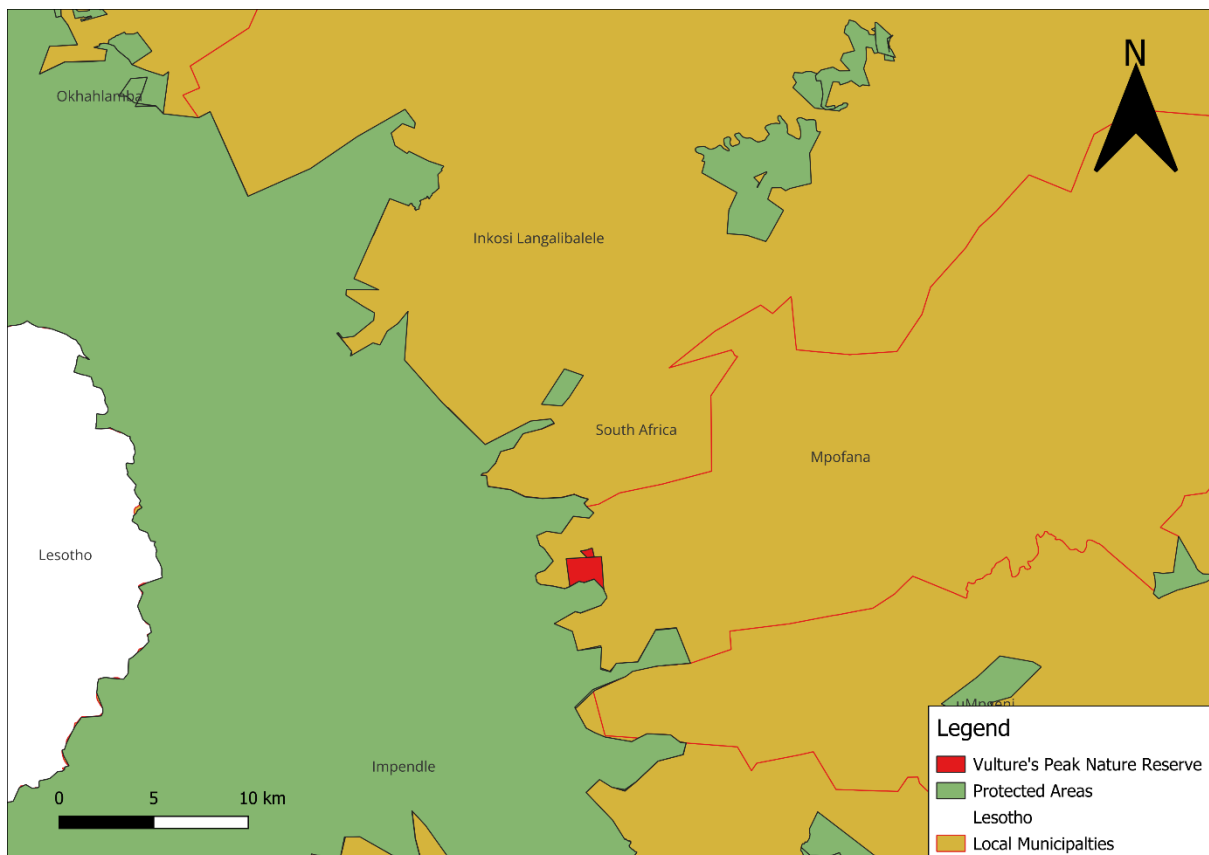
## 1.2 Structure of the plan

Section 1:	Provides an introduction and background to the management plan of Vulture's Peak Nature Reserve
Section 2:	Establishes the context of the protected area, providing the basis for the strategic and operational management frameworks that follow
Section 3:	Sets out the vision and objectives for the Nature Reserve
Section 4:	Sets out the zonation of the protected area, outlining the land uses in particular zones
Section 5:	Describes the administrative structure that has been established to assist in managing Vulture's Peak Nature Reserve
Section 6:	Sets out the management targets that must be achieved in managing the Nature Reserve
Section 7:	Sets out the monitoring measures required to determine if management targets are being met
Section 8:	Describes the components that must be included in the annual plan of operation

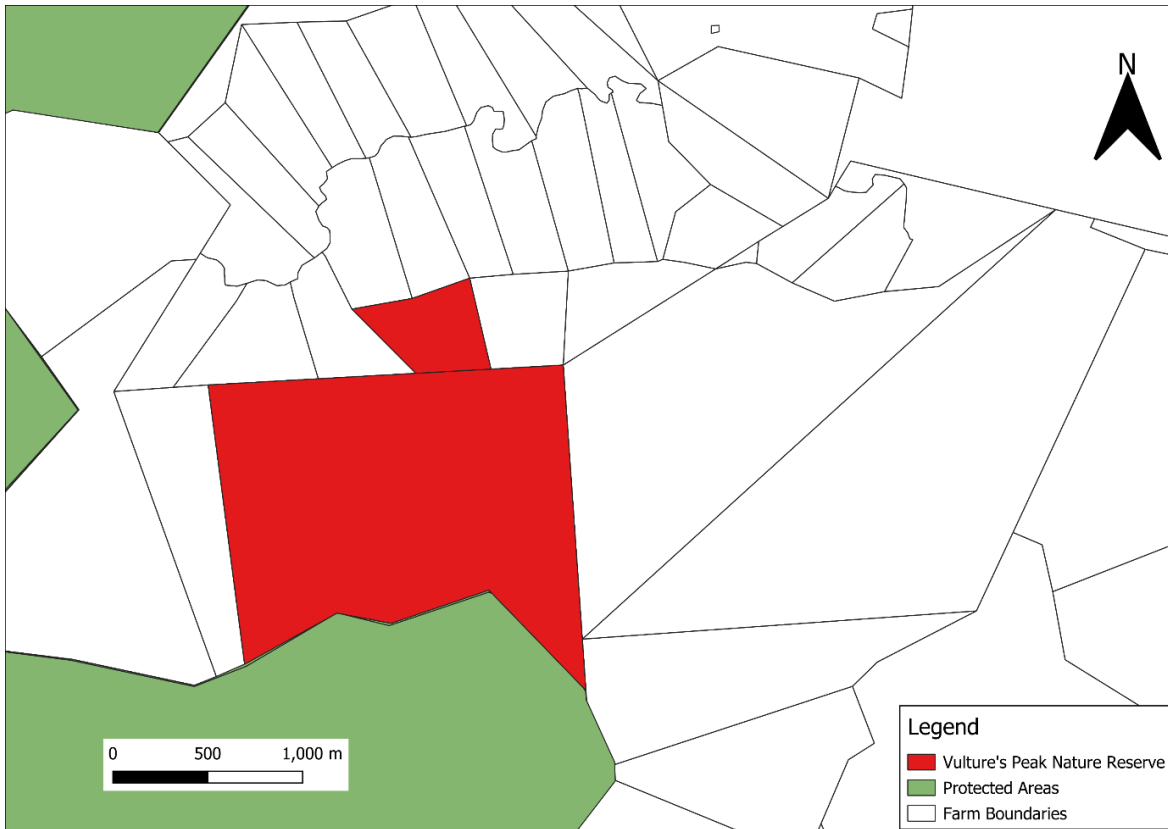


### 1.3 Introduction

The Vulture's Peak Nature Reserve is situated in the Mpfana District Municipality, shown in **Figure 1.1**, and immediately adjacent to the Highmoor section of the Maloti-Drakensberg Park World Heritage Site in the central Drakensberg of KwaZulu-Natal, as shown in **Figure 1.2** and satellite view in **Figure 1.3**.



**Figure 1.1. Regional location of Vulture's Peak Nature Reserve within the Mpfana Local Municipality**



**Figure 1.2. Location of Vulture's Peak Nature Reserve in relation to protected areas and farm boundaries**



**Figure 1.3. Satellite image of the Vulture's Peak Nature Reserve**

The Vulture's Peak Nature Reserve is owned by Oribi Mountain Pty Ltd and consists of a single property of 297 ha in extent, with the following property description:

- Silver Hill 18113, Division FS, KwaZulu-Natal, held by Title Deed T17736/2008

#### 1.4 The values of Vulture's Peak Nature Reserve

The values of Vulture's Peak Nature Reserve are important in planning and management, as they are relevant to the aspects of the nature reserve that must be protected. These values have been outlined below:

<p><b>Natural values</b></p>	<ul style="list-style-type: none"> <li>• The reserve has a number of red data species such as the endangered Long Toed Tree Frog (<i>Leptopelis xenodactylus</i>), critically endangered Bearded Vulture (<i>Gypaetus barbatus</i>), vulnerable Cape Vulture spp. endangered Oribi (<i>Ourebia ourebi</i>) and vulnerable African Grass Owl (<i>Tyto capensis</i>)</li> <li>• The majority of the vegetation is made up of the Endangered "Mooi River Highland Grassland" (according to the Revised List of Ecosystems that are Threatened and in Need of Protection (Government Gazette No. 47526, 2022)</li> <li>• The region falls within a Critical Biodiversity Area and known to be a Priority 1 Area: Irreplaceable</li> <li>• The property is home to a number of KwaZulu-Natal endemic species, highlighting its local value in protecting restricted range species.</li> <li>• It is identified as a key area for protected area expansion and consolidates the boundary of Highmoor.</li> </ul>
<p><b>Ecosystem service values</b></p>	<ul style="list-style-type: none"> <li>• The reserve is within a Strategic Water Source Area (the Southern Drakensberg Strategic Water Source Area)</li> <li>• The area has been identified to be part of the National Protected Areas Expansion Strategy</li> <li>• Wetlands and surrounding grasslands provide an excellent flow regulation to the Little Mooi River</li> <li>• The wetlands are identified as Sub-Escarpment Grassland Bioregion (Valley Bottom) wetlands</li> </ul>
<p><b>Socio-economic values</b></p>	<ul style="list-style-type: none"> <li>• The property provides benefits or has value based on its nature-based tourism facilities and opportunities.</li> </ul>

<b>Scenic values</b>	<ul style="list-style-type: none"> <li>• Highly scenic mosaic of mountain grassland habitat and Drakensberg pediments, adjacent to the World Heritage Site.</li> </ul>
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Consistent with Section 17 of the National Environmental Management: Protected Areas Act No. 57 of 2003, the purpose of Vulture's Peak Nature Reserve is to:

- Protect representative areas of Mooi River Highland Grassland.
- Protect the remnant habitats that contribute towards the maintenance of the ecological integrity of the region.
- Protect threatened, rare and endemic species characteristic of the region.
- Contribute towards the supply of sustained environmental goods and services, in particular water for downstream users.
- To provide for the sustainable use of natural and biological resources.
- To rehabilitate and restore degraded grassland and wetland ecosystems and promote the recovery of threatened species.
- To augment destinations for nature-based tourism.
- To minimise soil erosion and reinstate natural vegetation to graded roads

### 1.5 Adaptive management

The preparation of this management plan has been undertaken based on the guiding principles of adaptive management, which is a structured, iterative process in which decisions are made using the best available information, with the aim of obtaining better information through monitoring of performance (**Figure 1.4**). In this way, decision making is aimed at achieving the best outcome based on current understanding, whilst accruing the information needed to improve future management. Adaptive management can lead to revision of a part or if necessary, the whole management plan.

Adaptive management enables landowners and managers to:

- i) Learn through experience.
- ii) Take account of, and respond to, changing factors that affect the biodiversity stewardship site.
- iii) Develop or refine management processes.
- iv) Adopt best practices and proven new innovations in biodiversity management.
- v) Demonstrate that management is appropriate and effective.

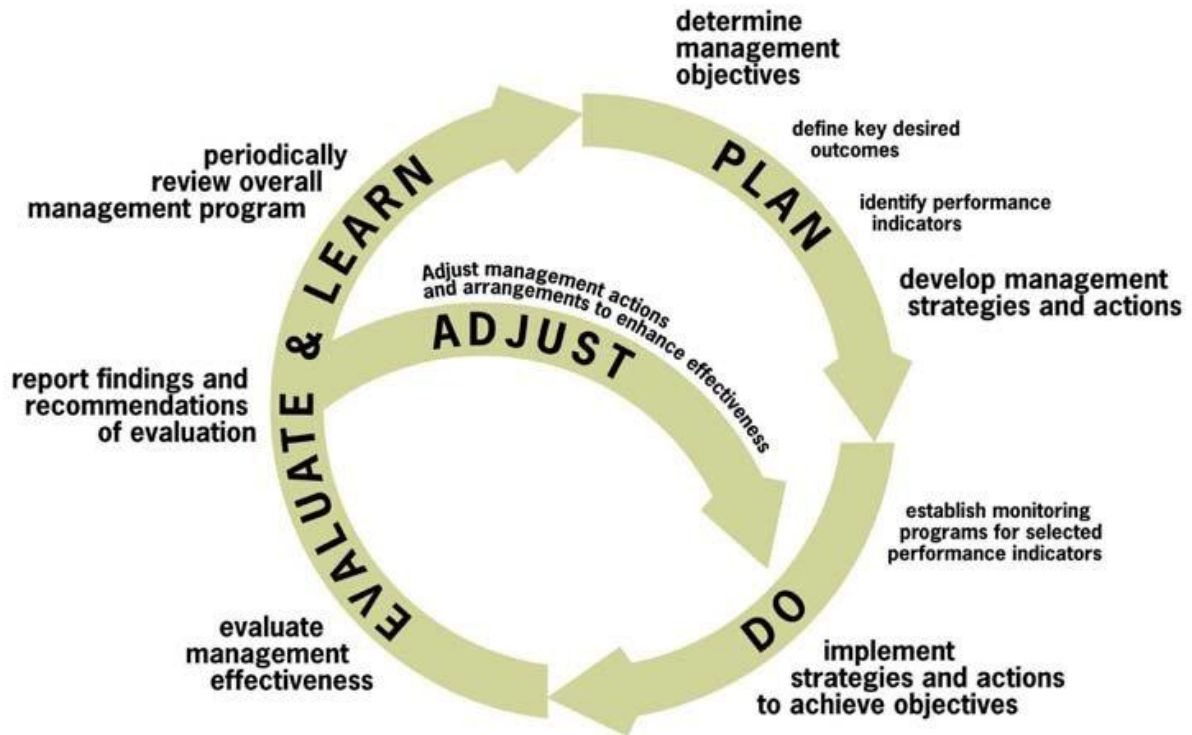


Figure 1.4. The adaptive management cycle (Pantus *et al.* 2008)

## 1.6 Consultation

Stakeholder involvement and support is an important aspect of effective protected area management. It is also a requirement in terms of Sections 39(3) and 41(2)(e) of the National Environmental Management: Protected Areas Act No. 57 of 2003. Accordingly, the development of this management plan has been undertaken through a collaborative process. Consultation in drafting the management plan has been undertaken through discussions with key stakeholders, shown in **Table 1.1**.

**Table 1.1: Workshops and meetings held with stakeholders in drafting the Vulture's Peak Nature Reserve Management Plan.**

Date	Meeting	Participants
2023	Management workshop	4 participants: Consultation with 2 members from the Endangered Wildlife Trust
15 December 2023	Management workshop	3 participants: Consultation with 1 member from the Endangered Wildlife Trust

## 2. DESCRIPTION OF VULTURE'S PEAK NATURE RESERVE AND ITS CONTEXT

### 2.1 The history of Vulture's Peak Nature Reserve

The Vulture's Peak Nature Reserve is a 297 ha property in the central Drakensberg. The following threatened species are found in the Vulture's Peak Nature Reserve: Endangered Long Toed Tree Frog (*Leptopelis xenodactylus*), Critically Endangered Bearded Vulture (*Gypaetus barbatus*), Endangered Oribi (*Ourebia ourebi*) and Vulnerable African Grass Owl (*Tyto capensis*). The Bearded Vultures breed on the cliffs overlooking the Vulture's Peak Nature Reserve that is part of the Highmoor Nature Reserve and the other above mentioned species can breed on the property. A full list of species can be found in Annexure A.

The responsible people from the Vulture's Peak Nature Reserve are committed to securing the property as a "Nature Reserve" which will further strengthen the conservation status and environmental services of operations within the property.

### 2.2 The legal context for the Vulture's Peak Nature Reserve

There is a large body of legislation that is relevant to the management of Vulture's Peak Nature Reserve, but the primary legislation guiding the management of protected areas is the National Environmental Management: Protected Areas Act (No. 57 of 2003). The Act establishes the legal basis for the creation and administration of protected areas in South Africa, as its objectives include provisions "for the protection and conservation of

ecologically viable areas representative of South Africa's biological diversity and its natural landscapes". The Act sets out the mechanisms for the declaration of protected areas and the requirements for their management.

#### 2.2.1 Declaration status of Vulture's Peak Nature Reserve

The owner of the property, namely Oribi Mountain Pty Ltd, has consented to the declaration of the property as a nature reserve in terms of Section 23 of the National Environmental Management: Protected Areas Act (No.57 of 2003).

#### 2.2.2 Boundary demarcation and deviations

The Vulture's Peak Nature Reserve includes the full extent of the registered property, as depicted in Surveyor General diagram number 1785/2008 and shown in Annexure B.

The boundary of the property is demarcated by a five-strand barbed-wire farm fence that is 1.2 to 1.5 metres in height.

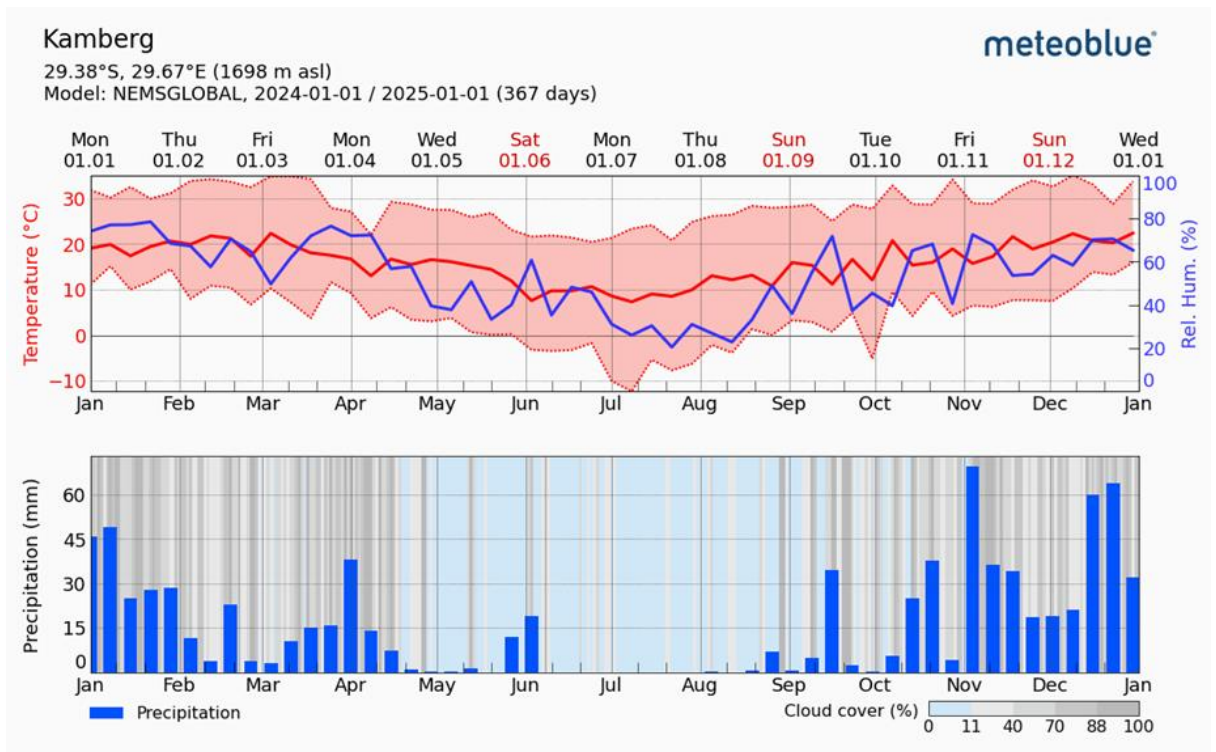
#### 2.2.3 Invasive species control

In terms of Section 76 of the National Environmental Management: Biodiversity Act (No.10 of 2004), the management authority of a protected area must incorporate an invasive species control plan in the protected area management plan. This is addressed in Sections 3 and 4 below.

### **2.3 Ecological context of Vulture's Peak Nature Reserve**

#### 2.3.1 Climate and weather

Climate data were obtained for the Kamberg region, located approximately 5.5km southwest of Silver Hill Estate. The annual average rainfall is 1 046mm for Kamberg (Grenfell *et al.* 2012). The temperature and rainfall data are shown in Figure 2.1.

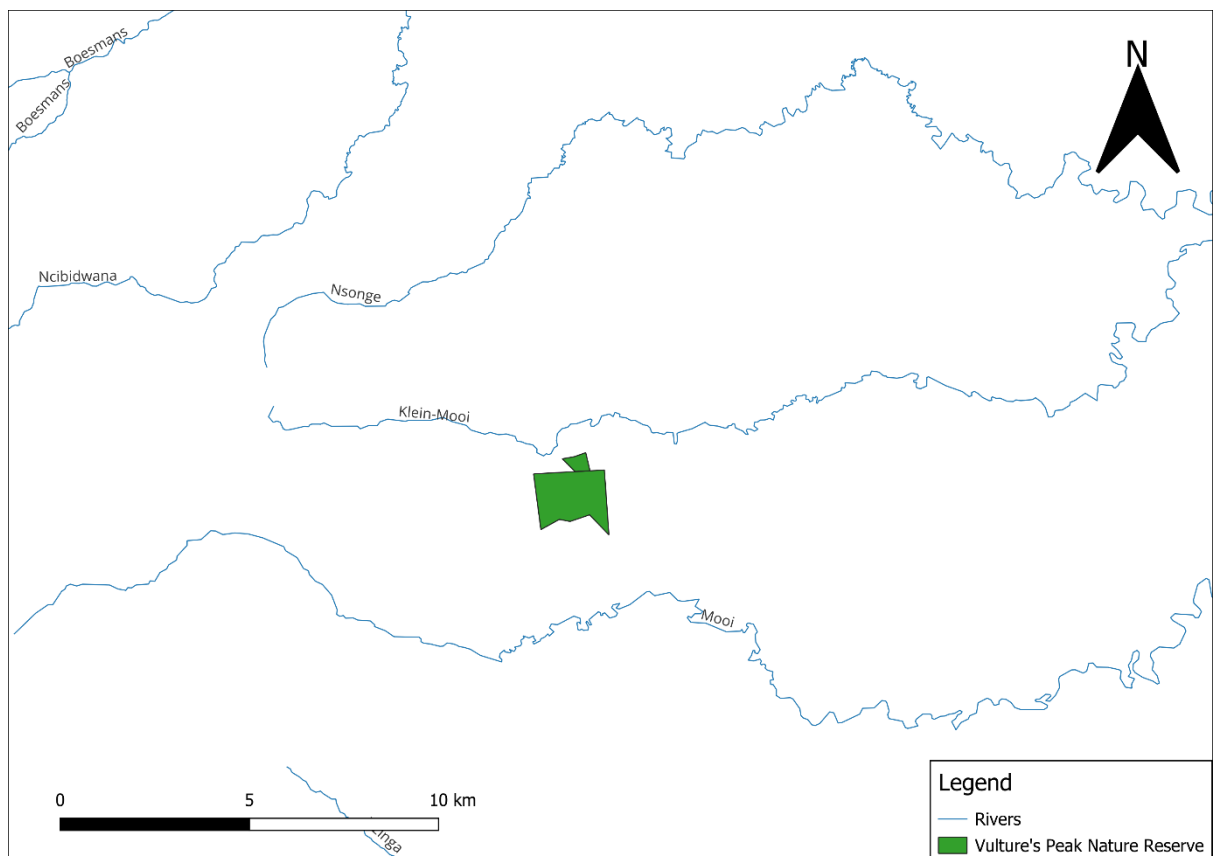


**Figure 2.1. Temperature and precipitation records for Kamberg, KwaZulu-Natal from 1 January 2024 to 1 January 2025 (Meteoblue 2025)**

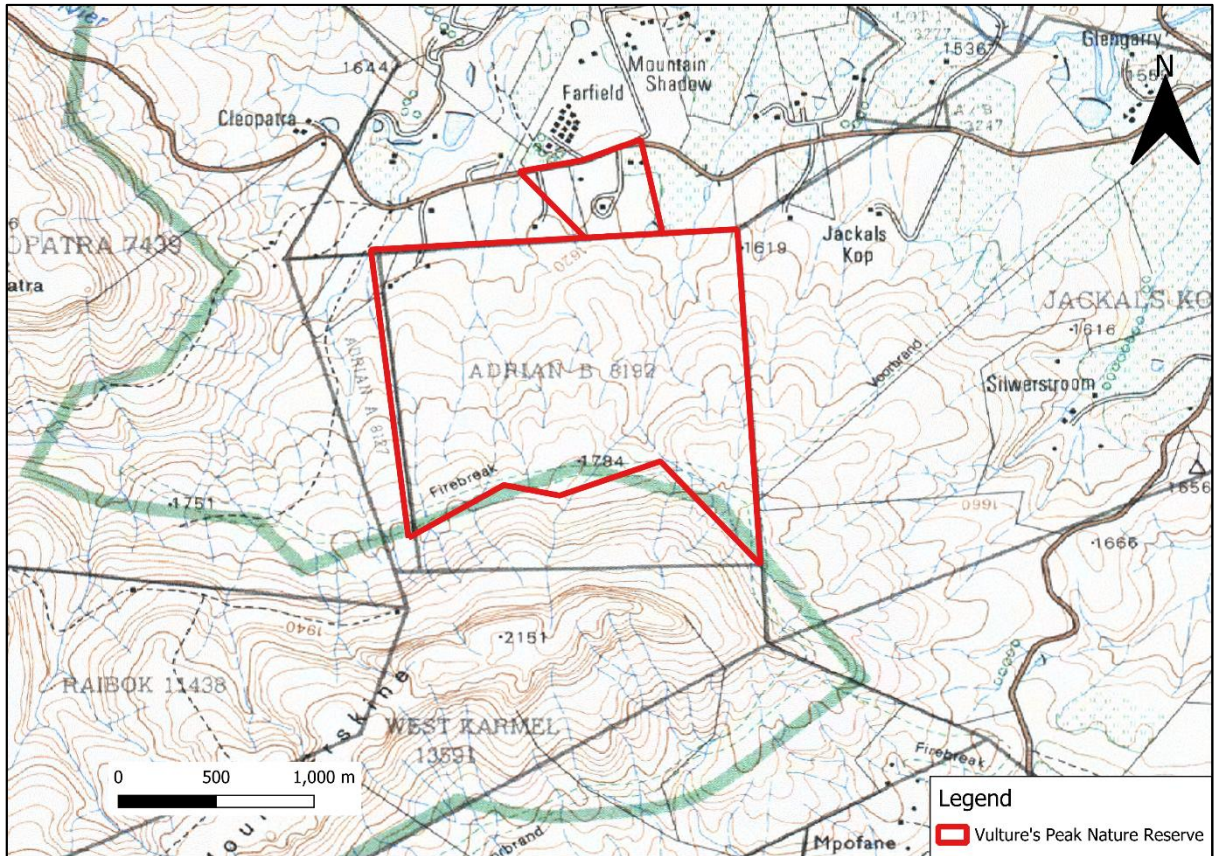


### 2.3.2 Topography

The property is located adjacent to the Highmoor section of the Maloti-Drakensberg Park World Heritage Site, fairly high in the river catchment. The Little Mooi River originates in Highmoor and flows to the north of the Vulture's Peak Nature Reserve into the Little Mooi River further downstream. The hydrology and topography are shown in Figure 2.2 and Figure 2.3 respectively.



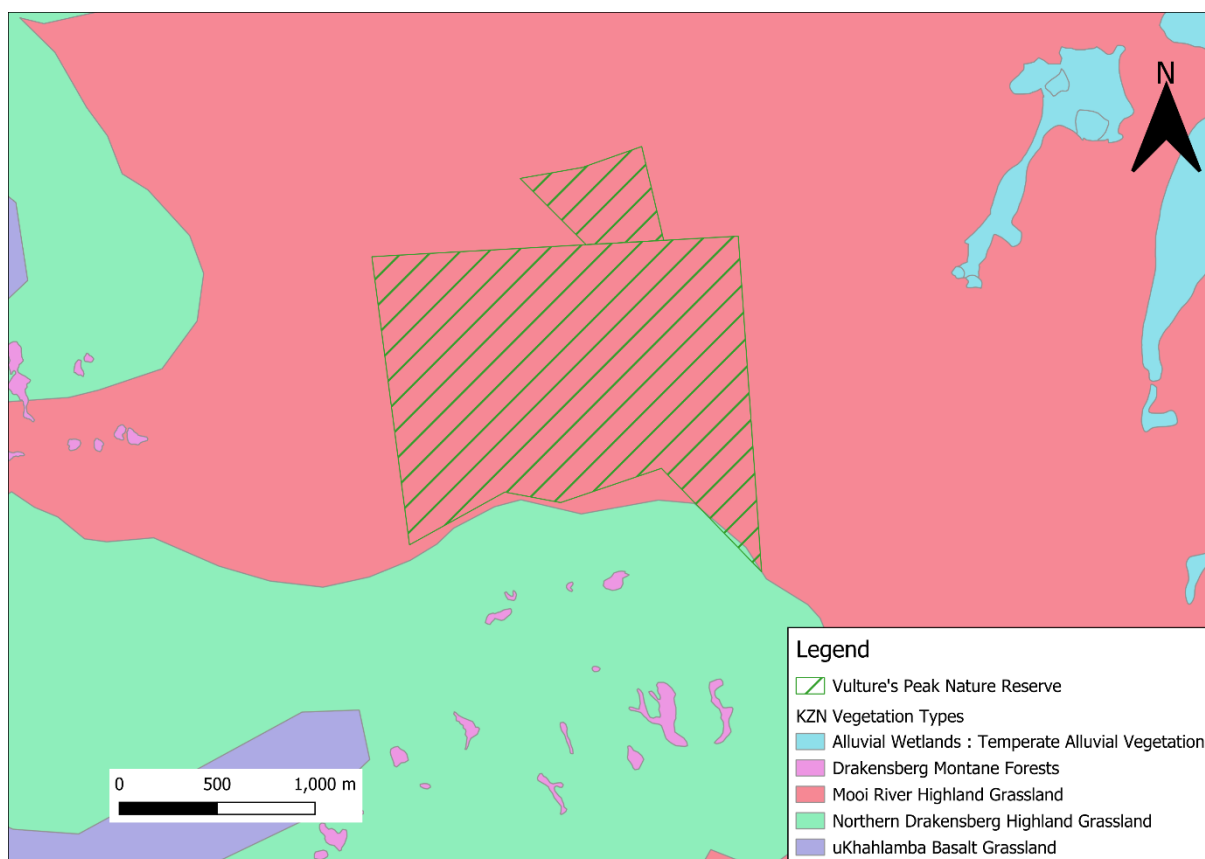
**Figure 2.2. Drainage in the vicinity of the Vulture's Peak Nature Reserve**



**Figure 2.3. Topographical map in the vicinity of the Vulture's Peak Nature Reserve**

### 2.3.3 Vegetation

The majority of the vegetation on the Vulture's Peak Nature Reserve is made up of the Vulnerable "Mooi River Highland Grassland" according to the Vegetation Map of South Africa (Mucina and Rutherford 2006; Jewitt 2018) and is within a Critical Biodiversity Area that is "Irreplaceable". The reserve also contains wetlands that are identified as Sub-Escarpment Grassland Bioregion (Valley Bottom) wetlands. The vegetation types of the reserve and surrounding areas are shown in Figure 2.4.



**Figure 2.4. The extent of the vegetation types on Vulture's Peak Nature Reserve, according to the broad vegetation types of KwaZulu-Natal**

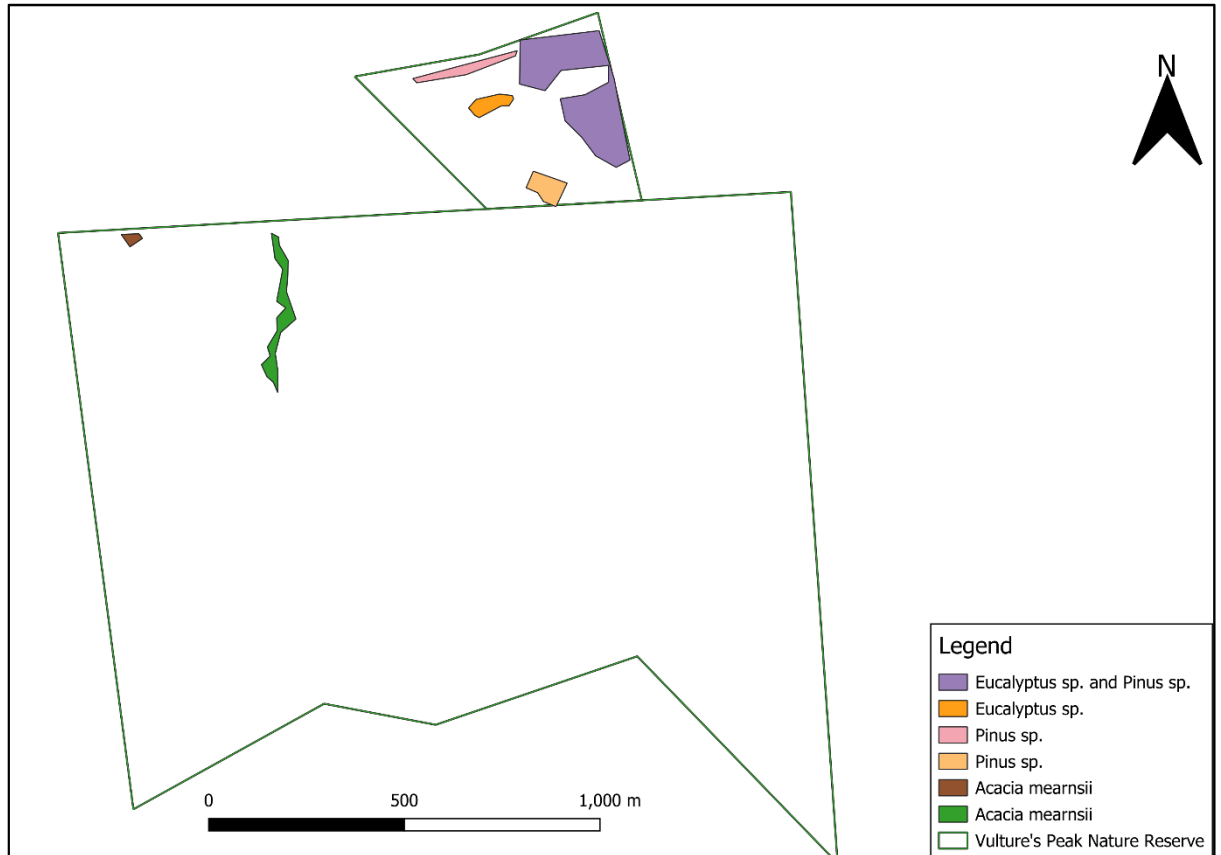
Using the KZN vegetation layer and condition assessment, the contribution of the nature reserve to provincial and national biodiversity and protected area targets was determined (Table 2.1).

**Table 2.1: Vegetation types in the Vulture's Peak Nature Reserve and their contribution towards protected area targets**

Vegetation type	Conservation status	Remaining natural habitat on site	Remaining provincial extent	Total protected	Contribution to target
Mooi River Highland Grassland	Vulnerable	398 ha	266 396 ha	3.5%	0.65%

### 2.3.4 Invasive species

The invasive species and extent of them on the Vulture's Peak Nature Reserve are shown in Figure 2.5.



**Figure 2.5. Map showing the invasive species found on Vulture's Peak Nature Reserve**

Requirements for landowners to take steps to control invasive plants on their properties are set out in the Conservation of Agricultural Resources Act (No. 43 of 1983) (CARA) and the National Environmental Management Biodiversity Act (No. 10 of 2004) (NEMBA). In terms of NEMBA, a person who is the owner of land on which a listed invasive species occurs must "take steps to control or eradicate the listed invasive species and to prevent it from spreading" (Section 73(2)(b)). Section 97 of NEMBA empowers the Minister to make regulations relating to the monitoring of compliance with and enforcement of norms and standards relating to the achievement of any objectives of the Act. In this regard, regulations for alien and invasive species were published in 2014.

In terms of the regulations, landowners are required to take control measures for the different categories of listed invasive species. The regulations require the following for the different categories of listed invasive species:

- Category 1a species are required to be combatted and eradicated.
- Category 1b species are required to be controlled.
- Category 2 species require a permit to carry out a restricted activity and the permit holder must ensure that the species do not spread outside of the area specified in the permit.
- Category 3 species are subject to exemptions in terms of the Act but must be considered a Category 1b species if it occurs in a riparian area.

Category 2 and 3 species relate to species such as Black Wattle (*Acacia mearnsii*), Gum (*Eucalyptus* spp) and Pine (*Pinus* spp.) that have commercial value but must be controlled outside of areas where they are formally grown.

In terms of Regulation 29 (3) “The seller of any immovable property must, prior to the conclusion of the relevant sale agreement, notify the purchaser of that property in writing of the presence of listed invasive species on that property”. These regulations, which also include significant fines for landowners who do not comply in controlling or eradicating invasive alien plants, are intended to ensure that landowners are implementing appropriate invasive alien plant control measures.

Vulture's Peak Nature Reserve has low densities of invasive alien plants, as indicated in **Table 2.2**. The species found on the reserve include Back Wattle (*Acacia mearnsii*), Bramble (*Rubus cuneifolius*) and Curry’s Post weed (*Phymaspermum acerosum*).

The exotic species found around the infrastructure (such as gum and pine species) will be excluded from eradication plans.

**Table 2.2: Identified listed invasive alien plant species that must be controlled within the reserve**

Common name	Scientific name	NEMBA category	CARA category
Black Wattle	<i>Acacia mearnsii</i>	2	2
American Bramble	<i>Rubus cuneifolius</i>	1b	1

### 2.3.5 Fauna and Flora

The Vulture's Peak Nature Reserve is home to a range of species characteristic of the foothills of the Drakensberg region. Surveys of the nature reserve by the SANBI CREW programme found a total of 112 plant species.

In terms of faunal species, a total of 166 bird species have been recorded on the nature reserve, with notable species being Secretary Bird, Denham's Bustard, Little Bittern, Grey Crowned Crane, African Grass Owl, Wattled Crane, Ground Hornbill, Bush Blackcap, Black Stork, while several other species have also been observed, including Black Harrier, Bearded Vulture, Cape Vulture, Verreaux's Eagle and Martial Eagle. Seventeen amphibian species have been recorded, the most notable being the Long-toed Tree Frog, while 27 reptile species have been recorded. Notable mammals that have been observed include Oribi and Mountain Reedbuck.

A full list of species recorded on site is shown in **Annexure A**. A key principle is that the property will be managed to maintain the habitat types in a good ecological condition, rather than performing specific management interventions relating to a specific species.

## 2.4 The regional and local planning context of the Vulture's Peak Nature Reserve

The Vulture's Peak Nature Reserve is located within the Mpofana Municipality.

The Vulture's Peak Nature Reserve currently contributes significantly towards eco-tourism and plans to contribute positively to conservation within the Mpofana region.

## 2.5 Operational management within the Vulture's Peak Nature Reserve

### 2.5.1 Infrastructure

The infrastructure on the property is associated with the primary uses, including the primary residences of the owners, and seven chalets used for nature-based tourism known as the Silver Hill Estate. The infrastructure is shown in **Figure 2.6** below, and **Figure 2.7** shows the site plan for the built-up area.



**Figure 2.6. Infrastructure layout of the Silver Hill Estate Infrastructure**

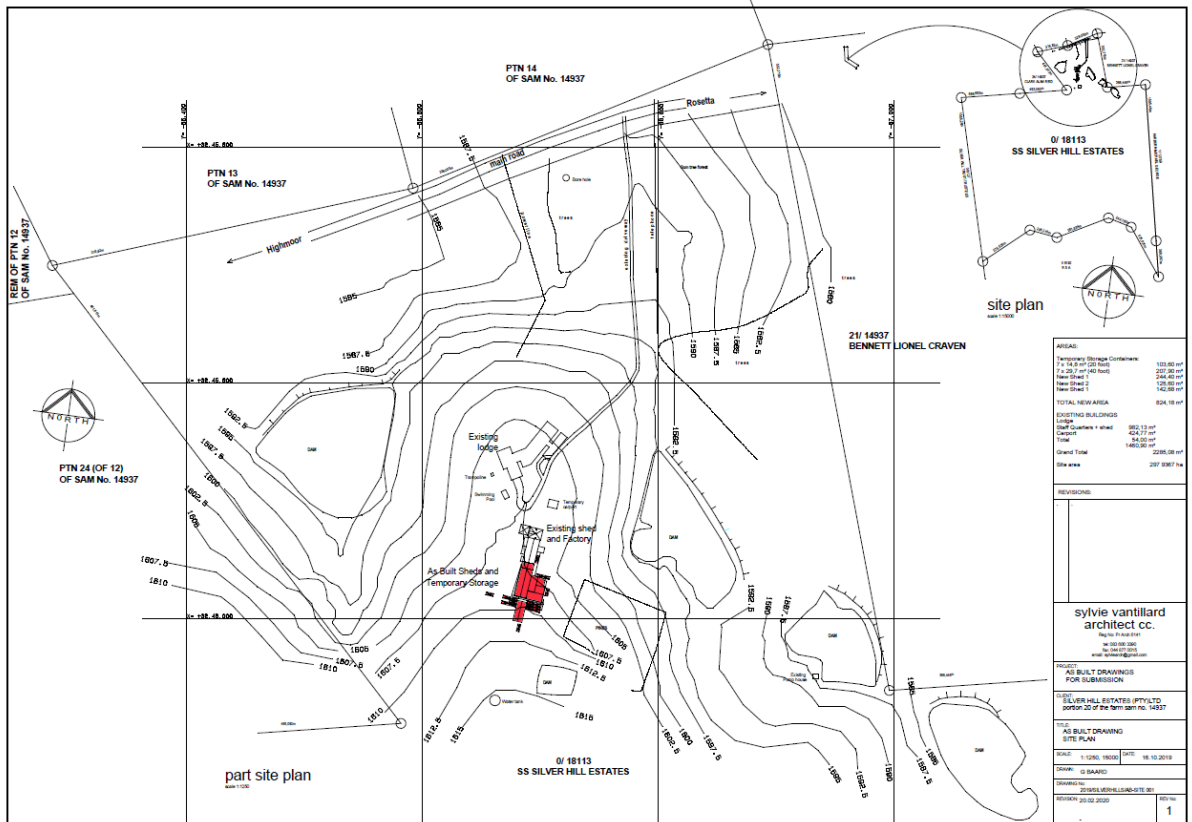


Figure 2.7. Site plan of the Silver Hill Estate Infrastructure



## 2.6 Summary of management issues, challenges and opportunities

A summary of the key management issues, challenges and opportunities, which are addressed through the management plan, are highlighted in **Table 2.3** below.

**Table 2.3: Management challenges, issues and opportunities**

Key performance area	Issue	Opportunity	Challenge
Legal compliance and law enforcement	Legal protection of the Vulture's Peak Nature Reserve through formal declaration as a protected area.	Declare the reserve to ensure it is legally protected.	Ensure that all the land within the reserve is declared as a protected area.
	Poaching and security – illegal access and dog hunting.	Collaboration between partners, neighbours and landowners to achieve improved law enforcement.	Increasing illegal access and poaching pressures.
Business management and development	Accommodation facilities.	Provision of accommodation for tourists	Decrease in tourist numbers during difficult financial times
	Nature-based tourism.	Nature-based experiences such as hiking, birding and natural history photography.	Ecotourism instability, global economic uncertainties
Conservation management	Ecosystem management.	Grassland and wetland habitats are managed to ensure their contribution to conservation.	Inappropriate management leads to the degradation of the ecosystems.
	Implementation of a fire management regime based on sound ecological principles.	Implement a fire management regime, based on ecological principles.	Managing arson and natural fires
	Managing the wetland habitats as recovery areas for threatened amphibian species.	Release appropriate species into appropriately managed habitat.	Wetland habitat may not be of sufficient size for species introductions.
	Control of infestations of invasive plant species listed in terms of NEMBA, and indigenous encroachers.	Manage invasive plant species in an effort to keep them at maintenance levels.	Threat of infestations by alien invasive plant species
	Erosion and rehabilitation.	Implement a programme to rehabilitate the grassland erosion areas and rationalise the road and path network.	Grassland degradation affects the ecological integrity of the grassland habitat and its ecosystem services.
Operational management	Maintenance of infrastructure and equipment.	Ensuring that all infrastructure and equipment is appropriately managed to avoid unnecessary environmental impacts.	Impacts associated with insufficient maintenance.
	Financial management.	Ensure annual financial flows to resource estate management.	Insufficient resources.

### **3. STRATEGIC MANAGEMENT FRAMEWORK**

The strategic framework is aimed at providing the basis for the long-term protection, development and operation of the nature reserve. The vision describes the long-term goal for the management and operation of Vulture's Peak Nature Reserve. The objectives and strategic outcomes that follow are intended to provide the basis for the achievement of the vision.

#### **3.1 The Vulture's Peak Nature Reserve vision**

*To strive for ecological sustainability by restoring and preserving the natural environment.*

This is made possible by developing a business model that generates income sufficient to implement the environmental management plan effectively.

#### **3.2 Objectives and strategic outcomes**

An objective has been identified for each of the Vulture's Peak Nature Reserve's key performance areas, which follow from the management challenges, issues and opportunities, and relate to the important functions and activities necessary to protect, develop and manage it effectively. The objectives have then been translated into strategic outcomes, which form the basis for the management activities and targets set out in the operational management framework, described in Section 6 below. **Table 3.1** sets out the key performance areas, the objective for each key performance area and the strategic outcomes, required to realise the objectives.

**Table 3.1: Objectives and strategic outcomes for the Vulture's Peak Nature Reserve**

<b>Key performance area</b>	<b>Objective</b>	<b>Strategic outcome</b>
Legal compliance and law enforcement	Comply with and enforce legislation pertaining to the protection, development and management of the reserve.	<ul style="list-style-type: none"> <li>The Vulture's Peak Nature Reserve is legally declared as a nature reserve.</li> <li>There is adequate security and law enforcement within the site to control access and prevent illegal access and biodiversity loss.</li> </ul>
Business management and development	Encourage nature-based experiences such as hiking, birding and natural history photography.	<ul style="list-style-type: none"> <li>Sustainable income generation with a low impact and footprint to the property while promoting nature-based tourism and conservation</li> </ul>
Conservation management	Protect the ecosystem functioning, ecological integrity, habitat and species of the reserve through active interventions based on principles of adaptive management.	<ul style="list-style-type: none"> <li>Grassland and wetland habitats are appropriately managed to ensure their ecological integrity for the duration of the offset.</li> <li>Fire management is undertaken based on ecological principles.</li> <li>Adequate fire safety within the nature reserve is ensured.</li> <li>Key threatened species, and their habitat, are managed to allow their recovery.</li> <li>Invasive and alien plant species control measures are implemented in the nature reserve in a planned and systematic manner.</li> <li>Potential erosion areas in the grasslands, wetlands and along roads are identified and rehabilitated as required.</li> <li>The road network is rationalised and rehabilitated where required.</li> </ul>
Buffer zone protection and regional management	Explore opportunities to consolidate the protection of the reserve's boundaries and its surrounds and promote compatible land uses in the areas surrounding the reserve.	<ul style="list-style-type: none"> <li>Compatible land use is ensured upstream and surrounding the Vulture's Peak Nature Reserve in order to secure its ecological integrity, by engagement with relevant authorities and the fostering of partnerships and relationships with surrounding and regional landowners.</li> <li>Being located in the Maloti-Drakensberg Park buffer zone, any developments must adhere to the conditions of the Buffer zone.</li> </ul>
Operational management	Provide adequate human resources, equipment and funding to ensure that the reserve is protected for the purpose for which it was established, and to enable its effective operational management and development.	<ul style="list-style-type: none"> <li>There are sufficient well-maintained facilities, infrastructure and equipment to enable staff to effectively manage the nature reserve.</li> <li>Annual plans of operation include detailed budgetary requirements.</li> </ul>

#### 4. ZONATION PLAN

The purpose of the zonation of the Vulture's Peak Nature Reserve is to identify the types and level of usage that are acceptable based on an area's sensitivity and resilience. Zonation may be used to delineate areas in which appropriate uses and infrastructure may be located and developed.

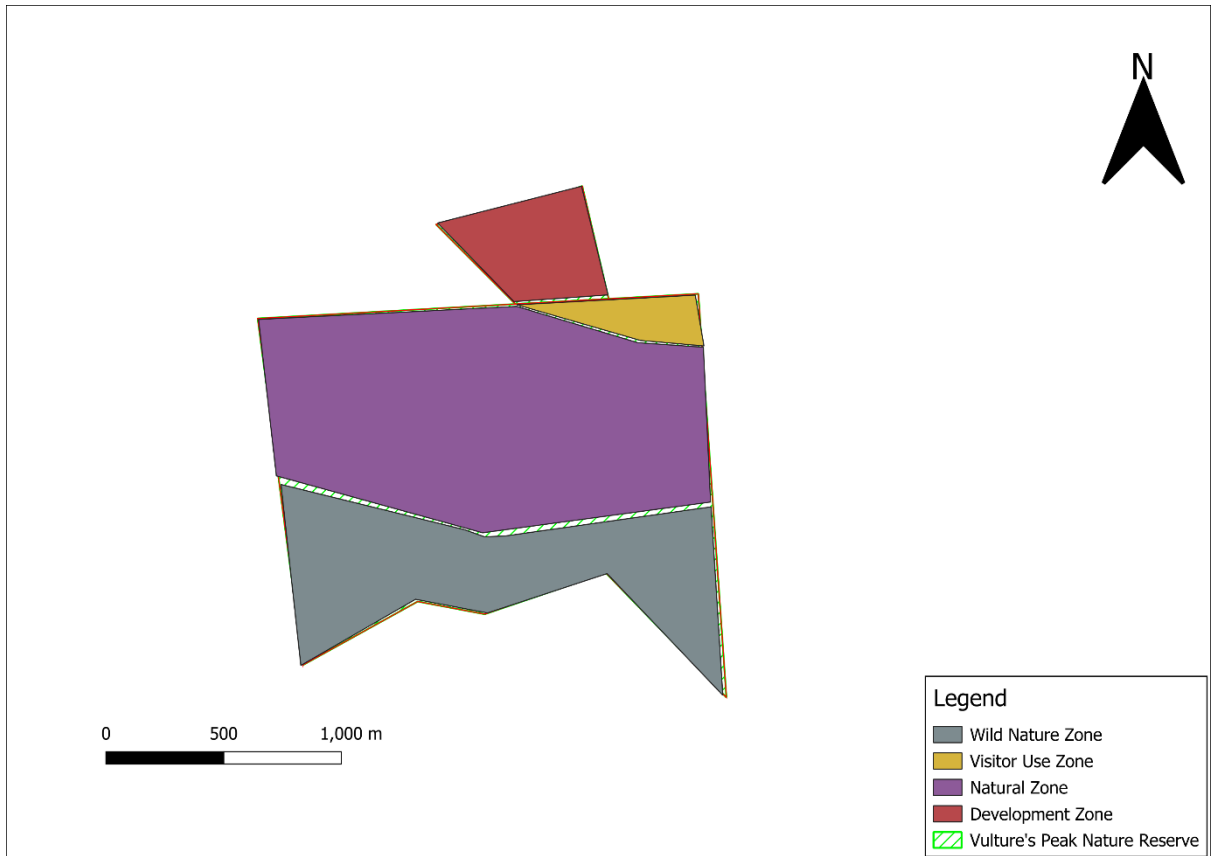
Zonation enables a protected area to be zoned along a continuum, from highly sensitive areas subject to low levels of use and impact, to higher intensity nature-based uses. The zonation system adopted for Vulture's Peak Nature Reserve recognises and reflects:

- Sensitive features associated with a protected area (i.e. biophysical, cultural and sense of place).
- A general gradation in the zonation categories, in which the next use level provides a buffer to the lower use level.
- Influence of existing and historic facilities, infrastructure and use.
- Opportunities and constraints (biophysical, social or managerial constraints) for use.

The zonation system applied to Vulture's Peak Nature Reserve is shown in **Table 4.1** and includes the following categories: zone description, permissible activities and non-permissible activities. The zonation plan for the Vulture's Peak Nature Reserve is shown in **Figure 4.1** below.

**Table 4.1: Zonation categories for the Vulture's Peak Nature Reserve**

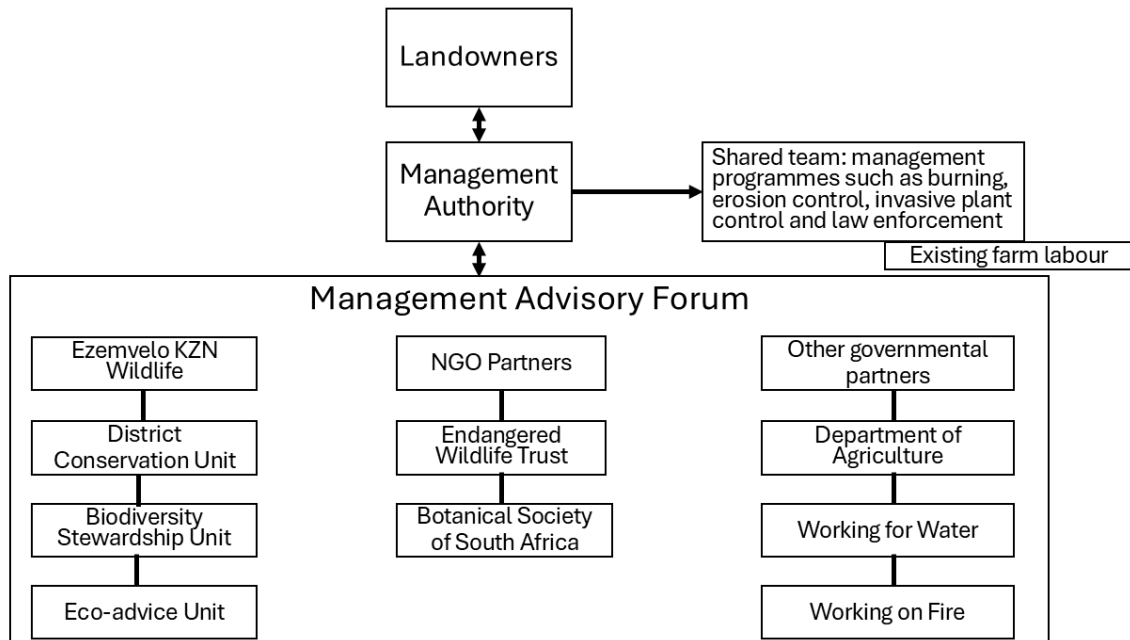
Zone	Description	Permissible Activities	Non-Permissible Activities
Development zone: High use	This area comprises the northern region of the Silver Hill Estate, incorporating the entrance and main access road to the primary residence and accommodation facilities.	All high impact activities associated with the primary residence and accommodation facilities and regular use of the access road by the owners.	Infrastructure that can be inappropriate should be excluded (such as cell phone towers)
Visitor use zone: High use	This area comprises the areas that visitors use on a regular basis, including a trout dam.	Human and vehicle access allowed.	Infrastructure that can be inappropriate should be excluded (such as non-nature-based tourism activities)
Natural zone: Low use zone	This zone is designated for areas in which activities are to be limited to low-impact use, predominantly non-vehicular management activities, with vehicle access limited to the specific vehicle tracks. The zone includes the access road.	Low intensity activities (non-motorised) and associated infrastructure (i.e. trails / footpaths).  Vehicle access permitted along designated roads / tracks	No habitat transformation.  Any activity impacting on wetland or water resources.  No ecotourism infrastructure (excluding trails / footpaths and associated signs).
Wild nature zone: Low use	The area on the border of the World Heritage Site, where no vehicular access is possible will remain a wild area, with potential for solitude, tranquility, naturalness and wildness but the feeling of remoteness, while enhanced by the proximity to the mountains.	Low use walking and trails, no vehicular access possible.	No vehicles and no infrastructure development.  BUT the hide will be constructed in this zone



**Figure 4.1.** The zonation plan for the Vulture's Peak Nature Reserve.

## 5. ADMINISTRATIVE STRUCTURE

The Vulture's Peak Nature Reserve will be managed according to a very simple administrative structure. The administrative structure is shown in **Figure 5.1** below.



**Figure 5.1. Administrative organisational structure for the Vulture's Peak Nature Reserve**

## 6. OPERATIONAL MANAGEMENT FRAMEWORK

This section translates the strategic framework described in Section 3 above into management activities and targets, which will be used to inform annual plans of operation and the resources required to implement them. The management targets will form the basis for monitoring performance in implementing the plan and are thus measurable.

## **6.1 Legal compliance and law enforcement**

The Vulture's Peak Nature Reserve management will adhere to the following guiding principles in enforcing the laws governing the use of protected areas and the prohibition of particular activities:

- All reasonable efforts must be made to ensure the effective conservation of biodiversity within and on the boundaries of the nature reserve.
- Boundary demarcation will be improved so as to prevent illegal access and trespassing.
- Cooperative structures should be established to enable participation by key stakeholders such as Ezemvelo KZN Wildlife and other neighbours in addressing offences and breaches of the law.
- Law enforcement within the nature reserve will be undertaken through surveillance, monitoring and appropriate reaction in the event of an offence.

## **6.2 Business management and development**

The business model for the Vulture's Peak Nature Reserve consists of two specific operations -

- The reserve has a small tourism operation with three campsites and one self-catering house for rental. This allows for further sustainable income generation with a low impact and footprint to the property while promoting nature-based tourism and conservation.
- The reserve has a vulture hide and supplementary feeding site for future income generation.

The guiding principle for the continued management and development of business operations is that they remain low-impact and do not impact on the biodiversity values for which the property has been declared as a protected area.

## **6.3 Conservation Management**

The Vulture's Peak Nature Reserve will be managed to ensure its ecological integrity is maintained in the long-term. It must be noted that the nature reserve is contributing as an extension and neighbour to the World Heritage Site and should therefore be secured in perpetuity.



The following conservation management activities will be carried out –

### **6.3.1 Grassland management**

#### 6.3.1.1 Fire management

In high rainfall dominated grasslands, fire is a key management intervention. Fire has important effects on vegetation composition, primary productivity, and nutrient cycling.

The following guiding principles should be adhered to:

- Burning should be undertaken in such a way that it maintains spatial and temporal heterogeneity within the landscape.
- A patch mosaic of burnt and un-burnt areas should be maintained.
- Burning must be undertaken with consideration of the biodiversity conservation requirements of the site and the need to protect rare and endangered species.
- Burning and fire management must be undertaken in a safe manner that is legally compliant with the National Veld and Forest Fire Act (No. 101 of 1998).

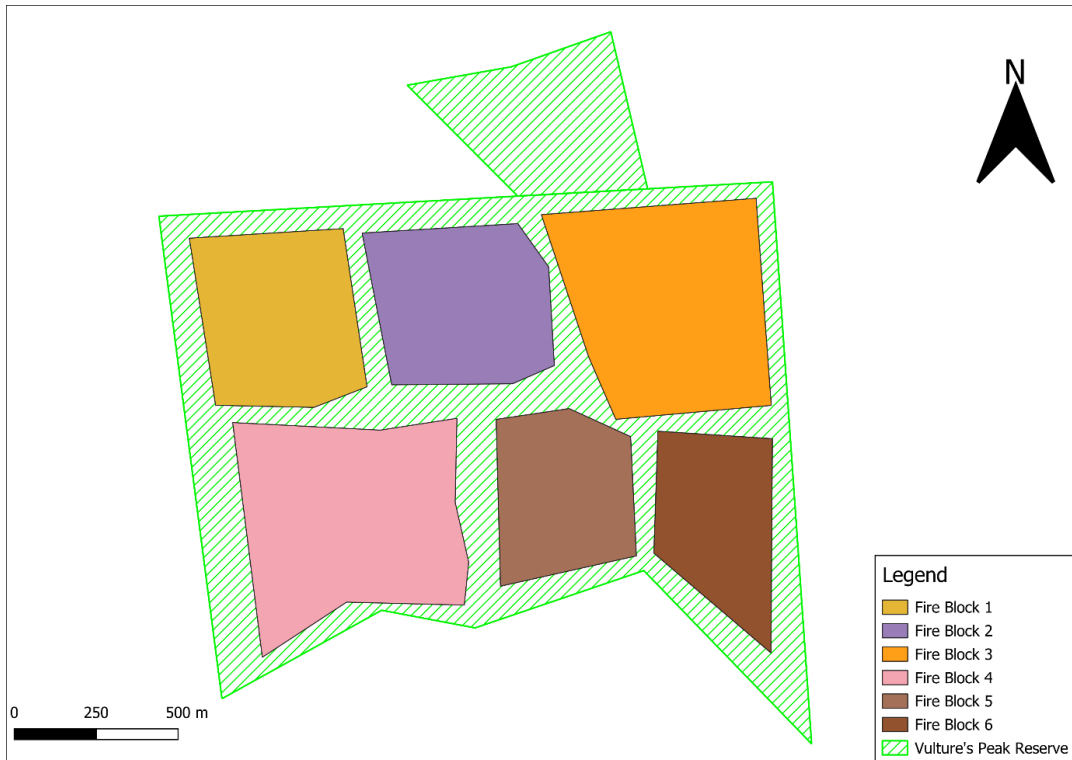
In order to achieve an effective burn to maintain grassland vigor, remove moribund vegetation and maintain suitable habitat for indigenous species, a cool burn needs to be applied. This should take the form of a head fire which will remove standing material without being excessively deleterious to the plants' growth points. Cool fires can be achieved under the following set of circumstances:

- Sufficient fuel available > 1,500 kg/ha grass – as determined with a disc pasture meter.
- Grass is wilted to 20% moisture.
- Air temperature below 20°C.
- Relative humidity higher than 50%.
- Steady wind present, to propagate an even head fire.
- Before new growth has commenced which depends on temperature and rainfall.

Grassland habitat - in terms of implementing an appropriate burning regime for the grassland habitat on the nature reserve, it is recommended to burn 33% of the property every year, on a rotational basis. The reserve has been divided into 6 fire management

blocks and 2 blocks of the 6 blocks are recommended to be burnt each year. The burning plan is shown in **Figure 6.2** below, indicating the burning blocks to be used.

Wetland habitat – it is recommended that the wetland areas be burnt every 2 to 3 years, following an annual wetland health assessment by an ecologist.



**Figure 6. Burning plan for the Vulture's Peak Nature Reserve (6 blocks)**

### 6.3.1.2 Fire Safety

In terms of the National Veld and Forest Fires Act (No. 101 of 1998), a landowner (in this case of the nature reserve) must provide the necessary security of the property from fire, by having a system of firebreaks burnt on the property, as well as having such equipment, protective clothing and trained personnel for enabling this fire management. It is therefore necessary to consider the following in relation to fire-fighting:

- The need to maintain a system of firebreaks to enable the management of controlled burns and to effectively fight wildfires.
- The size of the nature reserve and the requirements necessary to access different areas in the event of a wildfire. This relates to both roads and vehicles.
- The number of personnel necessary to effectively fight wildfires.
- The equipment necessary to effectively fight wildfires. This would include:
  - Fire-fighting equipment mounted on the backs of vehicles.
  - Backpack sprayers and beaters.
  - Safety equipment for personnel involved in fire-fighting.
  - Strategic water supply points.

The location of firebreaks in the Vulture's Peak Nature Reserve should surround the entire reserve and between the fire blocks that are displayed in **Figure 6**.

### 6.3.1.3 Grazing management

The interaction between fire and grazing is one of the primary management interventions that has the greatest impact and must be carefully managed on the Vulture's Peak Nature Reserve. Attention must therefore be given to the carrying capacity of the reserve and the grazing camps. This property is an open system for indigenous grazers all year round and no livestock grazing takes place.

## **6.3.2 Wetland management**

The management of the wetland resources on the Vulture's Peak Nature Reserve are directly associated with the management of fire and the control of alien invasive plants. Management measures for each of these components have been detailed separately and should be taken into consideration for the management of the wetlands.

Key wetland management measures include:

*Livestock management -*

- There are no permanent livestock permitted on the Vulture's Peak Nature Reserve.

*Fire management -*

- Annual burning of all the wetlands should be avoided. Late winter or early spring burns (July - September) should be considered at 3 - 5-year intervals.
- Burning all the wetland area within the nature reserve simultaneously would result in a deterioration of the wetland condition and functionality and reduce the potential suitability of the habitat for threatened wetland species. The proposed burning regime benefits not only the rangeland condition, but the wetland condition as well. Wetlands should be split and burnt alternatively every 2 to 3 years.

*Management and monitoring of important biota -*

- No threatened flora should be collected or harvested without the relevant permit.
- No threatened fauna should be hunted without the relevant permit.
- Where endangered faunal species occur in the wetlands, records should ideally be kept of sightings in order to help establish whether or not wetland management practices and rehabilitation efforts are having a positive impact on these species.
- The wetlands support an isolated population of Endangered Long-toed Tree Frog *Leptopelis xenodactylus* and this population will be monitored through recording of calls during spring. To prevent disturbance no other monitoring will be permitted.

### **6.3.3 Alien and indigenous encroacher plant control**

#### Alien plant infestations

A listed invasive species means any species, which is listed in terms of section 70 of NEMBA whose establishment and spread occurs outside of its natural distribution range. Such plants are considered to be a serious threat to the ecological functioning of natural systems and to water production and must be strictly controlled. In undertaking invasive plant control, the following guiding principles will be adhered to:

- Invasive plant control will require an ongoing programme that prioritises key infestations along water courses, drainage lines and upper catchment areas.

- Initial clearing efforts should focus on containing infestations that are most likely to spread into new areas.
- All follow-up requirements must be strictly adhered to otherwise the problem will be exacerbated.

In terms of the Vulture's Peak Nature Reserve, the following invasive plant species were found to be present on the property:

- Black Wattle (*Acacia mearnsii*)
- American Bramble (*Rubus cuneifolius*)
- Curry's Post Weed (*Phymaspermum acerosum*).

Some of these plants require specific herbicides, but the principle to be followed is that a selective herbicide (does not kill grass) must be used. This will require a suitable level of management in the field.

- Basic procedure

Select the priority areas where the work can begin based on the locality to sensitive areas.

- Initial clearing and maintenance

Initial clearing of all the above listed species will include cutting and treating with herbicides where applicable. Ongoing follow ups and maintenance will take place to ensure regrowth and infestations are eliminated.

#### **6.3.4 Erosion and rehabilitation**

With the aim of improving the ecological integrity of the natural areas an ongoing erosion prevention and rehabilitation plan will be implemented annually, focusing specifically on grassland, trail and road rehabilitation.

### **6.4 Buffer zone and regional management**

In order to safeguard the biodiversity within the nature reserve and to counter any threatening processes or edge effects, appropriate land uses in the surrounds of the property should be encouraged. Actions may also be taken to secure the boundaries of the property through protected area expansion mechanisms and local planning tools. In ensuring the protection of its biodiversity, the following guiding principles will be adopted in terms of buffer zone protection and regional management:

- Appropriate actions must be taken to manage threatening processes and edge effects on the property's boundaries and beyond.

- The property's manager will endeavour to assist the local and district municipalities in determining appropriate land uses and development strategies in the areas surrounding the nature reserve.
- The Vulture's Peak Nature Reserve should be reflected as a protected area in Mpofana Municipality, as well as in the Biodiversity Sector Plan.
- The management authority should engage with neighbouring landowners to build good working relationships and encourage compatible land use activities.

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## 6.5 Management activities and targets

The full set of management activities, with their management targets, relating to the Strategic Outcomes, are shown in **Table 6.1**. This table also highlights the frequency of activities and the parties responsible for the management activity.

**Table 6.1. Management activities and management targets relating to Strategic Outcomes**

Strategic outcome	Management activities	Management targets	Indicators of Concern	Timing	Management authority responsibility	Partner responsibility
<b>LEGAL COMPLIANCE - NATURE RESERVE DECLARATION</b>						
The reserve is a legally declared nature reserve.	The nature reserve must be declared in terms of S23 NEMBA.	Legal protection of the entire extent of the reserve in terms of the requirements of NEMBA.	No title deed endorsement on declared properties.	<b>Year 1</b>	Completion of legal agreements and approval of management plan.	Completion of the declaration process.
<b>LAW ENFORCEMENT</b>						
There is adequate security and law enforcement within the nature reserve to prevent illegal access and biodiversity loss.	There is adequate security and law enforcement within the site to control access, and prevent illegal access and biodiversity loss.	Live cameras, camera traps and general vigilance maintained to support security on the property.	Recorded illegal access incursions and losses of biodiversity through poaching or muti plant collecting. Frequent recovery of snares. Arson fires.	<b>Year 1 – ongoing</b>	Staff	N/A
<b>BUSINESS DEVELOPMENT</b>						
Explore opportunities to develop income-generating activities for the property.	Continue to grow the nature-based tourism model and maintain the aquaculture business. Also continue to consider other low impact income generators. For example photographic hide at feeding site	A business plan developed for the viable management of the nature reserve.	Budget constraints. Limited appropriate management interventions.	<b>Year 3</b>	Business plan developed.	N/A

CONSERVATION MANAGEMENT

Grassland and wetland habitats are appropriately managed to ensure their ecological integrity.	Manage all firebreaks and rotational block burns. Manage the wetlands to maintain their ecological integrity and water provisioning services (linked to disturbance, grazing, fire and alien control management).	<ul style="list-style-type: none"> <li>Grassland condition score is maintained or improved.</li> <li>Wetland monitoring reveals wetland health scores are maintained or improved.</li> </ul>	Grassland condition deteriorates. Wetland assessments indicate wetland degradation.	<b>Year 1 - ongoing</b>	Landowner to manage according to the management plan.	N/A
Fire management is undertaken based on ecological principles and the needs to maintain the integrity of the property.	Block burns carried out annually, based on a pre-burn inspection.	Annual blocks burnt according to ecological principles, the recommendations of the pre-burn inspection, and fire protection regulations.	Inappropriate block burns performed or unplanned/ arson fires.	<b>Year 1 - ongoing</b>	Annually perform the necessary block burns in the nature reserve.	N/A
Adequate fire safety within the nature reserve is ensured.	Burn annual firebreaks on the boundary of the property, as well as strategic internal breaks to facilitate block burns.	All firebreaks in place each year within the legally prescribed time frames. Firefighting Equipment is maintained and ready to use.	Firebreaks not in place timeously. Fire damage caused by the lack of appropriate fire protection.	<b>Year 1 - ongoing</b>	Annually perform the necessary firebreak burns in the nature reserve.	N/A
Key threatened species, and their habitats, are managed to ensure their recovery on the nature reserve.	Limit disturbance to sensitive species, especially during breeding seasons.	Annual priority species surveys.	Declines in populations of known threatened species.	<b>Year 1 - 2</b>	Landowners adheres to management recommendations	N/A
Invasive alien plant species control measures are implemented in a planned and systematic manner.	Develop a detail plan for strategic alien plant control. Perform the necessary alien plant control activities, using the correct methods, herbicides and timing. Undertake suitable rehabilitation measures, including re-vegetation using indigenous plant species, to prevent soil erosion, following clearing of invasive plant species.	<ul style="list-style-type: none"> <li>Systematic alien plant control activities carried out annually until maintenance levels attained.</li> <li>Ongoing annual maintenance – surveillance and low-level infestation removals.</li> </ul>	Alien plant infestations increase or spread.	<b>Year 1 - 5</b>	Employ and manage a team to implement the systematic alien plant clearing activities.	N/A



	Ensure annual follow-up to maintain low levels of infestations.					
Potential erosion areas in the grasslands, wetlands and along roads are identified and rehabilitated as required.	Implement the necessary rehabilitation interventions. Monitor these interventions and any erosion points that may degrade further.	<ul style="list-style-type: none"> <li>All sites identified have been rehabilitated with appropriate interventions.</li> <li>All relevant erosion sites monitored.</li> </ul>	Rehabilitation structures fail.	<b>Ongoing</b>	Implement appropriate rehabilitation interventions.	N/A
Supplementary feeding site provides food for vultures and other birds of prey.	Manage the supplementary feeding site for the benefit of birds of prey.	<ul style="list-style-type: none"> <li>Numbers of vultures monitored on a regular basis.</li> </ul>	Infrequent supply of meat for the site.	<b>Ongoing</b>	Feeding of birds of prey with the use of the supplementary feeding site.	Monitoring of birds of prey numbers.
<b>BUFFER ZONE PROTECTION AND REGIONAL MANAGEMENT</b>						
Compatible land use is ensured upstream and surrounding the nature reserve in order to secure its ecological integrity, by engaging with relevant authorities and the fostering of partnerships and relationships with surrounding and regional landowners.	<ul style="list-style-type: none"> <li>Ensure the Vulture's Peak Nature Reserve is captured in all spatial development plans as a protected area.</li> <li>Capture of buffer zone considerations in local and regional plans.</li> <li>Identify areas adjacent to the reserve for possible inclusion (expansion) of the protected area.</li> </ul>	<ul style="list-style-type: none"> <li>Land use planning takes the Vulture's Peak Nature Reserve status into consideration.</li> <li>Retention of existing compatible land uses in the areas around the reserve.</li> <li>Legal protection of upper catchment areas and areas of contiguous habitat with the nature reserve.</li> </ul>	<ul style="list-style-type: none"> <li>Land uses that lead to land transformation, fragmentation and loss of habitat.</li> <li>Detrimental changes of land use in the nature reserve's buffer zone.</li> </ul>	<b>Ongoing</b>	Engagement with neighbours around collaborative management.	Support to the landowner in encouraging appropriate land use in the catchment.
<b>OPERATIONAL MANAGEMENT</b>						
There are sufficient, well-maintained facilities, infrastructure and equipment to enable staff to effectively manage the nature reserve.	Maintain all infrastructure and equipment according to a detailed schedule. Identify infrastructure and equipment needs.	<ul style="list-style-type: none"> <li>Adequate facilities, infrastructure and equipment to manage the nature reserve.</li> <li>All infrastructure and equipment maintained.</li> </ul>	Lack of budget to maintain infrastructure or equipment. Infrastructure or equipment not maintained.	<b>Ongoing</b>	Annual infrastructure and equipment maintenance.	N/A
Annual plans of operation are developed and include detailed budgetary requirements.	Management committee to meet annually to review the past year's activities and plan the upcoming year's activities. Draft an Annual Plan of Operation, highlighting budget requirements.	Annual management meeting held and APO drafted.	Management activities not achieved. Budget constraints preventing management activities.	<b>Ongoing</b>	Attend annual Management meeting, provide input on annual activities.	Stakeholders participate in annual meeting and planning.

## **7 MONITORING AND REPORTING**

Monitoring and reporting are critical components of the adaptive management cycle. It enables the effective assessment of management interventions and, if necessary, can be used to direct modifications of management in an effort to achieve the outcomes required.

### **7.1 Annual monitoring**

Monitoring enables managers to periodically assess the state of the system so as to help in decision making in the management process. It is therefore an important aspect of active adaptive management strategies for conservation areas. A monitoring programme can serve as an early warning system to detect changes or trends as a result of management actions or natural events, with the goal to adapt management strategies where necessary. It is now recognised that good management goes beyond implementation and that effective management is integrally linked to well-designed monitoring or evaluation of systems. Monitoring also allows managers to develop knowledge of their particular ecosystems over time, which helps to predict how the system will respond to various possible management alternatives.

The annual monitoring schedule should be designed to monitor the implementation of aspects of the management plan. It should be designed to be straightforward and relatively easy to implement by on-site staff.

Records should be maintained of key management interventions and of problem events or incidents such as uncontrolled access, poaching, illegal plant collection or uncontrolled/arson fires.

Scientific monitoring programmes may be established to monitor specific management interventions such as measures for the protection of flagship species or habitat condition. Most of the outcomes of the monitoring process will be captured in an annual report, which will be used to inform the following year's annual plan of operation.

On this basis, a monitoring schedule for Vulture's Peak Nature Reserve is set out in **Table 7.1**.

**Table 7.1: Annual monitoring schedule for Vulture's Peak Nature Reserve**

Management issue	Parameters to be monitored	Monitoring measures	Monitoring frequency	Responsibility	Reporting requirements
Law enforcement	Ongoing management of live cameras	Photographs/written record	Monthly	Management Authority	Annual report
	Ongoing management of camera traps	Photographs/written record	Monthly		Annual report
	Illegal access or incidents	Photographs/written record	Per event		Record of event
Fire management	Burning of firebreaks as part of fire management	Written record/map/photography	Annually	Management Authority	Annual report
	Burning of blocks as part of controlled burning – date, weather conditions, burn intensity		Annually		Annual report
	Unplanned wildfires – date, weather conditions, fire intensity, area burnt		Per event		Record of event
Conservation targets	Maintain and improve the natural integrity	Written records	Biennial	Management Authority	Biennial report
Invasive plant control	Records of hectares cleared (labour hours/days)	Written record / map	Annually	Management Authority	Annual report
	Herbicide usage	Written record	Annually		Annual report
Rehabilitation interventions	Grassland rehabilitation sites	Photographs/written record	Annually	Management Authority	Annual report
	Road rehabilitation areas	Photographs/written record	Annually	Management Authority	Annual report
Facilities and infrastructure	State of roads, paths and fences	Photographs/written records	Quarterly	Management Authority	Annual report

## **7.2 Annual protected area management plan implementation review**

The purpose of undertaking an annual review of implementation of the protected area management plan will be to:

- Determine how effectively the management plan has been implemented.
- Assist in determining the focus for the annual plan of operation and the setting of appropriate time frames and budgets.
- Enable effective adaptive management by identifying changes and modifying management interventions.

The minutes of the annual management meeting will form the basis of the report on the management plan review. The minutes should include records of recommendations for update/changes to the five-year plan so that when the five-year plan is revised for the subsequent five years, these recommendations can be assessed and included where necessary. The Management Plan will be fully reviewed and updated every 5 years.

## **8 COSTING PLAN**

In line with the legal requirements of protected area management, the management programmes and activities required to achieve the desired state have been costed. The following guiding principles will be adhered to:

Guiding principles -

- Responsibly manage the allocation of budget, revenue raising activities and expenditure;
- Ensure solid financial management to support the achievement of the objectives of this plan.

### **8.1 Vulture's Peak Nature Reserve resource requirements**

In developing annual plans of operation for Vulture's Peak Nature Reserve the resource requirements, associated with management activities and targets set out in the operational management framework must be considered and budgeted for.

## 9 VULTURE'S PEAK NATURE RESERVE ANNUAL PLAN OF OPERATION

Each year an annual plan of operation will be prepared, based on the objectives, strategic outcomes, management activities and targets contained in the management plan.

### 9.1 Implementation of the management plan

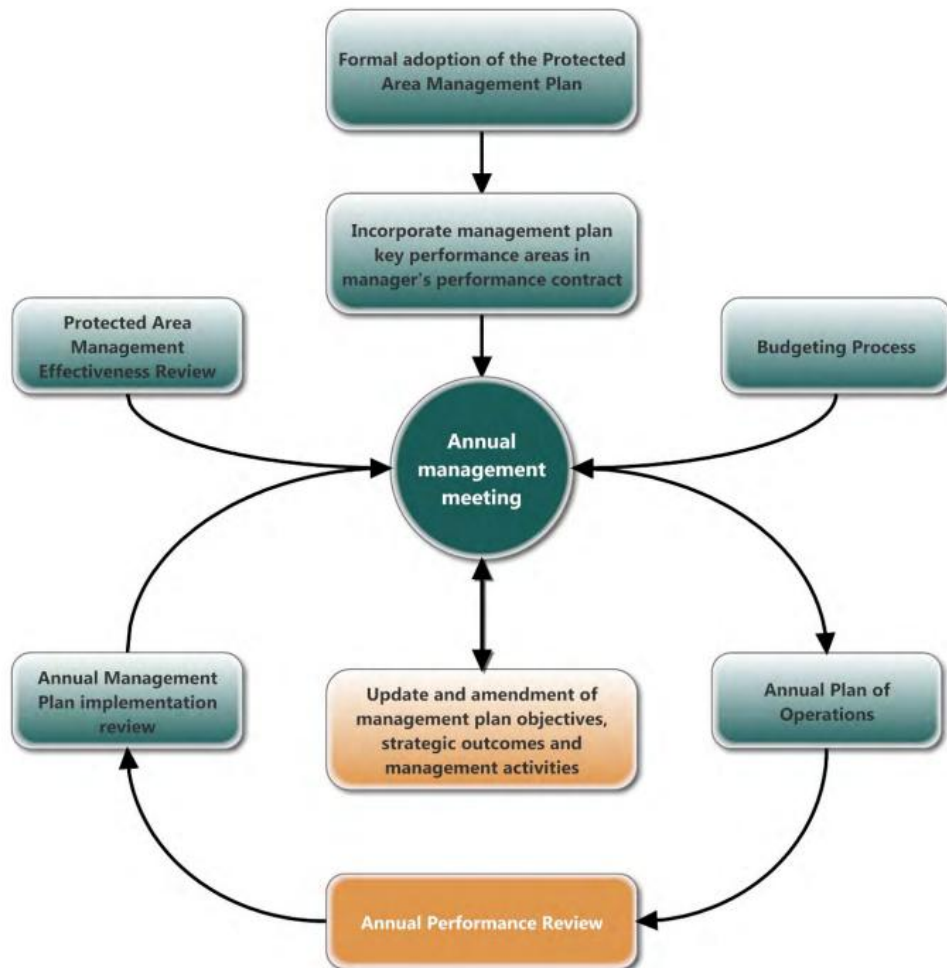


Figure 9.1. Process for the implementation of management plans

Each year an annual management meeting is to be held for the reserve, hosted by the Advisory Forum. In terms of the implementation of the management plan, the purpose of the annual management meeting for Vulture's Peak Nature Reserve will be to:

- Finalise the annual report, as part of the annual management plan review described in Section 7.3 above.
- As part of the annual performance review, determine the need to modify or change any of the management plan's objectives, strategic outcomes, management activities or targets.
- Provide an assessment of the continuing integrity of the natural areas on Vulture's Peak Nature Reserve, as a means to justify their contribution to the offset.
- Determine management activities for the coming year and to set goals for the year, based on the key performance areas set out in the management plan.
- Determine how budgets will be spent in an effort to achieve the goals for each of the quarters of the coming year.

The minutes and notes of the annual management meeting will be compiled in an annual plan of operation, which will include all of the information, set out above, and will determine what management activities need to be completed for the coming year, based on the management plan. The first year's annual plan of operation is set out in **Annexure C**.

## **9.2 Responsibilities in implementing the protected area management plan**

In the tables in the operational management framework, the responsibilities for the completion of management activities are identified. In many cases the people responsible for implementing the activities will be in attendance at the annual management meeting and the requirements for the achievement of the management activities can be discussed and agreed to at the meeting. In some cases, however, the management activities may be required to be referred to an individual within a conservation authority or another partner to ensure that they implement the management activity.

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## ANNEXURE A: SPECIES LISTS

### Mammals

<b>Name</b>	<b>Scientific name</b>
Eland	<i>Taurotragus oryx</i>
Oribi	<i>Ourebia ourebi</i>
Southern Reedbuck	<i>Redunca arundinum</i>
Common (Grey) Duiker	<i>Sylvicapra grimmia</i>
Mountain Reedbuck	<i>Redunca fulvorufula</i>
Grey Rhebok	<i>Pelea capreolus</i>
Bushbuck	<i>Tragelaphus sylvaticus</i>
Black Backed Jackal	<i>Canis mesomelas</i>
Serval	<i>Leptailurus serval</i>
Caracal	<i>Caracal caracal</i>
Scrub Hare	<i>Lepus saxatilis</i>
Rock hyrax	<i>Procavia capensis</i>
Bushpig	<i>Potamochoerus larvatus</i>
Chacma Baboon	<i>Papio ursinus</i>
Porcupine	<i>Hystrix africaeaustralis</i>
African Clawless Otter	<i>Aonyx capensis</i>
Spotted Necked Otter	<i>Hydriectis maculicollis</i>
Large spotted Genet	<i>Genetta tigrina</i>
Large Grey Mongoose	<i>Herpestes ichneumon</i>
Water Mongoose	<i>Atilax paludinosus</i>
White tailed mongoose	<i>Ichneumia albicauda</i>

### Amphibians

<b>Name</b>	<b>Scientific name</b>
Platanna	<i>Xenopus laevis</i>
Common River Frog	<i>Afrana angolensis</i>
Cape River Frog	<i>Afana fuscigula</i>
Drakensberg River Frog	<i>Afana dracomontana</i>
Striped Stream Frog	<i>Strongylopus fasciata</i>
Plain Stream Frog	<i>Strongylopus wageri</i>
Clicking Stream Frog	<i>Strongylopus grayii</i>
Guttural Toad	<i>Bufo gutturalis</i>
Raucous Toad	<i>Bufo tangeri</i>
Karoo Toad	<i>Bufo garipeensis</i>
Bubbling Cassina	<i>Kassina senegalensis</i>
Plaintive Rain Frog	<i>Breviceps verrucosus</i>
Bronze Caco	<i>Cacostermum nanum</i>
Common Caco	<i>Cacostermum boettgeri</i>
Long-toed tree Frog	<i>Leptopelis xenodactylus</i>
Rattling Frog	<i>Stenodactylus wealii</i>
Striped Grass Frog	<i>Ptychadena porosissima</i>



## Reptiles

<b>Name</b>	<b>Scientific name</b>
Water monitor	<i>Varanus niloticus</i>
Striped Skink	<i>Mabuya striata</i>
Drakensberg Rock Gecko	<i>Afroedura nivaria</i>
Southern Rock Agama	<i>Agama atra</i>
Short legged Seps	<i>Tetradactylus seps</i>
Transvaal Grass lizard	<i>Chaemasaura aenea</i>
Yellow Throated Plated Lizard	<i>Gerrhosaurus montana</i>
Delalandes Sandveld Lizard	<i>Nucra lalandi</i>
Rhombic Skaapsteker	<i>Psammophylax rhombeatus</i>
Common Egg eater	<i>Dasypeltis scabra</i>
Common night adder	<i>Causus rhombeatus</i>
Brown Water snake	<i>Lycodonomorphus rufulus</i>
Berg Adder	<i>Bitis atropos</i>
Puff Adder	<i>Bitis arietans</i>
Rinkhals	<i>Hemachatus hemachatus</i>
Natal Green Snake	<i>Philothamnus natalensis</i>
Green Water Snake	<i>Philothamnus hologatser</i>
Brown House Snake	<i>Lamprophis fuliginosus</i>
Yellow bellied House Snake	<i>Lamprophis ficus</i>
Olive House Snake	<i>Lamprophis inornatus</i>
Red Lipped Herald	<i>Crotaphopeltis hotamboeia</i>
Mole Snake	<i>Pseudaspis cana</i>
Common slug eater	<i>Duberia lectrix</i>
Many spotted snake	<i>Amplorhinus multimacultus</i>
Cross Marked Snake	<i>Psammophis crucifer</i>
Olive grass snake	<i>Psammophis phillipsii</i>
Bibrons Blind snake	<i>Typhlops bibronii</i>

## Fish

<b>Name</b>	<b>Scientific name</b>
African Mottled Eel	<i>Anguilla bengalensis</i>
Short Gin Eel	<i>Anguilla bicolor bicolor</i>
Madagascar Mottled Eel	<i>Anguilla marmorata</i>
Long-finned Eel	<i>Anguilla mossambica</i>
Pin striped barb	<i>Enteromius viviparus</i>
Chubby head minnow	<i>Barbus anoplus</i>
Brown Trout	<i>Salmo trutta</i>
Rainbow Trout	<i>Oncorhynchus mykiss</i>

**Bird list – from neighbouring Highmoor Nature Reserve**

<b>Group</b>	<b>Species</b>	<b>Genus</b>	<b>Species</b>
	Bokmakierie	<i>Telophorus</i>	<i>zeylonus</i>
	Hamerkop	<i>Scopus</i>	<i>umbretta</i>
	Quailfinch	<i>Ortygospiza</i>	<i>atricollis</i>
	Secretarybird	<i>Sagittarius</i>	<i>serpentarius</i>
Apalis	Bar-throated	<i>Apalis</i>	<i>thoracica</i>
Batis	Cape	<i>Batis</i>	<i>capensis</i>
Bishop	Southern Red	<i>Euplectes</i>	<i>orix</i>
Bishop	Yellow	<i>Euplectes</i>	<i>capensis</i>
Blackcap	Bush	<i>Sylvia</i>	<i>nigricapillus</i>
Boubou	Southern	<i>Laniarius</i>	<i>ferrugineus</i>
Bulbul	Dark-capped	<i>Pycnonotus</i>	<i>tricolor</i>
Bunting	Cape	<i>Emberiza</i>	<i>capensis</i>
Bunting	Cinnamon-breasted	<i>Emberiza</i>	<i>tahapisi</i>
Bunting	Golden-breasted	<i>Emberiza</i>	<i>flaviventris</i>
Bustard	Denham's	<i>Neotis</i>	<i>denhami</i>
Buzzard	Common	<i>Buteo</i>	<i>buteo</i>
Buzzard	Forest	<i>Buteo</i>	<i>trizonatus</i>
Buzzard	Jackal	<i>Buteo</i>	<i>rufofuscus</i>
Canary	Black-throated	<i>Crithagra</i>	<i>atrogularis</i>
Canary	Brimstone	<i>Crithagra</i>	<i>sulphurata</i>
Canary	Cape	<i>Serinus</i>	<i>canicollis</i>
Chat	Ant-eating	<i>Myrmecocichla</i>	<i>formicivora</i>
Chat	Buff-streaked	<i>Campicoloides</i>	<i>bifasciatus</i>
Chat	Familiar	<i>Oenanthe</i>	<i>familiaris</i>
Chat	Mountain	<i>Myrmecocichla</i>	<i>monticola</i>
Cisticola	Lazy / Rock-loving	<i>Cisticola</i>	<i>aberrans</i>
Cisticola	Levaillant's	<i>Cisticola</i>	<i>tinniens</i>
Cisticola	Wailing	<i>Cisticola</i>	<i>lais</i>
Cisticola	Zitting	<i>Cisticola</i>	<i>juncidis</i>
Coot	Red-knobbed	<i>Fulica</i>	<i>cristata</i>
Cormorant	Great	<i>Phalacrocorax</i>	<i>carbo</i>
Cormorant	Reed	<i>Microcarbo</i>	<i>africanus</i>
Coucal	Burchell's	<i>Centropus</i>	<i>burchellii</i>
Crane	Blue	<i>Grus</i>	<i>paradisea</i>
Crane	Grey Crowned	<i>Balearica</i>	<i>regulorum</i>
Crane	Wattled	<i>Grus</i>	<i>carunculata</i>
Crow	Cape	<i>Corvus</i>	<i>capensis</i>
Crow	Pied	<i>Corvus</i>	<i>albus</i>
Cuckoo	Diederik	<i>Chrysococcyx</i>	<i>caprius</i>
Cuckoo	Black	<i>Chrysococcyx</i>	<i>clamosus</i>
Cuckoo	Klaas's	<i>Chrysococcyx</i>	<i>klaas</i>
Cuckoo	Red-chested	<i>Cuculus</i>	<i>solitarius</i>
Cuckooshrike	Grey	<i>Cebilepyris</i>	<i>caesius</i>

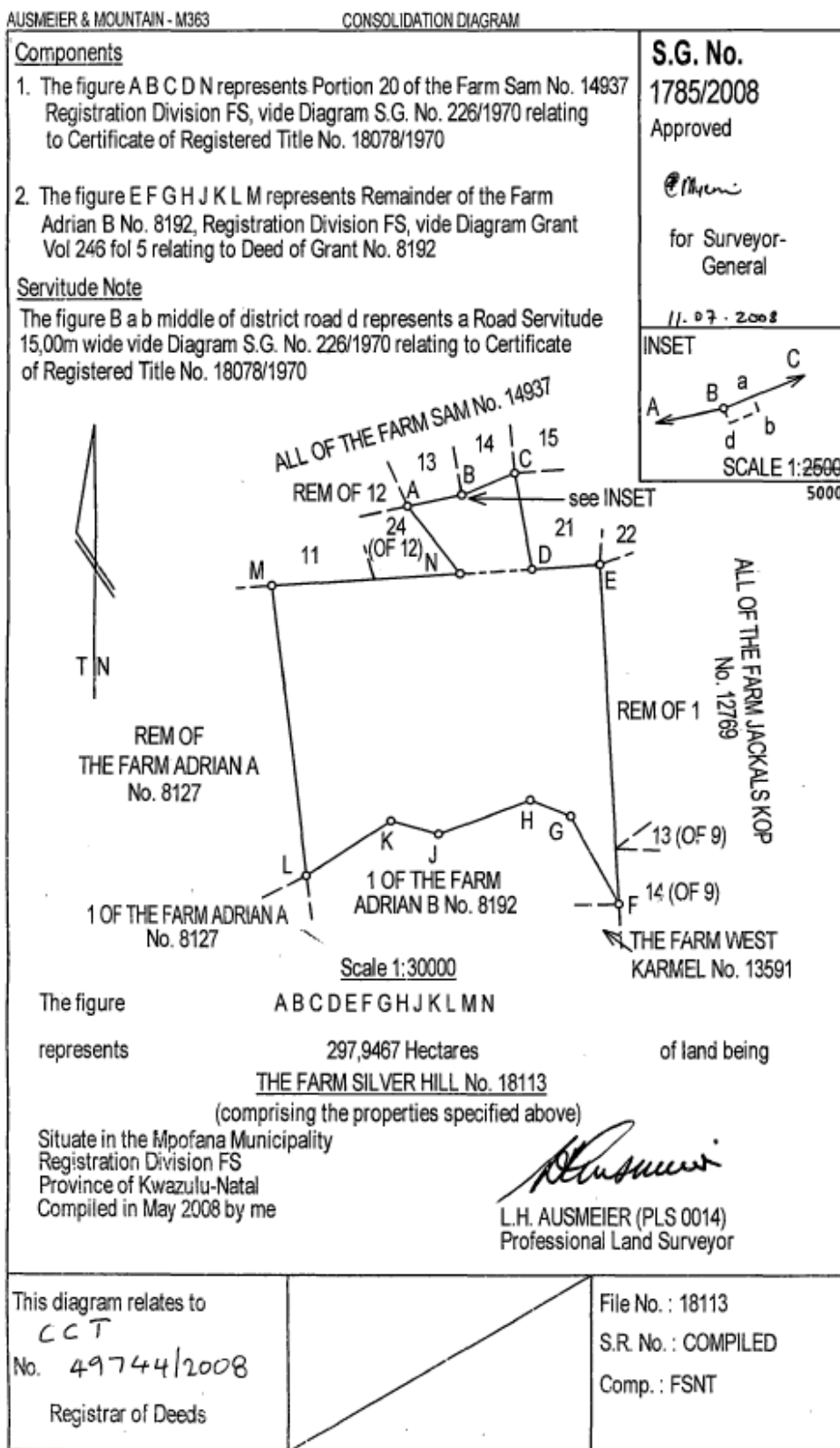
Dove	Cape Turtle	<i>Streptopelia</i>	<i>capicola</i>
Dove	Laughing	<i>Spilopelia</i>	<i>senegalensis</i>
Dove	Red-eyed	<i>Streptopelia</i>	<i>semitorquata</i>
Dove	Rock	<i>Columba</i>	<i>livia</i>
Drongo	Fork-tailed	<i>Dicrurus</i>	<i>adsimilis</i>
Duck	African Black	<i>Anas</i>	<i>sparsa</i>
Duck	White-faced Whistling	<i>Dendrocygna</i>	<i>viduata</i>
Duck	Yellow-billed	<i>Anas</i>	<i>undulata</i>
Eagle	African Fish	<i>Haliaeetus</i>	<i>vocifer</i>
Eagle	Ayres's Hawk	<i>Haliaeetus</i>	<i>ayresii</i>
Eagle	Long-crested	<i>Lophaetus</i>	<i>occipitalis</i>
Eagle	Verreaux's	<i>Aquila</i>	<i>verreauxii</i>
Eagle	Wahlberg's	<i>Hieraaetus</i>	<i>wahlbergi</i>
Egret	Great	<i>Ardea</i>	<i>alba</i>
Egret	Western Cattle	<i>Bubulcus</i>	<i>ibis</i>
Falcon	Amur	<i>Falco</i>	<i>amurensis</i>
Falcon	Peregrine	<i>Falco</i>	<i>peregrinus</i>
Fiscal	Southern	<i>Lanius</i>	<i>collaris</i>
Francolin	Grey-winged	<i>Scleroptila</i>	<i>afra</i>
Francolin	Red-winged	<i>Scleroptila</i>	<i>levaillantii</i>
Goshawk	African	<i>Aerospiza</i>	<i>tachiro</i>
Goose	Egyptian	<i>Alopochen</i>	<i>aegyptiaca</i>
Goose	Spur-winged	<i>Plectropterus</i>	<i>gambensis</i>
Grassbird	Cape	<i>Sphenoecus</i>	<i>afer</i>
Grebe	Little	<i>Tachybaptus</i>	<i>ruficollis</i>
Guineafowl	Helmeted	<i>Numida</i>	<i>meleagris</i>
Harrier	African Marsh	<i>Circus</i>	<i>ranivorus</i>
Harrier	Black	<i>Circus</i>	<i>maurus</i>
Heron	Black-headed	<i>Ardea</i>	<i>melanocephala</i>
Heron	Grey	<i>Ardea</i>	<i>cinerea</i>
Hoopoe	African	<i>Upupa</i>	<i>africana</i>
Hornbill	Southern Ground	<i>Bucorvus</i>	<i>leadbeateri</i>
Ibis	African Sacred	<i>Threskiornis</i>	<i>aethiopicus</i>
Ibis	Hadada	<i>Bostrychia</i>	<i>hagedash</i>
Ibis	Southern Bald	<i>Geronticus</i>	<i>calvus</i>
Kestrel	Rock	<i>Falco</i>	<i>rupicolus</i>
Kingfisher	Pied	<i>Ceryle</i>	<i>rudis</i>
Kite	Black	<i>Milvus</i>	<i>migrans</i>
Kite	Black-winged	<i>Elanus</i>	<i>caeruleus</i>
Lapwing	Crowned	<i>Vanellus</i>	<i>coronatus</i>
Lapwing	Blacksmith	<i>Vanellus</i>	<i>armatus</i>
Lark	Red-capped	<i>Calandrella</i>	<i>cinerea</i>
Longclaw	Cape	<i>Macronyx</i>	<i>capensis</i>
Martin	Banded	<i>Riparia</i>	<i>cincta</i>
Martin	Brown-throated / Plain	<i>Riparia</i>	<i>paludicola</i>
Martin	Rock / Southern Crag	<i>Ptyonoprogne</i>	<i>fuligula</i>

Moorhen	Common	<i>Gallinula</i>	<i>chloropus</i>
Mousebird	Speckled	<i>Colius</i>	<i>striatus</i>
Myna	Common	<i>Acridotheres</i>	<i>tristis</i>
Pigeon	African Olive	<i>Columba</i>	<i>arquatrix</i>
Pigeon	Speckled	<i>Columba</i>	<i>guinea</i>
Pipit	African	<i>Anthus</i>	<i>cinnamomeus</i>
Pipit	Nicholson's	<i>Anthus</i>	<i>nicholsoni</i>
Pipit	Striped	<i>Anthus</i>	<i>lineiventris</i>
Pipit	Yellow-breasted	<i>Anthus</i>	<i>chloris</i>
Prinia	Drakensberg	<i>Prinia</i>	<i>hypoxantha</i>
Prinia	Tawny-flanked	<i>Prinia</i>	<i>subflava</i>
Quail	Common	<i>Coturnix</i>	<i>coturnix</i>
Rail	African	<i>Rallus</i>	<i>caerulescens</i>
Raven	White-necked	<i>Corvus</i>	<i>albicollis</i>
Robin-Chat	Cape	<i>Cossypha</i>	<i>caffra</i>
Robin-Chat	White-throated	<i>Dessonornis</i>	<i>humeralis</i>
Saw-wing	Black (Southern Africa)	<i>Psalidoprocne</i>	<i>pristoptera holomelas</i>
Seedeater	Streaky-headed	<i>Crithagra</i>	<i>gularis</i>
Shelduck	South African	<i>Tadorna</i>	<i>cana</i>
Shoveler	Cape	<i>Spatula</i>	<i>smithii</i>
Sparrow	Cape	<i>Passer</i>	<i>melanurus</i>
Sparrow	House	<i>Passer</i>	<i>domesticus</i>
Sparrow	Southern Grey-headed	<i>Passer</i>	<i>diffusus</i>
Sparrowhawk	Little	<i>Tachyspiza</i>	<i>minulla</i>
Sparrowhawk	Rufous-breasted	<i>Accipiter</i>	<i>rufiventris</i>
Spoonbill	African	<i>Platalea</i>	<i>alba</i>
Spurfowl	Red-necked	<i>Pternistis</i>	<i>afer</i>
Starling	Common	<i>Sturnus</i>	<i>vulgaris</i>
Starling	Pied	<i>Lamprotornis</i>	<i>bicolor</i>
Starling	Red-winged	<i>Onychognathus</i>	<i>morio</i>
Stilt	Black-winged	<i>Himantopus</i>	<i>himantopus</i>
Stonechat	African	<i>Saxicola</i>	<i>torquatus</i>
Sugarbird	Gurney's	<i>Promerops</i>	<i>gurneyi</i>
Sunbird	Greater Double-collared	<i>Cinnyris</i>	<i>afer</i>
Sunbird	Malachite	<i>Nectarinia</i>	<i>famosa</i>
Swallow	Barn	<i>Hirundo</i>	<i>rustica</i>
Swallow	Greater Striped	<i>Cecropis</i>	<i>cucullata</i>
Swallow	White-throated	<i>Hirundo</i>	<i>albigularis</i>
Swift	African Black	<i>Apus</i>	<i>barbatus</i>
Swift	African Palm	<i>Cypsiurus</i>	<i>parvus</i>
Swift	Alpine	<i>Tachymarptis</i>	<i>melba</i>
Swift	Common	<i>Apus</i>	<i>apus</i>
Swift	Little	<i>Apus</i>	<i>affinis</i>
Swift	White-rumped	<i>Apus</i>	<i>caffer</i>
Thick-knee	Water	<i>Burhinus</i>	<i>vermiculatus</i>

Thrush	Cape Rock	<i>Monticola</i>	<i>rupestris</i>
Thrush	Olive	<i>Turdus</i>	<i>olivaceus</i>
Thrush	Sentinel Rock	<i>Monticola</i>	<i>explorator</i>
Vulture	Bearded	<i>Gypaetus</i>	<i>barbatus</i>
Vulture	Cape	<i>Gyps</i>	<i>coprotheres</i>
Vulture	White-backed	<i>Gyps</i>	<i>africanus</i>
Wagtail	Cape	<i>Motacilla</i>	<i>capensis</i>
Wagtail	Mountain	<i>Motacilla</i>	<i>clara</i>
Warbler	African Yellow	<i>Iduna</i>	<i>natalensis</i>
Warbler	Barratt's	<i>Bradypterus</i>	<i>barratti</i>
Warbler	Little Rush	<i>Bradypterus</i>	<i>baboecala</i>
Waxbill	Common	<i>Estrilda</i>	<i>astrild</i>
Weaver	Cape	<i>Ploceus</i>	<i>capensis</i>
Weaver	Southern Masked	<i>Ploceus</i>	<i>velatus</i>
Weaver	Village	<i>Ploceus</i>	<i>cucullatus</i>
Whydah	Pin-tailed	<i>Vidua</i>	<i>macroura</i>
Widowbird	Fan-tailed	<i>Euplectes</i>	<i>axillaris</i>
Widowbird	Long-tailed	<i>Euplectes</i>	<i>progne</i>
Widowbird	Red-collared	<i>Euplectes</i>	<i>ardens</i>
Woodpecker	Ground	<i>Geocolaptes</i>	<i>olivaceus</i>
Wryneck	Red-throated	<i>Jynx</i>	<i>ruficollis</i>

### ANNEXURE B

Surveyor General Diagram of Vulture's Peak Nature Reserve made up of Silver Hill 18113 FS



## ANNEXURE C

### ANNUAL PLAN OF OPERATION

#### Progress and goals set for Vulture's Peak Nature Reserve

Management target	2025 / 2026 Goal	2026 / 2027 Progress	Completion date	Responsibility	Action
<b>LEGAL COMPLIANCE – NATURE RESERVE DECLARATION</b>					
Legal protection of the entire extent of the reserve in terms of the requirements of the NEM: Protected Areas Act.	Vulture's Peak Nature Reserve is legally declared under S23 of the NEM: Protected Areas Act, with a title deed endorsement.		Year 1	Management authority	
<b>LAW ENFORCEMENT</b>					
Ensure boundary appropriately fenced.	Boundary fencing checked and repaired if needed		Year 1	Management authority	
Reduced illegal access incursions and arson fires. Regular patrols covering the full extent of the nature reserve.	Remove snares if found and report illegal hunting with dogs.		Year 1 - ongoing	Management Authority	
<b>BUSINESS DEVELOPMENT</b>					
Explore income-generating activities.	An assessment of income-generating activities.		Year 1 - ongoing	Management authority	
<b>CONSERVATION MANAGEMENT</b>					
Grassland condition score and wetland health scores are maintained or improved.	Livestock grazing managed according to the recommended stocking rate and grazing timing. Livestock numbers and timing monitored weekly.		Annually	Management authority	
All firebreaks in place each year within the legally prescribed timeframes	Coordinate a pre-burn inspection with relevant stakeholders. Firebreaks in place by the end of July 2024		Annually	Management authority	
Annual blocks burnt according to ecological principles, the recommendations of the pre-burn inspection, and fire protection regulations.	Block burns carried out according to the Management Plan		Annually	Management authority	
Systematic invasive plant control activities carried out annually until maintenance levels are attained.	Invasive plant clearing initiated and implemented for priority areas		Annually	Management authority	
Ongoing annual maintenance – surveillance and low-level infestation removals	Nothing until year 6.		Year 6 onwards	Management authority	
All erosion sites identified have been rehabilitated with appropriate interventions.	Identified erosion areas rehabilitated.		Year 1	Management authority	
All relevant erosion sites monitored	Nothing until year 2.		Year 2	Management authority	
Road network altered and redundant roads rehabilitated.	Road network altered and redundant roads rehabilitated.		Year 1	Management authority	

Develop a management plan for the supplementary feeding site	Combine the existing and future plans for the supplementary feeding site		Year 1	Management authority	
Continual road maintenance schedule implemented	Nothing until year 2.		Year 2 - ongoing	Management authority	
All relevant monitoring activities performed	Monitoring report provided for annual management meeting.		Year 1 - ongoing	Management authority	
Veld condition assessment performed	Nothing until year 5.		Year 5	Specialist	
<b>OPERATIONAL MANAGEMENT</b>					
Annual management meeting held and APO drafted.	APO meeting to be held in 2024.		Annual	Management Authority & partners	
Adequate infrastructure and equipment to manage the nature reserve.	Assessment of the infrastructure and equipment needs for the nature reserve.		Year 1 – ongoing	Management authority	
All infrastructure and equipment maintained.	All infrastructure and equipment maintained according to a maintenance schedule.		Year 1 - ongoing	Management authority	

Draft