

Volume 1: <b>INTEGRATED MANAGEMENT PLAN (IMP)</b>		
Volume 2: <b>IMP - Zoning and Tourism Master Plan</b>		
Volume 3: <b>IMP – Phase 1</b>	Volume 4: <b>IMP – Phase 2</b>	<b>Volume 5: IMP – Phase 3</b>

**BARBERTON NATURE RESERVE,**

**PHASE 3**

**INTEGRATED MANAGEMENT PLAN**

**2012 - 2017**



**Barberton Nature Reserve: Phase 3,  
Mpumalanga Province,  
South Africa**

**Integrated Management Plan:  
2012-2017**

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## DEFINITIONS

**Alien Species:**

Means species or genotypes that are not indigenous to the Barberton Nature Reserve, including hybrids and genetically altered organisms.

**Authority:**

Means the management authority for the Barberton Nature Reserve established by Government [in the process of promulgation] as defined and required by the National Environmental Management: Protected Areas Act (NEMPAA).

**Biodiversity / Biological Diversity:**

Means the variability among living organisms from all sources including, terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they are part and also includes diversity within species, between species, and of ecosystems (as per the National Environmental Management: Biodiversity Act, No. 10 of 2004).

**Bioprospecting:**

In relation to indigenous biological resources, means any research on, or development or application of, indigenous biological resources for commercial or industrial exploitation, and includes –

The systematic search, collection or gathering of such resources or making extractions from such resources for purposes of such research, development or application (as per the National Environmental Management: Biodiversity Act, No. 10 of 2004).

**Board:**

Means the Mpumalanga Tourism and Parks Agency Board as defined by the Mpumalanga Mpumalanga Tourism and Parks Agency Act (Act No. 20 of 2005).

**Buffer Zone:**

Means an area surrounding the Reserve which has restrictions placed on its use or where collaborative projects and programmes are undertaken to afford additional protection to the Reserve. Listing Notice #3 (GN 546) of the Environmental Impact Assessment Regulation of 2010 (GN 543) defines a buffer area extending 10km from the proclaimed boundary of a World Heritage Site or National Park and 5km from the proclaimed boundary of a Nature Reserve, respectively, or that defined as such for a biosphere.

**Co-management:**

Means managing in such a way as to take into account the needs and desires of stakeholders, neighbours and partners, and incorporating these into decision making through, amongst others, the promulgation of a local board.

**Convention:**

Means the Convention concerning the Protection of the World Cultural and Natural Heritage, adopted by the General Conference of United Nations Education, Scientific and Cultural Organisation (UNESCO) on 16 November 1972 and ratified by the Republic of South Africa on 10 July 1997 (as per World Heritage Convention Act, No. 49 of 1999).

**Cultural Heritage:**

As defined in Article 1 of the World Heritage Convention Act, 49 of 1999: Cultural heritage is considered as “monuments, architectural works, works of monumental sculpture and painting, elements or structures of an archaeological nature, inscriptions, cave dwellings and combinations of features, which are of outstanding universal value from the point of view of history, art or science, groups of buildings, groups of separate or connected buildings which, because of their architecture, their homogeneity or their place in the landscape, are of outstanding universal value from the point of view of history, art or science, sites, works of man or the combined works of nature and man, and areas including archaeological sites which are of outstanding universal value from the historical, aesthetic, ethnological or anthropological point of view.” For the purpose of this IMP features of living heritage such as mountains, pools, rivers, boulders, etc. as well as palaeontological features is also included under this definition.(Ref: Frans Prins of MDTP; 26/10/04).

**Ecotourism:**

Means the travel to natural areas to learn about the way of life and cultural history of people, the natural history of the environment, while taking care not to change the environment and contributing to the economic welfare of the local people (*MDTP - adapted from a definition of ecotourism by Hecto Ceballos Lascurain*).

**Ecosystem:**

Means a dynamic complex of animal, plant and micro-organism communities and their non-living environment interacting as a functional unit (as per National Environmental Management: Protected Areas Act, No. 57 of 2003).

**Ecosystem Services:**

As defined in Section 1 of the National Environmental Management: Protected Areas Act No. 57 of 2003 as

“environmental goods and services” meaning:

- (a) benefits obtained from ecosystems such as food, fuel and fibre and genetic resources;
- (b) benefits from the regulation of ecosystem processes such as climate regulation, disease and flood control and detoxification; and
- (c) cultural non-material benefits obtained from ecosystems such as benefits of a spiritual, recreational, aesthetic, inspirational, educational, community and symbolic nature;”

For the purposes of this IMP, sustainable water production is also specifically included under this definition.

**Heritage-based Resources:**

Means natural and / or cultural resources.

**Interested Parties:** (See stakeholders )

**Local Community:**

Means any community of people living or having rights or interests in a distinct geographical area (as per the National Environmental Management: Protected Areas Act, No. 57 of 2003).

**Songimvelo-Malolotja Transfrontier Conservation Area:**

Means the collaborative initiative between South Africa and the Kingdom of Swaziland to protect the exceptional biodiversity of the area through conservation, sustainable resource use, and land-use and development planning.



**Management:**

In relation to a protected area, includes control, protection, conservation, maintenance and rehabilitation of the protected area with due regard to the use and extraction of biological resources, community based practices and benefit sharing activities in the area in a manner consistent with the Biodiversity Act (as per the National Environmental Management: Protected Areas Act, No. 57 of 2003).

**Management Unit:**

Means the specific geographic area/sector of the reserve for which a manager has been appointed that is responsible for conservation management in that area/sector – normally each management unit will be provided with its own budget and associated management infrastructure. The boundaries of these areas do not necessarily follow original protected area boundaries.

**Minister:**

Means the National Minister of the Department of Environmental Affairs.

**Nature Conservation:**

Means the conservation of naturally occurring ecological systems, the sustainable utilization of indigenous plants and animals therein, and the promotion and maintenance of biological diversity.

**Natural Heritage:**

As defined in Article 2 of the World Heritage Convention Act, 49 of 1999: “natural heritage” is considered as consisting of physical and biological formations or groups of such formations, which are of outstanding universal value from the aesthetic or scientific point of view, geological and physiographical formations and precisely delineated areas which constitute the habitat of threatened species of animals and plants of outstanding universal value from the point of view of science or conservation, natural sites or precisely delineated natural areas of outstanding universal value from the point of view of science, conservation or natural beauty.

**Partnership/s:**

Means a co-operative and/or collaborative arrangement/s, between Reserve management /MTPA and a third party that supports the achievement of Reserve objectives.

**Protected Area:**

Means any of the protected areas referred to in section 9 of the National Environmental Management: Protected Areas Act No. 57 of 2003.

**Ramsar<sup>1</sup>:**

Means: “The Convention on Wetlands of International Importance, signed in Ramsar, Iran, in 1971, is an intergovernmental treaty, which provides the framework for national action and international cooperation for the conservation and wise use of wetlands and their resources.” (There are presently 141 Contracting Parties to the Convention, with 1387 wetland sites, totaling 122.7 million hectares, designated for inclusion in the Ramsar List of Wetlands of International Importance. Over the years, however, the Convention has broadened its scope to cover all aspects of wetland conservation and wise use, recognizing wetlands as ecosystems that are extremely important for biodiversity conservation in general and for the well-being of human communities.)

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<sup>1</sup> <http://www.ramsar.org>

**Stakeholders / Interested Parties<sup>2</sup>:**

These are interested individuals or groups concerned with or affected by an activity and its consequences. These include the authorities, local communities, investors, work force, consumers, environmental interest groups and the general public. According to the National Environmental Management: Biodiversity Act, No. 10 of 2004, “stakeholder” means 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).

**Sustainable:**

In relation to the use of a biological resource, means the use of such resource in a way and at a rate that would not lead to its long-term decline; would not disrupt the ecological integrity of the ecosystem in which it occurs; and would ensure its continued use to meet the needs and aspirations of present and future generations of people (as per National Environmental Management: Biodiversity Act, No. 10 of 2004).

**Wilderness Area:**

Means “an area designated .....for the purpose of retaining an intrinsically wild appearance and character, or capable of being restored to such and which is undeveloped and roadless, without permanent improvements or human habitation” as defined by the National Environmental Management: Protected Areas Act No. 57 of 2003.

**World Heritage Site:**

Means a world heritage site as defined in the World Heritage Convention Act, No. 49 of 1999 under Chapter 1, section 1 subsection (xxiv).

## ABBREVIATIONS

BEEP	Biodiversity Environmental Education Programme
BMML WHS	Barberton Makhonjwa Mountain Land World Heritage Site
BNR	Barberton Nature Reserve
BP	Business Plan
CDP	Concept Development Plan
DEA	National Department of Environmental Affairs
DoT	National Department of Tourism
DWA	National Department of Water Affairs
GIS	Geographical Information Systems
IDP	Integrated Development Plan
IMP	Integrated Management Plan

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<sup>2</sup> Defined in Guideline Document EIA Regulations, DEAT, April 1998



IUCN	World Conservation Union (as commonly referenced)
SMTFCA	Songimvelo-Malolotja TFCA
MOU	Memorandum of Understanding
RPC	Reserve Planning Committee
RSA	Republic of South Africa
SAHRA	South African Heritage Resources Agency
SMP	Strategic Management Plan
UNESCO	United Nations Educational, Scientific and Cultural Organisation

### **ABBREVIATIONS USED FOR STATUTES (ACTS)**

CARA	Conservation of Agricultural Resources Act, No. 43 of 1983
NEMBA	National Environmental Management: Biodiversity Act, No. 10 of 2004
NEMPAA	National Environmental Management: Protected Areas Act, No. 57 of 2003
PFMA	Public Finance Management Act, No. 1 of 1999
NHRA	National Heritage Resources Act, No. 25 of 1999
WHCA	World Heritage Convention Act, No. 49 of 1999

### **LIST OF APPENDICES**

<b>Appendix 1:</b>	Barberton Nature Reserve Phase 3: Discrepancy between fencelines and proclaimed Protected Area
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## **1 VISION, MISSION, MANAGEMENT OBJECTIVES AND CONSERVATION TARGETS**

### **1.1 INTRODUCTION**

Situated to the east of the town of Barberton lies an extent of land measuring approximately 18 000 ha (Barberton Nature Reserve Phase 3 – also referred to as Mountainlands Nature Reserve). Historically, Barberton was established as a gold mining town and to this day several active gold mines are found in the surrounding areas. The area includes the famous Sheba mine, reputed to be the richest gold mine per unit ore in South Africa along with the Fairview, Barbrook and Makhonjwa mine. The surface use of the land has remained relatively unaltered through the years and was earmarked for conservation as early as 1982.

The reserve is situated in an area of great landscape beauty with very high plant species diversity. These factors contribute to its conservation importance.

The Mpumalanga Tourism and Parks Agency (MTPA) has been appointed as custodian of the approximate 12 000 ha of State land in this area. Through co-operative management agreements with surrounding private and communal land owners, the fragmented portions of state land have been consolidated into a single ecologically and economically viable entity.

The MTPA has identified the greater Barberton area as having great potential as a tourism growth area. Several private sector initiatives have recently been launched in developing surrounding properties for ecotourism. The reserve therefore forms an important link between Nelspruit and the whole ecotourism development south of the Barberton Mountainlands which has been identified as a provincial priority area. It therefore has a high tourism potential especially with respect to special interest tours, bird watching, game viewing and adventure activities.

In terms of the most appropriate land use, it is quite clear that conservation of the rich biodiversity and different landscapes through ecologically sustainable economic activity, is the most viable and sustainable option. The key elements of the mission are thus conservation and sustainable utilisation (including eco-tourism and education).

### **1.2 VISION**

The management team of Phase3 of the Barberton Nature Reserve acknowledges its vision as being the following:

*‘To Ensure financially sustainable conservation of the reserve through co-operation for the benefit of Founding Members, stakeholders and the public at large’*

### **1.3 PHASE 3: SPECIFIC MANAGEMENT OBJECTIVES**

The specific management objectives of Phase 3 of the Barberton Nature Reserve have been identified as follows:

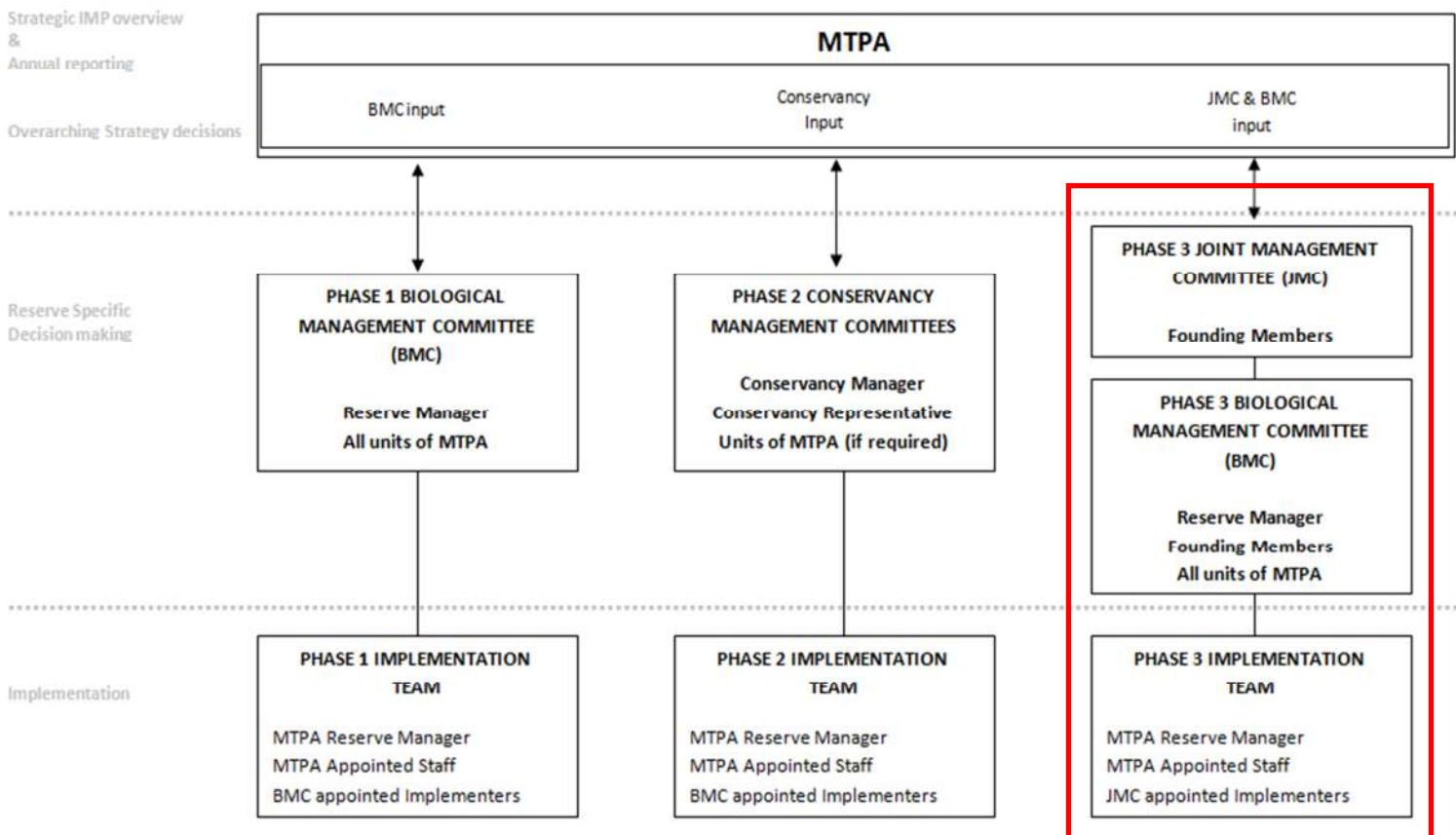
1. To create a single, viable nature reserve with an associated wildlife;
  - i. To manage the dynamic vegetation structure, compositional and plant species diversity, and the ecological processes involved.
  - ii. To ensure the survival and increased viability of threatened plant populations.
  - iii. To manage viable populations of threatened animals and/or priority game species.

2. To conserve its rich biodiversity and maintain (or where required restore) ecological functions and processes;
  - i. To manage populations of game species suited to the available habitat and according to broad historical distribution in such a way that there is no conflict with higher priority objectives.
  - ii. To ensure the continued yield of high-quality water, including natural and artificial aquatic systems, through proper catchment management.
3. To strive towards financial independence of the project through income generation that is based on certain common assets;
4. To benefit Founding Members and stakeholders through responsible and sustainable resource utilization and development.
5. To manage and preserve sites of archaeological, cultural, geological and historical significance.
6. In the interim, pending resettlement outside the reserve, to manage human settlement, domestic animals and agricultural cultivation in such a way that conflict with higher priority objectives is minimised.
7. To develop positive relations with local communities through effective participation in matters of mutual interest and in so doing contribute to the sustainability of the protected area.
8. To develop and implement environmental awareness and interpretation programs.

#### 1.4 INSTITUTIONAL ARRANGEMENTS

Also see Section 2 of the Overarching IMP document.

Integrated Management Plan Implementation Structure (Phase 3 structures highlighted)





In terms of a Memorandum of Understanding signed in June 2004 between the founding members of Phase 3, the founding members have formed an interim joint management committee to oversee the implementation of the IMP and management of the reserve.

While defining the relationship between the founding members, the MoU stipulates that a Integrated Management Plan (this IMP.) will be compiled to guide the development of detailed agreement . This detailed agreement defines responsibilities and commitments of each participant. It will also spell out all issues related to land ownership, Asset ownership (including wildlife), management and maintenance of joint assets to ensure compliance with all relevant legislative and best practice guidelines (including this IMP).

The detailed agreement must address the funding model and benefit flows to be adopted by the founding members. While it is proposed that the MTPA reserve manager and staff will be responsible for the implementation of much of this IMP, contributions and funding are expected to be derived from all founding members.

**Action Project 1.4 (1):** Founding members to develop and ratify the detailed agreement for the reserve.

A final Joint management Committee must be established to oversee the implementation of the Integrated Management Plan in Phase 3 of the reserve.

**Action Project 1.4 (2):** Establish a final Joint Management Committee for phase 3 of the reserve.

Given the unique attributes, ownership model and fragmented nature of the BNR the Joint Management Committee in consultation with MTPA may reconsider the future institutional model for Phase 3.

**Action Project 1.4 (3):** Joint Management Committee to reconsider institutional model options, including merits and demerits of potentially separating Phase 3 from the rest of BNR and proclamation as a separate Nature Reserve, and management as a distinct management unit.

### **1.5 *DEFINING RESERVE BOUNDARIES, DISCREPANCY BETWEEN FENCELINES AND PROCLAIMED PROTECTED AREA***

The proclamation of the Protected Area is defined along cadastral boundaries, whereas the fence has been aligned for practical purposes, largely due to mountainous terrain and to take cognizance of current and historical land uses that may be incompatible with the wildlife component inside the fence. The current alignment of the fence thus does not follow the actual proclaimed Protected Area and while this is common practice and acceptable in terms of NEMPA it requires management attention.

A document capturing these discrepancies and the agreements that are in place has been compiled. This document is attached as ***Appendix 1 – BNR Phase3: Discrepancy between fencelines and proclaimed Protected Area***

**Action Project 1.5 (1):** Actively manage portions of the proclaimed area excluded from the game fence, according to the recommendations of the report on fenceline discrepancies.

**Action Project 1.5 (2):** Annually review fenceline positioning and update the report on fenceline discrepancies accordingly.

## 2 BACKGROUND

### 2.1 HISTORY OF UTILISATION

Rock paintings in the mountains and the caves of the area provide evidence to the earlier existence of the San group. These paintings include familiar features of the San rock art paintings, which are prevalent in South African rock art.

These paintings are representative of the lives of the San hunters and gatherers, who inhabited the area before the arrival of the Nguni people from the north of the Mpumalanga province. As part of their survival, the San mined Red Ochre in an area known as Dumaneni. Apart from the existence of the San people, archaeologists have also found stone terraced walls, religious icons and gravesites that date back over a thousand years. Stone artefacts have also been found in the area dating back 30 000 years.

Early (approximately 1 million to 200 000 years ago), Middle (125 000 to 75 000 years) and Late Stone Age (between 30 000 and 40 000 years ago until about 20 000 years ago) implements have been found in dongas on the reserve

Scattered throughout the rock formations of Mountainlands are deposits of reef and alluvial gold, and also iron, talc, asbestos and nickel. Not only did the rich gold reefs attract attention in the 1880's, but the early evidence of historic civilizations mining for minerals was described in writings by the Europeans.

Gold fever was set off during a hunting trip in the Valley of the Kaap – instead of elephant they found gold. Within days, hundreds of other diggers heard the news of what was known either as Barber's Reef or the Inkenkisa Reef, from the African name, *Nkhenkesa* or The Gap, for the ravine in which it was found. Some ten thousand diggers descended on the Kaap Valley. They came from far and wide: the Klondike in Alaska, Cornwall, Ireland, Scotland, California, Russia and from all corners of South Africa.

The discovery of the Sheba Reef north east of Barberton and bordering Mountainlands was destined to become the most famous gold mine in the world. It was sensational in its richness and became at once the greatest blessing and curse of Barberton. It turned a gold frenzy into utter mania. Yields of twenty ounces to the ton were quite common and by 1898 this wonder mine had returned 519, 565 ounces of gold, valued then at over £2, 000, 000.

In the center of the numerous companies on Sheba Hill, an ex-Durban butcher named J. Sherwood established a butchery and hotel in December 1885. His establishment became the nucleus of what became Eureka City, which is today nearly in the centre of the Mountainlands Game Reserve.

Only a few walls of this once flourishing mining town remains in Mountainlands. It was a town, which, at the height of the boom in 1886, held a roaring population of about 650 diggers. It had three stores, three hotels, a dozen canteens, a chemist's shop, a baker, a racetrack and a music hall.



## 2.2 GEOLOGY

The geology of the area is extremely complex and of great interest. The Barberton Mountainland represents a typical early Precambrian greenstone belt with some exposures dating back more than 3 billion years. Numerous studies have been conducted in this area and the area is visited annually by geologists from across the globe.

About 4 600 million years ago the Earth was born and this formative phase of the planet is called the Hadeon Eon. The embryonic Earth was a hot place during which time the inner and outer core, mantle and crusts took shape. The Archaean Eon followed the Hadeon Eon and this is where Mountainlands fits into the picture due to the Barberton Greenstone Belt - a geological formation that is world famous for its staggering 3 500 million years of earth's natural history and evolution. And about 3 300 million years ago the first opportunity presented itself for living organisms to evolve and the evidence can be found in Mountainlands. There is no other place on Earth where scientists can go to recover information about this important formative period of Earth's history.

For example the hottest volcanic rocks ever to have erupted on the face of the planet, named Komatiites after the Komati River. Mountainlands occur in the center of this important geological formation. The age of the rocks exposed here covers a natural history spanning over 320 million years.

It is therefore not surprising that the area is recognized in the world of earth science as a unique living laboratory, as the sequences in the Barberton Greenstone Belt record the picture of the birth of the early oceans, the first atmosphere, the first life to appear on the planet and evidence of the formation of the first continent. The Barberton Greenstone Belt is also the only place on Earth where the ancient ocean floor can be studied revealing a unique 7-kilometre record of sedimentary rocks showing evidence of the sea and ancient beaches, rivers and sand dunes in Mountainlands. It also shows four layers of impact-produced debris from ancient giant meteorites that struck the Earth. Each of the meteorite impacts evident in this region was larger than the meteorite that struck earth 65 million years ago killing the dinosaurs and it is estimated that one of the impactors was approximately 30 km in diameter.

The Barberton Greenstone Belt has been sub-divided into three major rock sequence units: Onverwacht, Fig Tree and Moodies Group all belonging to the Swaziland Supergroup.

BARBERTON SUPERGROUP	GROUP	FORMATION
	MOODIES	BAVIAANSKOP JOE'S LUCK CLUTHA
	FIG TREE	SCHOONGEZICHT BELVUE ROAD SHEBA
	ONVERWACHT	ZWARTKOPPIE KROMBERG HOOGGENOEG KOMATI THEESPRUIT SANDSPRUIT

**Diagram showing the rock units or layers of the Barberton Supergroup.  
Produced by RM Frandsen and SC MacRae.**

**Action Project 2.2 [1]:** Consolidate and Maintain a database of geology and geological sites

### 2.3 PHYSIOGRAPHY

The Barberton Mountainlands Reserve is located in the Mpumalanga Province of South Africa at latitude 25°40' and longitude 30° 57'. The reserve stretches from the town Barberton and Fairview mine in the west to the town Louisville and Barbrook mine in the East. Sheba mine is more or less centrally situated on the northern border of the reserve. The reserve also lies predominantly to the south of the R 38 Barbeton to KaapMuiden road.

### 2.4 TOPOGRAPHY

(See Document 2 – BNR Integrated Zoning and Tourism Master Plan - Map 7)

The terrain varies between low-lying bushveld, high mountains, scenic valleys and rolling grasslands. The majority of vegetation belongs to the Sour Lowveld Bushveld of the Savannah Biome. This is mostly tree savannah, with dense riverine fringes along drainage lines and open grassy areas on the ridges and valleys. This vegetation merges into the North Eastern Mountain Grassland of the Grassland Biome at higher elevations.

Generally, the broken landscape makes the reserve aesthetically most attractive. Of particular interest are the spectacular deeply-incised Wonderscheur gorge.

Because of its size and ruggedness, this landscape has great value as one of the wild, open spaces of the Province. Open spaces like these are fast disappearing under agricultural, forestry and urban expansion.

### 2.5 HYDROLOGY

There are numerous perennial streams that have carved deep ravines with high cliffs and breathtaking waterfalls and pools. All of the streams originate on the reserve, which forms a pollution free and protected catchment area with an abundance of water

With exception of a very small area along the southern perimeter, all catchments drain northwards to the Suidkaap River.

The main streams within the reserve are:

- Hyslops Creek
- Figtree Creek
- Honeybird Creek

## **2.6 PEDOLOGY**

(See Document 2 – BNR Integrated Zoning and Tourism Master Plan - Map 6).

No detailed soil studies have been conducted for the whole of Phase 3. Soils have been mapped at a course scale using available data.

Phase 3 is dominated by Soil patterns characterised by shallow depth, on hard wearing rock. Pattern LP2 occurs primarily at lower elevations and along the northern perimeter of the reserve. Lime is a characteristic feature of this soil pattern. Higher lying areas, with drainage to the north are typical of soil pattern LP 1 – again shallow on hard wearing rock, but usually without the presence of lime.

Soil Pattern NT is found in a band along the Suidkaap and Kaap Rivers. This soil pattern is characterised by well drained, dark reddish soils with nutty structure. In addition vertic and melanic soils may be present.

Along the southern perimeter and particularly around the Makhonjwa mine area the soil pattern is characterised by red to yellow soils with a low to medium base status (AC).

<b>Action Project 2.6 (1):</b> Update soils map as better scale data is made available.
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## **2.7 ARCHAEOLOGY**

Artifacts collected from open donga sites revealed that material of all ages was mixed on the surface. Where artifacts were found in situ Earlier Stone Age (approximately 1 million to 200 000 years ago) implements were exposed at various depths in the deep dongas, Middle Stone Age (125 000 to 75 000 years) material occurred in the ferricrete overlying the subsoil, and Later Stone Age (between 30 000 and 40 000 years ago until about 20 000 years ago) artifacts were exposed by surface erosion.

The Stone Age is so-called because people in earlier times used stone implements, which they fabricated themselves. Wood, bone and rope were also used but because these were organic materials they disintegrated and vanished in most cases. Stone implements are therefore the characteristic remains of these early inhabitants.

During the Early Stone Age period the implements were in general large. Middle Stone Age smaller and more specialized and tools from the Later Stone Age period even smaller and mounted on wood or bone. A variety of potsherds, which vary considerably in type, composition, colour, thickness, texture, finish, burnishing and decoration, occur widespread on old living sites and in protected shelters in the area.

The rock art in some parts of southern Africa such as the Drakensberg, Cederberg and Limpopo-Shashe Confluence area has been intensively studied, but the Mountainlands not. This was in part due to its inaccessibility. Van Riet Lowe's (1952) catalogue of rock art sites in South Africa lists only ten in the Barberton and Nelspruit Districts. More rock paintings have been documented since then.

These occur on many sites where suitable protected surfaces could be found on granite boulders over the whole area from the Komati Valley, Legogote and in the Kruger National Park.

Paintings are both monochrome and biochrome and in different styles. The colours vary from very dark maroon through different shades of red to brown, yellow and white. In Barberton on a hillside close to the Havelock cableway, rock paintings in dark red and yellow ochre can be found. The number of located sites and the continuous discovery of new ones show that this part of southern Africa deserves to be as well-known as the more intensively studied regions. There is also proof that the Barberton mineral riches have been worked during the Iron Age (from 2000 years ago) before Europeans came looking for their fortune in this area. Small prehistoric iron mines, smelting sites and slag are found in many places. This indicates that iron was exploited on a large scale. Unfortunately the gold miners of the turn of the century were not impressed with such antiquities and destroyed most of the definitive proof of their predecessors' identity through their own mining operations.

Terraces and kraal like structures can be found in the mountains and research by Dr. Cyril Hromnik has it that the Dravidian merchant caste of southern India mined gold here 2000 years ago, resulting in these stone structures, celestial calendars as well as temples. Since 1984 interest in the early history of the Barberton goldfields has been revived by Dr. Hromnik's controversial research and his discovery in this area, of what he claims to be ancient megalithic Dravidian religious structures. Hromnik is of the opinion that an area known as Komati-land was the trading zone of the Dravidians and that their presence in fact predates the appearance of the first Bantu in this part of Africa by centuries. Evidence of dwellings estimated to be some 500 years old are interpreted to be part of a culture that traded gold with eastern (Arabic and Indian) communities in the past. At least one such complete Iron Age "village" is found on Mountainlands as well as various other sites still to be verified.

<b>Action Project 2.7 (1):</b> Identify and record sites of archaeological importance
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## **2.8 CLIMATE**

The climate is frost-free and sub-tropical, with a peak rainfall in summer, starting in October and ending in April. The average long term rainfall is 756mm p.a., ranging from 700mm in the lower-lying areas to 1000mm on the plateau. Temperature ranges between 2°C and 43°C, with an average of 22°C. Mean minimum and maximum monthly temperatures are 16°C in July and 24°C in January.

## **2.9 WEATHER DATA RECORDINGS**

Weather records are obtained from surrounding forestry stations (Highlands, SATIC) and mines (Sheba, Lily, Makhonjwa). It is important to be able to obtain measurements from different altitudes and locations. A full weather monitoring station is in operation at the Mountainlands Estate Visitor Centre.

The size of the reserve, steep topography and the vast range of elevation results in very different weather patterns in different locations.

Temperatures are also influenced by topography of the area, but winters are frost-free.

**Action Project 2.9 (1):** obtain and maintain weather records from locations at varying altitudes

## **2.10 FLORA**

The diverse landscape and rugged terrain together with wide altitude range contribute towards a high plant diversity.

### **2.10.1 Vegetation types/veldtypes**

There are 3 vegetation types that are predominant in Phase 3:

The vegetation SVI 12 (Kaalrug Mountain Bushveld) of the Savanna Biome according to the classification of Mucina and Rutherford (2006), Characterised by mountain slopes and hills. Altitude 350-950m. Predominantly the northern portions of the reserve.

The vegetation type Gm17 (Barberton Montane Grassland) of the Grassland Biome according to the classification of Mucina and Rutherford (2006), Characterised by high lying grasslands ranging from 760 – 1640m. Predominantly the southern portions of the reserve.

The vegetation type SVI 3 (Granite Lowveld) of the Savanna Biome according to the classification of Mucina and Rutherford (2006), Occuring in a belt along the Suidkaap and Kaap River. Altitude 400-500m.

Two small but important vegetation types of the Forest Biome are also represented in Phase 3:

Northern Mistbelt Forest FOz 4 according to the classification of Mucina and Rutherford (2006), 3 small patches found on cooler south facing slopes in the southern part of the reserve. Characterised by high altitude (1050 – 1650m).

Scarp Forest FOz 5 according to the classification of Mucina and Rutherford (2006), Found along the valley passing through Wonderscheur. Normally limited to altitudes below 600m, this patch extends from 810m -1220m.

**Action Project 2.10.1 (1):** Update floral distribution map and GIS database as better scale data is made available.

### **2.10.2 Plant communities**

The plant communities have not been identified, but are expected to be similar to those indicated by Mucina and Rutherford (2006) according to vegetation type.

#### **SVI 12**

Open to dense, short mountain savannah or thickets, with a more dense grassy layer at higher altitudes. Often steep or very broken mountain slopes.

Endemic taxa:

*Euphorbia complexa*, *Ledebouria cremnophila*

### SVI 3

Tall shrubland with few trees to moderately dense low woodland on the deep sandy uplands with *Terminalia sericea*, *Combretum zeyheri* and *C. apiculatum* and ground layer including *Pogonarthria squarrosa*, *Tricholaena monachne* and *Eragrostis rigidior*. Dense thicket to open savanna in the bottomlands with *Acacia nigrescens*, *Dichrostachys cinerea*, *Grewia bicolor* in the woody layer.

The dense herbaceous layer contains the dominant *Digitaria eriantha*, *Panicum maximum* and *Aristida congesta* on fine—textured soils, while brackish bottomlands support *Sporobolus nitens*, *Urochloa mosambicensis* and *Chloris virgata*. At seep lines, where convex topography changes to concave, a dense fringe of *Terminalia sericea* occurs, with *Eragrostis gummiflua* in the undergrowth.

### GM 17

The dominant vegetation is short rocky grassland and gradually becomes woodland along the lower slopes.

Biogeographically important taxa are:

Endemic Succulent Shrubs – *Hemizygia modesta*, *H. thornicroftii*, *Selago stewartii*

Endemic taxa:

*Encephalartos heenanii*, *Protea caffra* subsp. *falcata*, *P. roupelliae* subsp. *hamiltonii*. Tall Shrub: *Tinnoa barbata*. Herbs: *Euryops discoideus*, *Helichrysum calocephalum*, *Hemizygia stalmansii*, *Holothrix culveri*, *Streptocarpus pogonites*, *Thornicroftia thornicroftii*. Geophytic Herb: *Disa intermedia*. Succulent Herb: *Aloe albida*.

### FOz 4

Tall, evergreen afrotemperate mistbelt forests occurring primarily in east-facing fire refugia such as subridge scarps and moist sheltered kloofs where they form small, fragmented patches. The most common canopy trees include *Xymalos monospora*, *Podocarpus latifolius*, *Combretum kraussii*, *Cryptocarya transvaalensis*, *Schefflera umbellifera*, *Syzygium gerrardii*, *Olea capensis* subsp. *macrocarpa*, *Psydrax obovata* subsp. *elliptica*, *Pterocelastrus galpinii*. In the understory *Psychotria zombamontana*, *Canthium kuntzeanum*, *Gymnosporia harveyana*, *Peddiea africana*, *Pavetta inandensis*, *Mackaya bella*, *Sclerochiton harveyanus* etc. are found. The herb layer supports a number of dominant *Acanthaceae* (*isoglossa*), *Lamiaceae* (*Plectranthus*, *Stachys*) and *Rubiaceae* (*Galopina*) herbs and so called 'soft shrubs', geophytic herbs and ferns (*Asplenium*, *Dryopteris*, *Polystichum*). Of lianas and climbers *Dalbergia armata*, *Combretum edwardsii*, *Jasminum abyssinicum*, *Rhoicissus rhomboidea* and *Keetia gueinzii* are the most conspicuous vines, as is the scandent grass *Prosphytochloa prehensilis*.

Endemic taxa;

*Duvernoia adhatodoides*

### FOz 5.

Vegetation & Landscape Features Tall (15-25 m), species-rich and structurally diverse, multilayered forests, with well developed canopy and understory tree layers, but a poorly developed herb layer. Buttressed stems are common in the Scarp Forest. The most conspicuous

trees are *Buxus macovvanii*, *B. natalensis*, *Drypetes gerrardii*, *Englerophytum natalense*, *Harpephyllum caffrum*, *Heywoodia lucens*, *Memecylon natalense*, *Millettia grandis*, *Oricia bachmannii*, *Philenoptera sutherlandii*, *Rinorea angustifolia*, *Rothmannia globosa* and *Umtiza listeriana*.

### 2.10.3 Plant species list

The red data plant list for Phase 3 currently contains 31 taxa in 21 different families. Many of these are endemic to the area. Known locations of red data species are kept in a GIS database and are used to determine sensitivity overlays.

**Action Project 2.10.3 (1):** Regularly update floral species list, rare and threatened species and plant communities.

**Action Project 2.10.3 (2):** Update GIS to reflect localities of rare and vulnerable flora.

### 2.11 FAUNA

**Action Project 2.10.3 (3):** Regularly update faunal inventory lists as data becomes available.

#### 2.11.1 Mammal list

The total mammal list currently comprises 16 species. All threatened species lists will be updated when the new Red Data Lists become available.

#### 2.11.2 Game

The table below indicates the current estimates of game numbers in the reserve. In addition to naturally occurring game there have been a number of introductions including Blue Wildebeest, Impala, Eland, Red Hartebeest, Waterbuck, Warthog, Kudu and Zebra.

Five White Rhino have been donated to the reserve from Kruger National Park, however these animals have not yet been introduced due to security concerns over security and population size/viability.

Table – Projected game numbers for BMLNR

SPECIES	EST	EST	INTRO	EST	TOTAL	COUNT	INTRO	EST	PROJ	PROJ
Feeding spectrum	2006	2007	2008	2008	INTRO	2009	2010	OCT'10	APR11	LAU APR11
<b>BULK FEEDERS</b>										
Zebra	156	169	40	223	183	162		260	280	216
Bushpig	4	4		4		0		4		
Waterbuck	31	34		37	27	7		43	46	26
Cattle	360	360		370		230		300	336	336
<b>SELECTIVE:</b>										
<b>TALL GRASS</b>										
Red Hartebeest	73	84		96	55	29		127	146	54
Mtn.	47	55		64		72		88		



Reedbuck									103	13
Common Reedb.	2	3		3		0		0	3	
<b>SELECTIVE:</b>										
<b>SHORT GRASS</b>										
Black wildebeest	5	5		8		0				
Blue wildebeest	194	229		271	148	118	24	401	473	238
Impala	145	166	55	246	166	25	63	389	447	83
Eland			22	22	22	23		28	31	37
Warthog			8	8	8	0		10	11	2
Goat	135	135		150		126		213	239	46
<b>BROWZERS</b>										
Grey duiker						12		14	16	1
Red duiker						1		1	1	1
Kudu	66	79	22		68	15		168	202	106
Klipspringer	10	11				7		8	8	1
Bushbuck	7	9				10		12	14	2

### 2.11.3 Predators and Scavengers

List of threatened species: needs to be updated.

In addition carnivores such as leopard, brown hyena, caracal, civet, genet, serval and jackal occur. No major supplementary introductions are needed.

### 2.11.4 Red Data/priority game species

The objective for this category is to manage viable populations of threatened animals and/or priority game species.

### 2.11.5 Small mammals

A study of bat fauna was conducted in 2004. The mine addits provide good habitat for a number of bat species.

No other surveys have been conducted as yet.

No introduction of species to the reserve, except those that occurred historically and if the species required habitat is available. Genetics should be taken into consideration.

### 2.11.6 Birds/Avifauna

The Barberton Bird Club is conducting an ongoing survey of the reserve. More than 300 bird species have been recorded on the reserve.

Special sightings to be recorded in patrol reports. Nest sites of rare species must be plotted.

#### **2.11.7 Reptiles**

A checklist of reptiles in the Barberton area has been compiled by the MTPA, however no detailed surveys have been conducted to determine the status of these in the reserve.

#### **2.11.8 Amphibians**

A checklist of reptiles in the Barberton area has been compiled by the MTPA, however no detailed surveys have been conducted to determine the status of these in the reserve.

#### **2.11.9 Fish and other Aquatic fauna**

No detailed surveys have yet been carried out to determine the status of these in the reserve.

#### **2.11.10 Invertebrates**

The Lepidopterists Society has conducted numerous visits to Mountainlands Nature Reserve and has compiled a list of species from observation. This includes the endemic species *Aloeides barbara* and other Red Data species including *Lepidochrysops jefferyi* and *L. swanepoeli*.

### **3 POLICY FRAMEWORK & GUIDING PRINCIPLES: RESOURCE MANAGEMENT**

Since this phase of BNR is a true community-private-public partnership reserve all policies and guiding principles relating to resource management need to take account of the fact that ownership is spread between the founding members. This implies that the founding members have both rights and responsibilities and need to be consulted on all policy.

While existing policies and the legislative framework contained in this IMP will guide in the definition of roles and responsibilities during the development of further agreements, it must be ensured that all policies are adapted to reflect resource ownership rights and responsibilities.

**Action Project 3 (1):** Ensure that all policies are aligned with the principles of ownership rights and responsibilities.

#### **3.1 FINANCIAL & HUMAN RESOURCES**

##### **3.1.1 Management of Financial Resources**

*Also see Section 7.1.1 of the Overarching IMP document.*

All financial management activities and decisions being made in Phase 3 of the BNR, in respect of public finance, need to comply with the Public Finance Management Act (Act 1 of 1999) [PFMA]. This is of particular relevance to activities of the MTPA and to any other party utilizing public funding. A 5 Year Strategic Management Plan and Business Plan will govern the financial management issues in the BNR.

The Joint Management Committee of Phase 3 must ensure that all financial decisions and spending are done in alignment with the above mentioned policies. Financial Performance of Phase 3 will be measured on an annual basis in terms of the Key Performance Areas as determined in the 5 Year Strategic Management Plan.

A biodiversity resource inventory of Phase 3 should be developed and maintained. This inventory will be used by the Biological Management Committee of the BNR to determine the ecological value of the reserve and its contribution to the local and regional economy.

**Action Project 3.1.1 (1):**Ensure compliance with the Public Finance Management Act.

**Action Project 3.1.1 (2):**Develop and maintain a Biodiversity Inventory for use in determining the contribution of Phase 3 to the ecological value and economy of the area and region.

**Action Project 3.1.1 (3):**Integrate 5 Year Strategic Plan, Business Plan and requirements of the Public Finance Management Act in financial decision making, procurement procedures and spending policies specifically relating to Phase 3 of the BNR.

**Action Project 3.1.1 (4):**Depending on institutional model used,provide all financial management information to MTPA on an annual basis for Annual Performance Review.

### 3.1.2 Management of Human Resources

*Also see Section 7.1.2 of the Overarching IMP document.*

A staff organogram has been approved for all phases of the BNR by the MTPA. The organogram acknowledged the need to manage Phase 3 as a separate management unit with its own Reserve Manager. This staff organogram should be implemented effectively within Phase 3 of the BNR and all future staff appointments must be done on the basis of the requirements of this organogram.

A database of local skills within the communities surrounding Phase 3 of the BNR should be developed and employees should be sourced from the local community wherever possible utilising this database.

All current human resource activities within Phase 3 of the BNR should comply with the requirements of local, provincial and national labor laws. MTPA also has official labor policies which need to be complied with.

A Skills Development Plan will be implemented by the Joint Management Committee and the Reserve Manager of Phase 3 will co-ordinate management activities and availability of staff to meet the requirements of the Skills Development Plan.

**Action Project 3.1.2 (1):** Ensure current staffing structure of Phase3 complies with the organogram which has been approved by the MTPA.

**Action Project 3.1.2 (2):**Develop Database/Inventory of local skills within the community surrounding Phase 3 and employ local staff from this database wherever possible.

**Action Project 3.1.2 (3):** Undertake audit of staff contracts and human resource management

policies within Phase 3 and ensure compliance with relevant legislation and guidelines.

### **3.2 SAFETY AND SECURITY**

*Also see Section 7.2 of the Overarching IMP document.*

Phase 3 of the BNR has a security risk due to its location in relation to main roads, mines and human settlements. In order to address security needs of Phase 3, a risk assessment needs to be undertaken in alignment with the overarching objectives and operational guidelines of the BNR.

All areas of potential risk need to be identified and logged on a GIS system. This data will then be used by the Biological Management Committee to develop an Integrated Safety and Security plan for total area of the BNR.

A safety audit of all areas accessible to general public needs to be undertaken to ensure the safety of visitors is ensured and all public liabilities are addressed as far as possible. All such areas fall either outside the game fence and where not these areas fall under the control of a tourism operator or owners who should take responsibility for safety on their premises and their activities. As done in the safety audit for public access areas, a safety audit needs to be undertaken to determine and address any safety hazards for MTPA staff and relevant contractors.

It is recognized that due to the nature of the terrain and the intention to maintain the reserve in its natural state, it is impossible to safeguard visitors in all respects. Since Phase 3 does not offer open access to the public it should be ensured that all guided visitors and owners complete the necessary indemnity forms to be developed specifically for this purpose. Appropriate warnings and indemnifying signage to be erected at all operator access gates.

**Action Project 3.2 (1):** Undertake Risk Assessment of Phase 3 and provide all GIS data to Biological Management Committee for inclusion in Integrated Safety and Security Strategy for the greater BNR.

**Action Project 3.2 (2):** Wildlife Protection Services unit to undertake safety audit of all public areas and address problem areas.

**Action Project 3.2 (3):** Compile appropriate indemnity forms and ensure these are signed by all visitors and that such principles are captured in land sale agreements in the case of Mountainlands Estate.

**Action Project 3.2 (4):** Erect warning and indemnity signs at all operator access gates.

**Action Project 3.2 (5):** Undertake safety audit to determine safety issues relating to staff activities and address problem areas. Incorporate appropriate legal waivers in staff contracts due to nature of terrain.

### **3.3 BIODIVERSITY CONSERVATION MANAGEMENT**

Biological systems are dynamic and continuously react to factors such as climate changes, veld fires, epidemics, etc. Management interventions for such systems must also be dynamic and need to be updated on an ongoing basis. A Biological Management System has been developed to deal with the dynamic nature of the biological system in Phase 3. Meetings to discuss biological

management issues are held on a quarterly basis by the Biological Management Committee structured by the MTPA. Detailed documentation of all biological issues relevant to Phase 3 is kept in a Biological Management file system.

It is the responsibility of the Phase 3 Reserve Manager to co-ordinate all activities and tasks on Phase 3 of the BNR. Where any particular activity or task has or could have an ecological impact, the Manager must consult with the Biological Management Committee before such an activity may commence. Policies and decisions made by the Biological Management Committee are binding and valid until such time as a specific decision has been re-evaluated and documented by the Committee.

**Action Project 3.3 (1):** Ensure that management team of Phase 3 is represented on Biological Management Committee

### **3.3.1 Fire Management**

*Also see Section 7.3.1 of the Overarching IMP document.*

Fire is an important tool in the implementation of the overarching vegetation policies of the BNR in Phase 3, as well as in the provision of adequate grazing for relevant game species. The maintenance of the fire pattern and diversity is therefore essential in the maintenance of vegetation diversity, and to enhance game and game viewing potential in Phase 3.

Point ignition fires should be applied during the growth season in Phase 3. By extending this throughout the year, it can lead to an extremely diverse mosaic both in size, time and return period of fire. Furthermore, fire is applied within the reserve as and when required. Times and areas to be burned will be determined by the ecologist, Biological Management Committee and Reserve Manager. Areas can be burned on a 3-year rotation basis. All fire related activities must be in compliance with the overarching reserve objectives and strategies of the BNR along with all other relevant local, provincial and national legislation/policies.

The MTPA is a member of LEFPA (Lowveld Escarpment Fire Protection Agency) and currently pays annual subscription fees for the entire reserve. A member of the MTPA serves on the LEFPA executive and attends general meetings. Information from these meetings is relayed to the Reserve manager and BMC.

Mapping of fires is essential for digitising by GIS specialist in order for correct fire planning in Phase 3 by the Biological Management Committee.

Reserve management is responsible for the adequate fire-breaks of the Phase 3 perimeter and of infrastructure and tourism facilities for the protection of assets against accidental fires.

Significantly increased risk exists due to proximity of SAPPI plantations on southern boundary and implications of National Veld and Forest Fire Act 1010 of 1998. Current agreements exist that SAPPI takes responsibility for fire-breaks on the shared boundary with them. The continuation of these agreements is advisable to mitigate the risks.

Appropriate rotation of fire-breaks on high lying and sensitive southern boundary is required together with a review of the impact of past practices. This should include provision of sufficient space between cadastral boundary and plantation's to provide for increased fire-break

requirements due to presence of plantations and steep terrain, alternately on either side of the boundary.

**Action Project 3.3.1 (1):**Implement fire burning strategy as determined by the Biological Management Committee, in alignment with overarching objectives and operational guidelines.

**Action Project 3.3.1 (2):**Review structure of annual subscriptions to LEFPA to ensure that all Founding Members contribute.

**Action Project 3.3.1 (3):**Ensure that information from the Local Fire Protection Association (LEFPA) is disseminated to the BMC.

**Action Project 3.3.1 (4):**Implement GIS mapping system to record fires and provide data to Biological Management Committee as and when required.

**Action Project 3.3.1 (5):**Implement fire break burning programme, approved by the Biological Management Committee.

**Action Project 3.3.1 (6):**Review impact of fire break practices and agreements with SAPPI to ensure mitigation of risk and appropriate rotation and provision of firebreaks on either side of cadastral boundaries.

### 3.3.2 Alien and Invasive Species

*Also see Section 7.1.1 of the Overarching IMP document.*

#### 3.3.2.1 Alien and Invasive Plants

Due to historic settlement and mining activities over a long period of time, numerous disturbed areas have given rise to the establishment of alien plants. Commonly found along the lower lying drainage lines towards the north, are Lantana, Chromoleana, Mexican poppy and other alien plants. Wattle, Eucalyptus and other aliens are present in grasslands and mining areas. A sizable plantation of Eucalyptus was established on the Eureka plateau by Barberton mine many years ago for the purpose of providing logs as support in underground shafts. The responsibility for the removal of alien plants introduced by the mines rests with the mines.

**Action Project 3.3.2.1 (1):**Engage the mines on their responsibility for the removal of alien vegetation introduced through mining disturbances.

A continuous programme consisting of two teams will be budgeted for by the Reserve Manager of Phase 3. Programmes will include physical removal, chemical and fire control. Watercourses and valleys will mainly be physical and chemical, while for the plateau and hills, fire will be utilized as part of the programme. Biological control will be used in Phase 3 where technology and knowledge have proven it to be acceptable or even preferable.

A GIS based database and mapping system must be developed and implemented to monitor and manage the alien/invasive eradication programme in Phase 3 of the BNR. The GIS database developed for the BNR Zoning plan can accommodate an alien plant eradication programme as a special management overlay. Relevant staff members must be trained to manage the system.

**Action Project 3.3.2.1 (2):**Develop an alien invasive plant inventory for the reserve and map this in a GIS database.

**Action Project 3.3.2.1 (3):**Develop and Implement continuous alien plant eradication programme in accordance with overarching objectives and operational guidelines.

**Action Project 3.3.2.1 (4):**Update the GIS database and alien plant management overlays on a quarterly basis and use to plan and prioritize areas to be worked.

**Action Project 3.3.2.1 (5):**Obtain funding approval for dedicated teams to implement alien plant eradication programme.

### 3.3.2.2 Alien and Problem Animals

Animals that become an excessive nuisance to persons and property due to either habituation or divergent behavior may be destroyed or captured and removed from the area. This includes animals that leave and return from time to time. To minimize the need to control problem animals, efforts will be made to inform visitors and guests about the dangers associated with habituation.

No domestic animals will be allowed in Phase 3 of the BNR, inclusive of staff pets/live stock.

Pending their resettlement, dogs owned by families resident in the reserve have to be confined to prevent hunting and poaching.

**Action Project 3.3.2.2 (1):**Develop alien/problem animal protocol for BNR Phase 3 and ensure that staff are made aware of implications and management requirements.

**Action Project 3.3.2.2(2):**Remove or Destroy Alien/Problem animals as and when required,

**Action Project 3.3.2.2(3):**Ensure confinement of dogs, pending resettlement.

### 3.3.3 Catchment Management

*Also see Section 7.3.2 of the Overarching IMP document.*

It is essential that Phase 3 align all management efforts with the overarching catchment strategy of the Barberton Nature Reserve, with support from the Department of Water Affairs.

**Action Project 3.3.3 (1):**Integrate Regional Catchment Management Strategies in reserve management interventions for Phase 3 with input from Department of Water Affairs.

### 3.3.4 Soil Erosion and Control

*Also see Section 7.3.3 of the Overarching IMP document.*

Soil erosion will be considered as a natural process in Phase 3 of the BNR, yet where it is accelerated due to unsustainable land use practices or activities, active measures to mitigate, rehabilitate and control erosion will be implemented.



Sheet and gully erosion will be managed according to conditions through timing of controlled burns and packing of branches and gabions. The impact of these interventions will be monitored.

Much erosion has been caused as a result of historic mining activities. These areas must be identified and relevant mines must be held accountable for erosion reclamation and rehabilitation in these areas. A system must also be implemented which ensures that mines rehabilitate current operational areas in the future.

**Action Project 3.3.4 (1):**Identify problem erosion areas and capture on GIS database system

**Action Project 3.3.4(2):**Develop and Implement Soil Erosion Management Plan

**Action Project 3.3.4(3):**Monitor interventions and recurrences.

**Action Project 3.3.4 (4):**Identify areas impacted by erosion due to historic mining activities.

**Action Project 3.3.4(5):**Implement accountability system whereby relevant mines are responsible for areas which have been eroded due to their historic operations.

**Action Project 3.3.4(6):**Implement monitoring programme to ensure existing mining operations are rehabilitated into the future to avoid erosion problems.

### 3.3.5 Wildlife Management

*Also see Section 7.3.4 of the Overarching IMP document.*

The proposed stocking rate within this 18 000 ha game-fenced area is 1800 LAU or 10ha/LAU. Game numbers need to be within the carrying capacity of the area to ensure a healthy host of smaller organisms. Game stocking has been ongoing since 2003 and during site visits visible game and veld conditions indicate that numbers are still well below thresholds.

Feeding spectrums of stocked game include bulk feeders, selective tall grazers, selective short grazers and browsers. The quality of the grass layers in Phase 3 varies greatly depending on elevation and geology. The valley bottom and lower slopes are fairly palatable, but the higher parts of the reserve are of poor grazing quality. The species mix will be tilted towards adequate representation of bulk feeders which would enhance visitor experience.

Monitoring of game numbers forms a crucial part of the management process in Phase 3 of the BNR. The following management actions apply:

- A aerial survey annually during the winter months.
- Records (including introduction, natalities, natural deaths, predation, removal by culling/capture/poaching) will be kept per species and presented quarterly to the Biodiversity Management Committee; and
- MTPA Scientific Services, with the assistance of Founding Members, will conduct regular sex- and age as well as condition assessments.

Introduction of species to Phase 3 will only be considered if a species occurred historically in the area and if suitable habitat is still available on the reserve. Genetics will also be taken into consideration.

The detailed agreements of phase 3 must address issues relating to the ownership of game and their offspring, particularly related to rare and expensive game. In the absence of such agreement a principle of pro-rata ownership per land size contributed to the reserve has been adopted by the founding members.

Due to the land ownership and utilization model, lion will only be introduced with the consent of all founding members.

**Action Project 3.3.5 (1):**Develop and Implement Game Stocking Strategy for BNR, including potential key species such as buffalo and giraffe. Update and maintain and present records.

**Action Project 3.3.5 (2):**Implement wildlife management action plan inclusive of annual schedule of management interventions and activities.

### 3.3.6 Vegetation Management

The fixed point technique must be used to sample the herbaceous layer of the reserve. The former Transvaal Provincial Nature Conservation Department in consultation with the Pretoria University adopted this technique during the early 1980's. Plots are placed out in such a manner that each landform and aspect and height in the topography is represented.

The transects are monitored at a 2-year interval at the end of the growing season.

Woody plant monitoring is done using the fixed photo point method. Photographs are to be taken biannually at predetermined fixed points used for the herbaceous layer monitoring to document woodland structure. Fixed point photographs are available for many areas in Phase 3 and can be used as a basis for establishing a monitoring programme.

**Action Project 3.3.6 (1):**Commence implementing vegetation monitoring programme and implement management interventions as determined by Biological Management Committee.

### 3.3.7 Control over Illegal Activities and Use of Natural Resources

*Also see Section 7.3.5 of the Overarching IMP document.*

A field ranger patrol plan needs to be developed and staff trained accordingly to implement the plan. Field Ranger Pickets need to be strategically positioned throughout the reserve to ensure optimum efficiency. Existing infrastructure on the periphery of the reserve is available to be utilized as pickets and has already been placed under custodianship of the MTPA but not yet utilised. The function of field rangers is to provide security to the area by way of foot patrols, observation posts, law enforcement, regular fence patrols and collection of biological data.

**Action Project 3.3.7 (1):**Identify existing state owned infrastructure required for the establishment of Pickets. Engage the department of Rural Development and Land reform to release this infrastructure to the MTPA.

**Action Project 3.3.7 (2):**Develop Field Ranger Patrol Plan and train Field Rangers to implement plan. This plan should include placement of Field Ranger Pickets.

**Action Project 3.3.7 (3):**Ensure that field rangers are empowered and armed to conduct law enforcement activities.

### 3.3.8 Land Expansion and Incorporation

Also see Section 7.3.6 of the Overarching IMP document.

Land expansion and Incorporation in this case does not necessarily mean the purchasing of land, but can include land expansion in the form of corridors and/linkages between Phase 3 and other properties. The reserve can be expanded to the north-west to form a linkage with Phase 2 of the Barberton Nature Reserve. To the north, Phase 3 can link onto the Crocodile Gorge Conservancy. To the south Phase 3 can link with the Songimvelo Pan Handle and become part of the greater TFCA complex.

All land expansion and incorporation activities will be handled and approved by the MTPA Protected Area Expansion Officials, in conjunction with the Biological Management Committee.

**Action Project 3.3.8 (1):** Identify all expansion opportunities and benefits thereof.

**Action Project 3.3.8 (2):** Refer expansion/incorporation opportunities to MTPA Protected Area Expansion Team for further development and implementation.

### 3.4 CULTURAL RESOURCE MANAGEMENT

Also see Section 7.4 of the Overarching IMP document.

In order to effectively manage the cultural resources of Phase 3, the overarching strategy for the BNR relating to Cultural Resource Management should be implemented as efficiently and effectively as possible. The primary objective for cultural resource management in Phase 3 is to research, document and protect the cultural resources of the area as far as possible based on current knowledge and expertise. Another important aspect of cultural resource management in Phase 3 will be to document the history of the area and its surroundings, specifically the history of the reserve and the farms in the surrounding area. Other historical aspects such as trade routes, Swazi occupation, conflict, mining, exploration, etc should also be considered.

It is also important to interpret cultural resources in the reserve for visitors and to ensure that awareness is created without damaging the integrity of the cultural resources. Utilisation of resources in this regard should be approved by the South African Heritage Resources Agency.

The management strategy for the cultural resource management in Phase 3 will include:

- Development of cultural resource database;
- Continually capacitating staff to identify and manage cultural resources;
- Continually provide opportunities for academic institutions and students to undertake research projects on cultural resources in Phase 3;
- Support for cultural resource management and protection initiatives in the area; and
- Implementation of clear and measurable goals and objectives.

**Action Project 3.4 (1):** Identify cultural resources within Phase 3. Staff should be trained to be able to identify cultural features in Phase 3 and external specialists/students can also be used for this aspect.

**Action Project 3.4 (2):** Develop and maintain database of cultural heritage features in Phase 3.

**Action Project 3.4 (3):**Develop and implement cultural resource conservation plan and strategy with assistance from SAHRA.

**Action Project 3.4 (4):**Sustainably utilise cultural resource features in tourism experiences in alignment with cultural resource conservation plan and strategy.

### 3.5 **VIEWSHED PROTECTION**

As a result of the mountainous topography of Phase 3 and its surrounds there are numerous parts of the Protected Area that are susceptible to visual impacts from surrounding areas.

In cases where areas of the reserve are exposed to visual impacts from incompatible land uses such as forestry, mining, agriculture and settlement, user perception of these areas is negatively impacted. This principle is supported by the formalization of buffer zones around protected area as legislated through listing notice 3 of the 2010 EIA regulations (GN 546).

Further to this, a viewshed protection area has been defined for the BNR. Any activities occurring within this area has the potential to negatively impact on the experience of users as a result of it being visible. This viewshed protection zone is indicated on Map 11 – Viewshed Protection Zone included in the Integrated Zoning and Tourism Master Plan document.

This map should be utilized as a tool in evaluating the need to provide input to any development proposals surrounding the reserve. Visual impact within this zone should be opposed on the grounds that it will impact on the user experience and tourism potential of the reserve. Visual impact mitigation should be adopted for all development in this zone.

**Action Project 3.5 (1):**Actively engage in the EIA process for any development proposals within the Buffer Zone and viewshed Protection Zone.

While much of the identified viewshed protection zone has already been encumbered by landuses that are perceived as visually incompatible, the Joint Management Committee should actively engage the proponents of transient landuses such as forestry and mining to avoid the re-development of these visual impacts within the viewshed protection zone. This is of particular relevance to alien plantations that have been planted over the viewsheds of the reserve on the southern boundary.

**Action Project 3.5 (2):**Actively engage with Forestry to not replant plantations that extend over the viewshed into the reserve.

**Action Project 3.5 (3):**Engage Umjindi Municipality to ensure incorporation of appropriate bylaws to mitigate viewshed and buffer area impact for the Sheba Siding formalization project.

### 3.6 **BUFFER AREAS**

The proclaimed boundary of the reserve follows cadastral boundaries. It is recognized through the sensitivity analysis undertaken for the area as part of this study, and the through the broader World Heritage Site Dossier compilation, that attributes of high biodiversity and conservation value extend beyond the boundaries of the reserve.

It is also recognized that activities on the periphery of the proclaimed Nature Reserve have the potential to impact on the intrinsic value of the reserve – either negatively or positively.

The principle of establishing buffers around National Protected Area is well recognized in policies and legislation:

1. NEMA (107 of 1998) and Listing Notice 3 (GN R546 of 2010) identifies a buffer area *'extending 10 kilometres from the proclaimed boundary of a world heritage site or national park and 5 kilometres from the proclaimed boundary of a nature reserve, respectively, or that defined as such for a biosphere'*. The function of this buffer area is to ensure that any activities which may have a detrimental effect on the environment in the context of impacting on the adjacent Protected Area, are subject to an Environmental Impact Assessment. See **Map 3 – Conservation Planning** in **Volume 2: Integrated Zoning and Tourism Master Plan**
2. In February 2012, Department of Environmental Affairs published a document title *'Biodiversity Policy and Strategy for South Africa: Strategy on Buffer Zones for National Parks'* (GN 106 of 2012). This policy recognizes the need for buffer zones as a result on increasing levels of development adjacent to Protected Area, in such a manner that Protected areas are being negatively impacted on. While this policy is currently applicable to National Parks only, the principles can be equally applied to other Protected Areas.

The policy recognizes the need for a buffer zone for the following primary reasons:

- The extinction of populations of fauna and flora occurring outside the park due to their isolation from populations within the park as a result of inappropriate development adjacent to the park.
- Excessive disturbance to a park due to development on its borders. This applies not only to visual and auditory impacts, but extends to disturbances such as increased security risks and pollution of resources.

The Policy also recognizes that some developments may have negative regional economic impacts including:

- Excessive developments which negate the primary attraction of the park/reserve. This includes ribbon development along the periphery of the park/reserve.

The policy defines the purpose of a buffer zone as:

- Protect the purpose and values of the park, which are explicitly defined in the Management Plan submitted in terms of section 39(2) of the PAA.
- Protect important areas of high values for biodiversity and/or society where these extend beyond the boundary of the Protected Area
- Assist adjacent and affected communities to secure appropriate sustainable benefits for the park and buffer zone by promoting a wildlife and conservation economy, including sustainable resource harvesting.
- The Buffer Zone is an area surrounding the park which has complementary legal and management restrictions placed on its use and development, aimed at providing an extra layer of protection to the integrity of the park.

In the context of BNR, it is evident that a formalised buffer zone would be of great advantage to achieving the objectives of the reserve.

Section 28 (1) & 28 (2)(a) of NEMPAA makes provision for the Minister or MEC to proclaim and regulate a buffer zone for the protection of a nature reserve.

The Biological/Joint Management committee should further pursue the possibility of clearly defining and motivating for the proclamation of an appropriate buffer zone and policies.

**Action Project 3.6 (1):** Identify buffer area and proclamation process in terms of NEMPAA.

**Action Project 3.6 (2):** Initiate proclamation of buffer area in terms of NEMPAA

#### **4 POLICY FRAMEWORK & GUIDING PRINCIPLES: UTILISATION MANAGEMENT**

Since this phase of BNR is a true community-private-public partnership reserve all policies and guiding principles relating to resource management need to take account of the fact that ownership is spread between the founding members. This implies that the founding member have both rights and responsibilities and need to be consulted on all policy.

While existing policies and the legislative framework contained in this IMP will guide in the definition of roles and responsibilities during the development of further agreements, it must be ensured that all policies are adapted to reflect ownership rights and responsibilities.

**Action Project 4 (1):** Ensure that all policies are aligned with the principles in terms of ownership rights and responsibilities.

##### **4.1 COMMERCIALISATION**

Commercialisation refers to the process of unlocking commercial opportunities within Phase 3. Of these opportunities, some are specifically related to the achievement of the core business of conservation (e.g. live game sales and consumptive use). Some, however, may be pursued independently of the core business. These opportunities are those that are predominantly related to the development and operation of tourism products.

Commercialization opportunities related to the core business of conservation should be identified by the Biological Management Committee on an annual basis in response to annual resource monitoring.

**Action Project 4.1 (1):** Biological Management Committee to annually identify conservation related commercialization opportunities

The Tourism Master Plan developed for the BNR as part of this Integrated Management Plan outlines a long term sustainable tourism development vision for the Protected Area. It clearly defines potential tourism related facilities and products and does so in the context of existing developments and in balance with expectations of the founding members. The Tourism Master Plan aims to guard against the erosion of tourism potential by providing a framework from which the Joint Management Committee and Biological Management Committee can assess the impact and value of development proposals.

The recommendations of the Tourism Master Plan are generally not set in stone, but provide guidance to the management authority and Joint Management Committee in terms of forward planning. In this regard it is acknowledged that the Tourism Master Plan cannot predict future market forces, and that the implementation of recommendations set out in the plan should be verified through the market prior to initiation.

The Joint Management Committee should periodically review progress made in implementing the recommendations of the Tourism Master Plan and identify upcoming tourism development opportunities and/or actions required to develop these opportunities. This should be captured in a Tourism Implementation Programme for phase 3

**Action Project 4.1 (2):**Joint Management Committee to develop a Tourism Implementation Programme for Phase 3

**Action Project 4.1 (3):**Joint Management Committee to periodically review and update the Tourism Implementation Programme

All commercialization opportunities must be aligned with carrying capacities and zonation plan of Phase 3.

**Action Project 4.1 (4):**Ensure alignment of commercialization opportunities with the carrying capacities defined in the zoning plan.

Commercialisation activities taking place on state owned land and involving private-public partnership are subject to the provisions of the Public Finance Management Act.

**Action Project 4.1 (5):**The MTPA must ensure that commercial opportunities offered on state-owned land are aligned with MTPA policy and the provisions of the PFMA

Private land owners within Phase 3 may develop commercial products on their properties as long as they are in alignment with the phase specific objectives of Phase 3 and the overarching objectives of the BNR.

## **4.2 TOURISM MANAGEMENT**

### **4.2.1 Marketing**

*Also see Section 8.1.1 of the Overarching IMP document.*

Marketing of the tourism products provided by Phase 3 of the BNR will be undertaken by the individual product owners and operators at their own cost. This will be done within the context of a common identity and brand strategy to ensure mutual support, value creation and common brand values to protect and enhance the brand. To this end Phase 3 has become known as Mountainlands Nature Reserve in recognition of its unique attributes and ownership model, distinct from the rest of the BNR phases.

Mountainlands Nature Reserve has an already established market presence and visual identity upon which further development can take place.

The MTPA may at its discretion promote the BNR and its tourism offerings in the interest of promoting tourism within the region.

**Action Project 4.2.1 (1):**Build upon the Mountainlands Nature Reserve brand identity through a brand strategy and common brand architecture.

#### **4.2.2 Linkages with other tourism initiatives**

*Also see Section 8.1.2 of the Overarching IMP document.*

Linkages with other tourism initiatives will be addressed by the Joint Management and Biological Committee. All enquiries must be referred to the Regional Manager of the MTPA or the alternative appointed representative for discussion at the JMC. Managers of the individual phases of the BNR will not be responsible for establishing linkages with other tourism initiatives and should refer all external enquiries to the Regional Manager.

Established linkages between phase 3 and other tourism initiatives must be included in the marketing strategy for the BNR.

**Action Project 4.2.2 (1):**Implement protocol whereby all external enquiries relating to linkages with other tourism initiatives are referred to the Regional Manager of the MTPA.

**Action Project 4.2.2 (2):**Include established linkages in Marketing Strategy.

#### **4.2.3 Tourism Support Infrastructure**

*Also see Section 8.1.3 of the Overarching IMP document.*

An annual tourism infrastructure development and maintenance plan needs to be developed by the Joint Management Committee for all common supporting tourism infrastructure that will be developed/operated by the founding members. This infrastructure typically includes the development of roads, view sites, gates and information centers among others. Large scale tourism developments such as camps and resorts as outlined in the Tourism Master Plan are likely to fall outside this planning as they would typically be privately funded (See 3.1 above)

The tourism infrastructure development plan will guide all future developments in phase 3 and will ensure that future developments will meet the needs of relevant tourism markets. This plan should also stipulate all authorization requirements in terms of the overarching policies and guidelines of the BNR.

A site specific environmental management plan must be prepared for each development site or node. These management plans are detailed and when finalised will form part of the contract between the developer and the contractor (builder) as well as the developer and the Joint Management Committee. The site plans must be flexible and must allow the developer to act on contingencies or new and unaccounted events, though this would be done in consultation with the Reserve Management.

Specific site and activity plans must be developed for all development sites and activities that will be undertaken. For example, plans or sub-plans must be prepared for view sites, trails and any activity or area that will be utilised by the tourist operator.

**Action Project 4.2.2 (3):**Develop/revise annual infrastructure maintenance plan for phase 3, inclusive of upgrading projects.



**Action Project 4.2.2 (4):** Develop/revise annual infrastructure Development Plan for Phase 3, in alignment with the Concept Development Plan and Tourism Master Plan and in alignment with overarching development policies and guidelines of the BNR.

#### **4.2.4 Operational Guidelines**

*Also see Section 8.1.4 of the Overarching IMP document.*

A Tourism Operations Plan will be developed by the Joint Management Committee in consultation with the Biological Management Committee to ensure that the tourism experiences provided in the BNR are of a high standard and have limited impact on the receiving environment.

Action items identified in the overarching Tourism Operations Plan must be effectively implemented in Phase 3. All activities provided by Phase 3 need to be compatible with each other and should be provided to the market place in alignment with relevant tourism legislation and safety/security policies.

Staff should be capacitated and made aware of the requirements, policies and guidelines included in the Tourism Operations Plan to be developed for Phase 3. Staff skills/qualifications and equipment, used to provide tourism experiences must be compliant with relevant legislation and industry norms and standards. An operations manual must be developed for any external private operators providing tourism services in the reserve on a lease or concession basis.

**Action Project 4.2.4 (1):** Implement Action items identified in the overarching Tourism Operations Plan.

**Action Project 4.2.4 (2):** Capacitate staff on the requirements, policies and guidelines included in the Tourism Operations Plan.

**Action Project 4.2.4 (3):** Ensure staff skills/equipment and equipment used to provide tourism experiences are compliant with industry norms and standards.

**Action Project 4.2.4 (4):** Develop and Implement operations manual for private operators operating in Phase 3, if applicable.

#### **4.2.5 Environmental Management**

*Also see Section 8.1.5 of the Overarching IMP document.*

A database of environmental issues should be maintained by the reserve manager of phase 3. All new tourism developments and activities should be compliant with relevant legislation and approved by the Biological Management Committee. Environmental Compliance Officers should be appointed as and when necessary to ensure all operations and developments in Phase 3 comply with relevant legislation. These assessments should be undertaken every six months.

Environmental Management issues relating to mining operations in the BNR need to be constantly monitored and dealt with appropriately. A database of environmental non-compliances by mining operations needs to be developed and maintained. Mines need to be engaged in managing potential impacts of mining related activities.

All relevant environmental legislation needs to be filed and kept up to date by the management team for effective reference. The Environmental Control Officer should assist in this regard

The philosophy with respect to the environment and development in Phase 3 is that environmental considerations should be fundamental to all aspects of project design and implementation. Potential negative environmental impacts should be negated or minimised in the preliminary conceptual and design phase (from construction to operation) through creative thinking and by promoting empathy with each particular environment. The need for environmentally responsible and sustainable development is strongly supported and this principle will be upheld at all times.

**Action Project 4.2.5 (1):**Develop and maintain a database of all environmental issues within Phase 3, inclusive of mining related issues.

**Action Project 4.2.5 (2):**Engage with relevant mines in order to effectively manage mining related environment management issues.

**Action Project 4.2.5 (3):**Appoint Environmental Compliance Officer to undertake Environmental Compliance Assessments every 6 months to ensure compliance of management operations with relevant legislation and policies.

**Action Project 4.2.5 (4):**Develop and maintain filing system of environmental management legislation and policies for effective and fast reference.

#### **4.2.6 Tourism Monitoring**

*Also see Section 8.1.6 of the Overarching IMP document.*

In order to maintain an attractive and sustainable tourism product in Phase 3 of the BNR, feedback from visitors is essential. A system to capture and deal with comments and concerns presented by visitors should be developed. This system of feedback should target all operations within this phase of the BNR

Tourism activities and movement in Phase 3 should be monitored to ensure that no unlawful activities are undertaken in Phase 3 and to ensure that no damage is done by these activities. Visitor densities should also be monitored and controlled in Phase 3, in alignment with the Zoning Plan for the BNR.

**Action Project 4.2.6 (1):**Develop system to capture and deal with comments and concerns presented by visitors to Phase 3 of the BNR. (A database of comments and concerns should form part of this system).

### **4.3 NATURAL RESOURCE UTILISATION**

#### **4.3.1 Harvesting**

*Also see Section 8.2.1 of the Overarching IMP document.*

Although wildlife-based, educational and recreational-based tourism will be the prime form of resource use, controlled use of plant resources will be allowed when necessary in Phase 3 of the

BNR. Such use will only be to the benefit of founding members and local communities and not to external commercial ventures unless so agreed upon by the Joint Management Committee and Biological Management Committee and if it does not impact on the tourism and management activities in the reserve. Harvesting quotas will be determined and approved by the Biological Management Committee based on ecological assessments.

Any revenue streams accruing from these activities will be governed by the conditions of the detailed agreement adopted by the founding members.

**Action Project 4.3.1 (1):**Determining harvesting quotas on an annual basis.

**Action Project 4.3.1 (1):**Develop and maintain list of beneficiaries of harvesting programmes.

#### **4.3.2 Hunting**

*Also see Section 8.2.2 of the Overarching IMP document.*

Regular control of the numbers of specific species in Phase 3 of the BNR will be required once optimum populations have been established in Phase 3. MTPA Scientific Services, in consultation with the Biological Management Committee will determine necessary removals based on monitoring results. These removal quotas will be discussed and agreed upon by the Joint Management Committee. The optimal cost-effective balance should be decided upon between culling, hunting and/ or live capture of individual species.

Population control can be done using the following:

- Live capture;
- Culling;
- Hunting.

Controlled hunting will be allowed on Phase 3 as a population control measure only. Any such hunting activity must be approved by the Joint Management Committee. Any revenue streams accruing from these activities will be governed by the conditions of the detailed agreement adopted by the founding members.

**Action Project 4.3.2 (1):**Develop and implement hunting management plan and operational strategy for Phase 3 of the BNR once optimum populations are reached.

**Action Project 4.3.2 (2):**Identify qualified and experienced hunting operators to undertake hunting to control population numbers as and when required.

**Action Project 4.3.2 (3):**Determine hunting quotas on an annual basis.

#### **4.3.3 Live Sales**

*Also see Section 8.2.2 of the Overarching IMP document.*

Live capture is the preferred method for the population control of most species in Phase 3. Disturbance will be limited to a short period every year or second year. Culling should be done in a professional and sensitive way in order to minimise animal trauma, avoid general game shyness and to limit disturbance to the visitors of Phase 3. The resulting carcasses will be used internally

(liaison functions, venison for lodges, staff training, etc) and externally (commercial activities and community needs).

Any revenue streams accruing from these activities will be governed by the conditions of the detailed agreement adopted by the founding members.

**Action Project 4.3.3 (1):** Biological Management Committee must provide off take quotas on annual basis.

**Action Project 4.3.3 (2):** Regional manager, via the Biodiversity Conservation Officer, must approve number of carcasses to be used internally versus externally.

**Action Project 4.3.3 (3):** BMC, in conjunction with the JMC, to develop and Implement off-take plan and operations strategy to minimise impact on other aspects of the reserve during off-take operations.

#### 4.3.4 Mining

*Also see Section 8.2.4 of the Overarching IMP document for policy and actions.*

The policy and actions included in the Overarching document apply equally to Phase 3, however they are included in the overarching document since many of the mining rights and activities span multiple phases.

Reserve Management must be fully aware of the legal instruments dealing with mining in Protected Areas, particularly the provisions of NEMPAA with regard to mining as well as the recommendations emanating from any determinations by the Minister in terms of Section 48(3). The reserve management must also be fully aware of all existing, lawful mining rights and operations occurring in Phase 3.

The reserve manager must be included in MTPA engagement with the mines.

**Action Project 4.3.4 (1):** Expose reserve management to legal instruments and provisions dealing with mining in Protected Areas, particularly in respect of mining operations and their legal status, right and obligations.

Any mining surface activities and access to the reserve must be coordinated in advance and will be monitored by the reserve manager. Mining company to present an annual plan of activities impacting on the surface and all activities should receive prior approval of the Joint Management Committee and Biological Management Committee. Any irregular activity by mines is to be immediately elevated to the attention of the Joint Management Committee and the MTPA.

The reserve manager must implement access control mechanisms for the mines, as established by the Joint Management Committee and Biological Management Committee.

**Action Project 4.3.4 (2):** Receive annual access and activity plan for approval of JMC and BMC and implement access control of mine personnel and vehicles.

Joint Management Committee to provide input to the prioritization of rehabilitation of mining areas. All old mining areas, shaft and adits are known to the mines. In 1999 and 2000 Barberton mines conducted a comprehensive survey of all shafts and adits. Result captured and

documented in several volumes, including photos, maps, rehabilitation and safety requirements. The process was initially budgeted by never implemented. This survey can form basis of monitoring and compliance effort.

**Action Project 4.3.4 (3):** Prioritise rehabilitation of different mining areas. MTPA to engage mines on their rehabilitation obligations and agree on firm plans to be implemented according to reserve priorities. Review on an annual basis, and monitor implementation to acceptable standards congruent with reserve status.

#### **4.4 INFRASTRUCTURE**

##### **4.4.1 Entrance Gates**

*Also see Section 8.3.1 of the Overarching IMP document.*

Currently none of the entrance gates to Phase 3 are staffed. As tourism products are developed in line with the Tourism Master Plan it will become necessary to develop infrastructure at particular gates to accommodate staff and provide a high quality visitor experience. Specific gates linked to operators or facilities will be developed and staffed as part of the development of the linked facilities, in compliance with pre-approved plans. (Eg. The gate to Mountainlands Estate has been developed by the landowner, in this case designed and placed for electronic monitoring and staffing when required.)

Tourism access to Phase 3 of the reserve will only be allowed through specific entrance gates reflected on the Tourism Master Plan. Staff will be trained to provide a prompt, efficient and friendly welcome to visitors according to their needs, as well as provide an information service and sales point to passing travelers.

The main entrance gates need to be well maintained and provide a welcoming sense of arrival for visitors when arriving at Phase 3 of the BNR. Entrance gates must be developed and located in accordance with the tourism master plan of the BNR.

Management entrance gates will be managed accordingly and only management vehicles and officials will be permitted to use these gates unless other arrangements have been made with Phase 3 management.

**Action Project 4.4.1 (1):** Ensure development and maintenance of tourism entrance gates and facilities are catered for in concession/development agreements.

**Action Project 4.4.1 (2):** Train gate staff to provide a friendly, prompt and informative service to visitors.

##### **4.4.2 Signage**

*Also see Section 8.3.2 of the Overarching IMP document.*

Uniform signage will be installed to guide visitors to the different tourist areas in the reserve. Management roads will be marked with no entry signs. Trail markings will be installed on all trails in the reserve.

Signage will be implemented in a manner which will have very little visual and ecological impact on the surrounding environment.

**Action Project 4.4.2 (1):** Develop and implement signage strategy for the reserve in alignment with overarching signage strategy for the BNR.

#### 4.4.3 Roads, Tracks and Paths

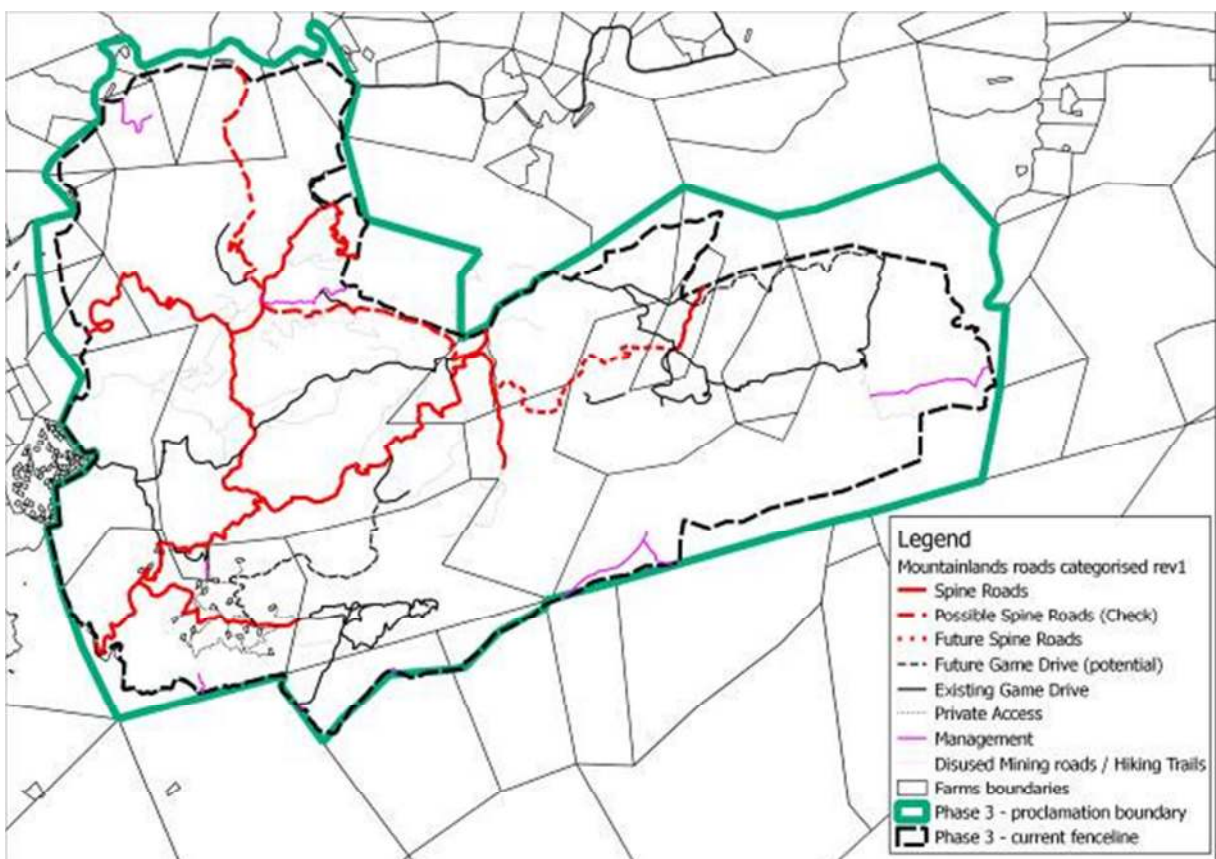
Also see Section 8.3.3 of the Overarching IMP document.

Two spoor type roads and those constructed for mining purposes are common on the reserve. Many of the existing roads are in poor condition and will require some construction to prevent erosion.

As part of the IMP planning a scoping exercise was conducted to identify network of roads that provides linkages between components as well as providing the opportunity for recreational drives. Roads that were considered too expensive to maintain and those of low tourism or management value have been indicated as closed. This data has been captured as a GIS shapefile. This GIS database should be maintained and updated.

It is acknowledged that certain roads leading to facilities, residences or management will be designated limited use for specific persons only according to their purpose (eg. Private access).

The following graphic illustrates the roads within Phase 3.



It is acknowledged that there will be the need to develop additional roads to service tourism facilities.

No new roads will be constructed before a comprehensive scoping exercise has been completed. This should be reviewed by the Biological Management Committee. Any new roads and tracks will be planned with due consideration to their functional requirements, associated erosion risks and required maintenance levels. The zoning plan makes reference to the category of roads that are suitable within each zone. Existing roads will be maintained in a state which minimises their impact on surrounding hydrology, soils and biota.

The applicability of the EIA regulations to any proposed road must also be assessed. In this regard Listing Notice #3 (GN 546) is relevant.

- Activity 4: Any road with an operating surface wider than 4m will require a formal EIA in terms of the regulations.
- Activity 12: The clearing of more than 300m<sup>2</sup> of vegetation within any critically endangered or endangered ecosystem listed in terms of section 52 of NEMBA.

Certain roads are in a state of disrepair and are poorly located (for example old access roads to mining areas which have been aligned on a slope which has caused significant erosion impacts). It is a priority to stabilise existing roads, relocate where necessary, and ensure sufficient funds for ongoing maintenance. Where required, concrete strips should be constructed to minimise erosion and maintenance costs.

**Action Project 4.4.3 (1):** Develop and Implement Road Development and Maintenance Plan for Phase 3, including GIS mapping.

#### 4.4.4 Fencing

*Also see Section 8.3.4 of the Overarching IMP document.*

The 18000 ha reserve is fenced with either steel wire strand Bonnox/Veldspan type perimeter fencing. The fence is not electrified, thereby limiting introduction of certain key species should the need arise.

A boundary fence patrol and maintenance roster should be developed on a monthly basis to ensure that the boundary fence of Phase 3 is maintained and illegal access/breach is reported to the management team. The perimeter fence of Phase 3 needs to be cleared and maintained as part of the maintenance schedule. The topography of the area does not allow a fence road in most areas of the reserve and this should be considered in the maintenance roster.

**Action Project 4.4.4 (1):** Boundary fence maintenance and patrol must be developed and implemented on a monthly basis.

**Action Project 4.4.4 (2):** Upgrade fence to accommodate larger species of game such as buffalo, should the game stocking strategy determine that these species will be stocked.

#### 4.4.5 Water Provision

MTPA staff are currently accommodated at Sheba mine where they have access to water. Boreholes and water extraction from perennial rivers will be utilized to provide water for tourism operations and other requirements. Development plans for each facility must include planning and related approvals for use of water resources.

Water extraction points and boreholes should comply with relevant legislation and all Water Use License requirements should be addressed as and when required.

**Action Project 4.4.5 (1):**Develop and implement water provision strategy for Phase 3

**Action Project 4.4.5 (2):** Ensure compliance of boreholes and water extraction points with relevant legislation and water use license requirements

#### 4.4.6 Radio Communication and Other Communication Equipment

*Also see Section 8.3.6 of the Overarching IMP document.*

Radio communication infrastructure will be upgraded to allow for more effective radio communication in Phase 3. This communication system must be developed in a manner which also allows communication with Phase 1 and 2 for more effective management of the total area of the BNR and faster response times to management issues such as fires and security breaches.

**Action Project 4.4.6 (1):**Implement effective radio communication system.

#### 4.4.7 Waste Management

*Also see Section 8.3.7 of the Overarching IMP document.*

Previously, old prospecting pits were used as refuse dumps in BNR. As it holds a potential contamination threat to ground water, this process has ceased and all refuse will be dumped at approved refuse sites in the Umjindi Municipal area. All future tourism developments shall utilise these as well. The option of recycling also needs to be assessed. Recycling options should be explored and implemented as far as possible.

To avoid animal habituation and the need to destroy attendant problem animals, all refuse collection points shall be protected from animal intrusion and only baboon-proof bins allowed.

All waste management activities must be conducted in line with current legislation.

**Action Project 4.4.7 (1):**Identify Municipal refuse dumps to dump refuse from reserve and formalise agreement with refuse dump.

**Action Project 4.4.7 (2):**Explore the potential of recycling as far as possible.



## 5 POLICY FRAMEWORK & GUIDING PRINCIPLES: BENEFIT FLOW MANAGEMENT

Since this phase of BNR is a true community-private-public partnership reserve all policies and guiding principles relating to resource management need to take account of the fact that ownership is spread between the founding members. This implies that the founding member have both rights and responsibilities and need to be consulted on all policy.

While existing policies and the legislative framework contained in this IMP will guide in the definition of roles and responsibilities during the development of further agreements, it must be ensured that all policies are adapted to reflect ownership rights and responsibilities.

**Action Project 5 (1):**Ensure that all policies relating to benefit flow are aligned with the principles in terms of ownership rights and responsibilities.

### 5.1 COMMUNITY PARTICIPATION

#### 5.1.1 Community Participation and partnerships

*Also see Section 9.1 of the Overarching IMP document.*

The reserve manager together with the MTPA Social Ecology department will establish formal relations with neighbours through existing forums, working groups and any other formal institutions that may exist. Where appropriate and relevant, Phase 3 will actively support community empowerment partnerships and social programmes focusing on conservation and tourism development.

**Action Project 5.1.1 (1):**Register with all relevant community forums, working groups, and any other formal institutions to participate in meetings and discussions.

**Action Project 5.1.1 (2):**Establish formal relations with neighbours.

**Action Project 5.1.1 (3):**Identify and actively support community empowerment partnerships and social programmes focusing on conservation and tourism development.

#### 5.1.2 Land Claims

*Also see Section 9.3 of the Overarching IMP document.*

An order was issued by the Land Claims Court on 22 July 2008 relating to all known land claims both on private and State Land in Phase 3. Accordingly the claims were found invalid and de-gazetted in 2009. MTPA and founding members will continually monitor and ensure compliance with the court order and the factual basis set out in the pleadings.

Issues regarding Land Claims on Phase 3 will be addressed by the Joint Management Committee. All enquiries must be referred to the Social Ecology department of the MTPA and the members of the Joint Management Committee on the same day when received. Managers of the individual phases of the BNR will not be responsible for resolving Land Claim issues as and when they occur.

**Action Project 5.1.2 (1):**Monitor compliance with Land Claims Court order and refer land claim inquiries to Social Ecology and Joint Management Committee as and when they are presented.

### **5.1.3 Environmental Awareness, Education and Interpretation**

The objective of Environmental Awareness, Education and Interpretation in Phase 3 is to provide access to wildlife and conservation through interpretative programmes to inform, educate and conscientise the reserves' varied constituency. Although this activity on Phase 3 is not operational yet, it will be regarded as a major draw card to schools, youth groups etc. within the greater Nelspruit region which would include the Mbombela and Umjindi municipal areas.

These programmes will need to be compatible with tourism and other commercial activities in the reserve. An Interpretation and Environmental Education Programme must be developed for Phase 3 of the BNR.

**Action Project 5.1.3 (1):**Develop and implement environmental education and interpretation plan.

### **5.1.4 Service Provider Database**

A Service Provider Database will be developed and maintained which captures all Service Providers in the local communities around the BNR. Local Service Providers, captured in the database, will be used whenever possible to undertake contracted work for the MTPA in Phase 3 of the BNR.

**Action Project 5.1.4 (1):**Develop and utilise a local Service Provider database for contract work opportunities in Phase 3 of the BNR.

### **5.1.5 Communication Strategies**

The management team of Phase 3 will regularly engage in two-way communication with recognised community institutions for information dissemination, exposure to regional initiatives and monitoring of community perceptions and attitudes. The management team will also attend community forums on a regular basis to forge relationships with the communities.

**Action Project 5.1.5 (1):**Undertake regular scheduled two way communication with community institutions and determine trends.

## **5.2 RESETTLEMENT AND DOMESTIC LIVESTOCK**

In 1999 when fencing of Phase 3 was planned 18 resident families of subsistence farmers were found to be settled on the reserve and adjoining farmers were found to be grazing livestock on the reserve. All these affected parties were engaged. The Mountainlands Affected Parties Programme in collaboration with Department of Land Affairs and Umjindi Local Municipality commenced in 2000. Under the programme families will be resettled outside the reserve through a tenure upgrade process to provide security of tenure and food security.

A range of agreements were entered into with surrounding communities, Lomshiyo Tribal Authority and the resident families. All families agreed to the programme which would have seen a substantial improvement in their livelihoods.

Four phases were identified and implemented:

- Firstly, grazing of domestic livestock by commercial farmers on the reserve either legally through rental agreements with Public Works or illegally, was terminated and attendant livestock removed.
- Secondly, 6 families resident on private land were relocated to a farm purchased for them under the LRAD programme with contributions from the land owners and DLA.
- Thirdly, the Lomshiyo Trust moved all families and domestic livestock off their land situated in the reserve to their adjoining settlement areas, with a view to development of their land in the reserve.
- Fourthly, the 12 families resident on State Land in the reserve agreed to move to the Sheba Siding area and a large portion of around 800ha was fenced out of the reserve to provide for their grazing needs. They own extensive livestock which is currently grazing inside the reserve. Formalization of the Sheba Siding settlement was initiated by DLA in 1996 and more recently the Umjindi Municipality are in the process of finalizing the township establishment. This phase has not been completed despite agreement reached with all relevant parties and departments. (See also 5.3 below – Sheba Siding).

**Action Project 5.2 (1):** Ensure that remaining families are accommodated at the Sheba Siding formal township and that their grazing is protected and they received equitable redress verified by Department of Human Settlements.

**Action Project 5.2 (2):** Pending resettlement, provide continued engagement and updates to families and manage the domestic livestock and attendant issues. This includes burning of grazing, confinement of dogs to prevent hunting and poaching, prevention of illegal grazing of outsiders livestock and limiting livestock herd growth and impacts.

### 5.3 SHEBA SIDING

From the late 80's an informal settlement developed around the Sheba Mine as a result of the mine's policies at the time. Formalization of the Sheba Siding settlement was initiated by DLA in 1996 and more recently the Umjindi Municipality are in the process of finalizing the township establishment.

The area being formalized forms part of the proclaimed land under custodianship of MTPA. Agreement has been reached with all departments to excise the area from the reserve which was already fenced out in 2000. The formalization process included surveying of the new farm Sheba 949JU and township establishment thereon. The township is adjacent to the reserve and directly affects the viewshed and buffer zone of the reserve. Appropriate municipal bylaws need to be promulgated to protect the gazing area (see 5.2 above) and to mitigate visual and densification aspects associated with townships. Costs could be offset by contributions from the mine who is directly responsible for establishing the settlement through their policies (refer DLA investigation reports 1996).

**Action Project 5.3 (1):** Deproclaim the farm Sheba 494JU to no longer be part of the reserve and allow for township establishment.

**Action Project 5.3 (2):** Ensure promulgation of appropriate bylaws by Umjindi Municipality to protect against future expansion and densification, mitigate visual impacts and protect gazing area and appropriate buffer areas through acceptable layout plan.

**Action Project 5.3 (3):**Engage Umjindi to ensure understanding of reserve requirements and buffer zone implications.

**Action Project 5.3 (4):**Ensure that suitable agricultural stands are provided in Sheba township for the state land resident families.

**Action Project 5.3 (5):**Increased security and management of impacts from Sheba area to be accommodated in reserve operations. This includes security and access control to prevent livestock intrusion, plant collection, poaching and others.

#### **5.4 RESEARCH**

*See Section 9.5 of the Overarching IMP document for Policy relating to research.*

All research projects in Phase 3 are subject to the following:

- Adherence to the MTPA research protocol
- Approval and registration using the guidelines as determined by the Integrated Management Plan;
- Informing the Joint Management Committee,
- Keeping the Phase 3 reserve manager informed as to practical arrangements and actual presence of researchers in the reserve and progress.
- Data from research programmes should then be obtained and captured in relevant databases and integrated into management interventions as and when possible.

Requests for research projects on geology, serpentines, floristic, etc. should be welcomed and actively promoted as it is of benefit to the management of the reserve or conservation in general. As a prerequisite the MTPA expects a final report at the conclusion of the study.

**Action Project 5.4 (1):** Create opportunities for research programmes and update list of potential research programmes that should and can be conducted in Phase 3 of the BNR.

**Action Project 5.4 (2):** Handle all research inquires in terms of the required protocol and obtain approval from the Joint Management Committee and Biological Management Committee.

## **6 PROJECT IMPLEMENTATION PLAN**

### **6.1 LIST OF ACTION PROJECTS**

**Action Project 1.4 (1):** Founding members to develop and ratify the detailed agreement for the reserve.

**Action Project 1.4 (2):** Establish a final Joint Management Committee for phase 3 of the reserve.

**Action Project 1.4 (3):** Joint Management Committee to reconsider institutional model options, including merits and demerits of potentially separating Phase 3 from the rest of BNR and proclamation as a separate Nature Reserve, and management as a distinct management unit.

**Action Project 1.5 (1):** Actively manage portions of the proclaimed area excluded from the game fence, according to the recommendations of the report on fenceline discrepancies.

**Action Project 1.5 (2):** Annually review fenceline positioning and update the report on fenceline discrepancies accordingly.

**Action Project 2.2 [1]:** Consolidate and Maintain a database of geology and geological sites

**Action Project 2.6 (1):** Update soils map as better scale data is made available.

**Action Project 2.7 (1):** Identify and record sites of archaeological importance

**Action Project 2.9 (1):** obtain and maintain weather records from locations at varying altitudes

**Action Project 2.10.1 (1):** Update floral distribution map and GIS database as better scale data is made available.

**Action Project 2.10.3 (1):** Regularly update floral species list, rare and threatened species and plant communities.

**Action Project 2.10.3 (2):**Update GIS to reflect localities of rare and vulnerable flora.

**Action Project 2.10.3 (3):** Regularly update faunal inventory lists as data becomes available.

**Action Project 3 (1):** Ensure that all policies are aligned with the principles of ownership rights and responsibilities.

**Action Project 3.1.1 (1):** Ensure compliance with the Public Finance Management Act.

**Action Project 3.1.1 (2):** Develop and maintain a Biodiversity Inventory for use in determining the contribution of Phase 3 to the ecological value and economy of the area and region.

**Action Project 3.1.1 (3):** Integrate 5 Year Strategic Plan, Business Plan and requirements of the Public Finance Management Act in financial decision making, procurement procedures and spending policies specifically relating to Phase 3 of the BNR.

**Action Project 3.1.1 (4):** Depending on institutional model used, provide all financial management information to MTPA on an annual basis for Annual Performance Review.

**Action Project 3.1.2 (1):** Ensure current staffing structure of Phase3 complies with the organogram which has been approved by the MTPA.

**Action Project 3.1.2 (2):** Develop Database/Inventory of local skills within the community surrounding Phase 3 and employ local staff from this database wherever possible.

**Action Project 3.1.2 (3):** Undertake audit of staff contracts and human resource management policies within Phase 3 and ensure compliance with relevant legislation and guidelines.

**Action Project 3.2 (1):** Undertake Risk Assessment of Phase 3 and provide all GIS data to Biological Management Committee for inclusion in Integrated Safety and Security Strategy for the greater BNR.

**Action Project 3.2 (2):** Wildlife Protection Services unit to undertake safety audit of all public areas and address problem areas.

**Action Project 3.2 (3):** Compile appropriate indemnity forms and ensure these are signed by all visitors and that such principles are captured in land sale agreements in the case of Mountainlands Estate.

**Action Project 3.2 (4):** Erect warning and indemnity signs at all operator access gates.

**Action Project 3.2 (5):** Undertake safety audit to determine safety issues relating to staff activities and address problem areas. Incorporate appropriate legal waivers in staff contracts due to nature of terrain.

**Action Project 3.3 (1):** Ensure that management team of Phase 3 is represented on Biological Management Committee

**Action Project 3.3.1 (1):** Implement fire burning strategy as determined by the Biological Management Committee, in alignment with overarching objectives and operational guidelines.

**Action Project 3.3.1 (2):** Review structure of annual subscriptions to LEFPA to ensure that all Founding Members contribute.

**Action Project 3.3.1 (3):** Ensure that information from the Local Fire Protection Association (LEFPA) is disseminated to the BMC.

**Action Project 3.3.1 (4):** Implement GIS mapping system to record fires and provide data to Biological Management Committee as and when required.

**Action Project 3.3.1 (5):** Implement fire break burning programme, approved by the Biological Management Committee.

**Action Project 3.3.1 (6):** Review impact of fire break practices and agreements with SAPPI to ensure mitigation of risk and appropriate rotation and provision of firebreaks on either side of cadastral boundaries.

**Action Project 3.3.2.1 (1):** Engage the mines on their responsibility for the removal of alien vegetation introduced through mining disturbances.

**Action Project 3.3.2.1 (2):** Develop an alien invasive plant inventory for the reserve and map this in a GIS database.

**Action Project 3.3.2.1 (3):** Develop and Implement continuous alien plant eradication programme in accordance with overarching objectives and operational guidelines.

**Action Project 3.3.2.1 (4):** Update the GIS database and alien plant management overlays on a quarterly basis and use to plan and prioritize areas to be worked.

**Action Project 3.3.2.1 (5):** Obtain funding approval for dedicated teams to implement alien plant eradication programme.

**Action Project 3.3.2.2 (1):** Develop alien/problem animal protocol for BNR Phase 3 and ensure that staff are made aware of implications and management requirements.

**Action Project 3.3.2.2 (2):** Remove or Destroy Alien/Problem animals as and when required,

**Action Project 3.3.2.2 (3):** Ensure confinement of dogs, pending resettlement.

**Action Project 3.3.3 (1):** Integrate Regional Catchment Management Strategies in reserve management interventions for Phase 3 with input from Department of Water Affairs.

**Action Project 3.3.4 (1):** Identify problem erosion areas and capture on GIS database system

**Action Project 3.3.4 (2):** Develop and Implement Soil Erosion Management Plan

**Action Project 3.3.4 (3):** Monitor soil erosion interventions and recurrences.

**Action Project 3.3.4 (4):** Identify areas impacted by erosion due to historic mining activities.

**Action Project 3.3.4 (5):** Implement accountability system whereby relevant mines are responsible for areas which have been eroded due to their historic operations.

**Action Project 3.3.4 (6):** Implement monitoring programme to ensure existing mining operations are rehabilitated into the future to avoid erosion problems.

**Action Project 3.3.5 (1):** Develop and Implement Game Stocking Strategy for BNR, including potential key species such as buffalo and giraffe. Update and maintain and present records.

**Action Project 3.3.5 (2):** Implement wildlife management action plan inclusive of annual schedule of management interventions and activities.

**Action Project 3.3.6 (1):** Commence implementing vegetation monitoring programme and implement management interventions as determined by Biological Management Committee.

**Action Project 3.3.7 (1):** Identify existing state owned infrastructure required for the

establishment of Pickets. Engage the department of Rural Development and Land reform to release this infrastructure to the MTPA.

**Action Project 3.3.7 (2):** Develop Field Ranger Patrol Plan and train Field Rangers to implement plan. This plan should include placement of Field Ranger Pickets.

**Action Project 3.3.7 (3):** Ensure that field rangers are empowered and armed to conduct law enforcement activities.

**Action Project 3.3.8 (1):** Identify all expansion opportunities and benefits thereof.

**Action Project 3.3.8 (2):** Refer expansion/incorporation opportunities to MTPA Protected Area Expansion Team for further development and implementation.

**Action Project 3.4 (1):** Identify cultural resources within Phase 3. Staff should be trained to be able to identify cultural features in Phase 3 and external specialists/students can also be used for this aspect.

**Action Project 3.4 (2):** Develop and maintain database of cultural heritage features in Phase 3.

**Action Project 3.4 (3):** Develop and implement cultural resource conservation plan and strategy with assistance from SAHRA.

**Action Project 3.4 (4):** Sustainably utilise cultural resource features in tourism experiences in alignment with cultural resource conservation plan and strategy.

**Action Project 3.5 (1):** Actively engage in the EIA process for any development proposals within the Buffer Zone and viewshed Protection Zone.

**Action Project 3.5 (2):** Actively engage with Forestry to not replant plantations that extend over the viewshed into the reserve.

**Action Project 3.5 (3):** Engage Umjindi Municipality to ensure incorporation of appropriate bylaws to mitigate viewshed and buffer area impact for the Sheba Siding formalization project.

**Action Project 3.6 (1):** Identify buffer area and proclamation process in terms of NEMPAA.

**Action Project 3.6 (2):** Initiate proclamation of buffer area in terms of NEMPAA

**Action Project 4 (1):** Ensure that all policies are aligned with the principles in terms of ownership rights and responsibilities.

**Action Project 4.1 (1):** Biological Management Committee to annually identify conservation related commercialization opportunities

**Action Project 4.1 (2):** Joint Management Committee to develop a Tourism Implementation Programme for Phase 3

**Action Project 4.1 (3):** Joint Management Committee to periodically review and update the Tourism Implementation Programme

**Action Project 4.1 (4):** Ensure alignment of commercialization opportunities with the carrying capacities defined in the zoning plan.

**Action Project 4.1 (5):** The MTPA must ensure that commercial opportunities offered on state-owned land are aligned with MTPA policy and the provisions of the PFMA

**Action Project 4.2.1 (1):** Build upon the Mountainlands Nature Reserve brand identity through a brand strategy and common brand architecture.

**Action Project 4.2.2 (1):** Implement protocol whereby all external enquiries relating to linkages with other tourism initiatives are referred to the Regional Manager of the MTPA.

**Action Project 4.2.2 (2):** Include established linkages in Marketing Strategy.

**Action Project 4.2.2 (3):** Develop/revise annual infrastructure maintenance plan for phase 3, inclusive of upgrading projects.

**Action Project 4.2.2 (4):** Develop/revise annual infrastructure Development Plan for Phase 3, in alignment with the Concept Development Plan and Tourism Master Plan and in alignment with overarching development policies and guidelines of the BNR.

**Action Project 4.2.4 (1):** Implement Action items identified in the overarching Tourism Operations Plan.



**Action Project 4.2.4 (2):** Capacitate staff on the requirements, policies and guidelines included in the Tourism Operations Plan.

**Action Project 4.2.4 (3):** Ensure staff skills/equipment and equipment used to provide tourism experiences are compliant with industry norms and standards.

**Action Project 4.2.4 (4):** Develop and Implement operations manual for private operators operating in Phase 3, if applicable.

**Action Project 4.2.5 (1):** Develop and maintain a database of all environmental issues within Phase 3, inclusive of mining related issues.

**Action Project 4.2.5 (2):** Engage with relevant mines in order to effectively manage mining related environment management issues.

**Action Project 4.2.5 (3):** Appoint Environmental Compliance Officer to undertake Environmental Compliance Assessments every 6 months to ensure compliance of management operations with relevant legislation and policies.

**Action Project 4.2.5 (4):** Develop and maintain filing system of environmental management legislation and policies for effective and fast reference.

**Action Project 4.2.6 (1):** Develop system to capture and deal with comments and concerns presented by visitors to Phase 3 of the BNR. (A database of comments and concerns should form part of this system).

**Action Project 4.3.1 (1):** Determining harvesting quotas on an annual basis.

**Action Project 4.3.1 (1):** Develop and maintain list of beneficiaries of harvesting programmes.

**Action Project 4.3.2 (1):** Develop and implement hunting management plan and operational strategy for Phase 3 of the BNR once optimum populations are reached.

**Action Project 4.3.2 (2):** Identify qualified and experienced hunting operators to undertake hunting to control population numbers as and when required.

**Action Project 4.3.2 (3):** Determine hunting quotas on an annual basis.

**Action Project 4.3.3 (1):** Biological Management Committee must provide off take quotas on annual basis.

**Action Project 4.3.3 (2):** Regional manager, via the Biodiversity Conservation Officer, must approve number of carcasses to be used internally versus externally.

**Action Project 4.3.3 (3):** BMC, in conjunction with the JMC, to develop and Implement off-take plan and operations strategy to minimise impact on other aspects of the reserve during off-take operations.

**Action Project 4.3.4 (1):** Expose reserve management to legal instruments and provisions dealing with mining in Protected Areas, particularly in respect of mining operations and their legal status, right and obligations.

**Action Project 4.3.4 (2):** Receive annual access and activity plan for approval of JMC and BMC and implement access control of mine personnel and vehicles.

**Action Project 4.3.4 (3):** Prioritise rehabilitation of different mining areas. MTPA to engage mines on their rehabilitation obligations and agree on firm plans to be implemented according to reserve priorities. Review on an annual basis, and monitor implementation to acceptable standards congruent with reserve status.

**Action Project 4.4.1 (1):** Ensure development and maintenance of tourism entrance gates and facilities are catered for in concession/development agreements.

**Action Project 4.4.1 (2):** Train gate staff to provide a friendly, prompt and informative service to visitors.

**Action Project 4.4.2 (1):** Develop and implement signage strategy for the reserve in alignment with overarching signage strategy for the BNR.

**Action Project 4.4.3 (1):** Develop and Implement Road Development and Maintenance Plan for Phase 3, including GIS mapping.

**Action Project 4.4.4 (1):** Boundary fence maintenance and patrol must be developed and implemented on a monthly basis.

**Action Project 4.4.4 (2):** Upgrade fence to accommodate larger species of game such as buffalo, should the game stocking strategy determine that these species will be stocked.

**Action Project 4.4.5 (1):** Develop and implement water provision strategy for Phase 3

**Action Project 4.4.5 (2):** Ensure compliance of boreholes and water extraction points with relevant legislation and water use license requirements

**Action Project 4.4.6 (1):** Implement effective radio communication system.

**Action Project 4.4.7 (1):** Identify Municipal refuse dumps to dump refuse from reserve and formalise agreement with refuse dump.

**Action Project 4.4.7 (2):** Explore the potential of recycling as far as possible.

**Action Project 5 (1):** Ensure that all policies relating to benefit flow are aligned with the principles in terms of ownership rights and responsibilities.

**Action Project 5.1.1 (1):** Register with all relevant community forums, working groups, and any other formal institutions to participate in meetings and discussions.

**Action Project 5.1.1 (2):** Establish formal relations with neighbours.

**Action Project 5.1.1 (3):** Identify and actively support community empowerment partnerships and social programmes focusing on conservation and tourism development.

**Action Project 5.1.2 (1):** Monitor compliance with Land Claims Court order and refer land claim inquiries to Social Ecology and Joint Management Committee as and when they are presented.

**Action Project 5.1.3 (1):** Develop and implement environmental education and interpretation plan.

**Action Project 5.1.4 (1):** Develop and utilise a local Service Provider database for contract work opportunities in Phase 3 of the BNR.

**Action Project 5.1.5 (1):** Undertake regular scheduled two way communication with community institutions and determine trends.

**Action Project 5.2 (1):** Ensure that remaining families are accommodated at the Sheba Siding formal township and that their grazing is protected and they received equitable redress verified by Department of Human Settlements.

**Action Project 5.2 (2):** Pending resettlement, provide continued engagement and updates to families and manage the domestic livestock and attendant issues. This includes burning of grazing, confinement of dogs to prevent hunting and poaching, prevention of illegal grazing of outsiders livestock and limiting livestock herd growth and impacts.

**Action Project 5.3 (1):** Deproclaim the farm Sheba 494JU to no longer be part of the reserve and allow for township establishment.

**Action Project 5.3 (2):** Ensure promulgation of appropriate bylaws by Umjindi Municipality to protect against future expansion and densification, mitigate visual impacts and protect gazing area and appropriate buffer areas through acceptable layout plan.

**Action Project 5.3 (3):** Engage Umjindi to ensure understanding of reserve requirements and buffer zone implications.

**Action Project 5.3 (4):** Ensure that suitable agricultural stands are provided in Sheba township for the state land resident families.

**Action Project 5.3 (5):** Increased security and management of impacts from Sheba area to be accommodated in reserve operations. This includes security and access control to prevent livestock intrusion, plant collection, poaching and others.

**Action Project 5.4 (1):** Create opportunities for research programmes and update list of potential research programmes that should and can be conducted in Phase 3 of the BNR.

**Action Project 5.4 (2):** Handle all research inquires in terms of the required protocol and obtain approval from the Joint Management Committee and Biological Management Committee.

## 6.2 ALIGNMENT OF ACTION PROJECTS WITH PHASE 3 SPECIFIC MANAGEMENT OBJECTIVES

<p><b>Objective 1:</b> – To create a single, viable nature reserve with an associated wildlife</p> <ul style="list-style-type: none"> <li>- To manage the dynamic vegetation structure, compositional and plant species diversity, and the ecological processes involved.</li> <li>- To ensure the survival and increased viability of threatened plant populations.</li> <li>- To manage viable populations of threatened animals and/or priority game species.</li> </ul>
<p><b>Action Project 1.5 (1):</b> Actively manage portions of the proclaimed area excluded from the game fence, according to the recommendations of the report on fenceline discrepancies.</p>
<p><b>Action Project 1.5 (2):</b> Annually review fenceline positioning and update the report on fenceline discrepancies accordingly.</p>
<p><b>Action Project 2.6 (1):</b> Update soils map as better scale data is made available.</p>
<p><b>Action Project 2.9 (1):</b> obtain and maintain weather records from locations at varying altitudes</p>
<p><b>Action Project 2.10.1 (1):</b> Update floral distribution map and GIS database as better scale data is made available.</p>
<p><b>Action Project 2.10.3 (1):</b> Regularly update floral species list, rare and threatened species and plant communities.</p>
<p><b>Action Project 2.10.3 (2):</b> Update GIS to reflect localities of rare and vulnerable flora.</p>
<p><b>Action Project 2.10.3 (3):</b> Regularly update faunal inventory lists as data becomes available.</p>
<p><b>Action Project 3 (1):</b> Ensure that all policies are aligned with the principles of ownership rights and responsibilities.</p>
<p><b>Action Project 3.1.2 (1):</b> Ensure current staffing structure of Phase3 complies with the organogram which has been approved by the MTPA.</p>
<p><b>Action Project 3.1.2 (2):</b> Develop Database/Inventory of local skills within the community surrounding Phase 3 and employ local staff from this database wherever possible.</p>
<p><b>Action Project 3.1.2 (3):</b> Undertake audit of staff contracts and human resource management policies within Phase 3 and ensure compliance with relevant legislation and guidelines.</p>
<p><b>Action Project 3.2 (1):</b> Undertake Risk Assessment of Phase 3 and provide all GIS data to Biological Management Committee for inclusion in Integrated Safety and Security Strategy for the greater BNR.</p>
<p><b>Action Project 3.2 (2):</b> Wildlife Protection Services unit to undertake safety audit of all public areas and address problem areas.</p>
<p><b>Action Project 3.2 (3):</b> Compile appropriate indemnity forms and ensure these are signed by all visitors and that such principles are captured in land sale agreements in the case of Mountainlands Estate.</p>
<p><b>Action Project 3.2 (4):</b> Erect warning and indemnity signs at all operator access gates.</p>
<p><b>Action Project 3.2 (5):</b> Undertake safety audit to determine safety issues relating to staff activities and address problem areas. Incorporate appropriate legal waivers in staff contracts due to nature of terrain.</p>
<p><b>Action Project 3.3 (1):</b> Ensure that management team of Phase 3 is represented on Biological Management Committee</p>
<p><b>Action Project 3.3.1 (1):</b> Implement fire burning strategy as determined by the Biological Management Committee, in alignment with overarching objectives and operational guidelines.</p>
<p><b>Action Project 3.3.1 (2):</b> Review structure of annual subscriptions to LEFPA to ensure that all Founding Members contribute.</p>
<p><b>Action Project 3.3.1 (3):</b> Ensure that information from the Local Fire Protection Association (LEFPA) is disseminated to the BMC.</p>

<b>Action Project 3.3.1 (4):</b> Implement GIS mapping system to record fires and provide data to Biological Management Committee as and when required.
<b>Action Project 3.3.1 (5):</b> Implement fire break burning programme, approved by the Biological Management Committee.
<b>Action Project 3.3.1 (6):</b> Review impact of fire break practices and agreements with SAPPI to ensure mitigation of risk and appropriate rotation and provision of firebreaks on either side of cadastral boundaries.
<b>Action Project 3.3.2.1 (1):</b> Engage the mines on their responsibility for the removal of alien vegetation introduced through mining disturbances.
<b>Action Project 3.3.2.1 (2):</b> Develop an alien invasive plant inventory for the reserve and map this in a GIS database.
<b>Action Project 3.3.2.1 (3):</b> Develop and Implement continuous alien plant eradication programme in accordance with overarching objectives and operational guidelines.
<b>Action Project 3.3.2.1 (4):</b> Update the GIS database and alien plant management overlays on a quarterly basis and use to plan and prioritize areas to be worked.
<b>Action Project 3.3.2.1 (5):</b> Obtain funding approval for dedicated teams to implement alien plant eradication programme.
<b>Action Project 3.3.2.2 (1):</b> Develop alien/problem animal protocol for BNR Phase 3 and ensure that staff are made aware of implications and management requirements.
<b>Action Project 3.3.2.2 (2):</b> Remove or Destroy Alien/Problem animals as and when required,
<b>Action Project 3.3.2.2 (3):</b> Ensure confinement of dogs, pending resettlement.
<b>Action Project 3.3.4 (1):</b> Identify problem erosion areas and capture on GIS database system
<b>Action Project 3.3.4 (2):</b> Develop and Implement Soil Erosion Management Plan
<b>Action Project 3.3.4 (3):</b> Monitor soil erosion interventions and recurrences.
<b>Action Project 3.3.4 (4):</b> Identify areas impacted by erosion due to historic mining activities.
<b>Action Project 3.3.4 (5):</b> Implement accountability system whereby relevant mines are responsible for areas which have been eroded due to their historic operations.
<b>Action Project 3.3.4 (6):</b> Implement monitoring programme to ensure existing mining operations are rehabilitated into the future to avoid erosion problems.
<b>Action Project 3.3.5 (1):</b> Develop and Implement Game Stocking Strategy for BNR, including potential key species such as buffalo and giraffe. Update and maintain and present records.
<b>Action Project 3.3.5 (2):</b> Implement wildlife management action plan inclusive of annual schedule of management interventions and activities.
<b>Action Project 3.3.6 (1):</b> Commence implementing vegetation monitoring programme and implement management interventions as determined by Biological Management Committee.
<b>Action Project 3.3.7 (1):</b> Identify existing state owned infrastructure required for the establishment of Pickets. Engage the department of Rural Development and Land reform to release this infrastructure to the MTPA.
<b>Action Project 3.3.7 (2):</b> Develop Field Ranger Patrol Plan and train Field Rangers to implement plan. This plan should include placement of Field Ranger Pickets.
<b>Action Project 3.3.7 (3):</b> Ensure that field rangers are empowered and armed to conduct law enforcement activities.
<b>Action Project 4.2.5 (1):</b> Develop and maintain a database of all environmental issues within Phase 3, inclusive of mining related issues.
<b>Action Project 4.2.5 (3):</b> Appoint Environmental Compliance Officer to undertake Environmental Compliance Assessments every 6 months to ensure compliance of management operations with relevant legislation and policies.

<b>Action Project 4.2.5 (4):</b> Develop and maintain filing system of environmental management legislation and policies for effective and fast reference.
<b>Action Project 4.3.4 (1):</b> Expose reserve management to legal instruments and provisions dealing with mining in Protected Areas, particularly in respect of mining operations and their legal status, right and obligations.
<b>Action Project 4.3.4 (2):</b> Receive annual access and activity plan from mines for approval of JMC and BMC and implement access control of mine personnel and vehicles.
<b>Action Project 4.3.4 (3):</b> Prioritise rehabilitation of different mining areas. MTPA to engage mines on their rehabilitation obligations and agree on firm plans to be implemented according to reserve priorities. Review on an annual basis, and monitor implementation to acceptable standards congruent with reserve status.
<b>Action Project 4.4.4 (1):</b> Boundary fence maintenance and patrol must be developed and implemented on a monthly basis.
<b>Action Project 4.4.4 (2):</b> Upgrade fence to accommodate larger species of game such as buffalo, should the game stocking strategy determine that these species will be stocked.
<b>Action Project 4.4.6 (1):</b> Implement effective radio communication system.
<b>Action Project 4.4.7 (1):</b> Identify Municipal refuse dumps to dump refuse from reserve and formalise agreement with refuse dump.
<b>Action Project 4.4.7 (2):</b> Explore the potential of recycling as far as possible.

<b>Objective 2:</b> – To conserve its rich biodiversity and maintain (or where required restore) ecological functions and processes - To manage populations of game species suited to the available habitat and according to broad historical distribution in such a way that there is no conflict with higher priority objectives. - To ensure the continued yield of high-quality water, including natural and artificial aquatic systems, through proper catchment management.
<b>Action Project 3.3.3 (1):</b> Integrate Regional Catchment Management Strategies in reserve management interventions for Phase 3 with input from Department of Water Affairs.
<b>Action Project 3.3.8 (1):</b> Identify all expansion opportunities and benefits thereof.
<b>Action Project 3.3.8 (2):</b> Refer expansion/incorporation opportunities to MTPA Protected Area Expansion Team for further development and implementation.
<b>Action Project 4.4.5 (1):</b> Develop and implement water provision strategy for Phase 3
<b>Action Project 4.4.5 (2):</b> Ensure compliance of boreholes and water extraction points with relevant legislation and water use license requirements
<b>Action Project 5.4 (1):</b> Create opportunities for research programmes and update list of potential research programmes that should and can be conducted in Phase 3 of the BNR.
<b>Action Project 5.4 (2):</b> Handle all research inquires in terms of the required protocol and obtain approval from the Joint Management Committee and Biological Management Committee.

<b>Objective 3:</b> – To strive towards financial independence of the project through income generation that is based on certain common assets
<b>Action Project 1.4 (1):</b> Founding members to develop and ratify the detailed agreement for the reserve.
<b>Action Project 1.4 (2):</b> Establish a final Joint Management Committee for phase 3 of the reserve.
<b>Action Project 1.4 (3):</b> Joint Management Committee to reconsider institutional model options, including merits and demerits of potentially separating Phase 3 from the rest of BNR and proclamation as a separate Nature Reserve, and management as a distinct management unit.
<b>Action Project 3.1.1 (1):</b> Ensure compliance with the Public Finance Management Act.

<b>Action Project 3.1.1 (2):</b> Develop and maintain a Biodiversity Inventory for use in determining the contribution of Phase 3 to the ecological value and economy of the area and region.
<b>Action Project 3.1.1 (3):</b> Integrate 5 Year Strategic Plan, Business Plan and requirements of the Public Finance Management Act in financial decision making, procurement procedures and spending policies specifically relating to Phase 3 of the BNR.
<b>Action Project 3.1.1 (4):</b> Depending on institutional model used, provide all financial management information to MTPA on an annual basis for Annual Performance Review.

<b>Objective 4:</b> – To benefit Founding Members and stakeholders through responsible and sustainable resource utilization and development.
<b>Action Project 4 (1):</b> Ensure that all policies are aligned with the principles in terms of ownership rights and responsibilities.
<b>Action Project 4.1 (1):</b> Biological Management Committee to annually identify conservation related commercialization opportunities
<b>Action Project 4.1 (2):</b> Joint Management Committee to develop a Tourism Implementation Programme for Phase 3
<b>Action Project 4.1 (3):</b> Joint Management Committee to periodically review and update the Tourism Implementation Programme
<b>Action Project 4.1 (4):</b> Ensure alignment of commercialization opportunities with the carrying capacities defined in the zoning plan.
<b>Action Project 4.1 (5):</b> The MTPA must ensure that commercial opportunities offered on state-owned land are aligned with MTPA policy and the provisions of the PFMA
<b>Action Project 4.2.1 (1):</b> Build upon the Mountainlands Nature Reserve brand identity through a brand strategy and common brand architecture.
<b>Action Project 4.2.2 (1):</b> Implement protocol whereby all external enquiries relating to linkages with other tourism initiatives are referred to the Regional Manager of the MTPA.
<b>Action Project 4.2.2 (2):</b> Include established linkages in Marketing Strategy.
<b>Action Project 4.2.2 (3):</b> Develop/revise annual infrastructure maintenance plan for phase 3, inclusive of upgrading projects.
<b>Action Project 4.2.2 (4):</b> Develop/revise annual infrastructure Development Plan for Phase 3, in alignment with the Concept Development Plan and Tourism Master Plan and in alignment with overarching development policies and guidelines of the BNR.
<b>Action Project 4.2.4 (1):</b> Implement Action items identified in the overarching Tourism Operations Plan.
<b>Action Project 4.2.4 (2):</b> Capacitate staff on the requirements, policies and guidelines included in the Tourism Operations Plan.
<b>Action Project 4.2.4 (3):</b> Ensure staff skills/equipment and equipment used to provide tourism experiences are compliant with industry norms and standards.
<b>Action Project 4.2.4 (4):</b> Develop and Implement operations manual for private operators operating in Phase 3, if applicable.
<b>Action Project 4.2.6 (1):</b> Develop system to capture and deal with comments and concerns presented by visitors to Phase 3 of the BNR. (A database of comments and concerns should form part of this system).
<b>Action Project 4.3.1 (1):</b> Determining harvesting quotas on an annual basis.
<b>Action Project 4.3.1 (1):</b> Develop and maintain list of beneficiaries of harvesting programmes.
<b>Action Project 4.3.2 (1):</b> Develop and implement hunting management plan and operational strategy for Phase 3 of the BNR once optimum populations are reached.

<b>Action Project 4.3.2 (2):</b> Identify qualified and experienced hunting operators to undertake hunting to control population numbers as and when required.
<b>Action Project 4.3.2 (3):</b> Determine hunting quotas on an annual basis.
<b>Action Project 4.3.3 (1):</b> Biological Management Committee must provide off take quotas on annual basis.
<b>Action Project 4.3.3 (2):</b> Regional manager, via the Biodiversity Conservation Officer, must approve number of carcasses to be used internally versus externally.
<b>Action Project 4.3.3 (3):</b> BMC, in conjunction with the JMC, to develop and Implement off-take plan and operations strategy to minimise impact on other aspects of the reserve during off-take operations.
<b>Action Project 4.4.1 (1):</b> Ensure development and maintenance of tourism entrance gates and facilities are catered for in concession/development agreements.
<b>Action Project 4.4.1 (2):</b> Train gate staff to provide a friendly, prompt and informative service to visitors.
<b>Action Project 4.4.2 (1):</b> Develop and implement signage strategy for the reserve in alignment with overarching signage strategy for the BNR.
<b>Action Project 4.4.3 (1):</b> Develop and Implement Road Development and Maintenance Plan for Phase 3, including GIS mapping.
<b>Action Project 5 (1):</b> Ensure that all policies relating to benefit flow are aligned with the principles in terms of ownership rights and responsibilities.

<b>Objective 5:</b> – To manage and preserve sites of archaeological, cultural, geological and historical significance.
<b>Action Project 2.2 [1]:</b> Consolidate and Maintain a database of geology and geological sites
<b>Action Project 2.7 (1):</b> Identify and record sites of archaeological importance
<b>Action Project 3.4 (1):</b> Identify cultural resources within Phase 3. Staff should be trained to be able to identify cultural features in Phase 3 and external specialists/students can also be used for this aspect.
<b>Action Project 3.4 (2):</b> Develop and maintain database of cultural heritage features in Phase 3.
<b>Action Project 3.4 (3):</b> Develop and implement cultural resource conservation plan and strategy with assistance from SAHRA.

<b>Objective 6:</b> – In the interim, pending resettlement outside the reserve, to manage human settlement, domestic animals and agricultural cultivation in such a way that conflict with higher priority objectives is minimised.
<b>Action Project 5.2 (1):</b> Ensure that remaining families are accommodated at the Sheba Siding formal township and that their grazing is protected and they received equitable redress verified by Department of Human Settlements.
<b>Action Project 5.2 (2):</b> Pending resettlement, provide continued engagement and updates to families and manage the domestic livestock and attendant issues. This includes burning of grazing, confinement of dogs to prevent hunting and poaching, prevention of illegal grazing of outsiders livestock and limiting livestock herd growth and impacts.
<b>Action Project 5.3 (1):</b> Deproclaim the farm Sheba 494JU to no longer be part of the reserve and allow for township establishment.
<b>Action Project 5.3 (2):</b> Ensure promulgation of appropriate bylaws by Umjindi Municipality to protect against future expansion and densification, mitigate visual impacts and protect gazing area and appropriate buffer areas through acceptable layout plan.
<b>Action Project 5.3 (3):</b> Engage Umjindi to ensure understanding of reserve requirements and buffer zone implications.
<b>Action Project 5.3 (4):</b> Ensure that suitable agricultural stands are provided in Sheba township for the state land resident families.



**Action Project 5.3 (5):** Increased security and management of impacts from Sheba area to be accommodated in reserve operations. This includes security and access control to prevent livestock intrusion, plant collection, poaching and others.

**Objective 7:** – To develop positive relations with local communities through effective participation in matters of mutual interest and in so doing contribute to the sustainability of the protected area.

**Action Project 3.5 (1):** Actively engage in the EIA process for any development proposals within the Buffer Zone and viewshed Protection Zone.

**Action Project 3.5 (2):** Actively engage with Forestry to not replant plantations that extend over the viewshed into the reserve.

**Action Project 3.5 (3):** Engage Umjindi Municipality to ensure incorporation of appropriate bylaws to mitigate viewshed and buffer area impact for the Sheba Siding formalization project.

**Action Project 3.6 (1):** Identify buffer area and proclamation process in terms of NEMPAA.

**Action Project 3.6 (2):** Initiate proclamation of buffer area in terms of NEMPAA

**Action Project 4.2.5 (2):** Engage with relevant mines in order to effectively manage mining related environment management issues.

**Action Project 5.1.1 (1):** Register with all relevant community forums, working groups, and any other formal institutions to participate in meetings and discussions.

**Action Project 5.1.1 (2):** Establish formal relations with neighbours.

**Action Project 5.1.1 (3):** Identify and actively support community empowerment partnerships and social programmes focusing on conservation and tourism development.

**Action Project 5.1.2 (1):** Monitor compliance with Land Claims Court order and refer land claim inquiries to Social Ecology and Joint Management Committee as and when they are presented.

**Action Project 5.1.4 (1):** Develop and utilise a local Service Provider database for contract work opportunities in Phase 3 of the BNR.

**Action Project 5.1.5 (1):** Undertake regular scheduled two way communication with community institutions and determine trends.

**Objective 8:** – To develop and implement environmental awareness and interpretation programs

**Action Project 5.1.3 (1):** Develop and implement environmental education and interpretation plan.

6.3 IMPLEMENTATION PLAN

**Principle #1: Ensure sound resource management and conservation of biodiversity, biophysical processes, landscapes, cultural, historical and archaeological resources.**

<b>Overarching Objective 2:</b> To achieve responsible management and maintenance of biodiversity and ecological processes, within the different landscape units.										
Overarching Action Projects (Refer to Document 1):	Timeframe					Priority	Responsibility	Indicators	Deliverables	Funding requirements
	1	2	3	4	5					
<b>Action Project 7.3.3 [1]:</b> Undertake baseline soil erosion assessment to identify problem areas.							Reserve Managers	Problem areas mapped in a GIS management overlay.	0	-
<b>Action Project 7.3.3 [2]:</b> Prioritise problem erosion areas.							Reserve Manager/Ecologist	Problem areas are prioritised and allocated timeframes/budgets accordingly.	0	-
<b>Action Project 7.3.3 [3]:</b> Develop soil erosion rehabilitation programme for the reserve which will be updated on an annual basis.							Reserve Manager/Ecologist	Based on baseline assessment and prioritisation exercise, a soil erosion rehabilitation programme is continuously implemented and reviewed on an annual basis.	0	-

<b>Overarching Objective 3: To manage and maintain floral composition including endemic and priority species.</b>										
<b>Overarching Action Projects (Refer to Document 1):</b>	<b>Timeframe</b>					<b>Priority</b>	<b>Responsibility</b>	<b>Indicators</b>	<b>Deliverables</b>	<b>Funding requirements</b>
	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>					
<b>Action Project 7.3.1 [1]:</b> Undertake annual ecological assessment to determine veld burning requirements.							Reserve manager / ecologist	Burning areas are identified on an annual basis and captured in a GIS system for monitoring purposes.	0	-
<b>Action Project 7.3.1 [2]:</b> Undertake fire risk assessment and develop fire prevention strategy							Reserve manager	Areas of high fire risk are identified on a GIS management overlay and a strategy to reduce the risk is being implemented.	0	-
<b>Action Project 3.4.5 [1]:</b> Update species lists and GIS database for the BNR.							Ecologist	Species list is updated in the first year to include all known species in the BNR. The species list is then continually updated as additional species are identified. This data should be captured in a GIS system.	0	-
<b>Overarching Objective 4: To effectively control and manage invasive species, both alien and indigenous.</b>										
<b>Overarching Action Projects (Refer to Document 1):</b>	<b>Timeframe</b>					<b>Priority</b>	<b>Responsibility</b>	<b>Indicators</b>	<b>Deliverables</b>	<b>Funding requirements</b>
	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>					
<b>Action Project 7.3.1.1 [1]:</b> Include Alien Plant eradication and management in Annual Performance Plan.							Reserve Manager	Alien plant eradication and management is assessed in annual performance plan and management interventions adjusted accordingly.	0	-

<b>Action Project 7.3.1.1 [2]:</b> Develop Alien Plant inventory and species lists for BNR.							Ecologist	A GIS based alien plant inventory is developed in year 1 and maintained as an ongoing management action.	0	-
<b>Action Project 7.3.1.2 [2]:</b> Develop a control programme for alien animals present in the Reserve.							Reserve managers	Alien plan control programme is approved by scientific services of the MTPA for implementation.	0	-
<b>Action Project 7.3.1.2 [1]:</b> Develop a new, equitable policy for keeping personal and official domestic animals and livestock in the Reserve that includes procedures for dealing in a consistent manner with alien animals that stray into the Reserve.							Reserve Managers	Equitable policy regarding personal and official domestic animals in the BNR is understood by all relevant stakeholders and being enforced by the MTPA.	0	-
<b>Action Project 7.3.1.1 [3]:</b> Annually review Alien Plant Management and Monitoring Programme for BNR.							Reserve manager/ ecologist	GIS overlays are used to monitor alien plant management on an annual basis. Management interventions are then adjusted accordingly.	0	-

<b>Overarching Objective 5:</b> To manage catchment areas and natural aquatic systems to ensure the continued yield of high quality water.										
<b>Overarching Action Projects (Refer to Document 1):</b>	<b>Timeframe</b>						<b>Responsibility</b>	<b>Indicators</b>	<b>Budget</b>	<b>Funding source</b>
	1	2	3	4	5					
<b>Action Project 7.3.2 [1]:</b> Develop and implement Integrated Catchment Management Strategy in association with the National Department of Water Affairs and other relevant water agencies.							Scientific services/NDWA	Integrated Catchment Management Strategy is implemented throughout the BNR and adopted by all relevant stakeholders.	0	-
<b>Overarching Objective 6:</b> To manage viable populations of fauna, including priority game and threatened species, that are specifically adapted to this habitat.										
<b>Overarching Action Projects (Refer to Document 1):</b>	<b>Timeframe</b>					<b>Priority</b>	<b>Responsibility</b>	<b>Indicators</b>	<b>Deliverables</b>	<b>Funding requirements</b>
	1	2	3	4	5					
<b>Action Project 7.3.4 [1]:</b> Develop Species Specific Introduction Plan for the BNR based on Ecological Carrying Capacities.							Ecologist	Species specific introduction plan is developed based on ecological carrying capacities and conservation objectives.	0	-
<b>Action Project 7.3.4.1 [1]:</b> Develop operational policies and procedures to address problem animal management in alignment with MTPA manuals and national legislation.							Reserve managers	All incidences associated with problem animals are managed in a uniform manner in terms of the policies relating to problem animal control in the BNR.	0	-

<b>Action Project 7.3.4.2 [1]:</b> Develop Species Introduction Policy and Strategy for the Reserve and ensure keeping of introduction registers.							Ecologist	Based on the species specific introduction plan, all relevant species are introduced in terms of MTPA wildlife relocation policies and all introductions are recorded in introduction registers for the BNR.	0	-
<b>Action Project 7.3.5 [1]:</b> Develop and Implement a range expansion strategy for the BNR which is in alignment with MTPA range expansion policies.							PA Expansion unit/ Reserve managers	A well planned long term range expansion strategy is implemented which aims at achieving the MTPA desired state in terms of range expansion for the BNR.	0	-

<b>Overarching Objective 13:</b> To manage and preserve features of geological, archaeological, cultural, and historical significance.										
<b>Overarching Action Projects (Refer to Document 1):</b>	Timeframe					Priority	Responsibility	Indicators	Deliverables	Funding requirements
	1	2	3	4	5					
<b>MANAGEMENT OF UNIQUE FEATURES (GEOLOGICAL, CULTURAL, HERITAGE)</b>										
<b>Action Project 3.4.3 [1]:</b> Consolidate and Maintain a database of geology and geological sites.							Reserve Managers / ecologist	Database of geology and geological sites is developed.	0	-

<b>Action Project 7.4 [1]:</b> Develop Comprehensive Cultural Heritage Management Plan, inclusive of a database/inventory of all Cultural Heritage Features and Resources in the BNR.							Reserve manager / social ecology	A comprehensive GIS based cultural heritage management plan is implemented which maintains	0	-
<p>Objective 1: – To create a single, viable nature reserve with an associated wildlife</p> <ul style="list-style-type: none"> <li>- To manage the dynamic vegetation structure, compositional and plant species diversity, and the ecological processes involved.</li> <li>- To ensure the survival and increased viability of threatened plant populations.</li> <li>- To manage viable populations of threatened animals and/or priority game species.</li> </ul>										
Action Project:	Timeframe					Priority	Responsibility	Indicators	Deliverables	Funding requirements
	1	2	3	4	5					
<b>Action Project 1.5 (1):</b> Actively manage portions of the proclaimed area excluded from the game fence, according to the recommendations of the report on fenceline discrepancies.							BMC/Reserve manager	Areas excluded from the game fence area are effectively and efficiently managed in accordance with the report on fenceline discrepancies.	0	-
<b>Action Project 1.5 (2):</b> Annually review fenceline positioning and update the report on fenceline discrepancies accordingly.							BMC	Fenceline positioning is reviewed annually and the report on fenceline discrepancies is updated accordingly on a continual basis.	0	-
<b>Action Project 2.6 (1):</b> Update soils map as better scale data is made available.							Ecologist	Soil maps are updated with improved scale data.	0	-

<b>Action Project 2.9 (1):</b> obtain and maintain weather records from locations at varying altitudes						Ecologist /Reserve Manager	Weather records for locations at various altitudes are continuously maintained.	0	-
<b>Action Project 2.10.1 (1):</b> Update floral distribution map and GIS database as better scale data is made available.						Ecologist	Floral distribution map and GIS database according to better scale data.	0	-
<b>Action Project 2.10.3 (1):</b> Regularly update floral species list, rare and threatened species and plant communities.						Ecologist	Floral species list including rare and threatened species is regularly updated.	0	-
<b>Action Project 2.10.3 (2):</b> Update GIS to reflect localities of rare and vulnerable flora.						Ecologist / PAM	Update GIS to reflect localities of rare and vulnerable flora.	0	-
<b>Action Project 2.10.3 (3):</b> Regularly update faunal inventory lists as data becomes available.						Ecologist	Update faunal inventory lists as data becomes available.	0	-
<b>Action Project 3 (1):</b> Ensure that all policies are aligned with the principles of ownership rights and responsibilities.						JMC	All policies are aligned with the principles of ownership rights and responsibilities.	0	-
<b>Action Project 3.1.2 (1):</b> Ensure current staffing structure of Phase3 complies with the organogram which has been approved by the MTPA.						Reserve Manager	Current staffing structure is reviewed to ensure compliance with MTPA organogram.	0	-



<b>Action Project 3.1.2 (2):</b> Develop Database/Inventory of local skills within the community surrounding Phase 3 and employ local staff from this database wherever possible.						Reserve Manager / Social Ecologist	Database/Inventory of local skills is well maintained and local staff are employed from this inventory.	0	-
<b>Action Project 3.1.2 (3):</b> Undertake audit of staff contracts and human resource management policies within Phase 3 and ensure compliance with relevant legislation and guidelines.						JMC / MTPA HR	Staff contracts and human resource management policies comply with relevant labour legislation.	0	-
<b>Action Project 3.2 (1):</b> Undertake Risk Assessment of Phase 3 and provide all GIS data to Biological Management Committee for inclusion in Integrated Safety and Security Strategy for the greater BNR.						Reserve Manager / WPS	Risk assessment is undertaken and GIS data provided for inclusion into Integrated Safety and Security Strategy for the BNR.	0	-
<b>Action Project 3.2 (2):</b> Wildlife Protection Services unit to undertake safety audit of all public areas and address problem areas.						WPS	Public areas are safe from a wildlife risk point of view.	0	-
<b>Action Project 3.2 (3):</b> Compile appropriate indemnity forms and ensure these are signed by all visitors and that such principles are captured in land sale agreements in the case of Mountainlands Estate.						JMC	Indemnity forms are signs by all visitors and principles relating to indemnity are captured in land sale agreements in the case of Mountainlands.	0	-
<b>Action Project 3.2 (4):</b> Erect warning and indemnity signs at all operator access gates.						Reserve Manager / JMC	Warning and indemnity signs are installed at all operator access gates.	0	-

<b>Action Project 3.2 (5):</b> Undertake safety audit to determine safety issues relating to staff activities and address problem areas. Incorporate appropriate legal waivers in staff contracts due to nature of terrain.						Reserve Manager / WPS	Safety issues relating to staff activities are addressed by a safety audit and legal waivers are incorporated into staff contracts.	0	-
<b>Action Project 3.3 (1):</b> Ensure that management team of Phase 3 is represented on Biological Management Committee						JMC / BMC / Reserve Manager	Management team of Phase 3 is represented on Biological Management Committee.	0	-
<b>Action Project 3.3.1 (1):</b> Implement fire burning strategy as determined by the Biological Management Committee, in alignment with overarching objectives and operational guidelines.						Reserve Manager / Ecologist	Fire burning strategy is implemented as per the recommendation of the BMC, in alignment with overarching objectives.	0	-
<b>Action Project 3.3.1 (2):</b> Review structure of annual subscriptions to LEFPA to ensure that all Founding Members contribute.						JMC	All founding members contribute to LEFPA due to a reviewed structure.	0	-
<b>Action Project 3.3.1 (3):</b> Ensure that information from the Local Fire Protection Association (LEFPA) is disseminated to the BMC.						MTPA	The BMC confirms receipt of LEFPA information from Phase 3 management team.	0	-
<b>Action Project 3.3.1 (4):</b> Implement GIS mapping system to record fires and provide data to Biological Management Committee as and when required.						Ecologist / Reserve Manager	All fires are recorded on GIS management system and data provided to the BMC for further decision making purposes.	0	-

<b>Action Project 3.3.1 (5):</b> Implement fire break burning programme, approved by the Biological Management Committee.						Reserve Manager	Fire breaks are burned on an annual basis as approved by the BMC.	0	-
<b>Action Project 3.3.1 (6):</b> Review impact of fire break practices and agreements with SAPPI to ensure mitigation of risk and appropriate rotation and provision of firebreaks on either side of cadastral boundaries.						Ecologist / BMC	Impacts of fire break practices are reviewed and amendments to the fire break programme are made accordingly. Agreements are then formalised with SAPPI which mitigate risk and ensure rotation and provision of firebreaks on either side of cadastral boundaries.	0	-
<b>Action Project 3.3.2.1 (1):</b> Engage the mines on their responsibility for the removal of alien vegetation introduced through mining disturbances.						BMC / Ecologist	Mines acknowledge their responsibility for the removal of alien vegetation introduced through mining disturbances.	0	-
<b>Action Project 3.3.2.1 (2):</b> Develop an alien invasive plant inventory for the reserve and map this in a GIS database.						Ecologist	Alien invasive plant inventory is developed and spatial alien plant data is captured in a GIS database.	0	-
<b>Action Project 3.3.2.1 (3):</b> Develop and Implement continuous alien plant eradication programme in accordance with overarching objectives and operational guidelines.						Ecologist / Reserve Manager	Alien plant eradication programme is implemented in accordance with overarching objectives and operational guidelines.	0	-

<b>Action Project 3.3.2.1 (4):</b> Update the GIS database and alien plant management overlays on a quarterly basis and use to plan and prioritize areas to be worked.						Ecologist / Reserve Manager	GIS databases and alien plant management overlays are updated on a quarterly basis and priority clearing areas are identified accordingly.	0	-
<b>Action Project 3.3.2.1 (5):</b> Obtain funding approval for dedicated teams to implement alien plant eradication programme.						BMC	Approved funding is obtained for dedicated team to implement alien plant eradication programme.	0	-
<b>Action Project 3.3.2.2 (1):</b> Develop alien/problem animal protocol for BNR Phase 3 and ensure that staff are made aware of implications and management requirements.						Reserve Manager	Alien/problem animals are controlled by a specific protocol understood by all staff.	0	-
<b>Action Project 3.3.2.2 (2):</b> Remove or Destroy Alien/Problem animals as and when required,						Reserve Manager	Alien/Problem animals are destroyed as and when required.	0	-
<b>Action Project 3.3.2.2 (3):</b> Ensure confinement of dogs, pending resettlement.						Reserve Manager	All dogs within the reserve are confined until such point that they are removed.	0	-
<b>Action Project 3.3.4 (1):</b> Identify problem erosion areas and capture on GIS database system						Reserve Manager / Ecologist	Problem erosion areas are captured on GIS database system.	0	-
<b>Action Project 3.3.4 (2):</b> Develop and Implement Soil Erosion Management Plan						Reserve Manager / Ecologist	A Soil Erosion Management Plan is being implemented focussing on priority areas.	0	-

<b>Action Project 3.3.4 (3):</b> Monitor soil erosion interventions and recurrences.						Ecologist	Soil erosion interventions and recurrences are monitored and changes in management interventions are made to the Soil Erosion Management Plan.	0	-
<b>Action Project 3.3.4 (4):</b> Identify areas impacted by erosion due to historic mining activities.						Reserve Manager / Ecologist	Areas impacted by erosion due to historic mining activities are identified and captured in a GIS database.	0	-
<b>Action Project 3.3.4 (5):</b> Implement accountability system whereby relevant mines are responsible for areas which have been eroded due to their historic operations.						BMC / reserve Manager	Mines accept responsibility for areas which have been eroded due to their historic operations.	0	-
<b>Action Project 3.3.4 (6):</b> Implement monitoring programme to ensure existing mining operations are rehabilitated into the future to avoid erosion problems.						BMC / reserve Manager	Existing mining operations are monitored and mines rehabilitate mining operations.	0	-
<b>Action Project 3.3.5 (1):</b> Develop and Implement Game Stocking Strategy for BNR, including potential key species such as buffalo and giraffe. Update and maintain and present records.						Ecologist / BMC	Game is stocked onto Phase 3, with specific focus on key species, in accordance with a game stocking strategy.	0	-

<b>Action Project 3.3.5 (2):</b> Implement wildlife management action plan inclusive of annual schedule of management interventions and activities.						Ecologist / BMC	Various action projects identified in the Wildlife Management Plan are implemented as and when required.	0	-
<b>Action Project 3.3.6 (1):</b> Commence implementing vegetation monitoring programme and implement management interventions as determined by Biological Management Committee.						Reserve Manager / Ecologist	Vegetation monitoring programme is implemented as determined by the BMC and relevant management interventions are implemented accordingly.	0	-
<b>Action Project 3.3.7 (1):</b> Identify existing state owned infrastructure required for the establishment of Pickets. Engage the department of Rural Development and Land reform to release this infrastructure to the MTPA.						Reserve Manager / Regional Manager	Pickets are established with existing state owned infrastructure by engaging with the department of Rural Development and Land Reform for them to release this infrastructure to the MTPA.	0	-
<b>Action Project 3.3.7 (2):</b> Develop Field Ranger Patrol Plan and train Field Rangers to implement plan. This plan should include placement of Field Ranger Pickets.						Reserve Manager / HR	All field ranger patrol activities are undertaken by well trained field rangers in terms of a Field Ranger Patrol Plan.	0	-
<b>Action Project 3.3.7 (3):</b> Ensure that field rangers are empowered and armed to conduct law enforcement activities.						Reserve Manager / WPS	Law enforcement activities are undertaken by well trained, relevantly qualified and fully empowered field rangers.	0	-

<b>Action Project 4.2.5 (1):</b> Develop and maintain a database of all environmental issues within Phase 3, inclusive of mining related issues.						Reserve Manager	All environmental issues are captured in a well maintained database to be addressed.	0	-
<b>Action Project 4.2.5 (3):</b> Appoint Environmental Compliance Officer to undertake Environmental Compliance Assessments every 6 months to ensure compliance of management operations with relevant legislation and policies.						JMC	Environmental compliance officer is appointed every six months to ensure compliance of management operations with relevant legislation.	0	-
<b>Action Project 4.2.5 (4):</b> Develop and maintain filing system of environmental management legislation and policies for effective and fast reference.						Reserve Manager / BMC	All relevant environmental management legislation and policies are captured in a filing system for effective and fast referencing.	0	-
<b>Action Project 4.3.4 (1):</b> Expose reserve management to legal instruments and provisions dealing with mining in Protected Areas, particularly in respect of mining operations and their legal status, right and obligations.						Regional Manager	Reserve management are exposed to and understand legal instruments and provisions dealing with mining in Protected Areas.	0	-
<b>Action Project 4.3.4 (2):</b> Receive annual access and activity plan from mines for approval of JMC and BMC and implement access control of mine personnel and vehicles.						Reserve Manager	Annual access and activity plans are received from mines for approval by the JMC and BMC.	0	-

<p><b>Action Project 4.3.4 (3):</b> Prioritise rehabilitation of different mining areas. MTPA to engage mines on their rehabilitation obligations and agree on firm plans to be implemented according to reserve priorities. Review on an annual basis, and monitor implementation to acceptable standards congruent with reserve status.</p>							Reserve Manager / Ecologist / JMC	Rehabilitation of mining areas are prioritised and mines are engaged with in terms of their rehabilitation obligations.	0	-
<p><b>Action Project 4.4.4 (1):</b> Boundary fence maintenance and patrol must be developed and implemented on a monthly basis.</p>							Reserve Manager	Boundary fence is well maintained and uncompromised. All security issues which do occur on the perimeter fence are indentified and addressed efficiently and effectively.	0	-
<p><b>Action Project 4.4.4 (2):</b> Upgrade fence to accommodate larger species of game such as buffalo, should the game stocking strategy determine that these species will be stocked.</p>							WPS	Fencing infrastructure is upgraded to accommodate larger species of game such as buffalo should the decision be made to stock these species.	0	-
<p><b>Action Project 4.4.6 (1):</b> Implement effective radio communication system.</p>							Reserve Manager	Radio communication system is developed in alignment with overarching radio communication strategy. The system should cover the entire reserve.	0	-



<b>Action Project 4.4.7 (1):</b> Identify Municipal refuse dumps to dump refuse from reserve and formalise agreement with refuse dump.							Reserve Manager	Formalised agreements are established between Phase 3 and the relevant Municipal refuse dumps.	0	-
<b>Action Project 4.4.7 (2):</b> Explore the potential of recycling as far as possible.							Reserve Manager	Recycling opportunities are identified and explored on a continual basis.	0	-

Objective 2: – To conserve its rich biodiversity and maintain (or where required restore) ecological functions and processes  
- To manage populations of game species suited to the available habitat and according to broad historical distribution in such a way that there is no conflict with higher priority objectives.  
- To ensure the continued yield of high-quality water, including natural and artificial aquatic systems, through proper catchment management.

Action Project:	Timeframe					Priority	Responsibility	Indicators	Deliverables	Funding requirements
	1	2	3	4	5					
<b>Action Project 3.3.3 (1):</b> Integrate Regional Catchment Management Strategies in reserve management interventions for Phase 3 with input from Department of Water Affairs.							Ecologist / Reserve Manager / BMC	Management interventions in Phase 3 are in alignment with Regional Catchment Management Strategy.	0	-
<b>Action Project 3.3.8 (1):</b> Identify all expansion opportunities and benefits thereof.							Reserve Manager / Protected Area Expansion Unit	All expansion opportunities are identified and the benefits of these opportunities are quantified in an expansion report.	0	-
<b>Action Project 3.3.8 (2):</b> Refer expansion/incorporation opportunities to MTPA Protected Area Expansion Team for further development and implementation.							Reserve Manager / Protected Area Expansion Unit	Expansion opportunities are considered by the MTPA Protected Areas Expansion Unit for further implementation.	0	-

<b>Action Project 4.4.5 (1):</b> Develop and implement water provision strategy for Phase 3						Reserve Manager	Water is provided in Phase 3 as and where necessary according to a water provision strategy.	0	-
<b>Action Project 4.4.5 (2):</b> Ensure compliance of boreholes and water extraction points with relevant legislation and water use license requirements						Reserve Manager	All water extraction points and boreholes comply with relevant legislation.	0	-
<b>Action Project 5.4 (1):</b> Create opportunities for research programmes and update list of potential research programmes that should and can be conducted in Phase 3 of the BNR.						Reserve Manager / Scientific Services / BMC	Research programmes are implemented in Phase 3, guided by a list of proposed research programmes.	0	-
<b>Action Project 5.4 (2):</b> Handle all research inquiries in terms of the required protocol and obtain approval from the Joint Management Committee and Biological Management Committee.						Scientific Services	All research inquiries are handled in terms of a research protocol and proposed research projects obtain approval from the JMC and the BMC.	0	-
<b>Objective 5: – To manage and preserve sites of archaeological, cultural, geological and historical significance.</b>									
<b>Action Project:</b>	<b>Timeframe</b>					<b>Responsibility</b>	<b>Indicators</b>	<b>Budget</b>	<b>Funding source</b>
	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>				
<b>Action Project 2.2 [1]:</b> Consolidate and Maintain a database of geology and geological sites						Ecologist / Reserve Manager	A database of geology and geological sites is developed and effectively	0	-

							maintained.		
<b>Action Project 2.7 (1):</b> Identify and record sites of archaeological importance						Ecologist / Reserve Manager	Sites of archaeological importance are identified and recorded in a GIS database.	0	-
<b>Action Project 3.4 (1):</b> Identify cultural resources within Phase 3. Staff should be trained to be able to identify cultural features in Phase 3 and external specialists/students can also be used for this aspect.						Social Ecologist	Cultural resources within phase 3 are identified by relevant staff who are well trained to be able to identify such sites. Students can also be used to supplement these activities.	0	-
<b>Action Project 3.4 (2):</b> Develop and maintain database of cultural heritage features in Phase 3.						Social Ecologist	Database of cultural heritage features and GIS spatial recording system is developed and maintain.	0	-
<b>Action Project 3.4 (3):</b> Develop and implement cultural resource conservation plan and strategy with assistance from SAHRA.						Social Ecologist	SAHRA is engaged with to develop and implement cultural resource conservation plan.	0	-

**Principle 2: Foster sustainable management and good governance in developing Barberton Nature Reserve into a leading partnership reserve.**

<b>Overarching Objective 1:</b> To ensure effective co-operative management of the various components of the reserve to achieve the objectives of the Protected Area.										
<b>Overarching Action Projects (Refer to Document 1):</b>	<b>Timeframe</b>					<b>Priority</b>	<b>Responsibility</b>	<b>Indicators</b>	<b>Deliverables</b>	<b>Funding requirements</b>
	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>					
<b>Action Project 2.2 [1]:</b> Develop thorough understanding applicable to objectives and functionality of various statutes relevant to all stakeholders in the BNR.							BMC/CMC/JMC	All management staff and primary stakeholders understand overarching objectives and statutes relevant to BNR.	0	-
<b>Action Project 2.4 [1]:</b> Map the Phase 2 fence lines and compile a document capturing the current arrangements that define the fence placement.							Reserve manager	Phase 2 fencelines are mapped and a document describing placement arrangements is compiled and presented to management staff and relevant primary stakeholders.	0	-
<b>Action Project 2.6 [1]:</b> Update the database of local agreements, servitude agreements, Settlement Agreements, Co-Management Agreements and Mou's.							Reserve manager / social ecology	All existing local agreements, servitude agreements, etc. are reviewed, updated and included in a well maintained database. Legal reviews should also be undertaken wherever necessary.	0	-

<p><b>Action Project 2.7 [1]:</b> Annually explore and investigate opportunities to broaden conservation land use in and surrounding the Reserve.</p>							<p>PA Expansion unit / Regional and Reserve Manager</p>	<p>All options to broaden conservation land use in and surrounding the reserve are explored on an annual basis and implemented where possible.</p>	<p>0</p>	<p>-</p>
<p><b>Action Project 2.7 [2]:</b> Implement MTPA Expansion Strategy and Processes when opportunities have been identified.</p>							<p>PA Expansion unit / Regional and Reserve Manager</p>	<p>Opportunities to implement the MTPA expansion strategy are explored and progressed annually.</p>	<p>0</p>	<p>-</p>
<p><b>Action Project 4.4 [1]:</b> Annually review strategic conservation objectives and revise the linked performance plan.</p>							<p>Reserve / Regional Manager</p>	<p>Strategic conservation objectives are reviewed and the associated linked performance plan revised accordingly.</p>	<p>0</p>	<p>-</p>
<p><b>Action Project 5.3 [1]:</b> MTPA to annually review special management overlays and develop management actions accordingly.</p>							<p>Ecologist</p>	<p>All management overlays are reviewed on annual basis and management actions in the IMP are revised accordingly. New management overlays should also be developed as and when required.</p>	<p>0</p>	<p>-</p>

<b>Action Project 7.1.1 [1]:</b> Develop 5 Year Strategic Plan and Annual Performance Plan.							MTPA	5 year strategic plan and associated annual performance plan is used to review annual performance of the management team in terms of the IMP.	0	-
<b>Action Project 7.1.3 [3]:</b> Implement Annual Strategic Performance Planning and Audits in accordance with the PFMA.							MTPA	Annual strategic performance planning is done in alignment with the requirements of the Integrated Management Plan and in compliance with the PFMA.	0	-
<b>Action Project 7.1.4 [4]:</b> Obtain info from DNPW once their investigation of available assets is complete and do needs analyses and implement accordingly.							BMC/CMC/JMC/DNPW	Information regarding available assets is obtained from DNPW and needs analysis	0	-
<b>Action Project 7.1.2 [1]:</b> Investigate human resource requirements in the BNR and adapt the existing staff organogram with a view to improving effectiveness and efficiency in achieving BNR objectives and informing the Business Plan.							MTPA	Existing staff organogram is revised according to actual management requirements in terms of the IMP and in compliance with MTPA Human Resource Management Policies.	0	-

<b>Action Project 7.1.2 [2]:</b> Implement MTPA official skills development plan and strategy within the BNR.							MTPA HR	Official MTPA skills development strategy is continually being implemented.	0	-
<b>Overarching Objective 7:</b> To prevent and control illegal or unauthorised activities within the Protected Area.										
<b>Overarching Action Projects (Refer to Document 1):</b>	<b>Timeframe</b>						<b>Responsibility</b>	<b>Indicators</b>	<b>Deliverables</b>	<b>Funding requirements</b>
	1	2	3	4	5	<b>Priority</b>				
<b>SAFETY AND SECURITY</b>										
<b>Action Project 8.3.4 [1]:</b> Develop Fence Patrol and Maintenance Strategy.							Reserve Managers	A strategy is developed which minimises illegal access to the reserve and ensures that breaches in perimeter fences are reacted to effectively.	0	-
<b>Action Project 7.2 [2]:</b> Develop and implement Integrated Security Plan for the BNR.							Reserve Managers / Wildlife Protection Services	A uniformed approach is taken by all primary stakeholders in responding to and managing security issues in the BNR.	0	-
<b>Action Project 7.2.1 [1]:</b> Develop Illegal Utilisation Monitoring Strategy.							Reserve Manager	A monitoring strategy which engages all primary is implemented which ensures a uniform front is formed in response to illegal activities in the BNR. All illegal utilisation is recorded on a central database.	0	-

<b>Action Project 7.2 [1]:</b> Wildlife Protection Services Unit to undertake comprehensive Security Audit to identify and quantify all safety and security threats to the reserve.							WPS	Security threats are identified and quantified and then integrated into the security plan for the BNR.	0	-
<b>Overarching Objective 8:</b> To manage activities of all individuals with rights within the reserve, in such a way that conflict with other objectives is minimized.										
Overarching Action Projects (Refer to Document 1):	Timeframe					Priority	Responsibility	Indicators	Deliverables	Funding requirements
	1	2	3	4	5					
<b>MINING RIGHTS</b>										
<b>Action Project 8.2.4 [2]:</b> MTPA to follow up with the Minister and ensure that provisions of NEM:PAA section 48(2) and section 48 (3) are affected.							Regional Manager	Provisions of Section 48 (2) and Section 48 (3) are affected.	0	-
<b>Action Project 8.2.4 [1]:</b> Verify, compile and map lawfully held current mining rights as well as past mining rights within the reserve for the purposes of reserve management, access arrangements and rehabilitation plans per further Action Projects below. Develop additional management overlay/s.							Reserve Managers / Regional Manager	All mining rights are reviewed and verified. Map lawful and unlawful mining activities on specific management overlays. Access arrangements and rehabilitation plans are confirmed and agreed upon accordingly.	0	-
<b>Action Project 8.2.4 [3]:</b> MTPA in conjunction with the relevant management structures, to implement recommendations emanating from a determination by the Minister in terms of Section 48 (3)							BMC/CMC/JMC	Recommendations emanating from a determination by the Minister in terms of Section 48 (3) are implemented.	0	-



<p><b>Action Project 8.2.4 [4]:</b> Prioritise rehabilitation of different mining areas. MTPA in conjunction with the relevant management structures, to engage mines on their rehabilitation obligations and agree on firm plans to be implemented according to reserve priorities. Review on an annual basis, and monitor implementation to acceptable standards congruent with reserve status.</p>							BMC/CMC/JMC	Mining areas are prioritised for rehabilitation and mines engaged in terms of their obligations to rehabilitate their specific areas.	0	-
<p><b>Action Project 8.2.4 [5]:</b> MTPA in conjunction with the relevant management structures, to monitor compliance with EMPRs for mining operations and engage mines on transgressions.</p>							BMC/CMC/JMC	Mine are engaged with on transgressions in terms of their compliance to their relevant EMPR's.	0	-
<p><b>Action Project 8.2.4 [6]:</b> Establishing access control mechanism with the mines which enables effective control by the reserve and monitoring of all mining activities.</p>							BMC/CMC/JMC	Access control mechanism is established with mines and all mining activities are monitored.	0	-

<b>Overarching Objective 9:</b> To build positive relations with interested and affected parties through effective participation in matters of mutual interest.										
<b>Overarching Action Projects (Refer to Document 1):</b>	<b>Timeframe</b>					<b>Priority</b>	<b>Responsibility</b>	<b>Indicators</b>	<b>Deliverables</b>	<b>Funding requirements</b>
	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>					
<b>COMMUNITY ENGAGEMENT</b>										
<b>Action Project 9.1 [1]:</b> Develop annual community participation strategy and plan, inclusive of relevant programmes and projects.							Social Ecology	Community programmes and projects are planned annually, based on a BNR community participation strategy.	0	-
<b>Action Project 9.1 [2]:</b> Develop database of local service providers and skilled people.							Social Ecology	Service providers for specific projects are selected from a database of local service providers.	0	-
<b>Action Project 9.2 [1]:</b> Develop policy to address the management of external funding for specific projects.							BMC/CMC/JMC	All external funding is well managed to address specific project funding requirements in terms of a funding policy.	0	-
<b>Action Project 9.2 [2]:</b> Develop strategy to lever additional external funding for specific development projects in the BNR.							BMC/CMC/JMC	External funding for specific development projects is obtained.	0	-
<b>Action Project 9.3 [1]:</b> Annually review any land claims lodged and gazetted within the BNR.							Social Ecology / Regional Manager	Land claims are reviewed and addressed on an annual basis.	0	-

**Objective 6:** – In the interim, pending resettlement outside the reserve, to manage human settlement, domestic animals and agricultural cultivation in such a way that conflict with higher priority objectives is minimised.

Action Project:	Timeframe					Priority	Responsibility	Indicators	Deliverables	Funding requirements
	1	2	3	4	5					
<b>Action Project 5.2 (1):</b> Ensure that remaining families are accommodated at the Sheba Siding formal township and that their grazing is protected and they received equitable redress verified by Department of Human Settlements.							Social Ecology / BMC	All remaining families are accommodated at the Sheba Siding formal township, their grazing protected and they have received equitable redress verified by the Department of Human Settlements.		
<b>Action Project 5.2 (2):</b> Pending resettlement, provide continued engagement and updates to families and manage the domestic livestock and attendant issues. This includes burning of grazing, confinement of dogs to prevent hunting and poaching, prevention of illegal grazing of outsiders livestock and limiting livestock herd growth and impacts.							Social Ecology / BMC / reserve Manager	Continued updates and engagement is provided to communities and livestock and attendant issues are addressed pending resettlement of families. Burning of grazing, confinement of dogs, prevention of illegal grazing of external livestock, etc are all managed during this period.		
<b>Action Project 5.3 (1):</b> Deproclaim the farm Sheba 494JU to no longer be part of the reserve and allow for township establishment.							BMC	494JU is no long part of Phase 3 due to a deproclamation process.		

<p><b>Action Project 5.3 (2):</b> Ensure promulgation of appropriate bylaws by Umjindi Municipality to protect against future expansion and densification, mitigate visual impacts and protect gazing area and appropriate buffer areas through acceptable layout plan.</p>					<p><b>BMC</b></p>	<p>Appropriate bylaws are promulgated by Umjindi Municipality to protect against future expansion and densification, mitigate visual impacts, etc through acceptable layout plan.</p>		
<p><b>Action Project 5.3 (3):</b> Engage Umjindi to ensure understanding of reserve requirements and buffer zone implications.</p>					<p><b>BMC</b></p>	<p>Umjindi Municipality understand the reserve requirements and buffer zone implications through an engagement process.</p>		
<p><b>Action Project 5.3 (4):</b> Ensure that suitable agricultural stands are provided in Sheba township for the state land resident families.</p>					<p><b>BMC</b></p>	<p>Suitable agricultural stands are provided in Sheba township for the state land resident families.</p>		
<p><b>Action Project 5.3 (5):</b> Increased security and management of impacts from Sheba area to be accommodated in reserve operations. This includes security and access control to prevent livestock intrusion, plant collection, poaching and others.</p>					<p>Reserve Manager / WPS</p>	<p>Increased security is implemented and management of impacts from Sheba area is accommodated in reserve operations.</p>		

**Objective 7:** – To develop positive relations with local communities through effective participation in matters of mutual interest and in so doing contribute to the sustainability of the protected area.

Action Project:	Timeframe					Priority	Responsibility	Indicators	Deliverables	Funding requirements
	1	2	3	4	5					
<b>Action Project 3.5 (1):</b> Actively engage in the EIA process for any development proposals within the Buffer Zone and viewshed Protection Zone.							Reserve Manager / BMC	Active participation in EIA processes for any development proposals within the Buffer Zone and viewshed Protection Zone.	0	-
<b>Action Project 3.5 (2):</b> Actively engage with Forestry to not replant plantations that extend over the viewshed into the reserve.							Reserve Manager / BMC	The viewshed of reserve is cleared of plantations through engagement with Forestry operations.	0	-
<b>Action Project 3.5 (3):</b> Engage Umjindi Municipality to ensure incorporation of appropriate bylaws to mitigate viewshed and buffer area impact for the Sheba Siding formalization project.							Reserve Manager / BMC	Incorporation of appropriate by-laws to mitigate viewshed and buffer areas for the Sheba Siding formalisation project through effective engagement with the Umjindi Municipality.	0	-
<b>Action Project 3.6 (1):</b> Identify buffer area and proclamation process in terms of NEMPAA.							BMC / Ecologist	Buffer area and proclamation process identified in terms of NEMPAA.	0	-
<b>Action Project 3.6 (2):</b> Initiate proclamation of buffer area in terms of NEMPAA							BMC	Proclamation of buffer area is initiated in terms of NEMPAA.	0	-

<b>Action Project 4.2.5 (2):</b> Engage with relevant mines in order to effectively manage mining related environment management issues.						Reserve Manager / BMC	Mines are engaged with to effectively manage mining related environmental management issues.	0	-
<b>Action Project 5.1.1 (1):</b> Register with all relevant community forums, working groups, and any other formal institutions to participate in meetings and discussions.						Reserve Manager / Social Ecology	Active participation by management team in community forums, working groups and other formal institutions.	0	-
<b>Action Project 5.1.1 (2):</b> Establish formal relations with neighbours.						Reserve Manager / Social Ecology	Formal relations with neighbours are established.	0	-
<b>Action Project 5.1.1 (3):</b> Identify and actively support community empowerment partnerships and social programmes focusing on conservation and tourism development.						Reserve Manager / Social Ecology	Community empowerment partnerships and social programmes are identified and actively supported.	0	-
<b>Action Project 5.1.2 (1):</b> Monitor compliance with Land Claims Court order and refer land claim inquiries to Social Ecology and Joint Management Committee as and when they are presented.						Social Ecology / JMC	Land claims court order is complied with and any land claim inquiry is referred to social ecology and Joint Management Committee.	0	-
<b>Action Project 5.1.4 (1):</b> Develop and utilise a local Service Provider database for contract work opportunities in Phase 3 of the BNR.						Reserve Manager / HR	A local service provider database is developed and maintained and contract workers are employed from this database.	0	-

<b>Action Project 5.1.5 (1):</b> Undertake regular scheduled two way communication with community institutions and determine trends.							Reserve Manager / Social Ecology	Trends in community institutions are determined through scheduled two way communication with these institutions.	0	-
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**Principle 3: Promote the sustainable development of a wildlife and tourism economy within and surrounding BNR**

<b>Overarching Objective 12:</b> To ensure that the reserve capitalises from and contributes to regional economic development through synergistic approaches.										
<b>Overarching Action Projects (Refer to Document 1):</b>	<b>Timeframe</b>					<b>Priority</b>	<b>Responsibility</b>	<b>Indicators</b>	<b>Deliverables</b>	<b>Funding requirements</b>
	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>					
<b>CONTRIBUTION TO REGIONAL ECONOMIC GROWTH</b>										
<b>Action Project 2.3 [1]:</b> Identify other planning initiatives in the region and ensure alignment with these processes.							BMC/CMC/JMC	Potential linkages are identified and explored on an annual basis.	0	-
<b>Action Project 7.1.1 [2]:</b> Undertake evaluation of ecosystem services and contribution to the local economy by the reserve.							Scientific Services / External SP	Ecosystem services are evaluated and a quantified contribution to the economy is determined.	0	-
<b>Action Project 2.3 [2]:</b> Ensure alignment with all local government IDPs and SDF's as these are developed and reviewed. Ensure local government are familiar with buffer area requirements.							Regional and Reserve Manager / Social Ecology / BMC/CMC/JMC	All government IDP's and SDF's incorporate the BNR planning initiatives as and when they are reviewed.	0	-

**Objective 3:**– To strive towards financial independence of the project through income generation that is based on certain common assets

Action Project:	Timeframe					Priority	Responsibility	Indicators	Deliverables	Funding requirements
	1	2	3	4	5					
<b>Action Project 1.4 (1):</b> Founding members to develop and ratify the detailed agreement for the reserve.							JMC (Founding Members)	A detailed agreement for the reserve is developed and ratified by the founding members.	0	-
<b>Action Project 1.4 (2):</b> Establish a final Joint Management Committee for phase 3 of the reserve.							JMC	Final Joint Management Committee is appointed and operational.	0	-
<b>Action Project 1.4 (3):</b> Joint Management Committee to reconsider institutional model options, including merits and demerits of potentially separating Phase 3 from the rest of BNR and proclamation as a separate Nature Reserve, and management as a distinct management unit.							JMC	A final decision is made by the JMC regarding institutional models and whether or not Phase 3 should be separated from the rest of the BNR.	0	-
<b>Action Project 3.1.1 (1):</b> Ensure compliance with the Public Finance Management Act.							BMC / Finance	Compliance with Public Finance Management Act is maintained at all times.	0	-
<b>Action Project 3.1.1 (2):</b> Develop and maintain a Biodiversity Inventory for use in determining the contribution of Phase 3 to the ecological value and economy of the area and region.							Reserve Manager / Scientific services	A Biodiversity Inventory is developed and maintained for use in determining the contribution of Phase 3 to the ecological value and economy of the area and region.	0	-



<b>Action Project 3.1.1 (3):</b> Integrate 5 Year Strategic Plan, Business Plan and requirements of the Public Finance Management Act in financial decision making, procurement procedures and spending policies specifically relating to Phase 3 of the BNR.							BMC / Finance	Financial decision making, procurement procedures and spending policies are based on 5 year strategic plan, business plan and Public Finance Management Act.	0	-
<b>Action Project 3.1.1 (4):</b> Depending on institutional model used, provide all financial management information to MTPA on an annual basis for Annual Performance Review.							Reserve Manager / JMC	All relevant financial information is provided to MTPA on an annual basis for Performance Review.	0	-

**Principle #4: Provide benefits to adjacent communities through sustainable resource utilisation.**

<b>Overarching Objective 10:</b> To promote awareness, research and interpretation of the reserve and its unique attributes.										
<b>Overarching Action Projects (Refer to Document 1):</b>	<b>Timeframe</b>					<b>Priority</b>	<b>Responsibility</b>	<b>Indicators</b>	<b>Deliverables</b>	<b>Funding requirements</b>
	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>					
<b>AWARENESS, INTERPRETATION AND RESEARCH</b>										
<b>Action Project 8.1.1 [1]:</b> Develop a Joint Marketing Strategy for BNR.							BMC/CMC/JMC	All joint marketing activities and actions are aligned in a Joint Marketing Strategy.	0	-
<b>Action Project 8.1.2 [1]:</b> Annually identify and explore potential linkages with tourism initiatives.							BMC/CMC/JMC	Potential linkages with tourism initiatives are identified and explored on an annual basis.	0	-

<b>Action Project 8.1.2 [2]:</b> Establish single point of contact to address any enquiries from tourism initiatives in the region.						BMC/CMC/JMC	Single point of contact is established to address any enquiries from tourism initiatives in the region.	0	-
<b>Action Project 8.1.2 [3]:</b> Align marketing plan with any linkages made with other tourism initiatives.						BMC/CMC/JMC	All linkages made with other tourism initiatives are included in the marketing plan and the marketing plan is updated accordingly on an annual basis.	0	-
<b>Action Project 9.4 [1]:</b> Develop a BNR environmental awareness education programme specifically for surrounding neighbouring communities and the general public interest groups.						Social Ecology	All awareness and education activities are implemented in a well developed plan which includes all relevant stakeholders.	0	-
<b>Action Project 9.4 [2]:</b> Develop an interpretation programme in a standard format for the Nature Reserve.						Social Ecology	Interpretation is standardised throughout the reserve, guided by an interpretation plan.	0	-
<b>Action Project 9.5 [1]:</b> Develop research strategy for the BNR, inclusive of list of prioritised research projects.						Ecologist / Scientific Services	All research projects are identified and implemented according to an official research strategy based on prioritised research projects as determined by the management team and other relevant professionals.	0	-

<b>Action Project 9.5 [2]:</b> Appropriate permanent research facilities must be developed for the BNR.							MTPA	Researchers have access to permanent research facilities.	0	-
<b>Action Project 9.5 [3]:</b> Motivate for the establishment of the reserve as part of South African Ecological Observatory Network.							Scientific Services	The reserve is established as part of the South African Ecological Observatory Network.	0	-
<b>Action Project 9.5 [4]:</b> Established Reserve Library and Document Database.							Reserve Manager	Reserve library is established and a database of all scientific and management documents is maintained.	0	-
<b>Overarching Objective 11:</b> To allow sustainable utilization within the greater conservation objectives so as to optimize benefits to stakeholders.										
Overarching Action Projects (Refer to Document 1):	Timeframe					Priority	Responsibility	Indicators	Deliverables	Funding requirements
	1	2	3	4	5					
<b>UTILISATION AND INFRASTRUCTURE</b>										
<b>Action Project 8.1.3 [1]:</b> Develop clear standards for all infrastructural development in the BNR.							BMC/CMC/JMC	All developments undertaken in the BNR are done so in terms of clear development standards.	0	-
<b>Action Project 8.1.3 [2]:</b> Establish approval process for proposed infrastructure development in the BNR.							BMC/CMC/JMC	All proposed development in the BNR is subject to an approval process before development can proceed.	0	-
<b>Action Project 8.1.4 [1]:</b> Develop Tourism Operations Plan.							BMC/CMC/JMC	Tourism Operations in the BNR are well structured and compatible with each other in terms of a Tourism Operations Plan.	0	-

<b>Action Project 8.1.5 [1]:</b> Implement strategy whereby all proposed developments in the BNR are reviewed in terms of Environmental Legislation and ensure that all relevant Environmental Authorisations are obtained.						BMC/CMC/JMC	All proposed developments in the BNR are compliant with relevant Environmental Legislation.	0	-
<b>Action Project 8.1.5 [2]:</b> Establish a reporting system whereby stakeholders can report any environmental issues within the BNR to the Biodiversity Management Committee or relevant management structure.						BMC/CMC/JMC	All environmental issues within the BNR are reported to the relevant management structures by Stakeholders and issues are effectively addressed.	0	-
<b>Action Project 8.1.6 [1]:</b> Develop and Implement Tourism Monitoring Strategy.						BMC/CMC/JMC	Tourism activities in the BNR are successfully monitored through a consolidated management strategy.	0	-
<b>Action Project 8.1.6 [2]:</b> Capacitate Landowners and Product Owners to implement Monitoring Strategy.						BMC/CMC/JMC	Landowners and Product Owners are capacitated and empowered to implement monitoring strategy.	0	-
<b>Action Project 8.2.1 [1]:</b> Develop Guideline and Policies for the sustainable harvesting of resources.						Scientific Services	Resources in the reserve are harvested in a manner which does not compromise any of the overarching objectives for BNR.	0	-

<b>Action Project 8.2.2 [1]:</b> Develop hunting guidelines and policies for the BNR.							WPS / PAM	Hunting is effectively managed through a uniformed approach in the BNR, based on well structured and established guidelines and policies for the sustainable harvesting of resources.	0	-
<b>Action Project 8.2.2 [2]:</b> Develop Game Management Model to address equitable division of income from live sales between relevant landowners.							BMC/CMC/JMC	Income from live sales is equitably divided between relevant landowners in terms of an approved Game Management Model for the BNR.	0	-
<b>Action Project 8.2.2 [3]:</b> Develop Annual Live Sales Strategy based on Ecological Carrying Capacities.							Scientific Services / Wildlife Business Development unit	Live sales quotas are determined and processed on an annual basis.	0	-
<b>Action Project 8.2.3 [1]:</b> Develop Bio-prospecting Policies and Guidelines for the BNR.							Scientific Services / WPS	Bio-prospecting in the reserve is handled in terms of specific guidelines and policies to ensure that these activities do not compromise any of the objectives of the BNR.	0	-

<b>Action Project 8.3.1 [1]:</b> Develop Access Management Strategy for the BNR.						BMC/CMC/JMC	All access to the BNR is managed in a uniformed approach and access is effectively controlled and managed.	0	-
<b>Action Project 8.3.2 [1]:</b> Develop Signage Manual for the BNR which includes guidelines and policies on all relevant signage requirements.						BMC/CMC/JMC	All signage in the BNR is uniformly designed and installed.	0	-
<b>Action Project 8.3.3 [1]:</b> Develop Road Construction manual for the BNR, including policies and guidelines for road development in the reserve.						Tourism Business Development / PAM	All roads in the BNR are upgraded and constructed to a set standard as determined by road construction manual.	0	-
<b>Action Project 8.3.3 [2]:</b> Engage with trail development professional to design and develop trails within the BNR, inclusive of mapping and marking.						Wildlife Business Development / PAM	Hiking trails and mountain biking trails are developed and established according to industry norms and standards.	0	-
<b>Action Project 8.3.4 [2]:</b> Develop internal fence approval criteria.						Reserve Managers	All internal fences are subject to an approval process before construction.	0	-
<b>Action Project 8.3.5 [1]:</b> Develop bulk services development policy and servitude registration protocol.						Scientific Services / PAM	All bulk service installation must be in alignment with a service development policy and in compliance with national and provincial guidelines and policies.	0	-

<b>Action Project 8.3.6 [1]:</b> Develop and implement radio operation protocol.							Reserve Managers	Radio communication in the BNR is well structured and communication protocol is maintained.	0	-
<b>Action Project 8.3.7 [1]:</b> Develop Integrated Waste Management Plan for BNR.							Reserve Manager / Ecologist	Waste is effectively managed in the BNR in compliance with relevant waste and environmental legislation.	0	-
<b>Action Project 8.3.7 [2]:</b> Develop Water and Energy Saving Plan and Strategy.							BMC/CMC/JMC	Water and Energy Saving Targets are set for the BNR and achieved through the use of a Water and Energy Saving Plan.	0	-
<b>Action Project 8.3.9 [1]:</b> Develop Air Space Policy in alignment with aviation legislation policies and tourism stakeholders.							BMC/CMC/JMC	All aircraft activities in the area are managed in accordance with relevant aviation policies and relevant sections in environmental statutes.	0	-
<b>Objective 4: – To benefit Founding Members and stakeholders through responsible and sustainable resource utilization and development.</b>										
Action Project:	Timeframe					Priority	Responsibility	Indicators	Deliverables	Funding requirements
	1	2	3	4	5					
<b>Action Project 4 (1):</b> Ensure that all policies are aligned with the principles in terms of ownership rights and responsibilities.							JMC	All policies are aligned with the principles in terms of ownership rights and responsibilities.	0	-

<b>Action Project 4.1 (1):</b> Biological Management Committee to annually identify conservation related commercialization opportunities						BMC / JMC	Conservation related commercialisation opportunities are identified on an annual basis and management relevant management policies adapted accordingly.	0	-
<b>Action Project 4.1 (2):</b> Joint Management Committee to develop a Tourism Implementation Programme for Phase 3						JMC	Tourism Implementation Plan is developed by the JMC.	0	-
<b>Action Project 4.1 (3):</b> Joint Management Committee to periodically review and update the Tourism Implementation Programme						JMC	Tourism Implementation Plan is periodically reviewed and updated periodically by JMC.	0	-
<b>Action Project 4.1 (4):</b> Ensure alignment of commercialization opportunities with the carrying capacities defined in the zoning plan.						JMC / Scientific Services	Commercialisation opportunities are aligned with carrying capacities as defined in the zoning plan.	0	-
<b>Action Project 4.1 (5):</b> The MTPA must ensure that commercial opportunities offered on state-owned land are aligned with MTPA policy and the provisions of the PFMA						MTPA / Finance	All commercial activities on state owned land are aligned with MTPA policy and comply with the provision of the PFMA.	0	-



<p><b>Action Project 4.2.1 (1):</b> Build upon the Mountainlands Nature Reserve brand identity through a brand strategy and common brand architecture.</p>							JMC	A common brand architecture and brand strategy is used to build upon the Mountainlands Nature Reserve brand identity.	0	-
<p><b>Action Project 4.2.2 (1):</b> Implement protocol whereby all external enquiries relating to linkages with other tourism initiatives are referred to the Regional Manager of the MTPA.</p>							Regional Manager / BMC	All inquiries relating to linkages with other tourism initiatives are referred to the regional manager of the MTPA in terms of a specific protocol.	0	-
<p><b>Action Project 4.2.2 (2):</b> Include established linkages in Marketing Strategy.</p>							JMC	Marketing strategy is updated with any additional established linkages.	0	-
<p><b>Action Project 4.2.2 (3):</b> Develop/revise annual infrastructure maintenance plan for phase 3, inclusive of upgrading projects.</p>							Reserve Manager / BMC	Annual infrastructure maintenance plan is developed, inclusive of upgrading projects.	0	-
<p><b>Action Project 4.2.2 (4):</b> Develop/revise annual infrastructure Development Plan for Phase 3, in alignment with the Concept Development Plan and Tourism Master Plan and in alignment with overarching development policies and guidelines of the BNR.</p>							BMC	Annual infrastructure is developed in alignment with the Concept Development Plan and Tourism Master Plan, in alignment with overarching development policies.	0	-

<b>Action Project 4.2.4 (1):</b> Implement Action items identified in the overarching Tourism Operations Plan.						BMC	Action items identified in the overarching tourism operations plan are implemented.	0	-
<b>Action Project 4.2.4 (2):</b> Capacitate staff on the requirements, policies and guidelines included in the Tourism Operations Plan.						BMC	Staff are capacitated on the requirements, policies and guidelines included in the Tourism Operations Plan.	0	-
<b>Action Project 4.2.4 (3):</b> Ensure staff skills/equipment and equipment used to provide tourism experiences are compliant with industry norms and standards.						Reserve Manager / Tourism Business Development	Staff skills and equipment used to provide tourism experiences comply with industry norms and standards.	0	-
<b>Action Project 4.2.4 (4):</b> Develop and Implement operations manual for private operators operating in Phase 3, if applicable.						BMC / Tourism Business Development	Private operators are guided by an operations manual where applicable.	0	-
<b>Action Project 4.2.6 (1):</b> Develop system to capture and deal with comments and concerns presented by visitors to Phase 3 of the BNR. (A database of comments and concerns should form part of this system).						BMC / Tourism Business Development	Comments and concerns presented by visitors to Phase 3 are captured and addressed accordingly through an efficient and effective system.	0	-
<b>Action Project 4.3.1 (1):</b> Determining harvesting quotas on an annual basis.						Ecologist	Harvesting quotas are determined on an annual basis.	0	-
<b>Action Project 4.3.1 (1):</b> Develop and maintain list of beneficiaries of harvesting programmes.						Social Ecologist / Reserve Manager	A list of beneficiaries of harvesting programmes is developed and maintained.	0	-

<b>Action Project 4.3.2 (1):</b> Develop and implement hunting management plan and operational strategy for Phase 3 of the BNR once optimum populations are reached.						Ecologist / BMC / Wildlife Business Unit	Hunting management plan and operational strategy is developed and used to manage consumptive utilisation activities in the reserve.	0	-
<b>Action Project 4.3.2 (2):</b> Identify qualified and experienced hunting operators to undertake hunting to control population numbers as and when required.						Wildlife Business Unit	Qualified and experienced hunting operators are identified to undertake hunting activities.	0	-
<b>Action Project 4.3.2 (3):</b> Determine hunting quotas on an annual basis.						BMC / JMC	Hunting quotas are determined on an annual basis.	0	-
<b>Action Project 4.3.3 (1):</b> Biological Management Committee must provide off take quotas on annual basis.						BMC	Off take quotas are provided by Biological Management Committee.	0	-
<b>Action Project 4.3.3 (2):</b> Regional manager, via the Biodiversity Conservation Officer, must approve number of carcasses to be used internally versus externally.						Biodiversity Conservation Officer	Number of carcasses to be used internally versus externally is approved by Regional Manager.	0	-
<b>Action Project 4.3.3 (3):</b> BMC, in conjunction with the JMC, to develop and Implement off-take plan and operations strategy to minimise impact on other aspects of the reserve during off-take operations.						BMC / JMC	Off take plan and operations strategy is developed by the BMC in conjunction with the JMC to minimise impact on other aspects of the reserve during off-take operations.	0	-

<b>Action Project 4.4.1 (1):</b> Ensure development and maintainance of tourism entrance gates and facilities are catered for in concession/development agreements.						JMC	Development and maintenance of tourism entrance gates and facilities are catered for in concession/development agreements.	0	-
<b>Action Project 4.4.1 (2):</b> Train gate staff to provide a friendly, prompt and informative service to visitors.						Reserve Manager	Gate staff are trained to provide a friendly, prompt and informative service to visitors.	0	-
<b>Action Project 4.4.2 (1):</b> Develop and implement signage strategy for the reserve in alignment with overarching signage strategy for the BNR.						JMC	Signage strategy is developed for Phase 3 which is in alignment with the overarching signage strategy for the BNR.	0	-
<b>Action Project 4.4.3 (1):</b> Develop and Implement Road Development and Maintenance Plan for Phase 3, including GIS mapping.						Reserve manager / BMC	Road Development and Maintenance Plan is developed along with the associated GIS mapping.	0	-
<b>Action Project 5 (1):</b> Ensure that all policies relating to benefit flow are aligned with the principles in terms of ownership rights and responsibilities.						Social Ecology / JMC	All policies relating to benefit flow are aligned with the principles in terms of ownership rights and responsibilities.	0	-

<b>Objective 8:</b> – To develop and implement environmental awareness and interpretation programs										
<b>Action Project:</b>	<b>Timeframe</b>					<b>Priority</b>	<b>Responsibility</b>	<b>Indicators</b>	<b>Deliverables</b>	<b>Funding requirements</b>
	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>					
<b>Action Project 5.1.3 (1):</b> Develop and implement environmental education and interpretation plan.							Social Ecology	Environmental Education and Interpretation Plan is developed for Phase 3.	0	-

## **7 PERFORMANCE REVIEW ON AN ANNUAL BASIS**

Refer to *Section 11* of Volume 1 – BNR: Overarching Document.



## APPENDIX 1

### Barberton Nature Reserve Phase 3

#### Discrepancy between fencelines and proclaimed Protected Area

Last Updated: October 2011 (Document and Shapefiles)

##### Introduction

The proclamation of the Protected Area is defined along cadastral boundaries, whereas the fence has been aligned for practical purposes, largely due to mountainous terrain and to take cognizance of current and historical land uses that may be incompatible with the wildlife component inside the fence. The current alignment of the fence thus does not follow the actual proclaimed protected Area and while this is common practice and acceptable in terms of NEMPAA it requires management attention.

This chapter aims to define the discrepancies between the fence line and the proclamation and to record the reasons for this, as well as the proposed management practices to be deployed commensurate with a Protected Area.

All proclaimed areas outside the fenceline should be managed as buffer area for the reserve. This includes wherever possible preserving the natural state, clearing alien vegetation, preventing illegal access and resource utilization, etc. Additional to the general rule, area specific requirements are discussed below.

##### Area A (see map 1):

###### *Description of area:*

The portion of the farm Dycedale 368JU lying to the south-west of the Saddleback pass road. This road runs through the proclaimed area for purposes of historical alignment. This area is unfenced. It is in private ownership of Simply See (Pty) Ltd.

###### *Reason for being fenced out:*

The road provides a logical position for the fence line. The positioning of the Mountainlands reserve fence along to the north-eastern road verge provides security. The placement of the road was dictated by mountainous topography.

###### *Agreements in place:*

None

###### *Management Practice:*

Managed as per provisions of the management plan for the purpose of conservation. Zoned as primitive. Provides green link to the Umjindi Municipal Nature Reserve situated to the west of the unfenced portion. Consider management of Umjindi Municipal Reserve and as part of MPAES.



Area B (see map 1):

*Description of area:*

Fairview Mine, dumps and office area. This area falls within the proclamation and lies within the custodianship of the MTPA. The area has a number of surface rights which are currently being exercised and considered to not be compatible with the conservation function of the reserve.

*Reason for being fenced out:*

The fence line has been placed to avoid actively used surface area and thereby reduce conflict between the mine and the conservation area. The current position of the fence assists in preventing mining activities to spill over into the managed area of the PA.

*Agreements in place:*

The active surface activities on this portion of the proclaimed area not viewed as compatible with the conservation objectives and principles of the reserve. Once the surface use and mining rights expire and the area has been rehabilitated, consideration can be given to realignment of the fence.

*Management Practice:*

This area has been highly transformed by the current mining operation. Management of this area must ensure that transformation does not extend beyond the approved surface right areas. Upon expiry of the surface rights and closure of the mine, management actions must ensure that proper rehabilitation takes place in line with the EMPR prior to a closure certificate being issued.

Section 48(3) of NEM:PAA deals with the impact of existing mining activities in Protected Areas. It prescribes that the Minister MUST engage with the Cabinet member of Minerals and Energy, and prescribe conditions under which those activities may continue in order to reduce or eliminate the impact on the environment.

**This legislative principle requires attention. MTPA must ensure that this takes place and implement the recommendations emanating from such a determination by the Minister.**

Area C (see map 1):

*Description of area:*

A portion of Mimosa by 557JU and Bramber East 314 JU. The area falls within the proclaimed area and custodianship lies with the MTPA. It is still in a natural state, however it has been used for grazing in the past.

*Reason for being fenced out:*

For practicality sake the fence line has been continued along the Eskom servitude from the Fairview mine area and to avoid steep terrain. It is intended that the fence will be realigned to follow the boundary of the proclaimed protected area once Area B has been rehabilitated and incorporated within the fence.

*Agreements in place:*

No agreements in place.

*Management Practice:*

This area must be managed to maintain its current natural state. MTPA must monitor the land use to ensure that no illegal activities take place.

#### Area D (see map 1):

##### *Description of area:*

A portion of the farm Mimosa 557JU, but excluding the portion of natural veld incorporated in Area C above. Portion 1 of Mimosa557JU is also excluded as it is transformed and inhabited private property.

The portion of Area D south of the R38 has been transformed through mining activities and other surface uses.

The proclamation extends to the Suidkaap River, however the fence follows the railway line and Eskom Servitude. The areas to the north of the railway line are still in a natural state, but are bisected by the R38 road and the railway.

##### *Reason for being fenced out:*

For practicality sake the fence line has been continued along the Eskom servitude in a line from Area C. Where the servitude deviates eastward, the fence has been extended directly northwards to the railway line. It then follows the railway line. It intended that the fence may be realigned to follow the boundary of the proclaimed protected area once Areas B & C have been rehabilitated and incorporated within the fence.

##### *Agreements in place:*

No agreements in place.

##### *Management Practice:*

MTPA must follow up on the legality of existing land uses on this area. Where applicable, illegal land uses must be stopped and prevented.

All areas must be managed to remove and control the spread of alien plant species. This must be done in conjunction with parties that have legal servitudes and surface use rights.

#### Area E (see map 1):

##### *Description of area:*

Area E includes a portion of the farm Hayward 310JU, but excludes the portion transferred to Transnet for the purpose of a railway siding. The remainder of the property is in custodianship of the MTPA.

The proclamation extends to the Suidkaap River, however the fence follows the railway line and Eskom Servitude. The areas to the north of the railway line are still in a natural state, but are transected by the R38 road and the railway. There is also a pump station on the Fairview Mine pipeline before it crosses the Suidkaap River .

##### *Reason for being fenced out:*

For practicality sake the fence line follows the railway line on the farm Hayward 310JU

##### *Agreements in place:*

No agreements in place.

*Management Practice:*

MTPA must monitor and follow up on the legality of existing land uses on this area. Where applicable, illegal land uses must be stopped and prevented.

All areas must be managed to remove and control the spread of alien plant species. This must be done in conjunction with parties that have legal servitudes and surface use rights.

Area F (see map 1):

*Description of area:*

Area F includes portions of the farms Mandarin 558JU and Moepel 559JU. The properties are in custodianship of the MTPA.

The proclamation extends to the Suidkaap River, however the fence follows the railway line. The areas to the north of the railway line are still in a natural state, but are bisected by the R38 road and the railway.

The Old Coach Road Guesthouse lies within the fenced perimeter of the reserve and appears to be based on an old order surface right. This property has been fenced in as the land use is compatible with conservation. The arrangements governing this inclusion are covered under the section 'Servitudes and Surface Rights'.

*Reason for being fenced out:*

For practicality sake the fence line follows the railway line on the farm Hayward 310JU

*Agreements in place:*

No agreements in place.

*Management Practice:*

MTPA must monitor and follow up on the legality of existing land use rights and future land uses on this area. Where applicable, illegal land uses must be stopped and prevented.

All areas must be managed to remove and control the spread of alien plant species. This must be done in conjunction with parties that have legal servitudes and surface use rights.

Area G (see map 1):

*Description of area:*

Area G includes portions of the farms Flamboyant 560JU, Raasblaar 561JU and Dublin 302JU. The properties are in custodianship of the MTPA.

The proclamation extends to the Suidkaap River, however the fence first follows the railway line and then the R38 road.

The area between the current fence line and the Suidkaap River is in the custodianship of the MTPA, with the exception of portion 4 of the farm Dublin 302JU which is registered for the purpose of the electricity substation (Eskom); and portions 1 on the farms Flamboyant 560JU, Raasblaar 561JU which are registered for the purpose of a railway siding (Transnet).

A number of dwellings and commercial entities exist in this portion. There are also a number of surface use rights, both current and historical.

*Reason for being fenced out:*

For practicality sake the fence line does not include any land uses that are not compatible with conservation, including the R38 road.

*Agreements in place:*

No agreements in place.

*Management Practice:*

MTPA must monitor and follow up on the legality of existing land use rights and future land uses on this area. Where applicable, illegal land uses must be stopped and prevented.

Infrastructure should be evaluated and maintained for possible future use by the MTPA if applicable.

All areas must be managed to remove and control the spread of alien plant species. This must be done in conjunction with parties that have legal servitudes and surface use rights.

Area H (see map 1):

*Description of area:*

Area H extends west from the Area G between the farms Dublin 302JU and the Camelot 320JU. The properties are in custodianship of the MTPA.

The proclamation extends to the Suidkaap River, however the fence follows the R38 road.

The area between the current fence line and the Suidkaap River is in the custodianship of the MTPA with the exception of portion1 of the farm Saffraan 562JU which is registered for the purpose of a railway siding. The area is still in a natural state with exception of a portion of the farm Saffraan 562JU which shows evidence of agricultural practices.

*Reason for being fenced out:*

For practicality, security and access control purposes the fence line follows the R38

*Agreements in place:*

No agreements in place.

*Management Practice:*

MTPA must monitor and follow up on the legality of existing land use rights and future land uses on this area. Where applicable, illegal land uses must be stopped and prevented.

Infrastructure should be evaluated and maintained for possible future use by the MTPA if applicable.

All areas must be managed to remove and control the spread of alien plant species. This must be done in conjunction with parties that have legal servitudes and surface use rights.

Excision Area (see map 2)

*Description of area:*

The portion of State Land as depicted in the attached map

*Reason for being fenced out:*

The area is in the process of being de-proclaimed for the purposes of Township Proclamation to formalise Sheba Siding informal settlement. The area is being set aside for this purpose and should be developed according to the guidelines and recommendations provided by MTPA. These recommendations are contained in the *Memorandum – Sheba Siding Formalisation Process* and seek amongst other items to:

- Prevent urbanisation/expansion beyond existing settlements
- Provide a low density buffer area to the reserve to be used for cattle grazing
- Accommodate the families currently living within the reserve within the formalised settlement. (See description of the *Exchange Area* in the section below)
- Provide grazing area specifically for the families currently living in the reserve
- Promulgation of appropriate bylaws by municipality to provide for enforcement of recommendations and mitigation of township in buffer zone and in protection of viewshed.

*Agreements in place:*

Refer to all correspondence on the process 2006 – to date. Louis Loock (MTPA)/ Umjindi Local Municipality/ Department of Land Affairs.

Process is still underway and final agreements will be put in place.

**This activity is outstanding. MTPA must ensure formal implementation of recommendations and revise this section once the process has reached completion.**

*Management Practice:*

Monitor formalisation of Sheba Siding in line with recommendations made.

Exchange Areas (Area 1 & Area 2 – see map 3)

*Description of area:*

During fence line negotiations in 2000, which coincided with Sheba siding formalisation process, agreement was reached to fence out Area 1 and fence in Area 2.

*Reason for being fenced out:*

The purpose was to allow the formalisation of Sheba settlement while providing grazing in Area 1 for the 12 remaining families situated on state owned land in MNR intended to be resettled as part of the formalisation process. This includes families situated on Area 2 as well as on state land in the reserve situated further east and Area 1 offered good grazing in close proximity to the Sheba Siding formalisation area. Simultaneously, Area 2 was critical for the cohesion and internal access of the reserve due to the severe topography further south.

*Agreements in place:*

These agreements are recorded in the following documentation:

Progress Report on Mountainlands Game Reserve Affected Parties Project (MGRAPP). Evaluation of Domestic Livestock in the Reserve - May 2003;

Sheba Siding Tenure Development Project workshops and site meeting reports - 9<sup>th</sup> and 14<sup>th</sup> of November 2000;

Agreement entered into 13 January 2001.

Process is still underway. The families currently living in the reserve will only be finally relocated once the Sheba Siding formalisation process is complete where they will receive secure title.

**This activity is outstanding. MTPA must ensure formal implementation of agreements and revise this section once the process has reached completion.**

*Management Practice:*

Monitor formalisation of Sheba Siding in line with recommendations made.

Ensure that Area 1 is utilised for cattle grazing only and that this is captured in zonation plans of township.

Area I (see map 1):

*Description of area:*

Urbanised areas consisting of Sheba Mine shafts, dumps, office area and town infrastructure. This area falls within the proclamation and lies within the custodianship of the MTPA. The area has a number of surface rights which are currently being exercised and considered to not be compatible with the conservation function of the reserve.

*Reason for being fenced out:*

The fence line has been placed to avoid actively used surface rights and thereby reduce conflict between the mine and the conservation area. The current position of the fence assists in preventing access to the reserve by general mine staff.

*Agreements in place:*

The active surface rights on this portion of the proclaimed area not viewed as compatible with the conservation function of the reserve. Once the surface rights expire and the area has been rehabilitated, consideration can be given to realignment of the fence.

*Management Practice:*

This area has been highly transformed by the current mining operation. Management of this area must ensure that transformation does not extend beyond the approved surface right areas. Upon expiry of the surface rights and closure of the mine, management actions must ensure that proper rehabilitation takes place in line with the EMPR prior to a closure certificate being issued. Ensure alien plants are properly addressed to prevent spreading to the reserve.

Infrastructure should be evaluated and maintained for possible future use by the MTPA if applicable.

Section 48(3) of NEM:PAA deals with the impact of existing mining activities in Protected Areas. It prescribes that the Minister MUST engage with the Cabinet member of Minerals and Energy, and prescribe conditions under which those activities may continue in order to reduce or eliminate the impact on the environment.

**This legislative principle requires attention. MTPA must ensure that this takes place and implement the recommendations emanating from such a determination by the Minister**

Area J (see map 1):

*Description of area:*

The area is under the custodianship of MTPA. The area is still in a natural state.

*Reason for being fenced out:*

The fence Alignment was chosen for practical purposes.

*Agreements in place:*

No agreements in place.

*Management Practice:*

MTPA must manage this portion in its natural state. MTPA to monitor future land uses on this area. Where applicable, illegal land uses must be stopped and prevented.

Area K (see map 1):

*Description of area:*

The area covers a portion of Lancaster 359JU and a portion of the state land to the east of this. The area is still in a natural state. The area may be utilised for community cattle grazing but may not be settled or transformed.

*Reason for being fenced out:*

The fence alignment was negotiated with Lomshiyo community led by Chief TS Dlamini and the Lomshiyo Trust. The section below relating to Exchange Area 3 and 4 are also of relevance.

*Agreements in place:*

Refer to the agreements in the section relating to Exchange Area 3 and 4.

*Management Practice:*

This portion in its natural state and must be managed to prevent overgrazing. No settlement or transformation is permitted. Monitor future land uses on this area. Where applicable, illegal land uses must be stopped and prevented.

Exchange Areas (Area 3 & Area 4 – see map 3)

*Description of area:*

Exchange Area 3 is the portion of State Land as shown on the map. Exchange Area 4 is the Farm Colombo 365JU.

*Reason for being fenced out:*

The fence line was negotiated and aligned to provide grazing only in the Lomshiyo and State land portions.

*Agreements in place:*

It was agreed that Exchange Area 3 would be formally transferred to the Lomshiyo Trust in exchange for Colombo 365JU, owned by them.

This process needs to be finalised as per the formal agreements dated 11 February 2001 and reflected in the workshop reports October 2000 - January 2001

Process has not been finalised. Land titles have not been amended.

**This activity is outstanding. MTPA and Lomshiyo Trust must finalise this agreement.**

*Management Practice:*

MTPA must manage the portion of state land outside the fence line for natural purposes. This to continue after transfer in line with agreement to use only for grazing. Area was identified for potential expansion of reserve in future, the inclusion of which would significantly increase the tourism potential of Lomshiyo land.

MTPA must monitor and follow up on the legality of existing and future land uses on this area. Where applicable, illegal land uses must be stopped and prevented.

Area L (see map 1):

*Description of area:*

The area covers a portion of state land to the east of the current fence line. The area is in the custodianship of MTPA.

The area is still used for grazing. Limited settlement has taken place on this area in the riverine areas in the far east.

*Reason for being fenced out:*

The fence was placed in its current position for practical purposes due to topography of terrain and grazing needs of community in lower valley.

*Agreements in place:*

None.

*Management Practice:*

This portion must be managed as a low density buffer area and must be managed to prevent overgrazing and change of land use.

MTPA to investigate the legality of current settlement and monitor future land uses on this area. Where applicable, illegal land uses must be stopped and prevented.

Area M (see map 1):

*Description of area:*

The area covers a portion of state land in the south east corner of the proclaimed area. The area has been largely transformed due to the operations of the Makhonjwa Mine. The area is in the custodianship of MTPA.

The Makhonjwa Mine has closed and rehabilitation is expected to commence shortly.

*Reason for being fenced out:*

The fence line was placed to avoid actively used surface rights and thereby reduce conflict between the mine and the conservation area. The current position of the fence assisted in preventing access to the reserve by general mine staff.



*Agreements in place:*

The active surface rights on this portion of the proclaimed were not viewed as compatible with the conservation function of the reserve. Once the area has been rehabilitated consideration will be given to re-alignment of the fenceline.

*Management Practice:*

This area has been highly transformed by the mining operation. Management of this area must ensure that proper rehabilitation takes place in line with the EMPR prior to a closure certificate being issued.

Infrastructure should be evaluated and maintained for possible future use by the MTPA if applicable.

Area N (see map 1):

*Description of area:*

The area covers a portion of state land on southern perimeter of the proclaimed area. The Shiyalongubo community falls within this area. The custodianship of the land rests with MTPA.

*Reason for being fenced out:*

The fence line was placed for practical purposes and to provide for grazing for the Shiyalongubo community.

*Agreements in place:*

This alignment was negotiated and agreed on the ground in the presence of Umjindi Mayor Cllr. Lukele, and the community - particularly members of prominent families residing in the Shiyalongubo community, Mr Gideon Zulu and Mr Thami Motha - at the time of the erection of the fence.

*Management Practice:*

The footprint of the settlement must be defined and confined to its current perimeter. The area outside the settlement area must be managed for grazing only.

