ENVIRONMAENTAL IMPACT ASSESSMENT FOR MINERAL EXPLORATION ACTIVITIES ON EPL 8375 IN THE SKELETON COAST, KUNENE REGION.



MAY 2022

PREPARED FOR GRAVITY MINING CC

PREPARED BY:

NAMIB – ENVIRO CONSULTANTS

EXECUTIVE SUMMARY

1. Introduction

1.1 Overview

Exploration aims to discover deposits of minerals and rocks that can be used to meet the resource needs of society, such as industrial raw materials (limestone, sulphur), ores (copper, iron and zinc), gemstones (diamonds), and solid fuels (oil, coal and uranium) (White, 2005). Gravity Mining cc (proponent), would like to explore in the Skeleton Coast Park area, Kunene region. The proponent appointed Namib – Enviro Consultants to undertake the environmental impact assessment in order to obtain an Environmental Clearance Certificate for the activities from the office of Environmental Commissioner in the Ministry Of Environment, Forestry and Tourism. This project will provide employment and contribute to the Namibian economy through foreign currency exchange. In addition the proponent also depend on mining for self-sustenance.

1.2 Project location

The Skeleton Coast National Park1 is Namibia's northernmost coastline protected region, bordering on Dorob NP in the south and Iona NP in Angola in the north. The park covers 16,390 square kilometres and is 500 kilometres long and 30 kilometres wide in the north and 40 kilometres wide in the south. The proposed site is located between Huab River in the north and Ugab River in the south, within the areas of Toscanini (figure 1), southwest of Khorixas, and its geographical coordinates are - 21.105489 and 13.673969.

1.3 Environmental Assessment Requirements

Any large scale project must undergo an Environmental Impact Assessment in accordance with the Environmental Management Act, Act 7 of 2007, the Environmental Impact Assessment Regulation (Government Gazette No. 30 February 2012), and Namibia's environmental assessment policy of 1995. As a result, in compliance with regulation 6 of the 2012 environmental regulations, an environmental clearance certificate must be requested for. The environmental proponent shall perform a public consultation process, create an environmental scoping study, and submit an Environmental Management Plan for the planned mineral exploration activities in accordance with regulation 21 of the 2012 environmental procedure.

1.4 Project alternatives

A processing alternative would be considered whereby the proposed project opt for drilling boreholes instead of desalination or abstraction of water in the water sources in the surroundings, and use of solar power energy or generators instead of a new electricity grind.

Table of contents

EXECUTIVE SUMMARY	2
1. Introduction	2
1.1 Overview	2
1.2 Project location	2
1.3 Environmental Assessment Requirements	2
1.4 Project alternatives	3
1. Introduction	1
1.1 Project background	1
1.1.1 Mineral licence tenure	1
1.1.2 Environmental consultant	1
1.1.3 Proponent of the proposed project	1
1.2 Project location	1
1.3 Infrastructure and services	2
1.3.1 Electricity	2
1.3.2 Water supply	2
1.3.3 Roads	2
1.3.4 Storage of lubrication and consumables	2
1.3.5 Buildings	3
1.3.6 Refuse and waste removal	3
1.3.7 Security and fencing	3
1.3.7 IT systems and communication	3
1.4 Environmental impact assessment requirements	3
1.5 Purpose of the scoping report	3
1.6 Terms of reference	4
1.6.1 Environmental approach and methodology	4
1.6.2 List of specialist studies undertaken	4
1.7 Need and desirability	4
1.7.1 Need of the exploration project	4
2. Summary of applicable legislation	5
3. Description of the proposed exploration project	7
3.1 Introduction	7
3.2 Techniques for mineral exploration	7
3.2.1 Labour requirement	8
4. Description of the current environment	9
4.1 Introduction	9

4.2 Climate conditions	9
4.2.1 Temperature	9
4.2.2 Precipitation	10
4.2.3 Wind	10
4.2.4 Humidity	10
4.3 Air quality	10
4.4 Geology	10
4.5 Hydrogeology and water resources	11
4.6 Flora, fauna and avifauna	11
4.6 Fauna	11
4.6.1 Invertebrates and vertebrates	11
4.6.2 Avifauna	11
4.7 Flora	13
4.7 Archaeology and heritage sites	15
4.8 Socio-economic environment	16
4.10 Soils	16
1.10.1 Abiotic soil crusts	16
1.10.2 Biological soil crusts	16
1.10.3 Desert pavement	17
5. Assessment of impacts	
5.1 Introduction	
5.2 Impact assessment methodology	
5.3 Overall socio-economic benefits and issues	20
5.4 Mineral Exploration phases and associated issues	21
6. Environmental management plan	23
6.1 Overview	23
6.2 Environmental management principles	23
6.3 Impacts on the bio-physical environment	23
6.5 Monitoring, Auditing and Reporting	35
6.5.1 Inspections and Audits	35
6.5.2 Roles and responsibilities for environmental management	35
6. 5.3 Environmental Management System Framework	37
6.6 Closure Plan	
6.6.1 Alternatives Considered	
6.6.2 Preferred Alternative: Rehabilitation/ Backfill of boreholes	40
6.6.3 Closure Assumptions	40

6.6.4 Closure and Rehabilitation Activities	.41
7. Public participation	.43
8. Conclusions	.44
Appendices	.47
Appendix A Newspaper advertisement in a Confidante newspaper	
Appendix B Newspaper advertisement in a Republikein newspaper	.48

List of figures

Figure 1 Location of EPL 8375	2
-------------------------------	---

List of Tables

Table 1 Summary of legal framework relevant to mining in Namibian parks	5
Table 2 Red Data Species occurring in the Skeleton Coast Park (MEFT, 2021)	12
Table 3 A table showing some plant species which occur in the	13
Table 4 Assessment methodology used to examine the impacts identified	
Table 5 Summary of socio-economic impacts and their evaluation	20
Table 6 Possible effects on the bio-physical environment, mitigation measures,	and their
monitoring methods	23
6.4 Table 8 Summary of Environmental Management Plan during the phases of the p	project 26

1. Introduction

1.1 Project background

Exploration aims to discover deposits of minerals and rocks that can be used to meet the resource needs of society, such as industrial raw materials (limestone, sulphur), ores (copper, iron and zinc), gemstones (diamonds), and solid fuels (oil, coal and uranium) (White, 2005). Gravity Mining cc (proponent), would like to explore the Khorixas linens in the Skeleton Coast Park area, Kunene region. The proponent appointed Namib – Enviro Consultants to undertake the environmental impact assessment in order to obtain an Environmental Clearance Certificate for the activities from the office of Environmental Commissioner in the Ministry Of Environment, Forestry and Tourism.

1.1.1 Mineral licence tenure

1.1.2 Environmental consultant

The proponent appointed Namib – Enviro Consultants to undertake the environmental impact assessment in order to obtain an Environmental Clearance Certificate for the activities from the office of Environmental Commissioner in the Ministry Of Environment, Forestry and Tourism.

1.1.3 Proponent of the proposed project

The proposed of exploration activities exclusive prospecting licence belongs to Gravity Mining cc.

1.2 Project location

The Skeleton Coast National Park1 is Namibia's northernmost coastline protected region, bordering on Dorob NP in the south and Iona NP in Angola in the north. The park covers 16,390 square kilometres and is 500 kilometres long and 30 kilometres wide in the north and 40 kilometres wide in the south. The proposed site is located between Huab River in the north and Ugab River in the south, within the areas of Toscanini (figure 1), southwest of Khorixas, and its geographical coordinates are - 21.105489 and 13.673969.

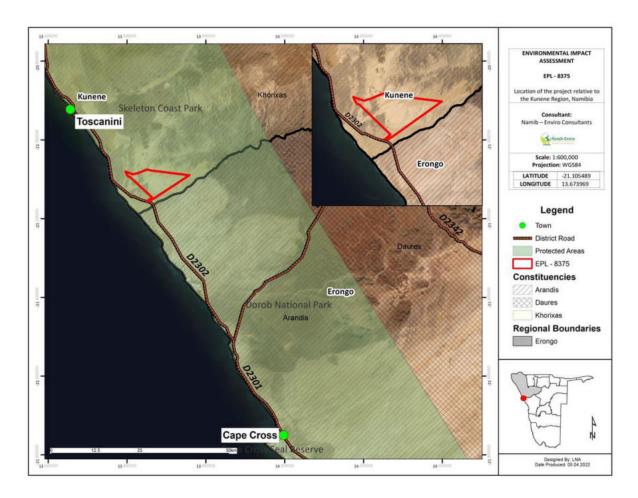


Figure 1 Location of EPL 8375

1.3 Infrastructure and services

1.3.1 Electricity

Exploration process normally require less power, therefore the power required to undertake the activities will be catered by the proponents own generator.

1.3.2 Water supply

The water required will be minor, and will be utilised mainly for domestic purposes: consumption and cleaning. The proponent will drill borehole within the exploration site to supply water.

1.3.3 Roads

Since there are currently no suitable roads, the conservancy administration will demarcate access to the exploration sites.

1.3.4 Storage of lubrication and consumables

All the hydrocarbons will be stored in a removable tanks/containers in a demarcated section of one of the temporary waste storage areas, and they will be removed from the site regularly to ensure that the temporary tanks is not full,

1.3.5 Buildings

Exploration camp will be set up and precautions will be taken to prevent the spreading of generated wastes of all kinds on and from the camping site.

1.3.6 Refuse and waste removal

Generated wastes will be stored in containers and collected on a regular basis and disposed off at a recognised disposal facility. In addition, temporary sanitary facilities will be provided by the proponent, and remove all generated wastes from the exploration site.

1.3.7 Security and fencing

No provision has been made for fencing off the camping facility, although strict access to and from the exploration site will be facilitated by personnel.

1.3.7 IT systems and communication

Telephones or other form of electronic communications will be made available on site in case of emergencies, and for effective communication.

1.4 Environmental impact assessment requirements

Any large scale project must undergo an Environmental Impact Assessment in accordance with the Environmental Management Act, Act 7 of 2007, the Environmental Impact Assessment Regulation (Government Gazette No. 30 February 2012), and Namibia's environmental assessment policy of 1995.

1.5 Purpose of the scoping report

The project's scope is confined to conducting an Environmental Impacts Assessment and filing for an Environmental Clearance Certificate for the exploration activities to be conducted. The scoping process identifies the issues that are likely to be most important during the EIA and eliminates those that are of little concern. The scoping process shall be concluded with the establishment of terms of reference for the preparation of an EIA, as set out by the Ministry of Environment and tourism. The purpose of this scoping report is to:

- Identify any important environmental issues to be considered before commencing with mineral exploration activities on the proposed mineral exploration sites.
- To identify appropriate time and space boundaries of the EIA study.
- To identify information required for decision-making.

As such, the key objectives of this scoping study are to:

- Inform the public about the proposed mineral exploration activities.
- Identify the main stakeholders, their comments and concerns.

- Define reasonable and practical alternatives to the proposal.
- To establish the terms of reference for an EIA study.

1.6 Terms of reference

1.6.1 Environmental approach and methodology

The approach and methodology will be guided by the Environmental Regulations of 2012 and the Terms of Reference which will be provided by the proponent.

1.6.2 List of specialist studies undertaken

It is a norm to disclose all the tasks to be undertaken as part of the assessment process, including any specialist to be included if need be as stipulated in section 9(a) of the environmental regulations of 2012. At this juncture, the exploration project has not commenced yet, this implies that currently no field specific specialist studies were commissioned by the proponent, however a full environmental impact assessment will be conducted out with appropriate sitespecific specialist studies on groundwater, air-quality, fauna, flora, archaeology and avifauna as exploration commences.

1.7 Need and desirability

1.7.1 Need of the exploration project

The exploration project could help Namibia achieve some of the objectives outlined in National Development Plans including the Fifth National Development Plan (NDP5) and the Harambee Prosperity Plan (HPP). The project will employ individuals from the local towns and communities throughout the exploratory phase. If the exploratory project results in the finding of a commercially viable mineral deposit, a mine could be built in the area. A mine can make a substantial contribution to the social and economic development of the town.

2. Summary of applicable legislation

Legislation/Policies	Relevant Provisions
The Constitution of the	Article 91 (c) provides for duty to guard against "the
Republic of Namibia as	degradation and destruction of ecosystems and failure to
Amended	protect the beauty and character of Namibia."
	Article 95(l) deals with the "maintenance of ecosystems,
	essential ecological processes and biological diversity" and
	sustainable use of the country's natural resources.
Environmental	Section 2 outlines the objective of the Act and the means to
Management Act No. 7 of	achieve that. Section 3 details the principle of Environmental
2007 (EMA)	Management
Mineral policy 2004	Section 2.2.3 deals with prospecting and mining in protected areas and states that: "Emphasis is placed on the government to ensure that mining does not jeopardise the potential for long-term sustainable development in tourism.
The Minerals Prospecting and Mining Act of 1992	The Minerals Prospecting and Mining Act No.33 of 1992 approves and regulates mineral rights in relation to exploration, reconnaissance, prospecting, small scale mining, mineral exploration, large-scale mining and transfers of mineral licenses.
EIA Regulations GN 28, 29, and 30 of EMA (2012)	GN 29 Identifies and lists certain activities that cannot be undertaken without an environmental clearance certificate.GN 30 provides the regulations governing the environmental assessment (EA) process.
Nature conservation	The Nature Ordinance 4 of 1975 covers game parks and
ordinance, ordinance No. 4	nature reserves, the hunting and protection of wild animals
of 1975	(including reptiles and wild birds), problem animals, fish,
	and the protection of indigenous plants.
Public and Environmental	Provide a framework for a structured uniform public and
Health Act, 2015	environmental health system in Namibia; and to provide for
	incidental matters.

Table 1 Summary of legal framework relevant to mining in Namibian parks

Atmospheric Pollution	Provides for the prevention of air pollution and is affected by
Prevention Ordinance 11 of	the Health Act 21 of 1988. Under this ordinance, the entire
1976	area of Namibia, with the exception of East Caprivi, is
	proclaimed as a controlled area for the purposes of section
	4(1) (a) of the ordinance.
Hazardous Substance	Provides for the control of toxic substances. It covers
Ordinance, No. 14 of 1974	manufacture, sale, use, disposal and dumping as well as
	import and export.
National Heritage Act, 2004	Act provides for the protection and conservation of places
(Act No. 27 of 2004)	and objects of heritage significance and the registration of
	such places and objects; to establish a National Heritage
	Council; to establish a National Heritage Register; and to
	provide for incidental matters.
Water Resources	Provides for the management, protection, development,
Management Act of 2004	usage and conservation of water resources; to provide for the
	regulation and monitoring of water resources and to provide
	for incidental matters.
Water Act No. 54 of 1956	Section 23(1) deals with the prohibition of pollution of
	underground and surface water bodies.
Labor Act no 11 of 2007	Chapter 2 details the fundamental rights and protections.
	Chapter 3 deals with the basic conditions of employment.

3. Description of the proposed exploration project

3.1 Introduction

Mineral exploitation in Namibia is a substantial industry that employs a huge number of people and contributes significantly to the national economy. When it comes to minerals, Namibia is well-diversified. Because mineral rights are vested in the state, the government of Namibia is the regulating agency for all minerals being exploited (Mansfeld, 2006). In Namibia, there are various alternatives for exploration or mining, and several application channels must be followed in order to comply with the legislation (MIT, 2003).

After South Africa, Ghana, Tanzania, Zimbabwe, and Zambia, Namibia's mining sector is the sixth largest in Africa. Minerals account for roughly 15% of Namibia's GDP, the sector is the largest contributor to the country's GDP, and mining products account for up to 50% of Namibia's yearly export revenues. The mining industry directly employs about 10,000 people (Bendi, 2003).

The proposed project will contribute to the Namibian economy and improve people's livelihood within the project location as the proponent intend to hire roughly seven local people, including two management employees at the initial phase of the project. All personnel will go through a safety orientation, a first-aid course, and a wildlife awareness program. The Labour Act of 2007 will be followed at all times

3.2 Techniques for mineral exploration

According to Hentschel, Hruschka, & Priester (2002), several approaches will be used by geoscientists during the exploration process to discover acceptable areas and assess the depth and shape of the ore deposit. Among them are:

- Creating and reviewing geological maps. Geologic maps show the locations of different types of bedrock (bedrock is the rock that is closest to the surface), give exploration geologists hints as to what geologic processes acted in a given area and suggest how rocks are distributed at depth. Maps help geologists compare an area with other sites that have yielded highly concentrated ores in the past.
- Visiting a potential mine site and completing field studies, which might entail additional geological mapping, surface rock sampling, and/or chemical analyses of rock, soil, and water samples.
- Performing "non-invasive" studies to obtain underground information. These studies are similar to someone using a metal detector to find discarded coins on a beach. The

larger-scale geophysical studies used by mining companies may include seismic, gravity, magnetic, or other surveys.

- Drilling down through the surface to obtain samples at depth. Hollow drills are used that bring cores (long cylinders of rock) to the surface.

For this proposed exploitations techniques are yet to be identified.

3.2.1 Labour requirement

For the initial phase of the project, the proponent plans to hire roughly seven people, including two management employees. Employees will be recruited from the local community, and nearby residents. All personnel will go through a safety orientation, a first-aid course, and a wildlife awareness program. The Labour Act of 2007 will be followed at all times

4. Description of the current environment

4.1 Introduction

This subsection tries to describe the current state of the environment, the potential impact of planned modifications, and ongoing monitoring to detect environmental changes. Minerals abundant in the Skeleton Coast National Park, including diamonds and other gems. The Atlantic Ocean, with sandy and pebble beaches, sand dunes, ephemeral riverbeds and canyons to rugged canyons with walls of richly coloured volcanic rock and extensive mountain ranges (Hutton & Palfi, 2003).

The Skeleton Coast National Park is a major section of this magnificent complex of protected areas, comprising ecological and geographical characteristics of the Northern Namib Desert. The park has a high level of biodiversity that is important on a national, regional, and worldwide scale. The Northern Sand Sea, other dune fields of the park, and the littoral zone have high levels of speciation and endemism in lichens and vascular plants, a highly diverse avifauna and an unusual assemblage of large mammals for such a hyper-arid park, and unique invertebrate diversity, but there are a number of other species or groups of species that are also very important. From north to south, communal conservancies Marienfluss, Orupembe, Sanitatas, Okondjombo, Puros, Sesfontein, Torra, Doro!nawas, and the Palmwag tourism concession area share the park's whole eastern border. The land to the east of the park is zoned and maintained to protect animals (MEFT, 2021).

The Skeleton Coast National Park is bordered on the west by the Atlantic Ocean, with the cold Benguela current bringing a wealth of marine life. Most tourists are unable to access the shoreline, which is littered with shipwrecks. The desert ecosystem is sustained by natural springs, whereas the huge Kunene River is an annual river that defines the northern boundary with Angola. In the park, the Hoarusib, Ugab, and Uniab rivers are also major living systems (MET, 2007).

4.2 Climate conditions

4.2.1 Temperature

According to the Management plan for Skeleton Coast Park of 202, the Namib Desert's coastal climate is mostly affected by the cold Benguela Current and the South Atlantic Anticyclone. Temperatures are generally moderate (average minimum and maximum temperatures reflect a range of around 7 to 32 °C during the coldest and hottest months, respectively), and fog is

common (about 125 days per year on the coast dropping to about 40 days per year 80 km inland).June is the coldest month of the year, with an average night time temperature of 20°C.

4.2.2 Precipitation

The park as a whole falls below the 100 mm isohyet, and much of it falls below the 50 mm isohyet. Aside from the unusually low yearly rainfall, the rainfall is also exceedingly erratic, with annual coefficients of variation ranging from 80 percent to over 100 percent on average. The park has an average water deficit of roughly 2 m per year due to high evaporation rates and minimal rainfall. The rainy season is from January through March. In the Namib Desert, the importance of fog as a source of water is well-known, and many species rely on and have evolved to fog water usage and harvesting.

4.2.3 Wind

The wind blows almost continuously. The southwest wind blows an average of 300 days/annum at up to 60 km/h, and peaks in the early summer months from October to December. Due to the hilly terrain, the Khorixas area is vulnerable to unpredictable winds and significant variations despite short distances. These winds push the Benguela Current northward, transporting sand from the beach to nearby land and causing upwelling along the coast, bringing nutrient-rich waters to the surface.

4.2.4 Humidity

The humidity is observed to be >80% during most months, and is significantly lower at 75% during the summer months. Because the cool, dry air cannot rise high enough over the coast to produce genuine rain clouds, precipitation frequently condenses primarily as fog and low clouds. Fog occurs 75 to 100 days per year with mornings and evenings being the most common times. The Kunene shore gets about 5 to 6 hours of sun every day on average.

4.3 Air quality

Emissions and dust from automobiles traveling on gravel roads, and wind erosion from exposed places are all possible sources of air pollution in the area. It was observed that the air quality in proposed area is good.

4.4 Geology

The geology is clearly apparent. Time and nature have fashioned a sand and rock dreamscape. Mica schists, gneiss, and granites date back over a billion years. The SCNP's Damara Super group granites and gneisses form the deep root zone of a north-south-trending Alpine-type mountain belt that formed 550 million years ago during continental collision and amalgamation, resulting in the formation of Gondwana, the southwestern part of the old supercontinent Pangaea. Terrace Bay still has the remnants of previous lava flows. Today, roaring dunes, clay castles, and beaches gleam with wind-polished stones can be found.

4.5 Hydrogeology and water resources

Several springs provide vital water to coastal areas, allowing large creatures to travel further west than they might otherwise. The majority of springs are generated by water being forced to the surface along faults in the underlying rock formations, although other springs are formed by water being driven to the surface along faults in the underlying rock formations. The Kunene River's mouth provides a critical habitat for a variety of birds, fish, turtles, and other species.

4.6 Flora, fauna and avifauna

4.6 Fauna

The fauna of the Skeleton Coast Park has become specially adapted to the unique and severe physiographical characteristics of the area. Whilst some species are endangered or even on the Red Date Species list and that reason are protected, all species in the park deserve full protection as they have managed to adapt to this extremely hostile environment.

4.6.1 Invertebrates and vertebrates

It is known that the dune fields in the park hold a number of endemic *Tenebrionid* beetles, scorpions and arachnids. Regarding reptiles, the desert plated lizard *Gerrhosaurus skoogi* deserves special mention. Endemic to the Northern Namib this species is the dominant lizard species inhabiting the dune systems of the Northern Namib and dune slip faces in particular. Mammals in the fog zone of the Namib Desert include permanent residents such as the conspicuous oryx (*Oryx gazella*), springbok (*Antidorcas marsupialis*), black-backed jackal (*Canis mesomelas*), brown hyena (*Hyaena brunnea*), and the Cape fur seal (*Arctocephalus pusillus*), in addition to the several small burrowing mammals such as gerbils (*Gerbillus* spp.) and whistling rats. The other mammal species are largely seasonal or occasional residents. The park supports a small population of African lions (*Panthera leo*) that are adapted to the harsh hyper-arid conditions.

4.6.2 Avifauna

In total, 314 bird species have been recorded in the park, accounting for 46.7 percent of Namibia's total number of indigenous bird species. The condition of the Damara Tern, which is essentially endemic to Namibia and breeds in summer on broad sandy or gravel plains, interdune valleys, and salt pans, is of special concern among the park's bird species. There are 21 red Data Species among them. As shown in Table 2, three of those species are highly endangered, while the remaining ten are vulnerable.

Common name	Scientific name	Red Data Status
Jackass Penguin	Spheniscus demersus	Critically endangered
Great Crested Grebe	Podiceps cristatus	Critically endangered
White Pelican	Pelecamus onocrotalus	Endangered
Cape Gannet	Morus capensis	Endangered
Crowned Cormorant	Phalacrocorax coronatus	Endangered
Black Stock	Ciconia nigra	Endangered
Marabou Stork	Leptoptilos crumeniferus	Vulnerable
Glossy Ibis	Plegadis falcinellus	Vulnerable
Greater Flamingo	Phoenicopterus ruber	Endangered
Lesser Flamingo	Phoeniconaias minor	Endangered
Egyptian Vulture	Neophron percnopterus	Critically endangered
Tawny Eagle	Aquila rapax	Vulnerable
Bateleur	Terathopius ecaudatus	Endangered
African Fish Eagle	Haliaeetus vocifer	Vulnerable
Martial Eagle	Polemaetus bellicosus	Vulnerable
African Black	Haematopus moquini	Vulnerable
Oystercatcher		
Chestnut Banded Plover	Charadrius pallidus	Vulnerable
Hartlaub's Gull	Larus hartlaubii	Vulnerable
Caspian Tern	Hydroprogne caspia	Vulnerable

Table 2 Red Data Species occurring in the Skeleton Coast Park (MEFT, 2021)

Swift Tern	Sterna bergii	Vulnerable
Damara Tern	Sterna balaenarum	Endangered

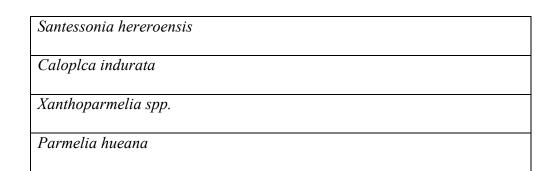
4.7 Flora

Plants in Skeleton National Park have adapted to survive by acquiring, retaining, and storing atmospheric moisture through a variety of creative adaptations. Succulents, grasses riverine growth, and lichens are among them, as are colonies of *Welwitschia mirabilis*, whose distribution in Namibia is centered in the southern part of the park, as well as the northern Dorob NP; *Acanthosicyos horridus* (! Nara); and succulents, grasses riverine growth, and lichens.

The park thus holds 32.2% of the 174 known lichen species recorded in Namibia. *W. mirabilis* is one of the few endemic and also keystone plant species that has been extensively mapped in the park. Another important Namib Desert plant endemic is the !nara *Acanthosicyos horridus* that is never very abundant but widely distributed in Skeleton Coast NP along dry riverbeds and dune fields including the Kunene Sand Sea.

Endemic to the area	
Hermbstaedtia spathulifolia	
Euphorbia pergracilis	
Euphorbia rimireptans	
Indigofera anabibensis	
Asystasia welwitschia	
Blepharis ferox	
Crassothonna agaatbergensis	
Acanthosicyos horridus	
Welwitschia mirabilis	
Acanthosicyos horridus	

Protected species		
Acacia erioloba		
Sterculia Africana		
Boscia albitrunca		
Albizia anthelmint	ica	
Other notable spe	ecies	
Sarcocaulon mosso		
Adenia pechuelii		
Arthraerua leubnii	tziae	
Salsola nollothens		
Stipagrotis ramulo		
Eragrotis cyperoia		
Brachiaria psamm		
Tamarix usneoides		
Colophospermum		
Combretum imberi	be	
Salvado persica		
Faidherbia albida		
Balantines welwits	schii	
Typha capensis		
Phragnmites austr	valis	
Schoenopletus litte	oralis	
Teloschistes capen	isis	



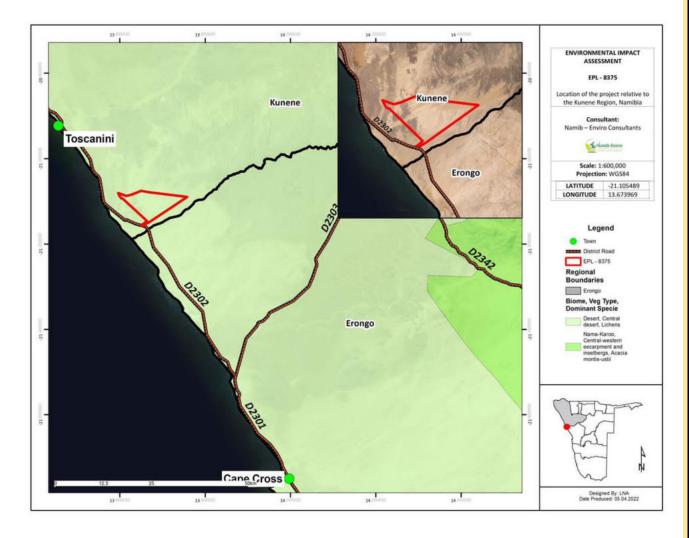


Figure 2 Vegetation type of the dominant species

4.7 Archaeology and heritage sites

The park has a rich archaeological and historical history. A settlement on the Ugab River with whale bone shelters is a one-of-a-kind sight in southern Africa. Historical artifacts abound along the shore from the Sechumib River to roughly 80 kilometers north of Angra Fria. This section of coast is filled with the wreckage of 500-year-old sailing ships. Recent wreck surveys along this coast have revealed that this area is historically significant (MEFT, 2018).

According to Mansfeld (2006), while many archaeological sites have been discovered along the Namibian coast, some of which provide evidence of long-term coastal occupation, many of these are regarded as "lucky finds," because the chances of artefacts surviving long enough to be discovered are extremely poor. As a result, there are just a few known archaeological sites with exceedingly old artefacts. At this time, it is unknown whether the exploration will yield any significant archaeological finds; however, an incidental find strategy may be required. Work must be suspended immediately if any heritage or culturally significant artefacts are discovered during construction, and the Namibian National Heritage Council must be notified.

4.8 Socio-economic environment

Currently accounts for a significant amount of Namibia's GDP, and tourism is only second in terms of economic importance to mining. However, tourism generates a small amount of revenue along the Kunene coast. Coastal Kunene could undoubtedly earn much more with smart, bold planning, enhancing the livelihoods of people in the region while also preserving the coast's stunning and pristine ecosystem (Mendelsohn, Jarvis, Roger, & Roberstson, 2012). Agriculture is unviable due to insufficient water and soil fertility. Because of the high-energy character of the coast, aquaculture has limited potential, and considerable development of recreational line fishing would be unsustainable because these coastal waters serve as breeding sites for many species that eventually migrate as adults to other parts of Namibia's coast.

4.10 Soils

The presence of three types of very fragile soil surface layers or crusts, which cover a substantial portion of the park and are very vulnerable to disturbance, is one factor to note here that is of high value to park management.

1.10.1 Abiotic soil crusts

Abiotic soil crusts result from evaporation exceeding precipitation in arid environments. Gypsum on the plains and salt on the pans and at water seepages are the two most common soil crusts in the park (and generally saline soils with variable degrees of salt crust formation in many places in the Central Namib).

1.10.2 Biological soil crusts

Lichens, mosses, green algae, micro-fungi, and cyanobacteria form biological soil crusts, which combine soil particles into a crust. Small crustose lichens and algae are connected with coarse sand and gravels in large portions of the park, although biological soil crusts are not known to be present in the form of the more thick and defined lichen fields found in

neighbouring Dorob NP. On alluvial fan deposits next to the Hoarusib, Khumib, and Sechumib Rivers and their historic tributaries, and on hillsides along the eastern edge of the Skeleton Coast Park, lichen-dominated soil crusts ranging from thick and diversified communities can be found.

1.10.3 Desert pavement

A large portion of the park is made up of gravel plains that represent an ancient Pleistocene erosion platform that hasn't been altered by anything other than in-situ wind erosion and chemical accretion and deposition, mostly from marine and fog sources, and in fact several successive erosion platforms. The third extremely sensitive feature of the Skeleton Coast NP substrates are ancient gravel and pebble13 deposits that represent an ancient landscape of Pleistocene age (up to 2.7 million years old) and represent an ancient landscape of Pleistocene age (up to 2.7 million years).

5. Assessment of impacts

5.1 Introduction

The goal of this section on impact assessments is to identify and examine the most important environmental implications from mineral exploration activities on EPL 8375, as well as feasible mitigation actions. If mineral exploration activities are discontinued in the future, an EIA will be required to address the resulting environmental impacts. This section also includes mitigation measures for the identified impacts.

5.2 Impact assessment methodology

The magnitude and temporal and spatial scales of the project, as well as the specific activities involved with the project, are used to determine the significance of an impact. At all times, the evaluation of the environmental effects of development operations should attempt to be objective and unbiased. Environmental activities, on the other hand, are vulnerable to the subjectivity that comes with attempting to quantify significance. The significance of an effect is determined by the context (spatial and temporal scale) as well as the strength of that impact.

Criteria	Category	Description
	National	Beyond a 10 Km radius of the site
	Regional	Within a 5 Km radius of the centre of the site
Criteria for ranking	Local	Within a 2 Km radius of the the centre of the site
Spatial impact		
	Site specific	On site or within the boundaries of the property
	Zero	
	High	Natural and/ or social functions and/ or
		processes are severely altered
Criteria for ranking the	Medium	Natural and/ or social functions and/ or
magnitute of impacts		processes are notably altered
	Low	Natural and/ or social functions and/ or
		processes are slightly altered

Table 4 Assessment methodology used to examine the impacts identified

	Very low	Natural and/ or social functions and/ or		
		processes are negligibly altered		
	Zero	Natural and/ or social functions and/ or		
		processes remain unaltered		
	Zero	Zero time		
	Short term	Up to 18 months		
	Medium term	0-5 years (after operation)		
Criteria for ranking the	Long term	5-10 years (after operation)		
duration of impact	Permanent	More than 10 years (after operation)		
	Definite	Estimated greater than 95 % chance of the		
		impact occurring		
	Very likely	Estimated 50 to 95% chance of the impact		
		Occurring		
Probability	Fairly likey	Estimated 5 to 50 % chance of the impact		
		Occurring		
	Unlikely	Estimated less than 5 % chance of the impact occurring		
	Zero	Definitely no chance of occurrence		
	Certain	Wealth of information on and sound		
		understanding of the environmental factors		
		potentially influencing the impact		
	Sure	Reasonable amount of useful information		
Confidence		on and relatively sound understanding of		
		the environmental factors potentially		
		influencing the impact		
Unsure Limited useful information on and		Limited useful information on and		
		understanding of the environmental factors		
		potentially influencing this impact		
	Irreversible	The activity will lead to an impact that is		
Reversibility		permanent		

Reversible	The impact is reversible, within a period of
	10 years.

5.3 Overall socio-economic benefits and issues

Table 5 Summary of socio-economic impacts and their evaluation

Impacts	Measurement	Rating	Mitigation
Benefits and issues			
Socio-economic benefits	Duration	Long and	
The project has great potential to		short-term	Employ local labour as
improve livelihoods and contribute to	Extent	Site specific	far as possible
sustainable development within the		& local	Establish on the job
surrounding community.	Magnitude	Low	training and other
	Probability	Very likely	capacity development
	Reversible	Reversibility	training
			programs
Potential Direct Benefits	Duration	Long and	
- Capital investment		short-term	Employ local labour as
- Training programs offered by	Extent	Site specific	far as possible
the proponent will		& Local	Establish on the job
permanently benefit staff	Magnitude	Medium	training and other
members.	Probability	Very likey	capacity development
- The surrounding community	Reversible	Reversibility	training
will benefit from the project			programs
during the on-going phase.			
Potential Indirect Benefits	Duration	Short-term	
			Employ local labour as
General enhancement of the health	Extent	Site specific	far as possible
conditions and quality of life for a few		& Local	Establish on the job
people in the surrounding settlements.	Magnitude	Low	training and other
	Probability	Faily likely	capacity development
	Reversible	Reversibility	training
			programs

General socio-economic concerns	Duration	Short-term	
- As the number of employees		Site specific,	Establish on the job
and contractors moving in and		Local &	training and other
out of the area expands, so	Extent	National	capacity development
does the chance of HIV/AIDS		High	training
spreading.			programs
- Increased migration of	Magnitude	Very likely	
individuals to the area in		Irreversibility	
search of job possibilities	Probability		
during the mineral exploration	Reversible		
project's target generation and			
drilling phase; and			
- Increased informal settlement			
and accompanying difficulties.			

5.4 Mineral Exploration phases and associated issues

Exploration phases	associated issues		
Mapping and Geochemical Sampling Phase of the Project			
Dust	Fall out dust settling on vegetation is likely		
	to cause local disruptions in herbivorous and		
	predatory complexes and should be		
	minimized as far as possible		
Noise	Disturbs or scare animals that inhabited in		
	the proposed exploration surrounding areas		
Safety and Security	Possibility of injuries during mapping and		
	sampling		
Visual	Accidental diversion off of routes and		
	aesthetic damage to the landscape		
Drilling Phase of the Project			
Air quality	Vehicle movement may cause less dust.		
	However, when appropriately controlled,		
	will be likely to have little effects.		
Fire and Explosion Hazard	Long term environmental impacts		

Littering the surrounding areas if wastes are		
not appropriately disposed.		
Can cause serious health and safety risks to		
workers on site.		
Disturbances to the environment will result		
in the loss or change in behavior of fauna		
Disturbances to the environment will result		
in the loss or change in behavior of flora		
Causes immigration of endemic birds		
All archaeological remains are protected		
under the National Heritage Act (2004) and		
will not be destroyed, disturbed, or removed.		
- Exploration activities may affect the		
availability of water and the quality		
thereof		
- Surface water for animals may be		
affected as well		

6. Environmental management plan

6.1 Overview

Conducting an environmental assessment prior to engaging in an activity such as mining or exploration is one means of anticipating future environmental repercussions and creating ways to avoid or minimize them. Prior to prospecting or mining a specific location, it is usual practice to have an environmental management plan in place. It's crucial to have a well-structured, all-encompassing plan in place, as well as an environmental management system put up by a certified environmental consultant to assist management in making responsible and realistic decisions. Each on-site employee should be given a simplified explanation of the EMP's needs at the start of exploratory activities. Employees must be informed that they are required to follow this plan when this paper is issued.

6.2 Environmental management principles

Everyone will be expected to conduct all of their activities in an environmentally and socially responsible manner. This includes all consultants, contractors, and subcontractors, as well as transport drivers, visitors, and anybody else involved in the mineral exploration project who enters the exploration regions. Protect project staff and the general public's health and safety from the project's potential consequences. This covers road safety, on-site protection from natural risks, and radiation concerns. Environmental resource management and conservation that takes into account the needs of current and future generations Prevent contamination of the air, water, and soil, and conserve biodiversity.

6.3 Impacts on the bio-physical environment

Table 6 Possible effects on the bio-physical environment, mitigation measures, and their monitoring methods

Impacts	Mitigation measures	Monitoring methods		
Impacts on	- Buffer zones will be created	An archaeologist will inspect any		
Archaeological	around the sites.	identified archaeological sites		
Sites	- Adhere to practical	actical before commencing with the		
	guidelines provided by an	mineral exploration activities.		
	archaeologist to reduce the			
	archaeological impact of			
	mineral exploration			
	activities.			

	- All archaeological sites to be	
	identified and protected	
	before further exploration	
	commences.	
	- Notices/information boards	
	will be placed on sites.	
	- Training employees	
	regarding the protection of	
	these sites.	
Impacts on	- Some habitat areas such as	Regular monitoring of any
Fauna	trees of the riverbeds and	unusual signs of animal habitat.
Faulta		
	tunnels outcrops will be	
	avoided wherever possible.	
	- A fauna survey will be	
	conducted to determine the	
	effect of fragmented habitat	
	on game species should the	
	need arise.	
	- No animals shall be killed,	
	captured or harmed in any	
	way.	
	- No foodstuff will be left	
	lying around as these will	
	attract animals which might	
	result in human-animal	
	conflict.	
	- Care will be taken to ensure	
	that no litter is lying around	
	as these may end up being	
	ingested by wild animals	
	- No animals shall be fed. This	
	allows animals to lose their	
	natural fear of humans,	

		which may result in	
		dangerous encounters.	
Impact on	-	Environmental	Environmental education
Vegetation		considerations will always	awareness, and regular monitoring
		be adhered to before clearing	of any unusual signs of animal
		roads, trenching and	habitat.
		excavating.	
	-	Paths and roads will be	
		aligned to avoid root zones.	
		Permeable materials will be	
		used wherever possible.	
	-	The movement of vehicles in	
		riverbeds, rocky outcrops	
		and vegetation sensitive	
		areas will be avoided.	
	-	The movement of vehicles	
		will be restricted to certain	
		tracks only.	
	-	Areas with species of	
		concern will be avoided.	
	-	Ministry of Environment	
		and Tourism will be	
		informed of any protected	
		species which will be	
		transplanted in consultation	
		with MET.	
Impacts on	-	The population change can	Public meetings will be held by
Socio-		be mitigated by employing	the proponent whenever
Economic		people from the local	necessary.
		community and encouraging	
		the contractors to employ	
		local individuals.	

	- The perception of risks will	
	be mitigated by putting up	
	safety signs wherever	
	possible and ensuring that all	
	employees and visitors to the	
	site undergo a safety	
	induction course.	
Visual Impacts	Environmental considerations will	Employees will be trained on the
	be adhered to at all times before	importance of minimizing visual
	clearing roads, trenching and	impacts.
	excavating.	
Generation of	Commit to the management of solid	Transportation of solid waste to a
Solid Waste	waste life cycle by all the employees	registered site for disposal.
	and contractors of the site.	
Noise	Disturbance to fauna that roam the	Restriction duration of noise
INDISE		
	area will be minimized by training	pollution.
	the employees on ways to minimize	
	noise.	
Air quality	- All staff on should be	
	equipped with dosimeters	
	that measure exposure levels	
	to radiation.	
	- All staff must be made aware	
	of the health risk and obliged	
	to wear dust masks.	
	to wear dust masks.	

6.4 Table 7 Summary of Environmental Management Plan during the phases of the project

CONSTRUCTION PHASE				
Environmental	Proposed mitigation measures	Responsibility	Monitoring plan	
impacts				

		I	ı
Solid waste	- Any debris should be collected by	e	sence of well-
	a waste collection company	Mai	ntained
		rece	ptacles and
		cent	tral collection
	- If trenches are dug, waste should	poir	nt.
	be re-used or backfilled.		
	- The site should have waste		
	receptacles with bulk storage		
	facilities at convenient points to		
	prevent littering during		
	exploration.		
Oil leaks and	- Vehicles and equipment should be	Proponent No	oil spills and
	well maintained to prevent oil		_
spills	leaks.	leak	as on the site
	iours.		
	- Contractor should have a		
	designated area where		
	maintenance is carried out and		
	that is protected from rainwater.		
	that is protected from raniwater.		
Visual	- Environmental considerations	Management Emp	ployees will be
	will be adhered to at all times	train	ned on the
	before clearing roads, trenching	imp	ortance of
	and excavating.	min	imizing visual
		imp	acts.
Auchassis	Adhere to prostical and there	Managament	
Archaeological	- Adhere to practical guidelines	Management	
Sites	provided by an archaeologist to		
	reduce the archaeological impact		
	of mineral exploration activities.		

	- All archaeological sites to be identified and protected before further exploration commences.		
Air pollution	 Maintenance of vehicles and equipment. Control speed and operation of construction vehicles. Prohibit idling of vehicles. Workers should be provided with dust masks if working in sensitive areas. 	Site manager	Control amount of dust produced
Noise pollution	 Field work should only be carried out only during daytime at a specific time. Workers should wear earmuffs if working in noisy section. Management to ensure that noise is kept within reasonable levels. 	Proponent and management	Control amount of noise
Soil pollution	 Clearly mark/demarcate vehicle routes. No worker should ever drive off road, but to stick to the demarcated routes. 	Project coordinator Management and park warden	Proper planning and management
Flora	- Care should be taken to avoid/minimize destruction of endemic and Red Data Species.	Management and proponent	Warning signs on site and restored vegetation

	- A geologist should be consulted with respect to the viability of moving the trench to avoid destruction of fragile species.		
Fauna	 Some habitat areas such as trees of the riverbeds and tunnels outcrops will be avoided wherever possible. A fauna survey will be conducted to determine the effect of fragmented habitat on game species should the need arise. No animals shall be killed, captured or harmed in any way. No food will be left lying around as these will attract animals which might result in human-animal conflict 	Management	Regular monitoring of any unusual signs of animal habitat.
Occupational Health and Safety	 Provide Personal Protective Equipment Train workers on personal safety and how to handle equipment and machines. A well-stocked first aid kit shall be maintained by qualified personnel. Provide sufficient and suitable sanitary conveniences which should be kept clean. 	Proponent	 Workers using protective equipment. Presence of Well stocked first aid kit. Clean sanitary facilities.

OPERATIONA	L PHASE
Oil leaks and spills	 Impervious PVC sheets should be deployed as flooring and covered with sand to absorb spillages Should spillages occur, contaminated sand needs to be removed and stored in a drum, to be later removed to an approved disposal site
Solid waste	 Under no conditions should any waste be buried or burned at the site Minimize solid waste generated on site. Waste to be deposited at a demarcated waste site in the park or if it needs to be removed to designated sites outside the park
Visual	 Environmental considerations will be adhered to at all times before clearing roads, trenching and excavating. Siting of roads should avoid the traversing of tops of ridges and always use of existed roads rather than creating new ones. Erected infrastructure should be sited in depressions not on hill tops or rises and should not be

	visible from any major tourist roads lookout points.		
Archaeological Sites	 Adhere to practical guidelines provided by an archaeologist to reduce the archaeological impact of mineral exploration activities. Should any item of interest be located, all activities need to cease immediately at that location, and notify the National Monuments Council. 	Management	Update Register of all archaeological sites identified.
Noise pollution	 Workers to wear earmuffs if working in noisy section Management to ensure that noise is kept within reasonable levels. 	Proponent Management	Control amount of noise
Soil pollution	 The top soil needs to be removed and stockpiled Stockpiled soil must be covered to prevent it from being windblown within three months All hydro-carbon products need to be stored in a bunded area, to avoid any accidental spillages. 	Project coordinator Management and park warden	Proper planning and management
Flora	 Care should be taken to avoid/minimize destruction of endemic and Red Data Species. A geologist should be consulted with respect to the viability of moving the 	Management and contractor	Warning signs on site and restored vegetation

	trench to avoid destruction of fragile		
	species.		
Fauna	- Strict employee's code of conduct	Management	Regular
	including prohibition of hunting		monitoring of any
	or trapping or interfering in any		unusual signs of
	manner with any wild animals.		wild animal
			habitat.
	- No feeding of wild animals		
	should be allowed.		
	- Litter should be prevented and		
	adequately disposed of to prevent		
	attracting scavenging wild		
	animals.		
Environment	- Train workers on personal safety	Management	Provide sanitary
Health and	and disaster preparedness.		facilities.
Safety	A wall stacked first aid hit shall		
	- A well-stocked first aid kit shall		
	be maintained by qualified		
	personnel.		
	- Report any accidents / incidences		
	and treat and compensate affected		
	workers.		
	- Provide sufficient and suitable		
	sanitary conveniences which		
	should be kept clean.		
	- Conduct Annual Health and		
	Safety Audits.		
Fire	- Firefighting emergency response	Management	- Proof of
preparedness	plan.		inspection
			on

	 Ensure all firefighting equipment are regularly maintained, serviced and inspected. Fire hazard signs and directions to emergency exit, route to follow and assembly point in case of any fire incidence. 		firefighting equipment - Fire Signs put up in strategic places. - Availabilit y of firefighting equipment.
DECOMMISSIO	ONING PHASE		
Solid waste	 Solid waste should be collected by a contracted waste collection company Excavation waste should be re- used or backfilled. 	Proponent and Management	Amount of waste on Site. Presence of well- maintained receptacles and central collection point
Noise & Air pollution	 Maintain plant equipment. Decommissioning works to be carried out only during daytime. Workers working in noisy section to wear earmuffs. Workers should be provided with dust masks. 	Proponent and Management	Amount of noise

Soil pollution	- The contaminated soil needs to be treated either by adding bacteria which break down spilled hydro- carbon, or by simply distributing the soil thinly in direct sunlight to naturally break down the hydro-	
	carbons.	
Disturbed Physical environment	- Undertake a complete environmental restoration program and introducing appropriate vegetation	
Occupational Health and Safety	 Provide Personal Protective Equipment. Train workers on personal safety and how to handle equipment and machines. A well-stocked first aid kit shall be maintained by qualified personnel. Demarcate area under decommissioning. 	using Protective Equipment. - Presence of a First Aid Box.
Visual pollution	 Rake the track or drag tyres to smooth tracks Removal of all construction equipment, surplus material and temporary structures, fences and works of every kind, and 	every foreign material at the site

everything that was brought at the	
site.	

6.5 Monitoring, Auditing and Reporting

6.5.1 Inspections and Audits

Performance against the EMP commitments will need to be reviewed throughout the project's life cycle, with corrective action implemented as needed, to guarantee compliance with the EMP and any Enviro-legal obligations. This will include conducting both the internal inspections/audits and external audits, documentation, reporting, establishing an environmental management systems, adhere to the drafted environmental policy, maintain the impact aspect register, drafting procedures and method statements by the relevant responsible mineral exploration staff and contractors, determining the relevant roles and responsibilities, and others.

Internal compliance monitoring will be implemented in the following manner:

- a) All contractors will be subjected to project kick-off and close-out audits. This applies to all phases of the process, including drilling contract work:
- Before a contractor begins work, the applicable phase site manager will perform an audit to confirm that the EMP commitments are reflected in the contractor's standard operating procedures (SOPs) and method statements.
- After a contractor's work is completed, the applicable phase site manager will conduct a final close-out audit of the contractor's performance against the EMP commitments.
- b) During the construction/initial and decommissioning phases, monthly internal EMP performance audits will be conducted.

6.5.2 Roles and responsibilities for environmental management

6.5.2.1 Communication between Parties

Emphasis will be put towards open communication between all parties, in order to reach a proactive approach towards potential environmental issues deriving from the project. This approach should guarantee that environmental impacts are anticipated and prevented, or minimised, rather than adopting a negative "policing" approach after negative impacts have already occurred. The importance of a proactive approach cannot be overemphasised, particularly in relation to preventing unnecessary tracks, and damage to vegetation (i.e. protected and endemic species) as these impacts cannot easily be remedied.

6.5.2.2 The Operating Company

The company is ultimately responsibility for all stages of the project and the impacts resulting from those activities. The responsible persons will be the company's Environmental Control Officer (ECO) and Managing Director to ensure that:

- The EMP and its environmental specifications are included in contractual documents and it is required that contractors, and subcontractors, consultants etc. do meet the EMP requirements;
- The company and all its subcontractors, consultants etc. comply with all Namibian legislation and policies and any relevant International Conventions;
- Compliance with the environmental specifications are enforced on a day-to-day basis;
- Environmental audits are conducted periodically by a suitably qualified ECO to confirm that the environmental requirements are properly understood and effectively implemented;
- Sufficient budget is provided to implement those measures that have cost implications;
- The site manager must commission tree surveys well in advance of planned road construction or drill pad preparation so that the necessary site visits by forestry personnel and forestry permits are acquired; and,
- Open an effective communication between all parties concerning environmental management on the project.

6.5.2.3 Site managers

Day-to-day responsibility for environmental management will be assigned to the ECO and Manager Field Operations site manager for the duration of all operational activities to:

- Be familiar with the contents of the EMP and applicable sections of the EIA and the measures recommended therein;
- Monitor compliance with the environmental specifications on a daily basis and enforce the environmental compliance on site by communicating the ECO's directions to all personnel involved;
- In the event of any infringements leading to environmental damage, personnel need to consult with the ECO and seek advice on any remedial measures to limit or rectify the damage;
- Maintain a record (photographic and written) of "before-and-after" conditions on site;
- Facilitate communication between all role players in the interests of effective environmental management.

6.5.2.4 Environmental Control Officer (ECO)

KMZ Enterprises cc must appoint a suitably qualified ECO who is responsible to:

- Undertake environmental audits of overall compliance with the environmental specifications. This should be done at least bi-annually for the warehouse.
- Submit a site inspection report to the Managing Director and MFO;
- Advise the MFO on interpretation and implementation of the environmental specifications as required; and,
- Make recommendations for remedial action in cases of non-compliance with the environmental specifications.

6. 5.3 Environmental Management System Framework

The proponent and its contractors will create and implement an Environmental Management System (EMS) in order to apply Environmental Management Practices. The structure for compiling a project EMS is established in this section. All environmental management paperwork will be kept in a paper and/or electronic system by the applicable exploration manager. These will be classified into the following groups:

a) Policy and Performance Standards

The EMP includes a draft environmental policy as well as accompanying objectives, targets, and pledges. These can be adjusted by the mineral explorer as needed.

b) Enviro-Legal Documentation

The proponent will always have a copy of the approved environmental assessment and EMP documents. The exploration team will also save copies of the Environment Clearance Certificate and all other related authorizations and licenses. In addition, a record of the project's applicable laws and regulations will be maintained and updated as needed.

c) Impact Aspect Register

The Aspect-Impact Register with the Project Activity is based on this Draft EMP, which specifies the foreseeable project features and related possible effects of the proposed project. It should be noted, however, that more project aspects and related affects may occur during the project's life cycle and will need to be recorded in the Aspect-Impact Register. The impact identification principles outlined in the scoping study can be utilized to update the Register in

this regard. During the project's life cycle, the applicable exploration manager can make changes to this approach as needed.

d) Procedures and Method Statements

Procedures and method statements will be drafted by the relevant accountable mineral exploration employees and Contractors in order to influence the promises included within the EMP. These may include, but are not limited to:

- Standard operating procedures for the implementation of the environmental action plan and management program.
- Procedures for dealing with incidents and emergencies.
- Procedures for auditing, monitoring, and reporting, as well as
- EMP compliance method statements for ad hoc actions not explicitly covered in the EMP action plans.

e) Register of Roles and Responsibilities

Relevant roles and duties will be identified during project planning and risk assessments. All environmental commitment duties and obligations must be documented in a register. The register must include pertinent contact information and be updated as needed.

f) Site Map

It is essential to keep an up-to-date map of the exploration site that shows all project activities. The following detail, in addition to the project layout, must be depicted:

- Material handling and storage
- Waste management (collection, storage, and transfer, among other things);
- Areas with a high level of sensitivity;
- The location of the incident and emergency equipment; and the location of the accountable parties.

g) Environmental Management Schedule

The applicable phase site managers and/or relevant Contractors must keep a schedule of environmental control actions. The exploration manager is responsible for keeping a master schedule of all such activities up to date. Environmental risk assessments, environmental management meetings, and other scheduled environmental actions include, but are not limited to:

- Handling, managing, and rehabilitating soils
- Waste removal
- Inspection and repair of incident and emergency response equipment
- Environmental education
- Participation of stakeholders; environmental inspections; and
- Auditing, monitoring, and reporting are all part of the auditing, monitoring, and reporting process.

h) Change Management

The EMS must have a change management procedure in place. In this regard, environmental documentation, procedures and method statements, action plants, and other related documents will be updated and revised as needed to account for the following scenarios:

Changes in standard operating procedures (SOPs), scope changes, ad hoc activities, project phase changes, and duties or roles changes

6.6 Closure Plan

The proposed project's closing plan is to develop a secure, stable, and non-polluting postprospecting landscape that may support integrated, self-sustaining, and value-generating activities, leaving a positive legacy in the process. The closure plan's goals are to:

- Prioritizing the creation of a functional post-prospecting environment that allows for selfsustaining agricultural operations whenever possible.
- To promote the restoration of terrestrial and aquatic wetland biodiversity, when appropriate.

6.6.1 Alternatives Considered

Because this is an exploration project, the proposed project is not complicated, and the hazards associated with prospecting are well understood and may be mitigated once the project is completed. There are few alternatives for closure. There are just two activity possibilities for the closure plan that have been considered:

First alternative:

Closure or backfill of boreholes with overburden removed during drilling (best option).

Second alternative:

Leaving boreholes open to allow for groundwater recharge from surface run-off.

6.6.2 Preferred Alternative: Rehabilitation/ Backfill of boreholes

The restoration of a disturbed environment that has been deteriorated as a result of operations such as mining, road construction, or waste disposal to a land use similar to that which existed before the activity began is known as rehabilitation. This involves aesthetic concerns, so that a disturbed region does not stand out from the surrounding surroundings. Backfilling boreholes with overburden removed during development and covering with growth medium to produce vegetation is the preferred technique for preserving physical, chemical, and biological ecosystem functions in degraded environments. This option provides a number of benefits, which are listed below:

Benefits:

- The site will be pleasing to the eye
- The location will blend in with the surroundings
- The site will be a suitable habitat for fauna and flora again
- The site will be safe and pollution-free

Option 1, which is to leave boreholes unbackfilled, carries the risk of these boreholes filling with water, which could attract wildlife and communities, resulting in drowning and the possibility of getting trapped in the declines. Backfilling is required to reduce these dangers.

6.6.3 Closure Assumptions

This closure plan was created using the minimal information available, including environmental data. During the operational phase, some of the already accessible data may need to be enhanced. To construct the suggested closure actions, numerous assumptions were made about general conditions, as well as the closure and rehabilitation of the site's facilities. These assumptions will be examined and amended as more information becomes available during operations.

The following are some of the assumptions that were utilized to create this plan:

- Once the last intended weight of minerals has been removed from the site for laboratory testing, the closing period will begin.
- The recommended prospecting sites will be followed to the letter in order to minimize potential consequences.
- Vegetation will be established in accordance with the native vegetation of the project area.
- Water management infrastructure constructed during the operational period will be kept for closure / end of project life if needed.

- There are few chances to build infrastructure on site, and any infrastructure that is created will be of minimal utility to the community. As a result, all structures will be demolished.
- All hazardous and household garbage will be carried offsite to licensed landfills for disposal.
- Existing roads will be utilized to the greatest extent practicable. Where access tracks have been built in the absence of roads, they will be restored and closed as part of the standard closure process.

6.6.4 Closure and Rehabilitation Activities

The remediation procedures that will be conducted when the projected prospecting activities reach the end of their life cycle are explained below:

6.6.4.1 Infrastructure

All infrastructure will be decommissioned, and the footprints will be repaired so that vegetation can grow. To minimize any surplus materials at closure, material inventories will be maintained at the end of prospecting activities. Equipment and materials of value that aren't needed for post-closure operations will be sold or removed from the site as much as possible. Scrap and salvageable equipment will be removed from the site and sold to recyclers.

Following the completion of demolition activities, a soil contamination investigation will be carried out. The goal is to identify potential contaminated locations and then create and implement appropriate remediation methods to ensure that soil contaminants are removed. The following actions will be taken to bring the situation to a close:

- Prior to undertaking any decommissioning work, all power and water services will be disconnected and certified as safe
- All remaining inert equipment and decommissioning waste will be disposed of at the nearest licensed general waste disposal facility
- Salvageable equipment will be removed and transported offsite prior to and during decommissioning
- All tanks, pipes, and sumps containing hydrocarbons will be flushed or emptied prior to removal to ensure no hydrocarbon/c is present

6.6.4.2 Boreholes

Boreholes will be backfilled with overburden stripped before prospecting activities begin. All overburden should be dumped into the vacuum, and the finished surface should be moulded to match the surrounding terrain while remaining free draining. After backfilling, a growth medium cover will be installed, and vegetation will begin to grow.

6.6.4.3 Roads

- Existing roads will be utilized to the greatest extent practicable. All signage, fences, and shade structures, as well as traffic barriers, will be removed as part of the road and parking area closure.
- All 'hard top' surfaces, as well as any concrete structures, must be ripped.
- All potentially contaminated soils must be identified and delineated for further treatment
- All haul routes treated with saline dust suppression water must be treated, with the upper surface pulled off and disposed of in authorized contaminated disposal places.

6.6.4.4 Remediation of Contaminated Areas

- All hydrocarbon-containing tanks, pipes, and sumps will be flushed or emptied, and removed soils will be treated according to the nature and amount of the pollution.
- The liquid storage tanks will be drained, the structure will be removed/demolished, and the sub-surface holes will be plugged; and
- All equipment used to store or transport chemicals will be cleaned and disposed of at a proper disposal facility.

6.6.4.5 Vegetation

Using non-invasive plants that meet the habitat's criteria, successful revegetation will help control erosion of soil resources, maintain soil productivity, and reduce sediment loading in streams (e.g. soils, water availability, slope and other appropriate environmental factors). Invasive species will be avoided, and the area will be managed to keep them from spreading. On slopes, naturally occurring grassland species will be planted to combat the effects of erosion. These plants will increase soil holding capacity while also lowering runoff velocity. The flat areas will be re-vegetated with the goal of establishing a long-term ecology. Before vegetation is removed, the presence of protected plant species must be identified, and the necessary licenses for destruction or relocation must be secured.

6.6.4.6 Waste Management

Hazardous waste will be controlled, sorted, and disposed of, while non-hazardous garbage will be disposed of in a nearby permitted landfill site. Scrap and waste steel will be sold to recyclers. Wastes to be contained in animal-proof drums with a solid lid, and drums be in an enclosed fence, to prevent windblown debris from escaping, and scavenging animals from rummaging through the waste.

7. Public participation

Notification of the proposed activities were advertised in the two widely common newspaper to consult the public as presented in Appendix, to identify and contact as many potential I&APs as possible. The description of the project was presented and opportunity was given for I&APs to give their comments and issues. The registered interested and affected are indicated in the table below:

Name	Position	Organization

8. Conclusions

The report is prepared for the Environmental Impact Assessment for mineral exploration in the Skeleton Coast Park The proposed site is located between Huab River in the north and Ugab River in the south, within the areas of Toscanini southwest of Khorixas, and its geographical coordinates are - 21.105489 and 13.673969.

The approach and methodology will be guided by the Environmental Regulations of 2012 and as per proponent's provisions. The project will employ individuals from the local towns and communities throughout the exploratory phase. If the exploratory project results in the finding of a commercially viable mineral deposit, a mine could be built in the area. A mine can make a substantial contribution to the social and economic development of the town.

On condition that that the relevant mitigation measures are effectively implemented by the proponent, there are no environmental reasons why the proposed project should not be approved. The project will have significant positive economic impacts that would benefit the local, regional and national economy of Namibia.

References

Bendi, M. (2003). Namibia: Mining Overview. Retrieved May 10, 2022

Hutton, R., & Palfi, A. G. (2003). *Environmental impact assessment of bulk sampling on portion of exclusive prospecting licence 2566, Terrace Bay, Skeleton Coast.* Windhoek: Namib Resources (Pty) Ltd.

Mansfeld, C. (2006). Environmental impact of prospecting and mining in Namibian National *Parks: Implications for legislative compliance*. Western Cape Winelands: University of Stellenbosch.

MEFT. (2021). *Management Plan for Skeleton Coast National Park 2021/2022-2020/2031*. Windhoek: MEFT.

Mendelsohn, J., Jarvis, A., Roger, S., & Roberstson, T. (2012). *The coast of Kunene and the Skeleton Coast Park: Namibia's coast.* Windhoek: Namibian Coast Conservation and Management (NACOMA) project, Ministry of Environment and Tourism.

MET. (2007). Retrieved from https://www.namibiahc.org.uk

MIT. (2003). *Report on investment opportunities in mining*. Retrieved May 10, 2022, from http://www.mti.gov.na/invopps text/mining.htm

Namene, C. P. (2020). *EIA REPORT: Proposed Construction of an 18MW Solar Power Plant on Lease 16 of Farm 38, Walvis Bay, Erongo Region.* Windhoek: Environam Consultants Trading (ECT).

Ministry of Environmental and Tourism, Ministry of Mines and Energy (2018). National Policy on Prospecting and Mining in protected areas 2018-2022

White, N. C. (2005). *Mining geology: Exploration*. Encyclopedia of Geology.

Appendices

Appendix A Newspaper advertisement in a Confidante newspaper



Appendix B Newspaper advertisement in a Republikein newspaper



Regskennisgewings Legal Notices

ENVIRONMETAL IMPACT AS-SESMENT FOR EXPLORATI-ONS ACTIVITIES BY KMZ IN-TERPRICES CC ON EXCLUSIVE PROSPECTIVE LICENCE (EPL 8496). Advanced environmental agency consultant herewith gives notice in terms of the Environmental Management Act, 7 of 2007 and Regulation 21 of the Environmental impact assessment (EIA) for the process mining activities on the above mentioned

EPL NO: 8496

PROPONENT: KMZ INTERPRI-CES CC

DESCRIPTION OF ACTIVITY: EXPLORATION ACTIVITIES ON DENMENSION STONES, PRECI-OUS METAL 16, 4604 Ha area APROXMATELY.

LOCATION OF THE ML AREA: KHORIXAS, KUNENE REGION SKELETON COAST.

Interested and Affected parties (I & AP) are invited to register with advanced environmental agency consultants for the proposed mining activities within 14days of the advertisement. Registration can be done by requesting of the Background information document provided in the email below.

Any persons having any objection to the email below by: 26 APRIL 2022-10 MAY 2022

Email: info.advanceenviroment@gmail.com Cell: 081-4801644.

DM0202200402290

ENVIRONMETAL IMPACT AS-SESMENT FOR EXPLORATI-ONS ACTIVITIES GRAVITY MINING CC ON EXCLUSIVE PROSPECTIVE LICENCE (EPL 8375). Advanced environmental agency consultant herewith gives notice in terms of the environmental Management Act, 7 of 2007 and Regulation 21 of the Environmental impact assessment (EIA) for the process mining activities on the above mentioned EPL NO: 8375

PROPONENT: GRAVITY MINING CC

DESCRIPTION OF ACTIVITY: EXPLORATION ACTIVITIES ON DENMENSION STONES, PRECI-OUS METAL 16,4604 Ha area APPROXMETLY

LOCATION OF THE ML AREA: KHORIXAS, KUNENE REGION SKELETON COAST.

Interested and Affected parties (I & AP) are invited to register with advanced environmental agency consultants for the proposed mining activities within 14 days of the advertisement.

Registration can be done by requesting of the Background information document provided in the email below. Any persons having any objection to the email below by: 26 APRIL 2022-10 MAY 2022

Email: info.advanceenviroment@ gmail.com Cell: 081-4801644 DM0202200402294

> Scanned with M@BILE SCANNER