# A SCOPING REPORT ON THE ENVIRONMENTAL IMPACT ASSESSMENT FOR MINERAL EXPLORATION ACTIVITIES ON EPL 6463, CENTRAL NAMIBIA

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# ENVIRONMENTAL ASSESSMENT FOR MINERAL EXPLORATION ON EPL 6463, CENTRAL NAMIBIA

# EXECUTIVE SUMMARY

#### 1. Introduction

#### 1.1 Overview

The proponent, Back to Back Investments (Pty) Ltd, was granted an exclusive prospecting licence (EPL) by the Ministry of Mines and Energy. The licence holder intends to explore for dolerite dykes within the Damaran intrusive rocks that are found within the vicinity of the area. Impala Environmental Consulting was appointed by the proponent to undertake an Environmental Assessment (EA) and Environmental Management Plan (EMP) for the mineral exploration project.

#### **1.2 Location**

The mineral license is located 25 km north of Uis. The coordinates for the centre of the licence are 15.059255 and -20.953384.

#### **1.3 Environmental Assessment Requirements**

The Environmental Regulations procedure (GN 30 of 2012) stipulates that no mining and mineral exploration activities may be undertaken without an environmental clearance certificate. As such, an environmental clearance certificate must be applied for in accordance with regulation 6 of the 2012 environmental regulations. It is imperative that the environmental proponent must conduct a public consultation process in accordance with regulation 21 of the 2012 environmental procedure, produce an environmental scoping report and submit an Environmental Management Plan for the proposed mineral exploration activities.

#### **1.4 Project Alternatives**

An alternative to the proposed mineral exploration activity would be to allocate the land-usage to other income generating activities tourism activities. The proposed project will strictly employ locals from nearby towns and settlements.



# ENVIRONMENTAL ASSESSMENT FOR MINERAL EXPLORATION ON EPL 6463, SOUTHERN NAMIBIA

# FINAL SCOPING REPORT

# Table of Contents

E	XECL	JTIV	E SUMMARY	1		
1.	1. Introduction7					
1.1 Project Background						
1.1.1 1.1.2		.1	Mineral Licence Tenure	8		
		.2	Environmental Consultant	8		
	1.1	.3	Proponent of the Proposed Project	8		
	1.2	Pro	ject Location	10		
	1.3	Infr	astructure and Services	11		
	1.3	.1	Electricity	11		
	1.3	.2	Water Supply	11		
	1.3	.3	Refuse and Waste Removal	11		
	1.3	.4	IT Systems and Communication	11		
	1.3	.5	Security and Fencing	11		
1.3.6		.6	Buildings	12		
	1.3.7		Roads	12		
	1.3	.8	Mobile Equipment	13		
	1.3	.9	Fuel Distribution, storage and supply	13		
	1.3	.10	Storage of Lubrication and consumables	13		
	1.3	.11	Fire Fighting Provision	13		
	1.4	En	vironmental Impact Assessment Requirements	13		
	1.5	Pur	pose of the Scoping Report	13		
	1.6	Ter	ms of Reference	14		
	1.6	.1	Environmental Assessment Approach and Methodology	17		
	1.6	.2	List of Specialist Studies Undertaken	19		
	1.7	Nee	ed and Desirability	19		
	1.7	.1	Need of the Exploration Project	19		
	1.7	.2	Alternatives	20		
2	Su	mma	ary of applicable legislation	21		
	2.1	En	vironmental Management Act of 2007	21		



	2.2	The Minerals Prospecting and Mining Act of 1992	21	
	2.3	Water Resources Management Act of 2004	21	
	2.4	Nature conservation ordinance, ordinance No. 4 of 1975	22	
	2.5	National Heritage Act, 2004 (Act No. 27 of 2004)	22	
	2.6	Petroleum Products and Energy Act No. 13 of 1990	22	
	2.7	Forest Act, No. 12 of 2001	23	
	2.8	Atmospheric Pollution Prevention Ordinance 11 of 1976	23	
	2.9	Hazardous Substance Ordinance, No. 14 of 1974	24	
	2.10	Namibian Water Corporation (Act 12 of 1997)	24	
	2.11	Public and Environmental Health Act, 2015	24	
	2.12	Agricultural (Commercial) Land Reform Act 6 of 1995	24	
3	Des	scription of Proposed Mineral exploration Project	25	
	3.1	Introduction	25	
	3.2	Techniques for Mineral Exploration	25	
	3.2	1 Target Generation	25	
<ul> <li>3.2.2 Target Drilling</li> <li>3.2.3 Resource Evaluation</li> <li>3.2.4 Resource Definition</li></ul>				
	3.3 La	abour Requirements	28	
4	Des	scription of the Current Environment	29	
	4.1	Introduction	29	
	4.2 C	limatic Conditions	29	
	4.2	1 Temperature	29	
	4.2	2 Precipitation	30	
	4.2	3 Wind	31	
	4.2	4 Humidity	32	
	4.2	Air Quality	33	
	4.3	Geology	34	
	4.3	1 Geological setting	34	
	4.4	Hydrogeology and Water Resources	36	
	4.5	Flora	37	
	4.6	Fauna	39	
	4.6	1 Introduction	39	
	4.6	2 Amphibians	39	



	4.6.	3	Mammals	41
	4.6.	4	Reptiles	42
	4.7	Avif	auna (Birds)	43
	4.8	Arc	haeology and Heritage Sites	44
	4.9	Soc	io-Economic Environment	44
	4.9.	1	Demographics of Uis	44
	4.9.	2	Social Economic Impact	44
5.	A	sses	ssment of Impacts	45
	5.1. C	Vera	all socio-economic benefits and issues	46
	5.1.	1. S	ocio-economic benefits	46
	5.2. N	liner	al Exploration phases and associated issues	48
	5.2.	1. N	lapping and Geochemical Sampling Phase of the Project	48
	5.2.	2. D	rilling Phase of the Project	49
6.	Envir	onm	ental Management Plan	54
	6.1 O	verv	iew	54
	6.2 Ei	nvirc	nmental Management Principles	54
	6.3 In	npac	ts on the Bio-physical Environment	56
	6.3.	1 Im	pacts on Archaeological Sites	56
	6.3.	2 Im	pacts on Fauna	57
	6.3.	3 Im	pacts on Avifauna	58
	6.3.	4 Im	pact on Vegetation	58
	6.3.	5 Im	pacts of Alien invasive Plants	58
	6.3.	6 Im	pacts on Socio-Economic	59
	6.3.	7 Vi	sual Impacts	60
	6.3.	8 Us	se of Natural Resources	60
	6.3.	9 Ge	eneration of Solid Waste	60
	6.3.	10 N	loise	60
	6.3.	11 A	Air Quality	61
	6.4 Si and d	umm ecor	nary of Environmental Management Plan during construction, operation	61
	6.5	Mor	nitoring, Auditing and Reporting.	65
	6.5	1 In	spections and Audits	65
	6.5	2	Environmental Management System Framework	66
	6.6	Clos	sure Plan	69



6.6.1	.6.1 Alternatives Considered				
6.6.2 Preferred Alternative: Rehabilitation/ Backfill of boreholes					
6.6.3	Closure Assumptions	71			
6.6.4	Closure and Rehabilitation Activities	72			
7. Public Participation Process					
8. Conclusi	on	77			
9. Reference	es	79			
Appendix A		81			
Appendix B: Proof of Advertisements, Letters and Notices					
Appendix o	Appendix of CV's				

# List of Figures

Figure 1 A satellite imagery showing the orientation of the mineral exploration	7
Figure 2 A map showing the farms surrounding the mineral exploration licence	. 7 . 9
Figure 3 Locality map of the exclusive prospecting licence area	10
Figure 4 Topographic map showing the existing road network within the licence are	a.
	12
Figure 5 Flowchart of the Environmental Impact Assessment process followed in	
Namibia	16
Figure 9 A graph showing the temperature patterns in UIs, from	20
Figure 10 A graph showing rainfall patterns in Llis, from	30
rigure to A graph showing faintail patients in ois, nom	31
Figure 11 A graph showing windspeed patterns in Uis from	51
www.worldweatheronline.com	32
Figure 12 A graph showing the humidity patterns in Uis, from	-
www.worldweatheronline.com	33
Figure 8 A geological map of the area	36

# List of Tables

Table 1 A table showing plant species which are likely to occur in the area	37
Table 2 Table of plant species which are protected under the Forestry Act and lik	ely
to occur in the area	39
Table 3 A list of amphibian species which may occur in the project area	40
Table 4 Mammal species which are likely to occur within the project area	41
Table 5 Protected reptile species in the project area	42
Table 6 Bird scpecies which are likely to occur within the site area.	43
Table 7 Assessment methodology used to examine the impacts identified	45
Table 8 Impact evaluation for socio-economy	47
Table 9 Impact evaluation for the target generation phase of the project	49
Table 10 Impact evaluation for the operational phase of the project	52



# 1. Introduction

## 1.1 Project Background

The proponent, Back to Back Investments (Pty) Ltd, was granted an exclusive prospecting licence (EPL) by the Ministry of Mines and Energy. The licence holder intends to explore for dolerite dykes within the Damaran intrusive rocks that are found within the vicinity of the area. An outline of the area is shown in the image below.



Figure 1 A satellite imagery showing the orientation of the mineral exploration licence.



Figure 2 shows the surrounding farms of the project area. The licence falls within a traditional authority area.

#### 1.1.1 Mineral Licence Tenure

The exclusive prospecting number is 14/2/1/4/2/6463. The Exclusive Prospecting Licence (EPL 6463) was granted in **29/08/2017** and will be valid up to **28/08/2020**. The mineral licence is issued to Back to Back Investments (Pty) Ltd who is in partnership with JTD Mining Group.

The size of the mineral licence is **22122.9992 Hectares**. It is granted for Base and Rare Metals, Dimension Stone, Industrial Minerals, and Precious Metals commodities.

#### 1.1.2 Environmental Consultant

Impala Environmental Consulting cc was appointed by the proponent to undertake an Environmental Assessment (EA) and Environmental Management Plan (EMP) for the mineral exploration project. Impala does not have any interest, be it business, financial, personal or other, in the proposed activity, application or appeal, other than fair remuneration for work performed on this project. The public participation process and report writing was overseen by Mr. Ndaluka Amutenya as the EAP. CV's of various role players are annexed to the appendix section of this report.

#### 1.1.3 Proponent of the Proposed Project

The Exclusive Prospecting Licence belongs to Back to Back Investments (Pty) Ltd who has formed a joint venture with JTD Mining Group (Pty) Ltd.

Licence Hol	der	Postal Address	Email Address	Contact
Back to	Back		kubaraf@mweb.com.na	0812276915
Investments	(Pty)			
Ltd				





# 1.2 Project Location

The mineral license is located 25 km Northeast of Uis. The coordinates for the centre of the licence are 15.059255 and -20.953384



Figure 3 Locality map of the exclusive prospecting licence area



## **1.3 Infrastructure and Services**

#### 1.3.1 Electricity

At this stage, electricity requirements for the project are minimal. The bulk of the power supply to the exploration site will be sourced from the proponent's own generator. The power requirements for the proposed project will be minimal as power will only be required for the following activities:

- Emergency lighting.
- Powering small machinery during the mineral exploration process.
- Power supply for temporary office block or container if necessary.

# 1.3.2 Water Supply

The water requirements for the project are minimal. Water containers will be brought on site and utilised whenever necessary. The water will mostly be used for general consumption and cleaning. The water used for drilling will be recycled.

## 1.3.3 Refuse and Waste Removal

The proponent will negotiate directly will all suppliers of consumables such as grease, oil etc. to remove these materials for disposal once they have been used and need to be discarded. The proponent will provide adequate temporary sanitary facilities and such facilities must be maintained in a hygienic condition. Sewerage will be disposed of in a manner not polluting the environment. The proponent will remove all refuse pertaining to the proponent's activities, domestic or otherwise, from the property. The Miner will undertake environmental rehabilitation, both during and at the conclusion of the mineral exploration operations.

# 1.3.4 IT Systems and Communication

If drilling commences, provision will be made for two-way radios to enable the drill rig operators and the on-site staff to communicate effectively.

# 1.3.5 Security and Fencing

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



#### 1.3.6 Buildings

At this stage, no exploration camp will be set up and so provision will be made for prefabricated containers.

#### 1.3.7 Roads

Access to the mineral exploration sites is limited as there are currently no convenient roads, except for 4x4 tracks. From Uis, the licence area will be accessed via the C 35 road.



Figure 4 Topographic map showing the existing road network within the licence area.



#### 1.3.8 Mobile Equipment

The proponent's vehicle fleet will be optimised during the next project phase. Provision will be made 4x4 vehicles and a drill rig.

## 1.3.9 Fuel Distribution, storage and supply

During the drilling phase, diesel will be delivered to the by road transport and offloaded into the vehicles by offloading pumps.

## 1.3.10 Storage of Lubrication and consumables

During the drilling phase, consumables and lubricants will be stored in a designated area within a container. These substances will only be used for mechanical purposes and are assumed to be non-hazardous.

## **1.3.11 Fire Fighting Provision**

Portable fire-extinguishers will be fitted, as required, in vehicles and, as well as in the mobile containers where possible.

# **1.4 Environmental Impact Assessment Requirements**

The Environmental Regulations procedure (GN 30 of 2012) stipulates that no mineral exploration activities may be undertaken without an environmental clearance certificate. As such, an environmental clearance certificate must be applied for in accordance with regulation 6 of the 2012 environmental regulations. It is imperative that the environmental proponent must conduct a public consultation process in accordance with regulation 21 of the 2012 environmental procedure, produce an environmental scoping report and submit an Environmental Management Plan for the proposed mineral exploration activities.

# **1.5 Purpose of the Scoping Report**

The scoping report is prepared for the Environmental Impact Assessment for mineral exploration on an area which is located 25 km Northeast of Uis. Environmental scoping is a critical step in the preparation of an EIA for the proposed mineral exploration activities. 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

13



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

The approach and methodology taken was guided by the Environmental Regulations of 2012 and the Terms of Reference (ToR) which were provided by the proponent:

- Identify all legislation and guidelines that have reference to the proposed project.
- Identify existing environmental (both bio-physical and socio-economic) conditions of the area in order to determine their environmental sensitivity.
- Inform Interested and Affected Parties (I&APs) and relevant authorities of the details of the proposed development and provide them with a reasonable opportunity to participate during the process.
- Consider the potential environmental and social impacts of the development and assess the significance of the identified impacts.
- Compile a Scoping Report detailing all identified issues and possible impacts, stipulating the way forward and identifying specialist investigations, if required.



- Outline management and mitigation measures in an Environmental Management Plan (EMP) to minimize and/or mitigate potentially negative impacts.
- Submit the final scoping report to the competent authority and the Environmental Commissioner.





Figure 5 Flowchart of the Environmental Impact Assessment process followed in Namibia.



#### 1.6.1 Environmental Assessment Approach and Methodology

Environmental assessment process in Namibia is governed by the Environmental Impact Assessment (EIA) Regulations No. 30 of 2012 gazetted under the Environmental Management Act, (EMA), 2007, (Act No. 7 of 2007) and in line with the provisions of the Cabinet approved Environmental Assessment Policy for Sustainable Development and Environmental Conservation of 1995.

This report has taken into consideration all the requirements for preparation of all the supporting documents and application for an Environmental Clearance Certificate and lodgement of such application to the Environmental Commissioner (EC), Department of Environmental Affairs (DEA) in the Ministry of Environment and Tourism (MET).

The purpose of the Scoping Phase was to communicate the scope of the proposed project to Interested and Affected Parties (I&APs), to consider project alternatives, to identify the environmental (and social) aspects and potential impacts for further investigation and assessment, and to develop the terms of reference for specialist studies to be conducted in the Impact Assessment Phase if necessary. The steps undertaken during the Scoping Phase are summarised below.

#### 1.6.1.1 Project Initiation and Screening

The project registered on the online ECC portal (eia.met.gov.na) in order to provide notification of the commencement of the EIA process and to obtain clarity on the process to be followed.

#### **1.6.1.2 Initial Scoping Public Participation Process**

The objective of the public scoping process was to ensure that interested and affected parties (I&Aps) were notified about the proposed project, given a reasonable opportunity to register on the project database and to provide initial comments. Steps that were undertaken during this phase are summarised below:

 I&AP identification: A preliminary I&AP database was compiled using the farmer's contact details that were obtained from the Ministry of Lands and contact details of other interested and affected parties that were provided by the proponent. Additional I&AP's were added to the database based on



responses to the advertisements and notification letters, as well as attendees to the various meetings.

- Notification letter and Background Information Document (BID): A notification letter and Background Information Document was distributed for review and comment for a period of 3-4 weeks after commencement of the project.
- Advertisements and site notice: Advertisements announcing the proposed project, the availability of the BID, public meetings and the I&AP registration / comment period were placed in two widely distributed newspapers for two consecutive weeks. Site notices were placed on the boundaries of farm fences and on the notice boards of the Regional Council.

Over and above the issues raised were incorporated into the scoping report. These submissions were collated and responded to as indicated in the public participation section of the scoping report.

# 1.6.1.3 Compilation and Review of Draft Scoping Report (DSR)

The DSR was prepared in compliance with Section 8 of the EIA Regulations of 2012 and incorporated with comments received during the initial Public Participation Process. The DSR was distributed for a 14-day review and comment period.

#### 1.6.1.4 Final Scoping Report and Completion of the Scoping Phase

The Final Scoping Report (FSR) summarises the following: the legal and policy framework; approach to the EIA and process methodology; the project's need and desirability; proposed project activities; key characteristics of the receiving environment; and key issues of concern that will be further investigated and assessed in the next phase of the EIA.

The FSR complies with Section 8 of the EIA Regulations 2012. All written submissions received during the DSR review and comment period will be collated and responded to. The FSR was submitted to the competent authority. In terms of Section 32 of the Environmental Management Act, 2007 (No. 7 of 2007), the competent authority is then required to make a recommendation on the acceptance or rejection of the report to Ministry of Environment and Tourism (MET): Department of Environmental Affairs (DEA), who will make the final decision.



#### 1.6.2 List of Specialist Studies Undertaken

Section 9(a) of the Environmental Regulations of 2012 requires a disclosure of all the tasks to be undertaken as part of the assessment process, including any specialist to be included if necessary.

The mineral exploration project has not commenced yet. This means that the proponent has not conducted any surface exploration activities (i.e. geophysical survey, geological mapping and geochemical sampling) to find anomalies and determine suitable targets which can be tested with drilling. As such, no field specific specialist studies were commissioned by the proponent as no specific target area has been delineated yet. Although specialist studies were deemed unnecessary for this environmental impact assessment due to low intensity and extent of the exploration activities at this stage, a heritage impact assessment study was undertaken for this project. Specialist studies conducted in the area, in previous years, have been reviewed as part of the scoping and assessment process of this project.

After the proponent successfully drills a delineated target, undertakes a feasibility study and confidently decides to proceed with mining, a full environmental impact assessment will be carried out with appropriate site-specific specialist studies on groundwater, air-quality, fauna, flora, archaeology and avifauna.

#### 1.7 Need and Desirability

#### 1.7.1 Need of the Exploration Project

Mineral exploration companies play an important role in the development of a country's mineral resources. When minerals are mined, the company selling the product must pay a royalty to the government). The royalties are set by the government at a level that will encourage others to risk their capital in finding and developing these minerals, rather than the government risking taxpayer's money. This way the country can share in benefit of mineral resources without risking funds required for key everyday services to the community.

Namibia has a long tradition of mining. In 2018, mining contributed 14% of GDP and expanded 28%. In 2019, the mining industry contributed over 300 million dollars to government revenue. The whole industry contributed around 2.2 billion dollars to the



national economy in the same period. However, a drop in diamond and uranium production caused a contraction of 11,1%. Lower mineral commodity prices led to the declining expenditure on exploration. In 2019, the mining industry paid over 300 million dollars in wages and salaries and provided 16 324 direct jobs with 9 027 permanent employees. Temporary jobs figured out 800, while 6 515 were contractor jobs.

The exploration project may assist in helping Namibia attain some of the goals set out in National Development Plans such as the Fifth National Development Plan (NDP5) and the Harambee Prosperity Plan (HPP). During the exploration phase, the project will provide employment to at least 15 people from the surrounding towns and settlements. If the exploration project leads to the discovery of an economically viable mineral deposit, this may subsequently lead to the development of a mine within the area. A mine can significantly contribute to social-economic development around the surrounding community.

## 1.7.2 Alternatives

During the application of the exploration licence, no alternative sites were considered. The proposed exploration site has shown the potential to host an orogenic gold deposit.

#### **1.7.2.1 Exploration Method Alternatives**

Geochemical sampling and geological mapping methods will be used during the initial exploration period until a target is delineated. Thereafter, reverse circulation and diamond drilling methods will be employed to test the depth and extent of the mineralised rock units. If more modern, effective, and environmentally friendly exploration methods than the preferred ones are developed, such methods will be assessed and or considered.

# 1.7.2.2 No-Go Alternatives

The no-go alternative will mean that the current land activities such as farming and important vegetation species will not be disturbed, that is, there will not be disturbance of the flora and fauna.



No-go alternative will result in the non-exploration of minerals and bring beneficiations to the receiving environment. However, the no-go alternative is not considered since it will lead to negative socio-economic impacts.

# 2 Summary of applicable legislation

All mineral rights, related to mineral exploration activities in Namibia, are regulated by the Ministry of Mines and Energy whereas the environmental regulations are regulated by the Ministry of Environment and Tourism. The acts that affect the implementation, operation and management of mineral exploration activities in Namibia are shown below.

# 2.1 Environmental Management Act of 2007

## Line Ministry: Ministry of Environment and Tourism

The regulations that accompany this act lists several activities that may not be undertaken without an environmental clearance certificate issued in terms of the Act. The act further states that any clearance certificate issued before the commencement of the act (6 February 2012) remains in force for one year. If a person wishes to continue with activities covered by the act, he or she must apply for a new certificate in terms of the Environmental Management Act.

# 2.2 The Minerals Prospecting and Mining Act of 1992

# Line Ministry: Ministry of Mines and Energy

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 licences.

# 2.3 Water Resources Management Act of 2004

# Line Ministry: Ministry of Agriculture, Water and Forestry

The act provides for the management, protection, development, usage and conservation of water resources; to provide for the regulation and monitoring of water resources and to provide for incidental matters.



# 2.4 Nature conservation ordinance, ordinance No. 4 of 1975

# Line Ministry: Ministry of Environment and Tourism

The Nature Ordinance 4 of 1975 covers game parks and nature reserves, the hunting and protection of wild animals (including reptiles and wild birds), problem animals, fish, and the protection of indigenous plants. It also establishes a nature conservation board. The basic set of regulations under the ordinance is contained in GN 240/1976 (OG 3556). The topics covered in the regulations include tariffs (game parks), regulations relating to game parks, swimming baths, use of boats in game parks, inland fisheries, keeping game and other wild animals in capturing. In addition, the ordinance also regulates game dealers, game skins, protected plants, birds kept in cages, trophy hunting of hunt-able game, hunting at night, export of game and game meat, sea birds, private game parks, nature reserves, regulations of wildlife associations and registers for coyote getters.

# 2.5 National Heritage Act, 2004 (Act No. 27 of 2004)

Line Ministry/Body: National Heritage Council

The National Heritage Act provides for the protection and conservation of places 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.

# 2.6 Petroleum Products and Energy Act No. 13 of 1990

Line Ministry/Body: Ministry of Mines and Energy

The act regulates the importation and usage of petroleum products. The act reads as "To provide measures for the saving of petroleum products and an economy in the cost of the distribution thereof, and for the maintenance of a price thereof; for control of the furnishing of certain information regarding petroleum products; and for the rendering of services of a particular kind, or services of a particular standard; in connection with motor vehicles; for the establishment of the National Energy Fund and for the utilization thereof; for the establishment of the National Energy Council



and the functions thereof; for the imposition of levies on fuel; and to provide for matters incidental thereof".

# 2.7 Forest Act, No. 12 of 2001

Line Ministry/Body: Ministry of Agriculture, Water and Forestry

The act regulates the cutting down of trees and reads as follows "To provide for the establishment of a Forestry Council and the appointment of certain officials; to consolidate the laws relating to the management and use of forests and forest produce; to provide for the protection of the environment and control and management of forest trees; to repeal the preservation of Bees and Honey proclamation 1923, preservation of Trees and Forests Ordinance, 1952 and the Forest Act, 1968; and to deal with incidental matters".

The constitution defines the function of the Ombudsman and commits the government to sustainable utilization of Namibia's natural resources for the benefit of all Namibians and describes the duty to investigate complaints concerning the overutilization of living natural resources for the benefit of all Namibians and describes the duties to investigate complaints concerning the over-utilization of living natural resources, the irrational exploitation of non-renewable resources, the degradation and the destruction of ecosystem and failure to protect the beauty and character of Namibia. Article 95 states that "the state shall actively promote and maintain the welfare of the people by adopting; inter-alia policies aimed at maintenance of ecosystems, essential ecological processes and biological diversity of Namibia and utilization of natural resources on a sustainable basis for the benefit of all Namibians both present and future".

# 2.8 Atmospheric Pollution Prevention Ordinance 11 of 1976

Line Ministry/Body: Ministry of Health and Social Services

This ordinance provides for the prevention of air pollution and is affected by the Health Act 21 of 1988. Under this ordinance, the entire 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.



# 2.9 Hazardous Substance Ordinance, No. 14 of 1974

#### Line Ministry/Body: Ministry of Safety and Security

The ordinance provides for the control of toxic substances. It covers manufacture, sale, use, disposal and dumping as well as import and export. Although the environmental aspects are not explicitly stated, the ordinance provides for the importing, storage and handling.

# 2.10 Namibian Water Corporation (Act 12 of 1997)

## Line Ministry/Body: Namibian Water Corporation

The act caters for water rehabilitation of prospecting and mineral exploration areas, environmental impact assessments and for minimising or preventing pollution.

# 2.11 Public and Environmental Health Act, 2015

## Line Ministry/Body: Ministry of Health and Social Services

provide a framework for a structured uniform public and environmental health system in Namibia; and to provide for incidental matters.

# 2.12 Agricultural (Commercial) Land Reform Act 6 of 1995

# Line Ministry/Body: Ministry of Lands, Resettlement and Rehabilitation

To provide for the acquisition of agricultural land by the State for the purposes of land reform and for the allocation of such land to Namibian citizens who do not own or otherwise have the use of any or of adequate agricultural land, and foremost to those Namibian citizens who have been socially, economically or educationally disadvantaged by past discriminatory laws or practices; to vest in the State a preferent right to purchase agricultural land for the purposes of the Act; to provide for the compulsory acquisition of certain agricultural land by the State for the purposes of the Act; to regulate the acquisition of agricultural land by foreign nationals; to establish a Lands Tribunal and determine its jurisdiction; and to provide for matters connected therewith.



# **3** Description of Proposed Mineral exploration Project

# 3.1 Introduction

Dolerite and Diabase are both mafic igneous rocks having same mineralogical composition but differ in formation. The colours are frequently dark gray, black and green. Dolerite is medium-grained intrusive equivalent of volcanic basalt or plutonic gabbro, and usually occurs as dykes, sill and plugs. Dolerite is heavy with specific gravity ranging between 2.9 and 3.3. Dolerite dykes are often exposed to the surface and exhibit as walls in straight line. Diabase is a subvolcanic rock equivalent to volcanic basalt or plutonic gabbro. Diabase is subsurface volcanic rock formed by injecting gabbroic magma or lava as shallow dykes and sills under the surface of the Earth. Diabase is typically fine grained having chilled margin. The main ingredients of dolerite and diabase are mafic lath-shaped plagioclase of about 60% (labradorite and rarely bytownite) set in a finer matrix of clinopyroxene (typically 20–30% augite) and ±olivine (up to 10% in olivine diabase), magnetite and ilmenite. The accessory minerals are chlorine, uralite and calcite. The rocks usually display intersertal and intergranular texture. The coarse-grained diabase with pyroxene specifically alters to uralite (uralite diabase) and plagioclase from the labradorite and oligoclase type, known as "ophite," which are characterized by a special structure known as "ophite structure". Dolerite and diabase rocks are used as crushed stone in road making, concrete mixture in rough masonry, and block paving and ornamental stone in monumental purposes.

#### 3.2 Techniques for Mineral Exploration

#### 3.2.1 Target Generation

Target generation involves certain stages, such as mapping, geochemical survey and remote sensing. Mapping includes development of the geological, topographical (base), geochemical, and structural maps. Geological map focuses on identifying and mapping outcrops, describing mineralization and alteration zones, and making geological cross sections. In other words, it relies on the identification of rocks and minerals and the understanding of the environment in which they form. It aims to find what rock types occur at or close to the surface and how these rock types are related to each other, e.g., by defining their boundaries, ages, and structure. Topographical map, which is a base map, depicts the topographical features (contour, hill, stream,



etc.). Geochemical map includes surface sample locations and results, including analyses of rock, silt, and soil samples. Geophysical map depicts the geology and results obtained from geophysical survey. Structural map shows the orientation data (strike, dip, type, etc.) of bedding planes, faults, folds, joints and other structural features. They are all gathered to be used for the interpretation in copper mineral exploration (Mentes, 2012).

#### 3.2.1.1 Geochemical Survey

Geochemical survey is a kind of sampling method in mineral exploration and results in 'Assay' after laboratory works. Exploration geochemistry has evolved from its early origins using the chemistry of the environment surrounding a deposit in order to locate it. In mineral exploration studies, geochemical methods involve the geochemical analysis of geological materials, including rock, soil, and stream sediment or silt sediment. In addition to these surface samples, any materials obtained from drilling can be analyzed for the evaluation. This survey provides physical results to be worked on for the further interpretation and is used for identifying geochemical anomalies, which are used for geochemical mapping (Mentes, 2012). During the first phase, the type of sampling methods that will be applied are bulk sampling.

#### 3.2.1.2 Remote Sensing

Remote Sensing is the collection of information about an object or area without being in physical contact with it. Data gathering systems used in remote sensing are photographs obtained from manned space flights or airborne cameras, and electronic scanner or sensors such as multispectral scanners in satellites or airplanes and TV cameras, all of which record data digitally. Aerial photography and satellites allow people to work with modern techniques. Aerial photography is used to sense the amount (quantity) of mineral in a particular area. The mineral exploration team collects information such as tracks, roads, fences, and habitation, as well as maps of outcrops, regolith, and vegetation cover across a region. Landsat image (satellite imagery) is used both for the visible light spectrum over mineral exploration (Mentes, 2012).



#### 3.2.2 Target Drilling

Target drilling is the process whereby rigs or some operated tools are used to make boreholes to intercept a rock unit. It can be done by contractors with more experienced operators. This method is used to obtain very detailed information about rock types, mineral content, and rock fabric, and the relationships between rock layers close to the surface and those at depth. Then, subsurface geology in an area is evaluated after the results are obtained. That indicates if the potentially economic resources are present or not.

#### 3.2.3 Resource Evaluation

It is an evaluation of tonnage (volume) and grade (concentration or weight percent) of the ore body. The volume is determined by using drill data to outline the deposit in the subsurface, and by using geometric models to calculate the volume. The grade is the average concentration determined from numerous assays of drill samples. The purpose of the resource evaluation is to understand the possibility to expand the known size of the deposit and mineralization. This step should give an information or idea about proceeding of mineral exploration activities. Resources at this work are determined during exploration and do not provide certain results of grade and tonnage. In order to get an exact size, quality of the commercial mineral, 'reserve definition', which is next step of mineral exploration studies, is used (Mentes, 2012).

#### 3.2.4 Resource Definition

Reserve definition is important to transform a mineral resource into an economic asset, which is an ore reserve and find the answer if it is valuable or not. 'Reserve' is more intensive, technical, and well characterized term with its exact quality and size relative to 'Resource'. Also, reserve estimation may be changed over time because of the assessments during and after the mining. The main purpose of this stage is the making decision on the techniques just before extraction as a result of the results. It includes technical, economic evaluation, geotechnical assessment, and engineering studies of the rocks surrounding the deposit to determine the potential parameters of proposed open pit or underground mining methods. At the end of this process, a feasibility study is published, and the deposit is supposed to either be uneconomic or economic.



# **3.3 Labour Requirements**

The proponent intends to employ about 5-15 personnel, including 3 management staff for the first phase of the project. The employees will be sourced from the local community including people from nearby town. All employees will undergo a safety induction, first aid training course and wildlife awareness program. The Labour Act of 2007 will always be adhered to.



# 4 Description of the Current Environment

# 4.1 Introduction

This section aims to document the present state of the environment, the likely impact of changes being planned and the regular monitoring to attempt to detect changes in the environment. As such, this area represents a high fauna diversity.

Namibia has four very large and arid regions which set them apart in various ways from the rest of the country; Kunene and Erongo region in the west and Karas and Erongo in the south (Mendelsohn, et al., 2002). Kunene Region occupies the north-west corner of Namibia. The Skeleton Coast Park forms its entire western boundary with the Atlantic Ocean. The Kunene River with its Epupa Falls forms an international boundary with Angola to the north. Nationally, Kunene is bordered by Omusati Region and the western boundary of Etosha National Park. In the south it forms the southern boundary of most of Etosha National Park and borders Erongo and Erongo regions. The region is home to the Skeleton Coast Park and many conservancies. Erongo is one of the central regions in Namibia with a size of 105,185 square kilometers, with vegetation ranging from open savanna around Uis, to lush vegetation and massive bright red sandstone cliffs.

There is generally an absence of fences in most parts of the Erongo Region. This makes livestock farming easier which means that both wild and domestic animals can move widely in many places, migrating from areas of poor grazing to other places with more abundant pastures.

#### **4.2 Climatic Conditions**

#### 4.2.1 Temperature

In the proposed area, December is the warmest month with an average temperature of 30-33°c at noon. July is the coldest month with an average temperature of 8-10°c at night. Uis, which is in the vicinity of the project area, has distinct temperature seasons; the temperature varies during the year.







# 4.2.2 Precipitation

In the proposed tourism development area, the highest rainfall is usually experienced in October which may reach 70 mm with average rainfall days of 7. In January months, rain-fall may reach about 50 mm with average rainfall days. The graph below shows the rainfall patterns in the area.





Figure 7 A graph showing rainfall patterns in Uis, from www.worldweatheronline.com

#### 4.2.3 Wind

Predominantly south easterly. Southerly, easterly and northerly airflow is common. Because of the proximity to the Ocean, the area is subject to erratic winds and considerable discrepancies despite short distances, due to the hilly terrain. The highest wind speeds are experienced in July and October (+/- 25 km/h).





Uis

Average and Max Wind Speed and Gust (kmph)

Figure 8 A graph showing windspeed patterns in Uis, from www.worldweatheronline.com

#### 4.2.4 Humidity

The relative humidity during the least humid months of the year, i.e. September and November, is around 16-18% and the most humid month is March with 40-50% humidity. Namibia has a low humidity in general, and the lack of moisture in the air has a major impact on its climate by reducing cloud cover and rain and increases the rate of evaporation.





Figure 9 A graph showing the humidity patterns in Uis, from www.worldweatheronline.com

#### 4.2 Air Quality

Activities around the exploration licence area mainly consist of tourism and smallscale livestock farming. Besides other exploration activities, there are no other industries or operating mines in the area or mines in the area. Probable sources of air pollution in the area are emissions and dust from vehicles travelling on gravel roads, dust generated by cattle grazing and wind erosion from the exposed areas.

PM<sub>10</sub> describes all particulate matter in the atmosphere with a diameter equal to or less than 10 µm and are generally emitted from motor vehicles (diesel engines) and burning of wood. PM<sub>2.5</sub> describes all particulate matter in the atmosphere with a diameter equal to or less than 2.5 µm and are mostly related to combustion. NO<sub>2</sub> and nitric oxide (NO) are formed simultaneously in combustion processes and other high temperature operations such as blast furnaces. Sources of SO<sub>2</sub> include fossil fuel



combustion from industry and power plants. SO<sub>2</sub> is emitted when coal or other biomass fuels are burnt for energy.

Data from accuweather.com shows that the air quality in the area is generally excellent with an air quality index of 16 AQI. The ground-level ozone (O<sub>3</sub>) is about 16  $\mu$ g/m<sup>3</sup> which is excellent. The fine particle matter levels (PM <sub>2.5</sub>) are about 6  $\mu$ g/m<sup>3</sup>. The particle matter (PM<sub>10</sub>) is about 4  $\mu$ g/m<sup>3</sup>. The nitrogen dioxide (NO<sub>2</sub>), carbon monoxide (CO), and sulphur dioxide (SO<sub>2</sub>) levels in the area are recorded to be 0  $\mu$ g/m<sup>3</sup>.

# 4.3 Geology

#### 4.3.1 Geological setting

The mineral licence is hosted by rocks within the Southern Central Zone of the Damara Orogen. This terrane comprises mid Proterozoic granitic basement inliers, overlain by metamorphosed late Proterozoic arkoses, shelf carbonates, turbidites and minor volcanic rocks that have been intruded by numerous granites and pegmatites.

Most of the project area is underlain by meta-sedimentary rocks of the Nosib Group meta-arkoses (Etusis Formation) or the stratigraphically younger Swakop Group marine carbonates and meta-turbidites comprising the Arandis Formation (biotite schist, minor quartz schist calc-silicate rock and amphibolite), the Uis Formation (dominantly dolomitic and calcitic marbles with minor calc-silicate) and the overlying Kuiseb Formation (schistose quartz feldspar mica meta-greywacke and meta-pelite). Glaciogenic mixtites of the Chuos and Ghaub Formations have limited exposure in the project area. The Swakop Group sediments have been intruded by a series of syn-, late-syn- and post-tectonic granite and pegmatite bodies.

The project is straddled by the magnetically defined regional scale Abbabis Lineaments. These lineaments are interpreted to be important tectono-stratigraphic boundaries associated with changes in sedimentology, structure and type of granitic intrusion observed in the Damara Orogen and have known association and control with uranium and other forms of mineralization. The structural setting of the Project



area is complex with sediments deformed during poly-phase deformation and metamorphosed to upper greenschist-amphibolite facies.




Figure 10 A geological map of the area

# 4.4 Hydrogeology and Water Resources

The area is underlain by rocks with little groundwater potential.





#### 4.5 Flora

Rainfall in the Erongo Region is usually both low and extremely variable which means that years of abundant rain often followed by extreme dry conditions (Mendelsohn, et al., 2002). In form, vegetation is generally sparse, with few trees and a thin variety of grass. Plant cover varies in relation to rainfall and so the eastern parts of Erongo have more grass and trees than the Western, coastal areas (Christian, 2005). The surrounding area is characterised by high botanical diversity. Based on the literature review, all the vegetation that are found within the vicinity of the area are of "medium" to "high" sensitivity against external conditions. The growing season is very short due to the semi-arid climate.

Grass is dependable on rainfall, which in-turn causes livestock and other animals to suffer during periods of minimal rainfall (Burke, 2003). The mineral exploration area, which is semi-arid, contains diverse vegetation species which include a number of species endemic to Namibia. Table 1 below lists the different plant species which are most likely to occur within the project area.

SCIENTIFIC NAME	COMMON NAME	STATUS IN NAMIBIA
Acacia erioloba	Camel thorn	Protected
Acacia mellifera	Black thorn	Secure
Acacia reficiens	False umbrella thorn	Secure
Acacia haematoxylon	Grey camel thorn	Protected
Acacia erubescens	Blue thorn	Secure
Acacia karroo	Sweet thorn	Secure
Acacia tortolis	Umbrella thorn	Secure
Acacia hereroensis	False hook-thorn	Secure
Commiphora tenuipetiolata	White-stem corkwood	Secure
Aloe littoralis		Protected
Ozoroa crassinervia	Namibian resin tree	Near endemic,
		protected
Boscia albitrunca	Shepherd's tree	Protected Protected
Boscia albitrunca Albizia anthelmintica	Shepherd's tree Worm-bark false-thorn	Protected Protected Protected
Boscia albitrunca Albizia anthelmintica Ziziphus mucronata	Shepherd's tree Worm-bark false-thorn Buffalo-thorn	Protected Protected Protected Protected
Boscia albitrunca Albizia anthelmintica Ziziphus mucronata Catophractes alexandri	Shepherd's tree Worm-bark false-thorn Buffalo-thorn Trumpet thorn	Protected Protected Protected Secure
Boscia albitrunca Albizia anthelmintica Ziziphus mucronata Catophractes alexandri Combretum apiculatum	Shepherd's tree Worm-bark false-thorn Buffalo-thorn Trumpet thorn Red bush willow	Protected Protected Protected Protected Secure Secure
Boscia albitrunca Albizia anthelmintica Ziziphus mucronata Catophractes alexandri Combretum apiculatum Commiphora dinteri	Shepherd's tree Worm-bark false-thorn Buffalo-thorn Trumpet thorn Red bush willow	Protected Protected Protected Secure Secure Endemic
Boscia albitrunca Albizia anthelmintica Ziziphus mucronata Catophractes alexandri Combretum apiculatum Commiphora dinteri Commiphora glandulosa	Shepherd's tree Worm-bark false-thorn Buffalo-thorn Trumpet thorn Red bush willow Tall common corkwood	Protected Protected Protected Protected Secure Secure Endemic Secure
Boscia albitrunca Albizia anthelmintica Ziziphus mucronata Catophractes alexandri Combretum apiculatum Commiphora dinteri Commiphora glandulosa Commiphora glaucescens	Shepherd's tree Worm-bark false-thorn Buffalo-thorn Trumpet thorn Red bush willow Tall common corkwood Blue-leaved corkwood	Protected Protected Protected Secure Secure Endemic Secure Nearendemic
Boscia albitrunca Albizia anthelmintica Ziziphus mucronata Catophractes alexandri Combretum apiculatum Commiphora dinteri Commiphora glandulosa Commiphora glaucescens Croton gratissimus	Shepherd's tree Worm-bark false-thorn Buffalo-thorn Trumpet thorn Red bush willow Tall common corkwood Blue-leaved corkwood Lavender fever-berry	Protected Protected Protected Secure Secure Endemic Secure Nearendemic Secure

#### Table 1 A table showing plant species which are likely to occur in the area



Cyphostemma bainesii		Endemic, protected
Dichrostachys cinerea	Sickle bush	Secure
Diospyros lycioides	Blue bush	Secure
Dombeya rotundifolia	Common wild pear	Endemic
Ehretia alba	·	Secure
Elephantorrhiza suffruticosa		Secure
Euclea pseudebenus	Ebony tree	Protected
Euclea undulata	Common guarri	Secure
Euphorbia guerichiana	Western woody milk bush	Secure
Euphorbia virosa		Secure
Ficus cordata	Namaqua fig	Protected
Ficus ilicina	Laurel fig	Secure
Ficus sycomorus	Common cluster fig	Protected
Grewia bicolor	White raisin	Secure
Grewia flava	Velvet raisin	Secure
Grewia flavescens	Sand paper raisin	Secure
Gymnosporia senegalensis	Red spike-thorn	Secure
Ipomoea adenioides		Secure
Lycium bosciifolium		Secure
Lycium cinereum		Secure
Lycium eenii		Secure
Lycium hirsutum		Secure
Lycium villosum		Secure
Maerua juncea		Secure
Maerua schinzii	Ringwood tree	Protected
Manuleopsis dinteri		Endemic
Melianthus comosus		Secure
Obetia carruthersiana		Near endemic
Pechuel-Loeschea leubnitziae		Secure
Sterculia africana	African star-chestnut	Protected
Tarchonanthus camphoratus		Secure
Tetragonia schenckii		Secure
Vernonia cinerascens		Secure
Searsia (Rhus) ciliata		Secure
Searsia (Rhus) lancea	Karree	Protected
Searsia (Rhus) marlothii		Secure

The density of vegetation in the vicinity of the mineral exploration site is sparse. Every effort will be made to protect the existing trees and schrubs, as these are very important to the ambience and visual appeal of the mineral exploration site. A vegetation expert will be consulted throughout the lifecycle of the mineral exploration



program. The protected plant species in the project area are shown in the table below.

Table 2 Table of plant species	which are protected under	the Forestry Act and likely	to occur in the area.
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SCIENTIFIC NAME	COMMON NAME
Acacia erioloba	Camel thorn
Acacia haematoxylon	Grey camel thorn
Albizia anthelmintica	Worm-bark false-thorn
Boscia albitrunca	Shepherd's tree
Euclea pseudebenus	Ebony tree
Ficus cordata	Namaqua fig
Ficus sycomorus	Common cluster fig
Maerua schinzii	Ringwood tree
Ozoroa crassinervia	Namibian resin tree
Searsia (Rhus lancea)	Karree
Sterculia Africana	African star-chestnut

# 4.6 Fauna

#### 4.6.1 Introduction

The information is based on a detailed literature review and a site visit which was carried out. The purpose of the Fauna literature review is to identify all potential amphibians, reptiles, and mammals expected on the project area and the surrounding farms in the vicinity of the mineral exploration area. The proposed mineral exploration area supports numerous faunal species but there are no species that are exclusive to the study area.

Larger types of animals such as zebras, giraffes, lions and elephants are rare in this area. There are no species which are exclusively endemic to the exploration area. Based on literature review, development of a mineral exploration project in the area will not have a negative impact on any of the species in the project area.

# 4.6.2 Amphibians

Based on the literature review, there are generally 14 types of amphibian species that occur in project area. Nine of these amphibian species occur abundantly, two



occur rarely and six of them occur uncommonly. Griffin (1998) highlighted that amphibian species are declining throughout the world due to various factors such as climate change and habitat destruction. There are approximately 4000 species of amphibians worldwide of which over 200 species are present in Southern Africa and 57 in Namibia (Griffin, 1998). However, this low figure may be due to the lack of detailed studies carried out on amphibians. The table below shows the different amphibian species that are likely to occur within the study area.

SCIENTIFIC NAME	COMMON NAME	STATUS	OCCURRENCE	REFERENCE
PLATANNAS				
Xenopus laevis	COMMON PLATANNA	SECURE	ABUNDANTLY	(Daudin, 1802)
TOADS	• •			
Breviceps adspersus	BUSHVELD RAIN FROG	SECURE	ABUNDANTLY	Peters, 1882
Bufo dombensis	DOMBE DWARF TOAD	ENDEMIC & INADEQUETLY KNOWN	ABUNDANTLY	Bocage, 1895
Bufo poweri	MOTTLED TOAD	SECURE	ABUNDANTLY	Hewitt, 1935
FOSSORIAL FROG	5			
Phrynomantis affinis	SPOTTED RUBBER FROG	AMBIGUOUS (RARE?)	RARELY	(Boulenger, 1901)
Phrynomantis bifasciatus	BANDED RUBBER FROG	SECURE	ABUNDANTLY	(Smith, 1848)
SAND FROGS, BUL	LFROGS, RIDGED FI	ROGS, CACOS, P	UDDLE FROGS e	tc.
Cacosternum boettgeri	COMMON CACO	SECURE	ABUNDANTLY	(Boulenger, 1882)
Hildebrandtia ornata	ORNATE FROG	SECURE	UNCOMMONLY	(Peters, 1878)
Phrynobatrachus mababiensis	MABABE PUDDLE FROG	SECURE	UNCOMMONLY	FitzSimons, 1932
Phrynobatrachus natalensis	SNORING PUDDLE FROG	SECURE	UNCOMMONLY	(A. Smith, 1849)
Pyxicephalus adspersus	GIANT BULLFROG	SECURE	ABUNDANTLY	Tschudi, 1838
Tomopterna krugerensis	KNOCKING SAND FROG	SECURE	RARELY	Passmore et al, 1975

Table 3 A list of am	phibian specie	s which may	occur in the	project area
		o minori inay		pi ojoot ui ou



Tomopterna tandyi	TANDY'S SAND FROG-	SECURE	ABUNDANTLY	Channing 1996	et	al,
TREE FROGS, REE	D FROGS & KASSIN	AS				
Kassina senegalensis	BUBBLING KASSINA	SECURE	ABUNDANTLY	(Dumèril 1841)	et	al,

#### 4.6.3 Mammals

Based on the literature review, there are generally about 68 species of mammals expected to occur within the immediate area. There are generally 25 species which rarely occur, 2 species that occur seasonally, 4 that occur occasionally, and 33 that occur abundantly within the project area. Considering the relative size of the mineral exploration area, the mammal fauna will not be affected by the mineral exploration activities of the proponent. Namibia is seemingly well endowed with mammal diversity with around 250 species know to be present within the country (Griffin, 1998). There are currently 14 mammal species which are considered to be endemic to Namibia, including 11 species of rodents and small carnivores which are not well known. Griffin (1998), points out that most of these endemic mammals are associated with the Namib and Escarpment with 60% of these appearing to be rockdwelling species. The author, Griffin (1998) further highlights that the endemic mammal fauna is best characterized by the endemic rodent family Petromuridae (Dassie rat) and the rodent genera Gerbillurus and Petromyscus. The table below shows the mammal species which are likely to occur within the study area. A full list, of mammal species that are likely to occur within the area, is in the appendix section at the end.

SCIENTIFIC NAME	COMMON NAME
Acinonyx jubatus	Cheetah
Antidorcas marsupialis	Springbok
Atelerix frontalis angolae	Southern African Hedgehog
Canis mesomelas	Black-backed Jackal
Caracal caracal	Caracal
Crocuta crocuta	Spotted Hyena
Cynictis penicillata	Yellow Mongoose
Equus zebra hartmannae	Hartmann's Mountain Zebra
Felis nigripes	Black-footed Cat
Felis silvestris/lybica	African Wild Cat
Galerella sanguinea	Slender Mongoose

Table 4 Mammal species which are likely to occur within the project area.



Genetta genetta	Small Spotted Genet
Ictonyx striatus	Striped Polecat
Lepus capensis	Cape Hare Secure
Lepus saxatilis	Scrub Hare
Manis temminckii	Ground Pangolin
Mellivora capensis	Honey Badger/Ratel
Oreotragus oreotragus	Klipspringer
Oryx gazella	Gemsbok
Otocyon megalotis	Bat-eared Fox
Panthera pardus	Leopard
Parahyaena (Hyaena) brunnea	Brown Hyena
Phacochoerus africanus	Common Warthog
Proteles cristatus	Aardwolf
Raphicerus campestris	Steenbok
Suricata suricatta marjoriae	Suricate
Sylvicapra grimmia	Common Duiker
Tragelaphus strepsiceros	Greater Kudu
Vulpes chama	Cape Fox

#### 4.6.4 Reptiles

The literature review showed that there are approximately 60 reptile species that are expected to occur in the site area. According to the Namibia Conservation Ordinance of 1975, there are four reptile species protected, namely:

Table 5 Protected reptile species in the project are	Table 5	Protected	reptile	species	in	the	project	area
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SCIENTIFIC NAME	COMMON NAME	STATUS
Psammobates Oculiferus	Kalahari Tent Tortoise	Protected
Python Natalis	Southern African Python	Protected
Geochelone Pardalis	Leopard Tortoise	Protected
Varanus Albigularis	Veld Leguaan	Protected

Griffin (1998) highlighted the presence of 261 species of reptiles which are present in Namibia. These reptiles make up 30% of the reptile species found on the continent. 55 species of Namibian Lizards are classified as endemic (Griffin, 1998). The author, Griffin (1998), describes that more than 60% of the reptiles found in Namibia are protected by the conservation Ordinance. Although mineral exploration activities do affect reptile habitat, the project will not have any significant impact on the reptile species within the proposed mineral exploration area. Namibia, with 129 species of lizards, has one of the continent's richest lizard Fauna. The table in the appendix



shows the reptile species which are likely to occur within the vicinity of the mineral exploration area.

# 4.7 Avifauna (Birds)

Simmons et al (2003) points that although Namibia's Avifauna is comperatively sparse compared to the high rainfall equatorial areas elsewhere in Africa, approximately 658 species have already been recorded with a diverse unique group of arid endemics. There are approximately 650 species of birds that have been recorded in Namibia, although the country's avifauna is comparatively sparse compared to the high rainfall equatorial areas in Africa (Brown & Lawson, 1989). Brown et al (1989) mentions that 14 species of birds are endemic or near endemic to Namibia with the majority of Namibian endemics occurring in the Savannah of which ten species occur in a north-south belt of dry Savannah in Central Namibia. Simmons (2003) recorded 63 species of birds within the vicinity of the project area. 650 bird species are recorded in Namibia, of which 160 species are present in area, especially after good rains fall (Christian, 2005). These birds consist of raptors, chats, larks and karoid species. Christian (2005) recorded the presence of the following bird species in the vicinity of the area, which include:

SCIENTIFIC NAME	COMMON NAME
Agapornis roseicollis	Rosy-faced Lovebird
Eupodotis rueppellii	Rüppell's Korhaan
Lanioturdus torquatus	White-tailed Shrike
Parus carpi	Carp's Tit
Phoeniculus damarensis	Violet Wood-Hoopoe
Poicephalus rueppellii	Rüppell's Parrot
Pternistis hartlaubi	Hartlaub's Spurfowl
Tockus damarensis	Damara Hornbil
Tockus monteiri	Monteiro's Hornbill

Table 6 Bird scpecies which are likely to occur within the site area.

A full list of bird species within the area is shown in the appendix.



# 4.8 Archaeology and Heritage Sites

A separate archaeological study is attached to this report.

# 4.9 Socio-Economic Environment

#### 4.9.1 Demographics of Uis

The closest settlement to the tourism development area is Uis. Uis is a settlement located in Erongo Region, Namibia. It belongs to the Dâures electoral constituency. Located in the former Damaraland, it is known for the local mineral wealth. The settlement has approximately 3,600 inhabitants and, before being downgraded from "village" to "settlement" in 2010, owned 10 square kilometers. Uis is located at the foot of the Brandberg, Namibia's highest mountain. The Brandberg is home to the world famous The White Lady rock painting, said by some to be over 20,000 years old. Being also situated on the C36, the main road between the coast and the Damaraland interior there is reasonable amount of traffic, by far the main source of economic activity in Uis. The settlement holds a small supermarket, guesthouses, a bakery, and a petrol station, together with a few other small shops.

Uis is home to the Brandberg Primary School and Petrus !Ganeb Secondary School, both with about 300 learners. Petrus Ganeb SS was built before Namibian independence; its facilities are old and dilapidated.

Once a small mining town, it is now one of the stops when travelling to the Brandberg and Twyfelfontein or en route between the Namib Coast or the Erongo Region and Damaraland. The town is excellently located for early morning visits to the Brandberg. If not staying at or near Uis, travellers use it as an opportunity to refuel and make minor purchases, including geological samples and Brandberg quartz crystals.

# 4.9.2 Social Economic Impact

Although a few people (including farmers) and animals might be negatively affected by dust and noise, the explorer will ensure that these aspects are properly mitigated. With the potential employment of 15 people, this means that 15 families will benefit from the project during the exploration phase. The project has great potential to improve livelihoods and contribute to sustainable development within the



surrounding community. Community meetings will be held from time to time by the proponent wherever possible, with the purpose of effectively communicating with the local community and to avoid any unexpected social impacts.

# 5. Assessment of Impacts

The purpose of this assessments of impacts section is to identify and consider the most pertinent environmental impacts and to provide possible mitigation measures that are expected from the mineral exploration activities on EPL 6463. Two different phases are associated with the proposed development. Firstly, the target generation (mapping and sampling) phase, and secondly the drilling phase are being covered by this assessment. Should the mineral exploration activities cease in the future, an EIA will need to be conducted to deal with the associated changes to environment. Mitigation measures for the identified impacts are also provided in this Section.

The following assessment methodology was used to examine each impact identified:

Evaluation Criteria	Symbol	Significance of Rating
Nature of impact:	P or N	Effect the proposed activity would have on the affected environment which is positive ( <i>P</i> ) or negative ( <b>N</b> )
Extent of impact:	0	<b>On-Site</b> (the site and it's immediate surrounds)
	L	Local (Mineral exploration Area)
	R	Regional (Erongo Region)
	Ν	National (Namibia)
	I	International
Duration of impact:	SD	Short Duration (0 to 5 years)
	MD	Medium Duration (5 to 15 years)
	LD	Long Duration (lifetime of the development)
Intensity of impact:	L	<b>Low</b> intensity where the natural, cultural and social functions and processes are not affected.
	Μ	<b>Medium</b> intensity where the affected environment is altered but natural, cultural and social functions and processes can continue.
	Н	<b>High</b> intensity where the affected environment is altered to the extent that natural, cultural and social functions and processes will temporarily or permanently cease.
Probability of impact:	LP	<b>Low probability</b> is when the possibility of the impact occurring is low.
	Р	<b>Probable</b> is when there is a distinct possibility that it will occur.
	HP	<b>Highly probable</b> is when the impact is most likely to occur.

Table 7 Assessment methodology used to examine the impacts identified



	D	Definite where the impact will occur.
Significance of Impact: Further subdivided into impacts with mitigation (MM) measures and impacts with no mitigation measures (NMM).	L	Low Significance is when natural, cultural, social and economic functions and processes are not affected. If the impacts are adverse, mitigation is either easily achieved or little will be required, or both. If impacts are beneficial, alternative means of achieving this benefit are likely to be easier, cheaper, more effective and less time=consuming
	Μ	<b>Medium Significance</b> is when the affected environment is altered but natural, cultural, social and economic functions and processes can continue. An impact exists but is not substantial in relation to other impacts that might take effect within the bounds of those that could occur. In the case of beneficial impacts, other means of achieving this benefit are about equal in time, cost and effort.
	H	<b>High Significance</b> is when the affected environment is altered to the extent that natural, cultural, social and economic functions and processes will temporarily or permanently cease. If impacts are adverse, there is no possible mitigation that could offset the impact, or mitigation is difficult, expensive, time consuming or a combination of these. In the case of beneficial impacts, the impact is of a Substantial order within the bounds of impacts that could occur.

# 5.1. Overall socio-economic benefits and issues

# 5.1.1. Socio-economic benefits

With the potential employment of 15 people, this means that 15 families will benefit from the project during the exploration phase. The project has great potential to improve livelihoods and contribute to sustainable development within the surrounding community. Community meetings will be held from time to time by the proponent wherever possible, with the purpose of effectively communicating with the local community and to avoid any unexpected social impacts.

# 5.1.1.1. Potential Direct Benefits

**Direct capital investment:** The mineral exploration project will require a significant capital investment of at least N\$ 10 million. This will be used for mapping, sampling and drilling.

**Stimulation of skills transfer:** Due to the nature of mineral exploration projects, the proponent will implement ad-hoc training programme for some of its staff members. Training programmes will be well structured and staff members will permanently benefit from these training programmes.



**Job creation:** With the potential employment of 15 people, this means that 10 families will benefit from the project during the on-going phase. The project has a great potential to improve livelihoods and contribute to sustainable development within the surrounding community.

# 5.1.1.2. Potential Indirect Benefits

- The data generated from the exploration programme will be made available to the Ministry of Mines and Energy for future research purposes.
- General enhancement of the health conditions and quality of life for a few people in the surrounding settlements.
- Of significance is the prospect of diversification of the surrounding economy, which is presently mainly focussed on small-scale farming and small-scale mining of semi-precious stones.

# 5.1.1.3. General socio-economic concerns

Notwithstanding the above benefits there are a few concerns that could reduce or counteract the above benefits related to the project, as follows:

- As the movement of staff and contractors to and from the area increases, the risk of spread of HIV/AIDS increases.
- Increased influx of people to the area as people come in search of job opportunities during the target generation and drilling phase of the mineral exploration project; and
- Increased informal settlement and associated problems.

#### Table 8 Impact evaluation for socio-economy

Identified	Significance		Duration	Extent	Intensity	Probability
Impact	NMM	MM				
Increased spread of HIV/AIDS	Μ	L	LD	Ν	Μ	LP
Increased influx of people to the area	L	L	SD	L	L	Р
Increased informal settlement in the area	Μ	L	MD	L	L	LP



# 5.2. Mineral Exploration phases and associated issues

# 5.2.1. Mapping and Geochemical Sampling Phase of the Project

The following potential effects on the environment during the target generation phase of the mineral exploration project have been identified:

# 5.2.1.1. Dust

Dust may be generated during this phase and might be aggravated during the winter months when strong winds occur. Dust will be generated by the vehicles moving in the area. Fall out dust settling on vegetation is likely to cause local disruptions in herbivorous and predatory complexes and should be minimised as far as possible.

# 5.2.1.2. Noise

Noise will most likely be generated by vehicles during the target generation phase. It is recommended that vehicle movement be limited to normal daytime hours to allow nocturnal animals to roam freely at night.

# 5.2.1.3. Safety and Security

During mapping and sampling, small tools and equipment will be used on site. This increases the possibility of injuries and the responsible manager must ensure that all staff members are briefed about the potential risks of injuries on site. The manager is further advised to ensure that adequate emergency facilities, including first aid kits, are available on site. All Health and Safety standards specified in the Labour Act should be complied with.

Should a camp be necessary at a later stage, it should be in such a way that it does not pose a risk to the community members and wildlife that roam the area.

# 5.2.1.4. Visual

The proposed exploration area is situated more than 1 km from any main road. As such, any visual impact that might be caused by the exploration team are minimal. In some parts of the area, the topography of the mineral exploration site is slightly elevated.



Identified	Significance		Duration	Extent	Intensity	Probability
Impact	NMM	ММ				
Dust	L	L	SD	L	L	Р
Noise	М	L	SD	L	М	D
Safety & Security	L	L	SD	0	L	Р
Visual	L	L	MD	0	L	LP

#### Table 9 Impact evaluation for the target generation phase of the project

# 5.2.2. Drilling Phase of the Project

During the operation phase of the project, a few holes will be drilled into the orebody. To conveniently refuelling company vehicles without driving long distances, a small portable fuel storage tank will be brought on site.

# 5.2.2.1. Air Quality

In terms of air quality, emissions will be given off by 4x4 vehicles and the drill rig but not to an extent that warrants concern. Dust will also be produced by the drill rig and the movement of vehicles in the area.

# 5.2.2.2. Fire and Explosion Hazard

Hydrocarbons are volatile under certain conditions and their vapours in specific concentrations are flammable. If precautions are not taken to prevent their ignition, fire and subsequent safety risks may arise.

All fuel storage and handling facilities in Namibia must however comply with strict safety distances as prescribed by SANS 10089. SANS 10089 is adopted by the Ministry of Mines and Energy as the national standard.

It must further be assured that enough water is available for fire firefighting purposes. In addition to this, all personnel must be sensitised about responsible fire protection measures and good housekeeping such as the removal of flammable materials including rubbish, dry vegetation, and hydrocarbon-soaked soil from the vicinity of the exploration area. Regular inspections should be carried out to inspect and test firefighting equipment and pollution control materials at the drilling site.



All fire precautions and fire control at the site must be in accordance with SANS 10089-1:1999, or better. A holistic fire protection and prevention plan is needed.

Experience has shown that the best chance to rapidly put out a major fire, is in the first 5 minutes. It is important to recognise that a responsive fire prevention plan does not solely include the availability of firefighting equipment, but more importantly, it involves premeditated measures and activities to timeously prevent, curb and avoid conditions that may result in fires. An integrated fire prevention plan should be drafted before drilling.

# 5.2.2.3. Generation of Waste

Solid waste be generated from contractors, staff members and other visitors to the area. Care should be taken when handling waste material.

The types of waste that could be generated during operation include hazardous industrial waste (e.g. lubricants), general industrial waste (e.g. scrap material), and domestic waste (e.g. packaging). The waste will be temporarily handled and stored on site before being removed for final disposal at permitted waste disposal facilities. A registered Waste Management Company would be contracted to remove all hazardous waste from the exploration site. Ablution facilities will use chemical toilets and/or sealed septic tanks and the sewerage taken to the Uis periodically. No waste will be discharged on site.

# 5.2.2.4. Health and Safety

The drilling programme operations can cause serious health and safety risks to workers on site. Occupational exposures are normally related to the dermal contact with fuels and inhalation of fuel vapours during handling of such products. For this reason, adequate measures must be brought in place to ensure safety of staff on site, and includes:

- Proper training of operators;
- First aid treatment;
- Medical assistance;
- Emergency treatment;
- Prevention of inhalation of fumes;



- Protective clothing, footwear, gloves and belts; safety goggles and shields;
- Manuals and training regarding the correct handling of materials and packages should be in place and updated as new or updated material safety data sheets becomes available;
- And Monitoring should be carried out on a regular basis, including accident reports.

# 5.2.2.5. Fauna

Mineral exploration activities may have minor disturbances on the habitat of a few species but no significant impacts on the animals are expected. The proponent shall ensure that no animal shall be captured, killed or harmed by any of the employees in any way. Wildlife poaching will strongly be avoided as this is an offence and anyone caught infringing in this regard will face suspension from the project and will be liable for prosecution.

# 5.2.2.6. Vegetation

The natural vegetation is seemingly undisturbed in the project area except for grasses, which have been grazed by livestock and wild animals. Some vegetation species in the area may be adversely impacted by the project. The type of vegetation that might be affected by the project are:

- Bushes
- Ephemeral grasses
- Small trees

Some of the sensitive vegetation types in the area include:

- Shallow drainage line vegetation
- Scrublands surrounding the mineral exploration area

Certain species regarded as particularly important for conservation may yet be identified and made known via an Addendum to this report. If particularly important species are found, they will be located by GPS and their locations communicated to the Ministry of Environment and Tourism. Such locations will then be demarcated and completely avoided.



#### 5.2.2.7. Avifauna

Birds or Nest sites will not be disturbed by any employee, tourist or contractor. Should the employees observe any bird nesting sites for vultures, they will be reported to the Ministry of Environment and Tourism and the site will be avoided.

#### 5.2.2.8. Alien Invasive Plants

Disturbance to the natural environment often encourages the establishment of alien invasive weed species. Some of the plant species that could become invasive in the area are listed below:

- Prosopis glandulosa
- Lantana camara
- Cyperus esculentus
- Opuntia imbricate
- Cereus jamacara
- Melia azedarach

There are numerous ways in which invasive species can be introduced deliberately or unintentionally.

# 5.2.2.9 Heritage Impacts

Although no archaeological sites have been identified yet in the project area, appropriate measures will be undertaken upon discovering any new archaeological sites. All archaeological remains are protected under the National Heritage Act (2004) and will not be destroyed, disturbed or removed. The Act also requires that any archaeological finds be reported to the Heritage Council Windhoek.

Identified	Significance		Duration	Extent	Intensity	Probability
Impact	NMM	ММ				
Air Quality	М	L	LD	L	М	HP
Fire & Explosion Hazard	Н	М	SD	0	М	LP
Generation of waste	М	L	LD	0	L	D
Health and Safety	Н	М	MD	Ν	L	Р
Fauna	Μ	L	MD	L	Μ	D
Vegetation	М	L	MD	L	М	D
Avifauna	М	L	MD	L	М	LP

Table 10 Impact evaluation for the operational phase of the project



Alien Invasive Plants	Μ	L	MD	L	Μ	Р
Heritage	Μ	L	LD	0	Н	LP

#### 5.2.2.10 Groundwater Impacts

Mineral exploration activities may affect the availability of water and the quality thereof. exploration works may affect the water availability for deep rooted trees in riverbeds. Surface water for animals may be affected by mineral exploration activities. In rare instances, the quality of the groundwater for water consumption may be compromised by mineral exploration activities.



# 6. Environmental Management Plan

# 6.1 Overview

This Environmental Management Plan is intended to give effect to the recommendations of the Environmental Impact Assessment. To achieve this goal, it is essential that all personnel involved on the mineral exploration are fully aware of the environmental issues and the means to avoid or minimize the potential impacts of activities on site. The proposed mineral exploration activities are summarized in Section 3 of the scoping report above. Legal and policy requirements are well known and understood by the proponent, its employees and contractors and will be strictly enforced by its management team. A general description of the environment is contained in Section 4, and more site-specific information on particularly sensitive areas is contained in Section 4 as well. Issues and concerns identified in the EIA will form a set of environmental specifications that will be implemented on site. It is the intention that these environmental specifications should form the basis for an agreement between the proponent and the Ministry of Environment and Tourism. By virtue of that agreement, these specifications will become binding on the proponent.

Environmental management requires a joint effort on the part of all parties involved. The proponent has assigned certain roles to ensure that all players fulfil their responsibilities in this regard.

# 6.2 Environmental Management Principles

The proponent will ensure that all parties involved in the project uphold the following broad aims:

- All persons will be required to conduct all their activities in a manner that is environmentally and socially responsible. This includes all consultants, contractors, and sub-contractors, transport drivers, guests and anyone entering the exploration areas in connection with the mineral exploration project.
- 2. Health, Safety and Social Well Being



- Safeguard the health and safety of project personnel and the public against potential impacts of the project. This includes issues of road safety, precautions against natural dangers on site, and radiation hazards; and,
- Promote good relationships with the local authorities and their staff.
- 3. Biophysical Environment
- Wise use and conservation of environmental resources, giving due consideration to the use of resources by present and future generations.
- Prevent or minimise environmental impacts.
- Prevent air, water, and soil pollution, Biodiversity conservation and Due respect for the purpose and sanctity of the area.

To achieve these aims, the following principles need to be upheld.

# A. Commitment and Accountability:

The proponent's senior executives and line managers will be held responsible and accountable for:

Health and safety of site personnel while on duty, including while travelling to and from site in company vehicles and environmental impacts caused by mineral exploration activities or by personnel engaged in the mineral exploration activities, including any recreational activities carried out by personnel in the area.

# **B.** Competence

The proponent will ensure a competent work force through appropriate selection, training, and awareness in all safety, health and environmental matters.

# C. Risk Assessment, Prevention and Control

Identify, assess and prioritise potential environmental risks. Prevent or minimize priority risks through careful planning and design, allocation of



financial resources, management and workplace procedures. Intervene promptly in the event of adverse impacts arising.

# D. Performance and Evaluation

Set appropriate objectives and performance indicators. Comply with all laws, regulations, policies and the environmental specifications. Implement regular monitoring and reporting of compliance with these requirements.

# E. Stakeholder Consultation

Create and maintain opportunities for constructive consultations with employees, authorities, other interested or affected parties. Seek to achieve open exchange of information and mutual understanding in matters of common concern.

# F. Continual Improvement

Through continual evaluation, feedbacks, and innovation, seek to improve performance about social health and well-being and environmental management throughout the lifespan of the mineral exploration project.

# G. Financial Provisions for Mineral exploration

In line with Namibia's environmental rehabilitation policy, the proponent will make the necessary financial provision for compliance with the EMP.

# 6.3 Impacts on the Bio-physical Environment

#### 6.3.1 Impacts on Archaeological Sites

The nature of impact is outlined below:

- Potential damage to archaeological sites as a result of vehicle tracks, footprints and actions of contractors, employees and visitors of the mineral exploration site.
- As the mitigation measures below are fully enforced, any impact will be significantly reduced compared to with present situation.

#### Mitigation Measures to be enforced:



- Buffer zones will be created around the sites.
- Adhere to practical guidelines 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.
- Notices/information boards will be placed on sites.
- Training employees regarding the protection of these sites.

# Methods for monitoring:

• An archaeologist will inspect any identified archaeological sites before commencing with the mineral exploration activities.

# 6.3.2 Impacts on Fauna

The **nature of impact** is outlined below:

- Movement of vehicles in and out of the site.
- Noise produced by moving earth-moving equipment.

# Mitigation Measures to be enforced:

- 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 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.



# Methods for monitoring:

• Regular monitoring of any unusual signs of animal habitat.

# 6.3.3 Impacts on Avifauna

Birds or Nest sites will not be disturbed by any employee, visitor or contractor.

# 6.3.4 Impact on Vegetation

The **nature of impact** is outlined below:

- Negative impacts on plants from trenching, compacting and removal of plants.
- Negative Impact from movement of vehicles and the movement of people around the site.
- Negative impacts from land-clearing and mineral exploration operations.

# Mitigation Measures to be enforced:

- Environmental considerations will always be adhered to before clearing roads, trenching and 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.

# 6.3.5 Impacts of Alien invasive Plants

The nature of impact is outlined below:

• Plant or seed material may adhere to car tyres or animals



- Seed or plant material may be imported to site in building materials if the source is contaminated.
- Seeds may blow from debris removed at sites.

# Mitigation Measures to be enforced:

- The explorer will ensure that debris is properly disposed of.
- Vehicle tyre inspections can be carried out although this may not be a practical mitigation measure.
- Eradicating alien plants by using an Area Management Plan

# Methods for monitoring:

• Regular monitoring of any unusual signs of alien species.

# 6.3.6 Impacts on Socio-Economic

The nature of impact is outlined below:

- Impact from loss of grazing for domestic livestock in "exclusive use zone"
- Impacts on cultural and spiritual values.
- Demographic factors: Attraction of additional population that cannot benefit from the project.
- Perception of Health and Safety risks associated with mineral exploration.

# Mitigation Measures to be enforced:

- The population change can be mitigated by employing people from the local 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.

# Methods for monitoring:

• Public meetings will be held by the proponent whenever necessary.

# 6.3.7 Visual Impacts

The **nature of impact** is outlined below:

• Tracks and damaged vegetation caused by the mineral exploration vehicles.

Mitigation Measures to be enforced:

• Environmental considerations will be adhered to at all times before clearing roads, trenching and excavating.

# Methods for monitoring:

• Employees will be trained on the importance of minimising visual impacts.

# 6.3.8 Use of Natural Resources

Water and electricity are very scarce in Namibia. During the exploration, best international practices will be considered as a minimum standard for operation. The bulk of the power supply to the exploration site will be sourced from the proponent's own generator. The proponent will maximise water recycling opportunities wherever possible.

# 6.3.9 Generation of Solid Waste

Correct management of solid waste will involve a commitment to the full waste life cycle by all the employees and contractors of the site. The Proponent's goal is to avoid the generation of solid waste in the first place and if not possible, to minimise the volumes generated by looking at technologies that promote longevity and recycling of products. Ideally, the proponent should transport solid waste to a registered site for disposal. However, it is not certain if such facilities are available in the area or if they have the capacity to handle large increases in volume. Appropriate on-site facilities will be designed to store large volumes of waste.

# 6.3.10 Noise

The nature of impact is outlined below:

• Movement of people, and vehicles.



• Noise may be generated from an airborne geophysical survey which may be carried out at a later stage.

#### Mitigation Measures to be enforced:

• Disturbance to fauna that roam the area will be minimized by training the employees on ways to minimise noise.

# 6.3.11 Air Quality

The **nature of impact** is outlined below:

• Dust from movement of people, vehicles and earth-moving machinery. Emissions from vehicles and drill rigs as well.

#### Mitigation Measures to be enforced:

- 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.

# 6.4 Summary of Environmental Management Plan during construction, operation and decommissioning phases

	Construction/Initial Phase		
Environmental Impact	Proposed mitigation measures	Responsibility	Monitoring plan
Air pollution	<ul> <li>Control speed and operation of construction vehicles.</li> <li>Prohibit idling of vehicles.</li> <li>Maintenance of vehicles and equipment.</li> <li>Sensitize field exploration workers and contractors.</li> <li>Workers should be provided with dust masks if working in sensitive areas.</li> </ul>	<ul> <li>Contractor</li> <li>Site Manager</li> </ul>	<ul> <li>Amount of dust produced.</li> <li>Level of Landscaping carried out.</li> </ul>
Noise pollution	<ul> <li>Maintain equipment and vehicles.</li> <li>Field work should only be carried out only during daytime i.e. 08h00 to 17h00.</li> <li>Workers should wear earmuffs if working in noisy section.</li> <li>Management to ensure that noise is kept within reasonable levels.</li> </ul>	<ul><li>Contractor</li><li>Management</li></ul>	Amount of noise



Solid waste	<ul> <li>Any debris should be collected by a waste collection company</li> <li>If trenches are dug, waste should be re-used or backfilled.</li> <li>The site should have waste receptacles with bulk storage facilities at convenient points to prevent littering during exploration.</li> </ul>	Management	Presence of well- Maintained receptacles and central collection point.
Oil leaks and Spills	<ul> <li>Vehicles and equipment should be well maintained to prevent oil leaks.</li> <li>Contractor should have a designated area where maintenance is carried out and that is protected from rainwater.</li> <li>All oil products should be handled carefully.</li> </ul>	Contractor	No oil spills and leaks on the site
First aid	A well-stocked first aid kit shall be maintained by qualified personnel	<ul> <li>Management</li> </ul>	Contents of the first aid kit.
Visual	Environmental considerations will be adhered to at all times before clearing roads, trenching and excavating.	Management	• Employees will be trained on the importance of minimising visual impacts.
Archaeological Sites	<ul> <li>Buffer zones will be created around the sites.</li> <li>Adhere to practical guidelines provided by an archaeologist to reduce the archaeological impact of mineral exploration activities.</li> <li>All archaeological sites to be identified and protected before further exploration commences.</li> </ul>	Management	<ul> <li>Register of all archaeological sites identified.</li> </ul>
Occupation al Health and Safety	<ul> <li>Provide Personal Protective Equipment Train workers on personal safety and how to handle equipment and machines.</li> <li>A well-stocked first aid kit shall be maintained by qualified personnel.</li> <li>Report any accidents / incidences and treat and Compensate affected workers.</li> <li>Provide sufficient and suitable sanitary conveniences which should be kept clean.</li> </ul>	<ul><li>Contractor</li><li>Management</li></ul>	<ul> <li>Workers using Protective</li> <li>Equipment.</li> <li>Presence of Well stocked First Aid Box.</li> <li>Clean sanitary facilities.</li> </ul>
Fauna	<ul> <li>Some habitat areas such as trees of the riverbeds and tunnels outcrops will be avoided wherever possible.</li> <li>A fauna survey will be conducted to determine the effect of fragmented habitat on game species should the need arise.</li> <li>No animals shall be killed, captured or harmed in any way.</li> <li>No foodstuff will be left lying around as these will attract animals which might result in humananimal conflict.</li> </ul>	Management	<ul> <li>Regular monitoring of any unusual signs of animal habitat.</li> </ul>
Alien Invasive Plants	<ul> <li>The explorer will ensure that debris is properly disposed off.</li> <li>Vehicle tyre inspections can be carried out although this may not be a practical mitigation measure.</li> <li>Eradicating alien plants by using an Area Management Plan</li> </ul>	<ul><li>Management</li><li>Contractor</li></ul>	<ul> <li>Regular monitoring of any unusual signs of alien species.</li> </ul>
Loss of Vegetation	<ul> <li>Environmental considerations will be adhered to at all times before clearing roads, trenching and excavating.</li> <li>Paths and roads will be aligned to avoid root zones. Permeable materials will be used wherever possible.</li> <li>The movement of vehicles in riverbeds, rocky outcrops and vegetation sensitive areas will be</li> </ul>	<ul><li>Contractor</li><li>Management</li></ul>	<ul> <li>Warning signs on site</li> <li>restored vegetation</li> </ul>



	avoided.		
	<ul> <li>The movement of vehicles will be restricted to certain tracks only.</li> </ul>		
	Operational Phase		
Environmental/ Social Impact	Proposed mitigation measures	Responsibility	Monitoring plan
Noise pollution	<ul> <li>Maintain vehicles and drilling equipment.</li> <li>Exploration drilling should be carried out only during daytime.</li> <li>Workers to wear earmuffs if working in noisy section</li> <li>Management to ensure that noise is kept within reasonable levels.</li> </ul>	Contractor     Management	<ul> <li>Amount of noise</li> </ul>
Visual	<ul> <li>Environmental considerations will be adhered to at all times before clearing roads, trenching and excavating.</li> </ul>	Management	• Employees will be trained on the importance of minimising visual impacts.
Fauna	<ul> <li>Some habitat areas such as trees of the riverbeds and tunnels outcrops will be avoided wherever possible.</li> <li>A fauna survey will be conducted to determine the effect of fragmented habitat on game species should the need arise.</li> <li>No animals shall be killed, captured or harmed in any way.</li> <li>No foodstuff will be left lying around as these will attract animals which might result in humananimal conflict.</li> </ul>	Management	<ul> <li>Regular monitoring of any unusual signs of animal habitat.</li> </ul>
Alien Invasive Plants	<ul> <li>The explorer will ensure that debris is properly disposed of.</li> <li>Vehicle tyre inspections can be carried out although this may not be a practical mitigation measure.</li> <li>Eradicating alien plants by using an Area Management Plan</li> </ul>	Management     Contractor	<ul> <li>Regular monitoring of any unusual signs of alien species.</li> </ul>
Loss of Vegetation	<ul> <li>Environmental considerations will be adhered to at all times before clearing roads, trenching and excavating.</li> <li>Paths and roads will be aligned to avoid root zones. Permeable materials will be used wherever possible.</li> <li>The movement of vehicles in riverbeds, rocky outcrops and vegetation sensitive areas will be avoided.</li> <li>The movement of vehicles will be restricted to certain tracks only.</li> </ul>	Contractor     Management	<ul> <li>Warning signs on site</li> <li>restored vegetation</li> </ul>
Solid waste	<ul> <li>Minimize solid waste generated on site.</li> <li>Recycle waste especially waste from trenching.</li> <li>Debris should be collected by waste collection company.</li> <li>Excavation waste should be re-used or backfilled.</li> </ul>	Contractor     Management	<ul> <li>Amount of waste on Site</li> <li>Presence of well- Maintained receptacles and central collection point.</li> </ul>



Oil leaks and spills Archaeological Sites	<ul> <li>Machinery should be well maintained to prevent oil leaks.</li> <li>Contractor should have a designated area where maintenance is carried out and that is protected from rainwater.</li> <li>All oil products should be stored in a site store and handled carefully.</li> <li>Buffer zones will be created around the sites.</li> <li>Adhere to practical guidelines provided by an archaeologist to reduce the archaeological impact of mineral exploration activities.</li> <li>All archaeological sites to be identified and</li> </ul>	Contractor     Management	<ul> <li>No oil spills and leaks on the site.</li> <li>Update Register of all archaeologic al sites</li> </ul>
First aid	<ul> <li>Protected before further exploration commences.</li> <li>A well-stocked first aid kit shall be maintained by qualified personnel</li> </ul>	Management	<ul> <li>Contents of the first aid</li> </ul>
Fire preparedness Environment Health and Safety	<ul> <li>Firefighting drills carried out regularly.</li> <li>Firefighting emergency response plan.</li> <li>Ensure all firefighting equipment are regularly maintained, serviced and inspected.</li> <li>Fire hazard signs and directions to emergency exit, route to follow and assembly point in case of any fire incidence.</li> <li>Train workers on personal safety and disaster preparedness.</li> <li>A well-stocked first aid kit shall be maintained by qualified personnel.</li> <li>Report any accidents / incidences and treat and compensate affected workers.</li> </ul>	Management     Management	<ul> <li>kit.</li> <li>Number of fire drills carried.</li> <li>Proof of inspection on firefighting equipment.</li> <li>Fire Signs put up in strategic places.</li> <li>Availability of firefighting equipment.</li> <li>Provide sanitary facilities.</li> <li>Copies of Annual Audit</li> </ul>
	<ul> <li>Provide sufficient and suffable safitary conveniences which should be kept clean.</li> <li>Conduct Annual Health and Safety Audits.</li> </ul>		
Environmental/	Decommissioning Phase	Pesponsibility	Monitoring
Social Impact	r roposed miligation measures	ιτεοροποιοιπιτγ	plan/indicator
Noise & Air pollution	<ul> <li>Maintain plant equipment.</li> <li>Decommissioning works to be carried out only during daytime.</li> <li>Workers working in noisy section to wear earmuffs.</li> <li>Workers should be provided with dust masks.</li> </ul>	Contractor     Management	Amount of noise
Disturbed Physical environment	<ul> <li>Undertake a complete environmental restoration programme and introducing appropriate vegetation</li> </ul>	Management	



Solid waste	<ul> <li>Solid waste should be collected by a contracted waste collection company</li> <li>Excavation waste should be re-used or backfilled.</li> </ul>	<ul> <li>Contractor</li> <li>Management</li> </ul>	<ul> <li>Amount of waste on</li> <li>Site.</li> <li>Presence of well- maintained receptacles and central collection point.</li> </ul>
Occupational Health and Safety	<ul> <li>Provide Personal Protective Equipment.</li> <li>Train workers on personal safety and how to handle equipment and machines.</li> <li>A well-stocked first aid kit shall be maintained by qualified personnel.</li> <li>Demarcate area under decommissioning.</li> </ul>	Contractor	<ul> <li>Workers using Protective Equipment.</li> <li>Presence of a First Aid Box.</li> </ul>

#### Monitoring, Auditing and Reporting 6.5

# 6.5.1 Inspections and Audits

During the life of the project, performance against the EMP commitments will need to be monitored, and corrective action taken where necessary, in order to ensure compliance with the EMP and relevant enviro-legal requirements.

#### 6.5.1.1 Internal Inspections/Audits

The following internal compliance monitoring programme will be implemented:

- Project kick-off and close-out audits will be conducted on all contractors. This applies to all phases, including drilling contract work during operations:
  - Prior to a contractor beginning work, an audit will be conducted by the applicable phase site manager to ensure that the EMP commitments are included in Contractors' standard operating procedures (SOPs) and method statements.
  - Following completion of a Contractors work, a final close-out audit of the contractor's performance against the EMP commitments will be conducted by the applicable phase site manager.
- 2. Monthly internal EMP performance audits will be conducted during the construction/initial and decommissioning phases.
- 3. Ad hoc internal inspections can be implemented by the applicable phase exploration manager at his/her discretion, or in follow-up to recommendations from previous inspection/audit findings.





# 6.5.1.2 External Audits

- At the close of each project phase, and annually during the operational phase, an independently conducted audit of EMP performance will be conducted.
- Specialist monitoring/auditing may be required where specialist expertise are required or in order to respond to grievances or authorities directives.
- Officials from the DEA may at any time conduct a compliance and/or performance inspection of mineral exploration operations. The proponent will be provided with a written report of the findings of the inspection. These audits assist with the continual improvement of the exploration project and the proponent will use such feedback to help improve its overall operations.

# 6.5.1.3 Documentation

Records of all inspections/audits and monitoring reports will be kept in line with legislation. Actions will be issued on inspection/audit findings. These will be tracked and closed out.

# 6.5.1.4 Reporting

Environmental compliance reports will be submitted to the Ministry of Environment and Tourism on a bi-annual basis.

# 6.5.2 Environmental Management System Framework

In order implement Environmental Management Practices, an Environmental Management System (EMS) will be established and implemented by the proponent and their Contractors. This subchapter establishes the framework for the compilation of a project EMS. The applicable exploration manager will maintain a paper based and/or electronic system of all environmental management documentation. These will be divided into the following main categories:

# 6.5.2.1 Policy and Performance Standards

A draft environmental policy and associated objective, goals and commitments has been included in the EMP. The mineral explorer may adapt these as necessary.



#### 6.5.2.2 Enviro-Legal Documentation

A copy of the approved environmental assessment and EMP documentation will always be available by the proponent. Copies of the Environment Clearance Certificate and all other associated authorisations and permits will also be kept with the exploration team. In addition, a register of the legislation and regulations applicable to the project will be maintained and updated as necessary.

# 6.5.2.3 Impact Aspect Register

A register of all project aspects that could impact the environment, including an assessment of these impacts and relevant management measures, is to be maintained. This Draft EMP identifies the foreseeable project aspects and related potential impacts of the proposed project, and as such forms the basis for the Aspect-Impact Register; with the Project Activity. It is however noted that during the life of the project additional project aspects and related impacts may arise which would need to be captured in the Aspect-Impact Register. In this regard, the impact identification principles set forth in the scoping report can be used to update the Register. This method can be modified as required by the applicable exploration manager as necessary during the life of the project.

# 6.5.2.3 Procedures and Method Statements

In order to affect the commitments contained in this EMP, procedures and method statements will be drafted by the relevant responsible mineral exploration staff and Contractors. These include, but may not be limited:

- Standard operating procedures for environmental action plan and management programme execution.
- Incident and emergency response procedures.
- Auditing, monitoring and reporting procedures, and
- Method statements for EMP compliance for ad hoc activities not directly addressed in the EMP action plans.

All procedures are to be version controlled and signed off by the applicable exploration manager. In addition, knowledge of procedures by relevant staff



responsible for the execution thereof must be demonstrable and training records maintained.

# 6.5.2.4 Register of Roles and Responsibilities

During project planning and risk assessments, relevant roles and responsibilities will be determined. These must be documented in a register of all environmental commitment roles and responsibilities. The register is to include relevant contact details and must be updated as required.

# 6.5.2.5 Site Map

An up to date map of the exploration site indicating all project activities is to be maintained. In addition to the project layout, the following detail must be depicted:

- Materials handling and storage;
- Waste management areas (collection, storage, transfer, etc.);
- Sensitive areas;
- Incident and emergency equipment locations; and Location of responsible parties.

# 6.5.2.6 Environmental Management Schedule

A schedule of environmental management actions is to be maintained by the applicable phase site managers and/or relevant Contractors. A master schedule of all such activities is to be kept up to date by the exploration manager. Scheduled environmental actions can include, but are not limited to:

- Environmental risk assessment;
- Environmental management meetings;
- Soil handling, management and rehabilitation;
- Waste collection
- Incident and emergency response equipment evaluations and maintenance
- Environmental training;





- Stakeholder engagement; Environmental inspections; and
- Auditing, monitoring and reporting.

# 6.5.2.7 Change Management

The EMS must have a procedure in place for change management. In this regard, updating and revision of environmental documentation, of procedures and method statements, actions plants etc. will be conducted as necessary in order to account for the following scenarios:

- Changes to standard operating procedures (SOPs);
- Changes in scope;
- Ad hoc actions;
- Changes in project phase; and
- Changes in responsibilities or roles

All documentation will be version controlled and require sign off by the applicable phase site managers.

# 6.6 Closure Plan

The closure vision for the proposed project is to establish a safe, stable and nonpolluting post-prospecting landscape that can facilitate integrated, self-sustaining and value generating opportunities, thereby leave a lasting positive legacy. The aim of the closure plan is to:

- Creating a safe, physically stable rehabilitated landscape that limits long-term erosion potential and environmental degradation.
- Sustaining long term catchment yield and water quality.
- Focusing on establishing a functional post-prospecting landscape that enables self-sustaining agricultural practices where possible.
- To encourage, where appropriate, the re-instatement of terrestrial and aquatic wetland biodiversity



# 6.6.1 Alternatives Considered

Considering that this is an exploration project, the proposed project is not complex, and the risks associated with prospecting are understood and can be mitigated at closure. Alternative options for closure are limited. There are only two options that have been considered as activity alternatives for the closure plan:

- **Preferred Alternative:** Closure or Backfill of boreholes with overburden removed during drilling.
- Alternative 2: To Leave boreholes open, in-order to allow for groundwater recharge by surface run-off.

# 6.6.2 Preferred Alternative: Rehabilitation/ Backfill of boreholes

Rehabilitation is the restoration of a disturbed area that has been degraded as a result of activities such as mining, road construction or waste disposal, to a land use in conformity with the original land use before the activity started. This also includes aesthetical considerations, so that a disturbed area will not be visibly different to the natural environment. This also involves maintaining physical, chemical and biological ecosystem processes in degraded environments, hence the preferred option of backfilling the boreholes with the overburden removed during development and cover with growth medium to establish vegetation. This option has several advantages as discussed below:

# Advantages:

- The site will be aesthetically acceptable;
- The site will blend in with the environment;
- The site will be a suitable habitat for fauna and flora again.
- The site will be safe and pollution free;
- Revegetating the site will ensure that the site in non-erodible.

Opting for alternative 1, which is to leave boreholes without backfilling poses a risk in that, these boreholes may fill in with water, which may become attractive to wildlife and communities leading to drowning and the risk of being trapped in the declines.



To mitigate these risks, it is necessary to backfill. Treatment technologies should be used to prevent decanting.

#### 6.6.3 Closure Assumptions

This closure plan has been developed based on limited available information including environmental data. Some of the information currently available may need to be supplemented during the operational period. Therefore, several assumptions were made about general conditions, and closure and rehabilitation of the facilities at the site to develop the proposed closure actions. As additional information is collected during operations, these assumptions will be reviewed and revised as appropriate.

The assumptions used to prepare this plan include the following:

- The closure period will commence once the last planned weight of minerals has been extracted from the site for laboratory testing.
- The proposed prospecting sites will be adhered to minimise the potential impacts.
- Vegetation establishment will be in line with a project area's indigenous vegetation.
- Water management infrastructure developed for the operational phase will be retained for closure /end of the life of the project as necessary.
- There are limited opportunities for any infrastructure to be built on site and if any infrastructure is built, it will be of limited benefit to the community. Therefore, all buildings will be demolished.
- All hazardous and domestic waste will be transported offsite for disposal in licensed landfills.
- No roads are anticipated to be constructed to access the site; existing roads will be used as far as possible. Where access tracks have been developed in cases where there are no roads, these will be rehabilitated and closed as part of normal closure actions.


#### 6.6.4 Closure and Rehabilitation Activities

The rehabilitation actions intended to be undertaken at the end of the life of the proposed prospecting activities are described below.

#### 6.6.4.1 Infrastructure

All infrastructures will be decommissioned, and the footprints rehabilitated for the establishment of vegetation. Material inventories will be managed near the end of prospecting activities to minimize any surplus materials at closure. Where practicable, equipment and materials with value not needed for post-closure operations will be sold and or removed from the site. Equipment with scrap or salvage value will be removed from the site and sold to recyclers.

A soil contamination investigation will be conducted on completion of demolition activities. The purpose of this is to identify areas of possible contamination and design and implement appropriate remedial measures to ensure that the soil contaminants are removed. Closure actions will include:

- All power and water services to be disconnected and certified as safe prior to commencement of any decommissioning works;
- All remaining inert equipment and decommissioning waste will be disposed to the nearest licensed general waste disposal facility;
- Salvageable equipment will be removed and transported offsite prior and during decommissioning;
- All tanks, pipes and sumps containing hydrocarbons to be flushed or emptied prior to removal to ensure no hydrocarbon/chemical residue remains;

#### 6.6.4.2 Boreholes

Closure of boreholes will entail backfilling with overburden stripped ahead of prospecting activities. All overburden should be replaced into the void and the final surface reshaped to simulate surrounding topography while ensuring that the surface is free draining.



Once backfilling is complete a growth medium cover will be placed, and vegetation will be established. There may be a requirement to include sacrificial erosion protection measures on the surface while vegetation is being established.

### 6.6.4.3 Roads

Existing roads will be used as far as possible. Closure actions concerning roads and parking areas will include:

- Removal of all signage, fencing, shade structures, traffic barriers, etc.
- All 'hard top' surfaces to be ripped along with any concrete structures.
- All potentially contaminated soils are to be identified and demarcated for later remediation; and
- All haul routes that have been treated with saline dust suppression water need to be treated, with the upper surface ripped and removed to designated contaminant disposal areas.

## 6.6.4.4 Remediation of Contaminated Areas

All soil, contaminated with hydrocarbons, will be identified, excavated, if possible, to at least 200 mm below the contaminated zone and then treated.

- All tanks, pipes and sumps containing hydrocarbons will be flushed or emptied.
- Removed soils will be managed as determined by the nature and extent of the contamination.
- Liquid storage tanks will be emptied, the structure removed/demolished and sub-surface holes filled; and
- All equipment in which chemicals have been stored or transported will be cleaned and disposed of in a suitable disposal facility.

## 6.6.4.5 Vegetation

Successful revegetation will help control erosion of soil resources, maintain soil productivity and reduce sediment loading in streams utilizing non-invasive plants that fit the criteria of the habitat (e.g. soils, water availability, slope and other appropriate



environmental factors). Invasive species will be avoided, and the area will be managed to control the spread of these species.

To counter the effects of erosion, naturally occurring grassland species will be planted on slopes. These species will provide soil holding capacity and reduce runoff velocity. The flatter areas will be re-vegetated with the objective of creating a sustainable ecosystem. The occurrence of protected plant species will need to be determined before vegetation is removed and the required permits will be obtained for either destruction or relocation.

#### 6.6.4.6 Waste Management

Waste management activities will include:

- Hazardous waste will be managed handled, classified and disposed.
- Non-hazardous will be disposed in the nearby licensed landfill site;
- Scrap and waste steel will be sold to recyclers.
- It may be necessary to fence temporary salvage yards for security reasons, particularly where these are located close to public roads.



# 7. Public Participation Process

The public participation process commenced with newspaper advertisements in two widely distributed newspapers for two consecutive weeks as shown in Appendix B.

Known interested and affected parties were notified directly via mail and fax. Posters were placed at the office of the Erongo Regional Council office and at the site as well.

Interested and affected parties that were notified directly include farmers, government departments, regional council, Namwater, Chamber of Mines and individuals that may be affected by the mineral exploration activities. Copies of letters sent by registered mail are attached in the appendix section. Should any interested and affected parties raise any concerns during the on-going project phase, the Ministry of Environment and Tourism will be immediately notified. The registered interested and affected are indicated in the table below:

Name	Organization	Tel	Email	Comments	Response
Dr. Chris Brown	Namibian Chamber of Environment	061 240 140	ceo@n-c-e.org	this EPL is in the Tsiteb Conservancy and that there should be thorough consultations with the Chairperson and the Committee.	We are engaging the traditional authority and will ensure that we obtain consent from them before submission.
John Hazam	Namibia Nature Foundation	08112800 62	nampho@iway.na	Good Morning Mr Amutenya, Thank you for taking our call.	

#### Registered IAP's and Summary of Issues Raised



Erasmus	Mining	Anna.Gideon@m	
Shivolo	Commission	me.gov.na	
	er		

# 8. Conclusion

The scoping report is prepared for the Environmental Impact Assessment for mineral exploration on an area which is located 25 km northeast of Uis. Environmental scoping is a critical step in the preparation of an EIA for the proposed mineral exploration activities.

Basically, mineral exploration is relatively unsophisticated and rudimentary. The methods that will be employed are mainly target generation, target drilling, resource evaluation and mineral resource definition.

With the potential employment of 15 people, this means that 15 families will benefit from the project during the exploration phase. The project has great potential to improve livelihoods and contribute to sustainable development within the surrounding community.

At this stage, electricity requirements for the project are minimal. The bulk of the power supply to the exploration site will be sourced from the proponent's own generator.

The potential negative impacts associated with the proposed mineral exploration project are expected to be low to medium in significance. Provided that the relevant mitigation measures are successfully 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.

Several other potential impacts have been addressed in Section 5 and 6 of this EIA, and will be managed through the implementation of the EMP.

The EMP contains a set of Environmental Specifications that will form part of all contracts between the proponent and contractors such as lubrication companies. The requirements of the EMP will be enforced on site by the Management team, and periodic environmental audits will be undertaken and submitted to MET.

This EIA has been subject to a few limitations, which are explained as follows: -

• the time available in which to secure an environmental contract with the authorities; and,



The limited botanical work done to date did not raise any concerns but will be monitored on an on-going basis. If any "special" species of plants are found, these will be located by GPS. An addendum will then be added to the EMP to indicate localities that should be avoided, or to implement other appropriate measures about any special plants.



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# Appendix A

SCIENTIFIC NAME	COMMON NAME	STATUS	OCCURRENCE
Eidolon helvum	STRAW-COLORED FRUIT BAT	SECURE	SEASONAL
Nvcteris thebaica	COMMON SLIT-FACED BAT	SECURE	ABUNDANTLY
Taphozous mauritianus	ТОМВ ВАТ	SECURE	SEASONAL
Rhinolophus fumigatus	RÜPPELL'S HORSESHOE BAT	SECURE	OCCASIONALLY
Rhinolophus darlingi	DARLING'S HORSESHOE BAT	SECURE	OCCASIONALLY
Rhinolophus denti	DENT'S HORSESHOE BAT	SECURE	OCCASIONALLY
Hipposideros commersoni	COMMERSON' S LEAF-NOSED BAT	SECURE	ABUNDANTLY
Hipposideros caffer	SUNDEVALL' S LEAF-NOSED BAT	SECURE	ABUNDANTLY
Chaerephon nigeriae	NIGERIAN FREE-TAILED BAT	SECURE	ABUNDANTLY
Mops midas	MIDAS FREE-TAILED BAT	SECURE	ABUNDANTLY
Tadarida aegyptiaca	EGYPTIAN FREE-TAILED BAT	SECURE	ABUNDANTLY
Miniopterus inflatus	GREATER LONG-FINGERED BAT	SECURE	RARELY
Miniopterus schreibersi	SCHREIBERS' LONG- FINGERED BAT	SECURE	ABUNDANTLY
Neoromicia capensis	CAPE SEROTINE BAT	SECURE	ABUNDANTLY
Neoromicia zuluensis	ALOE SEROTINE BAT	SECURE	RARELY
Nycticeinops schlieffenii	SCHLIEFFEN' S BAT	SECURE	RARELY
Scotophilus dingani	AFRICAN YELLOW BAT	SECURE	ABUNDANTLY
Atelerix frontalis	SOUTHERN AFRICAN HEDGEHOG	UNKNOWN, RARE?	RARELY
Crocidura fuscomurina	TINY MUSK SHREW	SECURE	RARELY
Crocidura hirta	LESSER RED MUSK SHREW	SECURE	ABUNDANTLY
Galago moholi	SOUTHERN AFRICAN BUSHBABY	UNKNOWN, RARE?	ABUNDANTLY
Papio ursinus	CHACMA BABOON	SECURE	ABUNDANTLY
Lepus victoriae		SECURE	ABUNDANTLY
Xerus inaurus	CAPE GROUND SQUIRREL	SECURE	ABUNDANTLY
Funisciurus congicus	STRIPED TREE SQUIRREL	SECURE	RARELY
Saccostomus campestris	POUCHED MOUSE	SECURE	ABUNDANTLY
Tatera leucogaster	BUSHVELD GERBIL	SECURE	ABUNDANTLY
Tatera brantsii	HIGHVELD GERBIL	SECURE	ABUNDANTLY
Desmodillus auricularis	SHORT-TAILED GERBIL	SECURE	RARELY
Gerbillurus paeba	PYGMY GERBIL	SECURE	ABUNDANTLY
Steatomys pratensis	FAT MOUSE	SECURE	ABUNDANTLY
Malacothrix typica	LARGE-EARED MOUSE	SECURE	RARELY
Mus indutus	KALAHARI PYGMY MOUSE	SECURE	ABUNDANTLY
Lemniscomys rosalia	SINGLE-STRIPED MOUSE	SECURE	RARELY
Rhabdomys pumilio	STRIPED MOUSE	SECURE	ABUNDANTLY
Thallomys paedulcus	TREE RAT	SECURE	ABUNDANTLY
Thallomys nigricauda	BLACK-TAILED TREE RAT	SECURE	ABUNDANTLY
Aethomys namaquensis	NAMAQUA ROCK RAT	SECURE	RARELY
Aethomys chrysophilus	RED VELD RAT	SECURE	ABUNDANTLY
Zelotomys woosnami	WOOSNAM'S DESERT RAT	RARE	RARELY
Mastomys natalensis	NATAL MULTIMAMMATE MOUSE	SECURE	ABUNDANTLY
Mastomys coucha	MULTIMAMMATE MOUSE	SECURE	ABUNDANTLY
Graphiurus murinus	WOODLAND DORMOUSE	SECURE	ABUNDANTLY
Pedetes capensis	SPRINGHARE	SECURE	ABUNDANTLY
Hystrix africaeaustralis	SOUTHERN AFRICAN PORCUPINE	SECURE	ABUNDANTLY
Cryptomys damarensis	DAMARA MOLE RAT	SECURE	ABUNDANTLY
Felis lybica	AFRICAN WILD CAT	ENDANGERED & SUPERFICIAL	RARELY
Felis nigripes	SMALL - SPOTTED CAT	INDETERMINATE;	RARELY



		PERIPHERAL;	
		AMBIGUOUS &	
Leptailurus serval	SERVAL	SUPERFICIAL	RARELY
Caracal caracal	CARACAL	SECURE	ABUNDANTLY
Panthera pardus	LEOPARD	SECURE? & SUPERFICIAL	RARELY
		AMBIGUOUS(ENDA	
Panthera leo	LION	NGERED) &	
			EXTINCT
	OUEETAL	KNOWN	
Acinonyx jubatus	CHEETAH	(ENDANGERED?) &	
			ABUNDANTLY
Civettictis civetta	CIVET	RARE? &	
		SUPERFICIAL	RARELY
Genetta maculata	SMALL-SPOTTED GENET	SECURE – SP (taxonomy)	ABUNDANTLY
Galarella sanguineus	SLENDER MONGOOSE	SECURE	ABUNDANTLY
Helogale parvula	DWARF MONGOOSE	SECURE	ABUNDANTLY
Mungos mungo	BANDED MONGOOSE	SECURE	ABUNDANTLY
Cynictis penicillata	YELLOW MONGOOSE	SECURE	ABUNDANTLY
Crocuta crocuta	SPOTTED HYAENA	SECURE? &	EVTINET
			EXTINCT
Derebucene brunnes		KNOWN	
Paranyaena brunnea	BROWN HTAENA	(ENDANGERED?) &	00000000000000
			OCCASIONALLY
Dratalaa ariatatua		KNOWN	
Proteies cristatus	AARDWOLF	(ENDANGERED?) &	
Conia monomolos		SUPERFICIAL	ABUNDANTLY
Canis mesomelas	BLACK-BACKED JACKAL	SECORE ENDANGERED &	ABUNDANTLY
Lycaon pictus	WILD DOG	SUPERFICIAL	EXTINCT
		ENDANGERED? &	
Otocyon megalotis	BAT-EARED FOX	(taxonomy)	RARFLY
Vulpes chama	CAPE FOX	ENDANGERED?	RARELY
lctonyx striatus	STRIPED POLECAT	SECURE	ABUNDANTLY
Mellivora capensis	HONEY BADGER	SECURE	RARELY
Poecilogale albinucha	AFRICAN STRIPED WEASEL	AMBIGUOUS(RARE	DADELY
		ENDANGERED &	NANELT
Manis temminckii	SAVANNA PANGOLIN	SUPERFICIAL	RARELY
Phacochoerus africanus	SOUTHERN WARTHOG	SECURE	ABUNDANTLY
Giraffa camelopardalis	GIRAFFE	ENDANGERED? &	FXTINCT
Alcelaphus buselaphus	RED HARTEBEEST	SECURE ?	ABUNDANTLY
Antidorcas marsupialis	SPRINGBOK	SECURE	
		INADEQUATELY	
Connochaetes taurinus	BLUE WILDEBEEST		
		SUPERFICIAL	ABUNDANTLY
Hippotragus equinus	ROAN	ENDANGERED &	
			ABUNDANTLY
Madoqua damarensis	DAMARA DIK-DIK	KNOWN	RARELY
Oryx gazella	GEMSBOK	SECURE	ABUNDANTLY
Raphicerus campestris	STEENBOK	SECURE	ABUNDANTLY
Sylvicapra grimmia	COMMON DUIKER	SECURE	ABUNDANTLY
Suncerus caffer	BLIFFALO		
Gynoeius callel		SUPERFICIAL	ABUNDANTLY
		INADEQUATELY	
Tragelaphus oryx	ELAND	KNOWN &	
Tragelaphus strepsiceros	GREATER KUDU	SECURE	ABUNDANTIY
Equus burchelli	PLAINS ZEBRA	INADEQUATELY	EXTINCT
,		· · · · · · · · · · · · · · · · · · ·	



		KNOWN & SUPERFICIAL	
Ceratotherium simum	WHITE RHINOCEROS	EXTINCT & REINTRODUCED (non topotypical stock)	EXTINCT
Diceros bicornis	BLACK RHINOCEROS	ENDANGERED & SUPERFICIAL	EXTINCT
Loxodonta africana	AFRICAN ELEPHANT	ENDANGERED & SUPERFICIAL	EXTINCT
Orycteropus afer	AARDVARK	SECURE ?	ABUNDANTLY
Elephantulus intufi	BUSHVELD SENGI	ENDEMIC AND SECURE	ABUNDANTLY

Reptile species which are likely to occur within the exploration area:

SCIENTIFIC NAME	COMMON NAME	STATUS	OCCURRENCE
Pelomedusa subrufa	HELMETED TERRAPIN	SECURE	ABUNDANTLY
Geochelone pardalis	LEOPARD TORTOISE	ENDANGERED & SUPERFICIAL	ABUNDANTLY
Psammobates oculiferus	KALAHARI TORTOISE	ENDANGERED	ABUNDANTLY
Lygodactylus bradfieldi	NAMIBIAN DWARF GECKO	ENDEMIC & SECURE	ABUNDANTLY
Colopus wahlbergii	KALAHARI GROUND GECKO	SECURE	RARELY
Pachydactylus turneri	TROPICAL BUTTON-SCALE GECKO	SECURE	ABUNDANTLY
Pachydactylus capensis	CAPE GECKO	SECURE	UNCOMMONLY
Pachydactylus punctatus	SPECKLED GECKO	SECURE	ABUNDANTLY
Ptenopus garrulus	COMMON BARKING GECKO	SECURE	ABUNDANTLY
Agama aculeata	COMMON GROUND AGAMA	SECURE	ABUNDANTLY
Chamaeleo dilepis	FLAP-NECK CHAMELEON	SECURE	ABUNDANTLY
Acontias occidentalis	WESTERN LEGLESS SKINK	SECURE	ABUNDANTLY
Lygosoma sundevalli	COMMON WRITHING SKINK	SECURE	ABUNDANTLY
Trachylepis capensis	CAPE SKINK	SECURE	UNCOMMONLY
Trachylepis punctulata	EASTERN VARIEGATED SKINK	SECURE	ABUNDANTLY
Trachylepis wahlbergii	WAHLBERG'S STRIPED SKINK	SECURE	ABUNDANTLY
Trachylepis varia	COMMON VARIABLE SKINK	SECURE	ABUNDANTLY
Heliobolis lugubris	BUSHVELD LIZARD	SECURE	ABUNDANTLY
Ichnotropis capensis	CAPE ROUGH-SCALED LIZARD	SECURE	ABUNDANTLY
Ichnotropis squamulosa	COMMON ROUGH-SCALED LIZARD	SECURE	ABUNDANTLY
Nucras holubi	HOLUB'S SANDVELD LIZARD	SECURE	UNCOMMONLY
Nucras intertexta	SPOTTED SANDVELD LIZARD	SECURE	UNCOMMONLY
Pedioplanis lineoocellata	OCELLATED SAND LIZARD	SECURE	ABUNDANTLY
Pedioplanis namaquensis	NAMAQUA SAND LIZARD	SECURE	ABUNDANTLY
Gerrhosaurus auritus	KALAHARI PLATED LIZARD	SECURE	UNCOMMONLY
Gerrhosaurus nigrolineatus	BLACK-LINED PLATED LIZARD	SECURE	ABUNDANTLY
Varanus albigularis	VELD LEGUAAN (MONITOR)	ENDANGERED & SUPERFICIAL	ABUNDANTLY
Dalophia pistillum	BLUNT-TAILED WORM LIZARD	SECURE ?	MARGINALLY
Monopeltis anchietae	ANGOLAN SPADE-SNOUTED WORM LIZARD	SECURE	ABUNDANTLY
Monopeltis infuscata	DUSKY SPADE-SNOUTED WORM LIZARD	SECURE	ABUNDANTLY
Monopeltis leonhardi	KALAHARI SPADE-SNOUTED WORM LIZARD	SECURE	MARGINALLY
Monopeltis mauricei	SLENDER SPADE-SNOUTED WORM LIZARD	SECURE	MARGINALLY
Zygaspis quadrifrons	KALAHARI ROUND-HEADED WORM LIZARD	SECURE	ABUNDANTLY
Leptotyphlops labialis	DAMARA WORM SNAKE	ENDEMIC & SECURE	MARGINALLY
Leptotyphlops scutifrons	PETERS= WORM SNAKE	SECURE	ABUNDANTLY
Rhinotyphlops schlegelii	SCHLEGEL'S BLIND SNAKE	SECURE	ABUNDANTLY
Rhinotyphlops boylei	KALAHARI BLIND SNAKE	SECURE	RARELY
Python natalensis	SOUTHERN AFRICAN PYTHON	ENDANGERED & SUPERFICIAL	ABUNDANTLY



Amblyodipsas polylepis	COMMON PURPLE-GLOSSED SNAKE	INADEQUETLY KNOWN; RARE?	RARELY
Amblyodipsas ventrimaculata	KALAHARI PURPLE-GLOSSED SNAKE	SECURE	MARGINALLY
Aparallactus capensis	CAPE CENTIPEDE EATER	INADEQUETLY KNOWN ; RARE?	RARELY
Atractaspis bibronii	SOUTHERN STILLETO SNAKE	SECURE	ABUNDANTLY
Xenocalamus bicolor	VARIABLE QUILL-SNOUTED SNAKE	SECURE	ABUNDANTLY
Xenocalamus mechowii	ELONGATED QUILL-SNOUTED SNAKE	SECURE	MARGINALLY
Crotaphopeltis hotamboeia	WHITE-LIPPED SNAKE	INADEQUETLY KNOWN	RARELY
Dasypeltis scabra	RHOMBIC EGG EATER	SECURE	ABUNDANTLY
Dispholidus typus	BOOMSLANG	SECURE	ABUNDANTLY
Lamprophis fuliginosus	BROWN HOUSE SNAKE	SECURE	ABUNDANTLY
Lycophidion capense	CAPE WOLF SNAKE	SECURE	ABUNDANTLY
Mehelya capensis	CAPE FILE SNAKE	SECURE	UNCOMMONLY
Mehelya nyassae	BLACK FILE SNAKE	INADEQUETLY KNOWN	RARELY
Mehelya vernayi	ANGOLAN FILE SNAKE	INADEQUETLY KNOWN	UNCOMMONLY
Philothamnus angolensis	ANGOLAN GREEN SNAKE	SECURE	UNCOMMONLY
Philothamnus semivariegatus	SPOTTED BUSH SNAKE	SECURE	ABUNDANTLY
Prosymna angolensis	ANGOLA SHOVEL-SNOUT	SECURE	MARGINALLY
Prosymna bivittata	TWIN-STRIPED SHOVELSNOUT	SECURE	MARGINALLY
Psammophis angolensis	DWARF WHIP SNAKE	SECURE	ABUNDANTLY
Psammophis jallae	JALLA'S SAND SNAKE	INADEQUETLY KNOWN	RARELY
Psammophis leopardinus	LEOPARD WHIP SNAKE	ENDEMIC & SECURE	UNCOMMONLY
Psammophis mossambicus	OLIVE WHIP SNAKE	SECURE	ABUNDANTLY
Psammophis notostictus	KAROO WHIP SNAKE	SECURE	MARGINALLY
Psammophis subtaeniatus	WESTERN STRIPED-BELLIED SAND SNAKE	SECURE	ABUNDANTLY
Psammophis trigrammus	WESTERN WHIP SNAKE	ENDEMIC & SECURE	ABUNDANTLY
Psammophis trinasalis	KALAHARI SAND SNAKE	SECURE	UNCOMMONLY
Psammophylax tritaeniatus	STRIPED SKAAPSTEKER	SECURE	ABUNDANTLY
Pseudaspis cana	MOLE SNAKE	SECURE	ABUNDANTLY
Telescopus semiannulatus	SOUTHERN TIGER SNAKE	SECURE	ABUNDANTLY
Thelotornis capensis	VINE SNAKE	SECURE	UNCOMMONLY
Aspidelaps lubricus	CORAL SNAKE	SECURE	UNCOMMONLY
Aspidelaps scutatus	SHIELD-NOSE SNAKE	SECURE	ABUNDANTLY
Dendroaspis polylepis	BLACK MAMBA	SECURE	ABUNDANTLY
Elapsoidea semiannulata	ANGOLA GARTER SNAKE	SECURE	UNCOMMONLY
Elapsoidea sundevallii	KALAHARI GARTER SNAKE	SECURE	UNCOMMONLY
Naja anchietae	ANGOLAN COBRA	SECURE	ABUNDANTLY
Naja mossambica	MOZAMBIQUE SPITTING COBRA	SECURE	RARELY
Naja nigricincta	ZEBRA SNAKE	ENDEMIC & SECURE	ABUNDANTLY
Bitis caudalis	HORNED ADDER	SECURE	UNCOMMONLY
Bitis arietans	PUFF ADDER	SECURE	ABUNDANTLY

Bird species which are likely to occur within the project area:

SCIENTIFIC NAME	COMMON NAME	STATUS IN NAMIBIA
Accipiter badius	Little Banded Goshawk	Secure
Accipiter ovampensis	Ovambo Sparrowhawk	Secure
Actophilornis africanus	African Jacana	Secure
Agapornis roseicollis	Rosyfaced Lovebird	Secure
Anastomus lamelligerus	Openbilled Stork	Secure
Anthus cinnamomeus	Richard's Pipit	Secure
Apus affinis	Little Swift	Secure
Apus apus	European Swift	Secure
Apus caffer	Whiterumped Swift	Secure
Apus melba	Alpine Swift	Secure



Aquila nipalensis	Steppe Eagle	Secure -
Aquila rapax	Tawny Eagle	Endangered
Aquila wahlbergi	Wahlberg's Eagle	Secure
Ardeotis kori	Kori Bustard	Secure
Batis molitor	Chinspot Batis	Secure
Batis pririt	Pririt Batis	Secure
Bubalornis niger	Redbilled Buffalo Weaver	Secure
Burhinus capensis	Spotted Dikkop	Secure
Buteo buteo	Steppe Buzzard	Secure -
Calamonastes fasciolatus	Barred Warbler	Secure
Calendulauda sabota	Sabota Lark	Secure
Camaroptera brevicaudata	Greybacked Camaroptera	Secure
Caprimulgus pectoralis	Fierynecked Nightjar	Secure
Caprimulgus rufigena	Rufouscheeked Nightjar	Secure
Ceryle rudis	Pied Kingfisher	Secure
Chrysococcyx caprius	Diederik Cuckoo	Secure
Chrysococcyx klaas	Klaas's Cuckoo	Secure
Ciconia abdimii	Abdim's Stork	Secure
Cinnyris mariquensis	Marico Sunbird	Secure
Circaetus pectoralis	Blackbreasted Snake Eagle	Secure
Cisticola chiniana	Rattling Cisticola	Secure
		Secure
Clamator glandarius	Great Spotted Cuckoo	Secure
	Lilacoreasted Roller	Secure
	Burple Beller	Secure -
Convincilla malanalaura	Fulple Roller	Secure
	Black Crow	Secure
Convus capensis	Grev Lourie	Secure
Creatophora cinerea	Wattled Starling	Secure
Crithagra flaviventris	Yellow Capary	Secure
Cuculus clamosus	Black Cuckoo	Secure
Cuculus cularis	African Cuckoo	Secure
	Temminck's Courser	Secure
Cypsiurus parvus	Palm Swift	Secure
Delichon urbicum	House Martin	Secure -
Dicrurus adsimilis	Forktailed Drongo	Secure
Elanus caeruleus	Blackshouldered Kite	Secure
Emberiza flaviventris	Goldenbreasted Bunting	Secure
Emberiza tahapisis	Rock Bunting	Secure
Eremomela icteropygialis	Yellowbellied Eremomela	Secure
Eremopterix verticalis	Greybacked Finchlark	Secure
Erythropygia leucophrys	Whitebrowed Robin	Secure
Erythropygia paena	Kalahari Robin	Secure
Estrilda erythronotos	Blackcheeked Waxbill	Secure
Eupodotis afraoides	Whitequilled Korhaan	Secure
Eupodotis ruficrista	Redcrested Korhaan	Secure
Eurocephalus anguitimens	Whitecrowned Shrike	Secure
Falco biarmicus	Lanner Falcon	Secure
Falco chicquera	Rednecked Falcon	Secure
Falco subbuteo	Hobby Falcon	Secure -
Falco tinnunculus	Rock Kestrel	Secure
Falco vespertinus	Western Redfooted Kestrel	Secure
Francolinus adspersus	Redbilled Francolin	Secure
Francolinus sepnaena	Crested Francolin	Secure
Collinggo pigringancia	Swainson's Francolin	Secure
		Secure Near Threatened
Gyps amcanus Hioragotus poppotus	Rested Facto	
Hirundo abyssinios	Lesser Striped Swallow	
Hirundo cucullata	Greater Striped Swallow	Secure
Hirundo fuliquia	Rock Martin	Secure
i munuo iuliyula		Occure



Hirundo rustica	European Swallow	Secure -
Hirundo semirufa	Redbreasted Swallow	Secure
Lamprotornis australis	Burchell's Starling	Secure
Lamprotornis nitens	Glossy Starling	Secure
Laniarius atrococcineus	Crimsonbreasted Shrike	Secure
Lanius collaris	Fiscal Shrike	Secure
Lanius collurio	Redbacked Shrike	Secure -
Lanius minor	Lesser Grey Shrike	Secure -
Melaenornis infuscatus	Chat Flycatcher	Secure
Melaenornis mariquensis	Marico Flycatcher	Secure
Melierax canorus	Pale Chanting Goshawk	Secure
Merops apiaster	European Bee-Eater	Secure -
Merops hirundineus	Swallowtailed Bee-Eater	Secure
Micronisus gabar	Gabar Goshawk	Secure
Milvus migrans	Black Kite	Secure -
Milvus parasitus	Yellowbilled Kite	Secure
Mirafra passerina	Monotonous Lark	Secure
Monticola brevipes	Shorttoed Rock Thrush	Secure
Muscicapa striata	Spotted Flycatcher	Secure -
Nectarinia fusca	Dusky Sunbird	Secure
Nectarinia talatala	Whitebellied Sunbird	Secure
Nilaus afer	Brubru	Secure
Numida meleagris	Helmeted Guineafowl	Secure
Oena capensis	Namaqua Dove	Secure
Onychognathus nabouroup	Palewinged Starling	Secure
Parisoma subcaeruleum	Titbabbler	Secure
Parus cinerascens	Ashy Tit	Secure
Passer diffusus	Southern Grey-headed Sparrow	Secure
Passer motitensis	Great Sparrow	Secure
Plocepasser mahali	Whitebrowed Sparrowweaver	Secure
Ploceus velatus	Masked Weaver	Secure
1 100003 Volatas		
Polemaetus bellicosus	Martial Eagle	Endangered
Polemaetus bellicosus Polihierax semitorquatus	Martial Eagle Pygmy Falcon	Endangered Secure
Polemaetus bellicosus Polihierax semitorquatus Prinia flavicans	Martial Eagle Pygmy Falcon Blackchested Prinia	Endangered Secure Secure
Polemaetus bellicosus Polihierax semitorquatus Prinia flavicans Psophocichla litsitsirupa	Martial Eagle Pygmy Falcon Blackchested Prinia Groundscraper Thrush	Endangered Secure Secure Secure
Polemaetus bellicosus Polihierax semitorquatus Prinia flavicans Psophocichla litsitsirupa Pterocles bicinctus	Martial Eagle Pygmy Falcon Blackchested Prinia Groundscraper Thrush Doublebanded Sandgrouse	Endangered Secure Secure Secure Secure
Polemaetus bellicosus Polihierax semitorquatus Prinia flavicans Psophocichla litsitsirupa Pterocles bicinctus Pterocles namaqua	Martial Eagle Pygmy Falcon Blackchested Prinia Groundscraper Thrush Doublebanded Sandgrouse Namaqua Sandgrouse	Endangered Secure Secure Secure Secure Secure
Polemaetus bellicosus Polihierax semitorquatus Prinia flavicans Psophocichla litsitsirupa Pterocles bicinctus Pterocles namaqua Pycnonotus nigricans	Martial Eagle Pygmy Falcon Blackchested Prinia Groundscraper Thrush Doublebanded Sandgrouse Namaqua Sandgrouse Redeyed Bulbul Malha Finak	Endangered Secure Secure Secure Secure Secure Secure Secure
Polemaetus bellicosus Polihierax semitorquatus Prinia flavicans Psophocichla litsitsirupa Pterocles bicinctus Pterocles namaqua Pycnonotus nigricans Pytilia melba	Martial Eagle Pygmy Falcon Blackchested Prinia Groundscraper Thrush Doublebanded Sandgrouse Namaqua Sandgrouse Redeyed Bulbul Melba Finch Badbillad Oueloo	Endangered Secure Secure Secure Secure Secure Secure Secure Secure
Polemaetus bellicosus Polihierax semitorquatus Prinia flavicans Psophocichla litsitsirupa Pterocles bicinctus Pterocles namaqua Pycnonotus nigricans Pytilia melba Quelea quelea Pbinopomentus pyropomelos	Martial Eagle Pygmy Falcon Blackchested Prinia Groundscraper Thrush Doublebanded Sandgrouse Namaqua Sandgrouse Redeyed Bulbul Melba Finch Redbilled Quelea Scimitarbilled Waadbaapaa	Endangered Secure Secure Secure Secure Secure Secure Secure Secure Secure Secure
Polemaetus bellicosus Polihierax semitorquatus Prinia flavicans Psophocichla litsitsirupa Pterocles bicinctus Pterocles namaqua Pycnonotus nigricans Pytilia melba Quelea quelea Rhinopomastus cyanomelas Pbinoptilus obalooptorus	Martial Eagle         Pygmy Falcon         Blackchested Prinia         Groundscraper Thrush         Doublebanded Sandgrouse         Namaqua Sandgrouse         Redeyed Bulbul         Melba Finch         Redbilled Quelea         Scimitarbilled Woodhoopoe         Brozowingged Coursor	Endangered Secure Secure Secure Secure Secure Secure Secure Secure Secure Secure Secure
Polemaetus bellicosus Polihierax semitorquatus Prinia flavicans Psophocichla litsitsirupa Pterocles bicinctus Pterocles namaqua Pycnonotus nigricans Pytilia melba Quelea quelea Rhinopomastus cyanomelas Rhinoptilus chalcopterus Scopus umbretta	Martial Eagle         Pygmy Falcon         Blackchested Prinia         Groundscraper Thrush         Doublebanded Sandgrouse         Namaqua Sandgrouse         Redeyed Bulbul         Melba Finch         Redbilled Quelea         Scimitarbilled Woodhoopoe         Bronzewinged Courser	Endangered         Secure
Polemaetus bellicosus         Polihierax semitorquatus         Prinia flavicans         Psophocichla litsitsirupa         Pterocles bicinctus         Pterocles namaqua         Pycnonotus nigricans         Pytilia melba         Quelea quelea         Rhinopomastus cyanomelas         Rhinoptilus chalcopterus         Scopus umbretta         Serinus atroqularis	Martial Eagle         Pygmy Falcon         Blackchested Prinia         Groundscraper Thrush         Doublebanded Sandgrouse         Namaqua Sandgrouse         Redeyed Bulbul         Melba Finch         Redbilled Quelea         Scimitarbilled Woodhoopoe         Bronzewinged Courser         Hamerkop         Blackthroated Capary	Endangered         Secure
Polemaetus bellicosus         Polihierax semitorquatus         Prinia flavicans         Psophocichla litsitsirupa         Pterocles bicinctus         Pterocles namaqua         Pycnonotus nigricans         Pytilia melba         Quelea quelea         Rhinopomastus cyanomelas         Rhinoptilus chalcopterus         Scopus umbretta         Serinus atrogularis         Smutsornis africanus	Martial Eagle         Pygmy Falcon         Blackchested Prinia         Groundscraper Thrush         Doublebanded Sandgrouse         Namaqua Sandgrouse         Redeyed Bulbul         Melba Finch         Redbilled Quelea         Scimitarbilled Woodhoopoe         Bronzewinged Courser         Hamerkop         Blackthroated Caurser	Endangered         Secure
Polemaetus bellicosus         Polihierax semitorquatus         Prinia flavicans         Psophocichla litsitsirupa         Pterocles bicinctus         Pterocles namaqua         Pycnonotus nigricans         Pytilia melba         Quelea quelea         Rhinopomastus cyanomelas         Rhinoptilus chalcopterus         Scopus umbretta         Serinus atrogularis         Smutsornis africanus         Sporopines squamifrons	Martial Eagle         Pygmy Falcon         Blackchested Prinia         Groundscraper Thrush         Doublebanded Sandgrouse         Namaqua Sandgrouse         Redeyed Bulbul         Melba Finch         Redbilled Quelea         Scimitarbilled Woodhoopoe         Bronzewinged Courser         Hamerkop         Blackthroated Canary         Doublebanded Courser	Endangered         Secure
Polemaetus bellicosus         Polihierax semitorquatus         Prinia flavicans         Psophocichla litsitsirupa         Pterocles bicinctus         Pterocles namaqua         Pycnonotus nigricans         Pytilia melba         Quelea quelea         Rhinopomastus cyanomelas         Rhinoptilus chalcopterus         Scopus umbretta         Serinus atrogularis         Smutsornis africanus         Sporopipes squamifrons         Streotopelia capicola	Martial Eagle         Pygmy Falcon         Blackchested Prinia         Groundscraper Thrush         Doublebanded Sandgrouse         Namaqua Sandgrouse         Redeyed Bulbul         Melba Finch         Redbilled Quelea         Scimitarbilled Woodhoopoe         Bronzewinged Courser         Hamerkop         Blackthroated Canary         Doublebanded Courser         Scalyfeathered Finch         Cape Turtle Dove	Endangered         Secure
Polemaetus bellicosus         Polihierax semitorquatus         Prinia flavicans         Psophocichla litsitsirupa         Pterocles bicinctus         Pterocles namaqua         Pycnonotus nigricans         Pytilia melba         Quelea quelea         Rhinopomastus cyanomelas         Rhinoptilus chalcopterus         Scopus umbretta         Serinus atrogularis         Smutsornis africanus         Sporopipes squamifrons         Streptopelia capicola	Martial Eagle         Pygmy Falcon         Blackchested Prinia         Groundscraper Thrush         Doublebanded Sandgrouse         Namaqua Sandgrouse         Redeyed Bulbul         Melba Finch         Redbilled Quelea         Scimitarbilled Woodhoopoe         Bronzewinged Courser         Hamerkop         Blackthroated Canary         Doublebanded Courser         Scalyfeathered Finch         Cape Turtle Dove         Laughing Dove	Endangered         Secure
Polemaetus bellicosus         Polihierax semitorquatus         Prinia flavicans         Psophocichla litsitsirupa         Pterocles bicinctus         Pterocles namaqua         Pycnonotus nigricans         Pytilia melba         Quelea quelea         Rhinopomastus cyanomelas         Rhinoptilus chalcopterus         Scopus umbretta         Serinus atrogularis         Smutsornis africanus         Sporopipes squamifrons         Streptopelia capicola         Struthio camelus	Martial Eagle         Pygmy Falcon         Blackchested Prinia         Groundscraper Thrush         Doublebanded Sandgrouse         Namaqua Sandgrouse         Redeyed Bulbul         Melba Finch         Redbilled Quelea         Scimitarbilled Woodhoopoe         Bronzewinged Courser         Hamerkop         Blackthroated Canary         Doublebanded Courser         Scalyfeathered Finch         Cape Turtle Dove         Laughing Dove         Ostrich	Endangered         Secure
Polemaetus bellicosus         Polihierax semitorquatus         Prinia flavicans         Psophocichla litsitsirupa         Pterocles bicinctus         Pterocles namaqua         Pycnonotus nigricans         Pytilia melba         Quelea quelea         Rhinopomastus cyanomelas         Rhinoptilus chalcopterus         Scopus umbretta         Serinus atrogularis         Smutsornis africanus         Sporopipes squamifrons         Streptopelia capicola         Struthio camelus         Svlvietta rufescens	Martial Eagle         Pygmy Falcon         Blackchested Prinia         Groundscraper Thrush         Doublebanded Sandgrouse         Namaqua Sandgrouse         Redeyed Bulbul         Melba Finch         Redbilled Quelea         Scimitarbilled Woodhoopoe         Bronzewinged Courser         Hamerkop         Blackthroated Canary         Doublebanded Courser         Scalyfeathered Finch         Cape Turtle Dove         Laughing Dove         Ostrich         Longbilled Crombec	Endangered         Secure
Polemaetus bellicosus         Polihierax semitorquatus         Prinia flavicans         Psophocichla litsitsirupa         Pterocles bicinctus         Pterocles namaqua         Pycnonotus nigricans         Pytilia melba         Quelea quelea         Rhinopomastus cyanomelas         Rhinoptilus chalcopterus         Scopus umbretta         Serinus atrogularis         Smutsornis africanus         Sporopipes squamifrons         Streptopelia capicola         Struthio camelus         Sylvietta rufescens         Tchagra australis	Martial Eagle         Pygmy Falcon         Blackchested Prinia         Groundscraper Thrush         Doublebanded Sandgrouse         Namaqua Sandgrouse         Redeyed Bulbul         Melba Finch         Redbilled Quelea         Scimitarbilled Woodhoopoe         Bronzewinged Courser         Hamerkop         Blackthroated Canary         Doublebanded Courser         Scalyfeathered Finch         Cape Turtle Dove         Laughing Dove         Ostrich         Longbilled Crombec         Threestreaked Tchagra	Endangered         Secure
Polemaetus bellicosus         Polihierax semitorquatus         Prinia flavicans         Psophocichla litsitsirupa         Pterocles bicinctus         Pterocles namaqua         Pycnonotus nigricans         Pytilia melba         Quelea quelea         Rhinopomastus cyanomelas         Rhinoptilus chalcopterus         Scopus umbretta         Serinus atrogularis         Smutsornis africanus         Sporopipes squamifrons         Streptopelia capicola         Streptopelia senegalensis         Struthio camelus         Sylvietta rufescens         Tchagra australis	Martial Eagle         Pygmy Falcon         Blackchested Prinia         Groundscraper Thrush         Doublebanded Sandgrouse         Namaqua Sandgrouse         Redeyed Bulbul         Melba Finch         Redbilled Quelea         Scimitarbilled Woodhoopoe         Bronzewinged Courser         Hamerkop         Blackthroated Canary         Doublebanded Courser         Scalyfeathered Finch         Cape Turtle Dove         Laughing Dove         Ostrich         Longbilled Crombec         Threestreaked Tchagra         Bateleur	Endangered         Secure         Se
Polemaetus bellicosus         Polihierax semitorquatus         Prinia flavicans         Psophocichla litsitsirupa         Pterocles bicinctus         Pterocles namaqua         Pycnonotus nigricans         Pytilia melba         Quelea quelea         Rhinopomastus cyanomelas         Rhinoptilus chalcopterus         Scopus umbretta         Serinus atrogularis         Smutsornis africanus         Sporopipes squamifrons         Streptopelia capicola         Streptopelia senegalensis         Struthio camelus         Sylvietta rufescens         Tchagra australis         Terathopius ecaudatus         Thripias namaquus	Martial Eagle         Pygmy Falcon         Blackchested Prinia         Groundscraper Thrush         Doublebanded Sandgrouse         Namaqua Sandgrouse         Redeyed Bulbul         Melba Finch         Redbilled Quelea         Scimitarbilled Woodhoopoe         Bronzewinged Courser         Hamerkop         Blackthroated Canary         Doublebanded Courser         Scalyfeathered Finch         Cape Turtle Dove         Laughing Dove         Ostrich         Longbilled Crombec         Threestreaked Tchagra         Bateleur         Bearded Woodpecker	Endangered         Secure         Se
Polemaetus bellicosus         Polihierax semitorquatus         Prinia flavicans         Psophocichla litsitsirupa         Pterocles bicinctus         Pterocles namaqua         Pycnonotus nigricans         Pytilia melba         Quelea quelea         Rhinopomastus cyanomelas         Rhinoptilus chalcopterus         Scopus umbretta         Serinus atrogularis         Smutsornis africanus         Sporopipes squamifrons         Streptopelia capicola         Streptopelia senegalensis         Struthio camelus         Sylvietta rufescens         Tchagra australis         Terathopius ecaudatus         Thripias namaquus         Tockus erythrorhvnchus	Martial Eagle         Pygmy Falcon         Blackchested Prinia         Groundscraper Thrush         Doublebanded Sandgrouse         Namaqua Sandgrouse         Redeyed Bulbul         Melba Finch         Redbilled Quelea         Scimitarbilled Woodhoopoe         Bronzewinged Courser         Hamerkop         Blackthroated Canary         Doublebanded Courser         Scalyfeathered Finch         Cape Turtle Dove         Laughing Dove         Ostrich         Longbilled Crombec         Threestreaked Tchagra         Bateleur         Bearded Woodpecker         Redbilled Hornbill	EndangeredSecure
Polemaetus bellicosus         Polihierax semitorquatus         Prinia flavicans         Psophocichla litsitsirupa         Pterocles bicinctus         Pterocles namaqua         Pycnonotus nigricans         Pytilia melba         Quelea quelea         Rhinopomastus cyanomelas         Rhinoptilus chalcopterus         Scopus umbretta         Serinus atrogularis         Smutsornis africanus         Sporopipes squamifrons         Streptopelia capicola         Streptopelia senegalensis         Struthio camelus         Sylvietta rufescens         Tchagra australis         Terathopius ecaudatus         Thripias namaquus         Tockus erythrorhynchus	Martial Eagle         Pygmy Falcon         Blackchested Prinia         Groundscraper Thrush         Doublebanded Sandgrouse         Namaqua Sandgrouse         Redeyed Bulbul         Melba Finch         Redbilled Quelea         Scimitarbilled Woodhoopoe         Bronzewinged Courser         Hamerkop         Blackthroated Canary         Doublebanded Courser         Scalyfeathered Finch         Cape Turtle Dove         Laughing Dove         Ostrich         Longbilled Crombec         Threestreaked Tchagra         Bateleur         Bearded Woodpecker         Redbilled Hornbill         Southern Yellowbilled Hornbill	EndangeredSecure
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Uraeginthus granatinus	Violeteared Waxbill	Secure	
Urocolius indicus	Redfaced Mousebird	Secure	
Vanellus armatus	Blacksmith Plover	Secure	
Vanellus coronatus	Crowned Plover	Secure	
Vanellus senegallus	Wattled Plover	Secure	
Vidua regia	Shafttailed Whydah	Secure	
Zosterops senegalensis	Yellow White-Eye	Secure	

Appendix B: Proof of Advertisements, Letters and Notices



# Appendix of CV's



#### SPORTS

# GOSSIP

Arsenal have moved closer to reaching an agreement for Brighton and England defender Ben White, 23, in a deal that could be worth around £50m. (Athletic)

Liverpool could bid for French superstar Kylian Mbappe as the 22-year-old forward has told Paris St-Germain he wants to leave the club this summer. (Star)

Aston Villa are confident they can fend off interest from Manchester City, Chelsea and Manchester United to keep a hold of England midfielder Jack Grealish, 25. (Athletic)

Grealish's representatives, however, believe they have got the go-ahead for him to leave Villa. which could see him make a £100m move to Manchester City. (Sun)

Dean Smith's side also have no interest in selling Scotland midfielder John McGinn this summer, with Liverpool believed to be considering a bid for the 26-yearold. (Express and Star)

Liverpool are monitoring Portugal and Lille midfielder Renato Sanches as a replacement for Gini Wijnaldum. The 23-yearold helped the French side win the Ligue 1 title last season. (HITC)

Liverpool have begun talks with PSV Eindhoven about a deal for 22-year-old Dutch forward Donyell Malen, who is expected to cost about £34m. (Sky Sport Germany, via Express)

Chelsea are the most likely side to land Sevilla defender Jules Kounde, 22. The Frenchman has been attracting interest from Manchester United, but now it seems the west Londoners are at the front of the queue. (ABC Sevilla, in Spanish)

Brighton, Burnley, West Ham and newly promoted Norwich City have all been linked with Barcelona's 30-year-old Denmark forward Martin Braithwaite. (Sport - in Spanish)

defender William French Saliba, 20, is again poised to leave Arsenal on loan and has attracted a number of suitors across Europe, including Nice where he had a spell last season. Newcastle United, Southampton. French clubs Rennes, Marseille, Lille, German side Bayer Leverkusen as well as two unnamed clubs in Italy are also said to be interested. (Footmercato - in French)

West Ham have tabled a £17m offer for Fiorentina's 23-year-old defender Nikola Milenkovic, but the bid is a long way short of what the Serie A club want for the Serbia international. (Calciomercato - in Italian)

Arsenal manager Mikel Arteta has made Rennes midfielder Eduardo Camavinga his primary target this summer. The 18-year-old only has one year left on his current deal, and Arteta is willing to let four players go in order to pay for the Frenchman. (Express)

Burnley are set to make a bid for Werder Bremen's Czech Republic international goalkeeper Ji Pavlenka, 29. (Bild - in German) Jiri

Leeds United could make a move for Blackburn Rovers' 22-year-old forward Ben Brereton following his impressive performances for Chile at the Copa America. (RedGol, via Mail)

# **HOUSES FOR SALE**

Zoned Business Property, Windhoek West:

3 Bedroom, Kitchen,

Bathroom/Dining/Living/Lounge room.

1 Bedroom Backyard Flat, kitchen, toilet. ERF size 1186 Sqm. 3,6 mill neg.

#### Rehoboth Block D:

4 Bedroom, Dining & Living room, Kitchen, 2 bathrooms. ERF size 1730 Sqm N\$2.4 mil neg.

#### Contact: 0813582483

#### CALL FOR PUBLIC PARTICIPATION ENVIRONMENTAL IMPACT ASSESSMENT FOR PROPOSED ESTABLISHMENT OF A FUEL STATION CLOSE TO OMUTHIYA

This notice serves to inform all interested and affected parties that an application for the environmental clearance certificate will be launched with the Environmental Commissioner in terms of the Environmental Management Act (No.7 of 2007) and the Environmental Regulations (GN 30 of 2012). The project will comprise of an establishment of a fuel station. Location: The proposed fuel station is located at Oshifukwa village, 3 km north of Omuthiya along the B1 road.

Name of Proponent: New Normal Investments (Pty) Ltd



All interested and affected parties are hereby invited to register and submit their comments regarding the proposed project on or before **30/06/2021**. Details of public meeting will be communicated to registered parties. Contact details for registration and further information:

Mr. N Amutenya. Email: eia@impalac.com, Tel: 0856630598

J Geo-Enviro

IMPALA

**NVIRONMENTAL** 

PUBLIC NOTICE: EIA FOR THE PRPOSED MINING ACTIVITIES ON MINING CLAIM NO: 68907,68908, 68909, AND 68910, OTJIMBINGWE, ERONGO **REGION**.

In accordance with the Environmental Management Act no. 7 of 2007 and its 2012 EIA regulations, the proposed mining activities on mining claims no 69059-69060 require an Environmental Clearance Certificate before commencement.

The proponent, Stone Evolution and Equipment Hire is proposing to conduct quarry activities for Dimension Stones (Marble), Otjimbingwe Area, Erongo region. Consultant: HJGeoEnviro Consulting & Trading Cc.

Members of the public are invited to register as I&AP's for comments/inputs in order to receive further information on the EIA process on and before the 30th of June 2021 at hjgeoenviro@gmail.com

For more information please contact: Mr Joseph Kawina Mobile: +264 813597277

#### VACANCY: JOURNALIST NORTH BRANCH

## Confidente

**Confidente** a leading service provider in the media industry is seeking a strong experienced Journalist to head the north branch. The candidate for this job should posses a talent and enthusiasm for digging out the real stories and uncovering the truth.

#### RESPONSIBILITIES:

- Assess leads and pitch captivating story ideas to editors. Ensure that you meet all regular and recurring deadlines. Review and edit work for editorial approval. Use all your findings to prepare clean, concise and factual articles. Adhere to the ethical code of the profession. Keep records of all notes, interviews, and audio files. Create trustworthy relationships with contacts and sources for use in future

- research. Keep up-to-date on the latest news developments by attending events, studying
- different papers, opinion pieces, and social media. Collect, verify and decipher data.

#### REQUIREMENTS

- Bachelor's degree in Media studies, communications, english or relevant field.
- Minimum of 5 years' working experience as a journalist or reporter. Capable of maintaining an ethical and objective standard in reporting. Ability to meet deadlines and accurately fact-check information.
- Excellent observation and judgment skills. Superb communication and networking skills, along with an aptitude to
- effectively extract information. Must possess leadership skills.

# Interested applicants must send their CVs to r@confidentenamibia.com not later than 18 June 2021 Only shortlisted candidates will be notified.



# **Drivers/Mechanics/Miners** /Security Officers

**Benefits offered:** 

(Accommodation/Visas and Flights Contact 0027119726054/002784917253

#### Email cv to

infocareermarketing@telkomsa.net Website www.careermarketingint.com Joining Fee R2500-00

#### **CALL FOR PUBLIC PARTICIPATION**

#### ENVIRONMENTAL IMPACT ASSESSMENT FOR **MINERAL EXPLORATION ON EPL 6463**

This notice serves to inform all interested and affected parties that an application for the environmental clearance certificate will be launched with the Environmental Commissioner in terms of the Environmental Management Act (No.7 of 2007) and the Environmental Regulations (GN 30 of 2012). The project will comprise of conventional mineral exploration activities on the granted license. Location: The mineral license is located 25 km north of Uis. Proponent: Back to Back Investments (Pty) Ltd

All interested and affected parties are hereby invited to register and submit their comments regarding the proposed project on or before 24/06/2021. Details of public meeting will be communicated to registered parties. Contact details for registration and further information

Mr. N Amutenya. Email: eia@impalac.com, Tel: 0856630598 4 IMPALA **VENVIRONMENTAL** 

#### CAREERS

# Survival strategies for single working parents

#### DAWN PAPANDREA, MONSTER CONTRIBUTOR

work/life balance already a tricky concept for married couples who work, it's even more of a challenge for those of you doing it on your own. As a single parent, not only do you have to juggle all of the logistics of childcare and working hours, but there's the financial pressure of managing a household solo, too.

When you're juggling the same responsibilities that dual-workingparent households face, but all on your own, it can be very challenging. That's on top of dealing with the friction between needing to work to pay the bills and wanting to be a good parent who spends time with their kids. Single parents handle so much without having an in-house partner to share that load.

Historically, readers have told Monster that they feel their role as a parent has affected their job search, while others have said parenthood has impacted their overall careers. So to help you cope with these unique challenges, we share some strategies for balancing single parenting with a fulfilling career.

#### Identify Your Biggest Pain Point

Because every family's dynamic and financial situation is different, start by figuring out what type of support you need most. If you work in a job that requires a lot of travel, maybe childcare is your greatest obstacle. Your solution will likely rely on a network of helpers siblings, parents, friends, daycare and after-school care workers, among others.

A flexible employer can make balancing your life easier, but flexibility can mean different things to different people. It might mean having predictable hours with no requirements to stay late; it could be working an earlier shift so you can hang out with your kids after school, or it might be working flexible hours a couple of days per week.

#### Ask for Flextime Strategically

If you're already at a company you love, think about asking for additional

Single parents have unique struggles, but solutions are available.



Employers need to understand the struggles of single parents.

support that will help you be a better employee and parent. It all comes down to more control over when, where, and how you work. Time off and a flexible work schedule are routinely among the most-desired aspects of a job offer.

For example, perhaps your employer might make accommodations so you have more leeway with your daily start and end times—as long as your work is done. Or maybe you can explore an option that lets you work longer hours so that you can have one day per week off.

If you decide to talk to your current employer about flexible options, here are some tips to keep in mind as you broach the subject:

Make it about your work.
Employers want to hear how working

flexibly will make you a more productive, focused, and energetic worker. If there is someone else at your company who works this way, cite them as an example.

 Anticipate your boss's concerns or fears and be ready to address them. Have a plan ready for how you'll communicate with them, what your schedule will look like, how you'll collaborate with your team, and how you'll be available for on-the-spot needs.

 Suggest a trial run. Many managers may be hesitant to automatically allow you to use flexible work options, so suggesting a trial run of one to two months can help them adjust to the idea, and allow you to prove that flexibility is a great idea for both of you. You might also consider nontraditional work situations such as scaling back to part-time hours while supplementing your income with freelance jobs that you can do on your own time—that is, if it makes sense for you. Freelance jobs can help you take on as much or as little work as you can handle, and that can fluctuate throughout the year depending on your needs.

#### Seek Out Companies That Can Meet Your Specific Needs

No matter what is most important to you—whether it's the ability to work remotely, good benefits, or access to (or even a subsidy for) daycare—it's important to do your research when looking for a job. Visit a company's website and Monster's company profile site and review areas that speak to the workplace culture and benefits. Often, when a company offers a flexible work arrangement or telecommuting benefits as examples, those perks will be evident

To help find companies with a strong track record of hiring working/single parents, you can start by researching those included on the best companies for working mothers. Beyond that, read company social media pages to discover what values they highlight, and what their employees are saying about them.

Once you actually begin an interview process, it's also smart to look for evidence of people's families in their workspace—virtual or in-person—like photos or kids' art. This can be a clue that you're in a family-friendly culture.

#### Negotiate for the Benefits Most Important to You

In a Monster survey, 75% of respondents said they will ask about an organization's policy on flexible work schedules before getting a job offer (22% in the screening call, 53% in an interview). And that's perfectly acceptable.

A recruiter can also help you

determine if the company fosters a culture that will be supportive. For example, ask if there's flexibility to arrive and depart the office, or if the manager or culture drives a set schedule (i.e. 7:30 a.m.-4:30 p.m.). This information is helpful in coordinating childcare.

Just be mindful that there is a fine line here between gathering the necessary information and unintentionally signaling a lack of commitment to the needs of your employer or demands of the job.

It's better to explore these details as you get toward the end of the process and have already determined that there seems to be a good fit and a mutual desire to make it work.

Some experts say openly discussing your situation as a single parent can, unfortunately, open you up to conscious and subconscious bias from recruiters and hiring managers. That being said, you can absolutely ask questions about how the company approaches worklife balance, or what its flexible work policies are.

No matter what, if you're a single parent, you're facing complexities that other people in the workforce may not. You need to shop for, cook for, feed, dress, teach, play, and transport your children—all while holding down and tending to your career. By selecting an employer that provides benefits and flexibility to accommodate your lifestyle, you will be better equipped to do your best work both on the job and at home.

#### Find the Right Fit

Knowing the best companies to meet your needs as a working parent is a key step in the job search process.

Need some help? When you join Monster for free, you can get job alerts from select companies sent to you when open positions become available, which cuts down on the time you'd spend searching through ads. Let us help you have a more streamlined job search so you can take care of what matters most.

CALL FOR PUBLIC PARTICIPATION ENVIRONMENTAL IMPACT ASSESSMENT FOR MINERAL EXPLORATION ON EPL 6463

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Location: The mineral license is located 25 km north of Uis. Proponent: Back to Back Investments (Pty) Ltd

All interested and affected parties are hereby invited to register and submit their comments regarding the proposed project on or before **24/06/2021.** Details of public meeting will be communicated to registered parties. Contact details for registration and further information:

Mr. N Amutenya. Email: eia@impalac.com, Tel: 0856630598



#### CAREERS

# How can I impress in my new job?

Give off Good Vibes from Day one tarting a new job can be quite a shock to the system getting to know what you're supposed to do and how you're supposed to act. Everybody knows first impressions count, and when start a new job you have an excellent – but also vital window of opportunity. It's a chance to start off on the right foot and build from there, whereas a negative start can be difficult to shake off.

When you start a new job most people will give you the benefit of the doubt, so mistakes and honest misunderstanding will be acceptable up to a point.

Most of your co-workers will also remember their first days only too well. Given this readymade goodwill, the trick is not to take it for granted, or abuse it. Go in with the wrong attitude and you'll build up almost unshakable resentment – even unreasonable resentment.

Here are few tips for getting it right:

#### Be punctual and presentable

Once you settle in you can go with the flow on punctuality, dress sense and language. On your first day you need to be acting almost as you did in your interview. Creating a good impression and not looking like you don't want to be there.

#### Don't try too hard

If you're the confident type you might want to try and impress your new workmates by being pushy or sharing your ideas openly. Try not to do this; you'll have time later on and you won't be expected to come into a new situation and have all the answers.

#### Ask questions

If you're given a job, do it as well as you can and don't be afraid to ask questions. Better to ask a question than sit silently hoping that what you need to know will turn up.

#### Get a notepad

Even if you have to quietly write down people's names, do it on a notepad - it helps you break through the communication barrier. It also avoids you having to ask someone else: "what's



that person's name I was just talking to?" You can also jot down any other rules and ways of doing things so that you're not blundering along and making obvious bad moves.

Volunteer

All of your new colleagues will be busy doing their own jobs. Sometimes you may feel neglected or under used. There's no harm in asking for a job or volunteering to do something for somebody. You may be new, but your offer will go down well and put you in some small measure of control in your new surroundings.

Generally, you're looking to be positive and start with small wins. You don't need to come in with all guns blazing. Let your work and your attitude

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speak for you. After a few weeks, you'll have built up enough confidence and goodwill to be yourself.

#### Be part of the team

Let your enthusiasm for being part of the team and the organisation show to everyone you interact with. Being a part of the set up means you want to be there and like the people you're working with.

You are now part of a work team, and teams work together to solve problems and get the job done. That said, on your first day, you should never try to guess the group or team culture. You need to find this out slowly.

Remember, it is your willingness to be part of the team, rather than your attempts to be part of the team, that counts.

#### Dressing the part

On your first day it pays to look smart. Casual dress codes are often the norm, but on your first day if you walk in looking too casual it suggests you are not taking your situation seriously.

You can dress down – or to fit the workplace style - later on. Whilst looking smart means efficient and reliable, too casual means disorganised and uncaring.

Most workers know that this is not necessarily true – but, remember, it's still all about first impressions – and you won't have had a chance to let everyone know how efficient you are by your actions alone. That's why you need to look smart and professional on you big day one.

The end of the day one

You've made a good impression.

You've been positive and helpful. So don't go and ruin it all by rushing to get away before everyone else.

Keep remembering that there are ubtle rules about who can leave first and why. If everyone is working late or on a difficult time-consuming job, they may not want to stay late either.

In this case, the very least you can do is to make sure you are available to do something or help somebody, right up until leaving time.

Disappearing on time, unless you been told you can go, is not creating a good impression – worse, it's creating the wrong impression.

#### And finally

As a general rule for your first day, don't stiffen up and be fearful. You might find that you're scowling or not smiling because you are afraid or feel intimidated. Don't worry: You'll meet lots of new faces, but most people will recognise you for what you are and be helpful. The office politics also need not concern you; you are a newcomer. It's unlikely you'll be treated to any adverse remarks about the company or its people, and any you may hear, you need not comment on.

On day one, you are very much a guest. Take any advice you can get and don't offer too many opinions. It's also a good idea not to make personal phone calls or disappear for a long lunch break. You're subtly being looked at and commented on even though you don't realise it. Making a phone call to a friend for half an hour will be remembered, even if you think nobody is paying you any attention. People at work don't always tell you what you are doing wrong.

www.observer.com.na

#### 10 |MONDAY 21 JUNE 2021

#### SPORTS



Leicester want to sign Celtic and Scotland midfielder Ryan Christie, 26. (Mail)Manchester City have made a £100m bid for England striker Harry Kane, though Tottenham are expected to reject the offer as they do not want to sell the 27-year-old this summer. (Sky Sports)

Manchester United plan to make France midfielder Paul Pogba, 28, the highest-paid player in the Premier League with a new £104m deal. (Sun)

Borussia Dortmund have handed Manchester United a take-it-or-leaveit asking price of £77m plus add-ons for England winger Jadon Sancho, 21. (Talksport)

Paris St-Germain have made contact with Real Madrid over a potential deal for French defender Raphael Varane, 28. (Foot Mercato in French)

Jose Mourinho wants to bring former Real Madrid and Spain centreback Sergio Ramos, 35, to Roma. (Calciomercato - in Italian)

Arsenal have opened talks with Eintracht Frankfurt over a move for Portugal striker Andre Silva, 25, who will be available for about £34m this summer. (Transfer Window Podcast, via Express)

Arsenal are frontrunners to sign Real Betis and Argentina midfielder Guido Rodriguez, 27. (Marca - in Spanish)

Chelsea are set to offer France midfielder N'Golo Kante, 30, a lucrative new contract. (Fabrizio Romano, via Mail)

Lazio are ready to sell 26-yearold Argentina forward Joaquin Correa, who has attracted interest from Arsenal and Tottenham, and the Gunners could use Uruguay midfielder Lucas Torreira, 25, as part of the deal. (Gazzetta dello Sport - in Italian)

Turkey's 27-year-old midfielder Hakan Calhanoglu, who is out of contract at AC Milan this summer, has been given a deadline to decide his future, amid reports of interest from Arsenal. (Football Italia, via Express)

Eintracht Frankfurt are interested in Roma's Turkey winger Cengiz Under, 23, who spent last season on loan with Leicester City and could be available for 10m euros (£8.6m). (Calciomercato - in Italian)

Newcastle are weighing up offering Arsenal a player-plus-cash deal that would see Joe Willock, 21, return after the English midfielder's successful loan spell last season. (Newcastle Chronicle)

Fiorentina are resigned to losing Nikola Milenkovic this summer as he has a year left on his contract and is not going to sign an extension. They will demand about £15m for the Serbia defender, 23, who is rumoured to be wanted by Juventus and some Premier League clubs. (Calciomercato - in Italian)

Barcelona have made contact over a potential move for Atalanta's Germany wing-back Robin Gosens, 26. (Sport1 - in German)

West Brom have registered their interest in signing Stoke City's English midfielder Sam Clucas, 30. (Football Insider)

West Brom are also close to appointing Barnsley boss Valerien Ismael as their new manager after reaching an agreement in principle with the 45-year-old Frenchman. (Football Insider)



After a perfect European qualifying run, Italy have continued that form in the group stage, beating Turkey and Switzerland, both with a 3-0 scoreline, before the victory over the Welsh sealed top spot in Group A.

# 'Magical Nights': Mancini rekindles Italy's love for Azzurri

Mancini has turned clock back for Italy, recapturing the atmosphere of the 1990 World Cup the country hosted, with a 1-0 win over Wales capping a perfect Euro 2020 group-stage run.

Three years after taking over following Italy's failure to qualify for the World Cup for the first time in 60 years, Mancini has lead the Azzurri back to centre stage in emphatic fashion.

All Italy's group matches have been played in Rome's Stadio Olimpico. And the song "Notti magiche" (Magical

Nights) popularised during their home World Cup 31 years ago when Italy reached the semifinals rang out among the thousands of fans who were both delighted to rediscover their allconquering national side and return to the stands after over a year away because of the pandemic.

After a perfect European qualifying run, Italy have continued that form in the group stage, beating Turkey and Switzerland, both with a 3-0 scoreline, before the victory over the Welsh sealed top spot in Group A. It was an 11th consecutive victory without conceding a goal.

"It was nice to hear the Stadio Olimpico singing 'Notti magiche' (Magical Nights)," said 56-year-old Mancini.

"It brought us back a few years when we were all younger and we felt an extraordinary love for the national team.

"This is why I want to dedicate this victory to them.

He added: "We say Ciao Roma and thank them for what they have done.

Matteo Pessina's goal before half-time means Italy will play the runner-up from Group C, either Austria or Ukraine, at Wembley, where the semifinals and final will also be hosted.

Italy extended their unbeaten run to 30 games -- 25 wins and five draws -- a feat last achieved

#### CALL FOR PUBLIC PARTICIPATION ENVIRONMENTAL IMPACT ASSESSMENT FOR **MINERAL EXPLORATION ON EPL 6463**

This notice serves to inform all interested and affected parties that an application for the environmental clearance certificate will be launched with the Environmental Commissioner in terms of the Environmental Management Act (No.7 of 2007) and the Environmental Regulations (GN 30 of 2012). The project will comprise of conventional mineral exploration activities on the granted license.

Location: The mineral license is located 25 km north of Uis. Proponent: Back to Back Investments (Pty) Ltd

All interested and affected parties are hereby invited to register and submit their comments regarding the proposed project on or before 24/06/2021. Details of public meeting will be communicated to registered parties. Contact details for registration and further information:

Mr. N Amutenva.

Email: eia@impalac.com, Tel: 0856630598 🚀 IMPALA **VENVIRONMENTAL**  under two-time World Cup winning coach Vittorio Pozzo between 1935 and 1939.

"I'd like to resemble one of the coaches who won the World Cup," said Mancini, who has been in charge of four-time world champions Italy for 35 games.

"Pozzo won many other important things. We are still behind."

Another record beckons -- a 12th consecutive victory. That was achieved by Ferruccio Valcareggi, who led Italy to their only European title in 1968, and a runners-up spot in the World Cup two years later.

#### 'DREAM BIG'

Mancini brought in fresh legs against the Welsh, with eight changes from the Swiss game, but the outcome was the same as a side with an average age of 27 again dominated their rivals.

Marco Verratti returned to midfield from injury and proved decisive, setting up 24-year-old Pessina for his first competitive international goal in his seventh appearance for Italy, having scored two others in friendlies.

Midfielder Federico Chiesa also got his first start in this Euro 2020 and earned the man of the match award.

"We are ready to dream big. We've all the options in hand," said the 23-year-old Juventus player.

"The best is yet to come. It's great to play at Wembley. But our goal is to return to London after the last 16.

"We've given the coach a lot of headaches about who to field. We have 26 players on the team who can start.

Mancini conceded the run had been perfect as Italy matched their unbeaten group runs in three previous world and European tournaments in 2000, 1990 and 1978.

"We couldn't have done better," said the former Manchester City manager.

"Changing even one or two players doesn't change anything because everyone knows what they have to do and the product does not change.'

Italy's home advantage also helped with rivals Wales, who also reached the next round after playing their first two group games in Baku.

The Welsh are now preparing for a last 16 game in Amsterdam on Saturday, although coach Robert Page questioned the wisdom of having venues spread across the continent.

"On paper it sounds a great idea," Page said, "but logistically it's a nightmare and with Covid on top of that, it just makes the job harder."

# court sessions.

As a prosecutor at the time, Tjizu would allegedly misrepresent the witnesses to the presiding magistrate - and as a result, witness fees were falsely claimed and paid out.

Once witness fees had been allegedly paid out to people who were arranged to pose as witnesses, the money would then be shared. - mamakali@nepc.com.na

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Civil rig Silence ( to its fo Ndeikwi of integr Ndeil founded and was 1999. BWSa allegedly liberation BWSa in a state importar running "Ndei individu encyclop Namibia especially

and com human 1 present in word," sa

#### Tuesday 15 June 2021 NEW ERA

#### **Probe into** witness fees scam case completed

#### Maria Amakali

The police have finalised their investigations into the case of the former public prosecutor, who allegedly worked in cahoots with a handful of people to scam the Office of the Judiciary in witness fees,

The case, which dates to 2016, was provisionally struck from the court's roll, pending police investigations in 2019. According to State prosecutor Ellen Shipena, investigations have been completed and it is just a matter of the accused attaining legal representation.

Former prosecutor Ivan Tjizu stands alongside co-accused Eino Kombanda, Sackaria Panduleni, Paulus Fillemon, Today Amoomo, Sam Haiduwa, Andrew Masipa, Benjamin Amoomo, Gabriel Usko, Festus Mweendeleli, Alvin Kuutondokwa, Pendukeni Shikongo, Michael Namene and Isai Nathanael in the matter.

During court proceedings, the State added Martin Ndepando, Dave Valombola, Oiva Kanime and Leonard Ndjoze.

Magistrate Namwenyo Shikalepo postponed the matter to 16 July for the accused to get themselves legal representation. All accused are currently on warning.

The prosecution is charging Tjizu and his co-accused with more than 130 counts of corruption under the Anti-Corruption Commission Act.

The charges range from fraud to managing an enterprise conducted through a pattern of racketeering activities, corruptly giving a false document containing false statements to an agent, conducting an enterprise through a pattern of racketeering activities and money laundering.

According to the prosecution, while Tjizu was working for the office of the prosecutor general in Windhoek, stationed at the Windhoek Magistrate's Court, he conspired with his co-accused in scamming N\$410 000 from the Office of the Judiciary through paid-out witness fees.

It is alleged that the group fraudulently worked with a web of people in claiming witness fees for people who allegedly travelled from outside Windhock and were arranged to pose as State witnesses during court sessions

court sessions. As a prosecutor at the time, Tjizu would allegedly misrepresent the witnesses to the presiding magistrate – and as a result, witness fees were falsely claimed and paid out. Once witness fees had been allegedly paid out to people who were arranged to pose as witnesses, the money would then be shared. - mamakali@nepc.com.na

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5 IMPALA

Mr. N Amutenya. Email: ela@impa Tel: 0856630598 inc com.

# **Former MultiChoice** employee denies guilt

#### **Roland Routh**

raud accused Manga Nawa-Mukena, her husband Joseph Mukena and Celestino Gabriel Antonio pleaded Celestino Gabriel Antonio pleaded not guilty yesterday on several charges of fraud, alternatively theft, forgery, uttering, money laundering and obstructing or defeating the course of justice. Nawa-Mukena faces 85 counts of fraud; the and her husband or courts of fraud;

Nawa-Mukena taces 85 counts of traue; she and her husband 85 counts on the alternative of theft, Nawa-Mukena alone 84 counts of forgery and uttering a forged document, all three accused a second count of forgery and uttering a forged document, the Mukenas one count of contravening the Prevention of Organised Crime Act, all three one count of money laundering, all three accused one count of obstructing or defeating the course of justice or attempting to do so, while Nawa-Mukena alone faces one count of contravening the Value Added Tax Act.

The prosecution says all charges emanate from the falsification of 80 invoices worth N\$2 088 071 for advertising services.

According to court documents, between April 2013 and 17 March 2017, Nawa-Mukena and her co-accused allegedly defrauded MultiChoice Namibia

The documents further state that over three years, the trio falsified 85 invoices and enticed the television company to pay for advertising services that were never rendered by State-owned newspaper Kundana (PTY) Ltd.

Allegedly, the invoices were presented with banking details but not of Kundana (PTY) Ltd and, as such, the payments were made into the accused's accounts.

The matter is now being presiding over by Windhoek High Court judge Herman January after the accused successfully petitioned the Supreme Court to have acting judge Kobus Miller removed from

Ndeikwila

as 'icon of

**integrity**'

Staff Reporter

liberation struggle.

running of BWS.

word," said Angula.

of integrity.

1999

remembered

Civil rights group Breaking the Wall of

Silence (BWS) has paid glowing tribute to its founding chairperson Samson

Ndeikwila, whom it described as an icon

Ndeikwila, who died last week, founded the civil rights pressure group

and was its chairperson from 1996 to

BWS advocates for the rights of those

allegedly detained by Swapo during the

BWS acting chairperson Oiva Angula in a statement said Ndeikwila was a very

important pillar in the formation and

individual - not just because of his

encyclopedic mind of the history of

Namibia's independence struggle,

especially from 1960, and his tenacity

and commitment to justice but as a

human being. His passion was ever-

present in his work, in his life and every

"Ndeikwila was a rare kind of



Plea... Manga Nawa-Mukena, flanked by her husband Joseph and longtime friend Celestino Antonio.

the trial for alleged bias, as he was supposed to be the mediator between Nawa-Mukena and Multichoice Namibia in a civil suit the company has brought against her.

The mediation, however, never took place. In a plea explanation of Nawa-Mukena.

read into the record by their legal representative advocate Slysken Makando, instructed by Kalundu Kamwi, she claims that a company called Kundanam, which belongs to Antonio, was lawfully contracted by Multichoice to do some promotions for them, and that Roger Gertze and Annarien Vorster, the general manager and finance manager, respectively, signed off on the contract

She further claims that as a natural consequence of checks and balances contained within the Multichoice payment policies, both Gertze and Vorster would have known that the bank account number of the invoices submitted by Antonio was in fact hers and was not pursuant to some fraudulent intent or act, but rather to assist Antonio, as he did not have a bank account

She further said the payment system a Multichoice is robust with multiple control points, with Gertze the last person to sign o on any payments made to service provider

According to her, she yehemently deni the assertion that she, at any time, forge the signature of Gertze or any other persor Her husband also provided a plea explanation in which he bluntly denies

that he at any time conspired with anyo to defraud Multichoice and most certainly did not conspire with either Nawa-Muken or Antonio or actively participated in an such scheme. rrouth@nepc.com.na

achievements," he said. "Indeed, BWS has lost a freedom fighter, a human rights warrior, a brave patriot, a wise counsellor, a generous citizen, a visionary activist and a man endowed with exemplary virtues."

Angula also said Ndeikwila will stay i the memory of the BWS family foreve

"His star will never be diminished According to Angula, und Ndeikwila's able leadership, BV attained remarkable success in its wo since February 1996.

Some major engagements in growth include exposure of the myst surrounding the truth about the arro torture, killing and detention of inno Namibians in exile allegedly by Sw

The late Ndeikwila also helped in successful launch of the English ed of German clergyman Siegfried G 'Namibia: The Wall of Silence'.

He further established and ope an office in Windhoek with a full national coordinator and fund with an organised leadership management structure. Additiona late Ndeikwila also secured partn with support groups at national, re continental and international let

"Ndeikwila gained credibili respect in terms of principle many corners of the country and BWS started the production pr multimedia documentary testi and evidence of the plight of detainees," Angula stated.



Go well ... The late Samson Ndeikwila. Photo: Nampo

a remarkable man, a fearless campaigner for truth-telling about our dark past, for justice, true reconciliation, democracy and respect for human dignity.

by recommitting to the values he sought to defend and celebrate his life, and remember his exceptional

He said BWS is mourning the loss of

"Let us honour Ndeikwila's memory

6 NEWS Monday 21 June 2021 NEW ERA

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Edward Mumb Uakutura Kam

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councillor Uarikua in April, the man

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# Kerina: The colossal 'myth

#### Edward Mumbuu Inr

rench political philosopher Frantz Fanon once remarked: Transzranon onceremarked: "Each generation must discover its mission, fulfil it or betray it, in relative opacity." As Namibia mourns one of its greatest sons, William Eric Getzen (also known as Mburumba Kerina), who diad the secon (2000)

who died at the age of 89 years old in a Windhoek hospital last week, Fanon's words are vivid today as they were many moons ago. Kerina succumbed to the deadly

coronavirus that has wreaked havoc worldwide.

For a great majority, Kerina has done his part in the country's political, academic and social justice theatres. He is credited with naming

Namibia and Swapo. Kerina also helped form other smaller political formations that exist to this day.

He was among the first petitioners to the United Nations in 1956 to internationalise the conditions the country endured under the repugnant South African apartheid regime.

And like a boxer, he left it all in the ring. Kerina was a larger-thanlife figure: colossal!

"It's a big tree [that has fallen] in the history of Namibia. He is definitely one of the founding fathers. A lot of Namibian history is gone with him. But he has done his part. I think we can only thank him or what we have today," explained Idumba Kamwanyah, a political ommentator.

He said the baton has now been anded over to another generation at should complete the liberation

oject. "Namibia is still a nation in nsition especially in terms of onomic emancipation. It is now us the younger generation to e the question of economic ancipation further," he said. Former prime minister Nahas

gula says for those who icipated in Namibia's liberation



Rest in peace... The late Mburumba Kerina being interviewed by Gondwana Collection Namibia.

struggle, Kerina was a source of

"A tree cannot be without roots. Mburumba Getzen is one of the roots on which the Namibian tree is growing. We must honour and is growing, we must nonour and respect him. We have lost a library but he did his part. It's for us to do our part and leave some sort of legacy behind," he said.

The 'professor', as many have fondly come to know him, is one of a handful of politicians alongside Founding President Sam Nujoma, Andimba Toivo Ya Toivo (late) and Theo-Ben Gurirab (late) considered to be in a league of their own

"We are losing our icons. Kerina leaves behind a rich legacy and it is our duty to carry it forward. It is saddening to hear his passing but he did all he could," former deputy prime minister Libertina Amathila said.

Political commentator and academic, Fanuel Kaapama remembers Kerina as an astute academic, visionary leader and a man whose principles remained solid till the end.

"He was a pioneer in many respects, that's what the Namibian history should recognise him for. He was followed by many other petitioners who went to the UN, including Jariretundu Kozonguizi and later Nujoma, Zed Ngavirue and Markus Kooper followed Kerina. He was a nationalist," he said.

Kerina was ahead of his time during the 1950s and 1960s, said Kaapama.

"He tried to implement some ideas that Namibia as a country was not ready for. His view was that by bringing Namibians of different ethnic groups that are suppressed, you would build a nation and I don't think many were prepared for that at the time," he said.

But Kerina was not recognised enough while he was alive.

Kaapama added.

Social commentator, Yarukeekuro Ndorokaze summed up Kerina as a creator and doer of things.

"Namibia and Swapo are just a few examples. When regard is placed to his many political formations, it tells a story of his ability to form alliances with almost anybody to advance an identified cause. Many will claim a part of him, underlining the giant of a person that he was. Mburumba Kerina will ring for a while longer." Historian Mbeuta Ua-

Ndjarakana described Kerina as a man of all seasons.

"Many will remember how words would roll off Kerina's tongue in mesmerising fluidity, his gentle voice, love for dialogue between individuals across all strata of life and his passion for Namibia's present and future, which until his demise he believed was in the hands of young people."

instead Names and a lot from Kerina, from the genesis of his life to his last moment. The family was shocked that he passed

and Legend'.

He studied for his PhD in Political Science at the Padjadjaran University of Bandung, Indonesia from 1960 to 1962 in legal courses, following his law studies at the American Extension School of Law in Chicago, Illinois from 1953 to 1957.

He was one of the founding members of Swapo, a member of the Constituent Assembly in 1989 for the Federal Convention of Namibia (FCN) and served as Member of Parliament (National Assembly) for the FCN and in later years for the National Unity Democratic Organisation (NUDO).

He was also a member of the Democratic Turnhalle Alliance, now Popular Democratic Movement, and served as a DTA member of the National Council and that party's councillor for the Aminuis constituency from 1998 to 2003.

He rejoined Swapo in 2010. President Hage Geingob has since conferred a State funeral on Kerina. - Nampa

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Location: The mineral license is located 25 km north of Uis.

Proponent: Back to Back Investments (Pty) Ltd

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T IMPALA

ENVIRONMENTAL

N Amutenya. nail: eia@impalac.com, 0856630598

ENVIRONMENTAL ASSESSMENT PROCESS FOR POSED TOWNSHIP ESTABLISHMENT OF OMADHIYA PROPER MADHIYA EXTENSION 1, OMUTHIYA, OSHIKOTO REGION

If Environmental Engineering Namibia (Phy) Ltd (GCS) hereby giv potentially interested and Affected Parties (I&APs) that an applicable de to the Environmental Commissioner in terms of the Environmental Int Act (No. 7 of 2007) and the Environmental impact Assessments (GN 30 of 6 February 2012) for the following:

hip Establishment, creation of street and installation of bulk is for Omadhiya Proper and Omadhiya Extension 1, Omuthiy

ion: Omuthiya, Oshikoto Region nt: Omuthiya Town Council ental Assessment Practitioner (EAP): GCS Water Envin

Public meeting: Please note that the due to the current COVID-19 regulatile file public meeting date, time and vence will be communicated to all register (APAP. If you with to attend the public meeting, please negister at the be contact information as an I&AP to receive the necessary information.

ISAP Registration and submission of comments: To comment further information on the project, please register with GCS (cor below) as an ISAP before end of business on Monday 5 July 2021.

ered I&APs will be informed throughout the assessment process and will ded with further opportunities for review and submission of comments.

tact: Stephanie Strauss Tel: +264 61 248 614 Fax: +264 61 238 586

GC

#### PUBLIC NOTICE ENVIRONMENTAL IMPACT ASSESSMENT

Stubenrauch Planning Consultants (SPC) hereby give notice to al potentially interested and Affected Parties (I&APs) that an application will be made to the Environmental Commissioner in terms of the Environmental Management Act (No 7 of 2007) and the Environmental Impact Assessment Regulations (GN 30 of 8 February 2012) for the

#### PROJECT DETAILS

Subdivision and Rezoning of the Remainder of the Farm Outapi No. 1116 into Portions A to K & Remainder of the Farm Outapi No. 1116.

roponent has allocated approximately 28ha of undeveloped de for purposes of accelerating affordable land delivery and to modate the creation of a new form of land tenure system (Flexible anure) in the Outapi Urban area.

Proponent: Outani Town Con

vironmental Assessment Practitioner (EAP): ibenrauch Planning Consultants (SPC)

REGISTRATION OF ISAPS AND SUBMISSION OF COMMENTS

Ene with Namibia's Environmental Management Act (No. 7 of 2007 nd EIA regulations (ON 30 of 6 February 2012), all I&APa are hereion vited to register and submit their commands, several of desting ng vin

Email: bronwynn@spc.com.na; Fax: 061 25 21 57 or Tel: 061 25 11 89 on or before 12 July 2021.



Ua-Ndjarakana says Kerina had a sharp tongue, spoke his mind, and never aged in his mind and focus. 'f can't say Namibia has lost instead Namibia has gained a los Kerina. from the genesis

family was snocked that he passed on because he had displayed good health and it's not surprising. Men of Kerina's calibre and talent do not die, they depart when they have accomplished their mission on earth," he added.

on earth, he added. Kerina leaves a rich political legacy, as the author of various books such as 'Namibia - The Making of a Nation'; as well as 'Chief Hosea Kutako, the Chief

Kerina served as a consulting lecturer in the United States of America in 1979 and was also an Associate Professor in the African Studies Department at Brooklyn College of the City University of New York from 1972 to 1975. to another generation complete the liberation

a is still a nation in especially in terms of mancipation. It is now younger generation to uestion of economic on further," he said. prime minister Nahas ays for those who din Namibia's liberation Andimba Toivo Ya Toivo (late) and Theo-Ben Gurirab (late) considered to be in a league of their own.

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oponent: Back to Back Investments (Pty) Ltd

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N Amutenya. ail: eia@impalac.com, 0856630598



# ENVIRONMENTAL ASSESSMENT PROCE THE PROPOSED TOWNSHIP ESTABLISHMENT OF C AND OMADHIYA EXTENSION 1, OMUTHIYA, OSH

GCS Water Environmental Engineering Namibia (Pty) Lt notice to all potentially Interested and Affected Parties (I&Ai will be made to the Environmental Commissioner in terms Management Act (No 7 of 2007) and the Environmental Regulations (GN 30 of 6 February 2012) for the following:

 Township Establishment, creation of street and insta services for Omadhiya Proper and Omadhiya Extensi

Site location: Omuthiya, Oshikoto Region Proponent: Omuthiya Town Council Environmental Assessment Practitioner (EAP): GCS Wa Engineering Namibia

**Public meeting:** Please note that the due to the current CO the public meeting date, time and venue will be communicate I&APs. If you wish to attend the public meeting, please regist contact information as an I&AP to receive the necessary inform

I&AP Registration and submission of comments: To confurther information on the project, please register with GCS below) as an I&AP before end of business on Monday 5 July 20

All registered I&APs will be informed throughout the assessment be provided with further opportunities for review and submission

Contact: Stephanie Strauss Tel: +264 61 248 614 Fax: +264 61 238 586 E-mail: stephanies@gcs-na.biz



MOTORING

# **NEW MODEL: Everything you need to know** about the 2021 Mazda, BT-50



IDRAND Mazda Southern Africa has confirmed the local introduction of the all-new BT-50 bakkie. The 2021 Mazda BT-50 is fully redesigned from the ground up and is built in Thailand and it will be fully revealed on July 15th with an online reveal on the company's social media pages on YouTube and Facebook. Here's everything we know about it so far: As an evolution of Mazda's Kodo

design, the new BT-50 is said to give life to a new form of elegance rooted in Japanese aesthetics.

# CALL FOR PUBLIC PARTICIPATION

#### ENVIRONMENTAL IMPACT ASSESSMENT FOR **MINERAL EXPLORATION ON EPL 6463**

This notice serves to inform all interested and affected parties that an application for the environmental clearance certificate will be launched with the Environmental Commissioner in terms of the Environmental Management Act (No.7 of 2007) and the Environmental Regulations (GN 30 of 2012). The project will comprise of conventional mineral exploration activities on the granted license.

Location: The mineral license is located 25 km north of Uis. Proponent: Back to Back Investments (Pty) Ltd

All interested and affected parties are hereby invited to register and submit their comments regarding the proposed project on or before 24/06/2021. Details of public meeting will be communicated to registered parties. Contact details for registration and further information:

Mr. N Amutenya. Email: eia@impalac.com, Tel: 0856630598



The 2021 Mazda BT-50 is fully redesigned from the ground up and is built in Thailand and it will be fully revealed on July 15th with an online reveal on the company's social media pages on YouTube and Facebook.

Mazda's Kodo - Soul of Motion design sensors, LED headlamps, Hill Launch language is immediately evident right from the front of the vehicle with the prominent front grille, and the 3 dimensional signature wing that extends out towards the side.

The design of the headlights is distinct and sharp, taking in cues from Mazda's SUV range. From the first glance, the 2021 BT-50 expresses unique power, toughness and utilitarian functionality, ready for adventure and built for working purposes, while appealing to lifestyle customers with its unique design.

The new 2021 Mazda BT-50 isn't all about utility, but bold evolution, designed with the goal of being a vehicle that customers can take pride in owning, they say. This new bakkie embodies Mazda's desire to enrich the lives of its customers with an exciting value proposition when it goes on sale in South Africa later this year.

The interior cabin space has been carefully crafted to express Mazda's commitment to human centric design. Everything from the dashboard, to the steering wheel, seats and centre console has been redesigned to ensure that drivers feel connected to their vehicle and as comfortable as they can be.

The new BT-50 comes standard with a generous level of features, including MZD Connect Infotainment System with up to 21cm display screens, Apple CarPlay and Android Auto, Reverse camera, Parking Assist, Hill Descent Control, Trailer Sway Mitigation, 7 airbags and Cruise Control.

The local BT-50 model line-up consists of three derivatives: Active, Dynamic and Individual and has been aligned with that of Mazda's local passenger car range.

The Active model features a new 1.9L diesel engine with automatic or manual gearbox, producing 121kW of power and 213Nm of torque.

The Dynamic and Individual models feature a new 3.0-litre turbodiesel engine with 6-speed automatic gearbox that boasts 140kW of power and 450Nm of torque

The Individual model is available with the 4x4 drivetrain, whereas all other models are available in the 4x2 drivetrain.

"We could not be prouder or more excited to launch the new BT-50 in Southern Africa now. The vehicle has a long history locally and internationally. It has been reimagined and rebuilt from the ground up, with all the utilitarian value of a double-cab bakkie, and all the comfort and technology expected of an SUV. We are confident it will be met with enthusiasm by our customers as a true stand-out and another bold reflection on our Japanese Heritage," says Craig Roberts, managing director of Mazda Southern Africa.

The online live reveal of the new Mazda BT-50 takes place on 15 July 2021 on Mazda's Facebook and YouTube social platforms for everyone to tune in at the same time. We'll have prices and the full specs for you next month.

# CALL FOR PUBLIC PARTICIPATION ENWBONMENTAL IMPACT ASSESSMENT

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# HERITAGE IMPACT ASSESSMENT

For Mineral Exploration Activities on EPL 6463

Client: Back to Back Investments (Pty) Ltd

# AUTHOR: Mr. John Shihepo

## **CONTACT:** +264817317004

# PROFESSIONAL QUALIFICATIONS:

BA in History and Geography

Master of Arts in History and Archaeology

SIGNATURE:

Table of Contents
1. Executive Summary
2. Background Information
2.1 Terms of Reference
2.2 Archaeological Legislation and Best Practice6
2.3 Description of Study Area6
2.3.1 Location Data6
2.3.2 Location Map8
3. Approach and Methodology9
3.1 Phase 1 – Desktop Study9
3.1.1 Literature Search9
3.1.2 Consultation9
3.1.3 Google Earth and Mapping Survey9
3.2 Phase 2 – Physical Surveying9
3.3 Restrictions10
4. Nature of the Development 10
4.1 Non-invasive Exploration11
4.2 Invasive Exploration11
4.2.1 Soil and Stream Sediment Sampling11
4.2.2 Drilling
4.3 Exploration Camp11
5. Historical and Archaeological Background12
5.1 Literature Review12
6. Heritage Site Significance and Mitigation Measures
6.1 Field Rating of Sites17
6.1.1 Vulnerability and Significance Ranking of Archaeological Finds
6.1.2 Significance Ranking18
6.1.3 Vulnerability18
7. Assessment – Description of Sites
8. Chance Find Procedure
9. Recommendations and Conclusions24

Heritage Impact Assessment for Exploration Activities on EPL 6463, Erongo Region	on
10. References	25
Appendix	26

# List of Figures

Figure 1 Topography of the area	7
Figure 2 Locality map showing the exploration licence (blue)	8
Figure 3 An image of the pegmatite and basaltic rock types that are found in the area 1	10
Figure 4 Locations of archaeological sites with artefacts from 1.8m to 10,000 ya. Data is	3
sourced from Atlas of Namibia Project, 2002, Directorate of Environmental Affairs,	
Ministry of Environment and Tourism1	14
Figure 5 Locations of archaeological sites with artefacts from 10,000 to 2,000 ya. Data is	s
sourced from Atlas of Namibia Project, 2002, Directorate of Environmental Affairs,	
Ministry of Environment and Tourism1	15
Figure 6 Locations of archaeological sites with artefacts from the last 2000 years. Data i	is
sourced from Atlas of Namibia Project, 2002, Directorate of Environmental Affairs,	
Ministry of Environment and Tourism1	16
Figure 7 A satellite image showing the surrounding area	19
Figure 8 An image showing the brandberg mountains in the background of the project	
site area2	20

# **1. Executive Summary**

The mineral exploration project was assessed for sites of archaeological significance.

The licence occurs in an area of archaeological significance. Management measures as made in section 8 of this report would need to be considered to avoid damage to the local heritage.

Due to the subsurface nature of archaeological material and unmarked graves the possibility of the occurrence of unmarked or informal graves and subsurface finds cannot be excluded. If during operation any possible finds such as stone tool scatters, artefacts or bone and fossil remains are made, the operations must be stopped, and an archaeologist must be contacted for an assessment of the find.

# 2. Background Information

Kind of study	Specialist Archaeological
	Assessment
Type of development	Exploration Activities on EPL 6463
Developer:	Back to Back Investments (Pty) Ltd
Environmental Coordinator:	Impala Environmental Consulting

The report forms part of the Heritage Impact Assessment (HIA) for the mineral exploration project.

The aim of the study is to identify archaeological sites, document, and assess their importance within local, regional, and national context. It serves to assess the impact of the exploration project on non-renewable heritage resources, and to submit appropriate recommendations about the responsible cultural resources management measures that might be required to assist the exploration company in managing the discovered heritage resources in a responsible manner. It is also conducted to protect, preserve, and develop such resources within the framework provided by the National Heritage Act (Act 27 of 2004).

The report outlines the approach and methodology utilized before and during the field survey, which includes: Phase 1, a desktop study that includes collection from various sources and consultations; Phase 2, the physical surveying of the area on foot; Phase 3, reporting the outcome of the study.

Possible impacts were identified, and mitigation measures are proposed in the following report.

# 2.1 Terms of Reference

# Desktop study

Conducting a desktop study where information on the area is collected to provide a background setting of the archaeology that can be expected in the area. Literature was gathered from the Namibia Scientific Society library, the National Museum, the University of Namibia's library and online documents.

# Field study

Conduct a field study to: a) systematically survey the proposed project area to locate, identify, record, photograph and describe sites of archaeological, historical or cultural interest; b) record GPS points identified as significant areas; c) determine the levels of significance of the various types of heritage resources recorded in the project area.

# Reporting

Report on the identification of anticipated and cumulative impacts the operational units of the proposed project activity may have on the identified heritage resources for all 3 phases of the project, i.e., commencement, operation, and decommissioning phases. Alternatives have been considered, should any significant sites be impacted adversely by the proposed project. The report needs to ensure that all studies and results comply with the Heritage legislation.

The study aims to assist the project proponent in managing the discovered heritage resources in a responsible manner, and to protect, preserve, and develop them within the framework provided by the National Heritage Act (Act 27 of 2004).

# 2.2 Archaeological Legislation and Best Practice

The overall purpose of a heritage specialist input is to:

- Identify any heritage resources, which may be affected.
- Assess the nature and degree of significance of such resources.
- Establish heritage informants/constraints to guide the development process through establishing thresholds of impact significance.
- Assess the negative and positive impact of the development on these resources.
- Make recommendations for the appropriate heritage management of these impacts.

The HIA, as a specialist sub-section of the EIA, is required under Sections 54(7) and 54(8) of the National Heritage Act (Act 27 of 2004).

Phase 1 HIAs are primarily concerned with the location and identification of sites situated within a proposed development area. Identified sites should be assessed according to their significance. Relevant conservation or Phase 2 mitigation recommendations should be made.

Conservation or Phase 2 mitigation recommendations are to be used as guidelines in the developer's decision-making process. Phase 2 archaeological projects are primarily based on salvage/mitigation excavations preceding development destruction or impact on a site. Phase 2 excavations can only be conducted with consent given by the NHC.

Human remains older than 50 years are protected by the Act, with reference to Section 1(a). Rock art older than 50 years, in the form of paintings, engravings, or other representations on rocks, are also represented by section 1(a) of the act.

# 2.3 Description of Study Area

# 2.3.1 Location Data

The mineral license is located 30 km northeast of Uis and covers the communal areas of Omungambu, Otjimbojo and Okondomba. The coordinates for the project area are 15.059255 and -20.953384. The project area is located within the Central-western Plains. Broad geomorphological characteristics include a shore of mixed sand and rock, with

gravelly coastal plains in the study area. Natural surface water is limited to drainage lines and coastal pans.



Figure 1 Topography of the area
## 2.3.2 Location Map



Figure 2 Locality map showing the exploration licence (blue).

## 3. Approach and Methodology

The aim of the study is to search the archaeological databases and to compile a background of the archaeology that can be expected in the study area followed by field verification. This was accomplished by means of the following phases.

## 3.1 Phase 1 – Desktop Study

The first phase comprised a desktop study scanning of existing records for archaeological sites, historical sites, graves, architecture (structures older than 50 years) of the area.

#### 3.1.1 Literature Search

Utilising information from the Namibia Scientific Society library, the National Museum, the University of Namibia's library and online documents. The aim of this literature search was to extract data and information on the area of interest.

#### 3.1.2 Consultation

The EIA Public Participation process was conducted by the EAP, in line with the procedure outlined in the Environmental Impact Assessments Regulations of 2012. The EIA Public Participation Process invited comments from affected communities and any registered heritage bodies on any matter related to the exploration project including heritage concerns that may arise because of the project.

## 3.1.3 Google Earth and Mapping Survey

Google Earth and 1:50 000 maps of the area were utilised to identify possible places where sites of heritage significance might be located.

## 3.2 Phase 2 – Physical Surveying

Due to the nature of cultural remains, the majority of which occurs below surface, a field survey of the study area was conducted. The study area was surveyed by means of a foot survey by the author. Although sites of interest were identified around the exploration licence, no sites were discovered inside the proposed project area.



Figure 3 An image of the pegmatite and basaltic rock types that are found in the area

## 3.3 Restrictions

Since most cultural remains may occur below surface, the possibility exists that some features or artefacts may not have been discovered/ recorded. The possible occurrence of unmarked graves and other cultural material cannot be excluded. It is incumbent upon the exploration company to stop operations and inform the Heritage Council should any cultural remains, such as stone tool scatters, artefacts, bones or fossils, be exposed during the process of development.

## 4. Nature of the Development

The mineral licence is valid for Base and Rare Metals, Precious Metals, Industrial Minerals and Dimension Stone commodities. The licence contains the Ais dome tantalite deposit and dolerite rock types which are the main exploration targets.

### 4.1 Non-invasive Exploration

Before the exploration company starts their field work, they conduct desktop work to help focus their attention on specific areas of interest. This is done by various methods:

- 1) Historic geological data compilation
- 2) Geochemical Sampling
- 3) Mapping

The processes above can be used to select smaller target areas to focus further activities on. These may include ground geophysics and further, more detailed, mapping.

## 4.2 Invasive Exploration

Once a target area has been identified, more invasive activities will be conducted to investigate the potential of the area. These include soil and stream sediment sampling, and drilling.

#### 4.2.1 Soil and Stream Sediment Sampling

This process involves taking small amount of material for the beds of streams, or from with the soil profile, and sending these samples off to laboratories for analysis.

## 4.2.2 Drilling

Further investigation at greater depths is conducted using drilling. There are several drilling types of drilling which can be used including drilling using high air pressure (RAB and RC drilling), or drilling using high rotation speeds (DD drilling). The type of drilling depends upon several factors including the geological information required, cost, environment, access and fuel and water supply.

## 4.3 Exploration Camp

Exploration staff will be accommodated in Uis and the nearby villages. Exploration activities will take place during daytime and the exploration team will be commuting to the work site. No exploration camp is envisaged at this stage of the project.

## 5. Historical and Archaeological Background

Archaeological record with evidence of human occupation which dates to 8 000 years ago in the Erongo Region.

Namibia has four clusters of sensitive historical and archaeological landscapes, namely: Inselbergens and Outcrops, Saddles, Drainage and Coastlines, and Pans (Nankela, 2017). The exploration area lies within the Inselbergens cluster. This Cluster is made up of prominent geological features such as faults, shearzones, anticlines, antiforms, and homogeneous rock formations.

Fossil remains of lineal hominin ancestors as early as the Miocene Epoch are present as modern humans and their ancestors have lived in Namibia for more than one million years. Namibia consists of an archaeological sequence covering the mid-Pleistocene to Recent Holocene period, represented by thousands of archaeological sites which are mainly located in the central highlands, escarpment, and Namib Desert (Conroy et al., 1992).

The Recent Holocene archaeological sequence in Namibia (last 5 000 years), is important because it provides the background evidence for the development and recent history of the indigenous peoples of Namibia before the advent of written historical records during the colonial era. Many archaeological sites from this period are of great significance to the understanding of Namibian history, and some are of global importance to our understanding of the African past.

The importance of archaeological evidence is that it is an independent material record of events which took place during the early

colonial era, a period which is represented by colonial documentary information. Remains of indigenous settlements, wells, burial places, and other sites are valuable material evidence of indigenous land ownership and can provide crucial support for ancestorial land claims. All this evidence is under the National Heritage Act.

## 5.1 Literature Review

The western parts of Namibia including the Dâures massif, or Brandberg, are recognized as a globally important archaeological landscape, having abundant evidence of human Heritage Impact Assessment for Exploration Activities on EPL 6463, Erongo Region settlement spanning the last one million years (Kinahan, 2005). Of particular interest and significance are archaeological site s dating to within the last 10 000 years, a period of marked climatic instability that brought many changes in human settlement and subsistence behaviour.

This period, the Holocene, commenced with the onset of warm, moist conditions following the Last Glacial Maximum, and saw a rapid expansion of human occupation over the entire Namib Desert. A sudden onset of arid conditions about 5 000 years ago caused a general retreat from the desert, but with a small number of notable exceptions (Kinahan, 2011). One of these was the Dâures massif where high elevation and favourable rainfall catchments sustained a refugium habitat suitable for small groups of hunter-gatherers. Systematic archaeological studies of the Dâures have shown the development of food gathering and processing techniques during this period, as well as the existence of extended social networks maintained by mutual gift exchange (Mitchell, 2002). Of major significance is the elaboration of a complex ritual rock art tradition linked to the rise of specialized shamans, or ritual practitioners.

During the last 2 000 years, hunter-gatherer communities in this area acquired domestic sheep and pottery, establishing a highly productive semi-nomadic pastoral mode of subsistence.

An essential component of the Namib Desert pastoral economy was the extensive and highly specialized use of wild food plants including !nara Acanthsicyos horridus melons which were processed to be stored for later use, and grass seed obtained from the underground storage caches of harvester ants Messor denticornis (Kinahan, 2011). The use of these plants enabled desert communities to achieve a measure of food security which seems to have resulted in improved infant survival and a growth in human population during the last two thousand years (Mitchell, 2002).

The archaeology of these adaptations is subtle and requires detailed analysis of a range of related evidence, including that of pottery, site position and layout as well as isotopic evidence which allows the reconstruction of human diet from skeletal remains (Mitchell, 2002). The evidence of settlement in the desert by hunter-gatherer and nomadic pastoral communities tends to be widespread and insubstantial, requiring the recording and investigation of large numbers of small, scattered sites. Field survey and analytical methods have been developed in the last few decades of research in this area, to obtain the maximum yield of high precision data from the available archaeological sites (Mitchell, 2002). Each new field survey and investigation draws from and builds upon previous work, leading thus to an improved understanding of the regional archaeology.

The exploration area, which covers an area of 22.41 km<sup>2</sup>, was overlain on four different maps with archaeological data in Namibia. The map showing archaeological records from 1.8 m to 10,000 ya (early stone age to middle stone age) does not show any known locations of artefacts in the project area although these may be present as the licence area is surrounded by artefact occurrences from the early and middle stone age shown in Figure 4.



Figure 4 Locations of archaeological sites with artefacts from 1.8m to 10,000 ya. Data is sourced from Atlas of Namibia Project, 2002, Directorate of Environmental Affairs, Ministry of Environment and Tourism.

The map showing archaeological records from 10,000 to 2000 ya shows that the exploration tenement falls within the rock art zone area as shown by the white part on the map in Figure 5.



Figure 5 Locations of archaeological sites with artefacts from 10,000 to 2,000 ya. Data is sourced from Atlas of Namibia Project, 2002, Directorate of Environmental Affairs, Ministry of Environment and Tourism.

The map showing archaeological records from the last 2000 years does not show any known occurrences of agro-pastoral, metal workings, or nomadic pastoral sites within the project area although these may be present as shown in Figure 6.



Figure 6 Locations of archaeological sites with artefacts from the last 2000 years. Data is sourced from Atlas of Namibia Project, 2002, Directorate of Environmental Affairs, Ministry of Environment and Tourism.

## 6. Heritage Site Significance and Mitigation Measures

The presence and distribution of heritage resources define a 'heritage landscape'. In this landscape, every site is relevant. In addition, because heritage resources are non-renewable, heritage surveys need to investigate an entire project area, or a representative sample, depending on the nature of the project. In all initial investigations, however, the specialists are responsible only for the identification of resources visible on the surface. This section describes the evaluation criteria used for determining the significance of archaeological and heritage sites. The following criteria were used to establish site significance:

- The unique nature of a site.
- The integrity of the archaeological/cultural heritage deposits.
- The wider historic, archaeological, and geographic context of the site.
- The location of the site in relation to other similar sites or features.
- The depth of the archaeological deposit (when it can be determined/is known).
- The preservation condition of the sites.

## 6.1 Field Rating of Sites

The author has followed the method developed by Quaternary Research Services (QRS). QRS has adopted the practice of identifying the specific research value of archaeological sites documented during field surveys. This means that the evaluation is focused on the likely research benefits of more detailed investigations on sites of high significance, or local site clusters of potential research importance (Kinahan, 2011). The immediate benefits in terms of sequence resolution or yield of comparative material and present this in the form of an expected research dividend are evaluated. Similarly, the consequences of damage or destruction are also evaluated as an expected loss of research dividend. These estimates form part of the proposal for mitigation of impacts.

## 6.1.1 Vulnerability and Significance Ranking of Archaeological Finds

The evaluation and ranking of site significance and vulnerability is an essential component of archaeological impact assessment. QRS has developed an approach to significance and vulnerability estimation that combines accepted international

practice with the results of more than 100 field surveys carried out in Namibia and elsewhere (Kinahan, 2011). Standard procedure involves an estimate of the archaeological value and the risk of damage, using ordinal scales of zero to five (Kinahan, 2011). These separate values can be combined as a significance and vulnerability index, e.g. 3/2, 4/0. The same data are used in the preparation of archaeological sensitivity maps and predictive models which form the empirical basis of our time and cost estimates for archaeological field surveys.

It is important to realize however, that such estimates have a degree of subjectivity. For this reason, the estimate significance with specific reference to the value of the site as a component of the Namibian archaeological record, while the estimation of vulnerability refers primarily to the potential consequences of the development project under consideration.

#### 6.1.2 Significance Ranking

Significance	Description
0	No archaeological significance
1	Disturbed or secondary context, without diagnostic material
2	Isolated minor finds in undisturbed primary context, with diagnostic
	material
3	Archaeological site forming part of an identifiable local distribution or
	group
4	Multi-component site, or central site with high research potential
5	Major archaeological site containing unique evidence of high regional
	significance.

The following is the summary of the significance ranking used:

#### 6.1.3 Vulnerability

The following is the summary of the vulnerability ranking used:

Significance	Description
0	Not vulnerable.
1	No threat posed by current or proposed development activities.
2	Low or indirect threat from possible consequences of development (e.g.
	soil erosion.
3	Probable threat from inadvertent disturbance due to proximity of
	development.

4	High likelihood of partial disturbance or destruction due to proximity of
	development.
5	Direct and certain threat of major disturbance or total destruction.

## 7. Assessment – Description of Sites

The study area varies in topography with dolerite and quartzite hills ranging in elevation from 1250 to 1290 metres above mean sea level (amsl). There are several declared heritage areas which occur a few km's away from the boundary of the exploration licence.



Figure 7 A satellite image showing the surrounding area.

# Site Name: Brandberg Mountains

Site Location: -21.095275 and 14.641525

Landscape: Townlands

#### Significance: 5

#### Vulnerability: 2

**Description:** The site is situated 30 km west of Uis and about 20 km towards the west of the licence boundary.



Figure 8 An image showing the brandberg mountains in the background of the project site area.

The Brandberg mountain is the highest mountain in Namibia. This large, almost circular inselberg is visible from space and rises more than 1800 m above the surrounding plains (highest peak 2573 m.) It has an exceptionally rich palaeo-archaeological heritage with a high concentration of prehistoric rock art (more than 43 000 paintings and 900 sites alone). The two genres of rock art (engravings and paintings) are found in close association in the Brandberg and more than 120 archaeological sites have been recorded. The Brandberg is home to the famous rock art frieze of the "White Lady",

Any potential drilling campaigns will be located at least 20 km away from this site. This will minimize any potential dust and noise from negatively impacting this monumental feature.

#### 8. Chance Find Procedure

An Archaeological Chance Find Procedure (CFP) is a tool for the protection of previously unidentified cultural heritage resources during exploration. The main purpose of a CFP is to raise awareness of all mine workers and management on site regarding the potential for accidental discovery of cultural heritage resources and establish a procedure for the protection of these resources. Chance Finds are defined as potential cultural heritage (or paleontological) objects, features, or sites that are identified outside of or after Heritage Impact studies, normally as a result of exploration monitoring. Chance Finds may be made by any member of the project team who may not necessarily be an archaeologist or even visitors. Appropriate application of a CFP on development projects has led to discovery of cultural heritage resources that were not identified during archaeological and heritage impact assessments.

The following procedure is to be executed if archaeological material is discovered:

- All construction/clearance/ exploration activity in the vicinity of the accidental find/feature/site must cease immediately to avoid further damage to the find site.
- Briefly note the type of archaeological materials encountered, and their location, including, if possible, the depth below surface of the find
- Report the discovery to the supervisor or if they are unavailable, report to the project environmental officer who will provide further instructions.
- If the supervisor is not available, notify the Environmental Control Officer immediately. The Environmental Control Officer will then report the find to the Site Manager who will promptly notify the project archaeologist and NHC.
- Delineate the discovered find/ feature/ site and provide 25m buffer zone from all sides of the find.
- Record the find GPS location, if able.
- All remains are to be stabilised in situ.
- Secure the area to prevent any damage or loss of removable objects.
- Photograph the exposed materials, preferably with a scale (a yellow plastic field binder will suffice).

- The project archaeologist will undertake the inspection process in accordance with all project health and safety protocols under direction of the Health and Safety Officer.
- Finds rescue strategy: All investigation of archaeological soils will be undertaken by hand, all finds, remains and samples will be kept and submitted to a Museum as required by the heritage legislation. If any artefacts need to be conserved, the relevant permit will be sought from the NHC.
- An on-site office and finds storage area will be provided, allowing storage of any artefacts or other archaeological material recovered during the monitoring process.
- In the case of human remains, in addition to the above, the NHC and the relevant authorities will be contacted and the guidelines for the treatment of human remains will be adhered to. If skeletal remains are identified, an archaeological will be available to examine the remains.
- The project archaeologist will complete a report on the findings as part of the permit application process.
- Once authorisation has been given by NHC, the Applicant will be informed when exploration activities can resume.

Table	1 Heritage	e Management Plan for the Proje	ct			
	•	Protection of archaeological sites a Protection of known physical cultur The preservation and appropriate r during exploration.	and land cons al property s management	sidered to be of ites against van of new archaeo	cultural value; dalism, destructio logical finds shou	n and theft; and ld these be discovered
1	Planning	Ensure all known sites of cultural, archaeological, and historical significance are demarcated on the site layout plan and marked as no-go areas.	Througho ut Project	Weekly Inspection	Contractor	Project Manager
		Should any archaeological or physical cultural property heritage resources be exposed during excavation for the purpose of exploration, construction in the vicinity of the finding must be stopped until heritage authority has cleared the development to continue.	N/A	Throughout	Contractor	Project Manager
		Should any archaeological, cultural property heritage resources be exposed during excavation or be found on development site, a heritage specialist or NHC official must be called to site for inspection.		Throughout	Contractor	Project Manager
1		Under no circumstances may any archaeological, historical or any physical cultural property heritage material be destroyed or removed form site;		Throughout	Contractor	Project Manager
	Response	Should remains and/or artefacts be discovered on the development site during earthworks, all work will cease in the area affected and the Contractor will immediately inform the Mine Manager who in turn will inform NHC.		When necessary	Contractor	Project Manager
	Emergency	Should any remains be found on site that is potentially human remains, the NHC and the Police Service should be contacted.		When necessary	Contractor	Project Manager
		Same as exploration phase.				
	1	1				
		Same as exploration phase.			1	

#### 9. Recommendations and Conclusions

- 1. The licence area is located a zone which is known to have rock arts and is therefore of archaeological significance. Any rock art sites encountered should be avoided and considered a no-go site within the exploration licence. A more detailed field survey should be carried out once the licence holder has identified potential exploration targets. In the interim, the proponent should carry out the chance find procedure outlined in section 8.
- The most likely impacts on artefacts protected under the National Heritage Act (27 of 2004) are damage through evasive exploration methods such as drilling and trenching.
- 3. Should any unmarked burials be exposed during exploration, affected people must be trekked and consulted, relevant rescue/ relocation permits must be obtained from NHC before any grave relocation can take place. Furthermore, an archaeologist must be retained to oversee the relocation process in accordance with the National Heritage Act 27 of 2004.
- 4. Should chance archaeological materials or human burials remains be exposed during exploration work on any section of the proposed exploration development laydown sites, work should cease on the affected area and the discovery must be reported to the heritage authorities immediately so that an investigation and evaluation of the finds can be made. The overriding objective, where remedial action is warranted, is to minimize disruption in exploration scheduling while recovering archaeological and any affected cultural heritage data as stipulated by the act.
- 5. Community engagement should take place before any activities commence and on a regular basis during the lifecycle of the project. This will ensure that any cultural heritage related matters for this project are given due attention whenever they arise and are communicated to NHC throughout the proposed project development.

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# Appendix

Site Photos



Heritage Impact Assessment for Exploration Activities on EPL 6463, Erongo Region







National Heritage Council of Namibia 52 Robert Mugabe Avenue, Windhoek Private Bag 12043, Ausspannplatz, Windhoek, Namibia Tel: (061) 244 375 • Fax: (061) 246 872 • E-mail: info@nhc-nam.org

#### CONSENT

(Section 55(9) of the National Heritage Act, 2004 (Act No. 27 of 2004)) Consent is hereby given to:

09 August 2022

Consent Number No: 123/2022

Name of applicant: Back to Back Investment Mining (Pty) Ltd

(Title and full name of the applicant)

Address of applicant: P.O.Box 29532 Windhoek

(Address of the applicant and of the applying institution (if applicable)

For: Exploration Prospecting License (EPL) 6467 for the exploration of Dolerites dykes.

(Type of Activity applied for)

Of: scattered lithic artefacts, rock shelters and rock art

(Description of Heritage Resources)

From: Located about 25 km north of Uis in the Erongo region.

(Description of the site, location as in the application)

In accordance with: Verification report of EPL 6463

(Specify relevant documentation and Permit application date)

The following conditions (imposed in terms of section 55(9) of the Act.) apply to this permit:

- a) That as per section 55 (9) (a) the activity authorised by this consent be supervised by a person with appropriate professional qualifications or experience in the identification and conservation of heritage.
- b) That any archaeological or palaeontological object or meteorite found in the course of the activity authorised by the consent must be recorded, conserved and dealt with as per the manual on Chance Find Procedures of heritage resources; and
- c) that Namibian citizens, especially members of the local community in and around the project area, be engaged in the activity authorised by the consent for the purpose of identification of heritage resources in the project area as well as of receiving professional training;
- d) That the consent holder reports back to the National Heritage Council every six (6) months on compliance with the conditions of this consent.
- e) This Consent does not exempt the holder from any conditions that may be imposed by owners, hosts or any other relevant authorities in consultation with NHC who have a stake in the project area.
- f) NHC shall not be liable for any losses, damages or injuries to persons or properties as a result of any activities related to this permit.
- g) This Consent is subject to the provisions of the National Heritage Act (Act 27 of 2004). Should any of the conditions contained herein conflict with the Act; the provisions of the Act as per section 55 (10) shall prevail.
- h) Adopt the Chance Find Procedures.
- This consent is renewable, upon submission of an application at least two months before the current permit lapses
- j) Consent granted only for the section on the eastern part of the EPL.

- k) A detailed survey should be carried on the western part of the EPL before any exploration take place.
- Buffer zone should at least 50m should be maintained from the burial sites and be fenced off, this should be done in consultation with community.
- m) The natural water collection point should not be disturbed.

(List any conditions that the Council may see fit to impose in terms of section 55 (9) of the act.

This Consent will be valid from 09th August 2022 to 10th August 2023

Director: National Heritage Council

National Heritage Council of Namibia

Allonal Heritage Council or Non Office of the Director 0 9 AUG 2022 Private Bag 12043 Ausepaniplaty Windhock Namioin

## Mr. Ndaluka Amutenya

- 1. Proposed Position: Environmental Coordinator
- 2. Name of Firm: Impala Environmental Consulting
- 3. Name of Staff: Ndaluka Amutenya
- 4. Nationality: Namibian
- 5. Education: Bachelor of Technology, Chemical Engineering,
  - University of South Africa, 2020Bachelor of Science, Chemistry Major and Geology Minor,
    - University of Namibia, 2012
  - Namibia Senior Secondary Certificate (NSSC), Otjikoto Senior Secondary School, 2008
- 6. Membership of Professional Associations:
   None
- 7. Other Training: None.
- 8. Countries of Work Experience: Namibia

9.	Languages:	1 <u>21</u>	Speaking	Read	ling	Writing	1
		English	Exce	llent	Excelle	ent	Excellent
		Afrikaans	Exce	llent	Good		Good
		Oshiwambo	Exce	llent	Excelle	ent	Excellent

#### 10 Employment Record:

From:	2019 to Present Employer: Positions held:	Impala Environmental Consulting Environmental Assessment Practioner
From:	2015 to 2018 Employer:	Tschudi Copper Mine
	Positions held:	Chemist
From:	2013 to 2015 Employer: Positions held:	Heat Exchange Products (Water Treatment) Water Treatment Specialist

11. Detailed Tasks Assigned	12. Past Projects Undertaken
<ul><li> Project Local Consultant</li><li> Client Liaison</li></ul>	Name of assignment or project: Catchment Management Plan for the swakoppoort dam namibia Year: 2020 Location: Okahandja, Namibia. Client: Namwater

<ul> <li>Water Sampling and Reporting</li> <li>Project Management</li> <li>Project Supervision</li> </ul>	Main project features: Catchment Management Plan for the Swakoppoort Dam. Positions held: Local Consultant Activities performed: Water Sampling, logistics, site inspections and report writing.
<ul> <li>Project Leader</li> <li>Client Liaison</li> <li>Public Participation</li> <li>Report Writing</li> <li>Project Management</li> <li>Project Supervision</li> </ul>	Name of assignment or project: Environmental Impact Assessment for the Development of a Tantalite Mine, Southern Namibia. Year: 2020 Location: Warmbad, Karas Region Client: Orange River Pegmatite (Pty) Ltd Main project features: Environmental Management Positions held: Lead Consultant Activities performed: Project Management, Report Writing, Public Participation, Site Inspections, Stakeholder Engagement, Specialist Study Inputs and Map production.
<ul> <li>Project Leader</li> <li>Client Liaison</li> <li>Public Participation</li> <li>Report Writing</li> <li>Project Management</li> <li>Project Supervision</li> </ul>	<ul> <li>Name of assignment or project: Environmental Impact Assessment for Proposed Development of A Medical Tourism University Hospital In Henties Bay Year: 2020</li> <li>Location: Henties Bay, Erongo Region</li> <li>Client: Franco Civil Engineeering Cc</li> <li>Main project features: Environmental Impact Assessment.</li> <li>Positions held: Lead Consultant</li> <li>Activities performed: Project Management, Report</li> <li>Writing, Public Meetings, Site Inspections, Stakeholder Engagement, Specialist Study Inputs and Map production.</li> </ul>
<ul> <li>Project Leader</li> <li>Client Liaison</li> <li>Public Participation</li> <li>Report Writing</li> <li>Project Management</li> <li>Project Supervision</li> </ul>	<ul> <li>Name of assignment or project: Environmental Impact Assessment for the Development of a Marble Mine.</li> <li>Year: 2020</li> <li>Location: 10 km north of Karibib</li> <li>Client: Sunsand Investments (Pty) Ltd</li> <li>Main project features: Environmental Impact Assessment.</li> <li>Positions held: Lead Consultant</li> <li>Activities performed: Project Management, Report Writing, Public Meetings, Site Inspections, Stakeholder Engagement, Specialist Study Inputs and Map production.</li> </ul>
<ul> <li>Project Leader</li> <li>Client Liaison</li> <li>Public Participation</li> <li>Report Writing</li> <li>Project Management</li> <li>Project Supervision</li> </ul>	<ul> <li>Name of assignment or project: Environmental Impact Assessment for Dimension Stone Quarrying Activities on Mining Claims 71816, 71817, 71818, 71819, 71820, 71821, 71822, 71823, 71824, And 71825.</li> <li>Year: 2020</li> <li>Location: 40 km northwest of Arandis</li> <li>Client: Rockstar Mining cc</li> <li>Main project features: Environmental Impact Assessment.</li> <li>Positions held: Lead Consultant</li> <li>Activities performed: Project Management, Report Writing, Public Meetings, Site Inspections, Stakeholder Engagement, Specialist Study Inputs and Map production.</li> </ul>

<ul> <li>Project Leader</li> <li>Client Liaison</li> <li>Public Participation</li> <li>Report Writing</li> <li>Project Management</li> <li>Project Supervision</li> </ul>	<ul> <li>Name of assignment or project: Environmental Impact Assessment for Sand Mining Activities on Mining Claim 72027</li> <li>Year: 2020</li> <li>Location: 30 km North of Ongwediva</li> <li>Client: Comitx Investments Group CC</li> <li>Main project features: Environmental Impact Assessment.</li> <li>Positions held: Lead Consultant</li> <li>Activities performed: Project Management, Report Writing, Public Meetings, Site Inspections, Stakeholder Engagement, Specialist Study Inputs and Map production.</li> </ul>
<ul> <li>Project Leader</li> <li>Client Liaison</li> <li>Public Participation</li> <li>Report Writing</li> <li>Project Management</li> <li>Project Supervision</li> </ul>	<ul> <li>Name of assignment or project: Environmental Impact Assessment for Mineral Exploration Activities on EPL 6408</li> <li>Year: 2020</li> <li>Location: 5 km south of Karibib</li> <li>Client: Antler Gold Inc</li> <li>Main project features: Environmental Impact Assessment.</li> <li>Positions held: Lead Consultant</li> <li>Activities performed: Project Management, Report Writing, Public Meetings, Site Inspections, Stakeholder Engagement, Specialist Study Inputs and Map production.</li> </ul>
<ul> <li>Project Leader</li> <li>Client Liaison</li> <li>Public Participation</li> <li>Report Writing</li> <li>Project Management</li> <li>Project Supervision</li> </ul>	<ul> <li>Name of assignment or project: Environmental Impact Assessment for Dimension Stone Quarrying Activities on Mining Claims 71896-71900</li> <li>Year: 2020</li> <li>Location: 15 km north of Karibib</li> <li>Client: Triple Tas Trading cc</li> <li>Main project features: Environmental Impact</li> <li>Assessment.</li> <li>Positions held: Lead Consultant</li> <li>Activities performed: Project Management, Report</li> <li>Writing, Public Meetings, Site Inspections, Stakeholder</li> <li>Engagement, Specialist Study Inputs and Map production.</li> </ul>
<ul> <li>Project Leader</li> <li>Client Liaison</li> <li>Public Participation</li> <li>Report Writing</li> <li>Project Management</li> <li>Project Supervision</li> </ul>	<ul> <li>Name of assignment or project: Environmental Impact Assessment for Mineral Exploration on EPL 7930</li> <li>Year: 2020</li> <li>Location: 40 km northwest of Karibib</li> <li>Client: Antler Gold Inc</li> <li>Main project features: Environmental Impact Assessment.</li> <li>Positions held: Lead Consultant</li> <li>Activities performed: Project Management, Report</li> <li>Writing, Public Meetings, Site Inspections, Stakeholder Engagement, Specialist Study Inputs and Map production.</li> </ul>
<ul><li> Project Leader</li><li> Client Liaison</li><li> Public Participation</li></ul>	Name of assignment or project: Environmental Impact Assessment for Dimension Stone Quarrying Activities on

<ul> <li>Report Writing</li> <li>Project Management</li> <li>Project Supervision</li> </ul>	Mining Claims 72100, 72101, 72102, 72103, 72104, 72105 And 72106 Year: 2020 Location: 40 km northeast of Arandis Client: Tala Mining cc Main project features: Environmental Impact Assessment. Positions held: Lead Consultant Activities performed: Project Management, Report Writing, Public Meetings, Site Inspections, Stakeholder Engagement, Specialist Study Inputs and Map production.
<ul> <li>Project Leader</li> <li>Client Liaison</li> <li>Public Participation</li> <li>Report Writing</li> <li>Project Management</li> <li>Project Supervision</li> </ul>	<ul> <li>Name of assignment or project: Environmental Impact Assessment for Mineral Exploration on EPL 5702</li> <li>Year: 2020</li> <li>Location: 30 km South of Kamanjab</li> <li>Client: Emor Mining (Pty) Ltd</li> <li>Main project features: Environmental Impact Assessment.</li> <li>Positions held: Lead Consultant</li> <li>Activities performed: Project Management, Report Writing, Public Meetings, Site Inspections, Stakeholder Engagement, Specialist Study Inputs and Map production.</li> </ul>
<ul> <li>Project Leader</li> <li>Client Liaison</li> <li>Public Participation</li> <li>Report Writing</li> <li>Project Management</li> <li>Project Supervision</li> </ul>	<ul> <li>Name of assignment or project: Environmental Impact Assessment for the Development of a Lodge in the Daures Conservancy Area.</li> <li>Year: 2019</li> <li>Location: 50-80 km northwest of UIS</li> <li>Client: !U-#Gab Ams Investment cc</li> <li>Main project features: Environmental Impact Assessment.</li> <li>Positions held: Lead Consultant</li> <li>Activities performed: Project Management, Report Writing, Public Meetings, Site Inspections, Stakeholder Engagement, Specialist Study Inputs and Map production.</li> </ul>
<ul> <li>Project Leader</li> <li>Client Liaison</li> <li>Public Participation</li> <li>Report Writing</li> <li>Project Management</li> <li>Project Supervision</li> </ul>	<ul> <li>Name of assignment or project: Eia For the Proposed Establishment of a Service Station on Erf 4121, Khorixas Year: 2019</li> <li>Location: Khorixas</li> <li>Client: Noabeb's Trading Enterprises cc</li> <li>Main project features: Environmental Impact Assessment.</li> <li>Positions held: Lead Consultant</li> <li>Activities performed: Project Management, Report Writing, Public Meetings, Site Inspections, Stakeholder Engagement, Specialist Study Inputs and Map production.</li> </ul>
<ul> <li>Project Leader</li> <li>Client Liaison</li> <li>Public Participation</li> <li>Report Writing</li> <li>Project Management</li> <li>Project Supervision</li> </ul>	Name of assignment or project: Environmental Impact Assessment on dimension stone and industrial mineral quarrying activities on mining claims 71227 and 71228. Year: 2019 Location: 10 km south of Omaruru Client: Hiku Poultry and Trading CC Main project features: Environmental Impact Assessment.

	<b>Positions held:</b> Lead Consultant <b>Activities performed:</b> Project Management, Report Writing, Public Meetings, Site Inspections, Stakeholder Engagement, Specialist Study Inputs and Map production.
<ul> <li>Project Leader</li> <li>Client Liaison</li> <li>Public Participation</li> <li>Report Writing</li> <li>Project Management</li> <li>Project Supervision</li> </ul>	<ul> <li>Name of assignment or project: Environmental Impact Assessment for Mineral Exploration Activities on Epl 5818, Central Namibia</li> <li>Year: 2019</li> <li>Location: 40 km east of Khorixas</li> <li>Client: Gravity Empire Investments (Pty) Ltd</li> <li>Main project features: Environmental Impact Assessment.</li> <li>Positions held: Lead Consultant</li> <li>Activities performed: Project Management, Report Writing, Public Meetings, Site Inspections, Stakeholder Engagement, Specialist Study Inputs and Map production.</li> </ul>
<ul> <li>Project Leader</li> <li>Client Liaison</li> <li>Public Participation</li> <li>Report Writing</li> <li>Project Management</li> <li>Project Supervision</li> </ul>	<ul> <li>Name of assignment or project: Environmental Impact Assessment for Mineral Exploration on Epl 6374</li> <li>Year: 2019</li> <li>Location: 50 km South of Opuwo</li> <li>Client: Nami Geological Techniques (Pty)</li> <li>Main project features: Environmental Impact Assessment.</li> <li>Positions held: Lead Consultant</li> <li>Activities performed: Project Management, Report Writing, Public Meetings, Site Inspections, Stakeholder Engagement, Specialist Study Inputs and Map production.</li> </ul>