

A SCOPING REPORT ON THE ENVIRONMENTAL IMPACT ASSESSMENT FOR QUARRYING ACTIVITIES ON MINING CLAIMS 72305, 72306, 72307, 72308, AND 72309

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EXECUTIVE SUMMARY

1. Introduction

1.1 Overview

The proponent, Josia Shilunga, has applied for mining claims namely MC 71896, 71897, 71898, 71899 and 71900, with the Ministry of Mines and Energy. The proponent intends to mine (quarry) dimension stone (dolerite) in the area. The area of interest sits predominantly on dolerite rock units of the Arandis Formation, within the Damara Orogen.

Impala Consulting was appointed by the proponent to undertake an Environmental Assessment (EA) and Environmental Management Plan (EMP) for the quarrying project.

1.2 Location

The mining claims are located 35 km northeast of Arandis, on farm Hakskeen within the Erongo Region. The coordinates for the centre of one of the mining claims are 22°9'48"S and 15°8'07" E.

1.3 Environmental Assessment Requirements

The Environmental Regulations procedure (GN 30 of 2012) stipulates that no mining and quarrying 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 quarrying activities.



FINAL SCOPING REPORT

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1. Project Background

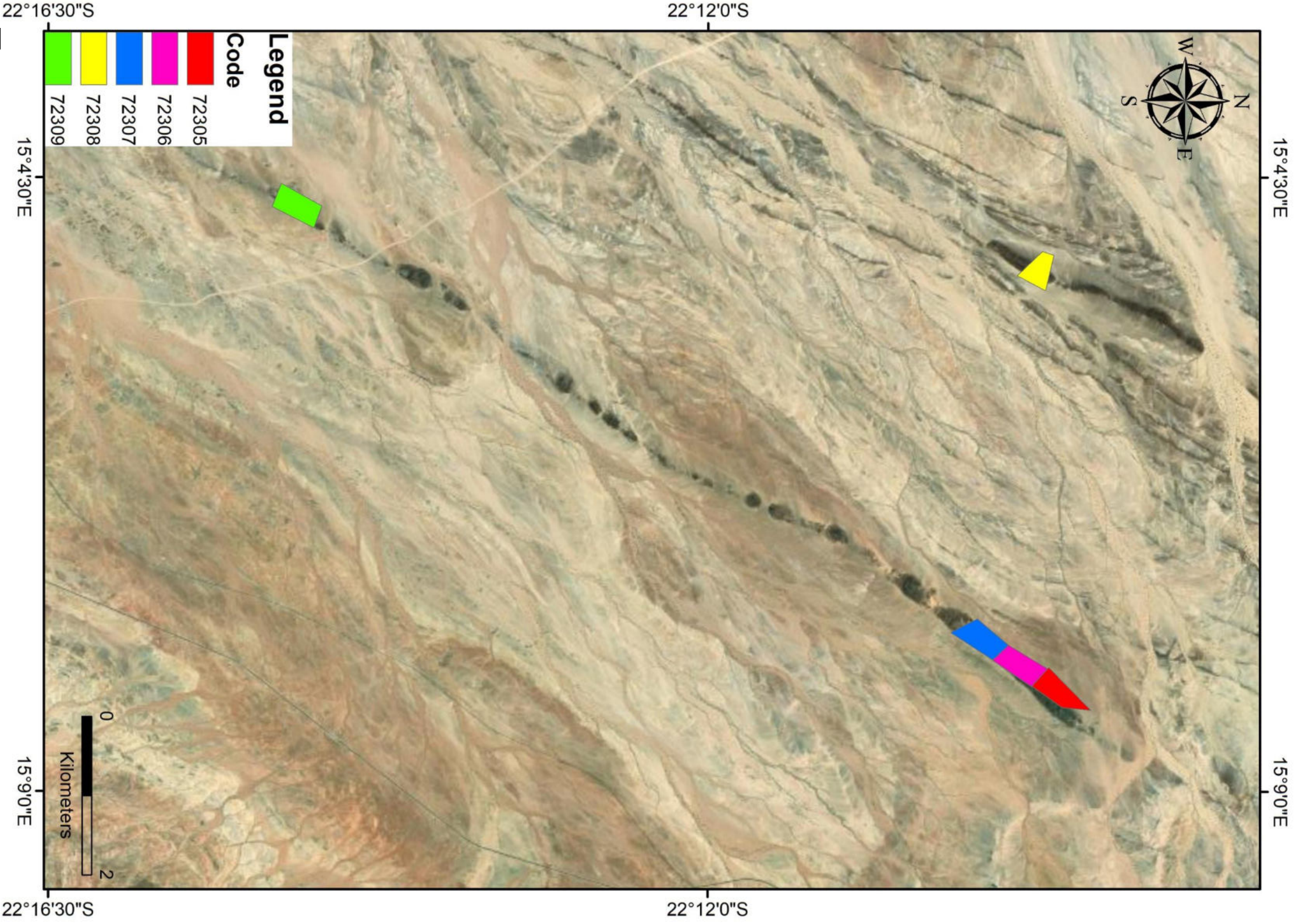
1.1 Introduction

The proponent, Josia Shilunga, applied for mining claims, namely MC 72100, 72101, 72102, 72103, 72104, 72105 and 72106, with the Ministry of Mines and Energy. The proponent intends to mine (quarry) dimension stone (dolerite) in the area. The area of interest sits predominantly on dolerite rock units of the Arandis Formation, within the Damara Orogen. An outline of the area is shown in the image below.

Although quarrying is costly, environmentally friendly quarrying is possible, yet the mineral quarrying process must never be at the expense of people or the environment. The proponent believes that social and environmental responsibility is a prerequisite for providing a conducive environment for mineral quarrying and future mining activities.

Impala Environmental Consulting was appointed by the proponent to undertake an Environmental Assessment (EA) and Environmental Management Plan (EMP) for the quarrying project. Figure 3 below shows the surrounding farms of the project area.





1.2 Project Location

The mining claims are located 35 km northeast of Arandis, on farm Hakskeen within the Erongo Region. A map showing the surrounding farms is shown in figure 4.



Figure 2 Locality map of the mining claim licence area



15°4'0"E



HAKSKEEN

SUKSES






VERGENOEG

TREKKOPJE

TREKKOPJE

Legend

Mining Claims

	72305		72308
	72306		72309
	72307		

0
2

Kilometers

22°16'0"S

22°16'0"S

15°4'0"E

The coordinates for the corners of each mining claim are indicated below:

Mining Claim 72308	
Longitude	Latitude
15.084574	-22.160655
15.088886	-22.161571
15.086917	-22.164842
15.083959	-22.161918

Mining Claim 72305	
Latitude	Longitude
-22.156458	15.139999
-22.159728	15.139633
-22.163058	15.137111
-22.161281	15.134954

Mining Claim 72306	
Latitude	Longitude
-22.161338	15.134954
-22.163287	15.137112
-22.167535	15.133913
-22.165815	15.132187

Mining Claim 72307	
Latitude	Longitude
-22.165815	15.132187
-22.167707	15.133913
-22.172414	15.130591
-22.169432	15.128864

Mining Claim 72309	
Latitude	Longitude
-22.243896	15.078495
-22.244761	15.081127
-22.249573	15.078594
-22.248469	15.075769



1.3 Environmental Impact Assessment Requirements

The Environmental Regulations procedure (GN 30 of 2012) stipulates that no mining and quarrying 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 quarrying activities.

1.4 Purpose of the Scoping Report

The scoping report is prepared for the Environmental Impact Assessment for dolerite quarrying on mining claims which are located 35 km northeast of Arandis, on farm Hakskeen within the Erongo Region. Environmental scoping is a critical step in the preparation of an EIA for the proposed quarrying 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 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 quarrying activities on the proposed mining 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 quarrying 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.



1.5 Project Alternatives

An alternative to the proposed quarrying activities would be to allocate the land-usage to other income generating activities such as farming and tourism activities.

2. Summary of applicable legislation

All mineral rights, related to quarrying 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 mining and quarrying 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, quarrying, prospecting, small scale mining, quarrying, 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 over-utilization 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 (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 quarrying areas, environmental impact assessments and for minimising or preventing pollution.



3. Description of Proposed Quarrying Project

3.1 Introduction

The Erongo region is known for vast occurrences of dolerite units of the Arandis formation and Swakop group (Miller, 1992). The first attempts to quarry dolerite in Namibia date back to the early years of the century when the Koloniale Marmorsyndikat was founded.

3.2 Dolerite Quarrying Method

There are various options for mining out a dolerite deposit. In choosing a method, important considerations are the kind of material, the shape and size of the geologic formation, the thickness of the overburden, the topography, the production level, the locality of the quarry and imposed restrictions by the government. If the calcitic dolerite proves to be homogeneous, the quarrying method will be by a regular bench design with the aid of diamond-based cutting technologies. Diamond-based cutting technologies are the best methods to use these days. The following operations will be carried out:

- Undercutting by using a diamond-wire saw.
- Vertical cuts with diamond wire
- Block shaping cuts with diamond wire or drill and shear techniques.

Basically, dolerite quarrying involves cutting channels on all sides of large, rectangular sections of dolerite called quarry blocks. These blocks usually have an open face, and once the ends and backs of the doorstep-like ledges are channelled loose, horizontal lift holes are drilled along the bottom of the open face. These long quarry blocks are being freed from the surrounding mass, with diamond wire sawing. The diamond saw which basically consists of an engine pulling wire cable through a system of pulleys and return wheels. The wire is a steel cable on which diamond grit-impregnated beads are held in place by plastic spacers.

The wire saw strand is threaded through intersecting vertical and horizontal holes; the wire is jointed together making a large loop which simultaneously cuts the top, bottom, and one end of the granite mass. Water is fed continuously through the narrow cuts to



cool the wire. If a ledge has two open sides, the wire saw can cut the entire block free. However, the attached side must still be channelled by way of drilling or light blasting. This entire block will now be moved over with a water bag jacking plant. The big block is then cut with dressing diamond wire saws into smaller blocks of 10 – 35 tons.

3.2.1 Mineral Processing

The smaller dolerite blocks will then be moved to the dressing yard. The yard is in very close proximity to the mining activities itself. While most dimension stone mine merely “rough-dress” the cut block by jack hammer trimming, the produced at this mining area will mostly be diamond wire dressed. A derrick boom is slowly raised, tightening the hooks in their holes and the block is lifted from the quarry to be placed on a waiting truck for transporting to the dressing yard. After final dressing and quality control these dimensioned saw blocks are removed by mobile crane onto trucks and shipped to monument plants for processing.

3.2.2 Quarry Residue and rehabilitation

The only noticeable mine residue will be the “waste” dolerite material not usable. This material can be used for rehabilitation purposes during decommissioning. The overburden removed during the opencast operation will be used to fill the excavations during rehabilitation with the result that on completion of mining no waste dumps will remain.

3.4 Labour Requirements

The proponent intends to employ more than 26 personnel, including 4 management staff for the first phase of the project. The employees will be sourced from the local community including people from Arandis. 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.

3.5 Waste Dumps

In choosing a waste dumpsite, the following aspects will be strongly considered by the explorer:

- Topography



- Land-use in the area
- The presence of any hazardous geological structures
- Groundwater considerations
- The prevailing wind direction in the area
- Visual impacts that the waste dump might have
- Presence of surface water in the vicinity of the area
- Presence of sensitive ecological areas

Since the area is located on privately-owned farm, all waste will be transported and disposed out of the area.

3.6 Services

3.6.1 Electricity requirements

At this stage, electricity requirements for the project are minimal. The bulk of the power supply to the quarrying 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 quarrying process
- Power supply for temporary office block or container if necessary.

3.6.2 Water Supply

For the purpose of the scoping study costing requirements, a separate geo-hydrological study will be undertaken at an advanced stage of the EIA. 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 granite drilling or wire-saw cutting will be recycled.

3.7 Infrastructure

3.7.1 Refuse and waste removal

The proponent will negotiate directly with 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 must be disposed 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. Domestic waste will be disposed of at a waste dump in Arandis. The Miner will undertake environmental rehabilitation, both during and at the conclusion of the quarrying operations. Unusable oil will be collected in drums and sold to dealers for recycling.

3.7.2 IT Systems and communication

Provision will be made for two-way radios to enable the drill rig operators and the on-site staff to communicate effectively.

3.7.3 Security and Fencing

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

3.7.4 Buildings

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

3.7.5 Roads

The access roads to the quarrying site are quite good. From Arandis, the quarrying sites will be accessed via the B2 road. The sites are located 8 kms from the B2 road.

3.7.6 Mobile Equipment

The proponent's vehicle fleet will be optimised during the next project phase. Provision will be made for 2 off-road vehicles, an excavator and a front-end loader. Other tools include a genset, wire saws, an electric compressor and a water jacking plant.

3.7.7 Storage of Fuel, Lubrication and consumables

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. Diesel will be delivered to a small temporary on-site fuel storage facility by road transport and offloaded into the storage tanks by offloading pumps.

3.7.8 Fire Fighting Provision

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

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. The project area is positioned at the interface of the Nama Karoo, Desert Biome and Savannah in Namibia (Barnard, 1998). 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). Rainfall in Erongo is usually both low and variable which implies that years of abundant rain are often followed by extreme dry conditions (Mendelsohn, et al., 2002). Mammals, birds, reptiles and amphibians are generally spaced out within the region due to low rainfall. The eastern parts of the Erongo region have more trees and grass than the Western, coastal areas (Mendelsohn, et al., 2002). As such, farming ventures are challenging with low livestock densities in most parts of the Erongo Region.

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 quarrying area, August is the warmest month with an average



temperature of 21°C at noon. September is the coldest month with an average temperature of 15.5°C at night. Arandis, which is in the vicinity of the project area, has distinct temperature seasons, the temperature varies during the year.

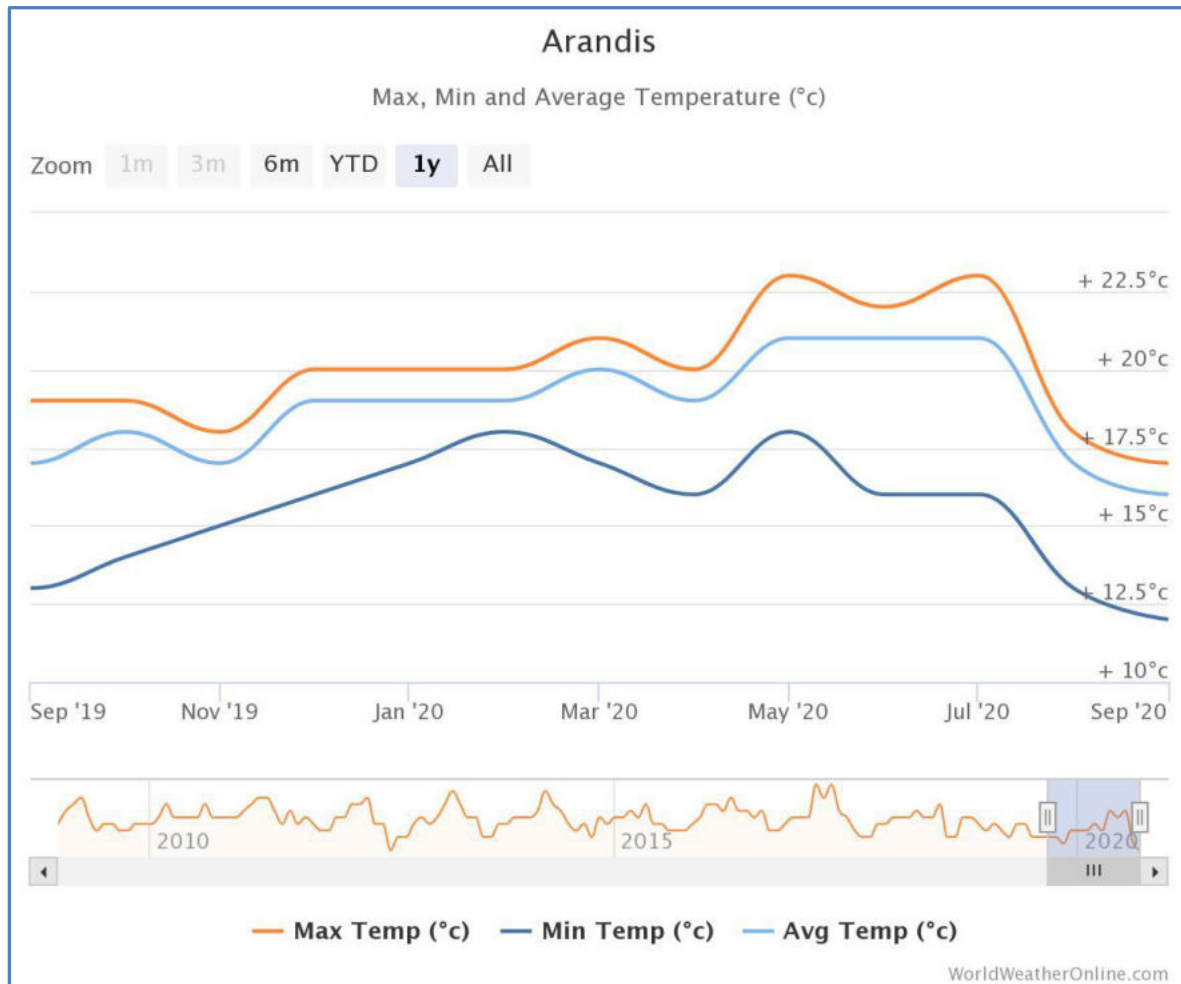


Figure 4 A graph showing the temperature patterns in Arandis, from www.worldweatheronline.com

In winter, temperatures can get to below degrees 12°C. Overall, winters are mild in temperature, with coldest month most often being September.

4.2.2 Precipitation

In the quarrying area, the highest rainfall is usually experienced in April which may reach 6 mm with average rainfall days of 4. In January months, rainfall may reach about 2 mm with 7 average rainfall days. The graph below shows the rainfall patterns in the area.



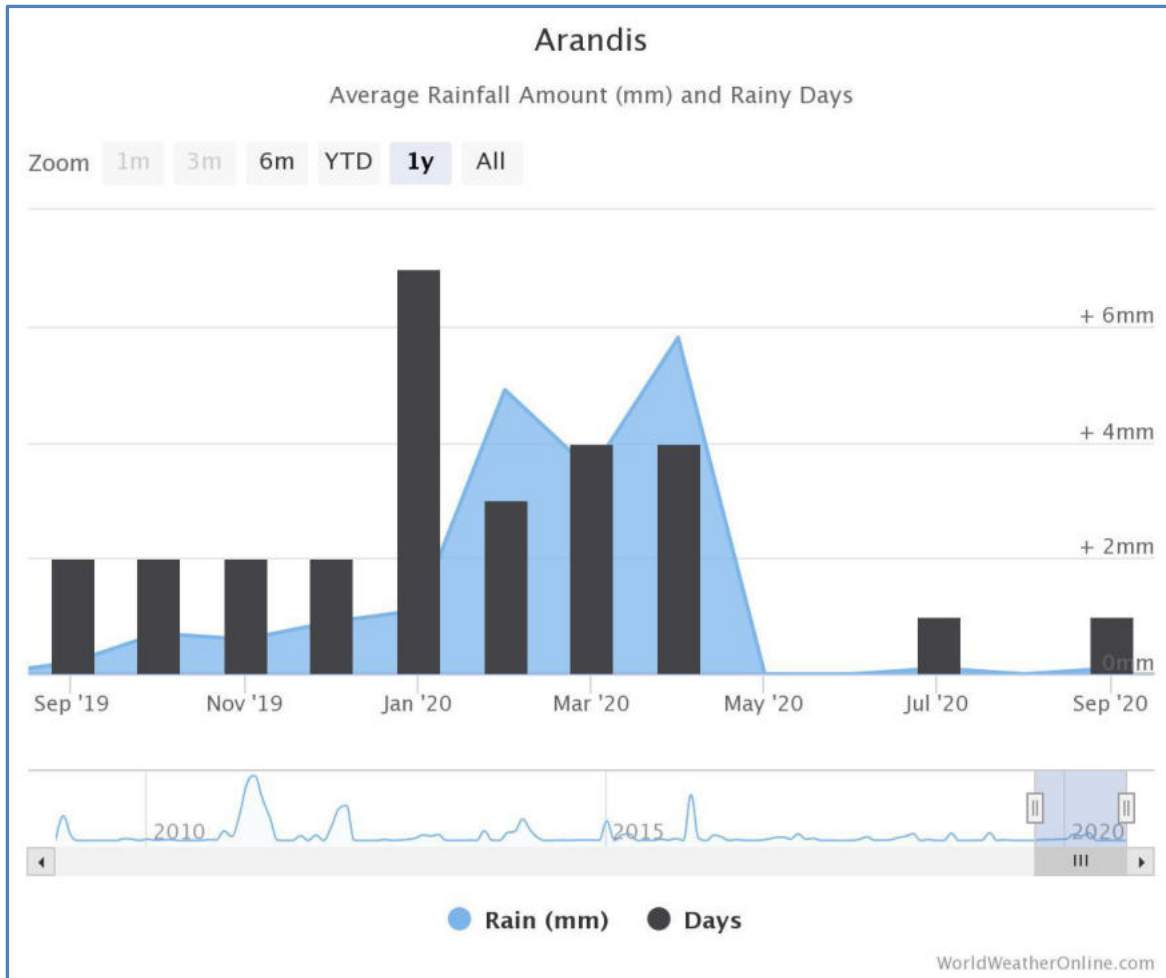


Figure 5 A graph showing rainfall patterns in Arandis, from www.worldweatheronline.com

4.2.3 Wind

Predominantly south easterly. Southerly, easterly and northerly airflow is common. The Arandis area is subject to erratic winds and considerable discrepancies despite short distances, due to the hilly terrain.

4.2.4 Humidity

The relative humidity during the least humid months of the year, i.e. August and June, is around 3% and the most humid month is February with 25% 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.



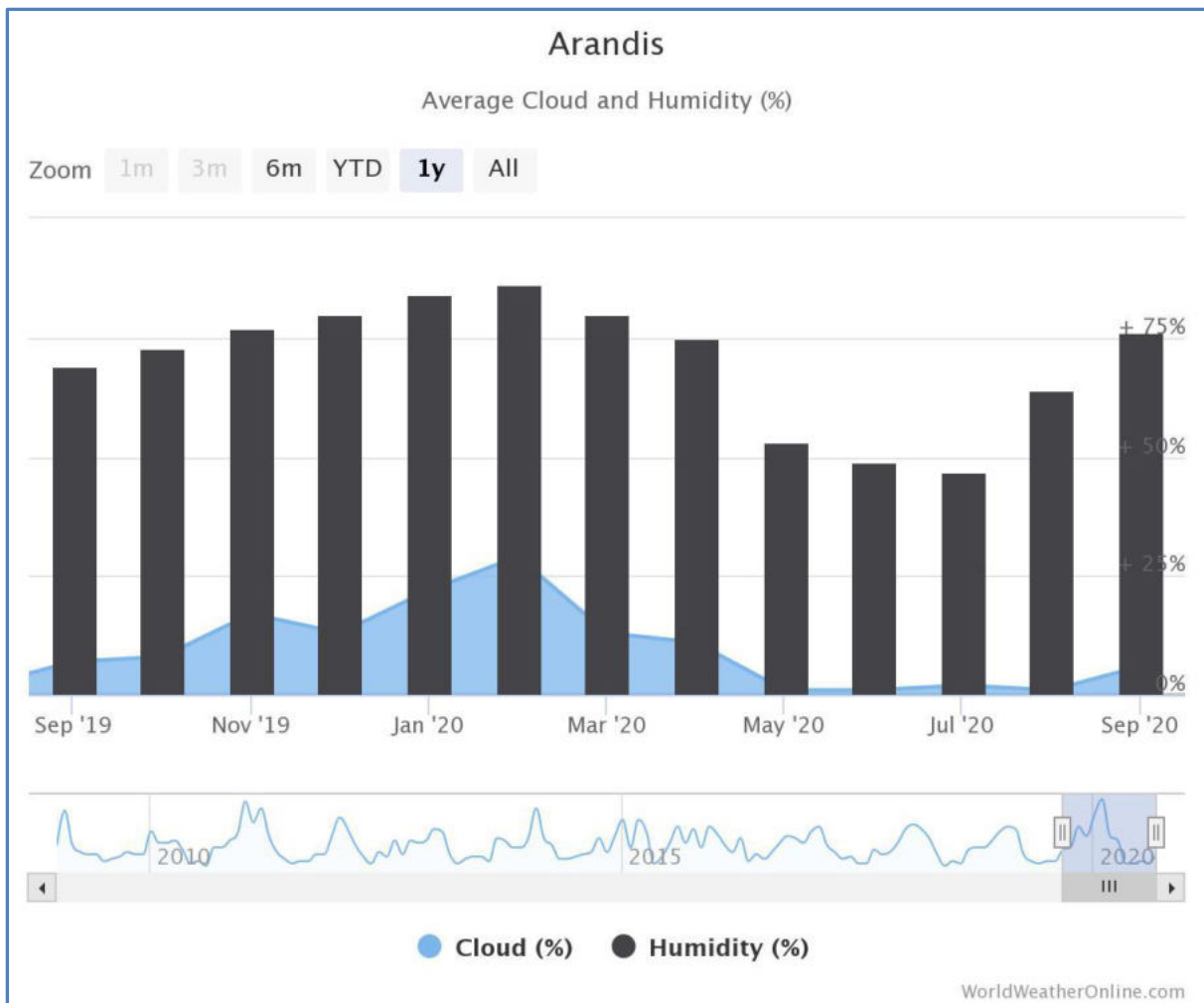


Figure 6 A graph showing the humidity patterns in Arandis, from www.worldweatheronline.com

4.3 Geology

4.3.1 Geological setting

The rocks in the area have been eroded in rocks of the Neoproterozoic Damara Orogenic Belt, which forms the bedrock to most of the Namib Desert. These rocks unconformably overly the 2 Ga Mesoproterozoic Abbabis Basement Complex of granite gneiss. The sedimentary rocks of the Damara Belt consist of arenites and argillites of the Nosib Group, overlain by pelitic sediments and carbonates of the Swakop Group. During metamorphism between 550 Ma and 450 Ma, Nosib and Swakop Group sedimentary rocks were partially mobilized and granitized and then intruded back into the Damara Supergroup to form what is today known as the Damara granites. These various Damaran granitoids have variably weak to strongly radiogenic characteristics.



The main rock types in the area include Karibib marble, Kuiseb schist, Damara aged leucogranites, Salem granite, Karoo dolerite, Klein Spitzkoppe granite and Gross Spitzkoppe granite.



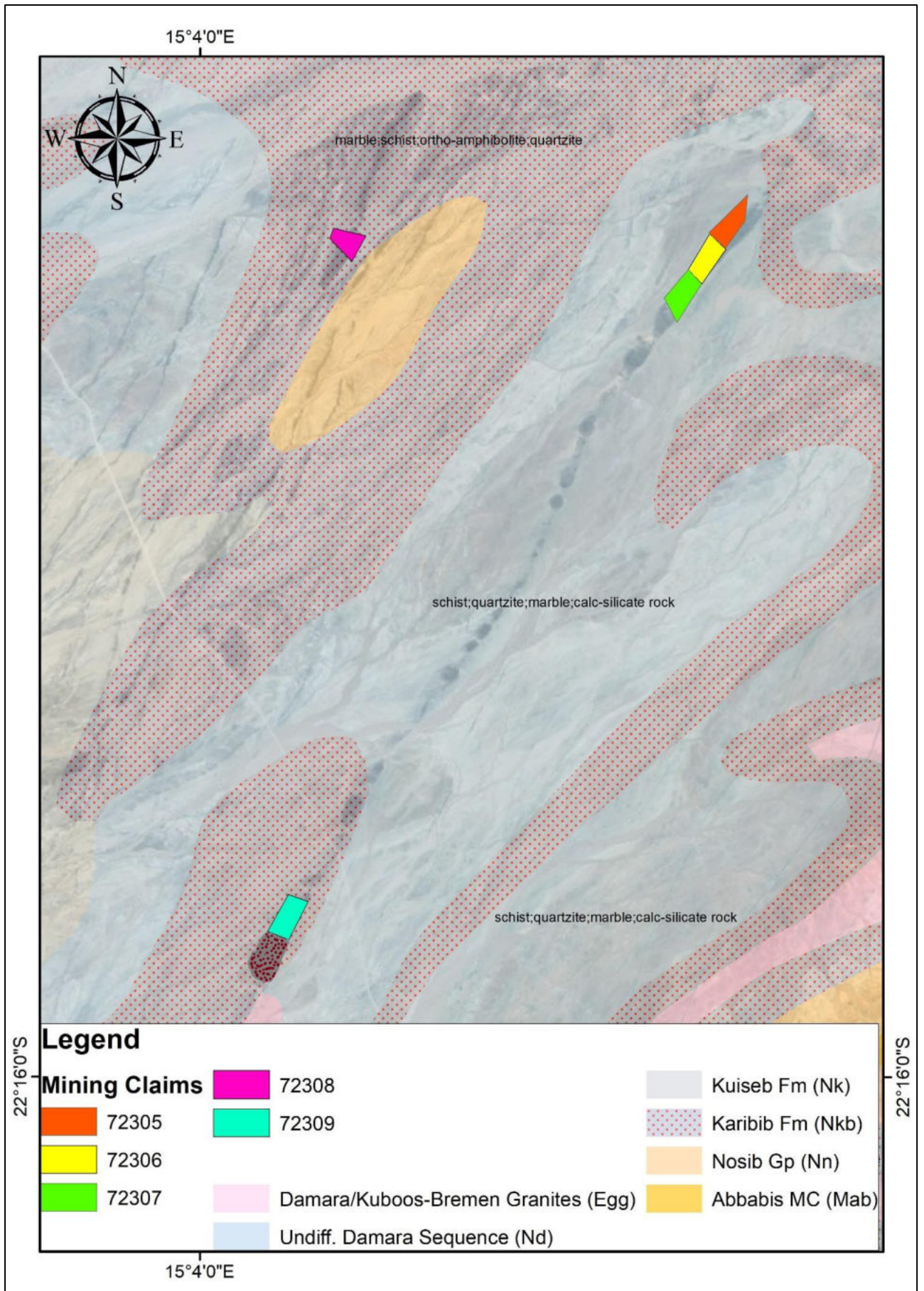


Figure 7 A geological map of the area



4.4 Hydrogeology and Water Resources

There are no river systems which pass through the mining site areas. The project area is underlain by a region with little or no groundwater.

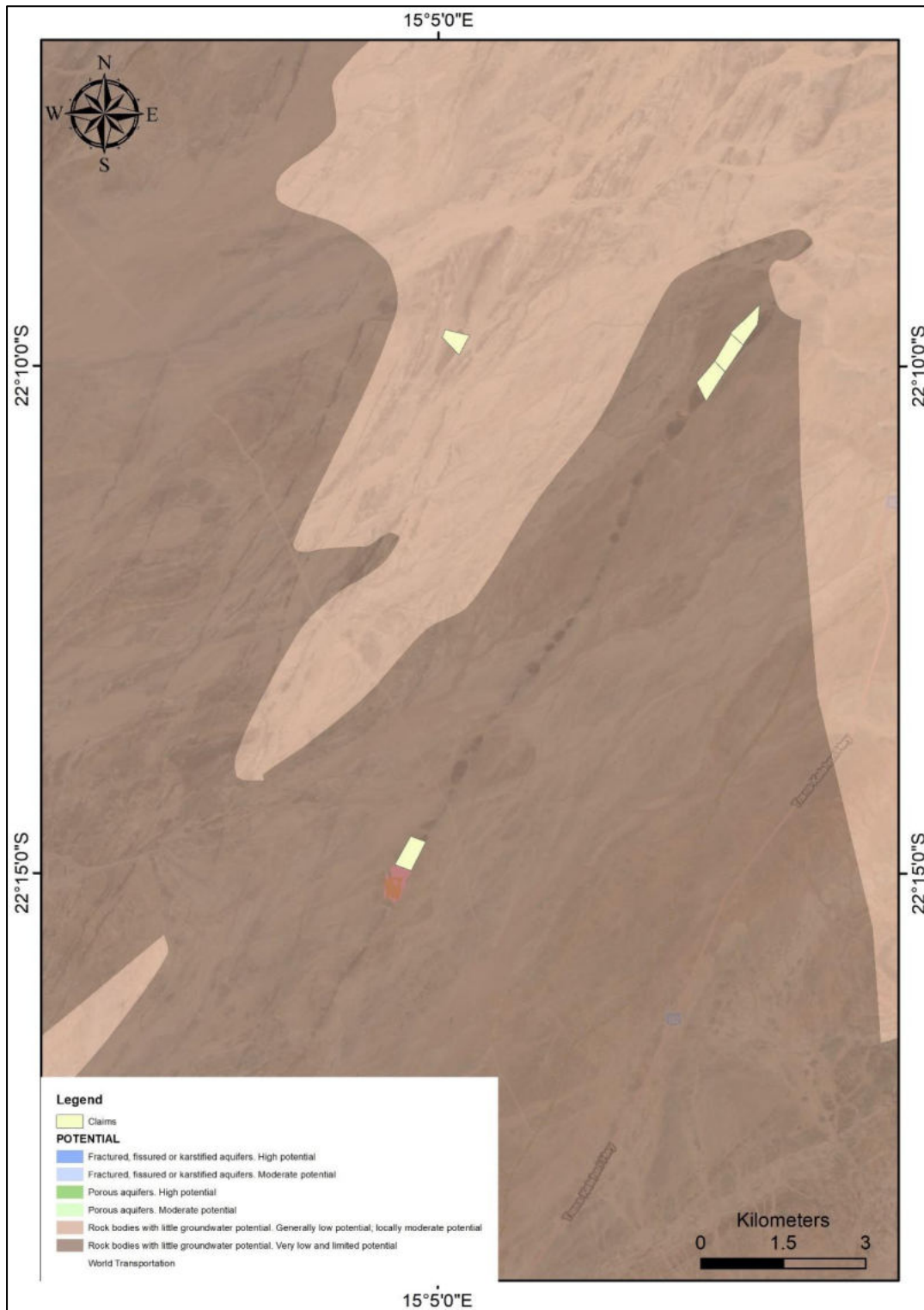


Figure 8 Map showing the groundwater flow in the area.



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 low-medium botanical diversity. Based on site visits and the literature review, all the vegetation that are found within the vicinity of the area are considered to be of “medium” to “high” sensitivity against external conditions. The growing season is relatively short due to the semi-arid climate. The most notable protected plant species in the area is the *Welwitschia mirabilis*.

Climatically the coastal area is referred to as Cool Desert with a high occurrence of fog (Mendelsohn, et al., 2002). The Namib Desert Biome makes up a large proportion (32%) of the land area with parks in this biome making up 69% of the protected area network or 29.7% of the biome (Barnard, 1998). Four of 14 desert vegetation types are adequately protected with up to 94% representation in the protected area network in Namibia (Barnard, 1998).

According to Curtis and Barnard (1998) the entire coast is viewed as sites with special ecological importance in Namibia. The known distinctive values along the Coastline are its biotic richness (arachnids, birds and lichens) and its biotic richness and migrant shorebirds and being the most important Ramsar site in Namibia (Mendelsohn, et al., 2002). The cold Benguela Current sustains a wealth of marine life. It continually produces fog that supports an intriguing variety of animals and plants, including over a hundred species of lichens. Providing stability to the fragile desert environment, vast lichen fields occur at Mile 30 south of Henties Bay and north of the turnoff to Cape Cross Seal Reserve (Brown & Lawson, 1989). The vegetation in the Desert Biome is characterised by a dominance of therophytes which persist in the form of seeds during unfavourable conditions.

The average plant production is extremely low with 0-5% variation in green vegetation biomass. The overall plant diversity (all species) in the general area is estimated to be less than 50 species (Mendelsohn, et al., 2002). These estimates are limited to “higher” plants as information regarding “lower” plants is sparse. Burke (2003)



estimates that over 400 species – 10% of the flora of Namibia – occur in the central Namib and although it has not been identified as a centre of endemism, it is dominated by endemics such as *Arthroerua leubnitziae*. The greatest variants affecting the diversity of plants are habitat and climate with the highest plant diversity generally associated with high rainfall areas (Burke, 2003).

Table 1 A table showing plant species which occur in the area

SCIENTIFIC NAME	COMMON NAME	STATUS IN NAMIBIA
<i>Acacia erioloba</i>	Camel thorn	Protected
<i>Acacia mellifera</i>	Black thorn	Secure
<i>Acacia reficiens</i>	False umbrella thorn	Secure
<i>Acacia haematoxylon</i>	Grey camel thorn	Protected
<i>Acacia erubescens</i>	Blue thorn	Secure
<i>Acacia karroo</i>	Sweet thorn	Secure
<i>Acacia tortolis</i>	Umbrella thorn	Secure
<i>Acacia hereroensis</i>	False hook-thorn	Secure
<i>Commiphora tenuipetiolata</i>	White-stem corkwood	Secure
<i>Aloe littoralis</i>		Protected
<i>Ozoroa crassinervia</i>	Namibian resin tree	Near endemic, protected
<i>Boscia albitrunca</i>	Shepherd's tree	Protected
<i>Albizia anthelmintica</i>	Worm-bark false-thorn	Protected
<i>Ziziphus mucronata</i>	Buffalo-thorn	Protected
<i>Catophractes alexandri</i>	Trumpet thorn	Secure
<i>Combretum apiculatum</i>	Red bush willow	Secure
<i>Commiphora dinteri</i>		Endemic
<i>Commiphora glandulosa</i>	Tall common corkwood	Secure
<i>Commiphora glaucescens</i>	Blue-leaved corkwood	Nearendemic
<i>Croton gratissimus</i>	Lavender fever-berry	Secure
<i>Cyphostemma bainesii</i>		Endemic, protected
<i>Dichrostachys cinerea</i>	Sickle bush	Secure
<i>Diospyros lycioides</i>	Blue bush	Secure
<i>Dombeya rotundifolia</i>	Common wild pear	Endemic
<i>Ehretia alba</i>		Secure
<i>Elephantorrhiza suffruticosa</i>		Secure
<i>Euclea pseudebenus</i>	Ebony tree	Protected
<i>Euclea undulata</i>	Common guarri	Secure
<i>Euphorbia guerichiana</i>	Western woody milk bush	Secure
<i>Euphorbia virosa</i>		Secure
<i>Ficus cordata</i>	Namaqua fig	Protected
<i>Ficus ilicina</i>	Laurel fig	Secure
<i>Ficus sycomorus</i>	Common cluster fig	Protected
<i>Grewia bicolor</i>	White raisin	Secure
<i>Grewia flava</i>	Velvet raisin	Secure



<i>Grewia flavescens</i>	Sand paper raisin	Secure
<i>Gymnosporia senegalensis</i>	Red spike-thorn	Secure
<i>Ipomoea adenioides</i>		Secure
<i>Lycium bosciifolium</i>		Secure
<i>Lycium cinereum</i>		Secure
<i>Lycium eenii</i>		Secure
<i>Lycium hirsutum</i>		Secure
<i>Lycium villosum</i>		Secure
<i>Maerua juncea</i>		Secure
<i>Maerua schinzii</i>	Ringwood tree	Protected
<i>Manuleopsis dinteri</i>		Endemic
<i>Melianthus comosus</i>		Secure
<i>Obetia carruthersiana</i>		Near endemic
<i>Pechuel-Loeschea leubnitziae</i>		Secure
<i>Sterculia africana</i>	African star-chestnut	Protected
<i>Tarchonanthus camphoratus</i>		Secure
<i>Tetragonia schenckii</i>		Secure
<i>Vernonia cinerascens</i>		Secure
<i>Searsia (Rhus) ciliata</i>		Secure
<i>Searsia (Rhus) lancea</i>	Karree	Protected
<i>Searsia (Rhus) marlothii</i>		Secure
<i>Welwitschia mirabilis</i>	Welwitschia	Protected

The density of vegetation in the vicinity of the tourism development site is fairly sparse. Every effort will be made to protect the existing plant species, especially the Welwitschia, as these are very important to the ambience and visual appeal of the tourism development site. A vegetation expert will be consulted throughout the lifecycle of the project. 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.

SCIENTIFIC NAME	COMMON NAME
<i>Acacia erioloba</i>	Camel thorn
<i>Acacia haematoxylon</i>	Grey camel thorn
<i>Albizia anthelmintica</i>	Worm-bark false-thorn
<i>Boscia albitrunca</i>	Shepherd's tree
<i>Euclea pseudebenus</i>	Ebony tree
<i>Ficus cordata</i>	Namaqua fig
<i>Ficus sycomorus</i>	Common cluster fig



<i>Maerua schinzii</i>	Ringwood tree
<i>Ozoroa crassinervia</i>	Namibian resin tree
<i>Searsia (Rhus lancea)</i>	Karree
<i>Sterculia Africana</i>	African star-chestnut
<i>Welwitschia mirabilis</i>	Welwitschia

4.6 Fauna

4.6.1 Introduction

The information is based on a detailed literature review and a site visit which was carried out on the 6th to 8th of June 2022. 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 quarrying area. The proposed quarrying 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 very rare in this area. There are no species which are exclusively endemic to the quarrying area. Based on literature review, development of a quarrying 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.

Table 3 A list of amphibian species which may occur in the project area

SCIENTIFIC NAME	COMMON NAME	STATUS	OCCURRENCE	REFERENCE



PLATANNAS				
<i>Xenopus laevis</i>	COMMON PLATANNA	SECURE	ABUNDANTLY	(Daudin, 1802)
TOADS				
<i>Breviceps adpersus</i>	BUSHVELD RAIN FROG	SECURE	ABUNDANTLY	Peters, 1882
<i>Bufo dombensis</i>	DOMBE DWARF TOAD	ENDEMIC & INADEQUETLY KNOWN	ABUNDANTLY	Bocage, 1895
<i>Bufo poweri</i>	MOTTLED TOAD	SECURE	ABUNDANTLY	Hewitt, 1935
FOSSORIAL FROGS				
<i>Phrynomantis affinis</i>	SPOTTED RUBBER FROG	AMBIGUOUS (RARE?)	RARELY	(Boulenger, 1901)
<i>Phrynomantis bifasciatus</i>	BANDED RUBBER FROG	SECURE	ABUNDANTLY	(Smith, 1848)
SAND FROGS, BULLFROGS, RIDGED FROGS, CACOS, PUDDLE FROGS etc.				
<i>Cacosternum boettgeri</i>	COMMON CACO	SECURE	ABUNDANTLY	(Boulenger, 1882)
<i>Hildebrandtia ornata</i>	ORNATE FROG	SECURE	UNCOMMONLY	(Peters, 1878)
<i>Phrynobatrachus mababiensis</i>	MABABE PUDDLE FROG	SECURE	UNCOMMONLY	FitzSimons, 1932
<i>Phrynobatrachus natalensis</i>	SNORING PUDDLE FROG	SECURE	UNCOMMONLY	(A. Smith, 1849)
<i>Pyxicephalus adpersus</i>	GIANT BULLFROG	SECURE	ABUNDANTLY	Tschudi, 1838
<i>Tomopterna krugerensis</i>	KNOCKING SAND FROG	SECURE	RARELY	Passmore et al, 1975
<i>Tomopterna tandyi</i>	TANDY'S SAND FROG-	SECURE	ABUNDANTLY	Channing et al, 1996
TREE FROGS, REED FROGS & KASSINAS				
<i>Kassina senegalensis</i>	BUBBLING KASSINA	SECURE	ABUNDANTLY	(Dumèril et al, 1841)

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 quarrying area, the mammal fauna will not be affected by the quarrying activities of the proponent. Namibia is seemingly well endowed with mammal diversity with around 250 species known 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 rock-dwelling 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.

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

SCIENTIFIC NAME	COMMON NAME
<i>Acinonyx jubatus</i>	Cheetah
<i>Antidorcas marsupialis</i>	Springbok
<i>Atelerix frontalis angolae</i>	Southern African Hedgehog
<i>Canis mesomelas</i>	Black-backed Jackal
<i>Caracal caracal</i>	Caracal
<i>Crocuta crocuta</i>	Spotted Hyena
<i>Cynictis penicillata</i>	Yellow Mongoose
<i>Equus zebra hartmannae</i>	Hartmann's Mountain Zebra
<i>Felis nigripes</i>	Black-footed Cat
<i>Felis silvestris/lybica</i>	African Wild Cat
<i>Galerella sanguinea</i>	Slender Mongoose
<i>Genetta genetta</i>	Small Spotted Genet
<i>Ictonyx striatus</i>	Striped Polecat
<i>Lepus capensis</i>	Cape Hare Secure
<i>Lepus saxatilis</i>	Scrub Hare
<i>Manis temminckii</i>	Ground Pangolin
<i>Mellivora capensis</i>	Honey Badger/Ratel
<i>Oreotragus oreotragus</i>	Klipspringer
<i>Oryx gazella</i>	Gemsbok
<i>Otocyon megalotis</i>	Bat-eared Fox
<i>Panthera pardus</i>	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 area

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. 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 quarrying area.

4.7 Avifauna (Birds)

Simmons et al (2003) points that although Namibia's Avifauna is comparatively 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:

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

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

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

4.8 Archaeology and Heritage Sites

A separate archaeological specialist study is attached to this report.

4.9 Socio-Economic Environment

4.9.1 Overview of the surrounding settlements

Arandis is a town situated in the Erongo Province of Namibia. This town is also known as the "Uranium Capital of the World" because the largest open-pit uranium mine is located 15 km from it. This mine, the Rössing Uranium Mine, was established in 1978 and the town of Arandis was established in 1994. Arandis has a total population of



approximately 8 000 residents and houses the Namibian Institute of Mining and Technology. It has been called the Uranium Capital of the World as it is located just 15 km outside the world's largest open-pit uranium mine, the Rössing Uranium Mine. Established for the workers of Rössing Uranium in 1978, Arandis was granted self-administration and "town" status in 1994. Currently it has 7,600 inhabitants, most of whom are somehow connected to the mine, and owns 29 square kilometres of land. Besides Rössing, Arandis also serves the Husab and Trekkopje uranium mines. It is the home of the Namibian Institute of Mining and Technology, a technical institute focusing on training skilled industrial workers. The 2000s saw a resurgence in economic growth in Arandis. With the global energy crisis, a significant rise in demand occurred for nuclear energy, increasing demand for Arandis' Uranium. Banks, which had previously closed and youth who had previously left the town seeking employment elsewhere, returned. In 2008, negotiations were at an advanced stage for a Chinese company, Namibia Industrial Mining Limited to build a factory for making building materials in Arandis. After an investment conference was held in 2011, investors have decided to erect a shopping mall in town.

4.9.2 Social Economic Impact

Although a few people and animals might be negatively affected by dust and noise, the miner will ensure that these aspects are properly mitigated. With the potential employment of 27 people, this means that 27 families will benefit from the project during the initial 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 quarrying activities on the proposed mining sites. Two different phases are associated with the proposed development. Two different phases are associated with the proposed development. Firstly, the construction phase, and secondly the operational phase is being covered by this assessment. Should the quarrying 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:

Table 7 Assessment methodology used to examine the impacts 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 (P) or negative (N)
Extent of impact:	O	On-Site (the site and it's immediate surrounds)
	L	Local (Quarrying Area)
	R	Regional (Erongo Region)
	N	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	Low intensity where the natural, cultural and social functions and processes are not affected.
	M	Medium intensity where the affected environment is altered but natural, cultural and social functions and processes can continue.
	H	High 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	Low probability is when the possibility of the impact occurring is low.
	P	Probable is when there is a distinct possibility that it will occur.
	HP	Highly probable is when the impact is most likely to occur.
	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
	M	Medium Significance 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	High Significance 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 27 people, this means that 27 families will benefit from the project during the construction 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 quarrying project will require a significant capital investment of at least N\$ 40 million. This will be used for purchasing plant and machinery required for the project.

Stimulation of skills transfer: Due to the nature of quarrying operations, 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 27 people, this means that 27 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 quarrying activities 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 farming, tourism 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 construction and operational phase of the quarrying project; and
- Increased informal settlement and associated problems.

Table 8 Impact evaluation for socio-economy

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



5.2. Quarrying phases and associated issues

5.2.1. Construction Phase of the Project

The following potential effects on the environment during the construction phase of the quarrying 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 construction 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 construction, 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 located 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 quarrying area is situated more than 1 km from any main road. As such, any visual impact that might be caused by the team are minimal. In some parts of the area, the topography of the quarrying site is slightly elevated.



Table 9 Impact evaluation for the construction phase of the project

Identified	Significance		Duration	Extent	Intensity	Probability
	NMM	MM				
Impact						
Dust	L	L	SD	L	L	P
Noise	M	L	SD	L	M	D
Safety & Security	L	L	SD	O	L	P
Visual	L	L	MD	O	L	LP

5.2.2. Operational phase of the Project

During the operation phase of the project, rock units will be cut by using a wire saw and sand will be excavated. For the purpose of conveniently refuelling company vehicles without driving long distances, a small fuel storage tank will be kept on site.

5.2.2.1. Air Quality

In terms of air quality, emissions will be given off by 4x4 vehicles, excavators, front end loaders 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 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 quarrying 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

Waste in the form of contaminated soil due to minor spillage might occur but should be prevented through the use of containment areas as provided. Solid waste will also be generated from contractors, staff members and other visitors to the area. Care should be taken when handling waste material.

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

Quarrying 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 quarrying 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*
- *Harissia martini*

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.

Table 10 Impact evaluation for the operational phase of the project

Identified Impact	Significance		Duration	Extent	Intensity	Probability
	NMM	MM				
Air Quality	M	L	LD	L	M	HP
Fire & Explosion Hazard	H	M	SD	O	M	LP
Generation of waste	M	L	LD	O	L	D
Health and Safety	H	M	MD	N	L	P
Fauna	M	L	MD	L	M	D
Vegetation	M	L	MD	L	M	D
Avifauna	M	L	MD	L	M	LP
Alien Invasive Plants	M	L	MD	L	M	P
Heritage	M	L	LD	O	H	LP



ENVIRONMENTAL MANAGEMENT PLAN FOR QUARRYING ACTIVITIES ON MINING CLAIMS 72305, 72306, 72307, 72308, AND 72309

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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 quarrying are fully aware of the environmental issues and the means to avoid or minimize the potential impacts of activities on site. The proposed quarrying 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:

1. 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 quarrying areas in connection with the quarrying 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 quarrying activities or by personnel engaged in the quarrying 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 regarding social health and well-being and environmental management throughout the lifespan of the quarrying project.

G. Financial Provisions for Quarrying

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 quarrying 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 quarrying activities.



- All archaeological sites to be identified and protected before construction 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 quarrying 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 quarrying operations.

Mitigation Measures to be enforced:

- Environmental considerations will be adhered to at all times 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 off.
- 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 quarrying.

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 quarrying 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 quarrying, best international practices will be considered as a minimum standard for operation. The bulk of the power supply to the quarrying 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 the drill rig and wire saw.

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 style="list-style-type: none"> • Control speed and operation of construction vehicles. • Prohibit idling of vehicles. • Maintenance of vehicles and equipment. • Sensitize field quarrying workers and contractors. • Workers should be provided with dust masks if working in sensitive areas. 	<ul style="list-style-type: none"> • Contractor • Site Manager 	<ul style="list-style-type: none"> • Amount of dust produced. • Level of Landscaping carried out.
Noise pollution	<ul style="list-style-type: none"> • Maintain equipment and vehicles. • Work should only be carried out only during daytime i.e. 08h00 to 17h00. • Workers should wear earmuffs if working in noisy section. • Management to ensure that noise is kept within reasonable levels. 	<ul style="list-style-type: none"> • Contractor • Management 	Amount of noise
Solid waste	<ul style="list-style-type: none"> • Any debris should be collected by a waste collection company • If trenches are dug, waste should be re-used or backfilled. • The site should have waste receptacles with bulk storage facilities at convenient points to prevent littering during quarrying. 	<ul style="list-style-type: none"> • Management 	Presence of well-Maintained receptacles and central collection point.



Oil leaks and spills	<ul style="list-style-type: none"> • Vehicles and equipment should be well maintained to prevent oil leaks. • Contractor should have a designated area where maintenance is carried out and that is protected from rainwater. • All oil products should be handled carefully. 	<ul style="list-style-type: none"> • Contractor 	No oil spills and leaks on the site
First aid	<ul style="list-style-type: none"> • A well-stocked first aid kit shall be maintained by qualified personnel 	<ul style="list-style-type: none"> • Management 	Contents of the first aid kit.
Visual	<ul style="list-style-type: none"> • Environmental considerations will always be adhered to before clearing roads, trenching and excavating. 	<ul style="list-style-type: none"> • Management 	<ul style="list-style-type: none"> • Employees will be trained on the importance of minimising visual impacts.
Archaeological Sites	<ul style="list-style-type: none"> • Buffer zones will be created around the sites. • Adhere to practical guidelines provided by an archaeologist to reduce the archaeological impact of quarrying activities. • All archaeological sites to be identified and protected before further quarrying commences. 	<ul style="list-style-type: none"> • Management 	<ul style="list-style-type: none"> • Register of all archaeological sites identified.
Occupational Health and Safety	<ul style="list-style-type: none"> • Provide Personal Protective Equipment • Train workers on personal safety and how to handle equipment and machines. • A well-stocked first aid kit shall be maintained by qualified personnel. • Report any accidents / incidences and treat and compensate affected workers. • Provide sufficient and suitable sanitary conveniences which should be kept clean. 	<ul style="list-style-type: none"> • Contractor • Management 	<ul style="list-style-type: none"> • Workers using Protective Equipment. • Presence of Well stocked First Aid Box. • Clean sanitary facilities.
Fauna	<ul style="list-style-type: none"> • 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. 	<ul style="list-style-type: none"> • Management 	<ul style="list-style-type: none"> • Regular monitoring of any unusual signs of animal habitat.
Alien Invasive Plants	<ul style="list-style-type: none"> • 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 	<ul style="list-style-type: none"> • Management • Contractor 	<ul style="list-style-type: none"> • Regular monitoring of any unusual signs of alien species.
Loss of vegetation	<ul style="list-style-type: none"> • Environmental considerations will be adhered to at all times 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 river beds, rocky outcrops and vegetation sensitive areas will be avoided. • The movement of vehicles will be restricted to certain tracks only. 	<ul style="list-style-type: none"> • Contractor • Management 	<ul style="list-style-type: none"> • Warning signs on site • restored vegetation
Operational Phase			



Environmental/ Social Impact	Proposed mitigation measures	Responsibility	Monitoring plan
Noise pollution	<ul style="list-style-type: none"> Maintain vehicles and drilling equipment. Quarrying should be carried out only during daytime. Workers to wear earmuffs if working in noisy section Management to ensure that noise is kept within reasonable levels. 	<ul style="list-style-type: none"> Contractor Management 	<ul style="list-style-type: none"> Amount of noise
Visual	<ul style="list-style-type: none"> Environmental considerations will be adhered to at all times before clearing roads, trenching and excavating. 	<ul style="list-style-type: none"> Management 	<ul style="list-style-type: none"> Employees will be trained on the importance of minimising visual impacts.
Fauna	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> Management 	<ul style="list-style-type: none"> Regular monitoring of any unusual signs of animal habitat.
Alien Invasive Plants	<ul style="list-style-type: none"> 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 	<ul style="list-style-type: none"> Management Contractor 	<ul style="list-style-type: none"> Regular monitoring of any unusual signs of alien species.
Loss of vegetation	<ul style="list-style-type: none"> Environmental considerations will be adhered to at all times 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. 	<ul style="list-style-type: none"> Contractor Management 	<ul style="list-style-type: none"> Warning signs on site restored vegetation
Solid waste	<ul style="list-style-type: none"> Minimize solid waste generated on site. Recycle waste especially waste from trenching. Debris should be collected by waste collection company. Excavation waste should be re-used or backfilled. 	<ul style="list-style-type: none"> Contractor Management 	<ul style="list-style-type: none"> Amount of waste on Site Presence of well-Maintained receptacles and central collection point.
Oil leaks and spills	<ul style="list-style-type: none"> Machinery should be well maintained to prevent oil leaks. Contractor should have a designated area where maintenance is carried out and that is protected from rainwater. All oil products should be stored in a site store and handled carefully. 	<ul style="list-style-type: none"> Contractor 	<ul style="list-style-type: none"> No oil spills and leaks on the site.



Archaeological Sites	<ul style="list-style-type: none"> • Buffer zones will be created around the sites. • Adhere to practical guidelines provided by an archaeologist to reduce the archaeological impact of quarrying activities. • All archaeological sites to be identified and protected before further quarrying commences. 	<ul style="list-style-type: none"> • Management 	<ul style="list-style-type: none"> • Update Register of all archaeological sites identified.
First aid	<ul style="list-style-type: none"> • A well-stocked first aid kit shall be maintained by qualified personnel 	<ul style="list-style-type: none"> • Management 	<ul style="list-style-type: none"> • Contents of the first aid kit.
Fire preparedness	<ul style="list-style-type: none"> • Firefighting drills carried out regularly. • Firefighting emergency response plan. • Ensure all firefighting equipment are regularly maintained, serviced and inspected. • Fire hazard signs and directions to emergency exit, route to follow and assembly point in case of any fire incidence. 	<ul style="list-style-type: none"> • Management 	<ul style="list-style-type: none"> • Number of fire drills carried. • Proof of inspection on firefighting equipment. • Fire Signs put up in strategic places. • Availability of firefighting equipment.
Environment Health and Safety	<ul style="list-style-type: none"> • Train workers on personal safety and disaster preparedness. • A well-stocked first aid kit shall be maintained by qualified personnel. • Report any accidents / incidences and treat and compensate affected workers. • Provide sufficient and suitable sanitary conveniences which should be kept clean. • Conduct Annual Health and Safety Audits. 	<ul style="list-style-type: none"> • Management 	<ul style="list-style-type: none"> • Provide sanitary facilities. • Copies of Annual Audit
Decommissioning Phase			
Environmental/Social Impact	Proposed mitigation measures	Responsibility	Monitoring plan/indicator
Noise & Air pollution	<ul style="list-style-type: none"> • Maintain plant equipment. • Decommissioning works to be carried out only during daytime. • Workers working in noisy section to wear earmuffs. • Workers should be provided with dust masks. 	<ul style="list-style-type: none"> • Contractor • Management 	<ul style="list-style-type: none"> • Amount of noise
Disturbed Physical environment	<ul style="list-style-type: none"> • Undertake a complete environmental restoration programme and introducing appropriate vegetation 	<ul style="list-style-type: none"> • Management 	
Solid waste	<ul style="list-style-type: none"> • Solid waste should be collected by a contracted waste collection company • Excavation waste should be re-used or backfilled. 	<ul style="list-style-type: none"> • Contractor • Management 	<ul style="list-style-type: none"> • Amount of waste on Site. • Presence of well-maintained receptacles and central collection point.



Occupational Health and Safety	<ul style="list-style-type: none"> • Provide Personal Protective Equipment. • Train workers on personal safety and how to handle equipment and machines. • A well-stocked first aid kit shall be maintained by qualified personnel. • Demarcate area under decommissioning. 	<ul style="list-style-type: none"> • Contractor 	<ul style="list-style-type: none"> • Workers using Protective Equipment. • Presence of a First Aid Box.
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6.5 Monitoring, Auditing and Reporting

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:

1. 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 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 quarrying 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 quarrying 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 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 quarrying 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 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 quarrying 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 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 quarrying 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 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.



7. Public Participation Process

The public participation process commenced with a total of more than 4 newspaper advertisements in two widely distributed newspapers (New Era and the Windhoek Observer) for three 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 farm fences as well. Registered mail letters were also sent to the farm owners.

Interested and affected parties that were notified directly include surrounding farmers, government departments, regional council, Namwater, Chamber of Mines and individuals that may be affected by the quarrying activities. No negative concerns were received at this stage. 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
Oliver Krappmann	Gecko Namibia	061 305444	oliver@gecko.na		
Frank Löhnert	Access Property Innovations CC	081 129 4770	flohnert@iway.na	Who will be conducting the Flora / Biodiversity assessments?	We have not yet decided on who will do the Flora specialist study,
Morne du Toit	Flightec Solutions (Pty) Ltd	064 425 350	info@uasflightec.com		



8. Conclusion

The scoping report is prepared for the Environmental Impact Assessment for quarrying on an area which is Located 35 km northeast of Arandis, on farm Hakskeen within the Erongo Region. Environmental scoping is a critical step in the preparation of an EIA for the proposed quarrying activities.

Basically, dolerite quarrying involves cutting channels on all sides of large, rectangular sections of dolerite called quarry blocks. These blocks usually have an open face, and once the ends and backs of the doorstep-like ledges are channelled loose, horizontal lift holes are drilled along the bottom of the open face.

With the potential employment of 27 people, this means that 27 families will benefit from the project during the quarrying 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 quarrying site will be sourced from the proponent's own generator.

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



<i>Felis nigripes</i>	SMALL - SPOTTED CAT	INDETERMINATE; PERIPHERAL; RARE?	RARELY
<i>Leptailurus serval</i>	SERVAL	AMBIGUOUS & SUPERFICIAL	RARELY
<i>Caracal caracal</i>	CARACAL	SECURE	ABUNDANTLY
<i>Panthera pardus</i>	LEOPARD	SECURE? & SUPERFICIAL	RARELY
<i>Panthera leo</i>	LION	AMBIGUOUS(END ANGERED) & SUPERFICIAL	EXTINCT
<i>Acinonyx jubatus</i>	CHEETAH	INADEQUATELY KNOWN (ENDANGERED?) & SUPERFICIAL	ABUNDANTLY
<i>Civettictis civetta</i>	CIVET	AMBIGUOUS, RARE? & SUPERFICIAL	RARELY
<i>Genetta maculata</i>	SMALL-SPOTTED GENET	SECURE - SP (taxonomy)	ABUNDANTLY
<i>Galarella sanguinea</i>	SLENDER MONGOOSE	SECURE	ABUNDANTLY
<i>Helogale parvula</i>	DWARF MONGOOSE	SECURE	ABUNDANTLY
<i>Mungos mungo</i>	BANDED MONGOOSE	SECURE	ABUNDANTLY
<i>Cynictis penicillata</i>	YELLOW MONGOOSE	SECURE	ABUNDANTLY
<i>Crocuta crocuta</i>	SPOTTED HYAENA	SECURE? & SUPERFICIAL	EXTINCT
<i>Parahyaena brunnea</i>	BROWN HYAENA	INADEQUATELY KNOWN (ENDANGERED?) & SUPERFICIAL	OCCASIONALLY
<i>Proteles cristatus</i>	AARDWOLF	INADEQUATELY KNOWN (ENDANGERED?) & SUPERFICIAL	ABUNDANTLY
<i>Canis mesomelas</i>	BLACK-BACKED JACKAL	SECURE	ABUNDANTLY
<i>Lycaon pictus</i>	WILD DOG	ENDANGERED & SUPERFICIAL	EXTINCT
<i>Otocyon megalotis</i>	BAT-EARED FOX	ENDANGERED? & SUPERFICIAL- SP (taxonomy)	RARELY
<i>Vulpes chama</i>	CAPE FOX	ENDANGERED?	RARELY
<i>Ictonyx striatus</i>	STRIPED POLECAT	SECURE	ABUNDANTLY
<i>Mellivora capensis</i>	HONEY BADGER	SECURE	RARELY
<i>Poecilogle albinucha</i>	AFRICAN STRIPED WEASEL	AMBIGUOUS(RAR E?)	RARELY
<i>Manis temminckii</i>	SAVANNA PANGOLIN	ENDANGERED & SUPERFICIAL	RARELY
<i>Phacochoerus africanus</i>	SOUTHERN WARTHOG	SECURE	ABUNDANTLY
<i>Giraffa camelopardalis</i>	GIRAFFE	ENDANGERED? & SUPERFICIAL	EXTINCT
<i>Alcelaphus buselaphus</i>	RED HARTEBEEST	SECURE ?	ABUNDANTLY
<i>Antidorcas marsupialis</i>	SPRINGBOK	SECURE	
<i>Connochaetes taurinus</i>	BLUE WILDEBEEST	INADEQUATELY KNOWN (ENDANGERED?) & SUPERFICIAL	ABUNDANTLY
<i>Hippotragus equinus</i>	ROAN	ENDANGERED & SUPERFICIAL	ABUNDANTLY
<i>Madoqua damarensis</i>	DAMARA DIK-DIK	INADEQUATELY KNOWN	RARELY
<i>Oryx gazella</i>	GEMSBOK	SECURE	ABUNDANTLY
<i>Raphicerus campestris</i>	STEENBOK	SECURE	ABUNDANTLY
<i>Sylvicapra grimmia</i>	COMMON DUIKER	SECURE	ABUNDANTLY
<i>Syncerus caffer</i>	BUFFALO	INSUFFICIENTLY KNOWN & SUPERFICIAL	ABUNDANTLY
<i>Tragelaphus oryx</i>	ELAND	INADEQUATELY KNOWN & SUPERFICIAL	ABUNDANTLY
<i>Tragelaphus strepsiceros</i>	GREATER KUDU	SECURE	ABUNDANTLY



<i>Equus burchelli</i>	PLAINS ZEBRA	INADEQUATELY KNOWN & SUPERFICIAL	EXTINCT
<i>Ceratotherium simum</i>	WHITE RHINOCEROS	EXTINCT & REINTRODUCED (non topotypical stock)	EXTINCT
<i>Diceros bicornis</i>	BLACK RHINOCEROS	ENDANGERED & SUPERFICIAL	EXTINCT
<i>Loxodonta africana</i>	AFRICAN ELEPHANT	ENDANGERED & SUPERFICIAL	EXTINCT
<i>Orycteropus afer</i>	AARDVARK	SECURE ?	ABUNDANTLY
<i>Elephantulus intufi</i>	BUSHVELD SENGI	ENDEMIC AND SECURE	ABUNDANTLY

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

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



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

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

SCIENTIFIC NAME	COMMON NAME	STATUS IN NAMIBIA
<i>Accipiter badius</i>	Little Banded Goshawk	Secure
<i>Accipiter ovampensis</i>	Ovambo Sparrowhawk	Secure
<i>Actophilornis africanus</i>	African Jacana	Secure
<i>Agapornis roseicollis</i>	Rosy faced Lovebird	Secure
<i>Anastomus lamelligerus</i>	Openbilled Stork	Secure
<i>Anthus cinnamomeus</i>	Richard's Pipit	Secure
<i>Apus affinis</i>	Little Swift	Secure
<i>Apus apus</i>	European Swift	Secure



<i>Apus caffer</i>	Whiterumped Swift	Secure
<i>Apus melba</i>	Alpine Swift	Secure
<i>Aquila nipalensis</i>	Steppe Eagle	Secure -
<i>Aquila rapax</i>	Tawny Eagle	Endangered
<i>Aquila wahlbergi</i>	Wahlberg's Eagle	Secure
<i>Ardeotis kori</i>	Kori Bustard	Secure
<i>Batis molitor</i>	Chinspot Batis	Secure
<i>Batis pririt</i>	Pirit Batis	Secure
<i>Bubalornis niger</i>	Redbilled Buffalo Weaver	Secure
<i>Burhinus capensis</i>	Spotted Dikkop	Secure
<i>Buteo buteo</i>	Steppe Buzzard	Secure -
<i>Calamonastes fasciolatus</i>	Barred Warbler	Secure
<i>Calendulauda sabota</i>	Sabota Lark	Secure
<i>Camaroptera brevicaudata</i>	Greybacked Camaroptera	Secure
<i>Caprimulgus pectoralis</i>	Fierynecked Nightjar	Secure
<i>Caprimulgus rufigena</i>	Rufouscheeked Nightjar	Secure
<i>Ceryle rudis</i>	Pied Kingfisher	Secure
<i>Chrysococcyx caprius</i>	Diederik Cuckoo	Secure
<i>Chrysococcyx klaas</i>	Klaas's Cuckoo	Secure
<i>Ciconia abdimii</i>	Abdim's Stork	Secure
<i>Cinnyris mariquensis</i>	Marico Sunbird	Secure
<i>Circaetus pectoralis</i>	Blackbreasted Snake Eagle	Secure
<i>Cisticola chiniana</i>	Rattling Cisticola	Secure
<i>Cisticola rufilatus</i>	Tinkling Cisticola	Secure
<i>Clamator glandarius</i>	Great Spotted Cuckoo	Secure
<i>Coracias caudata</i>	Lilacbreasted Roller	Secure
<i>Coracias garrulus</i>	European Roller	Secure -
<i>Coracias naevia</i>	Purple Roller	Secure
<i>Corvinella melanoleuca</i>	Longtailed Shrike	Secure
<i>Corvus capensis</i>	Black Crow	Secure
<i>Corythaixoides concolor</i>	Grey Lourie	Secure
<i>Creatophora cinerea</i>	Wattled Starling	Secure
<i>Crithagra flaviventris</i>	Yellow Canary	Secure
<i>Cuculus clamosus</i>	Black Cuckoo	Secure
<i>Cuculus gularis</i>	African Cuckoo	Secure
<i>Cursorius temminckii</i>	Temminck's Courser	Secure
<i>Cypsiurus parvus</i>	Palm Swift	Secure
<i>Delichon urbicum</i>	House Martin	Secure -
<i>Dicrurus adsimilis</i>	Forktailed Drongo	Secure
<i>Elanus caeruleus</i>	Blackshouldered Kite	Secure
<i>Emberiza flaviventris</i>	Goldenbreasted Bunting	Secure
<i>Emberiza tahapisis</i>	Rock Bunting	Secure
<i>Eremomela icteropygialis</i>	Yellowbellied Eremomela	Secure
<i>Eremopterix verticalis</i>	Greybacked Finchlark	Secure
<i>Erythropygia leucophrys</i>	Whitebrowed Robin	Secure
<i>Erythropygia paena</i>	Kalahari Robin	Secure
<i>Estrilda erythronotos</i>	Blackcheeked Waxbill	Secure
<i>Eupodotis afraoides</i>	Whitequilled Korhaan	Secure
<i>Eupodotis ruficrista</i>	Redcrested Korhaan	Secure
<i>Eurocephalus anguitemens</i>	Whitecrowned Shrike	Secure
<i>Falco biarmicus</i>	Lanner Falcon	Secure
<i>Falco chicquera</i>	Rednecked Falcon	Secure
<i>Falco subbuteo</i>	Hobby Falcon	Secure -
<i>Falco tinnunculus</i>	Rock Kestrel	Secure
<i>Falco vespertinus</i>	Western Redfooted Kestrel	Secure
<i>Francolinus adspersus</i>	Redbilled Francolin	Secure
<i>Francolinus sephaena</i>	Crested Francolin	Secure
<i>Francolinus swainsonii</i>	Swainson's Francolin	Secure
<i>Gallinago nigripennis</i>	Ethiopian Snipe	Secure
<i>Gyps africanus</i>	Whitebacked Vulture	Near Threatened
<i>Hieraaetus pennatus</i>	Booted Eagle	Endangered
<i>Hirundo abyssinica</i>	Lesser Striped Swallow	Secure



<i>Hirundo cucullata</i>	Greater Striped Swallow	Secure
<i>Hirundo fuligula</i>	Rock Martin	Secure
<i>Hirundo rustica</i>	European Swallow	Secure -
<i>Hirundo semirufa</i>	Redbreasted Swallow	Secure
<i>Lamprotonis australis</i>	Burchell's Starling	Secure
<i>Lamprotonis nitens</i>	Glossy Starling	Secure
<i>Laniarius atrococcineus</i>	Crimsonbreasted Shrike	Secure
<i>Lanius collaris</i>	Fiscal Shrike	Secure
<i>Lanius collurio</i>	Redbacked Shrike	Secure -
<i>Lanius minor</i>	Lesser Grey Shrike	Secure -
<i>Melaenornis infuscatus</i>	Chat Flycatcher	Secure
<i>Melaenornis mariquensis</i>	Marico Flycatcher	Secure
<i>Melierax canorus</i>	Pale Chanting Goshawk	Secure
<i>Merops apiaster</i>	European Bee-Eater	Secure -
<i>Merops hirundineus</i>	Swallowtailed Bee-Eater	Secure
<i>Micronisus gabar</i>	Gabar Goshawk	Secure
<i>Milvus migrans</i>	Black Kite	Secure -
<i>Milvus parasitus</i>	Yellowbilled Kite	Secure
<i>Mirafra passerina</i>	Monotonous Lark	Secure
<i>Monticola brevipes</i>	Shorttoed Rock Thrush	Secure
<i>Muscicapa striata</i>	Spotted Flycatcher	Secure -
<i>Nectarinia fusca</i>	Dusky Sunbird	Secure
<i>Nectarinia talatala</i>	Whitebellied Sunbird	Secure
<i>Nilaus afer</i>	Brubru	Secure
<i>Numida meleagris</i>	Helmeted Guineafowl	Secure
<i>Oena capensis</i>	Namaqua Dove	Secure
<i>Onychognathus naboroupp</i>	Palewinged Starling	Secure
<i>Parisoma subcaeruleum</i>	Titbabbler	Secure
<i>Parus cinerascens</i>	Ashy Tit	Secure
<i>Passer diffusus</i>	Southern Grey-headed Sparrow	Secure
<i>Passer motitensis</i>	Great Sparrow	Secure
<i>Plocepasser mahali</i>	Whitebrowed Sparrowweaver	Secure
<i>Ploceus velatus</i>	Masked Weaver	Secure
<i>Polemaetus bellicosus</i>	Martial Eagle	Endangered
<i>Polihierax semitorquatus</i>	Pygmy Falcon	Secure
<i>Prinia flavicans</i>	Blackcheded Prinia	Secure
<i>Psophocichla litsitsirupa</i>	Groundscraper Thrush	Secure
<i>Pterocles bicinctus</i>	Doublebanded Sandgrouse	Secure
<i>Pterocles namaqua</i>	Namaqua Sandgrouse	Secure
<i>Pycnonotus nigricans</i>	Redeyed Bulbul	Secure
<i>Pytilia melba</i>	Melba Finch	Secure
<i>Quelea quelea</i>	Redbilled Quelea	Secure
<i>Rhinopomastus cyanomelas</i>	Scimitar-billed Woodhoopoe	Secure
<i>Rhinoptilus chalcopterus</i>	Bronzewinged Courser	Secure
<i>Scopus umbretta</i>	Hamerkop	Secure
<i>Serinus atrogularis</i>	Blackthroated Canary	Secure
<i>Smutsonis africanus</i>	Doublebanded Courser	Secure
<i>Sporopipes squamifrons</i>	Scalyfeathered Finch	Secure
<i>Streptopelia capicola</i>	Cape Turtle Dove	Secure
<i>Streptopelia senegalensis</i>	Laughing Dove	Secure
<i>Struthio camelus</i>	Ostrich	Secure
<i>Sylvietta rufescens</i>	Longbilled Crombec	Secure
<i>Tchagra australis</i>	Threestreaked Tchagra	Secure
<i>Terathopius ecaudatus</i>	Bateleur	Endangered
<i>Thripias namaquus</i>	Bearded Woodpecker	Secure
<i>Tockus erythrorhynchus</i>	Redbilled Hornbill	Secure
<i>Tockus leucomelas</i>	Southern Yellowbilled Hornbill	Secure
<i>Tockus nasutus</i>	Grey Hornbill	Secure
<i>Torgos tracheliotus</i>	Lappetfaced Vulture	Vulnerable
<i>Tricholaema leucomelas</i>	Pied Barbet	Secure
<i>Turdoides bicolor</i>	Pied Babbler	Secure
<i>Turtur chalcospilos</i>	Greenspotted Dove	Secure



<i>Upupa epops</i>	Hoopoe	Secure
<i>Uraeginthus angolensis</i>	Blue Waxbill	Secure
<i>Uraeginthus granatinus</i>	Violeteared Waxbill	Secure
<i>Urocolius indicus</i>	Redfaced Mousebird	Secure
<i>Vanellus armatus</i>	Blacksmith Plover	Secure
<i>Vanellus coronatus</i>	Crowned Plover	Secure
<i>Vanellus senegallus</i>	Wattled Plover	Secure
<i>Vidua regia</i>	Shafttailed Whydah	Secure
<i>Zosterops senegalensis</i>	Yellow White-Eye	Secure

Appendix B



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, 2020
- Bachelor 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:**

	<i>Speaking</i>	<i>Reading</i>	<i>Writing</i>
English	Excellent	Excellent	Excellent
Afrikaans	Excellent	Good	Good
Oshiwambo	Excellent	Excellent	Excellent
- 10 **Employment Record:**

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

11. Detailed Tasks Assigned

- Project Local Consultant
- Client Liaison

12. Past Projects Undertaken

Name of assignment or project: Catchment Management Plan for the swakoppoort dam namibia
Year: 2020
Location: Okahandja, Namibia.
Client: Namwater

<ul style="list-style-type: none"> • Water Sampling and Reporting • Project Management • Project Supervision 	<p>Main project features: Catchment Management Plan for the Swakoppoort Dam.</p> <p>Positions held: Local Consultant</p> <p>Activities performed: Water Sampling, logistics, site inspections and report writing.</p>
<ul style="list-style-type: none"> • Project Leader • Client Liaison • Public Participation • Report Writing • Project Management • Project Supervision 	<p>Name of assignment or project: Environmental Impact Assessment for the Development of a Tantalite Mine, Southern Namibia.</p> <p>Year: 2020</p> <p>Location: Warmbad, Karas Region</p> <p>Client: Orange River Pegmatite (Pty) Ltd</p> <p>Main project features: Environmental Management</p> <p>Positions held: Lead Consultant</p> <p>Activities performed: Project Management, Report Writing, Public Participation, Site Inspections, Stakeholder Engagement, Specialist Study Inputs and Map production.</p>
<ul style="list-style-type: none"> • Project Leader • Client Liaison • Public Participation • Report Writing • Project Management • Project Supervision 	<p>Name of assignment or project: Environmental Impact Assessment for Proposed Development of A Medical Tourism University Hospital In Henties Bay</p> <p>Year: 2020</p> <p>Location: Henties Bay, Erongo Region</p> <p>Client: Franco Civil Engineering Cc</p> <p>Main project features: Environmental Impact Assessment.</p> <p>Positions held: Lead Consultant</p> <p>Activities performed: Project Management, Report Writing, Public Meetings, Site Inspections, Stakeholder Engagement, Specialist Study Inputs and Map production.</p>
<ul style="list-style-type: none"> • Project Leader • Client Liaison • Public Participation • Report Writing • Project Management • Project Supervision 	<p>Name of assignment or project: Environmental Impact Assessment for the Development of a Marble Mine.</p> <p>Year: 2020</p> <p>Location: 10 km north of Karibib</p> <p>Client: Sunsand Investments (Pty) Ltd</p> <p>Main project features: Environmental Impact Assessment.</p> <p>Positions held: Lead Consultant</p> <p>Activities performed: Project Management, Report Writing, Public Meetings, Site Inspections, Stakeholder Engagement, Specialist Study Inputs and Map production.</p>
<ul style="list-style-type: none"> • Project Leader • Client Liaison • Public Participation • Report Writing • Project Management • Project Supervision 	<p>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.</p> <p>Year: 2020</p> <p>Location: 40 km northwest of Arandis</p> <p>Client: Rockstar Mining cc</p> <p>Main project features: Environmental Impact Assessment.</p> <p>Positions held: Lead Consultant</p> <p>Activities performed: Project Management, Report Writing, Public Meetings, Site Inspections, Stakeholder Engagement, Specialist Study Inputs and Map production.</p>

<ul style="list-style-type: none"> • Project Leader • Client Liaison • Public Participation • Report Writing • Project Management • Project Supervision 	<p>Name of assignment or project: Environmental Impact Assessment for Sand Mining Activities on Mining Claim 72027 Year: 2020 Location: 30 km North of Ongwediva Client: Comitx Investments Group 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.</p>
<ul style="list-style-type: none"> • Project Leader • Client Liaison • Public Participation • Report Writing • Project Management • Project Supervision 	<p>Name of assignment or project: Environmental Impact Assessment for Mineral Exploration Activities on EPL 6408 Year: 2020 Location: 5 km south of Karibib Client: Antler Gold Inc 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.</p>
<ul style="list-style-type: none"> • Project Leader • Client Liaison • Public Participation • Report Writing • Project Management • Project Supervision 	<p>Name of assignment or project: Environmental Impact Assessment for Dimension Stone Quarrying Activities on Mining Claims 71896-71900 Year: 2020 Location: 15 km north of Karibib Client: Triple Tas Trading 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.</p>
<ul style="list-style-type: none"> • Project Leader • Client Liaison • Public Participation • Report Writing • Project Management • Project Supervision 	<p>Name of assignment or project: Environmental Impact Assessment for Mineral Exploration on EPL 7930 Year: 2020 Location: 40 km northwest of Karibib Client: Antler Gold Inc 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.</p>
<ul style="list-style-type: none"> • Project Leader • Client Liaison • Public Participation 	<p>Name of assignment or project: Environmental Impact Assessment for Dimension Stone Quarrying Activities on</p>

<ul style="list-style-type: none"> • Report Writing • Project Management • Project Supervision 	<p>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.</p>
<ul style="list-style-type: none"> • Project Leader • Client Liaison • Public Participation • Report Writing • Project Management • Project Supervision 	<p>Name of assignment or project: Environmental Impact Assessment for Mineral Exploration on EPL 5702 Year: 2020 Location: 30 km South of Kamanjab Client: Emor Mining (Pty) Ltd 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.</p>
<ul style="list-style-type: none"> • Project Leader • Client Liaison • Public Participation • Report Writing • Project Management • Project Supervision 	<p>Name of assignment or project: Environmental Impact Assessment for the Development of a Lodge in the Daures Conservancy Area. Year: 2019 Location: 50-80 km northwest of UIS Client: !U-#Gab Ams Investment 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.</p>
<ul style="list-style-type: none"> • Project Leader • Client Liaison • Public Participation • Report Writing • Project Management • Project Supervision 	<p>Name of assignment or project: Eia For the Proposed Establishment of a Service Station on Erf 4121, Khorixas Year: 2019 Location: Khorixas Client: Noabeb's Trading Enterprises 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.</p>
<ul style="list-style-type: none"> • Project Leader • Client Liaison • Public Participation • Report Writing • Project Management • Project Supervision 	<p>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.</p>

	<p>Positions held: Lead Consultant Activities performed: Project Management, Report Writing, Public Meetings, Site Inspections, Stakeholder Engagement, Specialist Study Inputs and Map production.</p>
<ul style="list-style-type: none"> • Project Leader • Client Liaison • Public Participation • Report Writing • Project Management • Project Supervision 	<p>Name of assignment or project: Environmental Impact Assessment for Mineral Exploration Activities on Epl 5818, Central Namibia Year: 2019 Location: 40 km east of Khorixas Client: Gravity Empire Investments (Pty) Ltd 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.</p>
<ul style="list-style-type: none"> • Project Leader • Client Liaison • Public Participation • Report Writing • Project Management • Project Supervision 	<p>Name of assignment or project: Environmental Impact Assessment for Mineral Exploration on Epl 6374 Year: 2019 Location: 50 km South of Opuwo Client: Nami Geological Techniques (Pty) 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.</p>

New COVID-19 data: South Africa has arrived at the recovery stage of the pandemic

A recently published South African study set out to determine sero-positivity against SARS-CoV-2 before the fourth wave of COVID-19, in which the omicron variant was dominant. Sero-positivity measures the presence of antibodies against the virus; it indicates past infection. The study focused on Gauteng, the country's economic hub. Ozayr Patel asked Shabir Madhi to unpack the results and explain why the findings suggest that South Africa has reached a turning point in the pandemic.

What we found

The results show the levels of sero-positivity – in other words what percentage of people have antibodies to the virus – among just over 7,000 people from whom samples were taken. From these results the following rates were calculated:

- In those under 12 years of age, none of who received a COVID-19 vaccine, 56% showed presence of antibodies to SARS-CoV-2
- In those over 50 it was 80%, including 70% if unvaccinated and 93% if vaccinated

- In high density inner city areas the sero-positivity prevalence was 85%

Using the seroprevalence data, together with COVID-19 attributable deaths using excess mortality data from the South African Medical Research Council, the study was also able to impute the risk of dying following infection by SARS-CoV-2 prior to the Omicron wave in South Africa. This infection fatality risk for COVID-19 was 0.57% pre-omicron in Gauteng. This is substantially higher than 0.019% imputed for seasonal flu, which infected one-third of the population each year pre-COVID, calculated using similar methods.

Vaccination coverage: We discovered high levels of hybrid immunity: that is immunity gained from a combination of previous infections plus vaccinations.

At the time of the onset of the omicron wave, 36% of people in Gauteng had at least one dose of the vaccine. This was higher – 61% – in those over the age of 50. (This cohort was responsible for more than 80% of deaths pre-omicron.)

Based on sero-survey, 70% of vaccinated people were also infected pre-omicron. Hence they would have had substantial hybrid immunity, which has



been shown to induce a broader repertoire of immune responses against the virus. Such hybrid immunity in South Africa has, however, come at the cost of loss of 300,000 lives based on South African Medical Research Council excess mortality estimates. These are three-fold higher than the official recorded number of deaths.

Based on another study, the hybrid

immunity is expected to confer greater protection against infection and mild COVID-19 compared with immunity only from vaccine or natural infection.

Hospitalisations and death rates: Our study also analysed the temporal trends in COVID-19 cases, hospitalisations and deaths (recorded and COVID attributable from excess mortality) from the start of the pandemic up until the tail end of the Omicron wave. The study found a massive decoupling between the number of people becoming infected with the virus relative to COVID hospitalisation and death rates during the course of omicron compared with earlier waves. This was true across all adult age groups.

The omicron wave was associated with 10% of all hospitalisations since the start of the pandemic, whereas 44% of hospitalisations had transpired during the course of the Delta variant wave. More impressively, only 3% of COVID deaths since the start of the pandemic occurred during the omicron wave, compared with 50% during the delta dominant wave.

The findings of decoupling of infections and severe or fatal COVID-19 were similar in the 50-59 year age group. In this group the omicron wave contributed to 15% of recorded COVID hospitalisations and 2% of deaths since the start of pandemic. This compares with 46% of hospitalisations and 53% of deaths occurring in the third wave, dominated by delta. The data for people over 60 years old was similar.

The survey also found that 58% of children under 12 years of age (all unvaccinated) were sero-positive. They were not more heavily affected during the Omicron wave.

The delta dominant wave which was the most severe in South Africa, coincided with South Africa's belated COVID vaccine rollout. The high death rate during that wave is an indictment of the missed opportunities that could have prevented a large percentage of the deaths which transpired. In particular, the delayed procurement and roll out of COVID-19 vaccines in South Africa, as well as the ill-informed decision to against the WHO recommendation on the continued use of the AstraZeneca vaccine which was available to in South Africa when the Beta variant was circulating in South Africa.

In summary, the omicron wave contributed to less than 5% of all COVID-19 deaths in Gauteng. Since the start of the pandemic, the delta variant wave contributed to 50% of all of the deaths. The balance is split roughly equally between the first and second waves caused by ancestry and the beta variant.

Our findings also show that natural infection has been high and is playing a major role in how the pandemic has unfolded especially in countries with low to moderate COVID-19 rollout. These high levels of infections have, however, resulted in a massive loss of lives; which to date is likely under-estimated in low and middle income countries as shown from the South African data. –sabc

MSME INFORMATION SESSIONS



The NIPDB invites all Micro, Small and Medium Enterprises (MSMEs) in the //Kharas and Hardap regions to the **Know2Grow (K2G)** information sessions.

K2G is a regional knowledge dissemination and capacity building initiative for MSMEs. The initiative facilitates awareness of the services, facilities and growth opportunities available for MSMEs, with a focus on financing and access to markets. It further provides an opportunity to engage and network, as the NIPDB will be joined by various private and public sector business support organisations (BSOs) including commercial banks, various government ministries and/or agencies, and more.

Town	Venue	Date
Karasburg	Karasburg Business Park	28 February 2022
Keetmanshoop	Moth Hall (Keetmanshoop Municipality)	1 March 2022
Bethanie	Bethanie Community Hall	2 March 2022
Lüderitz	Old Power Station	3 March 2022
Mariental	Persianer Hall	8 March 2022
Maltahohe	PA Smith Primary School Hall	9 March 2022

Time for all sessions: 10h00 to 13h00

Who may attend: Registered MSMEs operating in, but not limited to, the following sectors: Logistics, Agriculture, Horticulture and Aquaculture.

For enquiries, please email K2G@nipdb.com or call 083 333 8672 / 083 333 8614.

C/O Garten Street
& Dr. A. B. May Street

info@nipdb.com
www.nipdb.com

Private Bag 13340,
Windhoek, Namibia

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ABOUT NIPDB

The Namibia Investment Promotion and Development Board ("NIPDB") is a non-profit association incorporated under section 21 of the Companies Act, Act No. 28 of 2004 ("the Companies Act"). The Board was established as an autonomous entity in the office of the Presidency and is declared a Public Enterprise in accordance with section 2 of the Public Enterprise Governance Act, Act No. 1 of 2019. The NIPDB is mandated to promote and facilitate investment by foreign and Namibian investors, and coordinate MSMEs activities across all levers of the economy, with the aim of contributing to economic development and job creation.

CALL FOR PUBLIC PARTICIPATION

ENVIRONMENTAL IMPACT ASSESSMENT FOR MINING ACTIVITIES ON MINING CLAIMS 72305-72310

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).

Project: The license area is located about 21 km northeast of Arandis, along the B2 road. The proponent intends to mine dimension stone blocks from the mining claims.

Proponent: Mr. Josia Shilunga

All interested and affected parties are hereby invited to register and submit their comments regarding the proposed project on or before **15/03/2022**. Contact details for registration and further information:

Impala Environmental Consulting
Mr. S. Andjamba
Email: eia@impalac.com, Tel: 0856630598



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General	For Sale/To Let	Offered	Offered	Legal Notices	Legal Notices	Legal Notices

CLASSIFIEDS

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- To avoid disappointment of an advertisement not appearing on the date you wish, please book timeously
- Classifieds smalls and notices: 12:00, two working days prior to placing
- Cancellations and alterations: 16:00, two days before date of publication in writing only

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 Name Change N\$402.50
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Tombstone Unveiling from N\$200.00
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ENVIRONMENTAL IMPACT ASSESSMENT FOR THE CONSTRUCTION OF A NEW CHARCOAL STORAGE AND PACKAGING PLANT

Public Consultation Notice in line with Section 21 of Regulation No. 30, under the Environmental Management Act (No. 7 of 2007), related to the EIA for the construction of A New Charcoal Storage and Packaging Plant in Arandis in Erongo Region.

Green Charcoal Namibia (GCN) has appointed KPM Environmental Consulting as the independent Environmental Assessment Practitioner to carry out the EIA process. Notice is hereby given of the commencement of the Public Consultation Process. Should you wish to be informed or to comment on the proposed project and EIA, please contact us before Thursday, 24th February 2022.

A Public Consultation meeting in Arandis is scheduled for Thursday, 24th February 2022 at Arandis Community Hall from 15h00 to 16h30.

For more information or to register as an interested or affected party contact us on:
 Tel. +264 85 474 2222 / 085 277 2797
 E-mail: info@kpmenvironmental.com

Notices

Legal Notices


CALL FOR PUBLIC PARTICIPATION ENVIRONMENTAL IMPACT ASSESSMENT FOR MINING ACTIVITIES ON MINING CLAIMS 72305-72310

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).

Project: The license area is located about 21 km northeast of Arandis, along the B2 road. The proponent intends to mine dimension stone blocks from the mining claims.

Proponent: Mr. Josia Shilunga All interested and affected parties are hereby invited to register and submit their comments regarding the proposed project on or before **15/03/2022**. Contact details for registration and further information:

Impala Environmental Consulting
 Mr. S. Andjamba
 Email: eia@impalac.com, Tel: 0856630598



We are at the SPCA – please take us home!

VACANCY ASSISTANT FACTORY MANAGER

African Deli, based in Walvis Bay, was founded in 2013 with the purpose of producing cost-effective ready to eat food as well as bring consumer-friendly packaging solutions to the market. The consumer without a fridge or protected storing space can now store our products for 24 months in a normal environment. We strive to bring healthy foods into people's homes.

The Assistant Factory Manager is responsible for facilitating manufacturing of products by leading the Production, Maintenance departments. Ensuring a standardized, optimum, efficient, and profitable world class manufacturing system is in place and will be maintained

Education & Skills:

- Honors degree in Industrial and Manufacturing Engineering OR Qualification in a relevant subject such as Manufacturing Engineering, Food Sciences and Technology,
- 6 years of experience in Food Manufacturing Pouch/ Canning (FMCg), Production and Maintenance.

Additional Competencies:

- Working knowledge of ISO 9001, ISO 14001, OHSAS 1800, FSSC 22 000
- Working knowledge of 5S, Six Sigma, TPM, Lean Manufacturing System or VSM will be a distinct advantage
- Fully proficient in MS Windows and SAP/SAGE Evolution and Advanced Excel requirement.
- Attention to detail & Good with Numbers
- Deadline oriented
- Time Management skills

Responsibilities:

- Responsible of installation and maintenance of manufacturing equipment, performance enhancement trouble shoots issues
- Proving technical support and training on new equipment
- Improve design and maintain manufacturing process to deliver product at minimum cost.
- Formulation of production planning and control systems
- Demand planning and capacity planning
- Develop and maintain production performance reporting systems.
- Participates in development of new products
- Preventative and planned Maintenance
- Championing safety, health, and environment.
- Hazard and risk identification and mitigation
- Assist Factory Manager with Inspections and internal audits
- Assist Factory Manager Accident's investigations (RCA)
- Waste management systems
- Collate and analyze data, putting together production reports for both Factory Manager and customers where necessary

Closing Date for Applications:
 05 March 2022
 (CVs with qualifications to be sent to eassist@africandeli.com)

Avacare Health Group (Avacare) cares about your privacy. Avacare and other subsidiary or affiliated companies of Avacare are committed to protecting your privacy. Avacare is an equal opportunity organization that prides itself on its diverse teams across the globe.

If you have not heard from us within 10 working days of application, please regard your application as unsuccessful.

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The Residence Occupation Policy of Windhoek requires the right hand side of 1656, (061) 228654 or 081124320 to provide comments in the case where the neighboring owner 1632 intends to operate an office (Design & Firm) Supports the SPCA



NOTICE

Please take note that **URBAN DYNAMICS AFRICA TOWN AND REGIONAL PLANNERS**, on behalf of our clients, intends to apply to the Windhoek City Council for the following:

- CONSENT TO OPERATE A HAIR STUDIO IN UNIT 2 OF THE HPPP SECTIONAL TITLE SCHEME ON ERF RE/2802 KLEIN WINDHOEK; AND**
- CONSENT TO OPERATE A MEDICAL AND DENTAL CONSULTING ROOM IN A PORTION OF UNIT 5 OF THE HPPP SECTIONAL TITLE SCHEME ON ERF RE/2802 KLEIN WINDHOEK.**


Erf re/2802, is situated in Klein Windhoek on the corner of Nelson Mandela and Hugo Hahn Streets and measures 2824m² in extent. The erf is zoned "Office" with a bulk of 0.4. The particular portion of Units 2 and 5 are located along and obtain access from Hugo Hahn Street.

The proposed hair studio is located on the first floor of the westernmost building in the complex and has a floor area of 82m².

The medical and Dental Consulting rooms is located on the ground floor of the main building and has a floor area of 114m². Parking for both these uses comply with the municipal parking requirements.

Any person objecting to the proposed use of the land as set out above may lodge such objection together with the grounds thereof, with the City Council and with the applicant in writing within 14 days after **11 March 2022**. The last day for objections will therefore be **25 March 2022**.

Urban Dynamics Africa Town and Regional Planners
 P O Box 20837 Windhoek
 Tel: 061 240300 Fax: 061 2403



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Put the **WOEMA** back into your business!

PUBLIC NOTICE

Please take note that **Kamau Town Planning and Development Specialist** has been appointed by the owner of Portion 29/H/48 Brakwater, Windhoek to apply to the City of Windhoek and the Urban and Regional Planning Board for the:

REZONING OF PORTION 29/H/48 BRAKWATER WINDHOEK, FROM RESIDENTIAL WITH A DENSITY OF 1:50 000 TO INDUSTRIAL WITH A BULK OF 1

CONSENT TO USE PORTION 29/H/48 BRAKWATER WINDHOEK FOR RESIDENTIAL, WELDING WORKSHOP AND A BUILDING MATERIAL STORAGE FACILITY PURPOSES CONSENT TO COMMENCE WITH CONSTRUCTION WHILE REZONING IS IN PROCESS

Portion 29/H/48 Brakwater is located in the Brakwater settlement that is located 20km North of the Windhoek Central Business District. The Brakwater settlement comprises mainly of residential, business and industrial land uses. The respective portion is located to the east of the B1 main road.

The portion is bordered by the Umti lodge to the west, Indraai Abattoir and industrial works such as Spare Centre Namibia, Bart's Motor Workshop etc. the south, more industrial properties to the east and the Mix informal settlement further north of the portion.

The portion lies on a flat surface and measures 52 564sqm in extent, with a current zoning of 'Residential' and a density of 1:50 000m². There are three existing houses on the Erf measuring 385sqm, 147sqm, 88sqm respectively.

Please further take note that -

(a) For more inquiries regarding the rezoning application, visit the Department of Town Planning, 5th floor, office number 522 at the City of Windhoek;

(b) any person having objections to the rezoning and consent concerned or who wants to comment, may in writing lodge such objections and comments, together with the grounds, with the Chief Executive Officer of the City of Windhoek, and with the applicant within 14 days of the last publication of this notice, i.e. no later than **23 March 2022**.

PUBLIC COMMENTS DEADLINE: 23 March 2022



NOTICE

Please take note that Kamau Town Planning and Development Specialist has been appointed by the owner of Erf 3170 Salk Street, Windhoek to apply to the City of Windhoek for the:

- REZONING OF ERF 3170 (A PORTION OF CONSOLIDATED ERF 3150) WINDHOEK FROM "RESIDENTIAL" WITH A DENSITY OF 1:900M2 TO OFFICE WITH A BULK OF 0.4.**
- SUBSEQUENTLY CONSENT BE GRANTED TO OPERATE A BOUTIQUE HOTEL ON THE RESPECTIVE ERF (ERF 3170 (A PORTION OF CONSOLIDATED ERF 3150) WINDHOEK**
- CONSENT TO USE THE RESPECTIVE ERF AS "OFFICE" AND BOUTIQUE HOTEL WHILE THE REZONING IS IN PROGRESS**, as according to the Windhoek Town Planning Scheme.

Erf 3170 (a portion of consolidated Erf 3150) Windhoek, is located within the Windhoek West suburb in Windhoek, Salk Street. The respective Erf measures 1006m² in extent. The owner wishes to operate a boutique hotel and change the land use of the Erf from "Residential" with a density of 1:900m² to "Office" with a bulk of 1.0. Please further take note that -

(a) For more enquiries regarding the consent application, visit the Department of Town Planning at the City of Windhoek;

(b) any person having objections to the rezoning concerned or who wants to comment, may in writing lodge such objections and comments, together with the grounds, with the Chief Executive Officer of the City of Windhoek, and with the applicant within 14 days of the last publication of this notice, i.e. no later than **15th of March 2022**.

No. 04 Wagner street | Windhoek west | c: +264 81 3290584 P.O. Box 22296 | Windhoek |t: +264 61251975 | f: +264 61 304219 | fenni@kamau-tpds.com.w: www.kamau-architects.com

REPUBLIC OF NAMIBIA MINISTRY OF TRADE & INDUSTRY LIQUOR ACT, 1998 NOTICE OF APPLICATION TO A COMMITTEE IN TERMS OF THE LIQUOR ACT, 1998 (regulations 14, 26 & 33)

Notice is given that an application in terms of the Liquor Act, 1998, particulars of which appear below, will be made to the Regional Liquor Licensing Committee, Region:

OMUSATI

- Name and postal address of applicant, **NDINELAGO IIPINGE IIPINGE**
- Name of business or proposed **FAT JOE SHEBEEEN**
- Address/Location of premises to which Application relates: **ONAANDA LOCATION ONAAND VILLAGE**
- Nature and details of application: **SHEBEEEN LIQUOR LICENCE**
- Clerk of the court with whom Application will be lodged: **OUTAPI MAGISTRATE**
- Date on which application will be Lodged: **14-28 FEBRUARY 2022**
- Date of meeting of Committee at Which application will be heard: **13 APRIL 2022**

Any objection or written submission in terms of section 28 of the Act in relation to the applicant must be sent or delivered to the Secretary of the Committee to reach the Secretary not less than 21 days before the date of the meeting of the Committee at which the application will be heard.

Nigeria urges respect towards Africans at Ukrainian border

Increasing reports cite African citizens being blocked from crossing the Ukrainian border.

The presidency also cited a video that has been widely shared on social media showing a Nigerian woman with her young baby being forcibly made to give up her seat to another person.

“One group of Nigerian students having been repeatedly refused entry into Poland have concluded they have no choice but to travel again across Ukraine and attempt to exit the country via the border with Hungary,” read the statement

“While efforts to begin talks between Russia and Ukraine are under way, paramount on our minds is the safety and human rights of

some four thousand Nigerian citizens and many others from friendly African nations today stranded in Ukraine,” it added.

The same concerns were shared on Sunday by Nigeria’s foreign minister Geoffrey Onyeama who is said to have spoken about the matter with his Ukrainian counterpart.

“He asserted that Ukrainian border guards have been instructed to allow all foreigners to leave. He promised to investigate and revert quickly,” Onyeama said on Twitter.

Meanwhile, Poland’s ambassador to Nigeria Joanna Tarnawska has dismissed claims of unfair treatment. “Everybody receives equal treatment,” she told Nigerian journalists. “I can assure you that

I have reports that already some Nigerian nationals have crossed the border into Poland.”

The reports come in the middle of a war that started on Thursday after Russia’s President Vladimir Putin ordered troops to enter Ukraine following weeks of military build-up along the two countries’ border.

The conflict has prompted more than 500,000 people to flee Ukraine, according to the United Nations. UN refugee agency spokeswoman Shabia Mantoo said on Monday that the latest count had 281,000 people entering Poland, more than 84,500 in Hungary, about 36,400 in Moldova, more than 32,500 in Romania and about 30,000 in Slovakia.

SOURCE: AL JAZEERA



An African man rests as refugees from many countries - Africa, the Middle East and India - mostly students of Ukrainian universities are at the Medyka pedestrian border crossing fleeing the conflict in Ukraine, in eastern Poland [File: Wojtek Radwanski/AFP]



At least 20 civilians killed in attack in eastern Congo: Report

A resident of the attacked village and an activist said the Allied Democratic Forces (ADF) were behind the killings.

At least 20 civilians have been killed in an attack in the northeastern region of the Democratic Republic of the Congo (DRC), Reuters news agency has reported.

The attack occurred in the village of Kikura late Sunday, Odette Zawadi, the president of a local activist organisation, told the news agency.

The assailants struck at about 9 pm, wielding machetes and burning houses, the activist said. She and a local resident, Claude Kalinde, blamed the bloodshed on the Allied Democratic Forces (ADF) armed group.

The attack comes months after DRC and Ugandan troops launched a joint operation against the ADF, which has killed thousands of civilians in the region since 2013.

Since the operation began in late November, the group has continued to attack and kill civilians. In December, at least 16 people were killed in an attack suspected to have been carried out by the group in the rural commune of Mangina.

“We already didn’t seem to have confidence in these so-called joint operations. How can you explain that 20 people are killed in the presence of these two forces?” Zawadi told Reuters.

Kalinde, who also said that 20 bodies had been recovered, said: “We thought that the coalition of the Congolese and Ugandan armies would help us, but look at how sad this is.”

The ADF was founded in Uganda in 1995. It later moved to the DRC where it is among dozens of armed groups seeking control over territory and mineral resources in the east of the country. Despite its pledged allegiance to ISIL (ISIS) in 2019, UN researchers have not found any evidence that the group controls the ADF.

Ugandan forces have launched air and artillery raids in the DRC since the beginning of the joint operation, pledging to stay in the neighbouring country for as long as necessary to defeat the ADF.

However, the intervention has alarmed some Congolese, who remain wary after Uganda plundered the country’s resources during the DRC’s second civil war that raged from 1998 to 2003.

Capitaine Antony Mwalushayi, a spokesman for DRC’s army, told Reuters that soldiers in the area had been slow to learn of the latest attack because the assailants did not use firearms.

“We cannot be discouraged because the objective of the enemy is to discourage us, to separate us from the population,” he said.

SOURCE: NEWS AGENCIES

MSME INFORMATION SESSIONS



The NIPDB invites all Micro, Small and Medium Enterprises (MSMEs) in the //Kharas and Hardap regions to the **Know2Grow (K2G)** information sessions.

K2G is a regional knowledge dissemination and capacity building initiative for MSMEs. The initiative facilitates awareness of the services, facilities and growth opportunities available for MSMEs, with a focus on financing and access to markets. It further provides an opportunity to engage and network, as the NIPDB will be joined by various private and public sector business support organisations (BSOs) including commercial banks, various government ministries and/or agencies, and more.

Town	Venue	Date
Karasburg	Karasburg Business Park	28 February 2022
Keetmanshoop	Moth Hall (Keetmanshoop Municipality)	1 March 2022
Bethanie	Bethanie Community Hall	2 March 2022
Lüderitz	Old Power Station	3 March 2022
Mariental	Persianer Hall	8 March 2022
Maltahohe	PA Smith Primary School Hall	9 March 2022

Time for all sessions: 10h00 to 13h00

Who may attend: Registered MSMEs operating in, but not limited to, the following sectors: Logistics, Agriculture, Horticulture and Aquaculture.

For enquiries, please email K2G@nipdb.com or call 083 333 8672 / 083 333 8614.

C/O Garten Street
& Dr. A. B. May Street

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ABOUT NIPDB

The Namibia Investment Promotion and Development Board (“NIPDB”) is a non-profit association incorporated under section 21 of the Companies Act, Act No. 28 of 2004 (“the Companies Act”). The Board was established as an autonomous entity in the office of the Presidency and is declared a Public Enterprise in accordance with section 2 of the Public Enterprise Governance Act, Act No. 1 of 2019. The NIPDB is mandated to promote and facilitate investment by foreign and Namibian investors, and coordinate MSMEs activities across all levers of the economy, with the aim of contributing to economic development and job creation.

CALL FOR PUBLIC PARTICIPATION

ENVIRONMENTAL IMPACT ASSESSMENT FOR MINING ACTIVITIES ON MINING CLAIMS 72305-72310

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).

Project: The license area is located about 21 km northeast of Arandis, along the B2 road. The proponent intends to mine dimension stone blocks from the mining claims.

Proponent: Mr. Josia Shilunga

All interested and affected parties are hereby invited to register and submit their comments regarding the proposed project on or before **15/03/2022**. Contact details for registration and further information:

Impala Environmental Consulting
Mr. S. Andjamba
Email: eia@impalac.com, Tel: 0856630598



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