ENVIRONMENTAL SCOPING AND ASSESSMENT REPORT FOR THE PROPOSED MINERAL EXPLORATION ON EPL NO.8228

Karasburg District, Karas Region

APP-002315

2023

COMPILED BY

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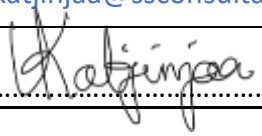
Signature:	 ……

PROPONENT:

Ms. Lusia Nghitukwa

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DEA – Department of Environmental Affairs

EMP - Environmental Management Plan

EA - Environmental assessment

ECC – Environmental Clearance Certificate

EIA – Environmental Impact Assessments

EMA – Environmental Management Act No. 7 of 2007

ESA - Environmental Scoping Assessment

I&AP – interested and affected parties.

METF – Ministry of Environment, Tourism and Forestry

MME – Ministry of Mines and Energy

M –Meters

ASL - above sea level

NDP5 – National Development Plan

GDP – Gross Domestic Product

HPPs – Harambee Prosperity Plan

LAC - Legal Assistance Centre

MOL - Ministry of Labour

NHC - National Heritage Council

PPE - Personal Protective Equipment

NNMP - Namaqua Natal Metamorphic Province

EAP - Environmental Assessment Practitioner

EXECUTIVE SUMMARY

Ms. Lusia Nghitukwa (hereinafter referred to as the proponent) has been granted an Exclusive prospecting Licence (EPL 8228) by the Ministry of Mines and Energy. The proponent intends to explore for Industrial minerals and precious metals. The EPL is located approximately 69.4 kilometres northeast of Karasburg within the Karasburg East constituency, in the Karas Region.

The project triggers listed activities in terms of the Environmental Management Act No. 7 of 2007 (EMA), therefore an Environmental Clearance Certificate is required. As part of the Environmental Clearance Certificate application, an Environmental Impact Assessment is being undertaken in compliance with the Environmental Management Act No. 7 of 2007 and its associated regulations. This Environmental Scoping Report and Environmental Management Plan shall be submitted to the competent authorities as part of the application for the Environmental Clearance Certificate. The scoping study is conducted to identify the potential environmental impacts caused by the proposed exploration project. Furthermore, the proponent is guided by various legislations and policies which includes the Mineral Act, the EMA etc.

The proposed exploration program will involve both non-invasive and invasive exploration methods. Non-invasive exploration methods will include activities such as geological desktop studies, interpretation of aeromagnetic and remote sensing images, field mapping, ground geophysical surveys, and sampling of surface rock and soil. Invasive exploration methods, include drilling (reverse circulation or diamond drilling) and pitting/trenching. The exploration program will follow a systematic approach, beginning with non-invasive methods to determine if invasive techniques are necessary.

The main aim of conducting an Environmental Impact Assessment (EIA) is to minimize any negative impact on the environment by thoroughly exploring and considering various project alternatives. The no-go option, which involves completely abandoning the project in environmentally sensitive areas, is an important aspect that is typically taken into account. However, in this project, the no-go option was not considered as it could result in economic losses. Nevertheless, for parts of the project that are more environmentally vulnerable, the

no-go option will be applied. Additionally, the exploration of alternative project locations was not undertaken because the decision to proceed with the chosen location was based on geological assessments, past exploration data, and promising mineralization indicators. Furthermore, the author has proposed several alternatives for service infrastructure to mitigate potential environmental impacts.

In compliance with the Environmental Management Act 7 of 2007, public consultations were conducted by actively engaging Interested and Affected Parties (I&APs) through newspaper advertisements in the Namibian Sun, the Republikein and the Allgemeine Zeitung newspapers and the Confidante newspaper. Additionally, site notices were prominently displayed at key locations such as the home affairs office, the Karasburg Town Council office. Moreover, a comprehensive background Information Document was circulated among both pre-identified and registered I&APs during from the 10th of October 2023 to the 14th of November 2023.

Geologically, the EPL is situated within the Namaqua Natal Metamorhic Province (NNMP). The geology of the area consists of three major tectonostratigraphic units, i.e., the Palaeo- to Mesoproterozoic Namaqua Province and the late Proterozoic to Palaeozoic cover sequences of the Nama Group and Karoo Supergroup. The topography within the EPL area is relatively flat with undulating hills.

The key biophysical, environmental, and social baseline factors considered in this project encompassed various aspects, such as climate, water resources (both surface and groundwater), fauna, flora, avifauna, social environment and demographics, economy and infrastructure, and land use. These baseline assessments aimed to provide a comprehensive understanding of the project's existing environmental and social conditions before any further developments or interventions take place.

The scoping assessment for EPL 8228 was carried out in adherence to the Environmental Management Act No 7 of 2007 (EMA) and its Environmental Impact Assessment (EIA) Regulations of 2021 (GG No. 4878 GN No. 30). The process followed the conditions set by EMA for obtaining an Environmental Clearance Certificate (ECC) to conduct specific listed activities.

During the scoping process, a comprehensive review of available data and on-site field assessments, including site visits, were conducted. Insignificant sensitive receptors were

identified, while potential environmental risks requiring further investigation were related to dust, noise, health and safety, land use, waste management, impacts on soil and surface, ecological impacts, impacts on archaeological and heritage resource, groundwater and surface water quality, and socio-economic aspects.

After thorough investigation, it was determined that the potential effects on EPL 8228 would have minor significance, provided appropriate mitigation measures are implemented. These mitigation measures are outlined in the Environmental Management Plan (EMP), encompassing specific actions and procedures to responsibly manage and minimize potential impacts throughout the project's duration.

Based on the evaluation of potential effects and the successful implementation of mitigation measures, the impacts are considered to be insignificant and localized. As a result, the environmental assessment is deemed comprehensive and satisfactory, necessitating no further assessment. Consequently, the environmental assessment practitioner (EAP) recommends the issuance of an environmental clearance certificate (ECC) under the condition that the specified management and mitigation measures outlined in the Environmental Management Plan (EMP) are diligently implemented and adhered to.

1 INTRODUCTION

1.1 Project Background

Ms Lusia Nghitukwa (hereinafter referred to as the proponent) has been granted an Exclusive prospecting Licence (EPL 8228) by the Ministry of Mines and Energy (MME) to explore for industrial minerals and precious metals. The license covers an area of 19794.6478 hectares and is demarcated by ten (10) corner coordinates as illustrated in Table 1. As part of the application process for obtaining an Environmental Clearance Certificate (ECC) for the proposed exploration activities, the proponent is currently undergoing the Environmental Impact Assessment (EIA) process. This process ensures that the potential environmental impacts resulting from the project's activities are thoroughly assessed, and suitable measures are identified to mitigate them effectively.

1.2 Locality.

The Exclusive Prospecting License (EPL No. 8228) is located approximately 69.4 kilometres northeast of Karasburg within the Karasburg East constituency, in the Karas Region. Karasburg Town is located in southern Namibia and can be accessed via the national road, B3 that leads to the South African border in the east. The license area is positioned at an elevation of 1004.2 meters. The EPL sits on commercial land and is partially underlain by eight (8) commercial farms Namely: Fettkluft North, Fettkluft South, Snyriver South, Hudap North, Hudab South, Tigerberg, Nabas, Helder farms (Figure 1-1). Running in an east west direction just south of the EPL are, the B3 tarred road provides convenient access to the area (Figure 1-1). To reach the EPL, a D209 gravel road branches off from the B3 road towards the NNE and into the EPL (Figure 1-1)

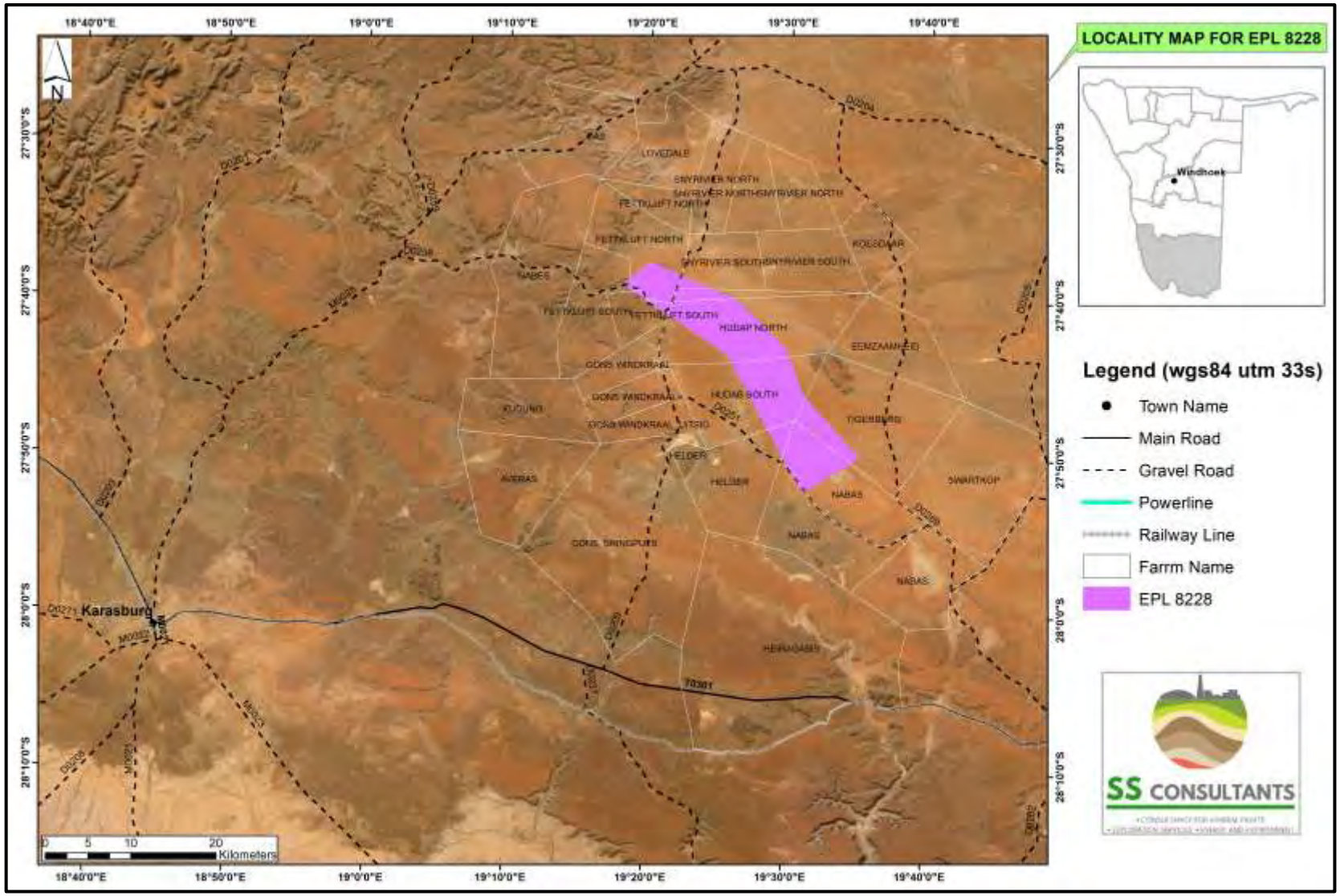

Figure 1-1: Google map showing the outline of EPL 8228 and road networks, towns, power line, and farms covering the EPL area.

Table 1-1: Corner coordinates for EPL 8228

	Geographic Coordinates	
	Latitude	Longitude
1	-27.870169S	19.519114E
2	-27.802384S	19.475793E
3	-27.724497S	19.427665E
4	-27.651807S	19.302016E
5	-27.627121S	19.335115E
6	-27.666751S	19.439478E
7	-27.717199S	19.497451E
8	-27.767256S	19.519672E
9	-27.832304S	19.587678E
10	-27.870169S	19.519114E

Table 1-2: Summary of EPL 8228 location details

Location	Approximately 69.4 km Northeast of Karasburg
Area size	19794.6479 hectares.
Constituency	Karasburg East Constituency
Regional Administration	Karas Region
Nearest Town/Village	Karasburg, Grunau, Warmbad

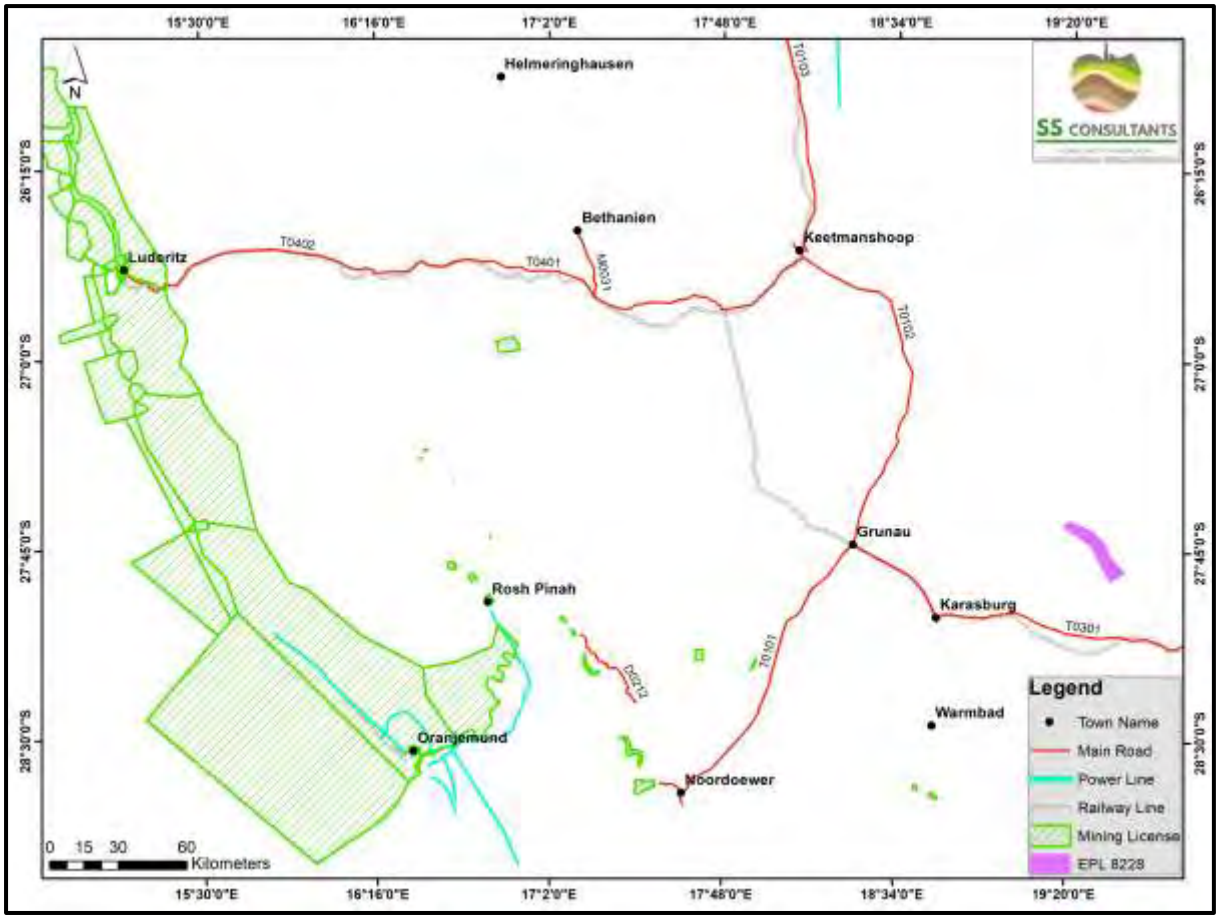

Figure 1-2: Map showing the location of EPL 8228 in relation to existing Mining Licenses in the area.

1.3 Need and Desirability of the Project

The mining sector in Namibia is a vital contributor to the country's economy, significantly impacting livelihoods and supporting various sectors. Private companies undertake mineral exploration, which has immense potential to drive development in other areas. These exploration activities not only create temporary employment but also generate tax revenue that funds social infrastructure projects. Moreover, the mining industry plays a pivotal role in earning foreign exchange and contributes significantly to the Gross Domestic Product (GDP). It also fosters the growth of a skilled workforce and small businesses that cater to local communities and can stimulate related industries. Furthermore, exploration activities promote the manufacturing of mining equipment and provide engineering and environmental services. The mining sector is integral to Namibia's Vision 2030, National

Development Plan 5 (NDP5), and the Harambee Prosperity Plans (HPPs) I and II, aligning with the country's goals of meeting global mineral demand and achieving national prosperity. Exploration activities on EPL 8228 has a potential for the establishment and operation of a mineral exploration program which will create direct permanent employment and indirect job creation in supporting services. These activities further have the potential for the discovery of an ore deposit of economic potential, which through mineral extraction, benefits the country in terms of employment, wealth, and economic development. The employment opportunities provided by the new project would be attractive to the local workforce due to the relatively higher wages offered, thereby contributing to economic growth in the Karasburg constituency, as well as the surrounding towns and the country at large.

1.4 Scope of Work

The scoping study is carried out in accordance with the Environmental Management Act (EMA) (No. 7 of 2007) and its 2012 EIA Regulations (GG No. 4878 GN No. 30) to identify potential environmental impacts caused by the proposed exploration project. By utilizing secondary data from both desk research and fieldwork, relevant environmental information is compiled. The EIA report and EMP serve as essential tools for stakeholders and relevant Ministries to make well-informed decisions regarding the exploration activities, considering the environmental perspective. These documents provide guidance on assessing and managing environmental impacts, ensuring responsible and sustainable exploration practices. This report has taken into consideration all the requirements for preparation of all the supporting documents and application for an Environmental Clearance Certificate and lodgement of such application to the Environmental Commissioner (EC), Department of Environmental Affairs (DEA) in the Ministry of Environment and Tourism (MET). After applying for an Environmental Clearance Certificate (ECC) from the Ministry of Environment, Forests, and Tourism (MEFT): Department of Environmental Affairs (DEA), the first stage of the Environmental Impact Assessment (EIA) process involves submitting a scoping report. Table 3 below provides a summary of the contents included in this report.

Table 1-3: A summary of the contents covered by the present report.

Description	Section of the Report
Introduction	Chapter 1
Legal Framework: The relevant legislation, policies and guidelines pertaining to the proposed project	Chapter 2
Project Activities: Overview of the different exploration methods to be undertaken	Chapter 3
Alternatives considered for the proposed project in terms of no-go option, location, exploration methods and services infrastructure	Chapter 4
The public consultation process followed (as described in Regulation 7 of the EMA Act) by which the interested and affected parties (I&APs) and relevant authorities are identified, informed of the proposed activity, and provided with a reasonable opportunity to give their concerns and opinions on the project	Chapter 5
Biophysical and social baseline: This chapter covers the geology of the area and impacts associated with proposed exploration activities and their impacts to the environment and society	Chapter 6
The identification of potential impacts, impacts description, assessment, mitigation measures and recommendations	Chapter 7
Recommendations and Conclusions to the report	Chapter 8

1.5 The Environmental Assessment Process

The Environmental Management Act (EMA), often referred to as the EMA, mandates the conduction of an Environmental Impact Assessment (EIA) for specific developmental projects listed within the EIA regulations. The primary objective of the EIA is to systematically identify, evaluate, and confirm potential environmental impacts that could arise from the proposed activities. The EIA process in Namibia involves four main steps: (a) screening, (b) scoping and

preparation of the EIA report, (c) review and decision making and (d) monitoring and auditing. A flowchart indicating the entire EIA process is presented in Figure 1-3.

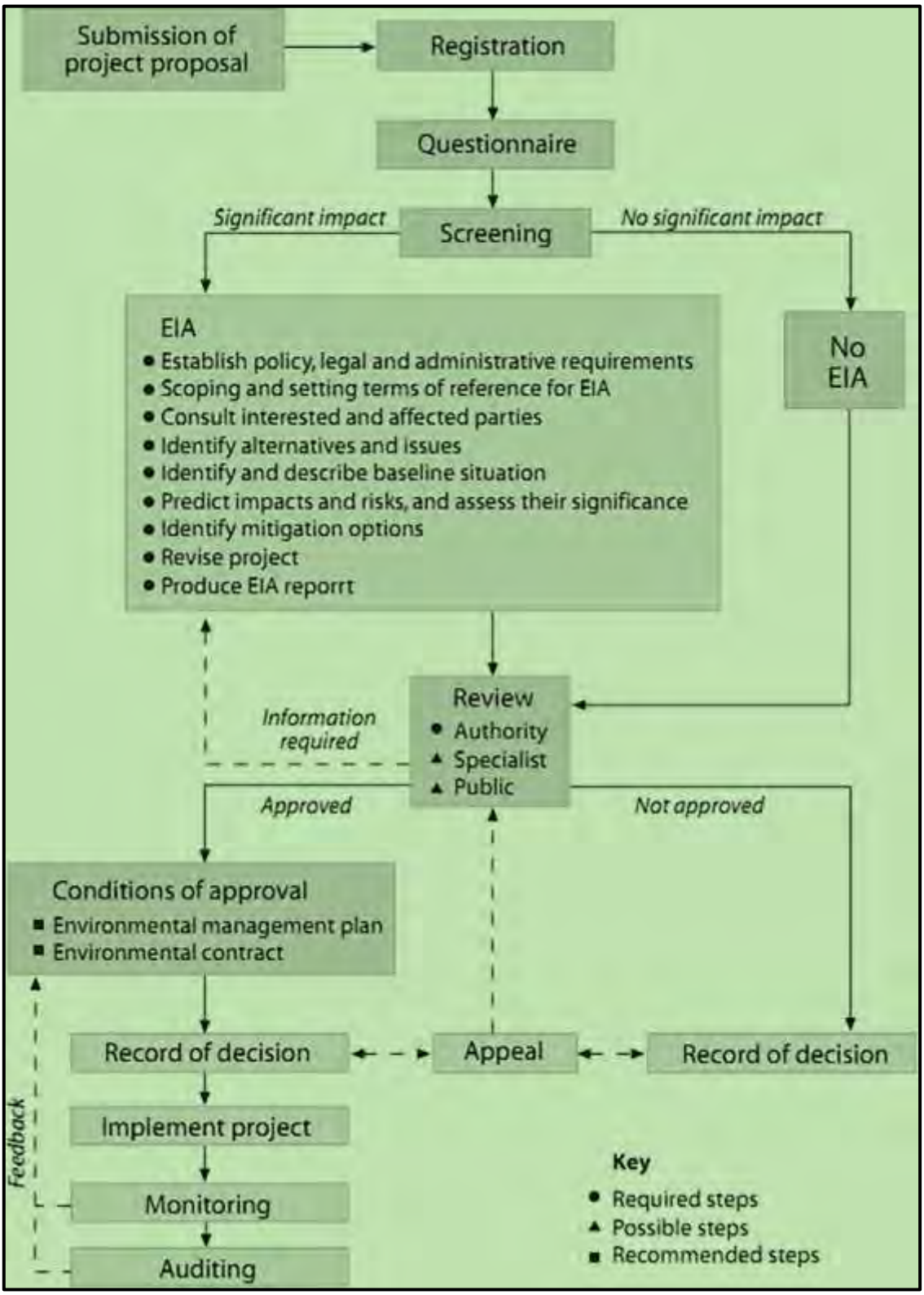

Figure 1-3: Flow chat of the EIA process in Namibia as adopted from MEFT, 2008.

2 LEGAL FRAMEWORK: LEGISLATION, POLICIES AND GUIDELINES

This chapter outlines all the relevant Namibian legislation, policies and guidelines that need to be adhered to for an effective EIA process. The review of the legal framework helps to inform the proponent, affected, and interested communities, and the decision makers at the MEFT: DEAF about the requirements and expectations, as laid out in terms of these instruments, to be met so that the exploration activities could be conducted.

This scoping assessment was carried out based on the Environmental Management Act No 7 of 2007 (EMA) and its Environmental Impact Assessment (EIA) Regulations of 2021 (GG No. 4878 GN No. 30), and following the conditions set by EMA for obtaining an ECC for permission to conduct certain listed activities.

The proponent must equally ensure adherence to the regulations put in place by the Minerals (Prospecting and Mining) Act No. 33 of 1992 (Minerals Act) with regards to the exploration activities. This Act caters for the reconnaissance, prospecting, and mining for, and disposal of, and the exercise of control over, minerals in Namibia; and provides for matters incidental thereto.

Table 2-1 below presents a comprehensive list of all relevant legislations identified during the Environmental Impact Assessment (EIA) process.

Table 2-1: Presents the full list of all applicable legislations identified and conducted during the EIA process:

Legislation/Policy/ Guideline	Relevant Provisions	Implications for this project
Environmental Management Act (EMA) No. 7 of 2007	Necessitate those projects with adverse environmental impacts are subject to an environmental assessment process (Section 27). Details principles which must guide all EAs.	EMA and its regulations should inform and guide this EA process.
Environmental Impact Assessment (EIA) Regulations GN 28-30 (GG 4878)	Details requirements for public consultation within a given environmental assessment process (GN 30 S21). Details requirements for what should be part of the Scoping Report (GN 30 S8) and an Assessment Report (GN 30 S15).	
Minerals (Prospecting and Mining) Act No. 33 of 1992	To provide for the reconnaissance, prospecting, exploration, and mining for, and disposal of, and the exercise of control over, minerals in Namibia; and to provide for matters incidental thereto.	The Proponent should ensure compliance with the conditions set in the Minerals Act regarding exploration activities.
The Constitution of Namibia Act No. 1 of 1990	According to Legal Assistance Centre (LAC), there is no clear right to health in the Namibian Constitution. But based on Article 95 of the Namibian Constitution that deals with Principles of State Policy, the Namibian Constitution states, “the state shall enact legislation to ensure consistent	The Proponent should ensure compliance with the conditions of the Act.

Legislation/Policy/ Guideline	Relevant Provisions	Implications for this project
	planning to raise and maintain an acceptable standard of living for the country's people" and to improve public health.	
Water Act No. 54 of 1956	The Water Resources Management Act 11 of 2013 is not yet gazetted; hence, the Water Act No 54 of 1956 is still in force: Interdict the pollution of water and implements the principle that a person disposing of effluent or waste has a duty of care to prevent pollution (S3 (k)). Provides for control and protection of groundwater (S66 (1), (d (ii)). Liability of clean-up costs after closure/abandonment of an activity (S3 (l)).	The safety of ground and surface water resources must be a priority throughout all exploration activities.
Water Resources Management Act No.11 of 2013	The act caters for the management, protection, development, use and conservation of water resources; and provides for the regulation and monitoring of water services and to provide for incidental matters. The objects of this Act are to: Certify that the water resources of Namibia are managed, developed, used, conserved, and protected in a manner accordant with, or conducive to, the fundamental principles set out in Section 66 - protection of aquifers, Subsection 1 (d) (iii) provide for preventing the contamination of the aquifer and water pollution control (Section 68).	

Legislation/Policy/ Guideline	Relevant Provisions	Implications for this project
Soil Conservation Act No. 76 of 1969	The Act aim to prevent and control soil erosion and to protect, revamp, and conserve the soil, vegetation and water supply sources and resources, through directives declared by the Minister.	At a time of soil sampling, soil conservation must be taken care of, and management measures must be part of the EMP.
Nature Conservation Ordinance No.4 of 1975	To centralise and amend the laws relating to the conservation of nature; the establishment of game parks and nature reserves; the control of problem animals; and to provide for matters incidental thereto.	The Proponent should ensure that any activities done in the project area do not in any way trade-off the wildlife and the ordinance requirements are adhered to.
Agricultural (Commercial) Land Reform Act No. 6 of 1995 (Agricultural (Commercial) Land Reform Amendment Act No. 1 of 2014))	To provide for the acquisition of agricultural land by the State for the purposes of land reform and for the allocation of such land to Namibian citizens who do not own or otherwise have the use of any or of adequate agricultural land, and foremost to those Namibian citizens who have been socially, economically or educationally disadvantaged by past discriminatory laws or practices; to vest in the state a preferred right to purchase agricultural land for the purposes of the Act; to provide for the compulsory acquisition of certain agricultural land by the state, for the	The Proponent should ensure that relevant regulations set under this Act are always adhered to.

Legislation/Policy/ Guideline	Relevant Provisions	Implications for this project
	purposes of the Act; to regulate the acquisition of agricultural land by foreign nationals; to establish a lands tribunal and determine its jurisdiction; and to provide for matters connected therewith.	
Forestry Act No. 12 of 2001	The Act cater for the management and use of forests and related products/resources. It provides protection to any living tree, bush or shrub growing within 100 meters of a river, stream or watercourse on land that is not surveyed or even of a local authority area. In such instances, a license would be required to cut and remove any such vegetation. These provisions are only guidelines.	Before removing any protected plant species within the proposed exploration site, the proponent must secure a permit from the Forestry office (Ministry of Agriculture offices) in Karasburg).
Atmospheric Pollution Prevention Ordinance No. 11 of 1976	This ordinance sets for the prevention of air pollution.	Measures should be set to ensure that dust and fumes emanating from exploration activities is kept at acceptable levels.
Public Health Act No. 36 of 1919	Section 119 states that “no person shall cause a nuisance or shall suffer to exist on any land or premises owned or occupied by him or of which he is	The Proponent and all its employees/contractors should

Legislation/Policy/ Guideline	Relevant Provisions	Implications for this project
	in charge any nuisance or other condition liable to be injurious or dangerous to health."	adhere to the provisions of these legal instruments.
Health and Safety Regulations GN 156/1997 (GG 1617)	Details various requirements regarding health and safety of labourers.	
The Regional Councils Act No. 22 of 1992	This Act sets out the conditions under which Regional Councils must be elected and administer each delineated region. From a land use and project planning point of view, their duties include, as described in section 28 "to undertake the planning of the development of the region for which it has been established with a view to physical, social and economic characteristics, urbanisation patterns, natural resources, economic development potential, infrastructure, land utilisation pattern and sensitivity of the natural environment." The main objective of this Act is to initiate, supervise, manage, and evaluate development.	The relevant Regional Councils are considered to be I&APs and must be consulted during the Environmental Assessment (EA) process. The Karas Regional Council (Karas Constituency) is the responsible Regional Authority of the area in which the proposed activity will be undertaken, therefore should be consulted for this EA.
Labour Act No. 6 of 1992	Ministry of Labour (MOL) aim to ensure harmonious labour relations through promoting social justice, occupational health and safety and	The Proponent should ensure that the proposed activity does

Legislation/Policy/ Guideline	Relevant Provisions	Implications for this project
	enhanced labour market services for the benefit of all Namibians. This ministry insures effective implementation of the Labour Act no. 6 of 1992.	not compromise the safety and welfare of workers.
Best Practice Guide: Environmental Principles for Mining in Namibia- Exploration	Outlines the regulatory and legislative requirements for exploration in Namibia. Serves as a guiding framework for the exploration phase of the mining life cycle.	The proponent should be guided by this framework for best practice mining and exploration activities in Namibia.
National Heritage Act (27 of 2004)	Part V Section 46 of the Act prohibits removal, damage, alteration, or excavation of heritage sites or remains. Section 48 off sets out the procedure for application and granting of permits such as might be required in the event of damage to a protected site occurring as an inevitable result of development. Section 51 (3) sets out the requirements for impact assessment. Part VI Section 55 Paragraphs 3 and 4 require that any person who discovers an archaeological site should notify the National Heritage Council. Heritage sites or remains are defined in Part 1, Definitions 1, as “any remains of human habitation or occupation that are 50 or more years old found on or beneath the surface”.	The project must ensure that no heritage resources are damaged and/or removed during its operations. All protected heritage resources (e.g., human remains, paintings etc.) discovered, need to be reported immediately to the National Heritage Council (NHC) and require a permit from the NHC before they may be removed and/or relocated.

3 DESCRIPTION OF THE PROJECT ACTIVITIES

3.1 Planned Exploration Techniques

The proponent plans to conduct an exploration program on EPL 8228, with a focus on Industrial minerals such as Lithium brines and precious metals such as Gold and Silver. The program will involve both non-invasive and invasive exploration methods. Non-invasive exploration methods will include activities such as geological desktop studies, interpretation of aeromagnetic and remote sensing images, field mapping, ground geophysical surveys, and sampling of surface rock and soil. These techniques aim to gather information about the geological characteristics of the area without causing significant disturbance. The primary objective of the non-invasive methods is to assess the need for more invasive exploration. If the non-invasive methods yield positive results, indicating the likelihood of economically viable deposits, the program will proceed to more invasive activities. Invasive exploration methods, such as drilling (reverse circulation or diamond drilling) and pitting/trenching, will be used to gather more detailed data. This includes site-specific drilling, trenching, and sampling to provide a clearer understanding of the mineral deposits. The exploration program will follow a systematic approach, beginning with non-invasive methods to determine if invasive techniques are necessary. If non-invasive exploration yields positive results, indicating the presence of promising mineralization, detailed site-specific drilling, trenching, and sampling will be conducted. This approach ensures that invasive activities are only undertaken when there is a high likelihood of discovering valuable mineral resources. It also helps minimize environmental impact by prioritizing non-invasive techniques for initial assessment and decision-making. The proposed exploration activities will be implemented through the following sequential phases.

Phase 1: Desktop study and geological mapping

This phase entails conducting a thorough review of available geological map data for the area and conducting on-site visual assessments of exposed rocks. To achieve this, a contemporary integrated data approach will be adopted, utilizing geospatial data that incorporates various sources such as geological, geophysical, remote sensing (Sentinel; ESRI Earth), and topographic data sets. The primary focus of the geological mapping will be to identify and map lithological units, geological structures, mineralization zones, and alteration zones.

Geological maps will be produced and will be accompanied by geological reports that provide comprehensive descriptions and interpretations of the geological features observed. The reports may include additional analysis, such as mineralogical studies or interpretations of geological processes. Additionally, the dataset will enable the development of cross-sections, which provide a vertical representation of the geological features.

Phase 2: Geophysical Surveys

Geophysical surveys involve the use of various sensing technologies to collect data about the subsurface or substrate. These surveys will be conducted were necessary to detect and assess different geological features, including mineralization, within a specific area. Ground geophysical surveys can be carried out using vehicle-mounted or handheld sensors, which are designed to measure and record physical properties of the Earth's subsurface, such as magnetic fields, electrical conductivity, gravitational anomalies, and seismic waves. The captured data from these instruments provides valuable insights into the geological structures and potential mineral deposits present in the surveyed area. In contrast, airborne geophysical surveys mount sensors onto aircraft, allowing them to systematically collect data as they fly over the target area. By interpreting this data, detailed maps, and models of the subsurface can be generated, aiding in mineral exploration, resource assessment, and geological mapping.

Phase 3: Geochemical sampling

Geochemical sampling surveys involve the collection of different types of earth materials, such as rocks, soils, and sediments, for analysis. These samples are sent to analytical laboratories to determine the presence and quantities of Industrial minerals (such as lithium brines) and precious metals (such as gold and silver) etc. Typically, small pits measuring approximately 25 cm by 25 cm by 35 cm may be dug, and about 1 kilogram of material is extracted and sieved to obtain around 50 grams for analysis. After sampling, the pits are filled back, ensuring that the disturbed area is restored as closely as possible to its original state. This practice minimizes the visual impact and environmental disturbance caused by the sampling activities.

Phase 4: Trenching and pitting.

Trenching and pitting involve excavating or digging an area to obtain a representative bulk sample of mineralization. The depth of the pit is typically around 5 meters, but it can vary depending on the target mineral and project requirements. The dimensions and methods for excavation, such as manual or using an excavator, should be discussed, and agreed upon with the landowners or community members involved. To minimize risks and ensure safety, excavations will be either opened and closed on the same day or fenced off until the project is completed. This prevents harm to livestock or wildlife.

Phase 5: Drilling and core sampling

If the results from geochemical sampling and geophysical surveys meet the desired criteria, drilling will be conducted on EPL 8228. Exploration drilling involves penetrating the ground and extracting rocks from different depths beneath the surface to verify the underlying geology or obtain samples for further chemical analysis. Experienced operators employed by contractors typically carry out this process in areas where previous geological mapping and geophysical surveys have indicated mineralization potential. Two commonly used drilling methods are reverse circulation (RC) drilling and diamond drilling. RC drilling employs a pneumatic hammer with a rotating tungsten-steel bit, producing dry rock chips. Diamond core drilling, on the other hand, uses a diamond-impregnated drill bit attached to hollow drill rods to extract cylindrical cores of solid rock. Water is often used during drilling, and all drill-water is collected in drill sumps to prevent overflow. These sumps must be constructed at least 100 feet away from bodies of water, such as rivers, streams, ponds, seeps, or springs, unless approved by a qualified hydrologist. Depending on the results of the prospecting phase and the extent of drilling requirements, an exploration team consisting of less than twelve (12) individuals, including drilling teams, geologists, and technicians, may be needed to meet market demands and investor expectations.

3.2 Infrastructure and Services

In addition to the planned exploration methods, the project's Environmentalist has considered the necessary infrastructure and services, including water, electricity, road networks, accommodation, transportation, domestic and hazardous wastes, human

personnel and safety and rehabilitation. These components are vital for the project, especially during the advanced stages. To meet the increased infrastructure and service requirements, a temporary campsite will be established within the EPL 8228. The selection of campsite locations will involve consultation with local farm owners or community members and will operate under strict conditions to control litter and minimize disturbances. The campsite will adhere to the provisions outlined in the Environmental Management Plan (EMP) to mitigate any potential harm to the environment. During the exploration phase, efforts will be made to minimize the campsite's footprint and its impact on the surroundings.

3.2.1 *Water Supply*

Water will be primarily utilized for general usage, cleaning, drilling-related activities, and dust suppression. The water supply will be obtained from either existing boreholes or new ones, depending on agreements made with landowners and community members (Figure 3-1). The utilization of water from existing boreholes will be determined through individual agreements with landowners and community members. All necessary permits and requirements for water drilling will be obtained from mandated authorities. Additionally, water used for drilling will be recycled to promote efficiency and conservation. Alternatively, water can be obtained from the Karasburg Municipality /Town Council if need be.

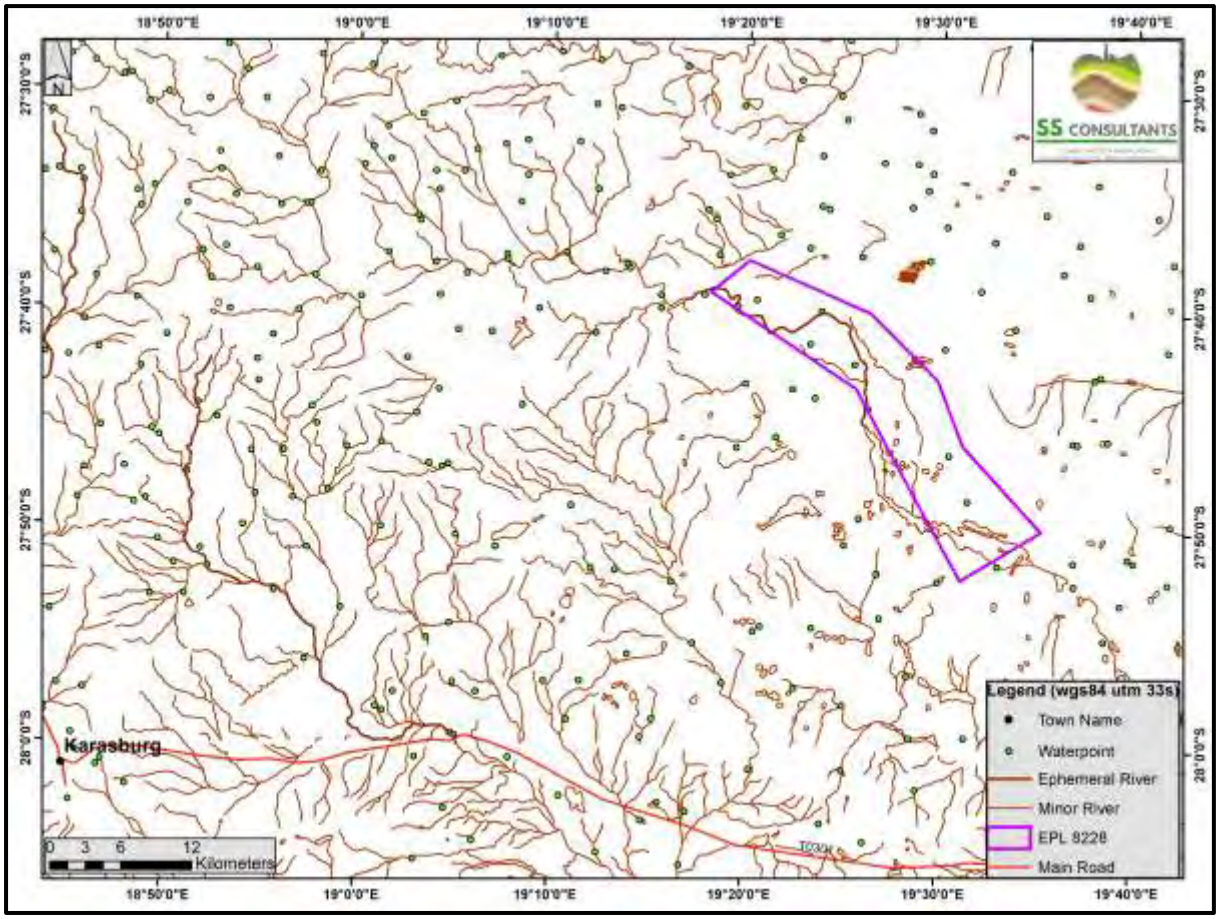

Figure 3-1: Map showing existing water points/water drillholes in the area.

3.2.2 *Power Supply*

The project area is located a few kilometres from the Karasburg Town and therefore presents the option to source power from the Karasburg Municipality. Alternatively, diesel power generation will be utilized, and the fuel will be stored in mobile fuel bowsers of small to medium sizes. The primary electricity demand will be for operating small machinery during the exploration process and, if necessary, providing power to temporary office blocks or containers. Refuelling of the drill rigs can be accomplished using Jerry cans or directly from the fuel bowser. This approach ensures flexibility and mobility in power supply, making it suitable for situations where connection to the Karasburg Municipality is not feasible or reliable. All potential environmental impacts resulting from diesel power generation will be thoroughly assessed, and efforts will be made to explore alternative power sources.

3.2.3 *Road Access*

The EPL is conveniently accessible via the D0209 gravel road that branches off the main Karasburg – Ariamsvleis (Namibia, South African border) road (Figure 1-1 and 3-2). Within the EPL, there are several smaller track roads. To minimize environmental impact during geological mapping, sampling, and geophysical surveys, motorized access will be limited to the existing tracks. However, if new access routes are needed for drilling, they will be identified, marked, and assessed for environmental sensitivity before drilling commences. Prior to initiating exploration activities, the final alignment of any new access tracks will be discussed and mutually agreed upon with the farm owner to ensure their input and address any concerns.

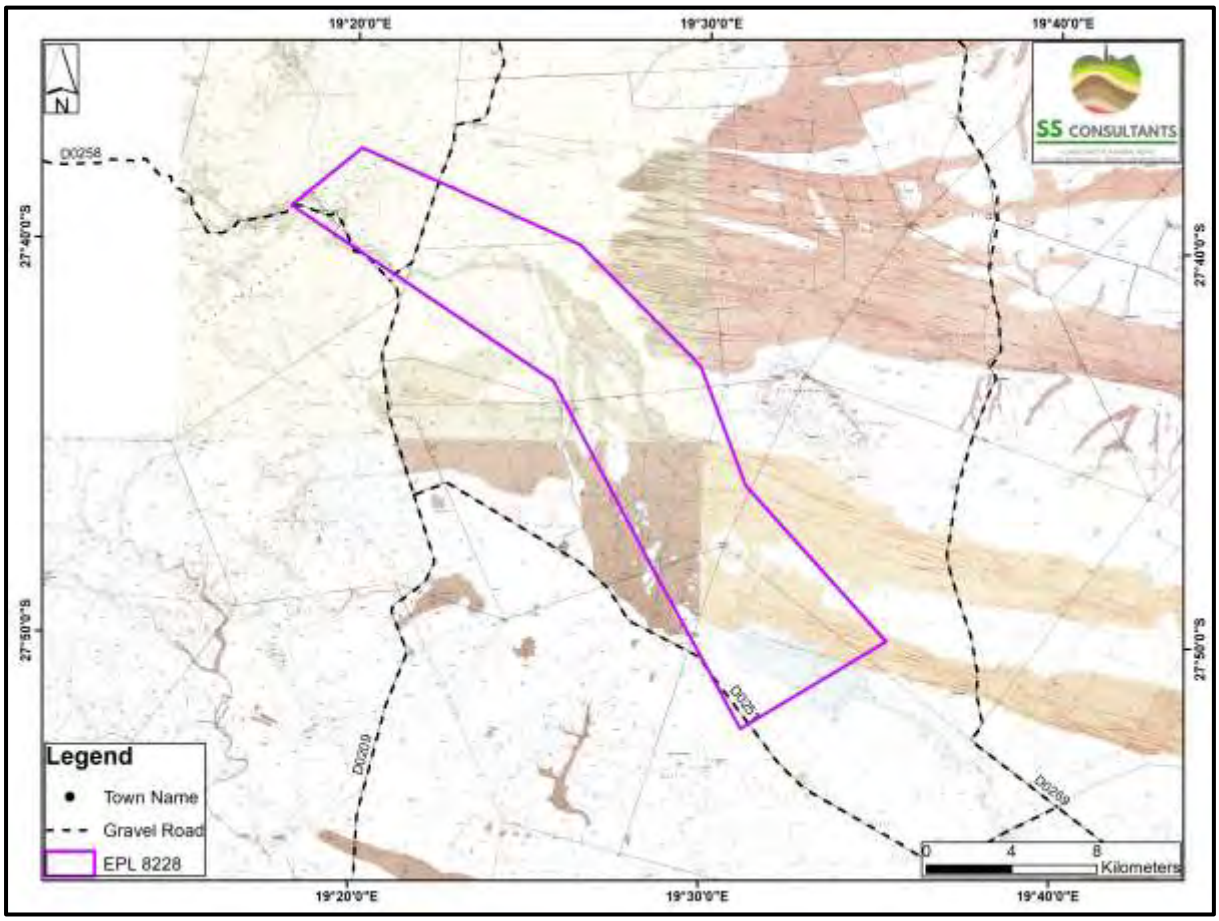

Figure 3-2: Topographic map showing existing road network within the EPL area.

Figure 3-3: D0209 road that leads to the EPL area.

3.2.4 *Transportation*

Transportation for everyday exploration activities will be restricted to the use of 4x4 pickups. These vehicles will be employed to carry out routine exploration tasks. However, as the project progresses, trucks and drilling machines will be utilized at an advanced stage. The 4x4 pickups will continue to be employed for everyday exploration activities, while the drilling machines will remain stationed at the specific drill site and will only be relocated when moving to the next drilling location.

3.2.5 *Domestic and hazardous waste*

All sites will be furnished with secure waste bins designated for each type of waste, including general waste and hazardous waste. Depending on the volume of waste generated, it will be sorted and collected as frequently as required and transported to the nearest certified landfill site. Prior to utilizing these facilities, agreements will be established with various waste management facility operators/owners, and necessary authorizations or permits will be obtained, specifically for the disposal of hazardous waste.

3.2.6 *Human personnel and Site Safety*

The exploration project will employ a total of twelve (12) individuals, all of whom will be provided with appropriate personal protective equipment (PPE) that will be regularly replaced or repaired to ensure their occupational health and safety. As a safety and security precaution, areas with high risk of incidents will be temporarily fenced off. Additionally, fire extinguishers will be equipped in exploration vehicles and at all drilling sites to handle potential fire outbreaks during exploration activities. All employment during the exploration phase will be temporary. Most of the workforce for the exploration project will be recruited from Karasburg and the surrounding towns.

3.2.7 *Rehabilitation*

Once the exploration program is completed, any damages or impacts resulting from the exploration activities will be addressed and rehabilitated in accordance with the Environmental Management Plan (EMP) requirements. The EMP outlines the necessary measures and procedures to mitigate and restore any environmental damage or disturbances caused by the exploration activities. The goal is to ensure that the affected areas are rehabilitated to their pre-exploration condition, following approved environmental standards and guidelines. By adhering to the EMP, the project aims to minimize any long-term negative impacts and promote environmental sustainability.

4 PROJECT ALTERNATIVES CONSIDERED

Alternatives are defined as “different means of meeting the general purpose and requirements of the activity” (Environmental Management Act 7 of 2007) of Namibia and its regulations (2012)). This chapter discussed different ways in which the project can be undertaken, as well as identify the alternatives that, in a practical way, can be applied to ensure minimal damage to the environment.

Different alternatives for proposed exploration activities have been identified. The most common and most important alternatives considered are the **no-go option, location, services infrastructure**. These alternatives are discussed as follows.

4.1 No-Go Option

The “No-Go” alternative refers to the choice of not proceeding with the proposed project or activity. In this case it would mean that planned exploration activities on EPL 8228 would not take place. By selecting the “No-Go” alternative, none of the potential impacts, whether positive or negative, associated with the project would occur. This includes the potential benefits of discovering and extracting mineral ores in the EPL area, as well as any negative impacts that might arise from such activities. Essentially, the “No-Go” alternative means that the area will remain untouched and unexplored, and the presence of any mineral ores will remain unknown since no exploration or identification efforts will take place. If the "No-Go" option is chosen and the proposed project does not proceed, there are several key losses that may never be realized. These losses can include:

- **Economic Loss**: Mining can contribute significantly to the economy by creating jobs, generating revenue, and stimulating local businesses. Without exploration and subsequent mining activities, potential economic opportunities and growth may be missed, particularly in Karasburg town and Warmbad Settlement where mining could play a crucial role in the local economy.
- **Resource Depletion**: Mining allows for the extraction of valuable minerals and resources from the Earth, such as metals, coal, and oil. Without exploration, these resources may remain untapped, potentially leading to a shortage of key materials for various industries and hindering technological advancements and economic development that rely on these resources.
- **Technological Innovation:** Mining exploration often involves the development and application of advanced technologies and techniques. These innovations can have broader applications beyond mining, leading to technological advancements in areas such as geology, engineering, and environmental monitoring. Without exploration driving these innovations, progress in these fields may be slower.
- **Scientific Knowledge:** Mining exploration contributes to our understanding of Earth's geology, mineralogy, and natural resources. Through exploration activities, valuable scientific data is gathered, enabling researchers to gain insights into geological processes, mineral formations, and the overall dynamics of the earth. The absence of

exploration may impede scientific discoveries and hinder our understanding of Earth's natural resources.

- **Environmental Considerations:** While mining can have adverse environmental impacts, exploration activities provide an opportunity to assess the potential environmental risks and develop strategies for mitigation and responsible resource extraction. Without exploration, there may be a lack of comprehensive environmental planning and management practices, which could lead to unregulated mining activities with potentially more severe ecological consequences.
- **Social and Cultural Impacts:** Mining operations often involve engaging with local communities, providing employment, infrastructure development, and community investment. Exploration activities can help identify potential social and cultural impacts early on, allowing for dialogue and collaboration with affected communities. Without exploration, opportunities for community engagement and addressing social concerns may be missed, leading to potential conflicts and negative social impacts.
- **Infrastructure and community development:** The proposed project includes plans for infrastructure development, such as roads, drill holes (water) etc that will have had positive effects on the local community. With the "No-Go" option, these infrastructure improvements and potential community development projects will not be realized, resulting in missed opportunities for growth and improvement in the area.

Based on a careful evaluation of the potential risk, benefits, and trade-offs associated with the project, the "No-Go" option was not considered for this project. For specific areas of the project site that are considered environmentally sensitive and/or protected, alternative strategies such as stakeholder engagement, conservation and prevention, avoidance etc, will be implemented.

4.2 Alternative Project Location

No alternative sites were considered for this project because the decision to pursue exploration activities in this area was primarily based on geological assessments, previous exploration data, and indication of mineralization in the area. It's worth noting that when

selecting a site for exploration, multiple factors are typically considered, such as geological characteristics, accessibility, existing infrastructure, and potential mineral resources.

Furthermore, the Ministry of Mines and Energy through its geological surveys and assessments, conduct studies to identify areas with potential mineral deposits. These studies involve geological mapping, sampling, and analysis to understand the mineral potential of different areas within Namibia. Based on the findings of these studies, the Ministry categorizes the identified areas according to their mineral potential, considering factors such as the type of mineralization, geological characteristics, and historical mining activities. This categorization helps in prioritizing exploration efforts and guiding potential investors in identifying areas of interest. The Namibia Mining Cadastral Map serves as a centralized database and visual representation of the mineral potential and existing mining rights across Namibia.

4.3 Services Infrastructure

The EIA process has identified the services that may be required for the proposed exploration activities. Table 4-1 below presents the alternatives for the identified services.

Table 4-1: Alternatives considered in terms of services infrastructure.

Services	Proposed source	Alternative source
Water	Obtaining water from the communal farm's sources within the EPL or from Karasburg. The proposed source will be used to ensure that the project will not generate depletion on the water level/availability of the sources that the local community uses.	Hauling water from the nearest Water pump station near the project or from Karasburg with permission from the municipality and local authority.
Power for equipment	Diesel power generators will be used to power the project.	Capitalizing on the region's high temperatures and abundant sunlight, the project will put up solar panels on site. This initiative aims to establish a supplementary energy source, mitigating dependence on conventional generators. By harnessing solar power, the project aims to generate clean and renewable energy, potentially reducing operational costs in the long term. The solar can be used for instance for cell phone charging and lighting.
Power for cooking and lighting for the Campsite	For cooking purposes, gas stoves will be used during the project activities. Using gas stove ensure that the contractors will not use	Firewood (purchased from permit holding suppliers) will be used in cases of emergencies (For instance, when the gas is unexpectedly

Services	Proposed source	Alternative source
	firewood from the area which would increase deforestation. Lighting system for the campsite will be via portable solar lamps that will be erected on site.	finished). Gas lamps will be an alternative lighting source. Mitigate global warming as well as prevent major soil and groundwater pollution that could have otherwise developed from always using a diesel generator.
Workers' accommodation	A temporary limited-sized campsite will be constructed within the boundary of the EPL. The campsite will be developed in the EPL area that is far from the nearby farm homesteads to minimise noise pollution.	In cases where there is an absence of a suitable site for a camp, accommodation in the nearest town i.e., Karasburg will be an option. The workers will be accommodated at any facility with the necessary ablution and electricity infrastructure.
Waste Management		
Sewage	Portable toilet – these are easily transportable and have no direct impact on the environment and ecology (if properly disposed). These are chosen at the drill sites.	

Services	Proposed source	Alternative source
Domestic waste	Onsite waste bins, regularly emptied at the nearest landfill (in Karasburg) is the chosen option. This will prevent an everyday drive from and to the nearest town for waste disposal, which can damage the road and disseminate dust within the area.	Driving waste to the nearest town landfill, which is an alternative, but not viable as it can result in road damaging.
Drilling waste (chemicals)	Waste generated is to be transported to and disposed of at an appropriate facility in the nearest town equipped for the disposal of hazardous waste to ensure that the area is not polluted.	In cases of emergencies, organic chemicals will be used.

5 PUBLIC CONSULTATION

5.1 Objective

Public consultations play a vital role in the Environmental Impact Assessment (EIA) process, aiming to engage Interested and Affected Parties (I&AP) from the project's inception to its completion. These consultations provide platforms for I&APs to express opinions and raise concerns, making public engagement a crucial element. The EMA and its 2012 EIA Regulations considers all comments and concerns raised during these consultations as essential components of the assessment process. Consequently, they must be included in the final scoping report and considered when making decisions regarding the Environmental Clearance Certificate (ECC).

Furthermore, early dissemination of project information and conducting consultations with the affected and interested community are crucial for identifying potential social risks associated with project activities. The community members possess valuable knowledge about their locality, making their input essential in comprehensively understanding potential impacts and determining the need for further investigations. Additionally, public consultations facilitate the identification of appropriate approaches for monitoring impacts and implementing effective mitigation measures. The public consultation for this scoping study has been conducted following the guidelines set forth by the EMA and its EIA Regulations.

5.2 Approach

The process for the public participation is shepherd by the public consultation definitions and guidance given by the MET as per the regulation 21 of the EIA.

a) Interested and Affected Parties (I&APs)

   The project took proactive steps to identify and involve relevant national, regional, and local authorities, as well as other interested individuals. Initially, pre-identified interested and affected parties (I&APs) were directly contacted. Additionally, individuals who responded to project advertisement notices in newspapers were registered as I&APs upon their request. This inclusive approach ensured that all

stakeholders were informed and had the opportunity to participate in the project. Engaging with authorities at various levels of governance and involving interested members of the public fostered transparency, compliance with regulations, and effective coordination. By directly reaching out to pre-identified I&APs and accommodating requests from others who expressed interest, the project demonstrated a commitment to inclusivity, active engagement, and a well-rounded decision-making process.

Additionally, as invitations for public participation were extended, the stakeholders list was expanded to include additional interested and affected parties (I&APs) who registered for the project. These I&APs, who expressed their interest, have been incorporated into the ongoing process of engaging with the public. You can find a comprehensive list of these I&APs in Appendix C. This appendix encompasses all individuals and organizations who have actively shown their interest and have been included as stakeholders, ensuring a diverse range of perspectives and concerns are considered throughout the project.

b) A Background Information Document (BID) containing descriptive information about the proposed exploration activities was compiled (Appendix D) and circulated with both pre-identified and registered I&APs between the 10th October 2023 to 14 November 2023.
c) The Department of resettlement at the Ministry of Lands assisted with the farmers contact details of the following farms: Fettkluft North (farm No. 33), Hudap North (farm No. 38), Hudab South (farm No. 39), Tigerberg (farm No. 62), Nabas (farm No. 61), Helder (farm No. 40).

d) Advertisements (public notices) were published in the Market Watch section of the Sun Newspaper, the Republikein and the Allgemeine Zeitung newspapers for two consecutive weeks (02nd November and 09th November 2023). A public notice was also placed in the Confidante Newspaper from the 3rd November and 09 November 2023. The purpose of these advertisements was to notify the public about the

proposed exploration activities on EPL 8228, providing a brief explanation of the activities and their location. Refer to Appendix E for more details.

e) Site notices: Printed site notices were placed at the office at various offices in the Karas Region Office including Home Affairs Karas Town Council offices. Pictures of the site notices are provided as appendix G.

5.3 Public consultation

The environmental practitioner, tasked with overseeing EPL 8228, organized a crucial meeting with the stakeholders involved, namely the farmers at Hudab farm and the workers at Nabas farm. The purpose of the meeting was to gather insights into their concerns and expectations regarding the proposed mining activities in the area.

At Hudab farm, the farmer articulated her primary concern regarding the presence of numerous ostriches in the vicinity. She emphasized the need for measures to address this issue, possibly to prevent any disturbances that would be caused by the mining operations. Additionally, the farmer expressed reservations about the access route to EPL 8228 crossing her farm, fearing potential disruptions to her daily activities. Despite these concerns, she acknowledged that the mining activities themselves would be distant from her property.

The employees at Nabas farm highlighted the position of EPL 8228 within a riverbed. They emphasized that this site is considerably distant from their residences, easing initial worries about the effect on their living areas. Nevertheless, they expressed a strong curiosity about the ways in which the mining project could positively impact the local community, including their own families. Their particular interest lay in exploring potential job opportunities for their relatives and friends who are currently on the lookout for employment.

Addressing these concerns and expectations is crucial for fostering positive relationships between the mining project and the local community. The environmental practitioner may need to collaborate with relevant authorities and the mining company to develop strategies to mitigate the impact on wildlife, establish alternative access routes that minimize disruption to the farmer at Hudab farm, and create mechanisms for local employment and community

benefits. Open communication channels between the stakeholders will be essential for fostering understanding and cooperation throughout the project's lifespan.

Figure 5-1: Meeting with the farm owner and farm workers.

6 BIOPHYSICAL AND SOCIAL BASELINE

Exploration activities are always undertaken in an environment with specific conditions, which get impacted by these activities in one way or another. For this reason, it is always critical to have a thorough understanding of the pre-project conditions before commencement. Additionally, it is equally vital to ensure that a baseline understanding of the area is formed and to make effective decisions on certain issues that may come up through or after the project's operations. The next subchapters outline the environmental and social baseline for the project area.

6.1 Geology

6.1.1 *Regional geology*

The regional geology surrounding EPL 8228 consists of three major tectonostratigraphic units, i.e., the Palaeo- to Mesoproterozoic Namaqua Province and the late Proterozoic to Palaeozoic cover sequences of the Nama Group and Karoo Supergroup (Figure 6-1). The NNMP represents the oldest tectonostratigraphic unit in the area, made up of a number of distinct NE-SE trending tectonostratigraphic domains (the Konkiep, Kakamas, Sperrgebiet, Vioolsdrif and Pella Domains) characterized by differences in stratigraphy, structural and metamorphic histories (e.g. Hartnady et al., 1985; Colliston et al., 1990; Miller, 2008; Macey et al., 2017, 2018), and encompasses supracrustal and intrusive rocks which are pre-, syn or post-tectonic relative to the main Namaqua high-grade tectonothermal event at ~1200 m.y. The domains are separated by major tectonic structures. The NNMP rocks are exposed towards the northeast, south and southwest of EPL 8228 (Figure 6-1, 6-2). The Kakamas Domain occurs to the south of EPL 8228 and is dominated by Mesoproterozoic (1.22-1.05 Ga) granulite facies paragneisses and voluminous granitic orthogneisses.

The Meso- and Palaeoproterozoic metamorphic rocks are overlain by the sedimentary cover sequences of the Neoproterozoic to Cambrian Nama Group and the Palaeozoic Karoo Supergroup. Consisting of the basal Kuibis, the middle Schwarzrand and the upper Fish River Subgroups, the shales, sandstones and limestones of the Nama Group occupy extensive areas in and between the Great and Klein Karas Mountains and towards the east and north of EPL 8228. The Nama Group rocks are overlain by sedimentary rocks of the Carboniferous Dwyka Group (Karoo Supergroup) and unconsolidated to semi-consolidated sediments of the Kalahari Group. Early Cambrian intrusives of the Kuboos-Bremen and Kainab Igneous Provinces invaded the older rocks within a southwest – northeast trending swath. During the Jurassic especially the Karoo Supergroup was extensively intruded by dolerite sills and dykes. The youngest stratigraphic unit is formed by calcretes and permament red sand dunes of the Kalahari Group. The EPL area is dominated by rocks of the Karoo Super Group, within minor parts (towards the northeast) covered by rocks of the Nama Group.

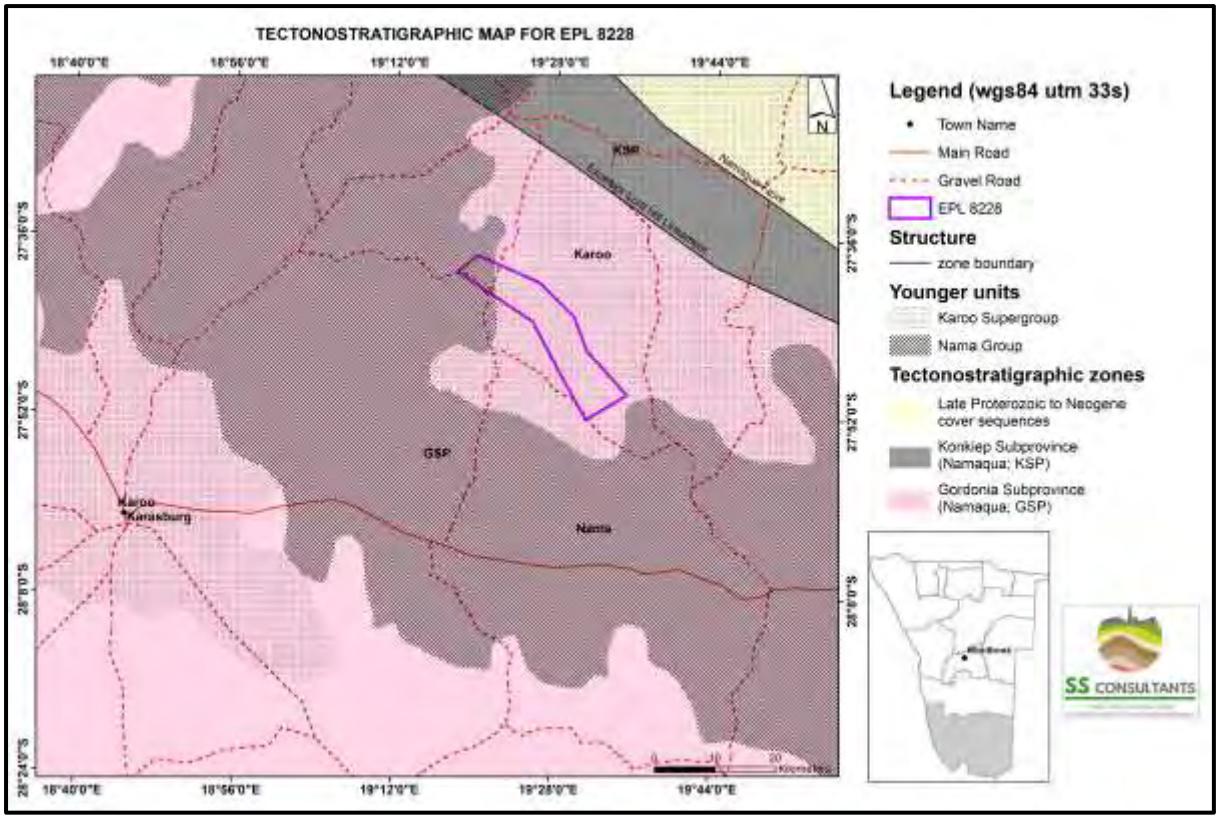

Figure 6-1: Tectonostratigraphic map of the area surrounding EPL 8228 (Modified after Miller, 2008).

6.1.2 *Local geology surrounding EPL 8228*

The local geology underlying EPL 8228 comprises several lithostratigraphic units belonging to the Nama Group (Nababis Formation), Karoo Super-Group (Dwyka Group), and post Karoo dolerite dykes. Minor quaternary sediments of the Kalahari Group, consisting of gravel, sand, scree, and calcrete are observed encroaching into EPL 8228 along the western border. The geology of the license area is presented in detail below as summarised from Miller, 2008 and references therein. The Nababis Formation is exposed on the north-eastern corner of EPL 8228 and consists of red to purple cross-bedded, medium- to coarse grained, feldspathic sandstones with interlayered shale and mudstone. The Dwyka Formation forms the base of the Karoo Super Group and is the dominant unit exposed throughout the EPL 8228. It comprises of tillite, mudstone and shale with erratics and limestone. The Nababis Formation and Karoo Super Group are intruded by post-Karoo dolerite dykes and sills, exposed on the south-eastern part of the EPL (Figure 6-2). The Dolerite intrusion was accompanied by faulting and gentle folding. Faults and fault-hosted dolerite dykes have three main trends, i.e., N to NE, NW and E-W. Karoo strata often display steep dips close to faults or dykes. Emplacement

also appears to have taken place during ENE – WSW compression as the sills is associated with a series of NNE-trending synclines and anticlines (Schreuder and Genis, 1975).

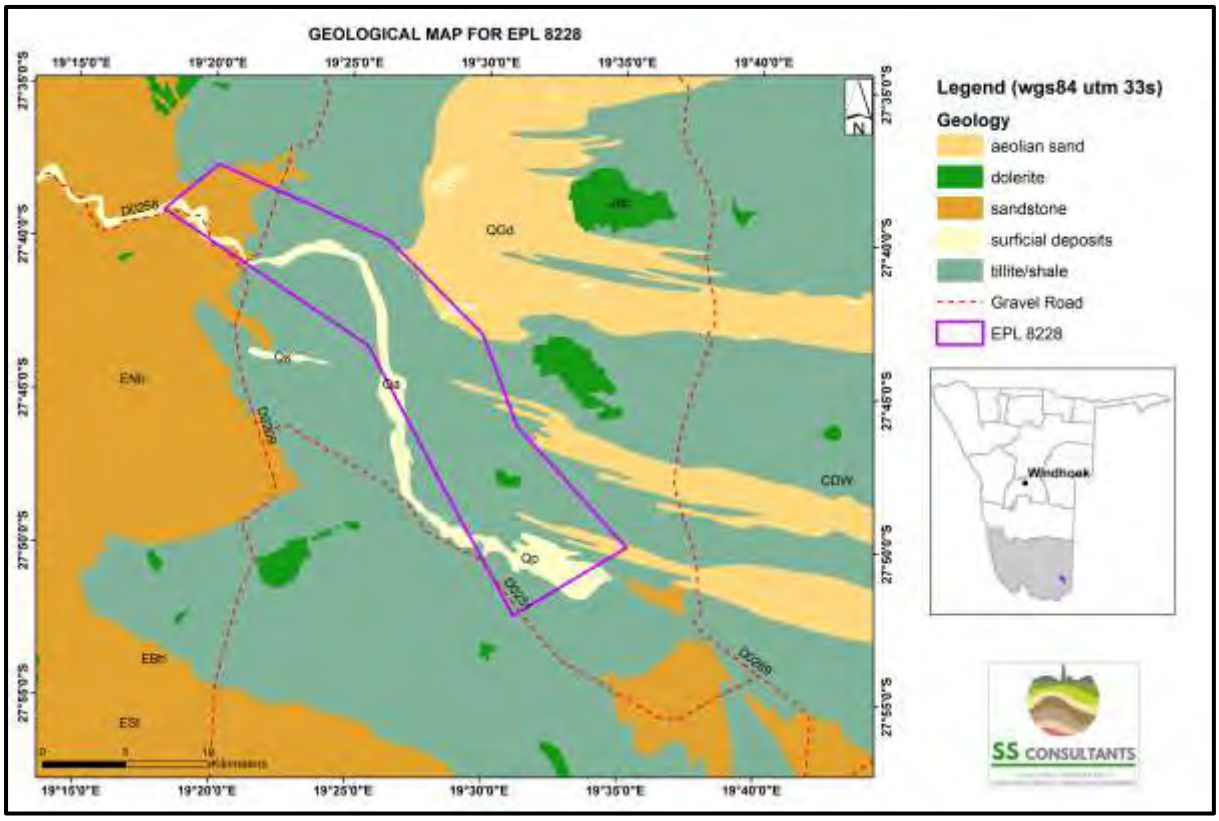

Figure 6-2: Local geology map around EPL-8228.

6.2 Landscape and Topography

The EPL is situated in the south eastern region of Namibia within the Karas Region. The topography of the Karas Region is characterised by diverse topography, featuring a mix of desert landscape, mountainous areas, and expansive plains. The EPL itself is characterised by a relatively flat topography with undulating hills and sits at an elevation of 1004 meters (3294.61942) above sea level.

6.2.1 *Climate*

The Exploration activities proposed within an EPL are significantly influenced by the climatic conditions of the area. Understanding climatic conditions is crucial as it helps determine the suitable and unsuitable times for conducting exploration activities and to avoid unfavourable or hazardous times. The Karas district were the EPL is situated has a warm desert climate

according to the Köppen-Geiger classification. Below are the descriptions of the rainfall and temperature conditions in the area.

6.2.1.1 Rainfall

Karasburg undergoes noticeable seasonal fluctuations in annual rainfall. In the mineral exploration license, June stands out as the month with the highest rainfall, averaging 7.5 mm with only one (1) day of rain, indicating concentrated precipitation. Conversely, the period from January to May experiences the lowest rainfall, with January and April recording the minimum of 0.1 mm. The month of March shows no recorded rainfall in the area. The graph below illustrates the rainfall patterns in the area (Figure 6-3), highlighting June, July, and November for having the highest number of rainy days, each averaging one (1) day of rainfall, signalling concentrated precipitation during these months.

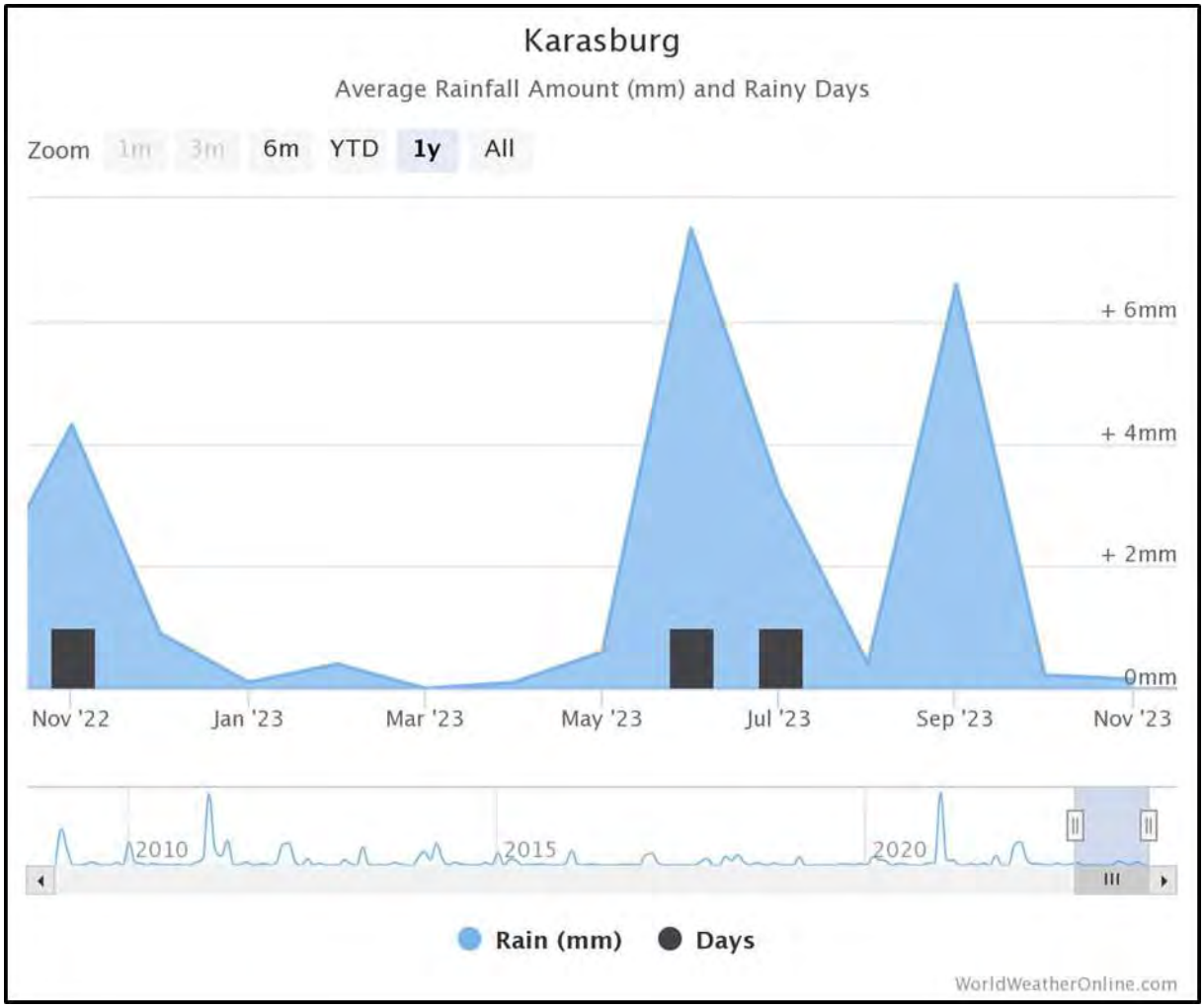

Figure 6-3: Annual average rainfall for Karasburg and surrounding area**.**

6.2.1.2 Temperature

In the mineral license area, January and February are characterized as the warmest months, featuring average high temperatures of 34°C each and average low temperatures of 18°C and 19°C, respectively. Conversely, June and July emerge as the coldest months, with average high temperatures of 21°C each and average low temperatures of 9°C and 8°C, respectively. Figure 6-5 bellow shows the average high and low temperatures in the Karasburg area.

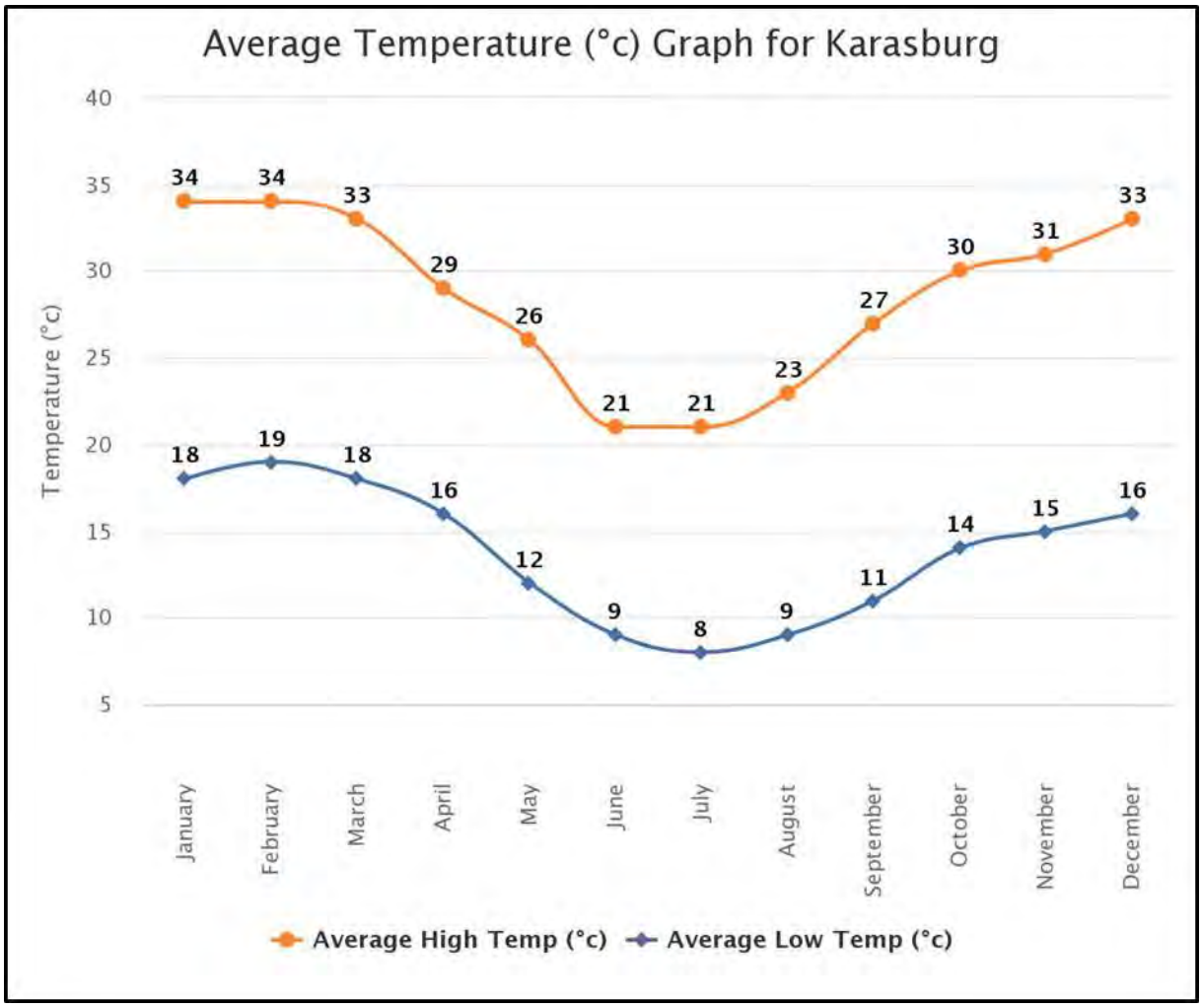

Figure 6-4: Average minimum and maximum temperatures in Karasburg.

6.2.1.3 Wind

The average wind speed in Karasburg undergoes subtle seasonal shifts throughout the year. Figures indicate that December tends to have the highest average wind speed, reaching 14.3 km/h. In contrast, may experiences comparatively lower wind speeds, averaging around 9.3

km/h. These fluctuations in wind speed are typical of arid climates, where seasonal variations and local influences contribute to atmospheric conditions.

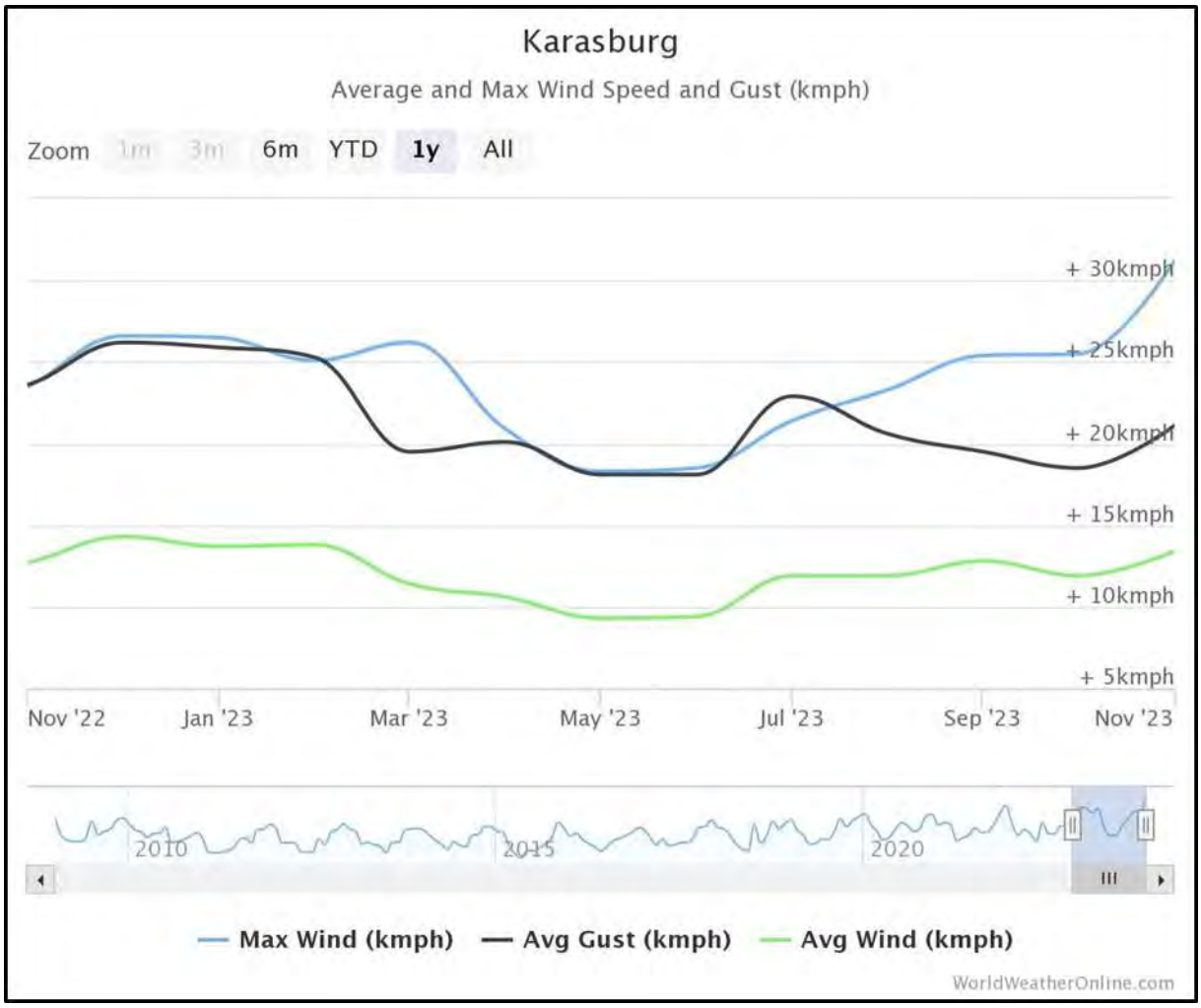

Figure 6-5: Average minimum and maximum wind patterns in Karasburg.

6.2.1.4 Humidity

June is identified as the most humid month in the area, characterized by an average relative humidity of 48% and an average cloud cover of 12%. In contrast, November experiences the least humid conditions, with an average relative humidity of 29% and an average cloud cover of 6%. Namibia, in general, exhibits low humidity levels, and this scarcity of moisture in the air significantly influences the climate. It leads to reduced cloud cover and precipitation, while also contributing to a higher rate of evaporation in the region.

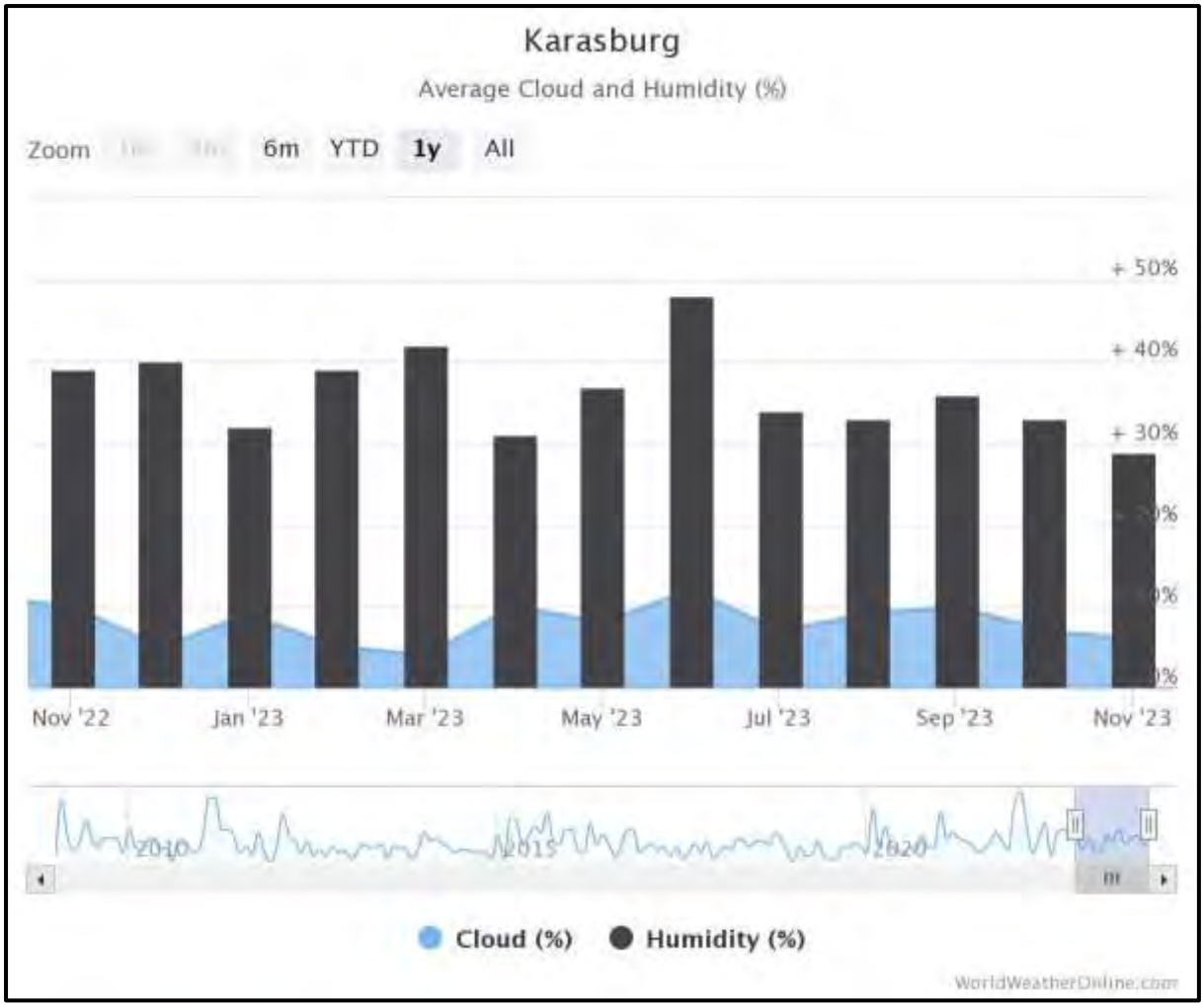

Figure 6-6: Map showing average clouds and humidity patterns in Karasburg.

6.2.2 *Water Resources: Surface and Groundwater*

EPL 8228 is situated in south-eastern Namibia within the Orange Basin, characterized by predominantly rocky terrain with limited ground water potential. The rock bodies in the area function as aquifers with generally low water potential, occasionally exhibiting moderate potential locally, as illustrated in Figure 6-7. The north-eastern section of EPL features rocks with moderate water potential, marked by fractured, fissured, or kastified formations. Given

these geological attributes, the EPL falls within an ecoregion where water potential is low, necessitating careful water usage of ground water to prevent depletion.

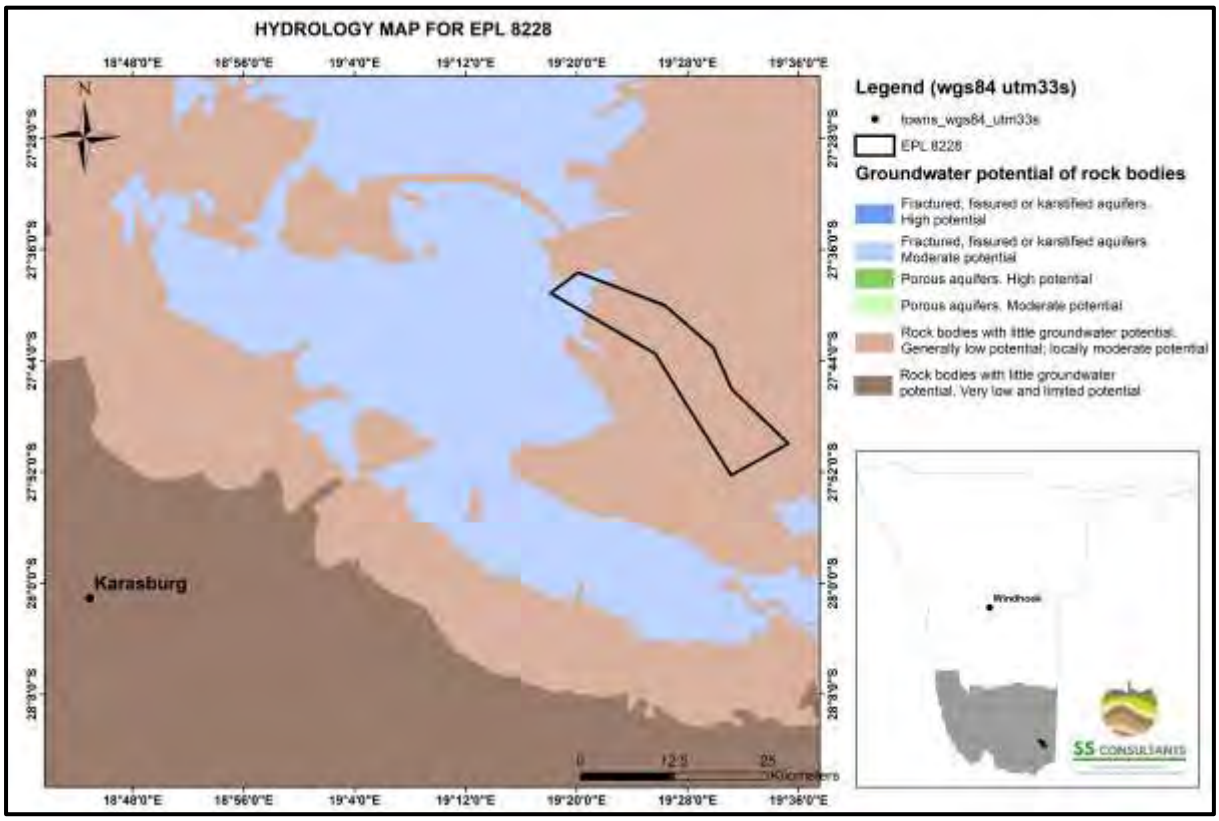

Figure 6-7: Ground water potential map for the area surrounding the EPL.

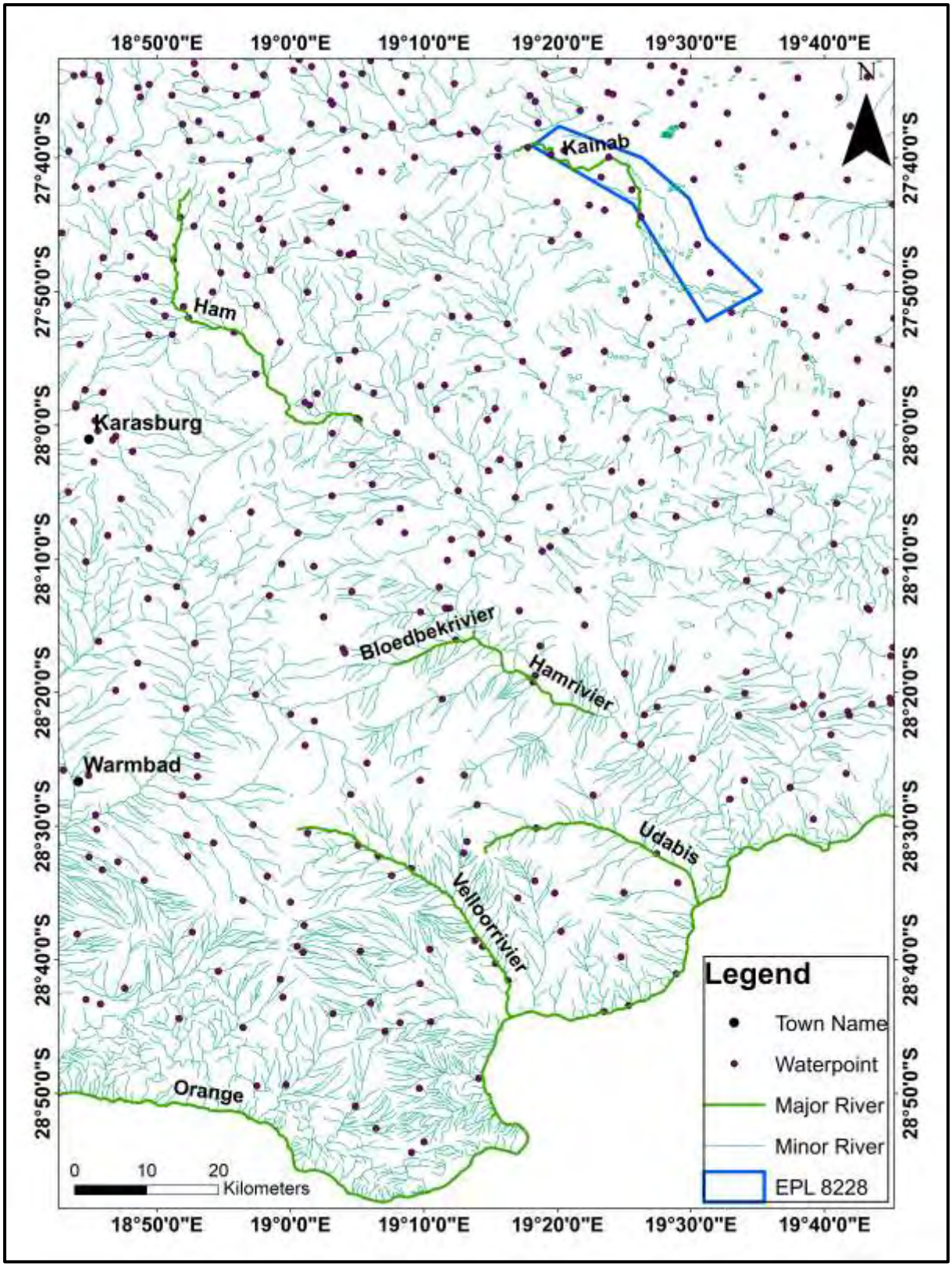

Figure 6-8: Map showing major and minor rivers and water points within and surrounding the EPL area.

6.2.3 *Fauna and Flora*

Flora

The project site is located in southern Namibia's southern region, encompassing the Nama Karoo biome and falling within the Karas Dwarf Shrubland Vegetation Type. The predominant landscape features grasslands and low shrubs, with plant endemism ranging from 2 to 9 species (Mendelsohn et al, 2002). Quiver trees (Aloe dichotoma, Figure 6-10), notable for their succulent nature and efficient water storage, are a key species in the area, particularly adapted to arid conditions. Hillsides are characterized by Euphorbia, Aloe, and Boscia species, while plains exhibit Rhigozum trichotomum, Parkinsonia Africana, and dominant Stipagrostis species in grasslands. Larger drainage lines host a diverse array of vegetation, including Acacia erioloba, A. karroo, Tamarix usneoides, Euclea pseudebenus, Rhus lancea, as well as succulent shrubs like Euphorbia gregaria and Ficus cordata. Figures 6-9 and Figure 6-10 visually depict the vegetation type observed within the project area.

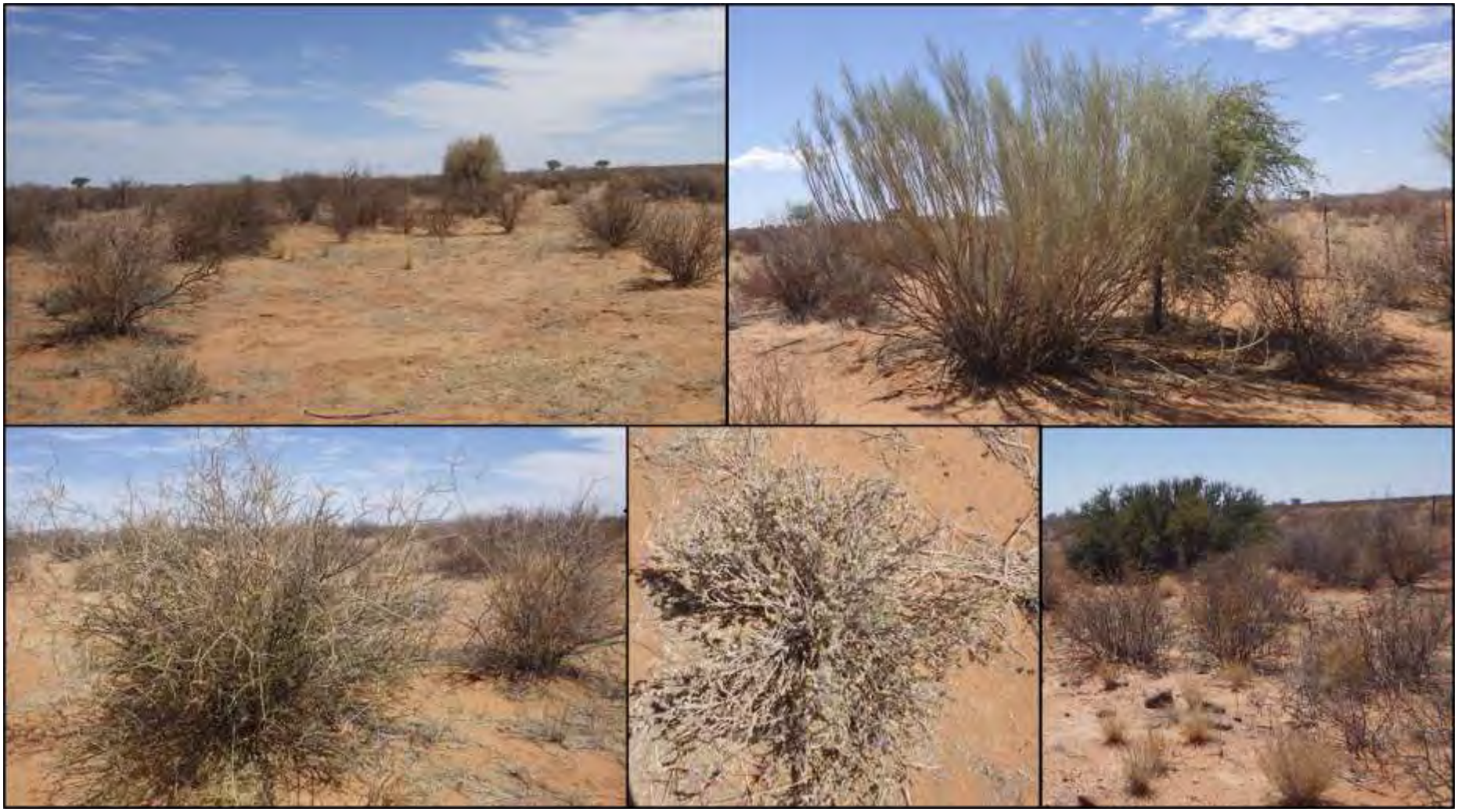

Figure 6-9: Dry desert bushes within the EPL.

Figure 6-10: Drier desert shrubs within the EPL area.

Fauna

EPL 8228 is situated in an ecological region characterized by relatively low overall diversity across terrestrial species, as reported by Mendelsohn et al. (2002). The diversity of mammals within and surrounding EPL 8228 ranges from 16 to 30 species, carnivores exhibit a diversity of 10 to 13 species, bird diversity is less than 51, reptile diversity falls between 41 to 50, and amphibians are observed in the range of 1 to 4 species. Common mammals expected in the area include gemsboks, steenboks, springboks, baboons, and porcupines. The region is also habitat to various reptiles, including snakes such as puff adders, cobras, dwarf adder, and whip snakes, as well as a variety of lizards and geckoes.

Avifauna

The most common bird species on-site are Sociable Weavers with several nest sites being located in the dry riverbeds across the site. These riverbeds appear to be higher in species density, abundance, and diversity than the adjacent plains which are relatively unproductive in terms of bird density and diversity. This habitat type is dominated by Spikeheeld Lark, Fawncoloured Lark, and Anteating Chats. The six globally threatened bird species which have a distribution range which overlaps with the study area may not always be observed on site, it is possible for them to occur within the study area at some stage. These include the Secretarybird, Kori Bustard, Ludwig's Bustard, Lanner Falcon, Martial Eagle, and Sclater's Lark. Larger bodied species, such as the Martial Eagle, have extremely large home ranges and could very well be found on occasion within the study area. Ostritches are the common ratites observed within the license area (Figures 6-11).

Figure 6-11: Ostriches observed within the EPL area.

6.2.4 *Archaeological and Heritage Resources*

Archaeological and Heritage Consultants (OTAH) and ESM Cultural Heritage Consultants (JV) was appointed to undertake an archaeological/heritage assessment for EPL 8228. Details and findings of this study is attached to this report (APPENDIX J).

6.3 SOCIAL BASELINE

6.3.1 *Social and demographic environment*

According to the Namibia 2001 Population and Housing Census, the Karas Region recorded a population of 69,329, with 32,346 females and 36,976 males, experiencing an annual growth rate of 1.3%. The majority of residents, approximately 54%, resided in urban areas, while 46% lived in rural areas. Covering a combined area of 161,215 km2, the region had a population

density of 0.4 persons per km2. The prevalent languages spoken were Afrikaans (40% of households), Nama/Damara (20%), and Oshiwambo (23%).

In 2001, the employment rate for the labour force (67% of those 15 years and older) stood at 71% employed and 29% unemployed. According to the 2012 Namibian Labour Force Survey, the unemployment rate in the Karas Region was 23.95%. The region is divided into seven constituencies: Berseba, Karasburg East, Keetmanshoop Rural, Keetmanshoop Urban, !Nami‡Naus, Oranjemund, and Karasbeur West. The project area is situated within the Karasburg East constituency.

6.3.2 *Economy and infrastructure*

The Karas Region is primarily characterized as a small stock-farming area, where sheep and goats are predominant. Noteworthy economic activities in the region include game farming and irrigation along the Naute Dam and the Orange River. The town of Lüderitz, a harbour town situated within the region, is renowned for its thriving fishing and boat-building industry. Mining activities include diamond areas along the coast, both on and off-shore, the Kudu Gas field in the Atlantic Ocean near Lüderitz, and small-scale industries in Lüderitz and Keetmanshoop. Tourist attractions encompass the Hot Water Springs at Ai-Ais, Warmbad, and the Fish River Canyon, which is the second-largest canyon in the world. In terms of education, the Karas Region hosts 49 schools with a total of 20,110 pupils. The transportation infrastructure is well-established, with the Karasburg Railway station serving as a crossing loop on the Trans-Namib Railway between Karasburg and Lüderitz, and Karasburg and Ariamsvlei. The main B3 road at Karasburg provides access to South Africa. The town of

Keetmanshoop, considered the capital of the south and located 215.8 km northwest of Karasburg by road, boasts direct air, road, and rail links.

Figure 6-12 Infrastructure types around the EPL

Figure 6-13 Homesteads around the EPL

6.4 Land Use

The Kunene Region predominantly revolves around several key land uses, including livestock grazing, subsistence agriculture, tourism, and mining. However, it is important to acknowledge that the primary land affected by EPL 8228, the proposed exploration project, is largely private owned land. The specific activities associated with this exploration project will take place on the designated private farmland within the project area. Given the arid

climate, extensive livestock farming is a vital economic activity in the region, with cattle, goats, and sheep being the main focus. Moreover, the regions exceptional landscapes such as canyons and hot water springs make it an attractive potential hub for eco-tourism.

Taking into account the existing land uses is crucial when considering potential interactions with the proposed exploration activities. Understanding the land use context is essential for assessing the potential impacts and ensuring that the exploration project aligns with existing land use patterns and adheres to regulations in the Karasburg area.

7 IMPACTS IDENTIFICATION, DESCRIPTION AND ASSESSMENT

7.1 Impact Assessment

The purpose of this section is to assess and identify the most pertinent environmental impacts by describing certain quantifiable aspects of these impacts and to provide possible mitigation measures to minimize the magnitude of the impacts that would be expected from the various activities that constitute the proposed minerals exploration on EPL 8228.

The following potential impacts on the environment during exploration activities have been identified:

- Socio economic impact
- Impacts on soil.
- Impacts on the flora and fauna.
- Air quality (generation of dust) and noise pollution
- Groundwater and surface water impacts
- Disturbance to Archaeological & Heritage Resources
- Health, safety, and welfare impact
- Land use impacts

ASSESSMENT METHODOLOGY FOR EVALUATING POTENTIAL IMPACTS

The impact screening criteria are summarized in the following table.

Table 7-1: Impact Screening Criteria

Aspect	Description
Nature	Focuses on the type of effect that the project will have on environmental components. Addresses questions related to "what will be affected and how?"
Extent	Spatial extend of the project and anticipated spatial extend of impacts indicating whether the impact will be within a limited area (on site where construction is to take place); local (limited to within 15km of the area); regional (limited to ~100km radius); national (extending beyond Namibia's boarders).
Duration	This looks at the temporal issues pertaining to time frames e.g., whether the impact will be temporary (during construction only), short term (1-5 years), medium term (5-10 years), long term (longer than 10 years, but will cease after operation) or permanent.
Intensity	Establishes whether the magnitude of the impact is destructive or innocuous and whether it exceeds set standards, and is described as none (no impact); low (where natural/ social environmental functions and processes are negligibly affected); medium (where the environment continues to function but in a noticeably modified manner); or high (where environmental functions and processes are altered such that they temporarily or permanently cease and/or exceed legal standards/requirements).
Probability	Considers the likelihood of the impact occurring and is described as uncertain, improbable (low likelihood), probable (distinct possibility), highly probable (most likely) or definite (impact will occur regardless of prevention measures).
Significance	Significance is given before and after mitigation. Low if the impact will not have an influence on the decision or require to be significantly accommodated in the project design, Medium if the impact could have an influence on the environment which will require modification of the project design or alternative mitigation (the route can be used, but with deviations or mitigation) High where it could have a "no-go"

	implication regardless of any possible mitigation (an alternative route should be used).

The application of the above criteria will be used to determine the significance of potential impacts using a combination of duration, extent, and intensity/magnitude, augmented by probability, cumulative effects, and confidence. Significance is described as follows:

Impact Rating Criteria

The impact rating criteria are summarised in the following table.

Table 7-2: Impact Rating Criteria

Significance Rating	Criteria
Low	Where the impact will have a negligible influence on the environment and no modifications or mitigations are necessary for the given development description. This would be allocated to impacts of any severity/ magnitude, if at a local scale/ extent and of temporary duration/time.
Moderate	Where the impact could have an influence on the environment, which will require modification of the development design and/or alternative mitigation. This would be allocated to impacts of moderate severity/magnitude, locally to regionally, and in the short term.
High	Where the impact could have a significant influence on the environment and, in the event of a negative impact the activity(ies) causing it, should not be permitted (i.e., there could be a 'no-go' implication for the development, regardless of any possible mitigation). This would be allocated to impacts of high magnitude, locally for longer than a month, and/or of high magnitude regionally and beyond.

By subjecting each of the potential impacts to the matrix above, the EIA team established the significance of each impact prior to implementing mitigation measures and then after mitigation measures have been implemented. Some of the mitigation measures are mentioned but detailed descriptions of management actions are contained in the accompanying EMP.

Environmental impact assessment matrix for the proposed EPL 8228.

Environmental Impact	Element	Impact	Phase	Duration	Magnitude	Extent	Type	Probability	Significance
TOPOGRAPHY	Topography and Landscape	Alternation of existing topography	Operation	Short term	Low	Local	Direct	Probable	Low
	Topography and Landscape	Topographic changes and visual Impact from overburden material.	Operation	Medium term	Moderate	Local	Direct	probable	Moderate
SOILS	Soil	Loss of usable topsoil material	Operation	Long term	Low	Local	Direct	Highly probable	Moderate
	Soil	Contamination to soil from waste disposal	Operation	Long term	Moderate	Local	Direct	Improbable	Low
LAND CAPABILITY	Socio Economic Activities	Land utilization for the benefit of the people	Operation	Long term	High	National	Indirect	Probable	Moderate

	Terrestrial ecology and biodiversity	Decreased in vegetated land (biodiversity zones) within the Exploration zones	Operation	Long term	Low	Local	Direct	Probable	Low

Environmental Impact	Element	Impact	Phase	Duration	Magnitude	Extent	Type	Probability	Significance
GROUNDWATER AND SURFACE WATER	Groundwater quality	Groundwater source and soil may be polluted by vehicular movements, mineral exploration drilling, etc.	Operation	Short term	High	Local	Direct	probable	Moderate
	Surface water quality	Increased sediment load from exposed surfaces	Operation	Short term	Low	Local	Direct	Probable	Moderate
	Surface water quality	Storm water generation from, the large open surface area may create	Operation	Long term	High	Local	Direct	Highly Probable	Moderate

		storm water which may result in pollution.							
	Surface water quality	Increase in surface water run- off from a large open surface area on site because of vegetation removal	Operation	Short term	Moderate	Local	Direct	Improbable	Low
AIR QUALITY	Air Quality	Generation of dust during drilling and campsite construction.	Construction, operation	Short term	Low	Local	Direct	Probable	Moderate
	Noise Pollution	Generation of dust during drilling and campsite construction.	Construction and operation	Long term (operation)	Low	local	Direct	Probable	Low
	Topography and Landscape	Visual impacts due to use of unsustainable disposal methods	Construction and Operations	Long term	Low	Local	Direct	Probable	Moderate

Environmental Impact	Element	Impact	Phase	Duration	Magnitude	Extent	Type	Probability	Significance
	Terrestrial ecology and biodiversity	Loss of habitat, and clear or damage to vegetation	Construction and Operations	Long term	Moderate	Local	Direct	Probable	Low
FAUNA	Terrestrial ecology and biodiversity	Loss of habitat and clearing or damage to vegetation	Construction, Operation	Short Time	Moderate	Local	Direct	Highly Probable	High
FLORA	Terrestrial ecology and biodiversity	Proliferation of invasive species Establishment of bush encroachers in disturbed areas.	Construction and Operations	Long Term	Low	Local	Direct	Probable	Low
	Terrestrial ecology and biodiversity	Illegal collection of firewood	Construction and Operations	Long Term	Low	Local	Direct	Probable	Low

	Terrestrial ecology and biodiversity	Clearing of land may lead to destruction of protected vegetation and loss of biodiversity. Loss of mature and protected tree species due to clearing of land for parking space.	Construction	Short Term	Moderate	Local	Direct	Highly Probable	Moderate
	Terrestrial ecology and biodiversity	Uncontrolled/accidental fires	Construction and Operations	Long Term	High	Local	Direct	Probable	Moderate
SOCIO-ECONOMIC	Socio Economic Activities	Temporary employment prospects in the area	Construction	Short Term	Low	Local	Direct	Probable	Moderate Positive

Environmental Impact	Element	Impact	Phase	Duration	Magnitude	Extent	Type	Probability	Significance
	Socio Economic Activities	Security concerns due to increased number of persons in areas	Construction and Operations	Long	High	Local	Direct	Probable	Moderate Positive
	Socio Economic Activities	Job creation construction workforce	Construction and operations	Long term	High	Local	Direct	Highly Probable	Moderate Positive
	Socio Economic Activities	Job creation permanent workforce	Operations and constructions	Long term	Moderate	Local	Direct	Probable	Moderate Positive
	Contributing to the National economy	Improved transport infrastructure and services	Operations	Long Term	Moderate	National	Direct	Highly Probable	High Positive
	Contribution to Local Economy	Employment and local procurement.	Construction and Operations	Long Term	Moderate	Local	Direct	Probable	Moderate Positive

Mitigation Measures

Mitigation measures are summarised in table 7-3 below.

Table 7-3: Mitigation measures

Impacts	Mitigation
Socio Economic	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.
Soil	During any excavating and clearing the contractor shall take care to remove as little topsoil as possible. All soil within 100mm of the cleared surface level shall be regarded as topsoil. Remove and separately stockpile any subsoil material that can be used for site backfilling. Topsoil shall be stockpiled (and seeded) in areas within the site boundary and approved by the Project Engineer in conjunction with the Environmental Consultant, for reuse and restoration.
Flora and Fauna	Some habitat areas such as the river and tunnel outcrops will be avoided wherever possible.

	A fauna survey will be conducted to determine the effect of fragmented habitat to game species should the need arise. No animals shall be killed, captured, or harmed in any way. No food stuff shall be left lying around as this will attract animals which may result in human-animal conflict.
Noise Pollution	Disturbance to fauna that roam the area will be minimized by training the employees on ways to minimize noise.
Air Quality	All staff on should be equipped with dosimeters that measure exposure levels to radiation. All staff must be made aware of the health risk and obliged to wear dust masks.
Water	Implementing water conservation practices to reduce water wastage and increase efficiency. Encourage the collection and storage of rainwater for non-potable uses, such as irrigation or toilet flushing. Developing and implementing water recycling and reuse systems, particularly for industrial activities. Treating and reusing water for non-potable purposes Groundwater Management: Managing and monitoring groundwater resources to prevent over-extraction and ensure sustainable use. This will involve setting up

	monitoring wells, implementing pumping restrictions, and assessing the aquifer's recharge rates. Desalination: Exploring desalination as an alternative water source. Although desalination can be energy-intensive, it can provide a viable option for obtaining freshwater in coastal areas where seawater is abundant.

8 CONCLUSION AND RECOMMENDATIONS

8.1 Conclusion

In conclusion, this project in EPL 8228 will explore precious metals and industrial minerals. Through exploring for these commodities, contributions to the Namibia's economy will be made and continued employment to the existing staff is made possible. For all aspects of operations and prospecting work strict adherence to the company's environment, Health and Safety policies must be ensured. Environmental training of the work force as well as monitoring of all aspects pertaining to the Environment, Health and Safety must be carried out in accordance with the approved EMP. During the exploration activities within the EPL, the company will follow a phased approach, which will be in line with the relevant Namibian legislation and regulations. The exploration program will be conducted in line with the EMP thus implementing the necessary mitigation measures, monitoring, and stipulated rehabilitation. It is of utmost importance that good relations are upheld with the farming community, community members and any other affected parties.

8.2 Recommendation

According to the information in the report, SS Consultants are confident that the risks and impacts associated with the proposed exploration activities can be brought down to tolerable levels, ensuring only negligible harm to the environment. This can be accomplished by successfully executing and closely monitoring the recommended measures in the Environmental Management Plan (EMP).

SS consultants therefore recommends that an ECC be granted on the following conditions:

- That the EMP be effectively implemented and monitored
- The proponent must engage with the local and traditional authorities including farm owners prior to the commencement of the exploration activities.
- That once a target area has been identified all invasive work should be conducted in accordance with the EMP.

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APPENDIX A: CV_ UAANAO KATJINJAA

CURRICULUM VITAE

UAANAO KATJINJAA

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Personal Statement

Committed individual willing to learn from more experienced personnel. Comfortable working in large scale environments and possesses comprehensive understanding of venture management principles. Capable to actively participate in business case study analysis and research projects; skills gained in team and group work at college.

Academic Background

Candidate for MSc. Integrated Environmental Management and Sustainable Development (2024)

(International University of Management**)**

- Environmental Impact Assessment
- Ecosystem Management and Conservation
- Research Methodology
- Environmental Legislations
- Mini Dissertation: *An Assessment of the Factors Affecting Sustainable Entrepreneurship Development in the Renewable Energy Sector in Windhoek, Namibia*

Bachelor of Business Administration- Entrepreneurship and Enterprise Development (2018)

(University Of Botswana**)**

- Strategic Management
- Management Consulting
- Business Plan Development
- Research Report: *An Assessment of Trends in Entrepreneurial Behavior of the Youth in Gaborone, Botswana*

Competencies

- Good Verbal and Written Communication Skills
- Microsoft Office (Word, Excel, PowerPoint)
- Report Preparation
- Data Collection and Analysis

Experience

Administration and Accounts Clerk- Chemspec Botswana- 2018-2019

- Receive and process invoices, expense forms
- Request for payments and handle KYC documents
- Handle daily banking reconciliation
- Attending emails and customers' enquiries

Junior Environmental Specialist SS- Consultants cc-2024

- Compilation and review of Environmental Impact Assessment (EIA) and Environmental Management Plan (EMP) report
- Compilation of Environmental Clearance Certificate application
- Conduct public consultation and engagements with stakeholders • Environmental Audit Compliance on various projects

Activities and other

- Participant in Tertiary Training Education Students Dialogue and Training on the Three Rio Conventions; Network and Learning Workshop (UNDP,2022).
- Business incubation and implementation through a small enterprise project; Creation of a mobile application (AccomoMe) with a database that links landlords to suitable tenants. (Global Business Labs, 2018).
- Article on Women Empowerment through Beauty Pageants (The Ngamitimes Newspaper, 2017).
- Documentary on Pursuit of Happiness (Media Studies, University of Botswana, 2016).

References

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APPENDIX B: ENVIRONMENTAL MANAGEMENT PLAN (EMP)

ENVIRONMENTAL MANAGEMENT PLAN REPORT FOR:

THE PROPOSED INDUSTRIAL MINERALS AND PRECIOUS MINERALS EXPLORATION ON EPL NO.8228

KARASBURG DISTRICT KARAS REGION

APP-002315

2023

COMPILED BY

SS CONSULTANTS

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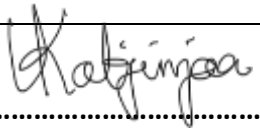
Signature:	 ……

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LIST OF ACRONYMS

DEA – Department of Environmental Affairs

EMP - Environmental Management Plan

EA - Environmental assessment

ECC – Environmental Clearance Certificate

EIA – Environmental Impact Assessments

EMA – Environmental Management Act No. 7 of 2007

ESA - Environmental Scoping Assessment

I&AP – interested and affected parties.

METF – Ministry of Environment, Tourism and Forestry

MME – Ministry of Mines and Energy

ECO - Environmental Control Officer

MFO - Manager Field Operations

M –Meters

ASL - above sea level

NDP5 – National Development Plan

GDP – Gross Domestic Product

HPPs – Harambee Prosperity Plan

LAC - Legal Assistance Centre

MOL - Ministry of Labour

NHC - National Heritage Council

PPE Personal Protective Equipment

NNMP - Namaqua Natal Metamorphic Province

EAP - Environmental Assessment Practitioner

EMS - Environmental Management Systems

1 INTRODUCTION

1.1 Background

The Environmental Management Plan (EMP) detailed in this section outlines the comprehensive strategy the Proponent intends to adopt for the management of exploration, potential mining, and processing operations within the Exclusive Prospecting License (EPL) area. This approach is particularly geared towards activities that have a substantial impact on the receiving environment or possess the potential for long-term high-risk implications. The overarching goal is to minimize adverse effects while maximizing positive outcomes associated with the operations in the EPL area.

- **Commitment to Environmental Responsibility:**

Aligned with the company's Environmental Policy, the Proponent commits to upholding responsible and sound environmental management throughout all stages of exploration, test mining, and processing activities within the EPL area. This commitment underscores the importance of integrating environmental considerations into every facet of the company's operations.

- **Integration into Environmental Management Systems (EMS):**

The impacts discussed in this section of the report will be seamlessly integrated into the company's overarching Environmental Management Systems (EMS). This integration ensures a holistic and systematic approach to environmental management, emphasizing a proactive stance in addressing potential challenges and leveraging opportunities for positive environmental contributions.

- **Auditing for Compliance:**

In adherence to the company's commitment to environmental stewardship, the EMP and EMS will undergo both internal and external audits annually. These audits serve as a rigorous mechanism to verify and ensure compliance with environmental standards and regulations. The commitment to regular audits reflects the Proponent's dedication to continuous improvement and transparency in environmental management practices.

- **Project Location and Land Use:**

EPL 8228 is situated 69 km northeast of Karasburg town in the Karas Region, covering an extensive area of 19,794.6478 hectares. The project is demarcated by ten corner coordinates, as illustrated in Figure 1-2. Notably, the predominant land use within and outside the EPL is private land, primarily utilized for goat, sheep, and cattle farming. Additionally, the EPL intersects with eight commercial farms, namely Fettkluft North (farm No. 33), Hudap North (farm No. 38), Hudab South (farm No. 39), Tigerberg (farm No. 62), Nabas (farm No. 61), Helder (farm No. 40).

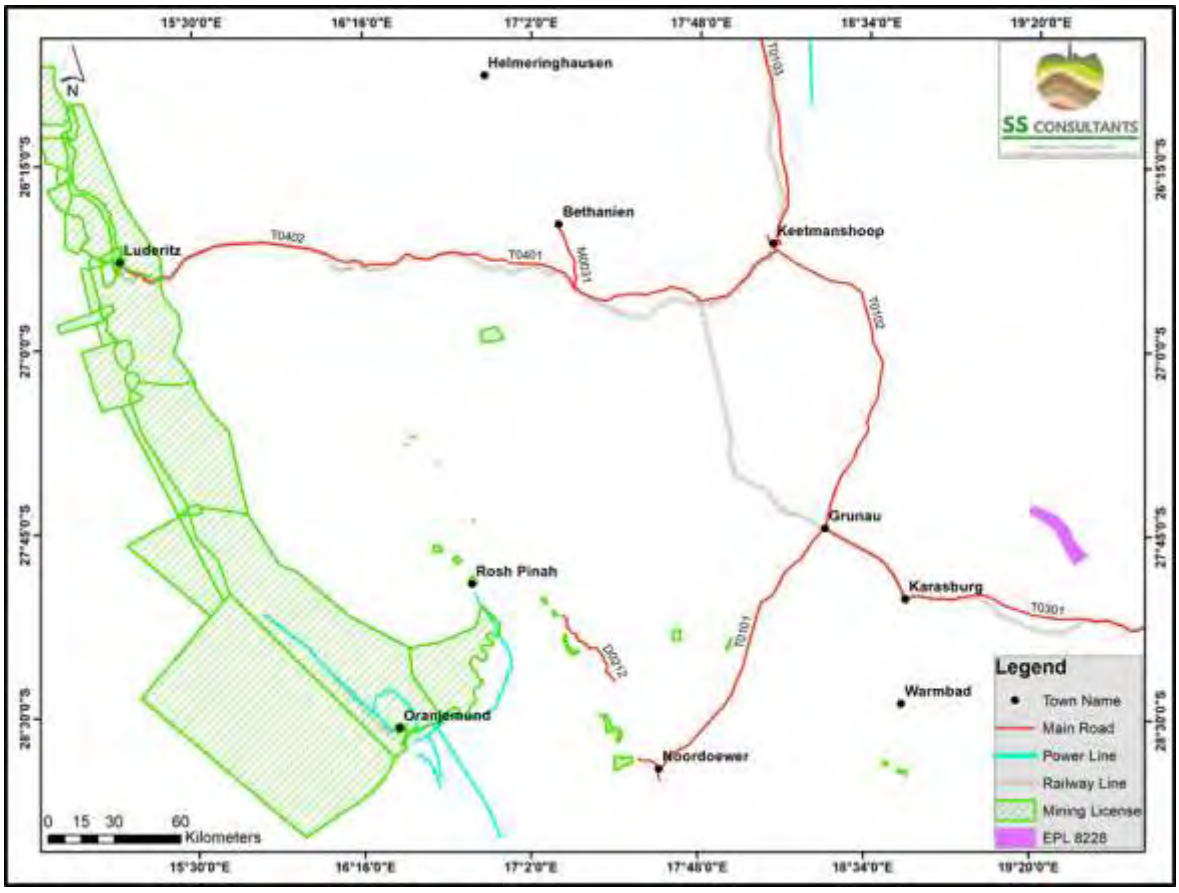

Figure 1-1: Map showing the location of EPL 8228 in relation to existing Mining Licenses in the area.

- **Consideration of Existing Land Uses:**

Given the prevalence of farming activities in the area, the EMP acknowledges the need to harmonize exploration and mining activities with existing land uses. This recognition underscores the importance of balancing economic development with environmental sustainability, minimizing conflicts, and fostering coexistence between mining operations and agricultural practices.

In essence, the EMP outlines a proactive and responsible approach to environmental management, demonstrating a commitment to compliance, transparency, and the integration of environmental considerations into the core of the company's operations in the specified EPL Area.

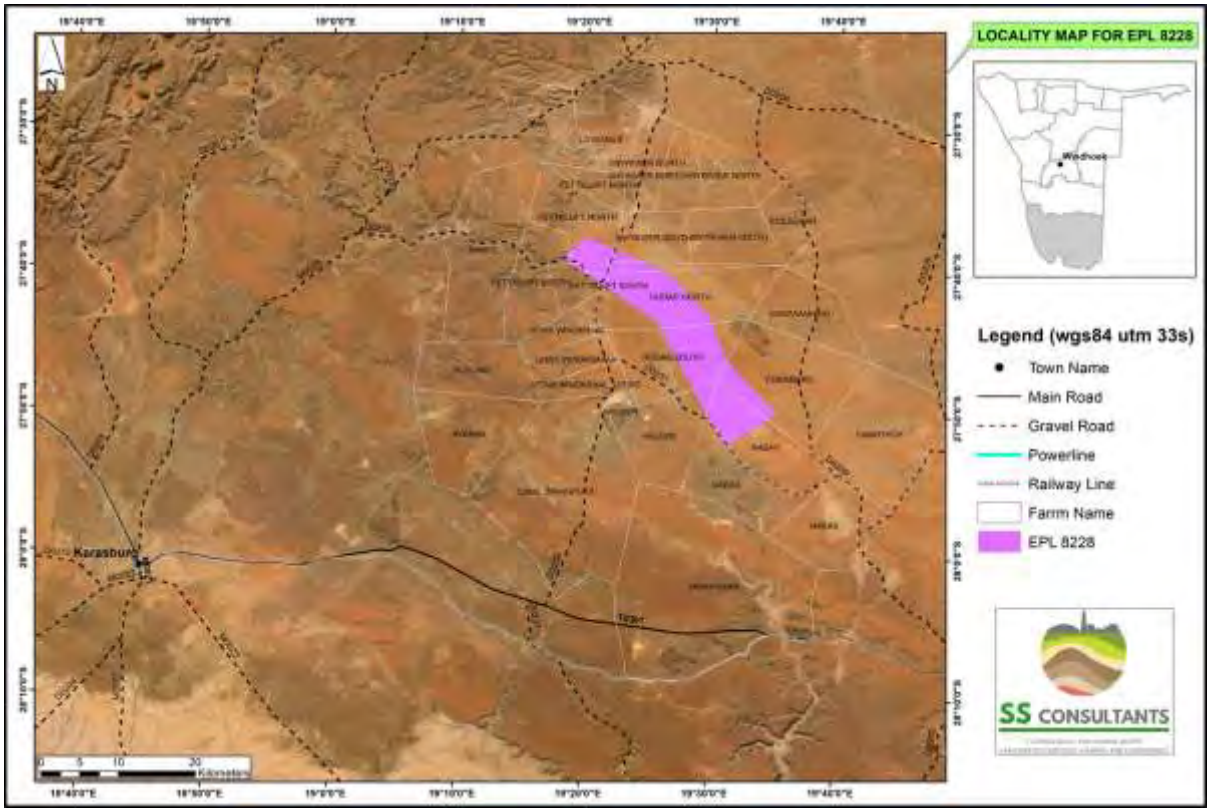

Figure 1-2: Locality map showing the location of EPL 8228.

1.2 **Purpose of the document**

This document is prepared as part of the Environmental Scoping and Impact Assessment for the Proposed Exploration which was conducted in terms of the Environmental Management Act, 2007 (Act No 7 of 2007). It is designed to function as a dynamic Environmental Management Plan (EMP), responding to the environmental effects discerned during the assessment. This EMP should be regarded as a living document, complementing the Environmental Scoping and Impact Assessment Report. The EMP serves as a crucial component in the environmental regulatory process, outlining measures to address identified environmental effects and providing a framework for responsible and sustainable practices.

i. **Purpose:** The primary purpose of this EMP is to delineate management measures aimed at addressing the identified environmental effects detailed in the

Environmental Scoping and Impact Assessment Report. Additionally, it provides mitigation measures and recommendations to counteract these effects. It is imperative for all personnel involved in the project to familiarize themselves with the potential environmental issues and the strategies outlined herein to prevent or minimize adverse impacts on the site.

ii. **Legal Compliance:** The proponent will acknowledge full compliance with legal and policy requirements as the holder of the Environmental Clearance Certificate (ECC). The impacts identified in the Environmental Impact Assessment (EIA) serve as the foundation for a set of environmental specifications that will be enforced on-site. These specifications constitute a binding agreement between the company and the Ministry of Environment, Forestry, and Tourism (MEFT).

2 PROJECT ACTIVITIES

2.1. Mineral Exploration Activities

i. **Exploration Data Review:** Exploration activities commence with a comprehensive review of existing data and past research through a desktop analysis. This involves acquiring high-resolution data from the Ministry of Mines and Energy (MME), interpreting it, and determining potential targets in the EPL area. This initial stage serves as a foundational step in exploration.

ii. **Reconnaissance Assessment:** Following the data review, a reconnaissance assessment is conducted, involving field-based activities like regional mapping and sampling. This phase aims to identify and validate prospective areas pinpointed during the first stage. Reconnaissance activities are only initiated if potential targets are identified in the initial data review.

iii. **Initial Field-Based Operations:** Subsequent to reconnaissance, preliminary field-based activities take place. These activities include widely distributed geological mapping, sampling, surveying, and possibly spaced trenching and drilling. The goal is to verify the feasibility of potential targets based on regional data acquired in the previous stage. The extent of exploration depends on the discovery of viable mineral resources. In the event that the specified target proves non-viable, the license is revoked.

iv. **Detailed Local Field-Based Operations:** To assess the viability of delineated local targets, detailed local field-based operations are conducted. This involves site-specific geology mapping, trenching, bulk sampling, surveying, and detailed drilling. The depth of exploration at this stage is contingent on the discovery of prospective mineral resources. If positive results are obtained from detailed exploration, the data is compiled into a pre-feasibility report.

v. **Detailed Feasibility Study:** If the pre-feasibility results are favourable, a comprehensive feasibility study is undertaken for the identified site-specific area. This includes detailed site-specific drilling, bulk sampling, and laboratory testing/test mining. The detailed feasibility study aims to provide a thorough understanding of the economic viability and technical feasibility of the mineral resources identified during the exploration process.

2.2. Access And Transport

The EPL is conveniently accessible via the D0209 gravel road that branches off the main Karasburg – Ariamsvlei (Namibia, South African border) road. Within the EPL, there are several smaller track roads (Figure 2-1). To minimize environmental impact during geological mapping, sampling, and geophysical surveys, motorized access will be limited to the existing tracks. However, if new access routes are needed for drilling, they will be identified, marked, and assessed for environmental sensitivity before drilling commences.

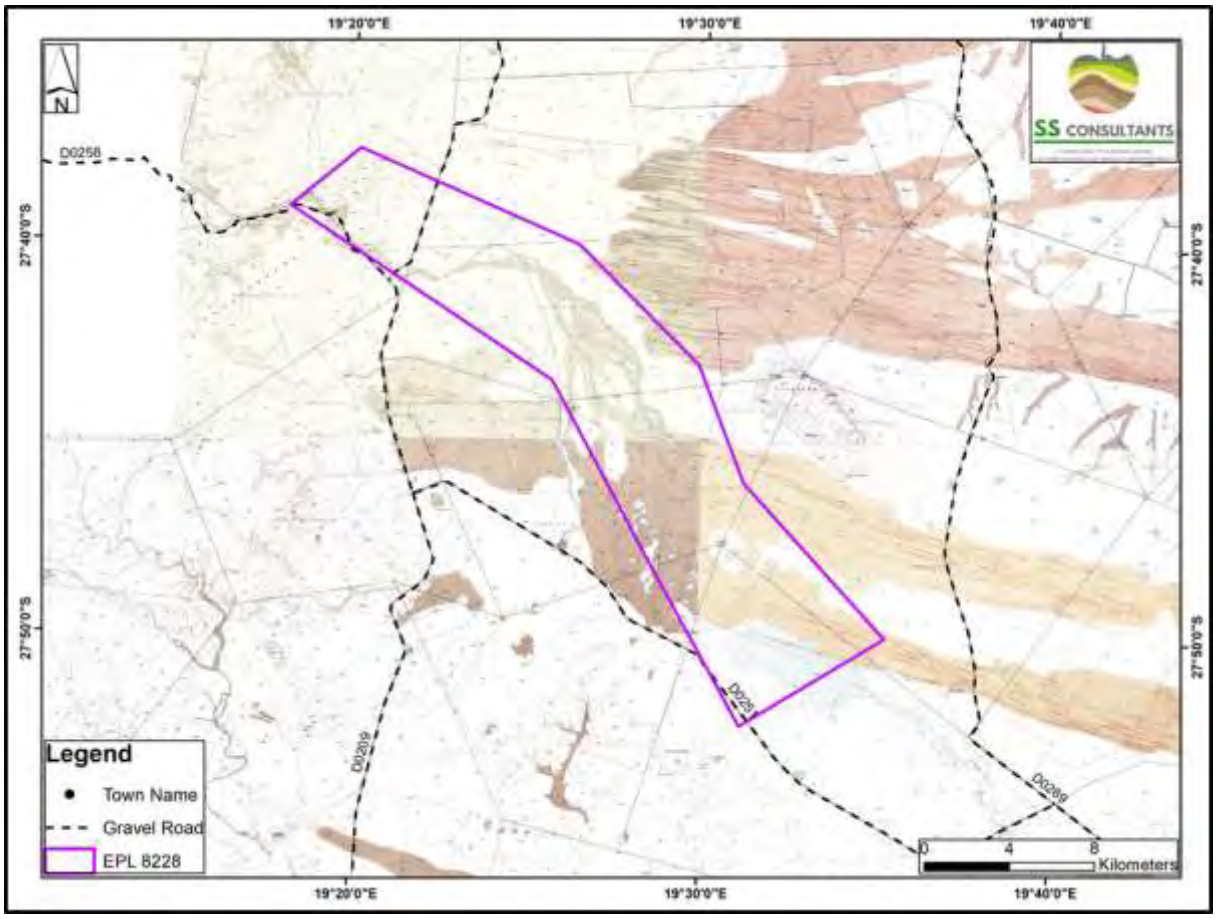

Figure 2-1 Topographic map showing existing road network within the EPL area

2.3. Resources (water and electricity)

Exploration activities will need a limited supply of water which will be brought to the site. A diesel-powered generator will be used as needed for operating machinery.

2.4. Accommodation and supporting infrastructure

- The exploration team is anticipated to comprise less than ten (10) skilled workers, who will commute daily to the site, eliminating the need for camp setups.
- To facilitate the team's daily operations, two portable toilets will be installed on-site and diligently serviced to ensure hygiene and compliance with environmental standards.
- Essential equipment for day-to-day activities will include an excavator, loader, screening plant, and one (1) bakkie, all crucial for efficient exploration tasks.

- Waste generated during exploration activities will be systematically collected and responsibly deposited at the Karasburg municipal dumpsite, aligning with waste management regulations.
- Hydrocarbon storage on-site will involve the presence of petrol (100 liters) and diesel (1000 liters) tanks. These tanks will be appropriately stored and bunded, with bunds designed to hold 110% of the tanks' capacity. The proponent will diligently apply for all necessary permits, as mandated by the Ministry of Mines and Energy (MME), to ensure compliance with regulatory standards.

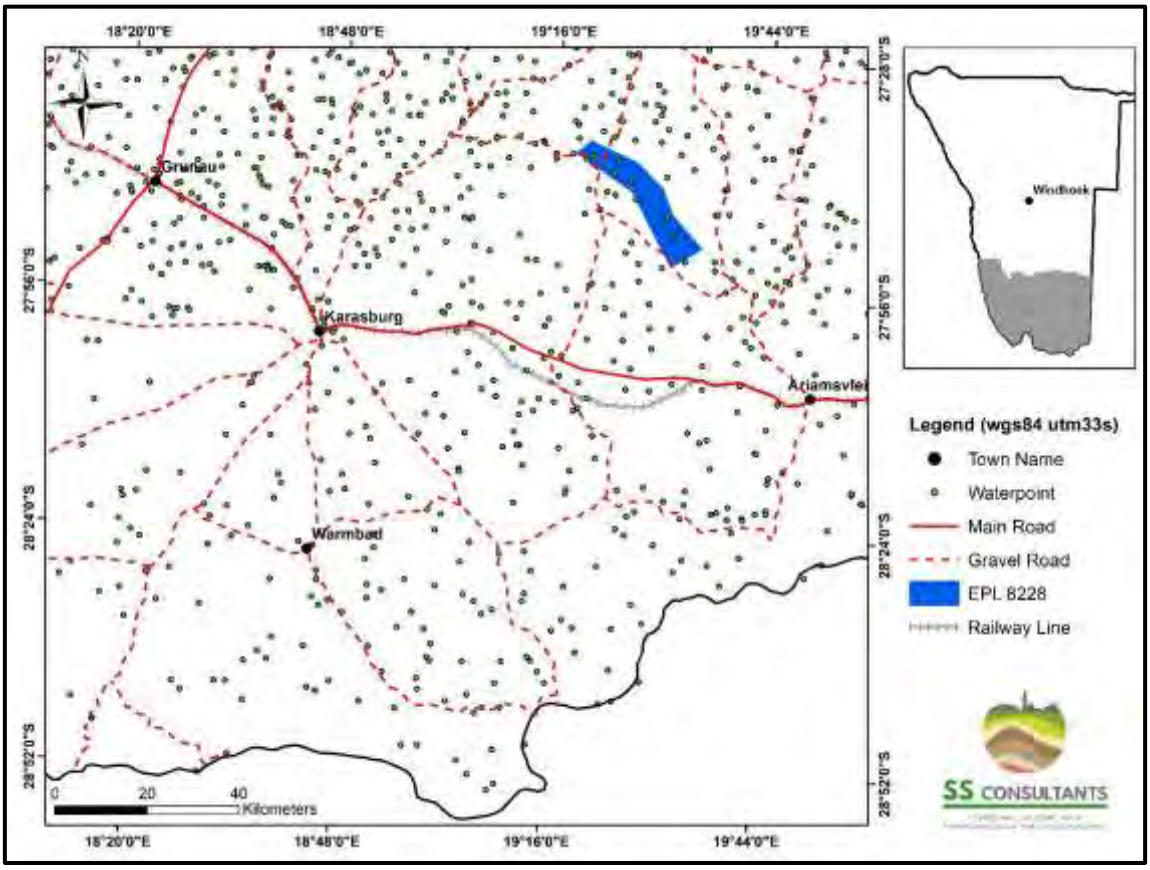

Figure 2-2: Map showing the outline of EPL 8228 and infrastructures surrounding the EPL area.

3. SUMMARY OF THE RECEIVING ENVIRONMENT

i. Regional Geology

The regional geology encompassing EPL 8228 is characterized by three primary tectonostratigraphic units: the Palaeo- to Mesoproterozoic Namaqua Province, late Proterozoic to Palaeozoic cover sequences of the Nama Group, and the Karoo Supergroup.

The Namaqua Province consists of distinct NE-SE trending domains with diverse stratigraphy and structural histories. NNMP rocks, exposed in various directions around EPL 8228, date back to 1200 million years. Overlying these are sedimentary cover sequences, including the Neoproterozoic to Cambrian Nama Group and Palaeozoic Karoo Supergroup, intruded by later igneous provinces and extensively impacted by Jurassic dolerite sills and dykes.

ii. Local Geology

The local geology under EPL 8228 involves lithostratigraphic units from the Nama Group, Karoo Supergroup (Dwyka Group), and post-Karoo dolerite dykes. Notable formations include the Nababis Formation, dominated by cross-bedded, feldspathic sandstones, and the Dwyka Formation, forming the base of the Karoo Supergroup. Post-Karoo dolerite dykes and sills, accompanied by faulting and gentle folding, have influenced the local geology, creating distinctive trends in faulting and dolerite emplacement.

iii. Landscape and Topography

The EPL is situated in the southeastern region of Namibia within the Karas Region. The topography of the Karas Region is characterized by diverse topography, featuring a mix of desert landscape, mountainous areas, and expansive plains. The EPL itself is characterized by a relatively flat topography with undulating hills and sits at an elevation of 1004 meters (3294.61942) above sea level.

iv. Climate

The Karasburg area, where the EPL is located, experiences a warm desert climate (Köppen-Geiger classification: BWh). The area has distinct wet (May to November) and dry (January to May) seasons. Temperature variations are noticeable, with the coldest months in June and July, and the highest temperatures in January to March and October to December. Temperature variations are observed between summer and winter, influencing exploration activity scheduling and hazard avoidance. Wind speed undergoes seasonal shifts, with December having the highest average speed (14.3 km/h). Humidity is generally low, with June being the most humid month (48% relative humidity), and November the least humid (29% relative humidity). Namibia's arid climate, characterized by low humidity, influences cloud cover, precipitation, and evaporation rates in the area.

v. Water Resources: Surface and Groundwater

EPL 8228 is situated in south-eastern Namibia within the Orange Basin, characterized by predominantly rocky terrain with limited ground water potential. The rock bodies in the area function as aquifers with generally low water potential, occasionally exhibiting moderate potential locally. The northeastern section of EPL features rocks with moderate water potential, marked by fractured, fissured, or kastified rock formations. Given these geological attributes, the EPL falls within an ecoregion where water potential is low, necessitating careful water usage of ground water to prevent depletion. The project will primarily use water for general purposes, cleaning, drilling activities, and dust suppression. The water will be sourced from existing boreholes or new ones based on agreements with landowners and the community. Individual agreements with landowners and community members will determine the use of water from existing boreholes. All necessary permits for water drilling should be obtained from relevant authorities. Water used for drilling will be recycled for efficiency, and if needed, water can be obtained from the Karasburg Municipality/Town Council.

vi. Flora

EPL 8228 occurs within the Nama Karoo biome and falls within the Karas Dwarf Shrubland Vegetation Type. The predominant landscape features grasslands and low shrubs, with plant endemism ranging from 2 to 9 species (Mendelsohn et al, 2002). Quiver trees (Aloe dichotoma), notable for their succulent nature and efficient water storage, are a key species in the area, particularly adapted to arid conditions. Hillsides are characterized by Euphorbia, Aloe, and Boscia species, while plains exhibit Rhigozum trichotomum, Parkinsonia africana, and dominant Stipagrostis species in grasslands. Larger drainage lines host a diverse array of vegetation, including Acacia erioloba, A. karroo, Tamarix usneoides, Euclea pseudebenus, Rhus lancea, as well as succulent shrubs like Euphorbia gregaria and Ficus cordata. Types of vegetation observed within the EPL is shown in figure 3-1.

Figure 3-1: Dry Desert shrubs within the EPL area

vii. Fauna

EPL 8228 is located in an ecological region with relatively low terrestrial species diversity. Mammal diversity ranges from 16 to 30 species, carnivores exhibit 10 to 13 species, bird diversity is below 51, reptile diversity falls between 41 to 50, and amphibians range from 1 to 4 species. Common mammals in the area include gemsboks, steenboks, springboks, baboons, and porcupines. Reptiles, including snakes like puff adders, cobras, dwarf adder, and whip snakes, as well as various lizards and geckoes, also inhabit the area.

Avifauna

The most common bird species on-site are Sociable Weavers with several nest sites being located in the dry riverbeds across the site. These riverbeds appear to be higher in species density, abundance, and diversity than the adjacent plains which are relatively unproductive in terms of bird density and diversity. This habitat type is dominated by Spikeheeld Lark, Fawncoloured Lark, and Anteating Chats. The six globally threatened bird species which have a distribution range which overlaps with the study area may not always be observed on site, it is possible for them to occur within the study area at some stage. These include the Secretarybird, Kori Bustard, Ludwig's Bustard, Lanner Falcon, Martial Eagle, and Sclater's Lark. Larger bodied species, such as the Martial Eagle, have extremely large home ranges and could very well be found on occasion within the study area. Ostriches are the common ratites observed within the license area.

4. ENVIRONMENTAL MANAGEMENT PRINCIPLES

The Proponent commits to ensuring that all project participants uphold the following principles:

i. Ecological and Social Responsibility

All employees, including consultants, workers, contractors, subcontractors, transporters, visitors, and others entering the premises, are obligated to conduct activities in an ecologically and socially responsible manner.

ii. Health and Safety

Safeguarding the health and safety of project personnel and the public is paramount. This includes addressing road safety, on-site dangers, and potential hazards associated with the project.

iii. Community Relations

Foster positive relationships with surrounding settlements, farm owners and stakeholders, emphasizing open communication and collaboration.

iv. Wise Use and Conservation of Environmental Resources

Ensure the wise use and conservation of environmental resources, with consideration for both present and future generations. Prevent or minimize environmental impacts associated with project activities. Take measures to minimize air, water, and soil pollution resulting from project operations. Actively contribute to the conservation of biodiversity in the project area.

These principles underscore the Proponent's commitment to responsible and sustainable practices, promoting not only the success of the project but also the well-being of the environment, communities, and future generations.

4.2. Roles and responsibilities for environmental management

The environmental aspects which may be affected by the proposed project have been categorized into negative and positive impacts as an extension of the preceding sections. This section summarizes the objectives, indicators to be observed, schedules be adhered to and roles and responsibilities of various stakeholders to the EMP.

4.2.1. Communication between Parties:

Emphasis on open communication among all parties to proactively address potential environmental issues. Prioritization of a proactive approach to anticipate and prevent/minimize environmental impacts. Recognition of the irreversibility of certain impacts, such as damage to protected and endemic species.

4.2.2. The Exploration Operating Company:

Ultimate responsibility lies with the company, led by the Environmental Control Officer (ECO) and Managing Director. Inclusion of Environmental Management Plan (EMP) and its specifications in contractual documents. Compliance with Namibian legislation, policies, and international conventions. Daily enforcement of environmental specifications and periodic environmental audits. Allocation of a sufficient budget for measures with cost implications. Early commissioning of tree surveys before road construction to secure necessary permits. Maintenance of open and effective communication on environmental management.

4.2.3. Site Managers:

Day-to-day environmental management responsibility assigned to the ECO and Manager Field Operations (MFO). Familiarity with EMP and relevant sections of the Environmental Impact Assessment (EIA). Daily monitoring and enforcement of environmental compliance on-site. Consultation with the ECO in case of infringements leading to environmental damage. Documentation of "before-and-after" site conditions. Facilitation of communication among all stakeholders for effective environmental management.

4.2.4. Environmental Control Officer (ECO):

Appointment of a qualified ECO responsible for environmental audits and reporting. Submission of site inspection reports to the Managing Director and MFO. Advising the MFO on interpretation and implementation of environmental specifications. Recommending remedial action in cases of non-compliance. Periodic submission of reports to the Ministry of Environment, Forestry, and Tourism (MEFT) as required by law.

4.2.5. Contractors:

Contractors' responsibilities include familiarity with EMP, compliance with environmental specifications, and timely notification of actions with potential negative impacts. Conducting or arranging environmental training for employees and subcontractors. Progressive implementation of rehabilitation measures when required, avoiding deferral until the project's end.

5. ENVIRONMENTAL SPECIFICATIONS

These are detailed and specific requirements, standards, and guidelines that are set to govern and ensure the environmental performance of exploration. These specifications are designed to minimize or mitigate any potential negative impacts on the environment resulting from the activities associated with the exploration. These specifications cover a range of aspects and practices to promote responsible and sustainable environmental management. The environmental specifications are:

5.2. Compliance with Environmental Specifications

- Conducting activities in an environmentally and socially responsible manner.
- Strict adherence to environmental specifications by the contractor and on-site personnel.

5.3. Training and Awareness

- Provision of training for all site personnel and contractors to ensure compliance with environmental specifications.
- Oversight by the Manager Field Operations (MFO) to guarantee appropriate training levels at all personnel tiers.

5.4. Stakeholder Relations

- Maintenance of positive relations with landowners and the public by all site personnel.
- Addressing and resolving any complaints received by the Environmental Control Officer (ECO).

5.5. Permits

- Obtaining all necessary permits from relevant authorities.

- Conservation and relocation of rare and endangered plants require permits from the Directorate of Forestry.

5.6. Road Safety

- Implementation of precautions for safe access road usage, considering visibility, animal presence, and road conditions.
- Adherence to speed limits, cautious driving, and strict control of vehicle movements.

5.7. Access Tracks

- No new tracks unless essential, with approval from the Municipality and landowners.
- Clear marking of selected access and site roads, avoiding damage to plants.
- Foot access to elevated or trackless sites where possible.

5.8. Conservation of Biodiversity

- Strict avoidance of damage to protected species.

5.9. Wildlife Poaching

- Prohibition of capturing, killing, or harming animals or birds.
- Strict consequences for violations, including potential suspension from the project and prosecution.

5.10. Soil Management and Erosion Control

- Careful excavation to minimize topsoil removal.
- Separation and stockpiling of subsoil for backfilling.
- Prevention of soil erosion with suitable measures in sensitive areas.

5.11. Pollution Control

- Immediate reporting and containment of spills by workers.
- Mitigation of pollution incidents by the contractor.

5.12. Air Pollution/Dust Emission

- Timely activities during permissible weather conditions.
- Sheltered location for soil and sand stockpiles.

- Vegetation retention to reduce dust, re-vegetation of exposed surfaces, and controlled vehicle movement.
- Adherence to speed limits and dust monitoring practices.

5.13. **Noise Pollution**

- Keeping noise levels within acceptable limits, following appropriate noise mitigation specifications.
- Limiting noisy activities to specific times and avoiding weekends and public holidays.

5.14. **Waste Management**

- Maintaining cleanliness with provided bins and responsible waste disposal.
- No on-site burial of waste; removal to approved facilities.

5.15. **Hazardous Substances**

- Proper labelling and sealing of containers holding hazardous substances.
- Bunding of tanks to contain spills, immediate clean-up, and disposal of spills.

5.16. **Fire Prevention**

- Emergency Response Plan establishment.
- Controlled burning of charcoal with precautions and supervision.

5.17. **Archaeological Sites**

- Protection of archaeological remains, reporting of any finds to the Heritage Council.

5.18. **Health and Safety**

- Detailed induction for all personnel, including measures for dust, bees, snakes, and scorpions.
- Emphasis on good personal hygiene, including handwashing before eating.
- Provision of personal protective equipment and first aid supplies.
- **Dust Management**

  Staff provided with dust masks and proper Personal Protective Equipment (PPE) during charcoal processing to prevent inhalation.
- **Ingestion Prevention**

Prohibition of eating, drinking, or smoking while working with potentially hazardous materials to avoid ingestion

- **Emergency Measures**

  Availability of Aspivenin (suction syringe) at all workstations for first aid in case of snake bites, scorpion stings, or bee stings.

5.19. Work Stoppage

- Authority of the MFO to halt work in case of environmental specification infringements.
- No entitlement to claims for delays during work stoppages.

5.20. Compliance Monitoring

- Monthly site compliance inspections by the company ECO.
- Compilation of EMP compliance reports submitted regularly to the MFO and biannually to the MEFT.

6. IMPACTS IDENTIFICATION, DESCRIPTION AND ASSESSMENT

6.2. Impact Assessment

The purpose of this section is to assess and identify the most pertinent environmental impacts by describing certain quantifiable aspects of these impacts and to provide possible mitigation measures to minimize the magnitude of the impacts that would be expected from the various activities that constitute the proposed minerals exploration on EPL 8228.

The following potential impacts on the environment during exploration activities have been identified:

- Socio economic impact
- Impacts on soil
- Impacts on the flora and fauna
- Air quality (generation of dust) and noise pollution
- Groundwater and surface water impacts

- Disturbance to Archaeological & Heritage Resources
- Health, safety, and welfare impact
- Land use

6.3. Assessment methodology for evaluating potential impacts.

The impact screening criteria are summarized in the following table.

Table 6-1: Impact Screening Criteria

Aspect	Description
Nature	Focuses on the type of effect that the project will have on environmental components. Addresses questions related to "what will be affected and how?"
Extent	Spatial extend of the project and anticipated spatial extend of impacts indicating whether the impact will be within a limited area (on site where construction is to take place); local (limited to within 15km of the area); regional (limited to ~100km radius); national (extending beyond Namibia's boarders).
Duration	This looks at the temporal issues pertaining to time frames e.g., whether the impact will be temporary (during construction only), short term (1-5 years), medium term (5-10 years), long term (longer than 10 years, but will cease after operation) or permanent.
Intensity	Establishes whether the magnitude of the impact is destructive or innocuous and whether it exceeds set standards, and is described as none (no impact); low (where natural/ social environmental functions and processes are negligibly affected); medium (where the environment continues to function but in a noticeably modified manner); or high (where environmental functions and processes are altered such that they temporarily or permanently cease and/or exceed legal standards/requirements).
Probability	Considers the likelihood of the impact occurring and is described as uncertain, improbable (low likelihood), probable (distinct possibility), highly probable (most likely) or definite (impact will occur regardless of prevention measures).

Significance	Significance is given before and after mitigation. Low if the impact will not have an influence on the decision or require to be significantly accommodated in the project design, Medium if the impact could have an influence on the environment which will require modification of the project design or alternative mitigation (the route can be used, but with deviations or mitigation) High where it could have a "no-go" implication regardless of any possible mitigation (an alternative route should be used).

The application of the above criteria will be used to determine the significance of potential impacts using a combination of duration, extent, and intensity/magnitude, augmented by probability, cumulative effects, and confidence.

6.4. Impact Rating Criteria

The impact rating criteria are summarised in the following table

Table 6-2 Impact Rating Criteria

Significance Rating	Criteria
Low	Where the impact will have a negligible influence on the environment and no modifications or mitigations are necessary for the given development description. This would be allocated to impacts of any severity/ magnitude, if at a local scale/ extent and of temporary duration/time.
Moderate	Where the impact could have an influence on the environment, which will require modification of the development design and/or alternative mitigation. This would be allocated to impacts of moderate severity/magnitude, locally to regionally, and in the short term.

High	Where the impact could have a significant influence on the environment and, in the event of a negative impact the activity(ies) causing it, should not be permitted (i.e. there could be a 'no-go' implication for the development, regardless of any possible mitigation). This would be allocated to impacts of high magnitude, locally for longer than a month, and/or of high magnitude regionally and beyond.

7. ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

The purpose of the Environmental Management Plan is to provide a detailed plan to mitigate the negative and positive impacts identified in the environmental assessment report. Furthermore, it aims to provide actions with roles and responsibilities to implement the environmental specifications provided for to the proponent, contractors, subcontractors who will undertake exploration activities.

The following table provides a large-scale summary overview of all the major environmental management aspects. The EIA submitted with this EMP also provide mitigation measures for impacts identified therein.

Table 7-1 Environmental impacts and mitigation

ENVIRONMENTAL IMPACTS	PROPOSED MITIGATION MEASURES	RESPONSIBILITY	MONITORING PLAN
Air pollution	• Regular maintenance of vehicles and equipment's. • Brief workers and contractors.	Personnel on duty, Foreman on duty and Environmental Officer	• Amount of dust produced. • Level of landscaping executed.

	• Control speed and operation of construction vehicles. • Regular maintenance of vehicles, construction equipment's and heavy machineries. • Provide workers with dust masks.		
Noise pollution	• All noise should be kept within reasonable levels. • Employees and neighbors should be notified of any scheduled unusual noise. • Regular maintenance of vehicles, equipment's and heavy machinery. • Workers should be provided with personal hearing protection if	Foreman on duty, Environmental Officer, Safety Health and Environment Manager.	• Amount of noise produced

	working in a noisy environment.		
Solid waste	• Littering should be discouraged by having strategically placed bins and refuse skips on site. • Recycling plastic, paper and cans should be encouraged on site • The bins should be emptied on a regular basis by the proponent or an independent contractor. • The site should have containers with bulk storage facilities at convenient points to prevent littering.	Personnel on duty, Environmental Officer and Safety Health and Environment Manager	• Presence of dust bins/waste collection points.
Oil leaks and spills	• Contactor should have a sealed designated area where	Personnel on duty, Foreman on duty Environmental	• Absence of oil spills and leaks on site.

	maintenance is carried out to prevent percolation of contaminants. • Oil products should be handled carefully on bounded surfaces; in case it leaks. • Vehicles and equipment should be well maintained to prevent oil leaks.	Officer and Safety Health and Environment Manager	
First aid	• A well-stocked first aid kit shall be maintained by qualified personnel.	Safety Health and Environment Manager, Safety and Health Officer.	• Contents of the first aid kits.
Visual	• Environmental considerations will always be adhered to before clearing roads, trenching and excavation.	Safety Health and Environment Manager, Environmental Officer	• Employees to be trained on how to minimize impacts that can easily be identified with the eye.

Archaeological sites	• Buffer zones will be created around the sites. • Adhere to practical guidelines provided by the responsible archaeologist to reduce archaeological impacts of quarrying activities. • All archaeological sites to be identified and protected before development commences.	All personnel on duty, Environmental officer, Safety Health and Environment Manager	• Register of all archaeological sites identified.
Occupational health and safety	• Provide personal protective equipment's, train workers on personal safety, and how to handle equipment's and machines. • A well-stocked first aid box shall be maintained by	Safety and Health Officer, Safety Health and Environment Manager	• Workers using personal protective equipment. • Availability of a well-stocked first aid box.

	qualified personnel. • Report any accidents/ incidences and treat and compensate affected workers. • Provide sufficient and suitable sanitary conveniences which should be kept clean. • Clean sanitary facilities.		
Fauna	• Some habitat areas such as the river and tunnel outcrops will be avoided wherever possible. • A fauna survey will be conducted to determine the effect of fragmented	Personnel on duty, Environmental Officer, Safety Health and Environment Manager	• Regular monitoring of any unusual signs of animal habitat.

	habitat to game species should the need arise. • No animals shall be killed, capture or harmed in any way. • No food stuff shall be left lying around as this will attract animals which may result in human-animal conflict.		
Alien invasive plants	• Ensure vehicles and equipment are clean of invasive plants and seeds. • Eradicating alien plants using area management plan. • Contain neighboring infestations and restrict movement of invasive plants from adjacent lands • Educating everyone on site	Environmental Officer, Environmental Manager	• Regular monitoring of any signs of alien plants.

	on types of invasive plants.		
Loss of vegetation	• Environmental considerations will be adhered to at all times before clearing roads, trenching and excavating. • The movement of vehicles in riverbeds, rocky outcrops and vegetation sensitive area will be avoided.	Environmental Officer, Safety Health and Environment Manager	• Warning signs on site • Restored vegetation
Socio Economic	• The population change can be mitigated by employing people from the local community and encouraging the contractors to employ local individuals.	Environmental Officer, Safety Health and Environment Manager.	• 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.

8. MONITORING PLAN

The project monitoring conducted under the EMP includes:

The monitoring plan includes:

i. **Project Readiness Monitoring:**

- Purpose: To assess the progress of project readiness and address deficiencies through corrective actions.

ii. **Environmental Quality Monitoring:**

- Responsible party: competent authority or proponent-appointed personnel.
- Parameters: Air quality, noise, and water quality.
- Method: Collection and analysis of data at designated monitoring locations.
- Objective: Evaluate compliance with applicable environmental quality and emission standards.

iii. **EMP Compliance Monitoring:**

- Responsible Party: Project Management Consultants.
- Purpose: Verify adherence to the Environmental Management Plan (EMP) during project implementation.

iv. **Operational Monitoring:**

- Responsible Party: Relevant government department or nominated private sector operator.
- Scope: Part of subproject operations.
- Objective: Ensure ongoing compliance with environmental standards during the operational phase.
- Auditing plan

9. ENVIRONMENTAL CODE OF CONDUCT

The Environmental Code of Conduct outlined in this section of the Environmental Management Plan (EMP) is applicable to all individuals involved in the project, including sub-

contractors, visitors, permanent and temporary workers. It is mandatory for anyone within the project site boundaries to adhere to the Environmental Code of Conduct as specified in this section of the EMP.

The on-site implementation of environmental guidelines will be overseen by the Environmental Coordinator (ENC), who holds the authority to issue warnings and take disciplinary actions against individuals violating environmental rules and procedures. In cases of persistent transgressions, a disciplinary hearing will be conducted. Continued noncompliance may lead to permanent removal from the construction sites. This Code of Conduct serves as a comprehensive framework to ensure that all project participants contribute to maintaining environmentally responsible practices throughout the project's duration.

9.2. Site closure and rehabilitation

Rehabilitation is the process of repairing the damage done by exploration activities. Rehabilitation plan has been developed with a main aim of returning disturbed environment close to its pre exploration state. It is also planned to cater for the access road, vehicle tracks around the site, removal, and restoration of areas covered by stockpile and rock piles. The closure vision for the proposed project is to establish a safe, stable and non-polluting post-prospecting landscape that can facilitate integrated, self-sustaining and value generating opportunities, thereby leave a lasting positive legacy.

9.2.1. Site closure and rehabilitation activities

All waste (such as hazardous and domestic) waste will be transported offsite for disposal in licensed landfills in Karasburg or surrounding towns. Disturbed or/and contaminated areas will be cleaned up, treated where necessary and restored to its pristine state.

- Demolition of camping structures.
- Removing of equipment on site.
- Removal of associated infrastructures such as storage tanks, solar panels and heavy-duty generators.

- Where access tracks have been developed in cases where there are no roads, these will be rehabilitated and closed as part of normal closure actions in consultation with landowners.
- Existing secondary roads in the area should be used to prevent damages of the main road.
- The recovered topsoil and subsoil should be utilized to reconstruct the original soil profile

10. RECOMMENDATIONS

Based on the results of this Environmental Management Plan (EMP) report, SS Consultants hereby recommended that the proponent be issued with an Environmental Clearance Certificate for proposed exploration on the EPL 8228. Once a viable project has been identified (economic resources are discovered) and a separate field-based and site-specific Environmental Impact Assessment (EIA) and Environmental Management Plan (EMP) must be implemented as part of the prefeasibility and feasibility study with respect to the possible mining operations. The site-specific EIA and EMP shall cover the area identified to have potential economic minerals resources.

11. CONCLUSION

In conclusion, this EMP signifies a commitment to environmental stewardship and regulatory compliance, providing a detailed roadmap for managing and mitigating potential environmental impacts during the exploration phase. It establishes a clear framework for responsible practices and serves as a contractual agreement between the company and the regulatory authorities. The implementation of the EMP as provided in this report will minimize the negative effects and maximize the positive effects thereby enhance the overall ecosystem services / value of the EPL 8228 and surrounding areas.

12. REFERENCES

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APPENDIX C: LIST OF INTERESTED AND AFFECTED PARTIES

PROJECT TITLE: ENVIRONMENTAL SCOPING ASSESSMENT REORT FOR THE PROPOSED EXPLORATION ACTIVITIES ON EPL 8228

Table 0-1: THE LIST OF THE REGISTERED INTERESTED AND AFFECTED PARTIES I&AP

NAME AND SURNAME	ORGANISATION	POSTAL ADRESS	CONTACT NUMBER	EMAIL
Iipinge Ndelimona	IA Tracking and Monitoring in Namibia (EIA Tracker) Namibian Environment and Wildlife Society	N/A	+264814138822	**ndeliimonachox@gmail.com**

APPENDIX D: BACKGROUND INFORMATION DOCUMENT

SS CONSULTANTS

BACKGROUND INFORMATION DOCUMENT (BID)

ENVIRONMENTAL SCOPING ASSESSMENT (ESA) FOR THE PROPOSED INDUSTRIAL MINERALS AND PRECIOUS METAL EXPLORATION ACTIVTIES ON EXCLUSIVE PROSPECTING LICENCE (EPL) 8228 LOCATED IN KARASBURG DISTRICT,KARAS REGION, NAMIBIA.

PUBLIC INVITATION TO REGISTER AND COMMENT

PURPOSE OF DOCUMENT

The purpose of the Background Information Document (BID) is to provide basic detailed information about the proposed listed activities and to be shared with all registered potential Interested and Affected Parties (I&APs) during the public consultation as part of the EIA process. Furthermore, the BID aims to outline the EIA process and public consultation methods to be followed.

Hence, BID aims to provide:

- An overview of proposed exploration activities on **EPL 8228 for industrial minerals and preciousmetals group of commodities**.
- An overview of the Environmental Impact Assessment process; and
- Guidance on how members of public can participate in the EIA process.

I&APs comments and concerns are vital to the success of the EIA process and potential public members are encouraged to register and participate.

Please register / complete registration form and submit to SS Consultants CC on or before the **10 November 2023**.

Attention: Ms. Anna Nekuta
Address: Unit 24, Bougain Villa, Sam Nujoma Road, Windhoek, Namibia
Email:
Cell: +264812409174

INTRODUCTION

SS CONSULTANTS CC (hereafter referred to as the consultant), an independent mineral resource and environmental consulting company has been appointed by **Ms Lusia Nghitukwa** (here after referred to as the Proponent) to undertake an environmental scoping assessment process and obtain an environmental clearance certificate on behalf of the proponent for the proposed mineral exploration activities on **EPL 8228**.

The proposed exploration activities fall in the listed activities under the Environmental Management Act 7 of 2007 – activities which may not be undertaken without an Environmental Clearance Certificate. Hence the proponent is expected to obtain an Environmental Clearance Certificate from the Environmental Commissioner prior to the commencing of these exploration activities.

The proposed development is therefore related to the specific listed activities as outlined by relevant sections in the Environmental Management Acts Regulations of 2012:

- *Construction of facilities for any process or activities which requires a license, right or other form of authorization, and the renewal of a license, right or other form of authorization, in terms of the Minerals (Prospecting and Mining Act), 1992 (Section 3.1);*
- *Other forms of mining or extraction of any natural resources whether regulated by law or not (Section 3.2);*
- *Resource extraction, manipulation, conservation, and related activities (Section 3.3);*
- *Abstraction of ground or surface water for industrial or commercial purposes (Section 8.1).*
- *Manufacturing, storage, handling, or processing of a hazardous substance defined in the Hazardous Substances Ordinance, 1974 (Section 9.1).*
- *Any process or activity which requires .....(Section 9.2).*

1. Project Description

EPL 8228 was granted to **Ms. Lusia Nghitukwa** by the Ministry of Mines and Energy (MME) on March 30, 2021. In accordance with the Environmental Management Act (EMA) of 2017 and its associated 2012 Environmental Impact Assessment (EIA) Regulations, anyone seeking to conduct exploration activities within EPL 8228 must obtain an Environmental Clearance Certificate (ECC) from the Department of Environmental Affairs (DEA) within the Ministry of Environment and Tourism (MET). The ECC will enable the license owner to carry out exploration activities focused on industrial minerals and precious metals. The project area is covered by a single EPL license, which has the potential for conversion into a mining license if economically viable mineral deposits are discovered, and all required licensing conditions are met. The proposed exploration activities will involve both non-invasive and invasive methods. Non-invasive methods include remote sensing, geological field mapping, ground geophysical surveys, and surface soil and rock sampling. Invasive techniques involve activities such as reverse circulation or diamond drilling and pitting/trenching. Initially, non-invasive methods will be employed to determine the necessity for more invasive exploration. The project area is situated close to Karasburg Town, with well-developed infrastructure, including access to water, national roads, railways, petrol stations in Grunau and Karasburg, and three-phase electricity from NamPower. The utilization of this infrastructure will be contingent on agreements with landowners and community members, and all requisite permits and requirements will be obtained from relevant authorities. Throughout the exploration process, various geological consultants and contractors will be engaged at different stages. Additionally, a geophysics expert may be contracted to conduct geophysical surveys. Drilling operations will be carried out by a registered drilling contractor, and they are expected to provide their own drilling crew. Moreover, the exploration activities on EPL 8228 have the potential to establish and operate a mineral exploration program, leading to direct permanent employment opportunities and indirect job creation in supporting services. These activities also hold the promise of discovering economically valuable ore deposits, which, through mineral extraction, can contribute to employment, wealth generation, and economic development in the country. The attractive wages offered by the new project are expected to benefit the local workforce, thereby boosting economic growth in the Karasburg East Constituency, nearby towns, constituencies, and the nation as a whole. The towns of Karasburg, Grunau, and Warmbad are the closest populated areas from which unskilled labor can be sourced. Accommodation for the workforce during the exploration program may involve temporary site camps or residing in the nearest towns throughout the exploration program.

2. Project Location

EPL 8228 is located 69 km northeast of Karasburg town in the **Karas Region**. The project covers an area of 19794.6478 hectares and is demarcated by nine (9) corner coordinates as shown in figure 1 below. The main land use of the area within and outside the EPL is private land which is mostly used for goat, sheep, and cattle farming. The EPL partially underlain by eight (8) commercial farms Namely: Fettkluft North, Fettkluft South, Snyriver South, Hudap North, Hudab South, Tigerberg, Nabas, Helder farms.

Coordinates and Shape

Coordinates

Official Area: 19794.6478 Ha

Coordinate system: GCS Bessel 1841

Order	Latitude	Longitude
Part 1		
1	27° 39' 06.23" S	19° 10' 07.14" E
2	27° 37' 37.36" S	19° 20' 06.29" E
3	27° 40' 00.03" S	19° 26' 22.00" E
4	27° 42' 01.64" S	19° 29' 50.70" E
5	27° 46' 01.84" S	19° 31' 10.69" E
6	27° 49' 56.01" S	19° 35' 15.51" E
7	27° 52' 12.32" S	19° 31' 08.68" E
8	27° 48' 08.30" S	19° 28' 32.73" E
9	27° 43' 27.91" S	19° 25' 39.47" E

Shape

Figure 1: Map depicting the coverage of EPL 8228 and corner coordinates of the license area.

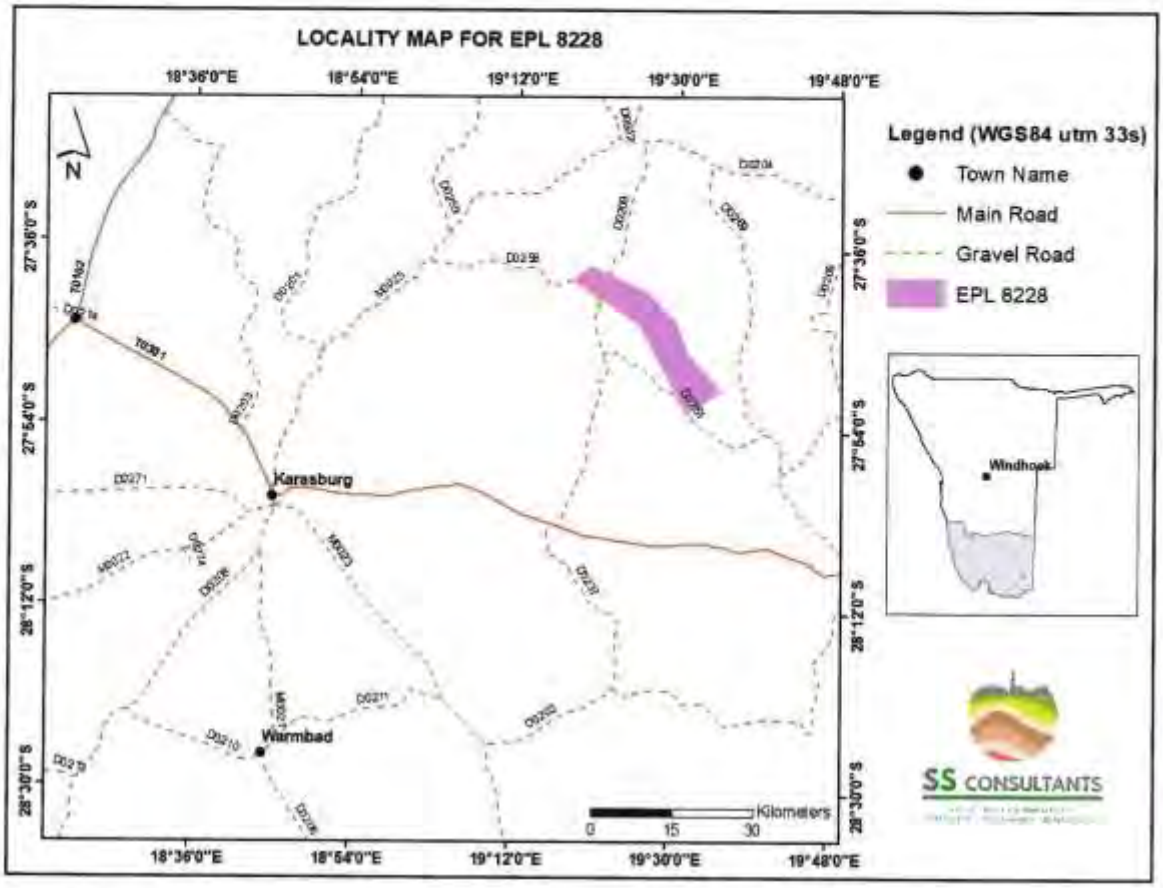
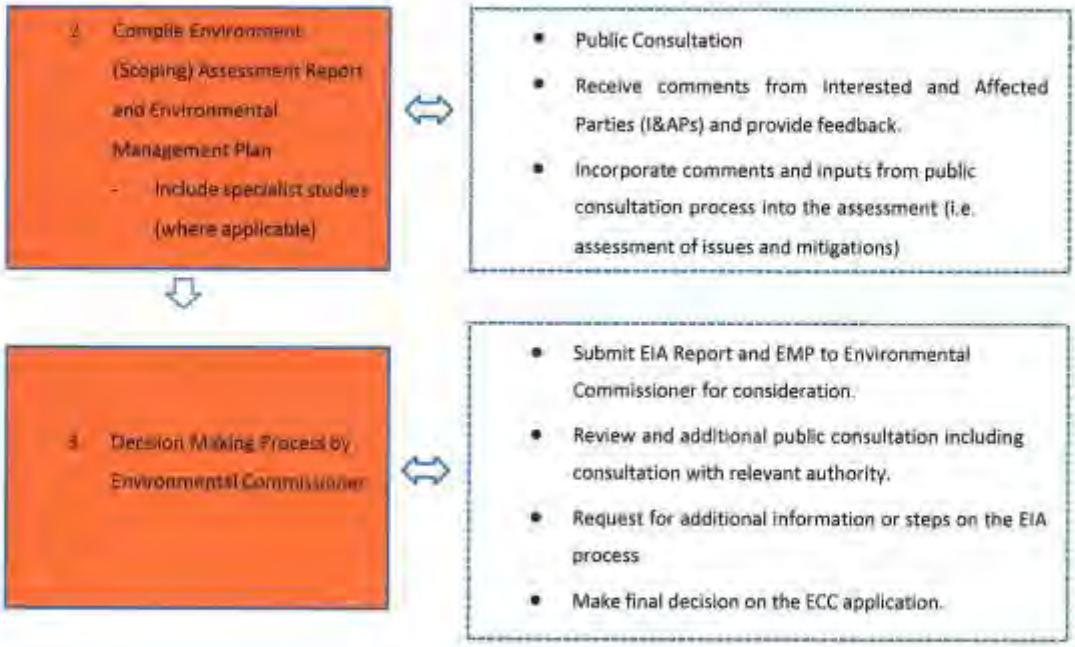


Figure 2: Google image showing the location of EPL 8228, northeast of Karasburg, in the Karas Region.

3. Environmental Impact Assessment process

The EIA process follows the general guideline as outlined in the 2012 EIA regulations of the EMA. The process followed is summarized below.

EIA Steps	Associated and Parallel Activities /processes.
1. Registration of Project with Office of Environmental Commissioner	• Determine whether project is listed activity or not; • Develop Background Information Document (BID); • Preparation of adverts and announcement in the local media and public place's notice boards; • Stakeholder database establishment/updating • Engage Office of Environmental Commissioner for any Terms of Reference (EIA ToRs)



1. Potential Impacts

Below are the potential impacts that have been identified from the proposed exploration activities on the license area:

- **Temporary job creation** this is the hiring of workers non-skilled to skilled workers from the area to be involved during the clearing of the fauna and flora in order to access target sites, and to also assist during pitting and trenching as well as drilling and associated exploration works.
- **Impact on vegetation and fauna:** some vegetation may need to be removed to create access roads, pitting and trenching, geophysical lines as well as drilling sites. This may also lead to habitat destruction for some fauna.
- **Traffic safety:** very slow drilling rigs and associated vehicles may compromise traffic safety in the area.
- **Environmental degradation** through different types of waste generated on the site.
- **Soil and water contamination** from chemicals and other substances used in drilling fluids.
- **Noise and dust** generated by pitting and trenching as well as drilling vehicles and activities.
- **Health and safety risks** which may result to workers operating on site.

2. Public consultation

Public participation is an essential part of any Environmental Assessment process. Interested and Affected Parties (I&APs) include any person or organization that will be directly or indirectly involved and/or affected by the project.

Registered I&APs will be kept informed of the Public Participation Process throughout the Environmental Assessment process, they will be given the opportunity to review and comment on the EIA reports and documents and, will also receive feedback on how comments have been taken into account, and will be informed of the outcome of the assessment. All comments will be recorded and presented to the project team and competent authority by means of the Project Comments and Responses Register (CRR).

Notices for public invitation to participate in the process will still be placed in the local newspaper as well as at strategic public places (notice boards). The date and venue for the public consultation meeting will be communicated.

If you categorize yourself as an I&AP who wishes to receive information regarding the above-mentioned project and/or provide input into the Environmental Impact Assessment process, you are hereby invited to register using the form on Page 7. You may also communicate with SS Consultants via email, or telephone to obtain further information or comment on the proposed project.

Contact details:

Ms. Anna Nekuta

Environmental Specialist (Environmental Assessment Practitioner)

SS Consultant CC

Physical Address: Unit 24B, Bougain Villa, Sam Nuuyoma Road, Windhoek, Namibia

Email: admin@ssconsultants.co

Mobile number: +264 812409124

SS CONSULTANTS

REGISTRATION OF INTERESTED AND AFFECTED PARTIES (I&APs)

ENVIRONMENTAL IMPACT ASSESSMENT (EIA) FOR THE PROPOSED INDUSTRIALS MINERALS AND PRECIOUS METALS; EXPLORATION ACTIVTIES ON EPL No. 8228 LOCATED IN THE KARASBURG DISTRICT, KARAS REGION, SOUTHERN NAMIBIA

Ms. Anna Nekuta
Environmental Specialist (Environmental Assessment Practitioner)

SS Consultant Cc
Physical Address: Unit 24, Bougain Villa, Sam Nuuyoma Road, Windhoek, Namibia
Email: admin@ssconsultants.co
Cell: +264 812409124

Title (Mr/Ms/Dr/Prof)		**Name**/Initials	
Surname			
Interested Parties or		**Affected Parties?**	
Physical Address and or Postal Address			
Tel No:		**Cell No:**	
Email Address:			
Comments/Issues/Concerns (Please if the space is not enough, use additional separate sheet)			

APPENDIX E: NEWSPAPER ADVERTS

6 Sun Market Watch

Market Watch Kleinadvertensies • Classifieds

SPERTYE: 13:00 TWEE WERKSDAE VOOR PLASING
DEADLINES: 13:00 TWO WORKING DAYS PRIOR TO PLACEMENT

TEL: 061*297 2175 FAX: 061*239 638
EMAIL: classifieds@synergi.com.na

Geen advertensies sal telefonies aanvaar word nie.
No advertisements will be accepted

INHOUDSOPGAWE / CONTENTS

RATES & DEADLINES

"To avoid disappointment of our advertisement not appearing on the date you want, please book conveniently. Cancellation months, notices can be done months (3) DAYS' time warning days prior to printing. A handling fee of 10% is payable on cancellations received in writing by 12:00 two days before scheduled publication. No cancellation will be accepted if received after this deadline.

RATES:
(Monday - Friday)

1. Classifieds: Words N$95.45 for the first 20 words and N$2.40 (15% Vat included) for every word thereafter.
2. Display Smalls: N$100.00 per column (15% Vat included)
3. Tenders: minimum N$60.00 (15% Vat included) per column
4. Obituaries: N$45.75 (15% Vat included) per column
5. Short Dates: N$108.78 (15% Vat included) per column
6. Births, engagements, marriages, deaths: No commission N$60.78 (15% Vat included) per col/cm
7. Legal Notices: N$60.83 for the first 200 words and N$2.40 (15% Vat included) for every word thereafter.

CONDITIONS OF ACCEPTANCE:
Republished reserves the right to withhold or cancel any advertisement at our discretion. Republished accepts no liability for failure to publish an advertisement received for telephone.

ERRORS:
Please report errors immediately. Republished accepts no responsibility for more than one incorrect insertion of any advertisement and only for the space occupied by the faulty advertisement. No responsibility will be given due to small typographical errors which do not lessen the effectiveness of the advertisement. Republished does not accept responsibility for misrepresentation in advertisements.

008 Bemiddelings gevra / Employment Wanted

ANNA (44) is op soek na huiswerk vir 5 dae in week. Ekonomiese bemiddeling. Skakel: 085 3885977

CONSTANCIA is op soek na huiswerk as Maandae tot Saterdae. Sy's toegewyd en betroubaar. Skakel: 081-7877621

ESTER is looking for domestic work for 3 days a week. She has experience. Available immediately. Call: 081-7134868

009 Vakatures / Vacancies

COSPHARM: Position: Regulatory Affairs Pharmacist
A suitable candidate should meet the following requirements:
- Must be a Namibian;
- Holder of a Bachelor of Pharmacy (Hons) Degree.
- Have a minimum of 5 years of Regulatory requirements of Namibia, Botswana, Zimbabwe, Zambia, and South Africa.
- Must be able to compile CTD & eCTD dossiers.
- Must be familiar with Veeva Bridge software for eCTD dossier preparation.
- Should be able to conduct a GMP of Manufacturing Plants.

Closing date: 15th November 2023. Please email your CV and qualification to recruitment@cosphar.ng
Call for interview at 0813312960

QUALIFIED TECHNICIAN Welded with at least 5 years experience. Thorough knowledge of commercial refrigeration and must have a strong electrical background of refrigeration systems. Must have a valid driver's license, valid Kubes, CV should not be longer than 2 pages. Only shortlisted candidates will be notified.
Send CV to: contact@winetech.com.na
Closing Date: 06 November 2023

013 Bou en verf / Construction

WCC CONSTRUCTION 24/7 Plumbing, Electrical Service, Electrical Services, Paving, Steel Work and Structures, Construction, Painting, New Building and Renovations. Contact 081-7120176/ 081 3424967

016 To huur / To Let

ROCKY CREST: Two bedroom flat, kitchen, bathroom, under cover parking, safe, water included, Electricity sharing. N$5 500. Call: 081-7086147

KHOMASDAL: Quickstar Court close to Augustineum School. Spacious 2 bedroom duplex flat. 1½ bathroom. N$3,000. Available 1 November. Available: 081-1285431

WINDHOEK WEST: 2 & 3 bedroom apartments with own lockable garages for N$3 600.00 and N$4 200 for a single person with own and lights included. Call: 081-1220640.

027 Alberlat te koop / Goods for Sale

GARAGE VERKOPING/SALE: 3 November 2023 from 09:00-14:00 at 29 Dr Theo-Ben Gurirab Street, Windhoek. Kelvinator, Hansa piano, bookcase/cutlery, photocopier, bench, household items, clothes, and more! Betaling: Kontant. Pay: Friday of EFT. Skakel: 081-1285512

025 Motors / Vehicles

MOTOR TE KOOP: White Ford Ranger 2.2 2014 year model, double cab, km 250 000. N$145 000.00. Serious buyers contact: 0816240571

028 Huise te koop / Residential Prop. for Sale

CENTRAL SWAKOPMUND CC Registered. Apartment 3rd floor (lift available), 2 bedrooms, 2 bathrooms, breakfast kitchen, open plan with lounge and dining room, to balcony with BBQ and covered automated garage for two cars and alarm. Fully furnished ready to move in. Animal allowed! N$2,250,000-00. Call: 081-2887335.

032 Veilings / Auctions

PRO-E

FURNITURE ON AUCTION:
FRIDGES / FREEZERS
LIVING ROOM SETS, 8 SEATER
BUILDING MATERIAL / DOORS
SCREENS / PC's / PROFESSIONALS
LAPTOPS / TABLETS / ELO PHONES
TV's / TELEVISION / SOUND SYSTEMS
WASHING MACHINES / DISHWASHERS
KITCHENWARE & HOUSEHOLD ITEMS
HOME / OFFICE TABLES & CHAIRS
SARGWARE, CABINETS & BOOKS
& MUCH MUCH MORE !!!

Come and view these items on on FRIDAY, 3 NOVEMBER 2023 from 13h00 till 16h00. For any further information please call: 0903 229 906

035 Regskennisgewings / Legal Notices

PUBLIC NOTICE: ENVIRONMENTAL IMPACT ASSESSMENT FOR EXPLORATION ACTIVITIES (EPL No. 8228)
Notice is hereby given to inform all potentially interested and Affected Parties (I&AP, APs) that an application for Environmental Clearance Certificate will be made to the Environmental Commissioner, in line with the provisions of Environmental Management Act 7 of 2007 and its Regulations of 2012, in respect of the exploration activities for industrial minerals and precious metals.
Proponent: Ivana Nghikukwa
Project Location: EPL 8228 is located 69 km northeast of Karibib, within the Karibib District Khan Region.
All Interested and Affected Parties (I&APs) are cordially invited to participate in public consultation meeting on the 13th November 2023 near the EPL area. Registration as well as submissions of I&Aps' APs comments including the request for the Background Information Document, must be done on or before 16th November 2023 to:
SS CONSULTANTS CC
CAN: 081 2405024
Email: admin@ssconsultants.co.na

033 Regskennisgewings / Legal Notices

IN THE High Court of Namibia
Case No: HC-MD-CIV ACT-CON-2021/04352
In the matter between:
NEDBANK NAMIBIA LIMITED
Plaintiff
and
KASINO STREET INVESTMENTS NO. 1 PCC, 1st Defendant
BRASTUS EMVERA, 2nd Defendant
NOTICE OF SALE IN EXECUTION
In execution of a judgment of the above Honourable Court dated 21 September 2022, a sale with a reserve price of N$1 395 000.00, will be held by the Deputy Sheriff, WINDHOEK, at the premises, in Section No. 19 Montevista Erf 3258 (a Portion of Erf 236) Eloni Windhoek, Windhoek, on 13 NOVEMBER 2023, at 15H00, of the under mentioned property:
A unit consisting of:
(a) Section Number 19 as shown and more fully described on Sectional Plan Number 55/81/2005, in the development scheme known as Montevista in respect of the land and building or buildings situated at Erf No. 3258 (A Portion of Erf 236) Eloni Windhoek, Municipality of Windhoek, Registration Division "K", Khomas Region, of which section the floor area according to the said sectional plan is 162 (One Hundred and Sixty-Two) square metres in extent; and
(b) An undivided share in and to the common property in the development scheme apportioned to the said section in accordance with the participation quota as endorsed on the said sectional plan.
Improvements: Ground Floor: 2 x Garages
First Floor: 1 x Entrance Area, 1 x Kitchen, 1 x Lounge, 1 x Dining, 2 x Bedrooms, 1 x Shower, 1 x Toilet, 1 x Bath/Shower, 1 x Study
Outbuilding: Open BBQ area
TERMS: 10% of the purchase price and the auctioneers commission must be paid on the date of the sale. The further terms and conditions of the sale will be read prior to the auction and be for inspection at the office of the Deputy Sheriff, WINDHOEK and at the offices of the execution creditor's attorneys.
AUCTIONEER'S NOTE: REFUNDABLE REGISTRATION FEE OF N$5 000.00
DATED at WINDHOEK this 29th day of SEPTEMBER 2023.
DR WEDER KAUTA & HOVEKA INC.
Legal Practitioner for Plaintiff
3RD Floor, WKH House, 1st Junker Road
WINDHOEK
(PLM/ng/MAT-12804)

037 Regskennisgewings / Legal Notices

IN THE HIGH COURT OF NAMIBIA
CASE NO: I 1986/2018
In the matter between:
NEDBANK NAMIBIA LIMITED, Plaintiff and
RICHARD MARTIN OLIVIER, 1st Defendant
LIESCHEN SUVETTE HALNETHE OLIVIER, 2nd Defendant
NOTICE OF SALE IN EXECUTION
In execution of a judgment of the above Honourable Court dated 10 APRIL 2023, a sale will be held by the Deputy Sheriff, WINDHOEK, at the premises, in Erf No. 234 Hochlandpark, Windhoek, on 13 NOVEMBER 2023, at 10H00, of the undermentioned property:
CERTAIN: Erf No. 234 Hochlandpark
SITUATED: In the Municipality of Windhoek, Registration Division "K", Khomas Region
MEASURING: 1285 (One Two Four Five) Square Metres
IMPROVEMENTS: 3x Kitchen with B/C, 1x Lounge, 1x Dining Room, 4x Bedrooms with B/C, 2x Full Bathroom B/S/T/C, 1x Half Bathroom S/T, 2x Garages
OTHER: Driving Flat, Guest House, Staircase, 2 X 2 Bedroom Flats, B/C, one Lounge & Open Plan Kitchen with half bathrooms S/T & B/T each.
TERMS: 10% of the purchase price and the auctioneers commission must be paid on the date of the sale. The further terms and conditions of the sale will be read prior to the auction and be for inspection at the office of the Deputy Sheriff, WINDHOEK and at the offices of the execution creditor's attorneys.
AUCTIONEER'S NOTE: REFUNDABLE REGISTRATION FEE OF N$5 000.00
DATED at WINDHOEK this 29th day of JULY 2023.
DR WEDER KAUTA & HOVEKA INC.
Legal Practitioner for Plaintiff
3RD Floor, WKH House, 1st Junker Road
WINDHOEK
(PLM/ng/MAT-12804)

Market Watch

Sun 7

Multiple Sclerosis NAMIBIA

WHAT IS MULTIPLE SCLEROSIS?

A chronic disease of the brain and central nervous system

OFFICE HOURS:
Monday - Friday:
09h00 - 17h00

info@msnamibia.org

NOTICE

NOTICE

#PROPERTY

REHOBOTH PROPERTY

AUCTION 21 November 2023 @ 12:00

VENUE: ERF 724, BLOCK B

Erf 724, Block B, Rehoboth

Land Size: 1166 m², Building Size: 279 m²

Main Building 171 m²:

Entrance Hall, Lounge, Family Room, Kitchen with BIC & BIS.

4 Bedrooms with BIC & 3 Bathrooms

Outside Building 42 m²:

Double Garage, Laundry, Servants Room and BBQ area

AucorNamibia

TRUCK & SALVAGE AUCTION

Thursday 16 November 2023

Aucor, Brakwater

SWAKOPMUND VEHICLE AUCTION

Thursday 23 November 2023 @ 10:00

25 Hidipo Hamutenya Street

Market Watch

TO ADVERTISE CALL:

Classifieds T: 061-297 2575

Health

- Health education
- Nutrition
- Diseases and disorders
- Science & Technology

Geingob vehemently condemns GBV, Alcohol abuse

BY MICHAEL UUGWANGA

PRESIDENT Hage Geingob has condemned the rise in Gender-Based Violence (GBV) against women and children, as well as alcohol abuse.

Geingob stated this during the official opening of the Emergency Unit at the Intermediate Hospital Katutura, where he said Namibians should drink responsibly and avoid driving while under the influence of alcohol at all costs.

The emergency unit was inaugurated as part of Project 9682, a N$12 million public-private partnership between the Motor Vehicle Accident Fund (MVA) and Standard Bank Namibia.

The President emphasised that alcohol consumption must be addressed as a priority at churches as a way of raising awareness, as it is one of the leading causes of GBV.

"Women are no longer reliant on men. PHDs are held by women. Women are now breadwinners, which was not the case in the past. Killing innocent individuals (especially women and children) is wrong.

Do not murder. Only one glass is required. At graduation, most of those graduating are women, indicating that women are no longer dependent and are now heads of the house. However, they occasionally allow us (men) to be heads of the house through bargaining.

"It's a good thing I stopped drinking. On weekdays, I never drink more than one drink and then go to bed. Alcoholism is not a laughing matter; and it is a serious condition. It is something that has to be addressed in churches. Boys are more likely than girls to abuse alcohol. People are being killed on the roads. Some of you are unable to drive. Many lives are lost on the highways," he said.

Geingob also pointed out that health influences all parts of life and affects workforce productivity.

"A healthy nation can only be a productive nation. In this context, primary health care must remain at the heart of our public health actions. Programmes aiming at generating and spreading illness prevention awareness must be strengthened. The spread of health awareness must begin in our homes, schools, and communities," the President said.

Meanwhile, speaking at the same occasion, Motor Vehicle Accident Fund (MVA) board chairperson Dr Shitaleni Herman said MVA spent roughly N$200 million on medical expenditures and N$95 million on other claims.

Dr Herman reported decreased road accidents resulting in injuries and fatalities this year.

"Casualty-related crashes show that road deaths in Namibia have decreased from 26 per 100 000 people to 18 per 100 000 people. The number of deaths went down from around 700 every year to 466 last year. While these numbers remain high, they indicate that something is working in our preventative efforts and that there is a need to strengthen and reinforce where there are leakages. When everything fails, the MVA Fund bears the weight, spending over N$200 million in medical bills yearly, in addition to N$95 million in other claims," Dr Herman explained.

The emergency unit's upgrade and renovation include a new resuscitation room with eight beds and an oxygen/electrical supply at each bed, the conversion of the old resuscitation room into a paediatric unit, the extension of the gynaecological examination room, the conversion of storage space into consultation rooms, and the installation of a new air conditioning system.

"The refurbishment project, while significant, is just one facet of the MVA Fund's multifaceted approach to enhancing healthcare and rehabilitation services," Dr. Herman remarked.

> *Women are no longer reliant on men. PHDs are held by women. Women are now breadwinners, which was not the case in the past. Killing innocent individuals (especially women and children) is wrong*

PUBLIC NOTICE
ENVIRONMENTAL IMPACT ASSESSMENT FOR EXPLORATION ACTIVITIES -

EPL No. 8228

Notice is hereby placed to inform all potentially Interested and Affected Parties (I&APs/ APs) that an application for Environmental Clearance Certificate will be made to the Environmental Commissioner, in line with the provisions of Environmental Management Act 7 of 2007 and its Regulations of 2012, in respect of the envisaged exploration activities for industrials minerals and precious metals.

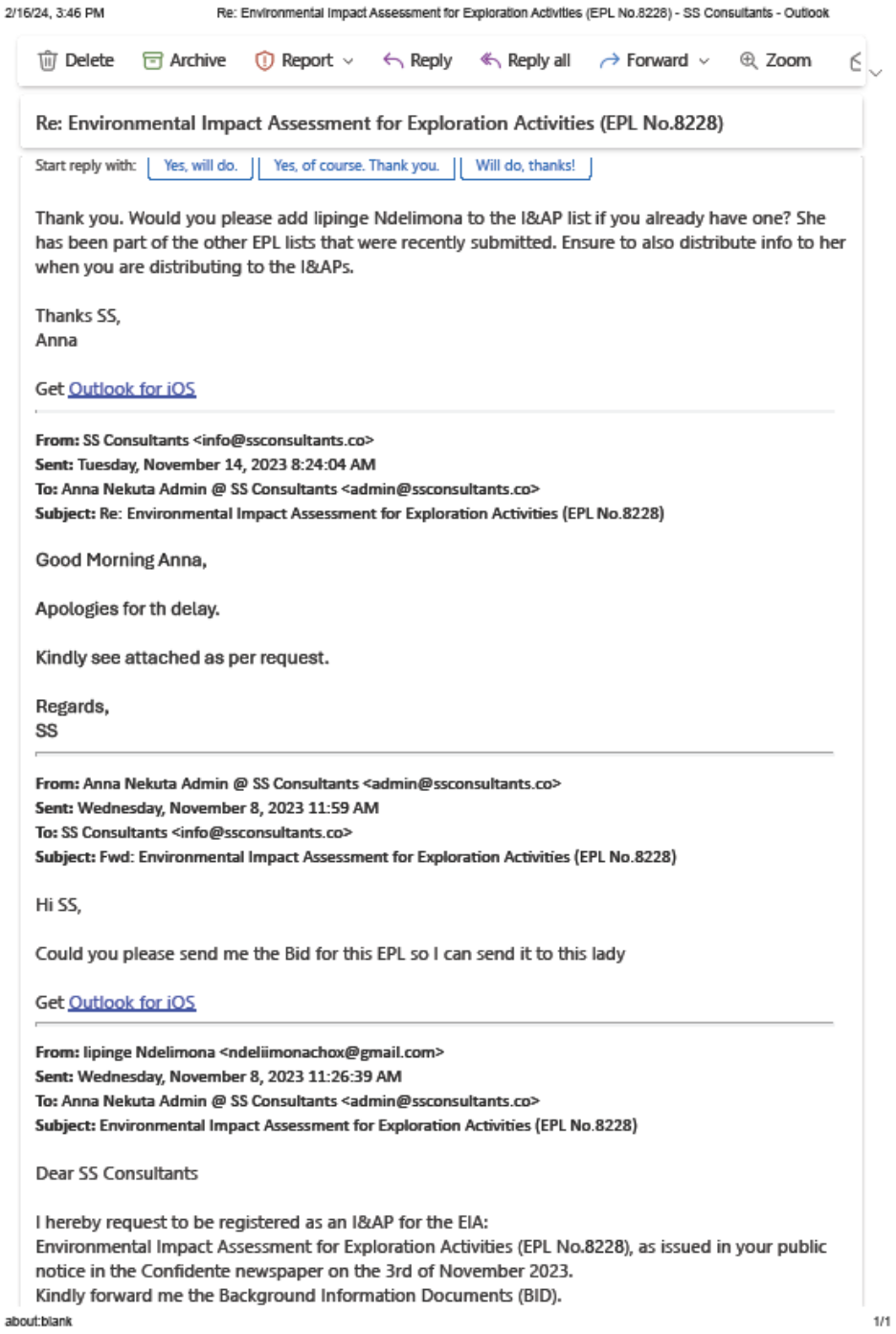
Proponent: Lumi Nghituliwa
Project Location: EPL 8228 is located 89 km northeast of Karasburg, within the Karasburg District, Karas Region.

All Interested and Affected Parties (I&APs) are cordially invited to participate in public consultation meeting on the 17th November 2023 near the EPL area. Registration, as well as submissions of I&APs/ APs comments (including the request for the Background Information Document), must be done on or before 14th November 2023, to:

SS Consultants CC
Cell: 081 240 9124
Email: admin@ssconsultants.co

SS CONSULTANTS

APPENDIX F: EMAIL CORRESPONDENCE



2/16/24, 3:46 PM Re: Environmental Impact Assessment for Exploration Activities (EPL No.8228) - SS Consultants - Outlook

Delete Archive Report Reply Reply all Forward Zoom

Re: Environmental Impact Assessment for Exploration Activities (EPL No.8228)

Start reply with: Yes, will do. | Yes, of course. Thank you. | Will do, thanks!

Thank you. Would you please add Iipinge Ndelimona to the I&AP list if you already have one? She has been part of the other EPL lists that were recently submitted. Ensure to also distribute info to her when you are distributing to the I&APs.

Thanks SS,
Anna

Get Outlook for iOS

From: SS Consultants <info@ssconsultants.co>
Sent: Tuesday, November 14, 2023 8:24:04 AM
To: Anna Nekuta Admin @ SS Consultants <admin@ssconsultants.co>
Subject: Re: Environmental Impact Assessment for Exploration Activities (EPL No.8228)

Good Morning Anna,

Apologies for th delay.

Kindly see attached as per request.

Regards,
SS

From: Anna Nekuta Admin @ SS Consultants <admin@ssconsultants.co>
Sent: Wednesday, November 8, 2023 11:59 AM
To: SS Consultants <info@ssconsultants.co>
Subject: Fwd: Environmental Impact Assessment for Exploration Activities (EPL No.8228)

Hi SS,

Could you please send me the Bid for this EPL so I can send it to this lady

Get Outlook for iOS

From: Iipinge Ndelimona <ndeliimonachox@gmail.com>
Sent: Wednesday, November 8, 2023 11:26:39 AM
To: Anna Nekuta Admin @ SS Consultants <admin@ssconsultants.co>
Subject: Environmental Impact Assessment for Exploration Activities (EPL No.8228)

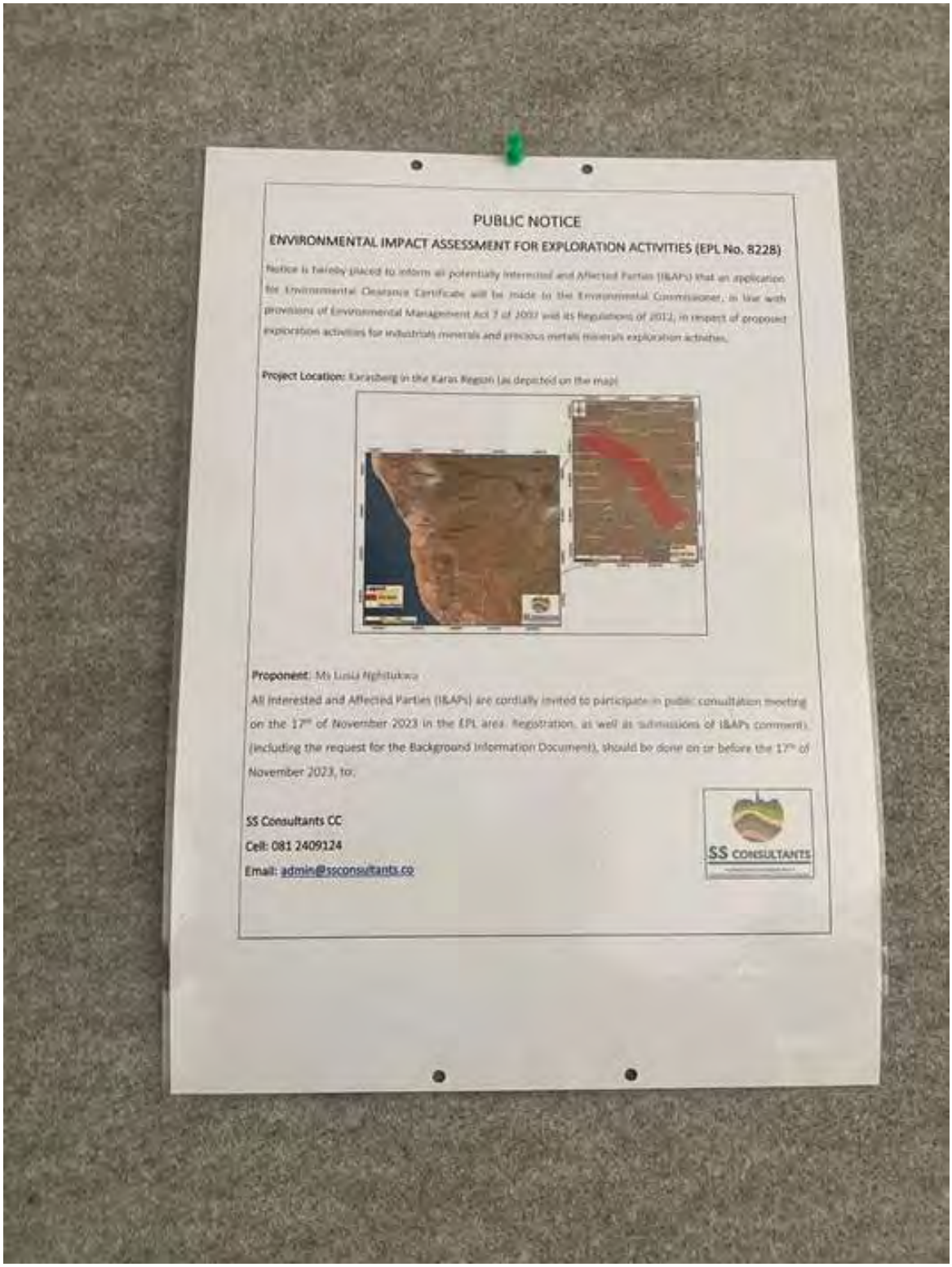
Dear SS Consultants

I hereby request to be registered as an I&AP for the EIA:
Environmental Impact Assessment for Exploration Activities (EPL No.8228), as issued in your public notice in the Confidente newspaper on the 3rd of November 2023.
Kindly forward me the Background Information Documents (BID).

about:blank 1/1

APPENDIX G: SITE NOTICES

Site notices at the home affairs office in Karasburg



Site notice at the Karasburg Town Council

APPENDIX H: MEETING MINUTES AND MEETING ATTENDANCE REGISTER

Attendance Register for EPL 8228

Exploration application for environmental clearance certificate

Name	Surname	Organization	Email	Cell phone Number	Signature
Ryno	Rossi	(worker)		0616435314	
Gervasius	Goretse	HUDAP (worker)		0815580200	G.Goretse
Siegiu	Moritz	HUDAP (Owner)		0818443788	
S.R Shigwedha	Silvanus	SS consultants	silvanus@ssconsultants	0812425757	[illegible]

APPENDIX J: ARCHAEOLOGICAL DESK ASSESSMENT

ARCHAEOLOGICAL AND CULTURAL HERITAGE IMPACT ASSESSMENT REPORT FOR EXCLUSIVE PROPESCTING LICENSE (EPL) NO. 8228, KARASBURG DISTRICT, KARAS REGION, NAMIBIA

Compiled by:

Kaarina Shagwanepandulo Efraim (Bachelor of Arts Honours Degree in History and Sociology - UNAM), (Post Graduate Diploma in Secondary Education - IUM) (Masters in Archaeology -UP).

Prepared for:

Ms Lusia Nghitukwa

Table: Project Details

Item	**Description**
Proposed development and location	Ms Lusia Nghitukwa **(The Proponent)** is intending to carry out exploration activities on Exclusive Prospecting License (EPL) No. 8228. The EPL is located 69 km northern of Karasberg town in the Karas region. The EPL covers a surface area of 19794.6478 hectares (ha).
Title	**ASSESSMENT REPORT FOR EXPLORATION ACTIVITIES ON EXCLUSIVE PROSPECTING LICENSE (EPL) NO. 8228, KARAS REGION, NAMIBIA**
Purpose of the study	The purpose of this document is an Archaeological and Heritage Impact Assessment report that describes the cultural values and heritage factors that may be impacted on by the proposed exploration activities.
Coordinates Municipalities	EPL Centred at 27° 44’ 40’’ S19° 28’ 25’’ S Karasburg District
Predominant land use of surrounding area	Farming and Small mining
Heritage Consultant	**Omapipi Tageya Archaeological and Heritage Consultants cc (Reg No: cc/2021/2930**
Author(s) identification	**Kaarina Shagwanepandulo Efraim**

In terms of land ownership, the land - use of the EPL 8228 is for commercial land.

Copyright

Authorship: This A/HIA Report has been prepared by Ms. Kaarina Shagwanepandulo Efraim. The report is for the review of the National Heritage Council of Namibia.

Geographic Co-ordinate Information: Geographic co-ordinates in this report were obtained using a hand-held Garmin Global Positioning System device. The manufacturer states that these devices are accurate to within +/- 5 m.

Maps: Maps included in this report use data extracted from the NTS Map and Google Earth Pro.

Disclaimer: The Author is not responsible for omissions and inconsistencies that may result from information not available at the time this report was prepared.

The Archaeological and Heritage Impact Assessment Study was carried out within the context of tangible and intangible cultural heritage resources as defined by the National Heritage Council Regulations and Guidelines as to the authorisation of proposed exploration project being proposed Ms Lusia Nghitukwa.

DECLARATION

I hereby declare that I do:

1. Have knowledge of and experience in conducting archaeological assessments, including knowledge of Namibian legislation, specifically the National Heritage Act (27 of 2004), as well as regulations and guidelines that have relevance to the proposed activity;

2. Perform the work relating to the application in an objective manner, even if this results in views and findings that are not favorable to the applicant;

3. Comply with the aforementioned Act, relevant regulations, guidelines and other applicable laws. I also declare that I have no interests or involvement in:
   (i) the financial or other affairs of either the applicant or his consultant; and
   (ii) the decision-making structures of the National Heritage Council of Namibia.

Signed by:

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Executive Summary

An archaeological impact assessment was carried out for **Ms Lusia Nghitukwa** focusing on the proposed prospecting activities on EPL 8228 which is located about 69 km northeast of Karasberg town in the Karas Region. The assessment therefore reviewed the archaeological records, historical documents from the previous studies surrounding the area, interview with local farmers, GIS spatial data and a field survey as a basis of inference to conclude that damage or disturb sites or materials protected under the National Heritage Act (27 of 2004) is unlikely to occur. However, due to the possibility that buried archaeological remains could come to light in the course of exploration activities the proponent is advised to adopt the Chance Finds Procedure attached as Appendix 1 to this report.

Table 1: Acronyms and Definitions table

Abbreviation	**Description**
AIA	Archaeological Impact Assessment
EIA	Environmental Impact Assessment
EMP	Environmental Management Plan
LIA	Late Iron Age
NHA	Nation Heritage Act, Act 27 of 2004
SM	Site Manager
NHCN	National Heritage Council of Namibia
ESA	Later Stone Age
EPL	Exclusive Prospecting License
ECC	Environmental Clearance Certificate
CFP	Chance Find Procedure
EMA	Environmental Management Act

Key Concepts and Terms

Periodization Archaeologists divide the different cultural periods according to the dominant material finds for the different time periods. This periodization is usually region-specific, such that the same label can have different dates for different areas. This makes it important to clarify and declare the periodization of the area one is studying.

These periods are nothing a little more than convenient time brackets because their terminal and commencement are not absolute and there are several instances of overlap. In the present study, relevant archaeological periods are given below;

Early Stone Age (~ 2.6 million to 250 000 years ago)

Middle Stone Age (~ 250 000 to 40-25 000 years ago)

Later Stone Age (~ 40-25 000, to recently, 100 years ago)

Early Iron Age (~ AD 200 to 1000)

Late Iron Age (~ AD1100-1840)

Historic (~ AD 1840 to 1950, but a Historic building is classified as over 60 years old)

Definitions Just like periodization, it is also critical to define key terms employed in this study. Most of these terms derive from Namibian National heritage legislation and its ancillary laws, as well as international regulations and norms of best-practice. The following aspects have a direct bearing on the investigation and the resulting report:

Cultural (heritage) resources are all non-physical and physical human-made occurrences, and natural features that are associated with human activity. These can be singular or in groups and include significant sites, structures, features, Eco facts and artefacts of importance associated with the history, architecture or archaeology of human development.

Cultural significance is determined by means of aesthetic, historic, scientific, social or spiritual values for past, present or future generations.

Value is related to concepts such as worth, merit, attraction or appeal, concepts that are associated with the (current) usefulness and condition of a place or an object. Although significance and value are not mutually exclusive, in some cases the place may have a high level of significance but a lower level of value. Often, the evaluation of any feature is based on a combination or balance between the two.

Isolated finds are occurrences of artefacts or other remains that are not in-situ or are located apart from archaeological sites. Although these are noted and recorded, but do not usually constitute the core of an impact assessment, unless if they have intrinsic cultural significance and value.

In-situ refers to material culture and surrounding deposits in their original location and context, for example an archaeological site that has not been disturbed by farming.

Archaeological site/materials are remains or traces of human activity that are in a state of disuse and are in, or on, land and which are older than 100 years, including artefacts, human and hominid remains, and artificial features and structures. According to the Namibia National Heritage Act (NNHA) (Act No. 27 of 2004), no archaeological artefact, assemblage or settlement (site) and no historical building or structure older than 60 years may be altered, moved or destroyed without the necessary authorization from the National Heritage Council or a provincial heritage resources authority.

Historic material are remains resulting from human activities, which are younger than 100 years, but no longer in use, including artefacts, human remains and artificial features and structures.

Chance finds means archaeological artefacts, features, structures or historical remains accidentally found during development.

A grave is a place of interment (variably referred to as burial) and includes the contents, headstone or other marker of such a place, and any other structure on or associated with such place. A grave may occur in isolation or in association with others where upon it is referred to as being situated in a cemetery (contemporary) or burial ground (historic).

A site is a distinct spatial cluster of artefacts, structures, organic and environmental remains, as residues of past human activity.

Heritage Impact Assessment (HIA) refers to the process of identifying, predicting and assessing the potential positive and negative cultural, social, economic and biophysical impacts of any proposed project, which requires authorization of permission by law and which may significantly affect the cultural and natural heritage resources. Accordingly, an HIA must include recommendations for appropriate mitigation measures for minimizing or circumventing negative impacts, measures enhancing the positive aspects of the proposal and heritage management and monitoring measures.

Impact is the positive or negative effects on human well-being and / or on the environment.

Mitigation is the implementation of practical measures to reduce and circumvent adverse impacts or enhance beneficial impacts of an action.

Mining heritage sites refer to old, abandoned mining activities, underground or on the surface, which may date from the pre-historical, historical or the relatively recent past.

Study area or 'project area' refers to the area where the developer wants to focus its development activities (refer to plan).

Phase I studies refer to surveys using various sources of data and limited field walking in order to establish the presence of all possible types of heritage resources in any given area.

1.0 Introduction

The Government of Namibia recognizes that the exploration and development of its mineral wealth could best be undertaken by the private sector. The government, therefore, focuses on creating an enabling environment through appropriate competitive policy and regulatory frameworks for the promotion of private sector investment coupled with the provision of national geo-scientific databases essential for attracting competitive exploration and mining (Draft Minerals Policy of Namibia, MME).

It is with this background that **Ms Lusia Nghitukwa** (*herein referred to as the proponent*) has decided to conduct exploration activities for industrial minerals and precious metals on Exclusive Prospecting License (EPL) 8228. The Proponent wants to carry out these exploration activities with the hope that if they yield positive results then a feasibility study and mapping of geological minerals will be conducted at a later stage. At this stage, however, the exploration activity is aimed at establishing the availability and type of minerals likely to be found within EPL 8228.

the proponent has then appointed Omapipi Tageya Archaeological & Heritage Consultants (**OTAH**) to provide an archaeological/heritage assessment as envisaged under the provisions of the National Heritage Act (27 of 2004). This report presents the results of an archaeological/heritage field survey of the area, focusing on EPL 8228. The report suggests mitigation measures that would be in keeping with the applicable laws and policies governing the preservation of archaeological remains in Namibia. The exclusive prospecting license is located about 69 km northeast of Karasberg town in the Karas Region. The EPL covers a surface area of 19794.6478 hectares (ha).

Due to the destructive tendency of such exploration activities, which may include earth-moving/ land alteration operations, it is a pre-requisite to conducting an Archaeological and/ or Heritage Impact Assessment (AIA) as obligated by the National Heritage Act, Act No. 27 of 2004 and, in part, by the Environmental Management Act, Act No. 7 of 2007. The main thrust of the provisions of the aforementioned legislation is to protect and salvage cultural/ archaeological and environmental resources from potential destruction resulting from mining activities.

It was against this backdrop that an Archaeological Impact Assessment (AIA) was carried out on EPL 8228 to fulfil the following objectives:

a) To identify and document cultural/ archaeological materials and sites occurring in the area within and around the EPL.
b) To assess the nature and scale of archaeological impact of the exploration activities on heritage resources.
c) To suggest some conservation strategies for the cultural heritage resources that might occur in the area proposed for explorations which can be potentially destroyed in the course of such activities.

1.1 Project Description

The proponent intends to develop a mine in Karasberg district, therefore she propose to conduct mineral exploration activities on EPL No. 8228 for the exploration of industrial minerals and precious metals group of commodities. The proposed activities of exploration on EPL 8228 will involve both non-invasive and invasive exploration methods. Non-invasive exploration methods usually include remote sensing, geological field mapping, ground geophysical survey, surface soil sampling and etc. whereas invasive exploration methods include more destructive methods of exploration such as reverse circulation or diamond drilling and pitting/trenching. Non-invasive exploration activities will be undertaken first in order to define the need for more invasive activities. Should the results from the non-invasive activities be positive the detailed site-specific drilling, trenching, and sampling will be undertaken.

1.2 Project Location

The proposed explorations will take place on EPL 8228, which is situated 69 km from Karasberg, Karas region, Namibiaa, see figure 1 below. The EPL covers a surface area of 19794.6478 hectares (ha). The EPL overlies a number of commercial farms including: Fettkluft North, Fettkluft South, Snyriver South, Hudap North, Hudab South, Tigerberg, Nabas, Helder farms. However, this archaeological and heritage field survey in this report only focused on seven farms which includes: Fettkluft North, Fettkluft South, Snyriver South, Hudap North, Hudab South, Tigerberg, Nabas,

Helder farms. Thus, the results reported herein cannot be generalised for farm Tigerberg. Farm Tigerberg which form part of the EPL could not be surveyed because of accessibility challenges which the proponent is aware of.

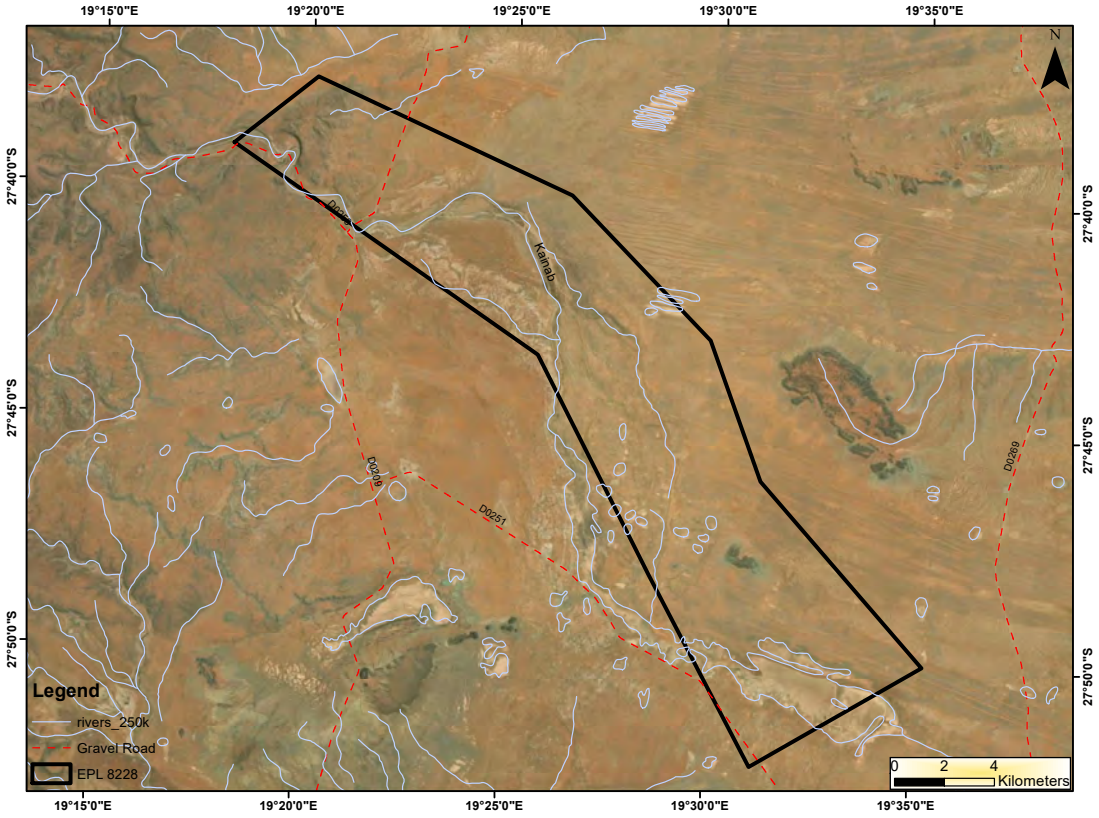

Figure 1: Locality map for EPL 8228 which is located about 69 km northeast of the Karasberg town (Map credits: SS Consultancy, 2023).

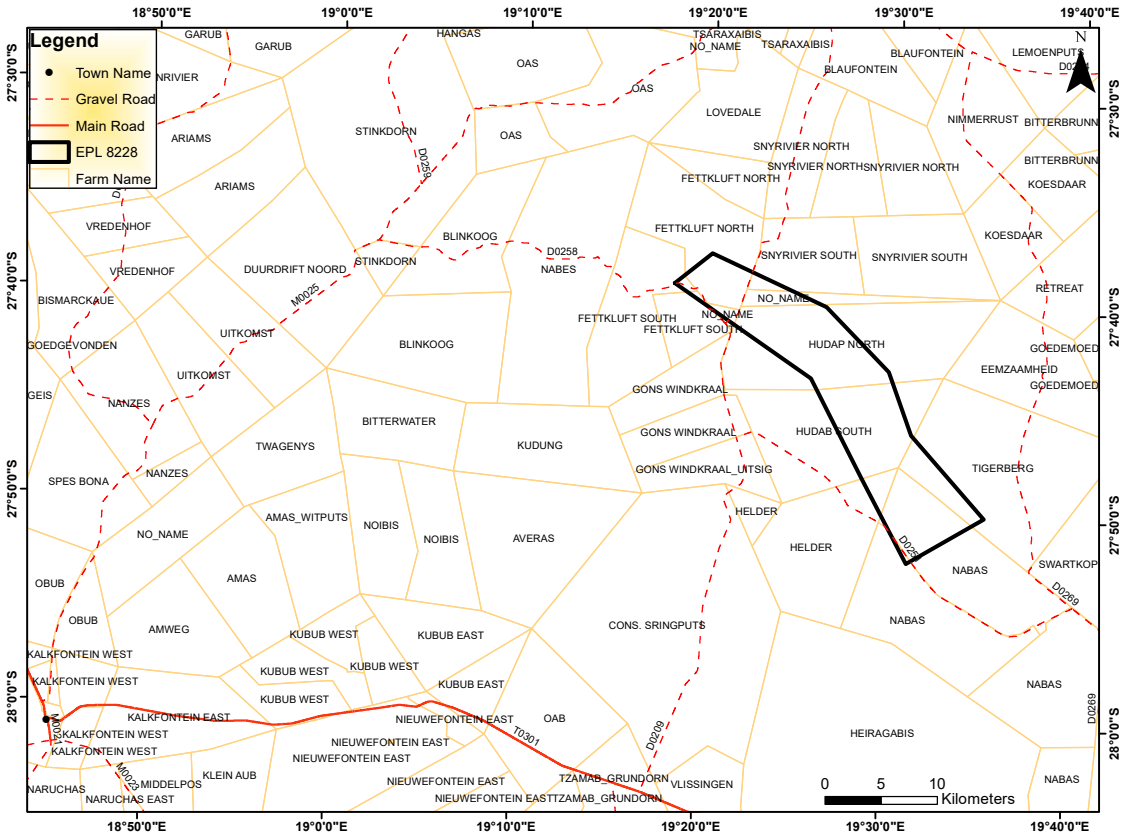

Figure 2: Regional location of EPL 8228 in the Karasberg region (Map credits: SS Consultancy, 2023).

2.0 Legislations

In most cases where the aspect of exploration is involved, cultural and archaeological evidence located within areas earmarked for development or mining usually faces the danger from complete destruction. The legal instrument for the protection of heritage sites and objects in Namibia is the National Heritage Act, Act No. 27 of 2004.

To ensure that this unique heritage of our past is protected and well documented, the National Heritage Act 27 of 2004 and Environmental Impact Assessment (EIA) Terms of Reference concerning the assessment of impacts of the proposed development on the cultural and heritage resources associated with the receiving environment shall be used to guide the exploration exercise. The statutory mandate of heritage impact assessment studies is to encourage and facilitate the protection and conservation of archaeological and cultural heritage sites, following the provisions of the National Heritage Act, Act 27 of 2004 and Environmental Management Act

(EMA) No. 7 of 2007 and its 2012 EIA Regulations. The National Heritage Act (Section 1 of 2004) defines heritage resources as those of geological and rare objects; paleontological; archaeological; ethnographic objects; historical objects/sites; maritime heritage; built monuments; mining sites as well as objects of scientific interests.

3.0 Approach to study

3.1 Terms of Reference

The main task of the archaeological survey and assessment was to identify and record all sensitive archaeological sites within the limits of EPL 8228 that could be negatively affected by the proposed exploration activities on EPL 8228. The assessment also intended to establish heritage significance of possible resources and assess their vulnerability, estimates the extent of the possible impacts and establish mitigation measures. This study is intended to satisfy the requirements of the Environmental Management Act (7 of 2007), and those of the National Heritage Act (27 of 2004).

3.2 Methodology

This Heritage & Archaeological Impact Assessment followed desktop-based assessments and field surveys, supplemented by oral interviews. These methodologies are standards for environmental and heritage assessment in Namibia, which are in line with international best practices. Desktop information was fashioned from current and existing heritage archives. These were taken from existing heritage records comprising those from National Heritage Council, National Museum of Namibia, archaeological GIS spatial data and record that has been substantially exposed during the last decades, by a series of detailed archaeological assessments carried out in the during the mineral investigation and mining operations, and the development of infrastructure required by these operations. These sources were then supplemented by site visit field work within EPL 8228.

Sensitivity and susceptibility rating scales, aimed at establishing the nature of vulnerability and sensitivity of heritage resources that are likely to be impacted by the exploration activities, were adopted as per assessment objectives. Their vulnerability to the disturbance in the course of exploration that includes drilling was evaluated according to parallel 0-5 scales, abridged in Table 3 below.

Table 2: Rating scales for the assessment of archaeological significance and vulnerability as developed by the QRN.

Significance Rating
0 No heritage significance
1 Disturbed or secondary context, without diagnostic materials
2 Isolated minor finds in undisturbed primary context, with diagnostic materials
3 Archaeological and paleontological site (s) forming part of an identifiable local distribution or group
4 Multi-component site (s), or central site (s) with high research potential
5 Major archaeological or paleontological site (s) containing unique evidence of high regional significances
Vulnerability Rating
0 Not vulnerable
1 No threat posed by current or proposed development activities
2 Low or indirect threat from possible consequences of development (e.g., soil erosion)
3 Probable threat from inadvertent disturbance due to proximity of development
4 High likelihood of partial disturbance or destruction due to close proximity of development
5 Direct and certain threat of major disturbance or total destruction

Concerning each specific source of impact risk to heritage resources, the assessment methodology estimated the extent of the impact, the magnitude of impact, and the duration of these impacts. The scales of estimation are set out and explained in Table 4.

Table 3: Assessment criteria for the evaluation of cumulative impacts on archaeological sites developed by the QRN.

CRITERIA	CATEGORY	DESCRIPTION
Extent or spatial influence of impact	**National** **Regional** **Local**	Within Namibia Within the Region On site or within 200 m of the impact site impact
Magnitude of impact (at the indicated spatial scale)	**High** **Medium** **Low** **Very Low** **Zero**	Social and/or natural functions and/ or processes are severely altered Social and/or natural functions and/ or processes are notably altered Social and/or natural functions and/ or processes are slightly altered Social and/or natural functions and/ or processes are negligibly altered Social and/or natural functions and/ or processes remain unaltered
Duration of impact	**Short Term** **Medium Term** **Long Term**	Up to 3 years 4 to 10 years after construction More than 10 years after construction

Table 4: Reversibility Ratings Criteria

Reversibility Ratings	Criteria
Irreversible	The impact will lead to an impact that is permanent.
Reversible	The impact is reversible, within a period of 10 years

4.0 Assumptions and Limitations

This heritage impact assessment described here relies on desktop studies and supported by field assessment undertaken and oral interviews. It is possible to predict the likely occurrence of further archaeological sites with some accuracy and to present a general statement of the local archaeological site distribution. Nevertheless, it is critical as a precautionary measure and best practice, we are recommending the proponent to strictly follow the chance find procedure as the project progresses should any archaeological objects be found during drilling and trenching. The Chance finds procedure is outlined in the National Heritage Council booklet, (2017) and the proponent will be supplied with a copy. Failure to follow and implement such procedure will result in appropriate action being taken against the proponent as per the Heritage Act of 2004.

5.0 Brief heritage setting of the Project Area

Southern part of Namibia is semi aridity and this affected the permanent settlement during the pre – colonial period, the area in consideration was hardly occupied, thus it presents little evidence of human occupation during this era Kinahan (2017). However, things changed during the colonial period, especially with the establishment of the railway from the town of Keetmanshop to the diamond towns during the 19th century. Namibia's southern region is dominated by wide open spaces, solitude and silence, including historical buildings, fossils, ghost towns and quiver tree forests. Germany's colonisation of Namibia proceeded along two main axes from the seashore; starting at the ports of Lüderitz in the south and Swakopmund in the north and continuing through the desert into the highlands. Warmbad and Keetmanshoop were its counterparts in the south. As

its name implies, Warmbad possessed rich artesian hot springs – useful for pastoralists' livestock after the 75km trek from the !Garib / Orange River – and the town contained numerous mission churches and some of the earliest German police patrols. From 1903, Nama groups began to take up arms against German rule, intensifying from 1904–1906 under the leadership of Hendrik Witbooi – whose family had crossed the !Garib / Orange River in the 19th century

The regional sequence is simplified as follows; Early to mid-Pleistocene (ca. 2my1to 0.128my; OIS2 6, 7, 19 &c): which is represented by surface scatters of stone tools and artefact debris, usually transported from original context by fluvial action occurring in sealed stratigraphic context. Historical (the last ca. 250 years): represented by remains of crude buildings, livestock enclosures, wagon routes and watering points. Some evidence of trade with indigenous communities, including metals, ceramics and glass beads Kinahan (2005).

6.0 Fieldwork Findings and Observations

A reconnaissance field survey was carried out to locate and record their most important archaeological features within the footprints of EPL 8228 in the Karas Region. The field survey was aimed at recording and locating the most important archaeological features (if found) that might be negatively impacted by the proposed exploration activities within the boundaries of EPL 8228 and close proximity. This survey was also meant to come up with mitigation measures that will safeguard and protect such heritage resources.

The field survey involved a combined approach which included foot survey within and around EPL 8228 and an interview with some community members that are currently living around the area of interest. Three possible archaeological/heritage sites were recorded during the field survey. Two sites recorded in Farm Herder and one recorded in Hudab. The site locations are set out below, together with brief remarks on their significance. The vulnerability of the sites in terms of their sensitivity is outlined below as well. Mitigation measures are required to ensure their protection and conservation.

Table 5: findings at the proposed exploration site for EPL 8228

Heritage resources	**Status/findings**	**Level of impact by proposed explorations**
Buildings, structures, and places of cultural significance	Farm houses	Low
Areas to which oral tradions are attached or which are associated with intangible heritage	None	None
Historical buildings	Dry stone klaar building in farm Helder	Mild
Landscapes and natural features of cultural significance	A river that runs through farm Hudab	Mild
Archaeological and paleontological sites	None	None
Graves and burial grounds	Two burial sites one in farm Helder and one on farm Hudab.	Mild - They are all fenced off. The ones in Farner Hudab are in a good condition while the ones in farm Helder are in a better condition
Movable objects	None	None

6.1 Detailed findings

Farm Helder

Site 1: Burial sites

Site coordinates: -27.4949.04 19.2939.77.

Description: Fenced burial site **(see fig 3)** (the workers/ employees on the farm stated that, they have no idea who's grave it could be.

Significance rating: 3

Vulnerability rating: 4

Records: Photographs and fieldnotes

Reversibility rating: Irreversible

Condition assessment: Stable condition

Figure 3: A burial site on farm Helder with Several graves (photo credits: Author 2023).

Site 2: Dry stone kraal

Site coordinates: -27.4951.51 19.2925.44

Description: Old dry-stone Klaar / wall which was probably a klaar for the domestic animals.

Significance rating: 3

Vulnerability rating: 4

Records: Photographs and fieldnotes

Reversibility rating: Irreversible

Condition assessment: Stable condition

Figure 4: A dry stone Klaar (photo credits: Author 2023).

Farm Hudab

Site 1: Burial site

Site coordinates: -27.4409 19.2601

Description: Suspected to be a grave for the previous owner. They are fenced off and in a very good condition, most of the are recent.

Significance rating: 3

Vulnerability rating: 4

Records: Photographs and fieldnotes

Reversibility rating: Irreversible

Condition assessment: Stable condition

Figure 5: Several graves -burial site (photo credits: Author, 2023)

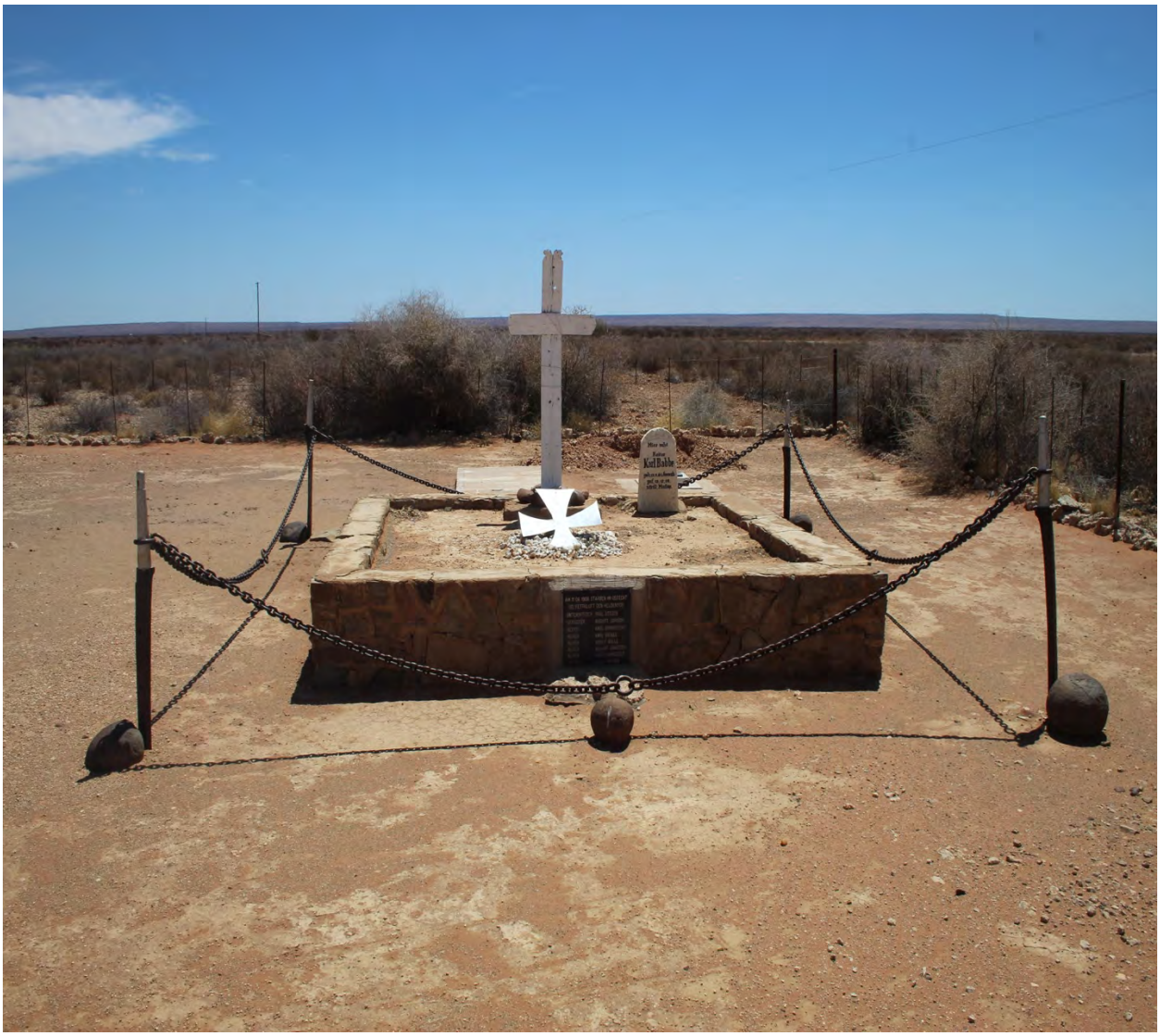

Figure 5: War memorial on farm Hudap (photo credits: Author, 2023)

6.2 Field photographs

Figure 6: The receiving environment of EPL 8228 (photo credits: Author, 2023).

Figure 7: Public consultation at farm Helder during the site visit (photo credits: Author, 2023).

Figure 8: Existing vehicle tracks within EPL 8228 (photo credits: Author, 2023).

7.0 Recommendations and Conclusions

7.1 Management Recommendations

At this stage it is important that the proponent is made aware of the fact that archaeological/heritage sites in the project area are protected under the National Heritage Act (27 of 2004). When prospecting is underway, the proponent should make sure that all personnel and contractors are aware of the protected nature of archaeological sites as well as the legal obligation to report any new finds to the National Heritage Council as soon as possible. The proponent should take steps to avoid either direct damage to the sites or to their immediate landscape setting. Within the boundaries of EPL 8228 lies concrete evidence that there was human occupation and there are people living there still given the number of historical and recent burial sites.

Based on the desktop study and field work survey undertaken in this study, it is recommended that:

a) At least a 100m buffer zone should be maintained from exploration activities and vehicle tracks off all burial sites recorded in both farm Hudap and Herder
b) The project proponent or contractors should adopt the Chance Finds Procedure attached here as Appendix 1, so that buried archaeological remains are discovered may be handled following the provisions of Part V Section 46 of the National Heritage Act (27 of 2004).
c) The vehicle tracks not to approach within 100m of any of the above-mentioned sites and should be deviated accordingly.
d) That the foot print impact of the proposed exploration activities should be kept to minimal, to limit the possibility of encountering chance finds within servitude.
e) That the Environmental Management Plan is to ensure that all the existing archaeological reference guidelines (Chance Find Procedure Guideline by NHC (2017) is shared with the proponent for guidance. So that, any buried archaeological remains that might be discovered during the prospecting phase are handled following the provisions of Part V Section 46 of the National Heritage Act (27 0f 2004).

7.2 Conclusions

The basis of the literature review and field survey confirmed that the proposed project area is situated within a contemporary cultural landscape dotted with settlements with long local history and is likely to be of archaeological significance. Field survey established that the affected project area might have hidden or buried archaeological materials that might be encountered during the exploration activities, hence a 'Chance Find Procedure' is highly recommended. This report concludes that the proposed exploration activities may be approved by NHC as planned subject to recommendations herein made and heritage monitoring plan being incorporated in the Environment Management Plan (EMP).

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Appendix 1)

The proponent is advised to implement the following management actions on the way forward:

1. **Chance Finds Procedure (CFP) management guideline:**

Areas of proposed development or mining activities are subject to heritage survey and assessment at the planning stage. These surveys are based on surface indications alone, and it is, therefore, possible that sites or items of heritage significance will be found in the course of development work. The procedure set out here covers the reporting and management of such finds.

Scope: The "chance finds" procedure covers the actions to be taken from the discovery of a heritage site or item to its investigation and assessment by a trained archaeologist or other appropriately qualified people.

Compliance: The "chance finds" procedure is intended to ensure compliance with relevant provisions of the National Heritage Act (27 of 2004), especially Section 55 (4): "a person who discovers any archaeological …. Object ……must as soon as practicable report the discovery to the Council". The procedure of reporting set out below must be observed so that heritage remains reported to the NHC are correctly identified in the field.

A. Responsibilities:

Operator to exercise due caution if archaeological remains are found

Foreman to secure site and advise management timeously

Superintendent to determine safe working boundary and request inspection

Archaeologist to inspect, identify, advice management, and recovers remain

B. Procedure:

Action by the person (operator) identifying archaeological or heritage material

- If operating machinery or equipment: **stop work**
- Identify the site with flag tape
- Determine GPS position if possible
- Report findings to foreman

C. Action by foreman:

- Report findings, site location and actions are taken to the superintendent
- Cease any works in the immediate vicinity

D. Action by superintendent

- Visit the site and determine whether work can proceed without damage to findings;
- Determine and mark the exclusion boundary
- Site location and details to be added to the Archaeological Heritage database system

E. Action by archaeologist

- Inspect site and confirm the addition to AH database system;
- Advise National Heritage Council and request a permit to remove findings;
- Recovery, packaging and labeling of findings for transfer to National Museum

F. In the event of discovering human remains

- Actions as above;
- Field inspection by archaeologist to confirm that remains are human;
- Advise and liaise with NHC Guidelines; and
- Recovery of remains and removal to National Museum or National Forensic Laboratory, or as directed.

Appendix 2) Archaeological and Heritage Monitoring Measures

Table 6; Archaeological and Heritage Monitoring Measures

SITE REF	HERITAGE ASPECT	POTENTIAL IMPACT	MITIGATION MEASURES	RESPONSIBLE PARTY	PENALTY	METHOD STATEMENT REQUIRED
Chance Finds (Archaeological and Burial Sites)	General area where the proposed project is situated is a historic landscape, which may yield archaeological, cultural property, remains. There are possibilities of encountering unknown archaeological sites during subsurface construction work which may disturb previously unidentified chance finds.	Possible damage to previously unidentified archaeological and burial sites during exploration phase. • Unanticipated impacts on Archaeological sites where project actions inadvertently uncovered significant archaeological sites. • Loss of historic cultural landscape; • Destruction of burial sites and associated graves • Loss of aesthetic value due to exploration work • Loss of sense of place Loss of intangible heritage value due to change in land use	In situations where unpredicted impacts occur exploration activities must be stopped and the heritage authority should be notified immediately. Where remedial action is warranted, minimize disruption in exploration scheduling while recovering archaeological data. Where necessary, implement emergency measures to mitigate. • Where burial sites are accidentally disturbed during exploration, the affected area should be demarcated as no-go zone by use of fencing during exploration, and access thereto by the exploration team must be denied. • Accidentally discovered burials in development context should be salvaged and rescued to safe sites as may be directed by relevantheritage authority. The heritage officer responsible should secure relevant heritage and health authorities' permits for possible relocation of affected graves accidentally encountered during exploration work.	• Contractor / • Project Manager • Archaeologist • Project Environmental Control Officer (ECO) or Site Manager	Fine and or imprisonment under the NHA	Monitoring measures should be issued as instruction within the project EMP. PM/EO/Archaeologists Monitor exploration activities on sites where such exploration projects commence within the farm.

Appendix 3) Archaeological Management Plan (AMP)

Objectives of Archaeological Management Plan (AMP)

- Protection of archaeological sites and land considered to be of cultural value.
- Protection of known physical cultural property against vandalism, destruction and theft; and
- The preservation and appropriate management of new archaeological finds should these be discovered during exploration and mining operations.

Table 7; Archaeological Management Plan (AMP

Archaeological Management Plan (AMP)								
Area and Site	**Mitigation Measures**	**Phase**	**Timeframe**	**Responsibility party for implementation**	**Monitoring party**	**Accountable party**	**Monitoring system (performance indicators)**	**Target**
	If potentially human remains, NHC and Namibian Police should be contacted	Throughout the project	The project life	Operational staff or any person employed by the proponent	Site Manager (SM)	Proponent	Checklist/Progress report	Place Ordinance 27 of 1966
NB! The procedure to be followed during the operation, decommissioning and rehabilitation phases are the same as they were during the exploration phase.								