ENVIRONMENTAL SCOPING ASSESSMENT (ESA) FOR THE PROPOSED FOR SMALL SCALE MINING ACTIVITIES OF MINING CLAIMS (MCs) No. 75626 AND 75628, LOCATED SOUTH EAST OF KARIBIB, ERONGO REGION.

ENVIRONMENTAL ASSESSMENT REPORT:FINAL REPORT

ECC Application Reference: APP - 005025

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EAP SIGNATURE ..... PROPONENT SIGNATURE .....

November 2024

EXECUTIVE SUMMARY

Adreas Nghikeno Kalimbo (The Proponent) has applied to the Ministry of Mines and Energy (MME) for the proposed small-scale mining activities on Minings Claims (MCs) No. 75626 and 75628. However, the approval and granting of these MCs is subject to an Environmental Clearance Certificate (ECC) form the Ministry of Environment, Forestry and Tourism (MEFT). The Mining claims (MCs) No. 75626 and 75628 covering a total surface area of 35. 5403 hectares and are located about 4 Km southeast of Karibib in the Erongo region, as shown in .The target commodities are **Dimension Stones.**

Mining and all extraction-related activities are among the listed activities that may not be undertaken without an ECC under the Environmental Impact Assessment (EIA) Regulations, Subsequently, to ensure that the proposed activity is compliant with the national environmental legislation, the project Proponent, appointed an independent environmental consultant, Excel Dynamic Solutions (Pty) Ltd to undertake the required Environmental Assessment (EA) process and apply for the ECC on their behalf.

The application for the ECC was compiled and submitted to the competent authority (Ministry of Environment, Forestry and Tourism (MEFT)) as the environmental custodian for project registration purposes. Upon submission of an Environmental Scoping Assessment (ESA) Report and Draft Environmental Management Plan (EMP), an ECC for the proposed project may be considered by the Environmental Commissioner at the MEFT's Department of Environmental Affairs and Forestry (DEAF).

Brief Project Description

Planned Activities: Proposed Exploration Methods

The Proponent intends to adopt a systematic prospecting and exploration approach to the project as follows:

1. **Non-invasive Technique:** This phase includes geological & geophysical mapping, reviewing of existing geological maps, field evaluation, and soil sampling.
2. **Invasive Technique:** Trenching, pitting and open pit mining using excavators.

Public Consultation

Public Consultation Activities

Regulation 21 of the EIA Regulations details steps to be taken during a public consultation process and these have been used in guiding this process. The public consultation process assisted the Environmental Consultant in identifying all potential impacts and aid in the process of identifying possible mitigation measures and alternatives to certain project activities. The communication with I&APs about the proposed prospecting and exploration activities was done through the following means in this order to ensure that the public is notified and allowed to comment on the proposed project:

- A Background Information Document (BID) containing information about the proposed exploration activities was compiled and emailed upon request to all registered Interested and Affected Parties (I&APs).
- Project Environmental Assessment notices were published in New Era Newspaper and The Namibian Newspaper **(18 and 25 October 2024)** briefly explaining the activity and its locality, inviting members of the public to register as I&APs and submit their comments/concerns.
- A door-to-door consultation meeting was scheduled and held with the affected landowners on **21 November 2024** from 13h00.
- A site notice was placed at Karibib Town Council , in Karibib , Erongo region
- No issues or concerns was raised during the consultation phase.

Potential Impacts identified

The following potential impacts are anticipated:

- **Positive impacts**: Socio-economic development through employment creation (primary, secondary, and tertiary employment) and skills transfer; Opens up other investment opportunities and infrastructure-related development benefits; Produces a trained workforce and small businesses that can serve communities and may initiate related businesses; Boosts the local economic growth and regional economic development and; Increased support for local businesses through the procurement of consumable items such as Personal Protective Equipment (PPE), machinery spare parts, lubricants, etc.

- **Negative impacts**: Potential disturbance of existing pastoral systems; Physical land/soil disturbance; Impact on local biodiversity (fauna and flora); Habitat disturbance and potential illegal wildlife and domestic hunting in the area; Potential impact on water resources and soils particularly due to pollution; Air quality issue: potential dust generated from the project; Potential occupational health and safety risks, Vehicular traffic safety and impact on services infrastructures such as local roads, Vibrations, and noise associated with drilling activities may be a nuisance to locals; Environmental pollution (solid waste and wastewater), Archaeological and heritage impact and Potential social nuisance and conflicts (theft, damage to properties, etc.).

The potential negative impacts were assessed, and mitigation measures were provided accordingly.

CONCLUSIONS AND RECOMMENDATIONS

Conclusions

The potential impacts that are anticipated from the proposed project activities were identified, described, and assessed. For the significant adverse (negative) impacts with a medium rating, appropriate management, and mitigation measures were recommended for implementation by the Proponent, their contractors, and project-related employees.

The public was consulted as required by the EMA and its 2012 EIA Regulations (Sections 21 to 24). This was done via the two newspapers (New Era and The Namibian) used for this environmental assessment. A consultation through a face-to-face meeting(door-to door) was held to inform stakeholder about the proposed project and to raise their concerns and comments on the proposed project activities.

The issues and concerns raised by the registered I&APs formed the basis for this Report and the Draft EMP. The issues were addressed and incorporated into this Report whereby mitigation measures have been provided thereof to avoid and/or minimize their significance on the environmental and social components. Most of the potential impacts were found to be of medium-rating significance. With the effective implementation of the recommended management and mitigation measures, will particularly see a reduction in the significance of adverse impacts that cannot be avoided completely (from medium rating to low). To maintain the desirable rating, the implementation of management and mitigation measures should be monitored by the Proponent

directly, or their Environmental Control Officer (ECO) is highly recommended. The monitoring of this implementation will not only be done to maintain the reduced impacts' rating or maintain a low rating but to also ensure that all potential impacts identified in this study and other impacts that might arise during implementation are properly identified in time and addressed right away too.

It is crucial for the Proponent and their contractors as well as to effectively implement the recommended management and mitigation measures to protect both the biophysical and social environment throughout the project duration. All these would be done to promote environmental sustainability while ensuring a smooth and harmonious existence and purpose of the project activities in the community and environment at large.

Recommendations

The Environmental Consultant is confident that the potential negative impacts associated with the proposed project activities can be managed and mitigated by the effective implementation of the recommended management and mitigation measures and with more effort and commitment put into monitoring the implementation of these measures.

It is, therefore, recommended that the proposed prospecting and exploration activities be granted an ECC, provided that:

- All the management and mitigation measures provided herein are effectively and progressively implemented.
- All required permits, licenses, and approvals for the proposed activities should be obtained as required. These include permits and licenses for land use access agreements to explore and ensure compliance with these specific legal requirements.
- The Proponent and all their project workers or contractors comply with the legal requirements governing their project and its associated activities and ensure that project permits and or approvals required to undertake specific site activities are obtained and renewed as stipulated by the issuing authorities.
- Site areas where Mining activities have ceased are rehabilitated, as far as practicable, to their pre-mining state.

- Environmental Compliance monitoring reports should be compiled and submitted to the DEAF Portal as per the provision made on the MEFT/DEAF's portal.

Disclaimer

Excel Dynamic Solutions (EDS) warrants that the findings and conclusion contained herein were accomplished following the methodologies outlined in the Scope of Work and Environmental Management Act (EMA) of 2007. These methodologies are described as representing good customary practice for conducting an EIA of a property to identify recognized environmental conditions. There is a possibility that even with the proper application of these// methodologies there may exist subject property conditions that could not be identified within the scope of the assessment, or which were not reasonably identifiable from the available information. The Consultant believes that the information obtained from the record review and during the public consultation processes concerning the proposed small scale mining work is reliable. However, the Consultant cannot and does not warrant or guarantee that the information provided by the other sources is accurate or complete. The conclusions and findings outlined in this report are strictly limited in time and scope to the date of the evaluations. No other warranties are implied or expressed.

Some of the information provided in this report is based on personal interviews, and research of available documents, records, and maps held by the appropriate government and private agencies. This report is subject to the limitations of historical documentation, availability, and accuracy of pertinent records, and the personal recollections of those persons contacted.

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LIST OF ABBREVIATIONS

Abbreviation	**Meaning**
AMSL	Above Mean Sea Level
BID	Background Information Document
CV	Curriculum Vitae
DEA	Department of Environmental Affairs
EA	Environmental Assessment
EAP	Environmental Assessment Practitioner
ECC	Environmental Clearance Certificate
EDS	Excel Dynamic Solutions
ESA	Environmental Scoping Assessment
EMA	Environmental Management Act
EMP	Environmental Management Plan
MCs	Mining Claims
GG	Government Gazette
GN	Government Notice
I&Aps	Interested and Affected Parties

MEFT	Ministry of Environment, Forestry, and Tourism
MME	Ministry of Mines and Energy
PPE	Personal Protective Equipment
Reg	Regulation
S	Section
TOR	Terms of Reference

DEFINITION OF TERMS

Alternative	A possible course of action, in place of another would meet the same purpose and need of the proposal.
Baseline	Work done to collect and interpret information on the condition/trends of the existing environment.
Biophysical	That part of the environment does not originate with human activities (e.g. biological, physical, and chemical processes).
Cumulative Impacts/Effects Assessment	About an activity, means the impact of an activity that in it may not be significant but may become significant when added to the existing and potential impacts eventuating from similar or diverse activities or undertakings in the area.
Decision-maker	The person(s) entrusted with the responsibility for allocating resources or granting approval to a proposal.
Ecological Processes	Processes play an essential part in maintaining ecosystem integrity. Four fundamental ecological processes are the cycling of water, the cycling of nutrients, the flow of energy, and biological diversity (as an expression of evolution).

Environment	As defined in the Environmental Management Act - the complex of natural and anthropogenic factors and elements that are mutually interrelated and affect the ecological equilibrium and the quality of life, including – (a) the natural environment that is land, water, and air; all organic and inorganic matter and living organisms and (b) the human environment that is the landscape and natural, cultural, historical, aesthetic, economic and social heritage and values.
Environmental Management Plan	As defined in the EIA Regulations (Section 8(j)), a plan that describes how activities that may have significant environments effects are to be mitigated, controlled, and monitored.
Interested and Affected Party (I&AP)	Concerning the assessment of a listed activity includes - (a) any person, group of persons, or organization interested in or affected by the activity; and (b) any organ of state that may have jurisdiction over any aspect of the activity. Mitigate - practical measures to reduce adverse impacts. Proponent – as defined in the Environmental Management Act, a person who proposes to undertake a listed activity. Significant impact - means an impact that by its magnitude, duration, intensity, or probability of occurrence may have a notable effect on one or more aspects of the environment.
Fauna	All of the animals that are found in a given area.
Flora	All of the plants are found in a given area.
Mitigation	The purposeful implementation of decisions or activities that are designed to reduce the undesirable impacts of a proposed action on the affected environment.

Monitoring	Activity involving repeated observation, according to a pre-determined schedule, of one or more elements of the environment to detect their characteristics (status and trends).
Nomadic Pastoralism	Nomadic pastoralists live in societies in which the husbandry of grazing animals is viewed as an ideal way of making a living and the regular movement of all or part of the society is considered a normal and natural part of life. Pastoral nomadism is commonly found where climatic conditions produce seasonal pastures but cannot support sustained agriculture.
Proponent	Organization (private or public sector) or individual intending to implement a development proposal.
Public Consultation/Involvement	A range of techniques can be used to inform, consult or interact with stakeholders affected by the proposed activities.
Protected Area	Refers to a protected area that is proclaimed in the Government Gazette according to the Nature Conservation Ordinance number 4 of 1975, as amended
Scoping	An early and open activity to identify the impacts that are most likely to be significant and require specialized investigation during the EIA work. Can, also be used to identify alternative project designs/sites to be assessed, obtain local knowledge of the site and surroundings, and prepare a plan for public involvement. The results of scoping are frequently used to prepare a Terms of Reference for the specialized input into full EIA.
Terms of Reference (ToR)	Written requirements governing full EIA input and implementation, consultations to be held, data to be produced, and form/contents of the EIA report. Often produced as an output from scoping.

1 INTRODUCTION

1.1 Project Background

Adreas Nghikeno Kalimbo (The Proponent) has applied to the Ministry of Mines and Energy (MME) for the proposed small-scale mining activities on Mining Claims (MCs) No. 75626 and 75628. However, the approval and granting of these MCs is subject to an Environmental Clearance Certificate (ECC) form the Ministry of Environment, Forestry and Tourism (MEFT). The Mining Claims (MCs) No. 75626 and 75628 cover a total surface area of 35. 5403 hectares and are located about 4 Km Southeast of Karibib in the Erongo region, as shown in Figure 1 .The target commodity is Dimension Stones.

Section 27 (1) of the Environmental Management Act (EMA) (No. 7 of 2007) and its 2012 Environmental Impact Assessment (EIA) Regulations, provides a list of activities that may not be carried out without an EIA undertaken and an ECC obtained. Small-scale mining activities are listed among activities that may not occur without an ECC. Therefore, individuals or organizations may not carry out small-scale mining activities without an ECC awarded to the Proponent.

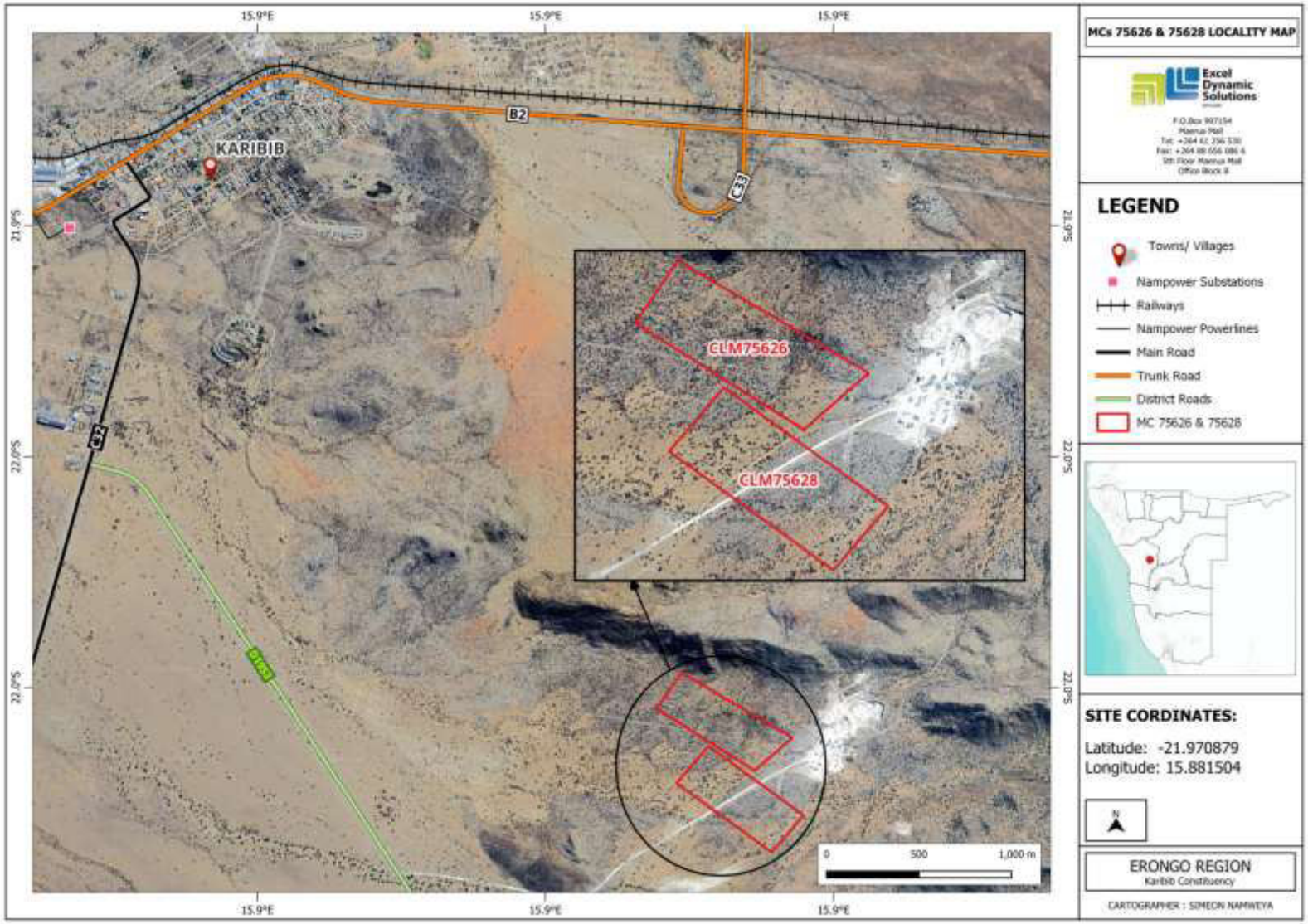

Figure 1: Locality map for MCs No. 75626 & 75628

1.2 Terms of Reference, Scope of Works, and Appointed EA Practitioner

To satisfy the requirements of the EMA and its 2012 EIA Regulations, The Proponent appointed EDS to conduct the required Environmental Assessment (EA) process on their (Proponent's) behalf, and thereafter, apply for an ECC for small-scale mining works on the MCs. There were no formal Terms of Reference (ToR) provided to EDS by the Proponent. The consultant, instead, relied on the requirements of the Environmental Management Act (No. 7 of 2007) (EMA) and its EIA Regulations (GN. No. 30 of 2012) to conduct the study.

The application for the ECC (**Appendix A**) is compiled and submitted to the Ministry of Environment, Forestry, and Tourism (MEFT), the environmental custodian for project registration purposes. Upon submission of an Environmental Scoping Assessment (ESA) Report and Draft Environmental Management Plan (EMP) (**Appendix B**), an ECC for the proposed project may be considered by the Environmental Commissioner at the MEFT Department of Environmental Affairs and Forestry (DEAF).

The EIA project is headed by Mr. Nerson Tjelos, a qualified and experienced Geoscientist and experienced EAP. The consultation process and reporting is being carried out by Ms. Aili Iipinge , EAP CV is presented in **Appendix C.**

1.3 Motivation for the Proposed Project

The mining industry is one of the largest contributors to the Namibian economy, it contributes to the improvement of local livelihoods. In Namibia, the exploration and mining of minerals is done mainly by the private sector. Mining activities have a great potential to enhance and contribute to the development of other sectors and their activities do provide temporary employment, and taxes that fund social infrastructural development. The minerals sector yields foreign exchange and accounts for a significant portion of the gross domestic product (GDP). Additionally, the industry produces a trained workforce and small businesses that can serve communities and may initiate related businesses. Small Scale Mining activity fosters several associated activities such as the manufacturing of exploration and mining equipment, and the provision of engineering and environmental services. The mining sector forms a vital part of some of Namibia's development plans, namely: Vision 2030, National Development Plan 5 (NDP5), and Harambee Prosperity Plans (HPPs) I and II. Mining is essential to the development goals of Namibia in contributing to meeting the ever-increasing global demand for minerals, and for national prosperity. Successful mining on MCs No. 75626 and 75628 would contribute towards achieving the goals of the national development plans.

2 PROJECT DESCRIPTION: PROPOSED SMALL SCALE MINING ACTIVITY

The description of small-scale mining activities and stages to be undertaken is presented below as well as the decommissioning of the mining activities

2.1 Pre-development Phase

The small scale mining phase includes reconnaissance and mapping to identify the lithostratigraphic packages. In addition, literature review, fieldwork (lithological (soil/rock) mapping and sampling) will be conducted to verify desktop work.

2.2 Operation and maintenance phase

During this phase, extraction of minerals and all associated mining activities are carried out on site. Both, invasive and non-invasive activities are expected to take place. Non-invasive activities include detailed mapping. No ground geophysical surveys are planned for the project. While invasive activities involve trenching and pitting, open pit mining.

An initial 10 year period of small scale mining period is predicted. The selection of the potential mineralization model and mineral targets will be based on the local geology, trenching, and assay results of the samples collected. No explosives will be used during the operational phase.

Other aspects of the proposed small-scale mining activities operations include:

2.1.1 Accessibility to Site

The MCs is accessible via C32 route that diverts into D1953 which will lead into an existing route that is used by UWM Mineral Processing .All project related vehicles will be using these existing roads to access the MCs and must be agreement with UWM Mineral Processing management . It is also anticipated that, if necessary, new tracks to the different targeted mining sites within the MCs will be created and the Proponent may need to do some upgrade on the site access roads to ensure that they fit to accommodate project related vehicles, such as heavy trucks.

2.1.2 Material and Equipment

The requirements of the small-scale mining activities program in terms of vehicles and equipment include: (4X4) vehicles, a truck, water tanks, Escavators, front-end loader, and a power generator. Equipment and vehicles will be stored at a designated area near the accommodation site or a storage site established within the MCs area.

2.1.3 Services and Infrastructure

- **Water:** Water for the operational phase will be obtained from the nearest existing boreholes near the mining claims or nearest town (Karibib Town Council). This will be done upon agreement with the land owners and relevant authorities. In the case that the proponent needs to source water elsewhere, this needs to be carried out through the appropriate approval channels from relevant authorities. Estimated monthly water consumptions are at +- 3000 liters, which includes water for drinking, sanitation, cooking, dust control, as well as washing equipment. Potable water will also be made available for the mining crew (workers) on site.
- **Power supply:** Power required during the operation phase will be provided from diesel generators. About 500 litres of diesel will be used per day.
- **Fuel (diesel for generators and other equipment):** The fuel (diesel) required for small-scale mining activities equipment will be stored in a tank mounted on a mobile trailer, and drip trays will be readily available on this trailer and monitored to ensure that accidental fuel spills are cleaned up as soon as they have been detected/observed. Fuel may also be stored in a bunded diesel bowser on site, and in jerry cans placed on plastic sheeting to avoid unnecessary contamination of soils.

2.1.4 Waste Management

The site will be equipped with secured waste bins for each type of waste (i.e., domestic, hazardous, and recyclable). Depending on the amount generated, waste will be sorted and collected as regularly as possible and taken to the nearest certified landfill site. An agreement will need to be reached with different waste management facility operators/owners and authorization or permits will be obtained before utilizing these facilities, in the case of generation of any hazardous waste.

- **Sanitation and human waste**: Portable ablution facilities will be used, and the sewage will be disposed of according to the approved disposal or treatment methods of the waste products.
- **Hazardous waste**: Drip trays and spill control kits will be available on-site to ensure that oil/fuel spills and leaks from vehicles and equipment are captured on time and contained correctly before polluting the site.

The waste produced on-site can also be categorized as mineral or non-mineral waste:

- **Mineral Waste:** Consists of solid products of mining and mineral concentration to acquire the targeted minerals. Mineral waste will potentially be produced throughout the project mining phase. This waste will be stripped and dumped in allocated areas as stipulated in the EMP.
- **Non-mineral Waste:** Consists primarily of auxiliary materials that will support the mining phase. This includes but is not limited to items such as empty containers, plastic, etc., and other domestic waste. This waste will be collected, sorted, and taken to the dumpsite as regularly as necessary.

2.1.5 Safety and Security

- **Storage Site**: Temporary storage areas for exploration material, equipment, and machinery will be required at the campsite and/or mining sites. Security will be supplied on a 24-hour basis at the delegated sites for storage. A temporary support fence surrounding the storage site will be constructed to ensure people and domestic animals are not put at risk.
- **Fire management:** Basic firefighting equipment, i.e., fire extinguishers will be readily available in vehicles, at the working sites and camps. The mining crew is required to have the contact details of the nearest fire station at hand in case of a larger scale of fires at the site.
- **Health and Safety**: Adequate and appropriate Personal Protective Equipment (PPE) will be provided to every project personnel while on and working at the site. A first aid kit will be readily available on-site to attend to potential minor injuries.

2.1.6 Accommodation

The mining crew will be accommodated in Karibib, but if accommodation camp is to be set up near the MCs, necessary arrangements will be made with the land owners. All mining activities will take place during daytime only and staff will commute to site(s) from their place of accommodation if they are not accommodated on site

2.2 Decommissioning and Rehabilitation Phase

Once the mining activities on the MCs come to an end, the Proponent will need to put site rehabilitation measures in place. Decommissioning and rehabilitation are primarily reinforced through a decommissioning and rehabilitation plan, which consists of safety, health, environmental, and contingency aspects. An unfavorable economic situation or unconvincing mining results might force the Proponent to cease the mining program before the predicted

closure. Therefore, it is best practice for the Proponent to ensure the project activities cease in an environmentally friendly manner and the site is rehabilitated.

3 PROJECT ALTENATIVES

Alternatives are defined as the “different means of meeting the general purpose and requirements of the activity” (EMA, 2007). This section highlights the different ways in which the project can be undertaken, and identifies alternatives that may be the most practical, but least damaging to the environment.

Once the alternatives have been established, these are examined by asking the following three questions:

- What alternatives are technically and economically feasible?
- What are the environmental effects associated with the feasible alternatives?
- What is the rationale for selecting the preferred alternative?

The alternatives considered for the proposed development are discussed in the following subsections.

3.1 Types of Alternatives Considered

3.1.1 The "No-go" Alternative

The “no action” alternative implies that the status quo remains, and nothing happens. Should the proposal of small-scale mining activities on the MCs, be discontinued, none of the potential impacts (positive and negative) identified would occur. If the proposed project is to be discontinued, the current land use for the proposed site will remain unchanged.

This no-go option is considered and a comparative assessment of the environmental and socio-economic impacts of the “no action” alternative, is undertaken to establish what benefits might be lost if the project is not implemented. The key losses that may never be realized if the proposed project does not go ahead include:

- Loss of foreign direct investment.
- Temporary job opportunities for community members will not be realized.

- No realization of local business supports through the procurement of consumable items such as Personal Protective Equipment (PPE), machinery spare parts, lubricants, etc.
- Loss of potential income to the local and national government through land lease fees, license lease fees, and various tax structures.
- Improved geological understanding of the site area regarding the targeted commodities.
- Socio-economic benefits such as skills acquisition for local community members would be not realized.

Considering the above losses, the “no-action/go” alternative may not necessarily be considered a viable option for this project, although, in the case where parts of the project site are considered environmentally sensitive and/or protected, one or several sections of the site may be identified as no-go zones.

3.1.2 Small-scale mining activitivies Location

The mining location is dependent on the geological setting (regional and local), the economic geology, and the small-scale mining activities and mining history of the MCs area. Therefore, finding an alternative location for the planned mining activities is not possible. This means that the mineralization of the target commodities is area-specific, and exploration targets are primarily determined by the geology (host rocks) and the tectonic environment of the site (an ore-forming mechanism)). The tenement has a sufficient surface area for future related facilities, should an economic mineral deposit be defined.

Furthermore, the national mineral resources’ potential locations are also mapped and categorized by the Ministry of Mines and Energy, on exclusive prospecting licenses, mining licenses and claims, mineral deposit retention licenses, reconnaissance licenses, and exclusive reconnaissance licenses. Available information on the MCs (**Figure 2**) and other licenses are available on the Namibia Mining Cadastral Map here https://maps.landfolio.com/Namibia/

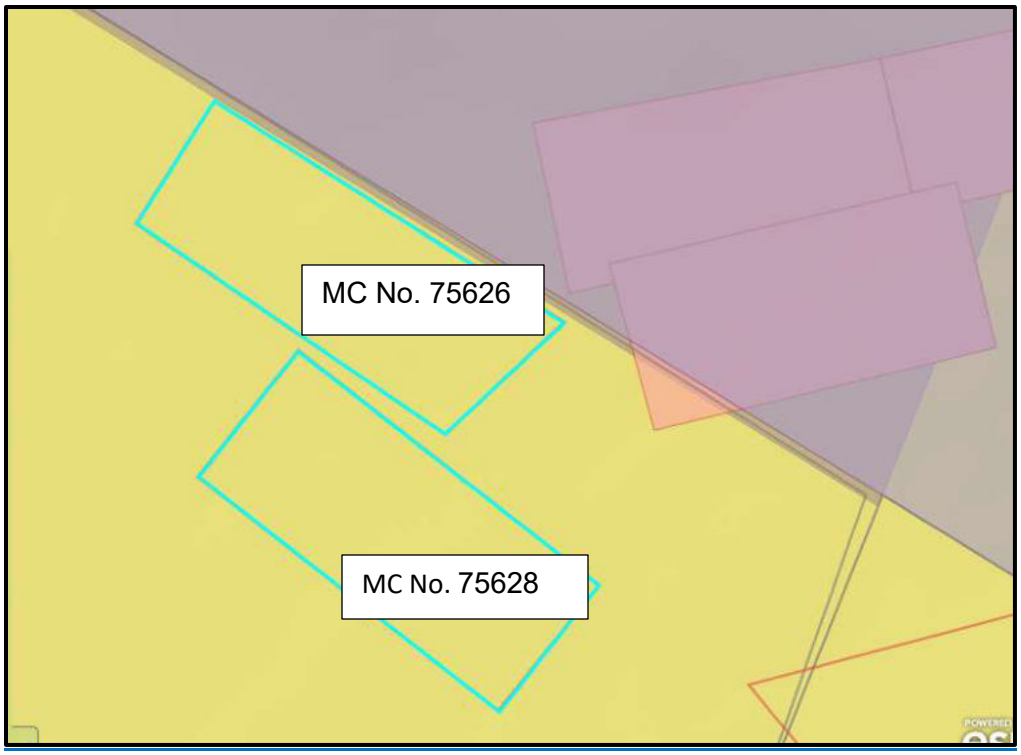

Figure 2: The location of MCs 75626 and 75628 on the National Mining Cadastre

4 LEGAL FRAMEWORK: LEGISLATION, POLICIES AND GUIDELINES

Small-scale mining activities have legal implications associated with certain applicable legal standards. A summary of applicable and relevant international policies and Namibian legislation, policies, and guidelines for the proposed development is given in this section (**Table 2**). This summary serves to inform the project Proponent, Interested and Affected Parties, and the decision-makers at the DEAF, of the requirements and expectations, as laid out in terms of these instruments, to be fulfilled to establish the proposed small scale mining activities.

4.1 The Environmental Management Act (No. 7 of 2007)

This EIA was carried out according to the Environmental Management Act (EMA) and its Environmental Impact Assessment (EIA) Regulations (GG No. 4878 GN No. 30).

The EMA has stipulated requirements to complete the required documentation to obtain an ECC for permission to undertake certain listed activities. These activities are listed under the following Regulations:

- *3.1 The construction of facilities for any process or activities which requires a license, the right of other forms of authorization, and the renewal of a license, right, or other forms of authorization, in terms of the Minerals (Prospecting and Mining Act, 1992).*
- *3.2 other forms of mining or extraction of any natural resources whether regulated by law or not.*
- *3.3 Resource extraction, manipulation, conservation, and related activities.*

The Environmental Impact Assessment (EIA) Regulations GN 28-30 (GG 4878) detail requirements for public consultation within a given environmental assessment process (GN 30 S21). The EIA regulations also outline the required details of a Scoping Report (GN 30 S8) and an Assessment Report (GN 30 S15).

Other legal obligations that are relevant to the proposed mining activities on MCs No. 75626 & 75628 and related activities are presented**.**

Table 1: Applicable local, national and international standards, policies and guidelines governing the proposed Small-Scale Mining activities

Legislation / Policy / Guideline: Custodian	**Relevant Provisions**	**Implications for this project**
The Constitution of the Republic of Namibia, 1990 as amended: **Government of the Republic of Namibia**	The Constitution of the Republic of Namibia (1990 as amended) addresses matters relating to environmental protection and sustainable development. Article 91(c) defines the functions of the Ombudsman to include: "…the duty to investigate complaints concerning the over-utilization of living natural resources, the irrational exploitation of non-renewable resources, the degradation and	By implementing the environmental management plan, the establishment will be conformant to the constitution in terms of environmental management and sustainability. Ecological sustainability will be the main priority for the proposed development.

Legislation / Policy / Guideline: Custodian	Relevant Provisions	Implications for this project
	destruction of ecosystems and failure to protect the beauty and character of Namibia…" Article 95(l) commits the state to actively promoting and maintaining the welfare of the people by adopting policies aimed at the: "…Natural resources situated in the soil and on the subsoil, the internal waters, in the sea, in the continental shelf, and in the exclusive economic zone are property of the State."	
Minerals (Prospecting and Mining) Act (No. 33 of 1992): **Ministry of Mines and Energy (MME)**	Section 52 requires mineral license holders to enter into a written agreement with affected landowners before exercising rights conferred upon the license holder. Section 52(1) mineral license holder may not exercise his/her rights in any town or village, on or in a proclaimed road, land utilized for cultivation, within 100m of any water resource (borehole, dam, spring, drinking trough, etc.) and boreholes, or no operations in municipal areas, etc.), which should individually be checked to ensure compliance. Section 54 requires a written notice to be submitted to the Mining	The Proponent should enter into a written agreement with landowners before exploring their land. On communal land, the Proponent should engage the landowners for land use consent. An assessment of the impact on the receiving environment should be carried out. The Proponent should include as part of their application for the MCs, measures by which they will rehabilitate the areas where

Legislation / Policy / Guideline: Custodian	Relevant Provisions	Implications for this project
	Commissioner if the holder of a mineral license intends to abandon the mineral license area. Section 68 stipulates that an application for Mining Claims (MCs) shall contain the particulars of the condition of, and any existing damage to, the environment in the area to which the application relates and an estimate of the effect which the proposed prospecting operations may have on the environment and the measures to be taken to prevent or minimize any such effect. Section 91 requires that rehabilitation measures should be included in an application for a mineral license.	they intend to carry out mineral small scale mining activities. The Proponent may not carry out mining activities within the areas limited by Section 52 (1) of this Act.
Nature Conservation Amendment Act, No. 3 of 2017: **Ministry of Environment, Forestry and Tourism (MEFT)**	National Parks are established and gazetted following the Nature Conservation Ordinance, 1975 (4 of 1975), as amended. The Ordinance provides a legal framework concerning the permission of entering a state-protected area, as well as requirements for individuals damaging objects (geological, ethnological, archaeological, and historical) within a protected area. Though the Ordinance	. The Proponent will be required to comply with the existing and planned local operational management plans, regulations, and guidelines.

Legislation / Policy / Guideline: Custodian	Relevant Provisions	Implications for this project
	does not specifically refer to mining as an activity within a protected area (PA) or recreational area (RA), it does restrict access to PAs and prohibits certain acts therein as well as the purposes for which permission to enter game parks and nature reserves may be granted.	
The Parks and Wildlife Management Bill of 2008**: Ministry of Environment, Forestry and Tourism (MEFT)**	Aims to provide a regulatory framework for the protection, conservation, and rehabilitation of species and ecosystems, the sustainable use and sustainable management of indigenous biological resources, and the management of protected areas, to conserve biodiversity and contribute to national development.	
Mine Health & Safety Regulations, 10th Draft**: Ministry of Health and Social Services (MHSS)**	Makes provision for the health and safety of persons employed or otherwise present in the mineral licenses area. These deal with among other matters; clothing and devices; design, use, operation, supervision, and control of machinery; fencing and guards; and safety measures during repairs and maintenance.	The Proponent should comply with all these regulations concerning their employees.
Petroleum Products and Energy Act (No.	Regulation 3(2)(b) states that "No person shall possess [sic] or store any fuel except under the authority of a	The Proponent should obtain the necessary authorization from

Legislation / Policy / Guideline: Custodian	Relevant Provisions	Implications for this project
13 of 1990) Regulations (2001)**: Ministry of Mines and Energy (MME)**	license or a certificate, excluding a person who possesses or stores such fuel in a quantity of 600 liters or less in any container kept at a place outside a local authority area"	the MME for the storage of fuel on-site.
The Regional Councils Act (No. 22 of 1992)**: Ministry of Urban and Rural Development (MURD)**	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 perspective, 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, urbanization patterns, natural resources, economic development potential, infrastructure, land utilization pattern and sensitivity of the natural environment.	The relevant Regional Councils are IAPs and must be consulted during the Environmental Assessment (EA) process. The project site falls under the Erongo Council; therefore, they should be consulted.
Water Act 54 of 1956**: Ministry of Agriculture, Water and Land Reform (MAWLR)**	The Water Resources Management Act 11 of 2013 is present without regulations; therefore, the Water Act No 54 of 1956 is still in force: Prohibits the pollution of water and implements the principle that a person disposing of effluent or waste has a duly of care to prevent pollution (S3 (k)).	The protection (both quality and quantity/abstraction) of water resources should be a priority. The permits and license required thereto should be obtained from MAWLR's relevant Departments (these permits include Borehole Drilling

Legislation / Policy / Guideline: Custodian	Relevant Provisions	Implications for this project
	Provides for control and protection of groundwater (S66 (1), (d (ii)). Liability of clean-up costs after closure/abandonment of an activity (S3 (l)). (l)).	Permits, Groundwater Abstraction & Use Permits, and when required, Wastewater / Effluent Discharge Permits).
Water Resources Management Act (No 11 of 2013)**: Ministry of Agriculture, Water and Land Reform (MAWLR)**	The Act provides for the management, protection, development, use, and conservation of water resources; provides for the regulation and monitoring of water services, and provides for incidental matters. The objects of this Act are to: Ensure that the water resources of Namibia are managed, developed, used, conserved, and protected in a manner consistent 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 (S68).	
National Heritage Act No. 27 of 2004**: Ministry of Education, Arts, and Culture (MEAC)**	To provide for the protection and conservation of places and objects of heritage significance and the registration of such places and objects; to establish a National Heritage Council; to establish a National	The Proponent should ensure compliance with this act's requirements. The necessary management measures and related permitting requirements must be taken. This is done by

Legislation / Policy / Guideline: Custodian	Relevant Provisions	Implications for this project
	Heritage Register; and to provide for incidental matters.	consulting with the National Heritage Council (NHC) of Namibia. The management measures should be incorporated into the Draft EMP.
The National Monuments Act (No. 28 of 1969)**: Ministry of Education, Arts, and Culture (MEAC)**	The Act enables the proclamation of national monuments and protects archaeological sites.	
Soil Conservation Act (No 76 of 1969)**: Ministry of Agriculture, Water and Land Reform (MAWLR)**	The Act makes provision for the prevention and control of soil erosion and the protection, improvement, and conservation of soil, vegetation, and water supply sources and resources, through directives declared by the Minister.	Duty of care must be applied to soil conservation and management measures must be included in the EMP.
Local Authorities Act No. 23 of 1992	To provide for the determination, for purposes of traditional government, of traditional authority councils; the establishment of such authority councils; and to define the powers, duties and functions of traditional authority councils; and to provide for incidental matters.	The Karibib Town Council is the responsible local Authority of the area therefore they should be consulted.
Public Health Act (No. 36 of 1919)**: Ministry of Health and**	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 in	The Proponent and all its employees should ensure

Legislation / Policy / Guideline: Custodian	Relevant Provisions	Implications for this project
Social Services (MHSS)	charge any nuisance or other condition liable to be injurious or dangerous to health."	compliance with the provisions of these legal instruments.
Health and Safety Regulations GN 156/1997 (GG 1617)**: Ministry of Health and Social Services (MHSS)**	Details various requirements regarding the health and safety of labourers.	
Public and Environmental Health Act No. 1 of 2015**: Ministry of Health and Social Services (MHSS)**	The Act serves to protect the public from nuisance and 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 in charge any nuisance or other condition liable to be injurious or dangerous to health.	The Proponent should ensure that the project infrastructure, vehicles, equipment, and machinery are designed and operated in a way that is safe, or not injurious or dangerous to public health, and that the noise and dust emissions which could be considered a nuisance remain at acceptable levels. Public and environmental health should be preserved and remain uncompromised.
Atmospheric Pollution Prevention Ordinance (1976)**: Ministry**	This ordinance provides for the prevention of air pollution and is affected by the Health Act 21 of 1988. Under this ordinance, the entire area of Namibia, apart from East Caprivi, is	The proposed project and related activities should be undertaken in such a way that they do not pollute or compromise the surrounding air

Legislation / Policy / Guideline: Custodian	Relevant Provisions	Implications for this project
of Health and Social Services (MHSS)	proclaimed as a controlled area for section 4(1) (a) of the ordinance.	quality. Mitigation measures should be put in place and implemented on-site.
Hazardous Substance Ordinance, No. 14 of 1974**: Ministry of Health and Social Services (MHSS)**	The ordinance provides for the control of toxic substances. It covers manufacture, sale, use, disposal, and dumping as well as import and export. Although the environmental aspects are not explicitly stated, the ordinance provides for the importing, storage, and handling.	The Proponent should handle and manage the storage and use of hazardous substances on site so that they do not harm or compromise the site environment
Road Traffic and Transport Act, No. 22 of 1999**: Ministry of Works and Transport (Roads Authority of Namibia)**	The Act provides for the establishment of the Transportation Commission of Namibia; for the control of traffic on public roads, the licensing of drivers, the registration and licensing of vehicles, the control and regulation of road transport across Namibia's borders; and for matters incidental thereto. Should the Proponent wish to undertake activities involving road transportation or access to existing roads, the relevant permits will be required.	Mitigation measures should be provided for, if the roads and traffic impact cannot be avoided, the relevant permits must be applied for.
Labour Act (No. 6 of 1992)**: Ministry of Labour,**	Ministry of Labour, Industrial Relations and Employment Creation is aimed at ensuring harmonious labour relations through promoting social justice,	The Proponent should ensure that the small scale mining activities do not compromise

Legislation / Policy / Guideline: Custodian	Relevant Provisions	Implications for this project
Industrial Relations and Employment Creation (MLIREC)	occupational health and safety, and enhanced labour market services for the benefit of all Namibians. This ministry insures the effective implementation of the Labour Act No. 6 of 1992.	the safety and welfare of workers.

4.2 International Policies, Principles, Standards, Treaties, and Conventions

The international policies, principles, standards, treaties, and conventions applicable to the project are listed in **Table 3** below.

Table 2: International Policies, Principles, Standards, Treaties and Convention applicable to the project

Statute	Provisions	Project Implications
Equator Principles	A financial industry benchmark for determining, assessing, and managing environmental and social risk in projects (August 2013). The Equator Principles have been developed in conjunction with the International Finance Corporation (IFC), to establish an International Standard with which companies must comply to apply for approved funding by Equator Principles Financial Institutions (EPFIs). The principles apply to all new project financings globally across all sectors.	These principles are an attempt to: '…encourage the development of socially responsible projects, which subscribe to appropriately responsible environmental management practices with a minimum negative impact on project-affected ecosystems and community-based

	Principle 1: Review and Categorization Principle 2: Environmental and Social Assessment Principle 3: Applicable Environmental and Social Standards Principle 4: Environmental and Social Management System and Equator Principles Action Plan Principle 5: Stakeholder Engagement Principle 6: Grievance Mechanism Principle 7: Independent Review Principle 8: Covenants Principle 9: Independent Monitoring and Reporting Principle 10: Reporting and Transparency	upliftment and empowering interactions.'
The International Finance Corporation (IFC) Performance Standards	The International Finance Corporation's (IFC) Sustainability Framework articulates the Corporation's strategic commitment to sustainable development and is an integral part of the IFC's approach to risk management. The Sustainability Framework comprises IFC's Policy and Performance Standards on Environmental and Social Sustainability, and IFC's Access to Information Policy. The Policy on Environmental and Social Sustainability describes IFC's commitments, roles, and	The Performance Standards are directed toward clients, guiding how to identify risks and impacts, and are designed to help avoid, mitigate, and manage risks and impacts as a way of doing business sustainably, including stakeholder engagement and disclosure obligations of the Client (Borrower) concerning

	responsibilities related to environmental and social sustainability. As of 28 October 2018, there are ten (10) Performance Standards (Performance Standards on Environmental and Social Sustainability) that the IFC requires project Proponents to meet throughout the life of an investment. These standard requirements are briefly described below. Performance Standard 1: Assessment and Management of Environmental and Social Risks and Impacts Performance Standard 2: Labour and Working Conditions Performance Standard 3: Resource Efficient and Pollution Prevention and Management Performance Standard 4: Community Health and Safety Performance Standard 5: Land Acquisition, Restrictions on Land Use, and Involuntary Resettlement Performance Standard 6: Biodiversity Conservation and Sustainable Management of Living Natural Resources Performance Standard 7: Indigenous Peoples/Sub-Saharan African Historically Undeserved Traditional Local Communities	project-level activities. In the case of its direct investments (including project and corporate finance provided through financial intermediaries), IFC requires its clients to apply the Performance Standards to manage environmental and social risks and impacts so that development opportunities are enhanced. IFC uses the Sustainability Framework along with other strategies, policies, and initiatives to direct the business activities of the Corporation to achieve its overall development objectives.

	Performance Standard 8: Cultural Heritage Performance Standard 9: Financial Intermediaries (FIs) Performance Standard 10: Stakeholder Engagement and Information A full description of the IFC Standards can be obtained from http://www.worldbank.org/en/projects-operations/environmental-and-social-framework/brief/environmental-and-social-standards?cq_ck=1522164538151#ess1	
The United Nations Convention to Combat Desertification (UNCCD) 1992	Addresses land degradation in arid regions with the purpose to contribute to the conservation and sustainable use of biodiversity and the mitigation of climate change. The convention's objective is to forge a global partnership to reverse and prevent desertification/land degradation and to mitigate the effects of drought in affected areas to support poverty reduction and environmental sustainability United Nations Convention.	The project activities should not be such that they contribute to desertification.
Convention on Biological Diversity 1992	Regulate or manage biological resources important for the conservation of biological diversity whether within or outside protected areas, to ensure their conservation and sustainable use.	Removal of vegetation cover and destruction of natural habitats should be avoided and where not possible minimized.

	Promote the protection of ecosystems, and natural habitats, and the maintenance of viable populations of species in natural surroundings.	
Stockholm Declaration on the Human Environment, Stockholm (1972)	It recognizes the need for: “a common outlook and common principles to inspire and guide the people of the world in the preservation and enhancement of the human environment.	Protection of natural resources and prevention of any form of pollution.

Relevant international Treaties and Protocols ratified by the Namibian Government

- Convention on International Trade and Endangered Species of Wild Fauna and Flora (CITES), 1973.
- Convention on Biological Diversity, 1992.
- World Heritage Convention, 1972.

5 ENVIRONMENTAL AND SOCIAL BASELINE

The project activities will be undertaken in specific environmental and social conditions. The undertstanding of these conditions helps in identifying sensitive environmental features that may need to be protected through the implementation of certain managemet and mitigation measures. The summary of selected physical, biological and social baseline information of the project area is provided below as per the site visit conducted by the Environmental Consultant and relevant published reports and books.

5.1 Biophysical Environment

5.1.1 Climate

The proposed small-scale mining programme will be undertaken in specific environmental and social conditions. Understanding the pre-project conditions of the environment will aid in laying down background "information" of the status quo and future projections of environmental

conditions after proposed works on the MCs. This also helps the EAP in identifying the sensitive environmental features that may need to be protected through the recommendations and effective implementation of mitigation measures provided.

The baseline information presented below is sourced from a variety of sources including reports of studies conducted in the Erongo Region and around Karibib. Further information was obtained by the Consultant during the site visit.

The town of Karibib and immediate surroundings are situated in a semi-desert climate, with low rainfall and high evaporation. Evaporation rates are between 2,330 and 2,440mm per year (Stubenrauch Planning Consultants, 2016). The annual average rainfall recorded between 1967 and 1983 was 244mm, 180mm between 1980 and 2002 and 215mm between 2008 and 2010. The average annual temperature is more than 22.3ºC, with an average maximum temperature of between 34 and 36ºC, and an average winter month minimum of between 25 and 28ºC (Stubenrauch Planning Consultants, 2016).

5.1.2 Landscape and Topography

In the terms of landscape, the MCs are found within the Central-Western Plains with an elevation of 1225 – 1279m as shown on the map in figure 3. According to Mendelsohn *et al* (2002), this landscape is stretches back from the coast. This broad area of plains extends inland for about 450km in places. The plains were largely formed by erosion cutting back into higher ground and carving out the catchment areas of several major rivers, which include the Khan, Omaruru, Swakop and Ugab Rivers (Mendelsohn *et al*., 2002).

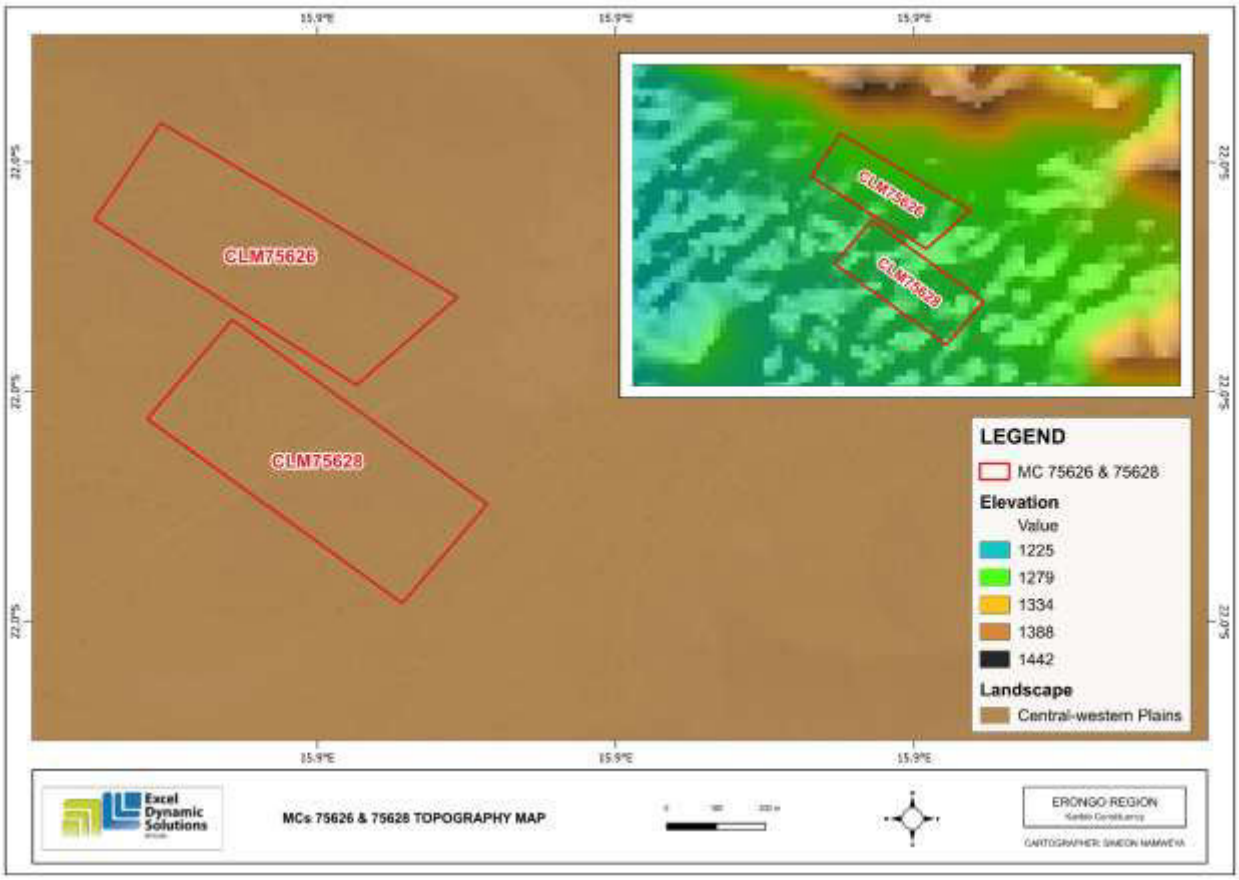

Figure 3: Landscape and topographic map of the project area

5.1.3 Geology

the geology is predominantly characterized by the presence of ancient metamorphic and igneous rocks, primarily part of the Damara Orogenic Belt. This area features complex geological formations including schists, Marbles, mixtite, gneisses, and granites that date back to the Proterozoic Eon, around 2 billion years ago. Additionally, the region is known for its rich mineral deposits, particularly uranium, which has led to significant mining activities. The landscape also includes various fault lines and folds, indicative of the intense tectonic activity that shaped the region (Miller, 2008). **Figure 5** below shows the geology and lithology map.

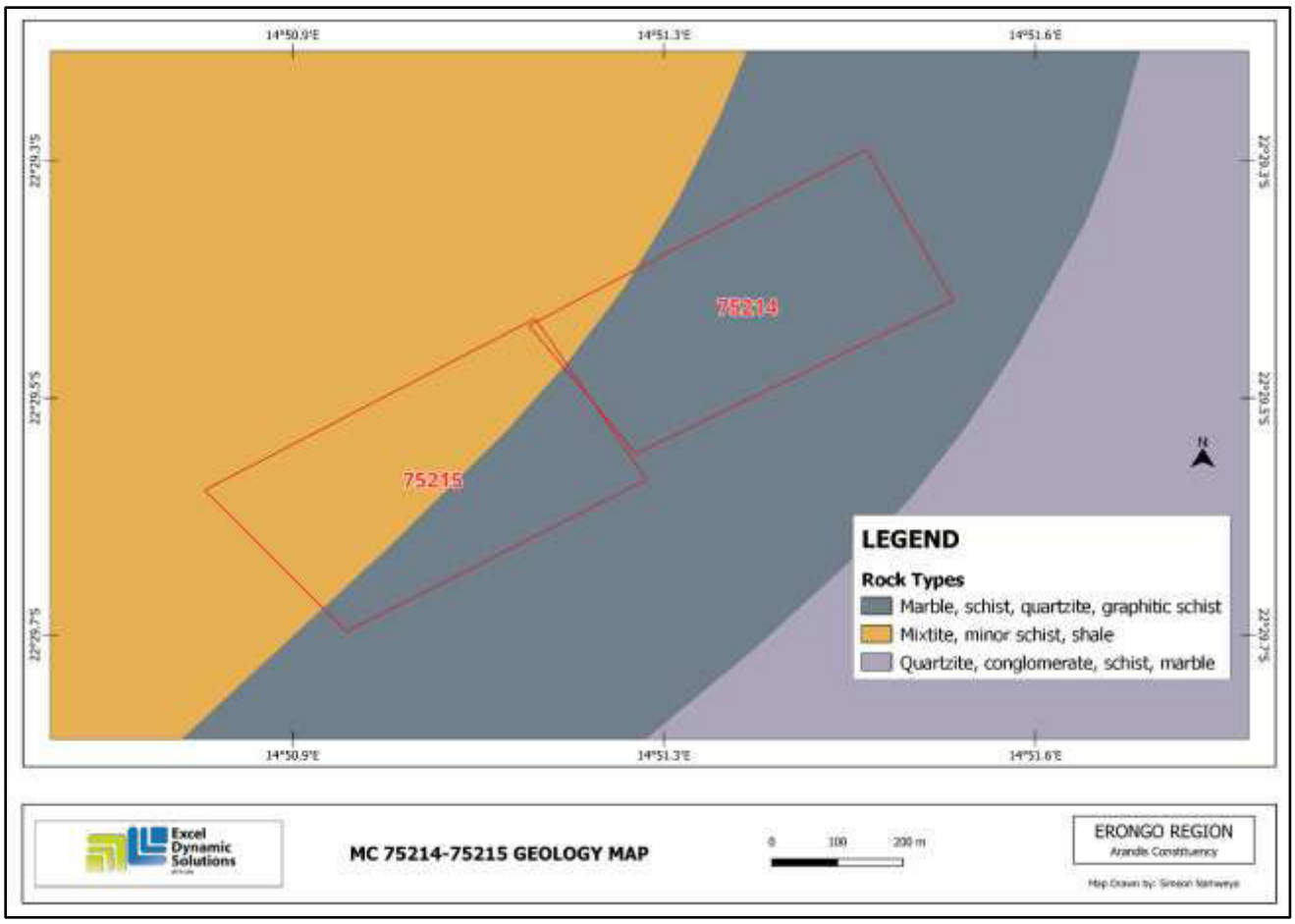

Figure 4: General geology and lithology map of the MCs.

5.1.4 Soil

The MCs area is dominated by Petric Gypsisols as indicated in the map below. Petric Gypsisols, are soils characterized by a significant accumulation of gypsum (calcium sulfate) in their profile. These soils typically form in arid and semi-arid environments where evaporation exceeds precipitation, leading to the precipitation of gypsum from soil water. Petric Gypsisols often have a hard, crusty layer of gypsum near the surface. They support limited vegetation due to their high gypsum content and low fertility but can sustain specialized plant species adapted to these conditions (FAO, 2006). **Figure 6** below is a map of the type of soil found within the MCs and **Figure 7** shows the soil type observed on the MCs.

It is notable that during the operational phase of the project, soil sampling may be conducted**.** *Therefore, the Soil Conservation Act (No 76 of 1969) should be taken into account to ensure that soils are conserved in a way that does not promote soil erosion.* (Refer to the EMP).

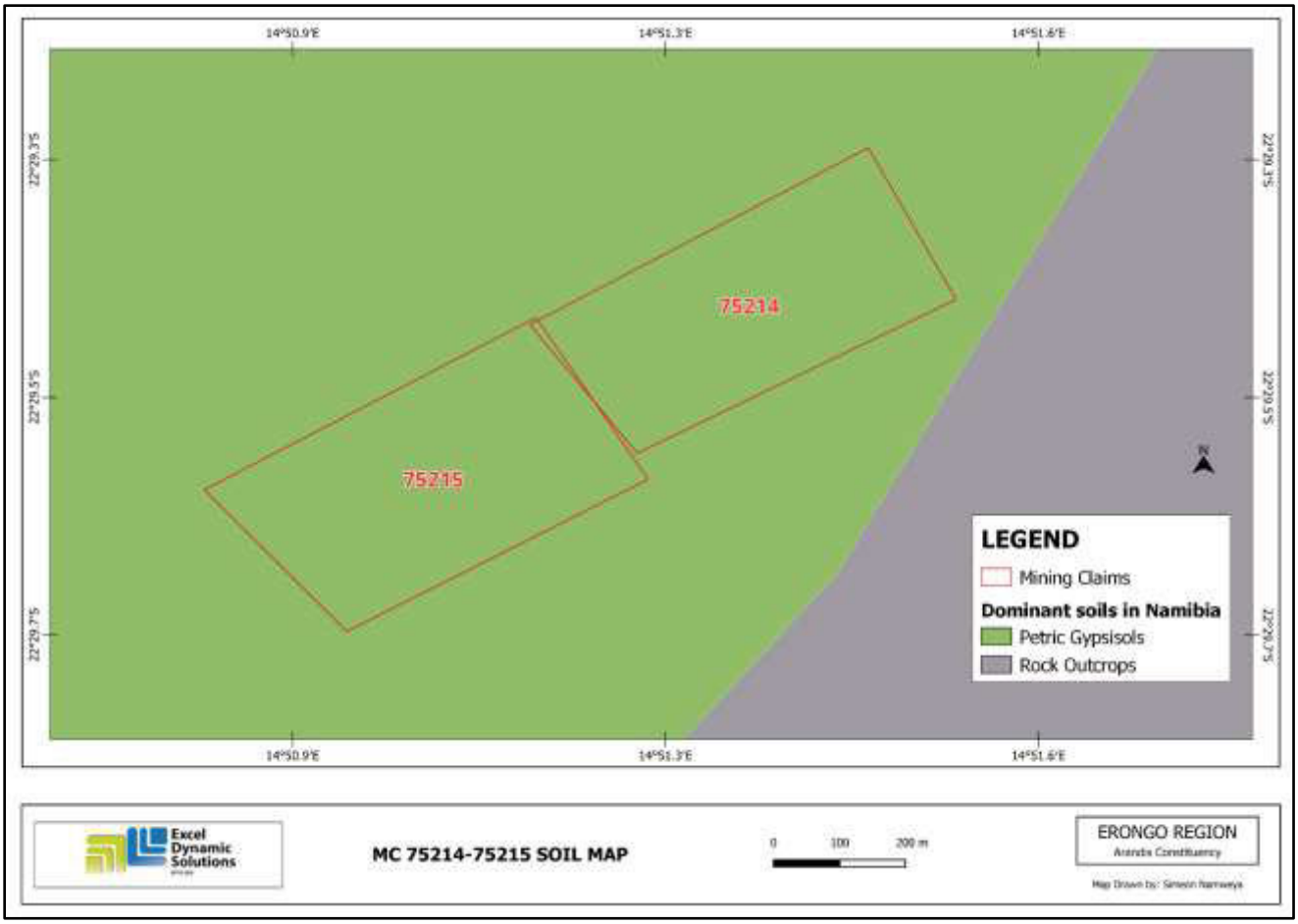

Figure 5: Dominant soil type on the MCs

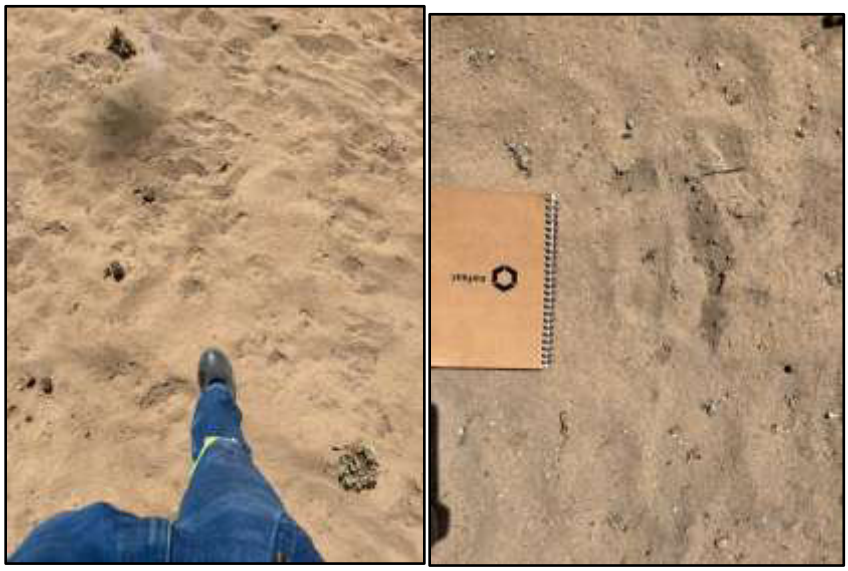

Figure 6: Observed soil type

5.1.5 Water Resources: Groundwater and Surface Water

The project area has limited surface water, the area is generally arid and semi-arid, and the rainfall is highly variable from year to year. As a result, surface water resources cannot be relied upon for sustainable use. In terms of groundwater, the MCs are mainly covered by Rock Bodies with little Groundwater potential aquifer. This means that the MCs falls within a zone rather low sensitivity (Vulnerability) to groundwater pollution. **Figure 8** shows the groundwater map of the project area and figure 9 shows the river tributes tha passes through the MCs..

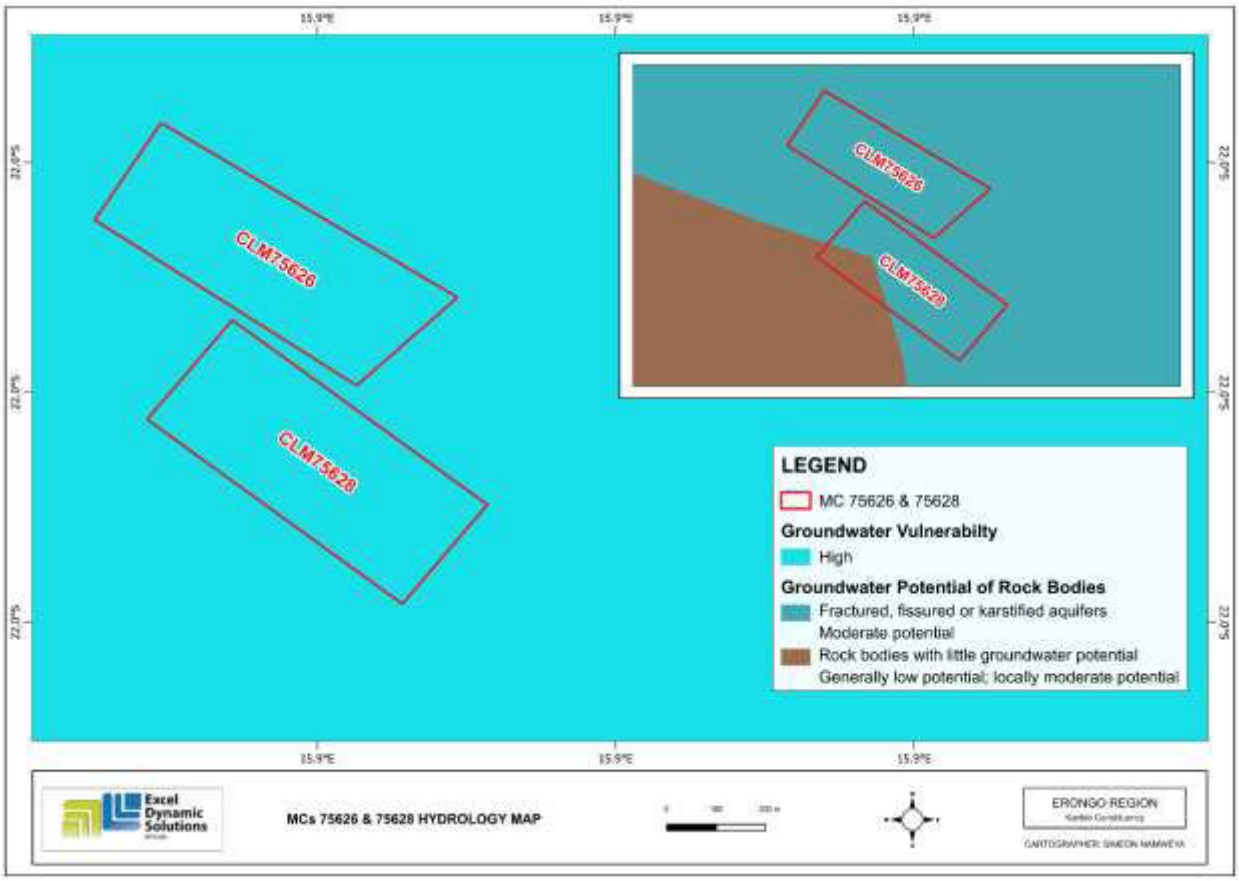

Figure 7: Hydrology map for the MCs

Figure 8 the river channel within this MCThe

5.1.6 Flora and Fauna

5.1.6.1 Flora

The general Karibib area is viewed as an area of importance for local endemic plant species, especially the Erongo Mountains with between 26-35 endemic species (Mendelsohn et al. 2002). The overall plant diversity (all species) in the general Karibib area is estimated at between 150- 299 species and the Erongo Mountain area between 400-499 species (Mendelsohn et al. 2002). These estimates are limited to “higher” plants as information regarding “lower” plants is sparse. The greatest variants affecting the diversity of plants are habitat and climate with the highest plant diversity generally associated with high rainfall areas. The vegetation in the area is dominated by Boscia species, *Acacia Senegalia and Dichrostachys Cinerea.* **(Figure 9)** shows the type of vegetation observed on the MCs.

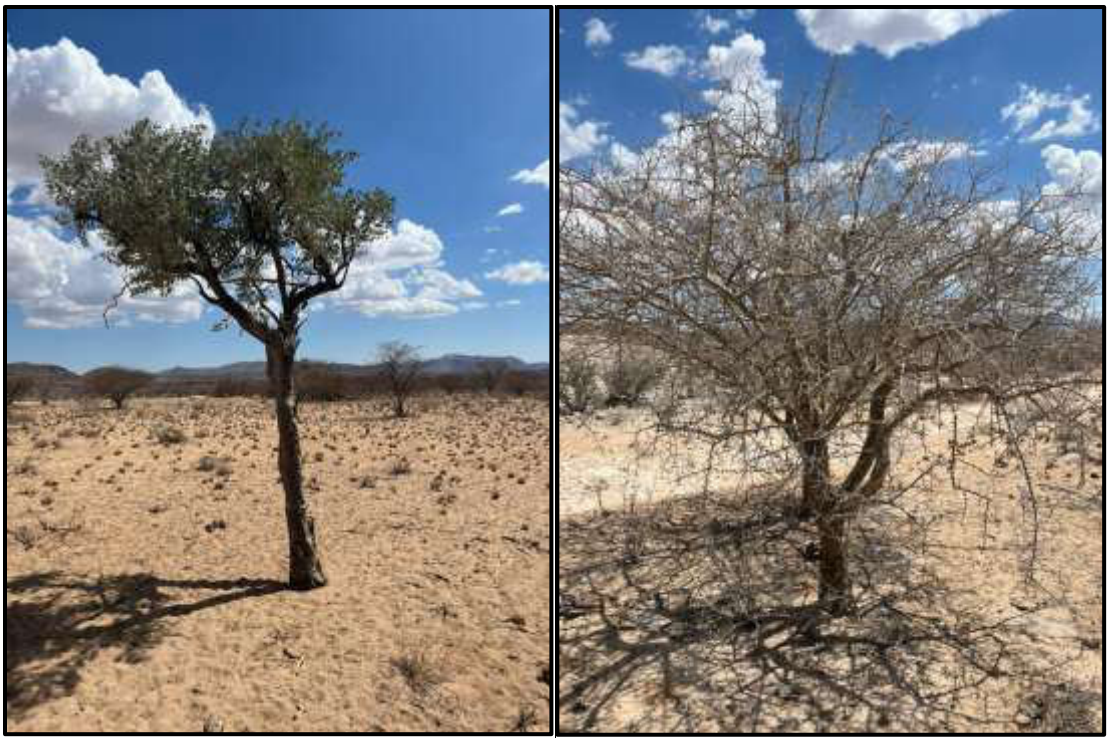

Figure 9: Vegetation Observed on site

5.1.6.2 Fauna

There is a variety of wildlife in the region. According to the information from the members who were consultated, the area boasts the presence of specialized wildlife, including insects, reptiles, and small mammals, adapted to the extreme conditions and different types of birds can be found roaming freely in their natural environment.

5.2 Heritage and Archaeology

5.2.1 Local Level and Archaeological Findings

There are no nationally recognized archaeological sites recorded within the MCs. A possibility that unrecorded or undiscovered archaeological features or artifacts may be discovered during the mining phase. In the case where an archaeological discovery is made on-site during exploration works, the procedures outlined in the National Heritage Act, No. 27 of 2004 are to be followed. Section 55 (4) of the National Heritage Act, No. 27 of 2004, requires that any archaeological or paleontological object or meteorite discovered is reported to the National Heritage Council as soon as practicable.

5.3 Surrounding Land Uses

The MCs Fall within commercial farmland as shown in (**Figure 10)**. The Proponent is required to secure a signed agreement from the affected landowners to gain access to the areas of interest for small-scale mining activities as per Section 52 of the Minerals (Prospecting and Mining) Act No. 33 of 1992 and Section 2.2.3 of the Minerals Policy of Namibia.

1. Section 52 (1) The holder of the mineral license shall not exercise any rights conferred upon such holder by this Act or under any terms and conditions of such mineral license –

    (a) In, on, or under any and until such holder has agreed in writing with the owner of such land containing terms and conditions relating to the payment of compensation, or the owner of such land has in writing waived any right to such compensation and has submitted a copy of such agreement or waiver to the Commissioner.

Section 2.2.3 of the Draft Minerals Policy of Namibia states that the License Holder and/or mineral explorers currently have to negotiate a contract with landowners to gain access for mining purposes.

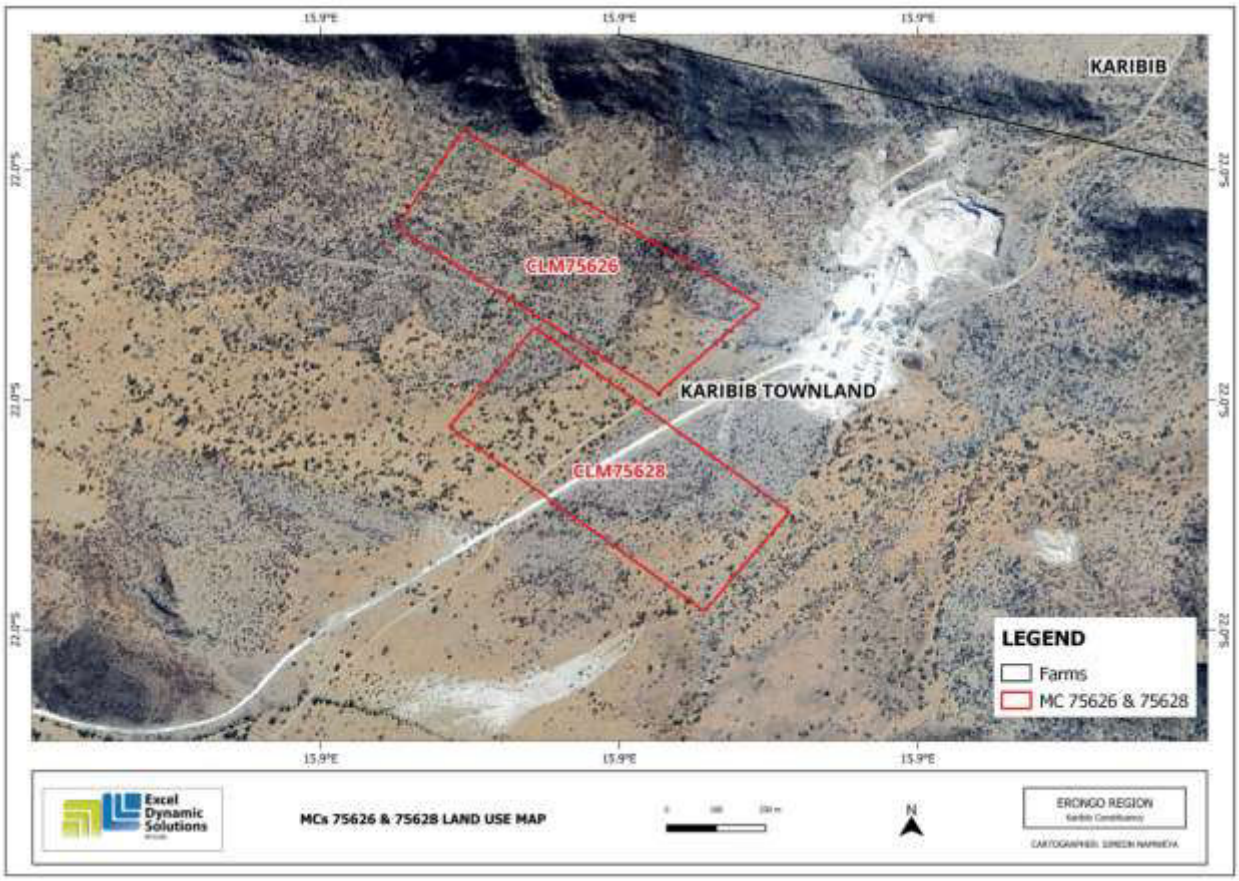

Figure 10: Land use map

There are infrastructures observed within the MCs, but there is an existing srushe existing on the Northeast side of the crusher .

5.4 Socio-Economic conditions

Karibib is a small town situated within the Erongo Region, halfway between the capital city of Windhoek and the coastal town of Swakopmund. Historically the town of Karibib was a trade town with this role diminishing over the years to a fuel stop for travelers to the coast or to Windhoek. According to the Namibia 2023 Population and Housing Census Main Report by the Namibia Statistics Agency, Karibib town has a total population of 8,434 (NSA, 2024) of which 4,323 are males while 4,111 are females. The total population of Karibib town was 5,132 in 2011 compared to 8,434 in 2023 representing an annual growth rate of 4.1%. According to the Namibia 2023 Population and Housing Census Main Report by the Namibia Statistics Agency, the total population of Karibib Constituency is 19,705, of which 10,394 are males while 9,311 are females. Karibib is situated in an important strategic position and is the gateway linking a number of Southern Africa Development Community (SADC) countries with the Namibian port of Walvis Bay. Both the Trans-Kalahari Corridor (B2) that links the port of Walvis Bay through Windhoek to Botswana and South Africa and Trans-Cunene rail and road corridor that will link the port of Walvis Bay to Lubango in Angola runs through the town of Karibib.

The business component of the town is located on both sides of the B1 main road and is spread out over a distance of approximately one kilometer. Institutional, public open spaces, business, industrial and government properties can be found within the town. Most buildings in town are one storey buildings with some double story buildings that can be found on government owned properties and business properties. The main street of town also has a number of historical buildings that lends a certain character to the town.

Services and Infrastructure

Bulk water to Karibib is supplied by NamWater via the Swakoppoort reservoir. NamWater extracts raw water from the Swakoppoort dam which is then pumped to Karibib and treated at a treatment plant in Karibib. Karibib town is supplied by a 66kV overhead powerline by ErongoRED, terminating at the Karibib 66/11kV, 2.5 MVA substation (WCE, 2015). Erongo RED buys electricity from NamPower and then supply these to the various contracted towns.

The current demand according to the bulk infrastructure masterplan is 1.65MVA, leaving the town with a reserve capacity of 0.85MVA. The current sewage works are situated approximately 1.5km to the north of town on private land.

Educational and Institutional Facilities

Karibib has the following school facilities: (a) Ebenhaeser Primary School which houses mostly children from the surrounding rural areas and has a hostel linked to the school that can only accommodate 90 children. (b) Karibib Junior Secondary School: teaches grade 8 to 10. (c) Karibib Private School has grades from pre-primary to Grade 12. (d) Cornerstone Academy, a Christian private education facility and caters for children from kindergarten up to Grade 7. Karibib has the following public institutions, among others: police station; a fire station; a clinic and magistrate office. There are two developed parks within town.

Source of Income and Livelihood

The local economy of Karibib town is small and largely dependent on the Navachab mine and to some extent the business activities derived from travellers on their way to Swakopmund or Windhoek and the agriculture and tourism activities in the hinterland of the constituency. The town itself has a small economic base, which is a concern especially realising the challenge the town will face if the Navachab mine closes down. Within the Karibib Constituency 58% of the household income is derived from wages and salaries and 7.8% from business activities.

The 2011 census shows that the private sector employs the majority of the employed population in the Karibib Constituency (51.22%) and 22.82% is employed within the agriculture sector and 22.95% is employed within the mining sector. In the Town of Karibib, a variety of business activities can be found such as retail outlets, petrol stations, accommodation establishments, government offices, schools and a hospital. The town of Karibib has one health centre; one private health facility and one HIV counselling and testing centre. The town further has an ambulance service of the Ministry of Health and Social Services and there are two private medical practitioners in town.

6 PUBLIC CONSULTATION PROCESS

Public consultation is an important component of an Environmental Assessment (EA) process. It provides potential Interested and Affected Parties (I&APs) with an opportunity to comment on and raise any issues relevant to the project for consideration as part of the assessment process, thus assisting the Environmental Assessment Practitioner (EAP) in identifying all potential impacts and what extent further investigations are necessary. Public consultation can also aid in the process of identifying possible mitigation measures. Public consultation for this scoping study has been done following the EMA and its EIA Regulations.

6.1 Pre-identified and Registered Interested and Affected Parties (I&APs)

Relevant and applicable national, regional, and local authorities and other interested members of the public were identified. Pre-identified I&APs were contacted directly, while other parties who contacted the Consultant after project advertisement notices in the newspapers, were registered as I&APs upon their request. Newspaper advertisements of the proposed exploration activities were placed in two widely read national newspapers in the region (New Era Newspaper and The Namibian Newspaper). The project advertisement/announcement ran for two consecutive weeks inviting members of the public to register as I&APs and submit their comments. The summary of pre-identified and registered I&APs is listed in **Table 4** below and the complete list of I&APs is provided in **Appendix D**.

Table 3: Summary of Interested and Affected Parties (I&APs)

National (Ministries and State-Owned Enterprises)
Ministry of Environment, Forestry and Tourism
Ministry of Mines and Energy
Ministry of Health and Social Services
Regional, Local, and Traditional Authorities

Erongo Regional Council
KaribibTown Council
General Public
Landowners /Interested members of the public

6.2 Communication with I&APs

Regulation 21 of the EIA Regulations details the steps to be taken during a public consultation process and these have been used in guiding this process. Communication with I&APs concerning the proposed development was facilitated through the following means and in this order:

- A Background Information Document (BID) containing brief information about the proposed exploration works was compiled and emailed to registered and Identified Interested and Affected Parties (I&APs);
- Project Environmental Assessment notices were published in the New Era Newspaperand The Namibian Newspaper on the 18 and 25 October 2024 briefly explaining the activity and its locality and inviting members of the public to register as I&APs and submit their comments/concerns.
- A public notice was placed at Karibib Town Council Notice Board (**Figure 12**) to inform members of the public about the EIA process. Communication was made with the Erongo Regional Council, Karibib Town council, the proposed project and upcoming public consultation meetings.
- A door to door public consultation was scheduled and held on **21 November 2024**, for stakeholders consultation as from 13H00.

Figure 11: Public notices placed at Karibib Town Council notice board

Figure 12: Public Consultation meeting (a) Karibib Town Council and at (b) UWM Mineral Processing plant

No issues was raised by I&APs have been recorded during the consultation phase .

7 IMPACT IDENTIFICATION, ASSESSMENT AND MITIGATION MEASURES

7.1 Impact Identification

Proposed developments/activities are usually associated with different potential positive and/or negative impacts. For an environmental assessment, the focus is placed mainly on the negative impacts. This is done to ensure that these impacts are addressed by providing adequate mitigation measures such that an impact's significance is brought under control while maximizing the positive impacts of the development. The potential positive and negative impacts that have been identified from the prospecting activities are listed as follows:

Positive impacts:

- Creation of jobs for the locals (primary, secondary, and tertiary employment).
- Producing a trained workforce and small businesses that can service communities and may initiate related businesses.
- Boosting local economic growth and regional economic development.
- Open up other investment opportunities and infrastructure-related development benefits.

Negative impacts:

- Disturbance to grazing areas
- Land degradation and Biodiversity Loss
- Generation of dust
- Water Resources Use
- Soil & Water Resources Pollution
- Waste Generation
- Occupational Health & Safety risks
- Vehicular Traffic Use & Safety
- Noise & Vibrations
- Disturbance to Archaeological & Heritage Resources
- Impacts on Local Roads
- Social Nuisance: local property intrusion & disturbance

- Social Nuisance: Job seeking & differing Norms, Culture & values
- Impacts associated with closure and decommissioning of exploration works

7.2 Impact Assessment Methodology

The Environmental Assessment process primarily ensures that potential impacts that may occur from project activity are identified and addressed with environmentally cautious approaches and legal compliance. The impact assessment method used for this project is following Namibia's Environmental Management Act (No. 7 of 2007) and its Regulations of 2012, as well as the International Finance Corporation (IFC) Performance Standards.

The identified impacts were assessed in terms of scale/extent (spatial scale), duration (temporal scale), magnitude (severity), and probability (likelihood of occurring), as presented in **Table 5**, **Table 6**, **Table 7,** and **Table 8**, respectively.

To enable a scientific approach to the determination of the environmental significance, a numerical value is linked to each rating scale. This methodology ensures uniformity and that potential impacts can be addressed in a standard manner so that a wide range of impacts are comparable. It is assumed that an assessment of the significance of a potential impact is a good indicator of the risk associated with such an impact. The following process will be applied to each potential impact:

- Provision of a brief explanation of the impact.
- Assessment of the pre-mitigation significance of the impact; and
- Description of recommended mitigation measures.

The recommended mitigation measures prescribed for each of the potential impacts contribute towards the attainment of environmentally sustainable operational conditions of the project for various features of the biophysical and social environment. The following criteria were applied in this impact assessment:

7.2.1 Extent (spatial scale)

The extent is an indication of the physical and spatial scale of the impact. **Table 5** shows the rating of impact in terms of the extent of spatial scale.

Table 4: Extent or spatial impact rating

Low (1)	Low/Medium (2)	Medium (3)	Medium/High (4)	High (5)
The impact is localized within the site boundary: Site only	The impact is beyond the site boundary: Local	Impacts felt within adjacent biophysical and social environments: Regional	Impact widespread far beyond site boundary: Regional	The impact extends National or international boundaries

7.2.2 Duration

Duration refers to the timeframe over which the impact is expected to occur, measured concerning the lifetime of the project. **Table 6** shows the rating of impact in terms of duration.

Table 5:Duration impact rating

Low (1)	Low/Medium (2)	Medium (3)	Medium/High (4)	High (5)
Immediate mitigating measures, immediate progress	The impact is quickly reversible, and short-term impacts (0-5 years)	Reversible over time; medium-term (5-15 years)	Impact is long-term	Long-term; beyond closure; permanent; irreplaceable or irretrievable commitment of resources

7.2.3 Intensity, Magnitude/severity

Intensity refers to the degree or magnitude to which the impact alters the functioning of an element of the environment. The magnitude of alteration can either be positive or negative. These ratings were also taken into consideration during the assessment of severity. **Table 7** shows the rating of impact in terms of intensity, magnitude, or severity.

Table 6:Intensity, magnitude, or severity impact rating

Type of criteria	Negative				
	H- (10)	M/H- (8)	M- (6)	M/L- (4)	L- (2)
Qualitative	Very high deterioration, high quantity of deaths,	Substantial deterioration, death, illness or injury, loss of	Moderate deterioration, discomfort, partial loss of habitat/biodiversit	Low deterioration, slight noticeable alteration in	Minor deterioration, nuisance or irritation, minor change in species/habitat/diversity or resource, no or

Type of criteria	Negative				
	H- (10)	M/H- (8)	M- (6)	M/L- (4)	L- (2)
	injury or illness / total loss of habitat, total alteration of ecological processes, extinction of rare species	habitat/diversity or resource, severe alteration or disturbance of important processes	y or resource, moderate alteration	habitat and biodiversity. Little loss in species numbers	very little quality deterioration.

7.2.4 Probability of occurrence

Probability describes the likelihood of the impacts occurring. This determination is based on previous experience with similar projects and/or based on professional judgment. **Table 8** shows impact rating in terms of probability of occurrence.

Table 7:Probability of occurrence impact rating

Low (1)	Medium/Low (2)	Medium (3)	Medium/High (4)	High (5)
Improbable; low likelihood; seldom. No known risk or vulnerability to natural or induced hazards.	Likely to occur from time to time. Low risk or vulnerability to natural or induced hazards	A possible, distinct possibility, frequent. Low to medium risk or vulnerability to natural or induced hazards.	Probable if mitigating measures are not implemented. Medium risk of vulnerability to natural or induced hazards.	Definite (regardless of preventative measures), highly likely, and continuous. High risk or vulnerability to natural or induced hazards.

7.2.5 Significance

Impact significance is determined through a synthesis of the above impact characteristics. The significance of the impact “without mitigation” is the main determinant of the nature and degree of mitigation required. As stated in the introduction to this section, for this assessment, the significance of the impact without prescribed mitigation actions is measured.

Once the above factors (**Table 5**, **Table 6**, **Table 7,** and **Table 8**) have been ranked for each potential impact, the impact significance of each is assessed using the following formula:

SIGNIFICANCE POINTS (SP) = (MAGNITUDE + DURATION + SCALE) X PROBABILITY

The maximum value per potential impact is 100 significance points (SP). Potential impacts were rated as high, moderate, or low significance, based on the following significance rating scale (**Table 9**).

Table 8:Significance rating scale

Significance	***Environmental Significance Points***	***Colour Code***
High (positive)	>60	H
Medium (positive)	30 to 60	M
Low (positive)	1 to 30	L
Neutral	0	N
Low (negative)	-1 to -30	L
Medium (negative)	-30 to -60	M
High (negative)	-60<	H

Positive (+) – Beneficial impact

Negative (-) – Deleterious/ adverse+ Impact

Neutral – Impacts are neither beneficial nor adverse

For an impact with a significance rating of high (-ve), mitigation measures are recommended to reduce the impact to a medium (-ve) or low (-ve) significance rating, provided that the impact with a medium significance rating can be sufficiently controlled with the recommended mitigation measures. To maintain a low or medium significance rating, monitoring is recommended for a period to enable the confirmation of the significance of the impact as low or medium and under control.

The assessment of the exploration phases is done for pre-mitigation and post-mitigation.

The risk/impact assessment is driven by three factors:

Source: The cause or source of the contamination.

Pathway: The route taken by the source to reach a given receptor

Receptor: A person, animal, plant, ecosystem, property, or a controlled water source. If contamination is to cause harm or impact, it must reach a receptor.

A pollutant linkage occurs when a source, pathway, and receptor exist together. Mitigation measures aim firstly, to avoid risk and if the risk cannot be avoided, mitigation measures to minimize the impact are recommended. Once mitigation measures have been applied, the identified risk would be reduced to lower significance (Booth, 2011).

This assessment focuses on the three project phases namely, prospecting, small scale mining activity and decommissioning. The potential negative impacts stemming from the proposed activities of the MCs are described and assessed and mitigation measures are provided thereof. Further mitigation measures in the form of management action plans are provided in the Draft Environmental Management Plan.

7.3 Assessment of Potential Negative Impacts

The main potential negative impacts associated with the operation and maintenance phase are identified and assessed below:

7.3.1 Disturbance to grazing areas

The MCs are overlying within the Karibib Townland farm . Small-scale mining activities such as site clearing, trenching, and drilling can potentially lead to the disturbance of grazing land. This will potentially affect the grazing land available to wildlife, and since the wildlife greatly depends on the little available flora, their livelihood will be impacted.

The effect of small-scale mining work on the land (when done over a wider spatial extent), if not mitigated, may hinder grazing areas. Under the status quo, the impact can be considered to be of a medium significance rating. With the implementation of appropriate mitigation measures, the rating will be reduced to a lower significance. The impact is assessed in **Table 10** below.

Table 9:Assessment of the impacts of small-scale mining on grazing areas

Mitigation Status	Extent	Duration	Intensity	Probability	Significance
Pre mitigation	M: -4	M: -3	M: -4	M/H: 5	M: -55

Post mitigation	L/M: -2	L/M: -2	L/M: -4	L/M: 3	L: -24

7.3.2 Land Degradation and Loss of Biodiversity

Fauna: The trenching, pitting, and drilling activities carried out during mining would result in land degradation, leading to habitat loss for a diversity of flora and fauna ranging from microorganisms to large animals and trees. Endemic species are most at risk since even the slightest disruption in their habitat can result in extinction.

The presence and movement of the mining workforce and operation of project equipment and heavy vehicles would disturb wildlife present. The proposed activities may also carry the risk of the potential illegal hunting of local wildlife. This could lead to the reduction of specific faunal species, which may limit tourism (sightseeing and safari) activity in the area.

Additionally, if the mining sites are not rehabilitated, they could pose a high risk of injuries to animals by falling into holes and pits.

Flora: The direct impact of small-scale mining works on flora will mainly occur through clearing for mining access routes and associated infrastructure. The dust emissions from drilling may also affect surrounding vegetation through the fall of dust, if excessive. Some loss of vegetation is an inevitable consequence of the development. However, given a moderate abundance of vegetation and site-specific areas of mining on the MCs, the impact will be localized and, therefore manageable.

Under the status, the impact can be of a medium significance rating. With the implementation of appropriate mitigation measures, the rating will be reduced to a low significance rating. The impact is assessed in **Table 11** below.

Table 10:Assessment of the impacts of small-scale mining on biodiversity

Mitigation Status	Extent	Duration	Intensity	Probability	Significance
Pre mitigation	M: -4	M: -4	M: -6	M/H: 4	M: -56
Post mitigation	L/M: -3	L/M: -3	L/M: -4	L/M: 3	L: -30

7.3.3 Generation of Dust (Air Quality)

Dust emanating from site access routes when transporting equipment and supplies to and from the site may compromise the air quality in the area. Vehicular movements from heavy vehicles such as trucks would potentially create dust, even if it is not anticipated to be low. Additionally, activities carried out as part of the small-scale mining works such as drilling would contribute to the dust levels in the air. The medium significance of this impact can be reduced to a low significance rating by properly implementing mitigation measures. The impact is assessed in **Table 12** below.

Table 11: Assessment of the impacts of small-scale mining on air quality

Mitigation Status	Extent	Duration	Intensity	Probability	Significance
Pre mitigation	M: -3	M: -3	M/L: -4	M/H: 4	M: -40
Post mitigation	L - 2	L - 2	L- 2	L - 1	L - 6

7.3.4 Water Resources Use

Water resources are impacted by project developments/activities in two ways - through pollution (water quality) or over-abstraction (water quantity) or at times both.

The abstraction of more water than can be replenished from low groundwater potential areas would negatively affect the local communities that depend on the same low potential groundwater resource (aquifer).

Given the low to medium groundwater potential of the project site areas, the Proponent may consider carting some of the water volumes from outside the area and stored in industry-standard water reservoirs/tanks on site. The exact amounts of water required for proposed operations would be dependent on the duration of the mining works and the number of mining boreholes required to make a reliable interpretation of the commodities to be mined. The mining period can be temporally limited, therefore, the impact will only last for the duration of the mining activities and cease upon their completion.

Without the implementation of any mitigation measures, the impact can be rated as medium, but upon effective implementation of the recommended measures, the impact significance would be reduced to low as presented in **Table 13** below.

Table 12: Assessment of the project impact on water resource use and availability

Mitigation Status	Extent	Duration	Intensity	Probability	Significance
Pre mitigation	M - 3	M/H - 3	L/M - 4	M/H - 4	M - 40
Post mitigation	L/M - 1	L/M - 1	L - 2	L/M - 3	L - 12

7.3.5 Soil and Water Resources Pollution

The proposed small-scale mining activities are associated with a variety of potential pollution sources (i.e., lubricants, fuel, and wastewater) that may contaminate/pollute soils, and eventually, surface and groundwater. The anticipated potential source of pollution to water resources from the project activities would be hydrocarbons (oil) from project vehicles, machinery, and equipment as well as potential wastewater/effluent from mining-related activities.

The spills (depending on volumes spilled on the soils) from machinery, vehicles, and equipment could infiltrate into the ground and pollute the fractured or faulted aquifers on site, and with time reach further groundwater systems in the area. However, it should be noted that the scale and extent/footprint of the activities where potential sources of pollution will be handled are relatively small. Therefore, the impact will be moderately low.

Pre-implementation of any mitigation measures, the impact significance is medium to high and upon implementation, the significance will be reduced to moderate. The impact is assessed in **Table 14** below.

Table 13: Assessment of the project impact on soils and water resources (pollution)

Mitigation Status	Extent	Duration	Intensity	Probability	Significance
Pre mitigation	M - 5	M/L - 3	M/L - 3	M - 4	M - 44
Post mitigation	L - 3	M - 3	L - 3	L/M - 3	L - 27

7.3.6 Waste Generation

During the small-scale mining program, domestic and general waste is produced on-site. If the generated waste is not disposed of responsibly, land pollution may occur on the MCs or around the sites. The MCs are in an area of moderate sensitivity to pollution. Improper handling, storage, and disposal of hydrocarbon products and hazardous materials at the site may lead to soil and groundwater contamination, in case of spills and leakages. Therefore, the mining program needs

to have appropriate waste management for the site. To prevent these issues, any hazardous waste that may have an impact on animals, vegetation, water resources, and the general environment should be handled cautiously. Without any mitigation measures, the general impact of waste generation has a medium significance. The impact will be reduced to low significance, upon implementing the mitigation measures. The assessment of this impact is given in **Table 15** below.

Table 14: Assessment of waste generation impact

Mitigation Status	Extent	Duration	Intensity	Probability	Significance
Pre mitigation	L/M - 2	L/M - 2	M – 6	M - 5	M – 50
Post mitigation	L - 1	L - 1	L – 2	L/M - 2	L - 8

7.3.7 Occupational Health and Safety Risks

Project personnel (workers) involved in small-scale mining activities may be exposed to health and safety risks. These may result from accidental injury, owing to either minor (i.e., superficial physical injury) or major (i.e., involving heavy machinery or vehicles) accidents. The site safety of all personnel is the Proponent's responsibility and should be adhered to as per the requirements of the Labour Act (No. 11 of 2007) and the Public Health Act (No. 36 of 1919). The heavy vehicle, equipment, and fuel storage area should be properly secured to prevent any harm or injury to the project workers or local animals.

The use of heavy equipment, especially during drilling, and the presence of hydrocarbons on sites may result in accidental fire outbreaks, which could pose a safety risk to the project personnel, equipment, and vehicles. It may also lead to widespread veld fires if an outbreak is not contained and if machinery and equipment are not properly stored, the safety risk may be a concern for project workers and residents.

The impact is probable and has a medium significance rating. However, with adequate mitigation measures, the impact rating will be reduced to low. This impact is assessed in **Table 16** below and mitigation measures are provided.

Table 15: Assessment of the impacts of exploration on health and safety

Mitigation Status	Extent	Duration	Intensity	Probability	Significance
Pre mitigation	M - 3	M/L - 2	M – 6	M/H - 4	M – 44
Post mitigation	L/M - 2	L/M - 2	L – 2	L/M - 2	L - 12

7.3.8 Vehicular Traffic Use and Safety

The MCs are accessible via the track roads which diverts from B2 road. These are some of the main transportation routes for all vehicular movement in the area, and provide access to the MCs, and connect the project area to other towns. Traffic volume will therefore increase on these district roads during mining as the project would need delivery of supplies and services on site.

Depending on the project needs, trucks, medium-sized vehicles, and small vehicles will frequent the area to and from mining sites on the MCs. This would potentially increase slow-moving heavy vehicular traffic along these roads and add additional pressure on the roads. However, transportation of materials and equipment is expected to occur on a limited schedule and only for the duration of the project. Therefore, the risk is anticipated to be short-term, not frequent, and therefore of medium significance. Before mitigation, the impact can be rated medium and with the implementation of mitigation measures, the significance will be low as assessed in **Table 17** below.

Table 16: Assessment of the impacts of exploration on-road use (vehicular traffic)

Mitigation Status	Extent	Duration	Intensity	Probability	Significance
Pre mitigation	M - 4	M/H - 3	L/M – 4	M/H - 5	M - 55
Post mitigation	L/M - 2	L/M - 2	L – 2	L/M - 2	L - 12

7.3.9 Noise and vibrations

Small-scale mining work (especially drilling) may be a nuisance to surrounding communities due to the noise produced by the activity. Excess noise and vibrations can be a health risk to workers on site. The small-scale mining equipment used for drilling on site is of medium size and the noise level is bound to be limited to the site only, therefore, the impact likelihood is minimal. Without any mitigation, the impact is rated as of medium significance. To change the impact significance

from the pre-mitigation significance to a low rating, mitigation measures should be implemented. This impact is assessed in **Table 18** below.

Table 17: Assessment of the impacts of noise and vibrations from exploration

Mitigation Status	Extent	Duration	Intensity	Probability	Significance
Pre mitigation	L/M - 2	L/M - 2	M - 6	M/H - 3	M – 30
Post mitigation	L - 1	L/M - 2	L - 2	L/M -2	L - 10

7.3.10 Disturbance to Archaeological and Heritage Resources

The Erongo Region contains archeological/cultural significant sites, and there is a possibility of unveiling/discovering new archeological and/or cultural materials in the proposed project area. If such Materials are found, the areas must be mapped out and coordinates taken to establish “No-Go-Areas”, due to their sensitivity and then documented. They may be protected either by fencing them off or demarcation for preservation purposes, or excluding them from any development i.e., no small-scale mining activities should be conducted near these recorded areas through the establishment of buffer zones.

This impact can be rated as medium significance if there are no mitigation measures in place. Upon implementation of the necessary measures, the impact significance will be reduced to a lower rating. The impact is assessed in **Table 20**.

Table 18: Assessment of the impacts of small-scale mining on archaeological & heritage resources

Mitigation Status	Extent	Duration	Intensity	Probability	Significance
Pre mitigation	M - 3	M/H - 3	M - 4	M/H - 4	M – 40
Post mitigation	L/M - 2	L/M - 2	L - 2	L/M - 2	L - 12

7.3.11 Impact on Local Roads/Routes

Mining projects are usually associated with the movements of heavy trucks and equipment or machinery that use local roads. Heavy vehicles traveling on local roads exert pressure on the roads and may make the roads difficult to use. This will be a concern if maintenance and care are not taken during all the phases.

Without any management and or mitigation measures, the impact can be rated as medium and to reduce this rating to low, the measures will need to be effectively implemented. The assessment of this impact is presented in **Table 21**.

Table 19: Assessment of exploration of local services (roads and water)

Mitigation Status	Extent	Duration	Intensity	Probability	Significance
Pre mitigation	M/H - 4	M - 3	M - 6	M - 3	M – 39
Post mitigation	L - 1	L - 1	M/L - 4	M/L -2	L - 12

7.3.12 Social Nuisance: Local Property Intrusion and Disturbance/Damage

The presence of some non-resident workers may lead to social annoyance to the local community. This could particularly be a concern if they enter or damage local private property. The private properties of the locals may include houses, fences, vegetation, wildlife, or any properties of economic or cultural value to land users. The damage or disturbance to properties may not only be private but also local public properties. The unpermitted and unauthorized entry to private property may cause crashes between the affected property (land) owners and the Proponent.

The impact is rated as of medium significance. However, upon mitigation (post-mitigation), the significance will change from a medium to a low rating. The impact is assessed below **(Table 22)**.

Table 20: Assessment of the social impact of community property damage or disturbance

Mitigation Status	Extent	Duration	Intensity	Probability	Significance
Pre mitigation	M - 2	M - 3	M - 4	M/H - 3	M – 27
Post mitigation	L - 1	L - 1	M/L - 4	M/L -2	L - 12

8 RECOMMENDATIONS AND CONCLUSION

8.1 Recommendations

The potential positive and negative impacts of the proposed small-scale mining activities on MCs 75626 and 75628 were identified and assessed and appropriate management and mitigation

measures (to negative impacts) were made thereof for implementation by the Proponent, their contractors, and project-related employees.

Mitigation measures for identified issues have been provided in the Environmental Management Plan, for the Proponent to avoid and/or minimize their significant impacts on the environmental and social components. Most of the potential impacts were found to be of medium-rating significance. With effective implementation of the recommended management and mitigation measures, a reduced rating in the significance of adverse impacts is expected from Medium to Low. To maintain the desirable rating, the implementation of management and mitigation measures should be monitored by the Proponent directly, or their Environmental Control Officer (ECO). The monitoring of implementation will not only be done to maintain a low rating but also to ensure that all potential impacts identified in this study and other impacts that might arise during implementation are properly identified in time and addressed right away.

The Environmental Consultant is confident that the potential negative impacts associated with the proposed project activities can be managed and mitigated by the effective implementation of the recommended management and mitigation measures, and with more effort and commitment put into monitoring the implementation of these measures.

It is, therefore, recommended that in the case of granting an ECC for this project, the proposed small-scale mining activities may be granted an ECC, provided that:

- All the management and mitigation measures provided in the EMP are effectively and progressively implemented.
- All required permits, licenses, and approvals for the proposed activities should be obtained as required. These include permits and licenses for land use access agreements to explore and ensure compliance with these specific legal requirements.
- The Proponent and all project workers and contractors must comply with the legal requirements governing the project and ensure that all required permits and or approvals are obtained and renewed as stipulated by the issuing authorities.
- Site areas where small-scale mining activities have ceased are rehabilitated, as far as practicable, to their pre-mining state.

8.2 Conclusion

It is crucial for the proponents and their contractors to effectively implement the recommended management and mitigation measures, to protect the biophysical and social environment throughout the project duration. This would be done to promote environmental sustainability while

ensuring a smooth and harmonious existence and purpose of the project activities in the community and environment at large. It is also to ensure that all potential impacts identified in this study and other impacts that might arise during implementation are properly identified in time and addressed accordingly. Lastly, should the ECC be issued, the Proponent will be expected to be compliant with the ECC conditions as well as legal requirements governing small-scale mining and related activities.

9 REFERENCES

Booth, P. (2011). Environmental Conceptual Site Model Exercise: Source – pathway – receptor. WSP Global: Semantic Scholar.

FAO. (2006). *World Reference Base for Soil Resources 2006: A Framework for International Classification, Correlation and Communication*. Food and Agriculture Organization of the United Nations.

Mannheimer,C.A. & Curtis, B.A. (2018). Le Roux and Müller's Field Guide to the Trees and Shrubs of Namibia. 2nd Edition.Windhoek: Namibia Publishing House.

Mendelsohn,. (2003). *The Atlas of Namibia. A Portrait of the land and its people.*

Mendelsohn, J., Jarvis, A., Roberts, C., & Robertson, T. (2002). *Atlas of Namibia: A Portrait of the Land and its People*. David Philip Publishers.

Mendelsohn, J., Jarvis, A., Roberts, C., & Roberston, T. 2009. Atlas of Namibia: A Portrait of the Land and its People (3rd Edition). Cape Town: Sunbird Publishers (Pty) Ltd.

Miller, R. McG. (2008). *The Geology of Namibia*. Ministry of Mines and Energy, Geological Survey of Namibia.

Schneider, G.I.C., & Seeger, K.G. (1992). Copper. In The mineral resources of Namibia. Windhoek: Geological Survey of Namibia.

Weather and Climate, Okangwati https://weatherandclimate.com/namibia/kunene/okangwati#t1 Accessed 2023-12-19.

Various, Authors. 2011. The Geology of Namibia, 1–2. MME. Accessed 2023-12-26.