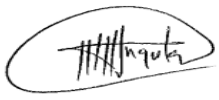
Excel Dynamic Solutions (Pty) Ltd

ENVIRONMENTAL SCOPING ASSESSMENT (ESA) FOR THE PROPOSED SMALL-SCALE MINING ACTIVITIES ON MINING CLAIM (MC) No. 75712 LOCATED NORTH OF OKANDOMBO, IN THE KUNENE REGION, NAMIBIA.

ENVIRONMENTAL ASSESSMENT REPORT: Final

ECC Application Reference: APP- 007034

Author(s): **Mr. Wilbard Angula** Reviewer**: Mr. Nerson Tjerlos** Company: **Excel Dynamic Solutions (Pty) Ltd** Telephone: **+264 (0) 61 259 530** Email: public@edsnamibia.com	Proponent: **Mr. Uatembua Tjiramba** Contact person: **Mr. Karipetua Uarije** Telephone: **+264 (0)81 409 8441** Postal Address: **P.O. Box 90, Opuwo, Namibia** Email: ukuarije@gmail.com



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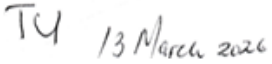

Proponent Signature and Date

April 2026

EXECUTIVE SUMMARY

Uatembua Tjiramba (The Proponent) has applied to the Ministry of Industries, Mines and Energy (MIME), to be granted the Mining Claim (MC) No. 75712 on 14 October 2024. Excel Dynamic Solutions (Pty) Ltd ("the Consultant") was appointed to act on behalf of the proponent to conduct an Environmental Scoping Assessment and submit the application to the Ministry of Environment, Forestry and Tourism (MEFT) for consideration and the potential issuance of an Environmental Clearance Certificate (ECC). The MC measuring an area of 10.0586 hectares (ha) is located north of Okandombo settlement in the Kunene region as shown in **(Figure 1)**. The MC overlies the Epupa conservancy. The Proponent applied to conduct small-scale mining activities of **Base & Rare metals, Industrial Minerals, Precious Metal, Precious Stone and Semi-Precious Stone** as commodities of interest.

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.

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 small scale-mining 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 small-scale mining activities was compiled and emailed upon request to all registered Interested and Affected Parties (I&APs).
- Project Environmental Assessment notices were readvertised in the New Era Newspaper **(19 December 2025 and 06 January 2026),** and The Namibian Newspaper **(19 December 2025 and 06 January 2026),** briefly explaining the activity and its locality, inviting members of the public to register as I&APs and submit their comments/concerns.
- Public meeting was scheduled and held at Omuzorororua between Onyungurura village & Camp Cornie. The meeting took place on the 16 February 2026 at scheduled venue at 11h00. The issues and concerns raised were noted and used to form the basis for the ESA Report and EMP.

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 with directly affected landowners whereby they raised concerns and comments on the proposed project activities (copies of scoping meetings' minutes attached).

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 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 small-scale mining 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 APPENDICES (To be submitted to MEFT and MIME)

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
MC	Mining Claims
GG	Government Gazette
GN	Government Notice
I&APs	Interested and Affected Parties
MEFT	Ministry of Environment, Forestry, and Tourism
MIME	Ministry of Industries, 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

Uatembua Tjiramba (The Proponent) has applied to the Ministry of Industries, Mines and Energy (MIME), to be granted the Mining Claim (MC) No. 75712 on 14 October 2024. Excel Dynamic Solutions (Pty) Ltd ("the Consultant") was appointed to act on behalf of the proponent to conduct an Environmental Scoping Assessment and submit the application to the Ministry of Environment, Forestry and Tourism (MEFT) for consideration and the potential issuance of an Environmental Clearance Certificate (ECC). The MC measuring an area of 10.0586 hectares (ha) is located north of Okandombo settlement in the Kunene region as shown in **(Figure 1)**. The MC overlies the Epupa conservancy. The proponent applied to conduct small-scale mining activities of **Base & Rare Metals, Industrial Minerals, Precious Metal, Precious Stone and Semi-Precious Stone** as commodities of interest.

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.

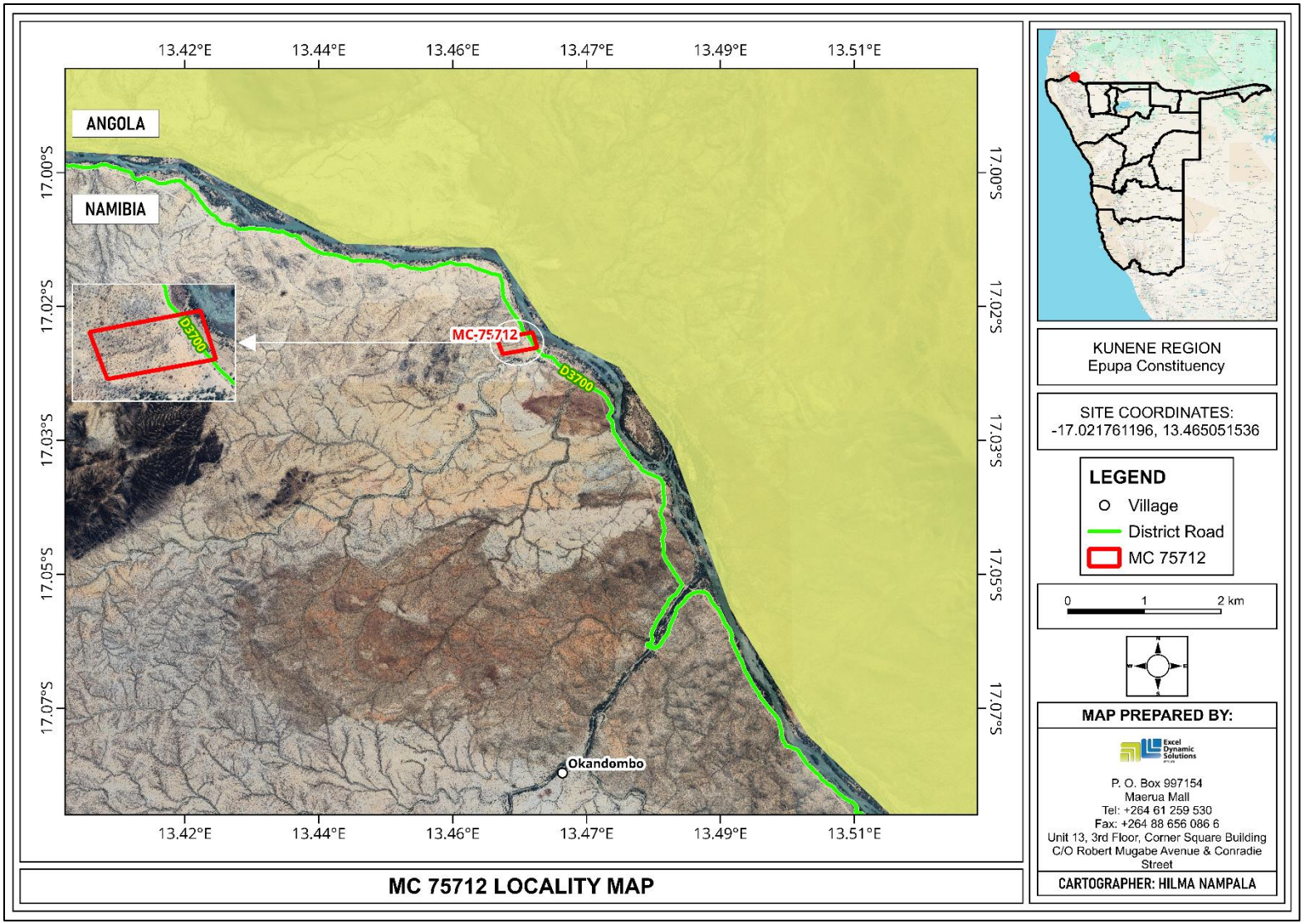

Figure 1: Locality map for MC No. 75712.

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 MC. 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 are done by Mr. Wilbard Angula and Reviewed by Mr. Nerson Tjelos,. EAP's CV are 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. 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 MC No. 75712 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.

2.1.1 Accessibility to Site

The MC is accessible via the D3700 from Epupa, Kunene Region. All project related vehicles will be using these existing roads to access the MC. It is also anticipated that, if necessary, new tracks to the different targeted mining sites within the MC will be created. 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, Excavators, 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 MC area.

2.1.3 Services and Infrastructure

- **Water:** Operational water requirements will be met by either drawing water from existing nearby boreholes, or sourcing it from the town supply. 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 +- 2500 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 either in Epupa or nearby village, but if accommodation camp is to be set up near the MC, 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 MC 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 unfavourable 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 MC, 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 activities 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 MC 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 Industries, 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 MC (**Figure 2**) and other licenses is available on the Namibia Mining Cadastral Map here https://maps.landfolio.com/Namibia/

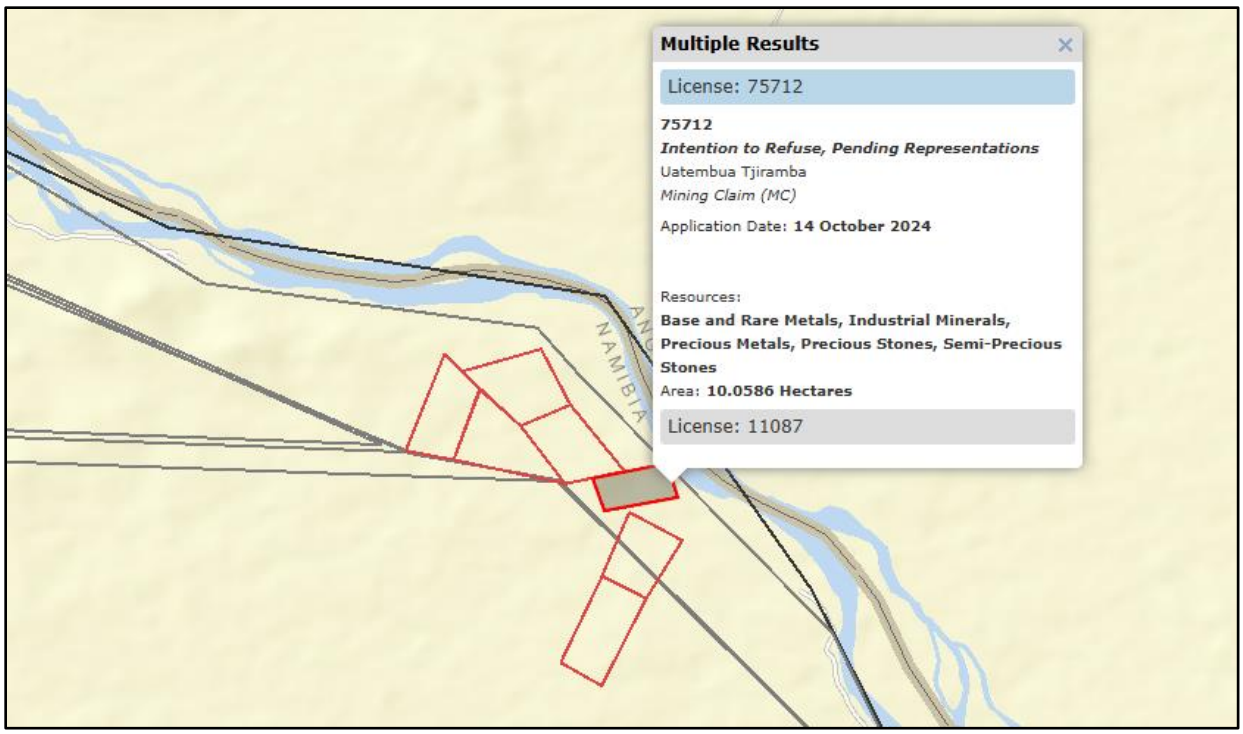

Figure 2: The location of MC no. 75712 on the National Mining Cadastre.

3.1.3 Small-scale mining Methods

Both invasive and non-invasive activities as indicated under the project description chapter are expected to take place. If an economically viable discovery is made, the project will proceed to the mining phase upon approval of a small-scale mining EIA and issuance of a mining claims license. If any other alternative viable mining methods are found to achieve the purpose more effectively and/or efficiently without aggravating any environmental measures put in place, it can be implemented.

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 MC No. 75712 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 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."	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.
Minerals (Prospecting and	Section 52 requires mineral license holders to enter into a written	The Proponent should enter into a written agreement with

Legislation / Policy / Guideline: Custodian	Relevant Provisions	Implications for this project
Mining) Act (No. 33 of 1992): **Ministry of Industries, Mines and Energy (MIME).**	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 Commissioner if the holder of a mineral license intends to abandon the mineral license area. Section 68 stipulates that an application for Mining Claims (MC) 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.	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 MC, measures by which they will rehabilitate the areas where 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.

Legislation / Policy / Guideline: Custodian	**Relevant Provisions**	**Implications for this project**
	Section 91 requires that rehabilitation measures should be included in an application for a mineral license.	
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 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 MC falls within the Epupa communal conservancy. Therefore, the Proponent will be required to enhance the conservation of biodiversity and the maintenance of the ecological integrity of protected areas and another State land in the Project Site area. The Proponent will also be required to comply with the existing and planned local operational management plans, regulations, and guidelines.
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	

Legislation / Policy / Guideline: Custodian	Relevant Provisions	Implications for this project
	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. 13 of 1990) Regulations (2001)**: Ministry of Industries, Mines and Energy (MIME)**	Regulation 3(2)(b) states that "No person shall possess [sic] or store any fuel except under the authority of a 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 Proponent should obtain the necessary authorization from the MIME 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	The relevant Regional Councils are IAPs and must be consulted during the Environmental Assessment (EA) process. The project site falls under the Kunene Regional Council; therefore, they should be consulted.

Legislation / Policy / Guideline: Custodian	**Relevant Provisions**	**Implications for this project**
	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.	
Traditional Authority Act (Act No. 25 of 2000): **Ministry of Urban and Rural Development (MURD)**	The Act also stipulates that Traditional Authorities (TAs) should ensure that natural resources are used on a sustainable basis that conserves the ecosystem. This Act implies that Tas must be fully involved in the planning of land use and development for their area. It is the responsibility of the TA's customary leadership, the Chiefs, to exercise control on behalf of the state and the residents in their designated area.	The MC falls under the Kapika Traditional Authority. Therefore, the Traditional authorities and community members should be consulted.
Water Act 54 of 1956**: Ministry of Fisheries, 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 Fisheries, 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 Fisheries, Agriculture, Water and Land Reform (MAFWLR)**	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: **Ministry of Urban and Rural Development (MURD)**	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.	Epupa constituency is the responsible local authority of the area therefore they should be consulted.
Public Health Act (No. 36 of 1919)**: Ministry of**	Section 119 states that “no person shall cause a nuisance or shall suffer to exist on any land or premises owned or	The Proponent and all its employees should ensure

Legislation / Policy / Guideline: Custodian	**Relevant Provisions**	**Implications for this project**
Health and Social Services (MHSS)	occupied by him or of which he is in 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	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	The proposed project and related activities should be undertaken in such a way that they do not pollute or

Legislation / Policy / Guideline: Custodian	**Relevant Provisions**	**Implications for this project**
(1976)**: Ministry of Health and Social Services (MHSS)**	Namibia, apart from East Caprivi, is proclaimed as a controlled area for section 4(1) (a) of the ordinance.	compromise the surrounding air 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**	Ministry of Labour, Industrial Relations and Employment Creation is aimed at ensuring harmonious labour relations	The Proponent should ensure that the small-scale mining activities do not compromise

Legislation / Policy / Guideline: Custodian	Relevant Provisions	Implications for this project
Labour, Industrial Relations and Employment Creation (MLIREC)	through promoting social justice, 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 2** 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

Statute	Provisions	Project Implications
	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

Statute	Provisions	Project Implications
	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	(Borrower) concerning 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.

Statute	Provisions	Project Implications
	Historically Undeserved Traditional Local Communities 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.

Statute	Provisions	Project Implications
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. Promote the protection of ecosystems, and natural habitats, and the maintenance of viable populations of species in natural surroundings.	Removal of vegetation cover and destruction of natural habitats should be avoided and where not possible minimized.
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 understanding of these conditions helps in identifying the sensitive environmental features that may need to be protected through the implementation of certain management 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 Consultant on the 16th of February 2026 and relevant published reports and books.

The climatic conditions of the project area are described using the available nearest data for the area obtained from the Meteoblue website (2025).

5.1 Biophysical Environment

5.1.1 Climate

The MC is located east of Epupa, having a climate consistent with Oryeheke a nearby village. Oryeheke has a regional steppe climate (Classification: *BWh*) with annual rainfall of approximately 280mm, rainfall season spans from October to April and peaking rainfall is received during February-March. The average daily maximum temperatures are measured during October and November reaching up to 35°C; the coldest temperatures are measured during June and July with average temperatures reaching below as 13°C. The winter season, characterised by little to no precipitation, extends from May to September. Wind direction is mostly southeastern and Northwestern.

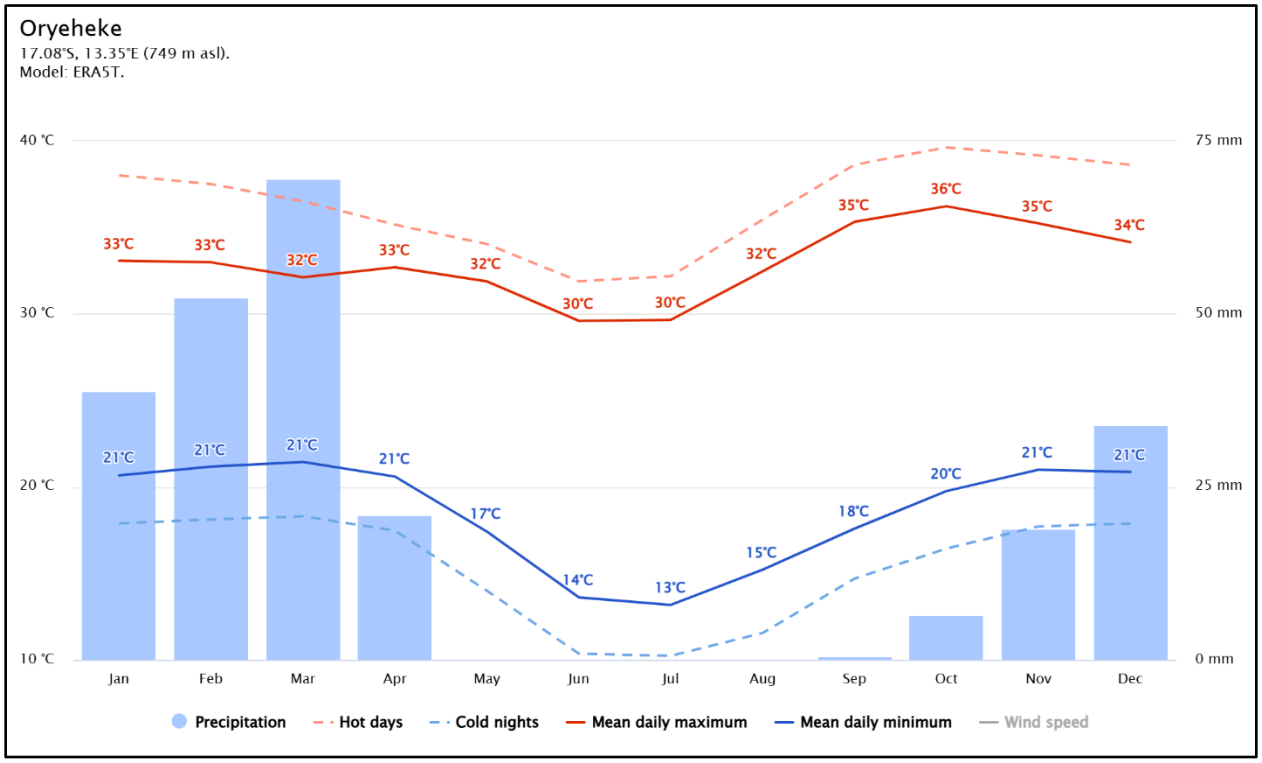

Figure 3: Climate condition around the project area (source: (Meteoblue, 2025)).

5.1.2 Landscape and Topography

The MC area is generally flat with gradual elevation variations. Elevations range between 646 to 674 masl. The MC is located on the Kunene Hills landscape, a landscape characterised by rocky outcrops, undulating hills, and scattered inselbergs that rise abruptly from the surrounding plains (Atlas of Namibia Team, 2022). **Figure 4** and **Figure 5** below shows the landscape and topography of the project area.

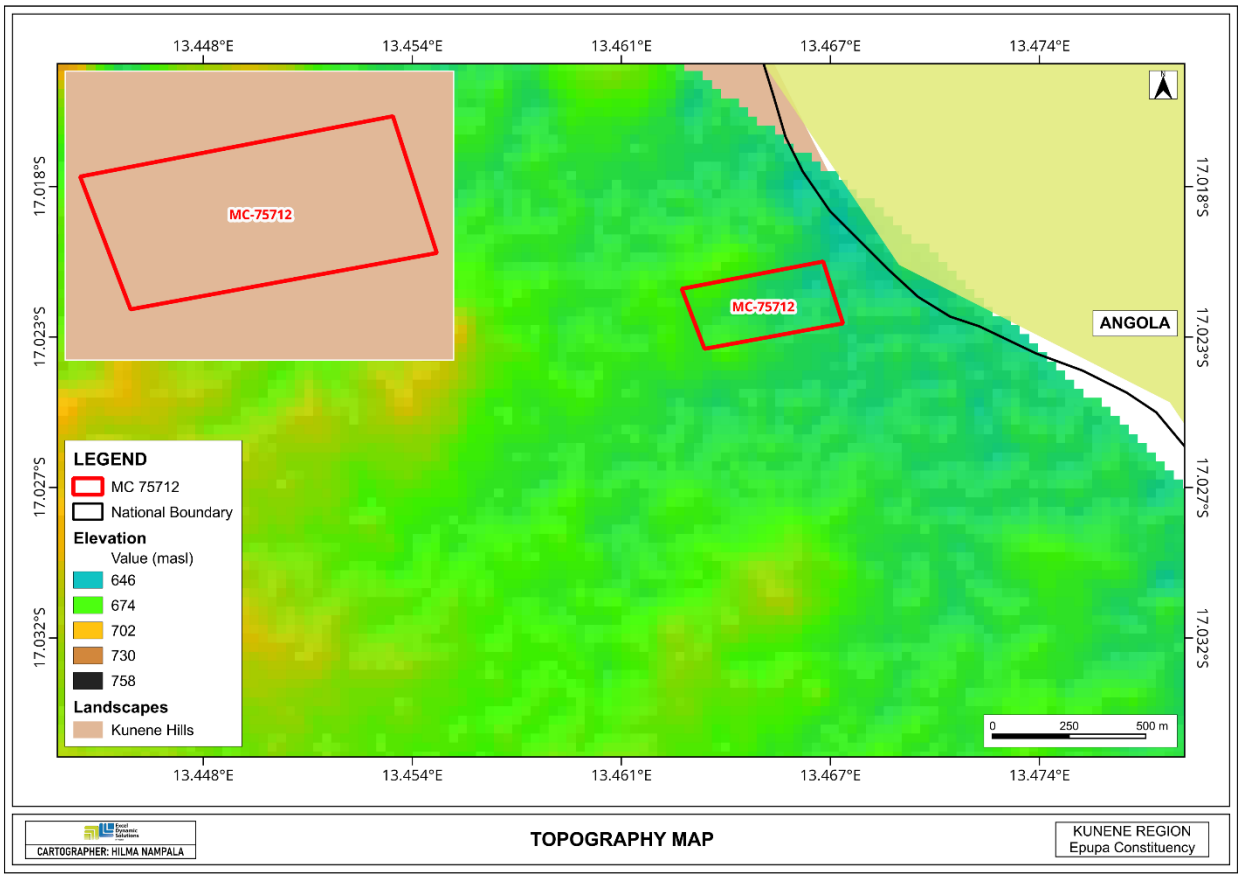

Figure 4: Landscape map.

Figure 5: General topography on the MC.

5.1.3 Geology

The geology of the MC area consist mainly of intrusive lithologies associated with the Kunene Anorthosite Complex, a prominent geological feature of northwestern Namibia. This complex forms part of the Proterozoic magmatic system that extends across the border between Namibia and Angola and is common in the mountainous terrain around the Kunene River.

The main lithology in the area is Kunene anorthosite. This rock type is typically coarse-grained and composed predominantly of plagioclase feldspar, with minor mafic minerals. These rocks are known to be resistant to weathering and usually create ridges and rugged landscapes in the region. Outside of the MC the area also contains occurrences of Kunene syenite. Syenite is an intrusive felsic to intermediate igneous rock composed mainly of alkali feldspar, with lesser amounts of mafic minerals. **Figure 6** below shows the geology and lithology map.

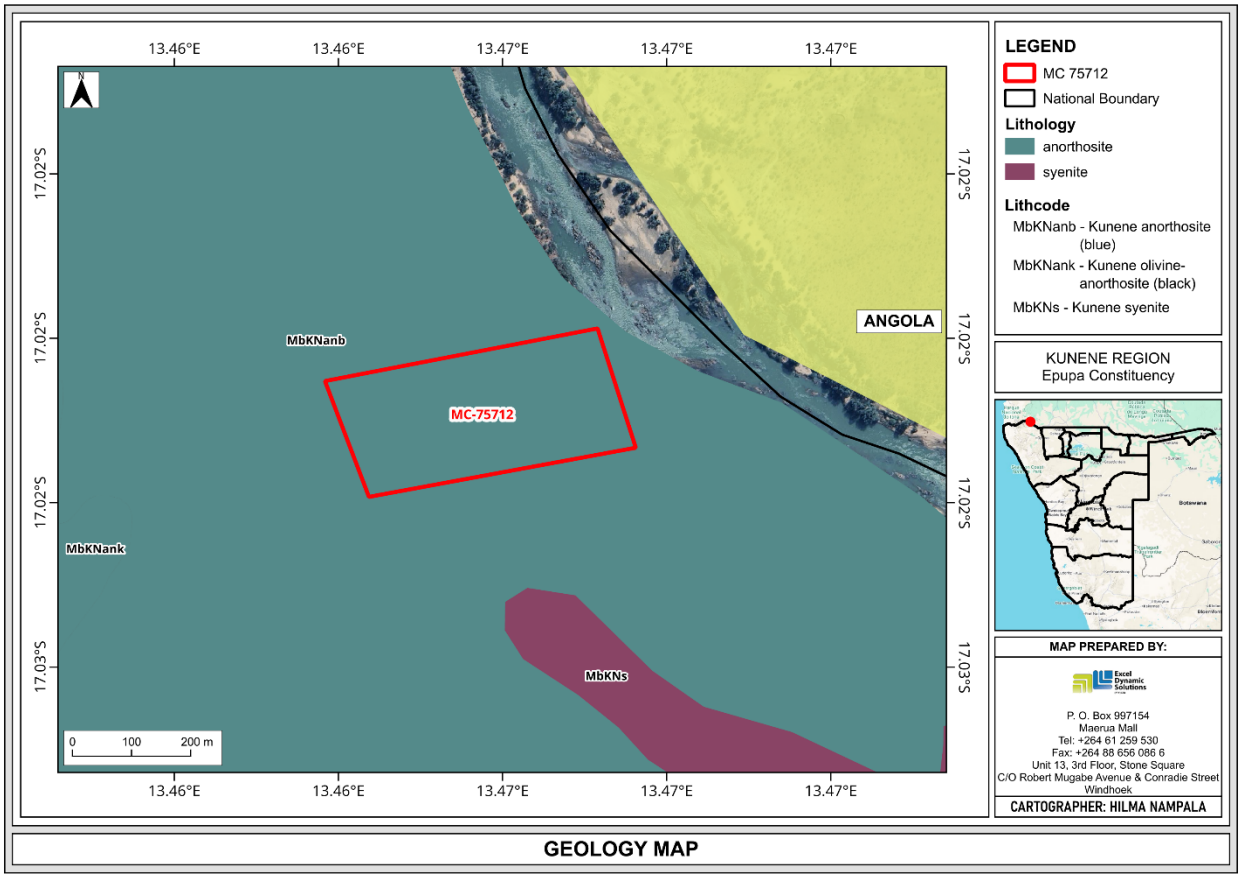

Figure 6: General geology map of the MC.

5.1.4 Soil

The soil profile on the MC consists mainly of Chromic Cambisols. Cambisols are poorly developed soils formed where the parent material is recently deposited or exposed, or where aridity or low temperatures slow down the processes of soil formation (Atlas of Namibia Team, 2022). The Cambisols form in a wide variety of medium to fine-textured parent materials, mostly in young colluvial, alluvial and aeolian deposits. Cambisols are usually found in level to mountainous terrain, in different climates, however mostly found in arid climates. The chromic soil qualifier refers to soils with bright reddish colours in the subsoil. Chromic soils have a layer of at least 30 cm thick, between 25 and 150 cm from the soil surface, that has, in more than 90 % of its exposed area, a moist Munsell colour hue redder than 7 and chroma of more than 4 (Coetzee, 2021). The rock outcrop refers to exposed bedrock formations of varying size and morphology. **Figure 7** below is a soil map of the type of MC and **Figure 8** shows the soil type observed on the MC.

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).

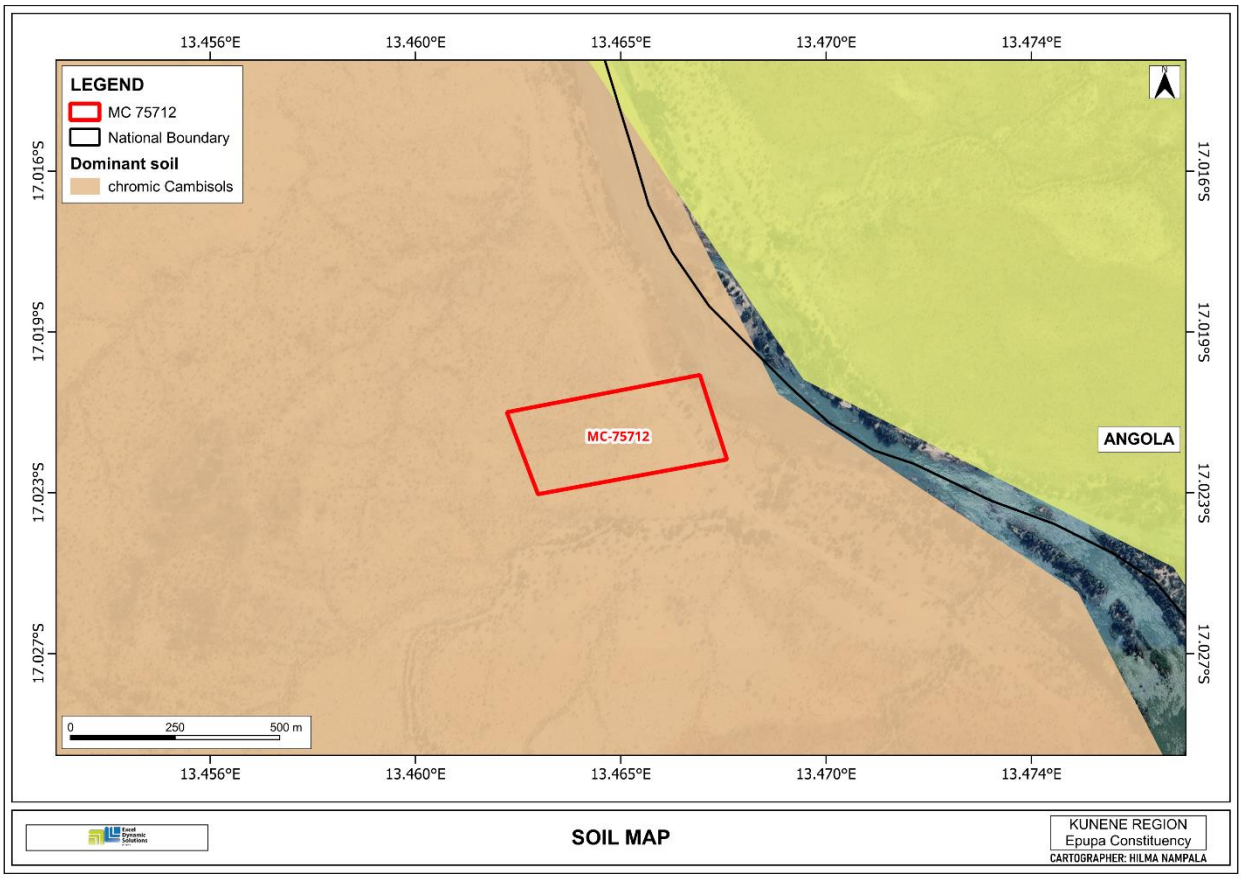

Figure 7: Soil map for MC No. 75712.

Figure 8: Observed soil on the MC.

5.1.5 Water Resources: Groundwater and Surface Water

The MC area consist of rock bodies showing low groundwater potential, classified as very low to limited. Consequently, the overall aquifer potential and groundwater vulnerability across the area is low. Surface water resources in the area are primarily associated with the perennial Kunene River, which flows nearby the MC. No rivers or significant drainage channels traverse the MC itself. (**Figure 9)** shows the groundwater map of the project area.

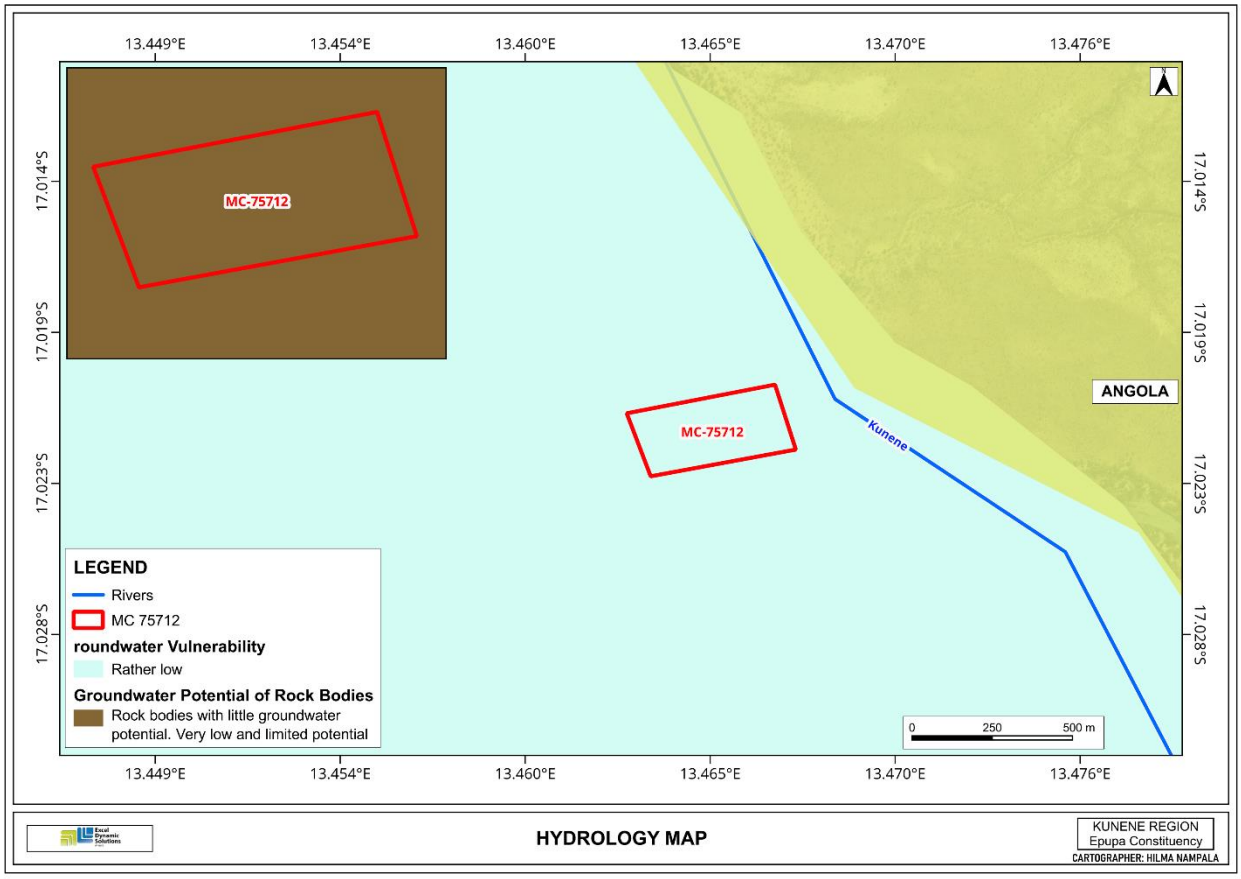

Figure 9: Hydrology map for the MC.

Figure 10: Kunene River nearby the MC.

5.1.6 Flora and Fauna

5.1.6.1 Flora

The MC is located within the Acacia tree and shrub savannah of the Western Highlands, a semi-arid biome classified under the Kaokoveld floristic group. The area consists of plant species such as Mopane (*Colophospermum mopane*), Acacia species (e.g., *Acacia reficiens*, *A. erioloba*), Commiphora (*Commiphora wildii*), Shepherd's Tree (*Boscia albitrunca*), Purple-pod Cluster-leaf (*Terminalia prunioides*), and Herero Sesame Bush (*Sesamothamnus guerichii*), Buffalo thorn Ziziphus mucronata, (Alexander Cathophractis) Trumpet Thorn, and bird plum. Ground cover consists of grass and bitterbos. Towards the Kunene perennial river this area has a higher plant density as compared inland nearby the Kunene River of plants such as Makalani (*Peltophorum africanum*) and Large Sourplum (*Ximenia caffra*) are found (Excel Dynamic Solution , 2026). **(Figure 11)** shows the type of vegetation observed on the MC.

Operational phase might necessitate the clearance of vegetation to accommodate access roads and drilling sites. In compliance with legal and environmental safeguards, the Forest Act (No. 12 of 2001) and the Nature Conservation Ordinance of 1975 must be strictly adhered to. These regulations ensure the protection of flora, particularly protected species such as Mopane, and Boscia spp mandate that necessary permits be secured prior to any vegetation clearance.

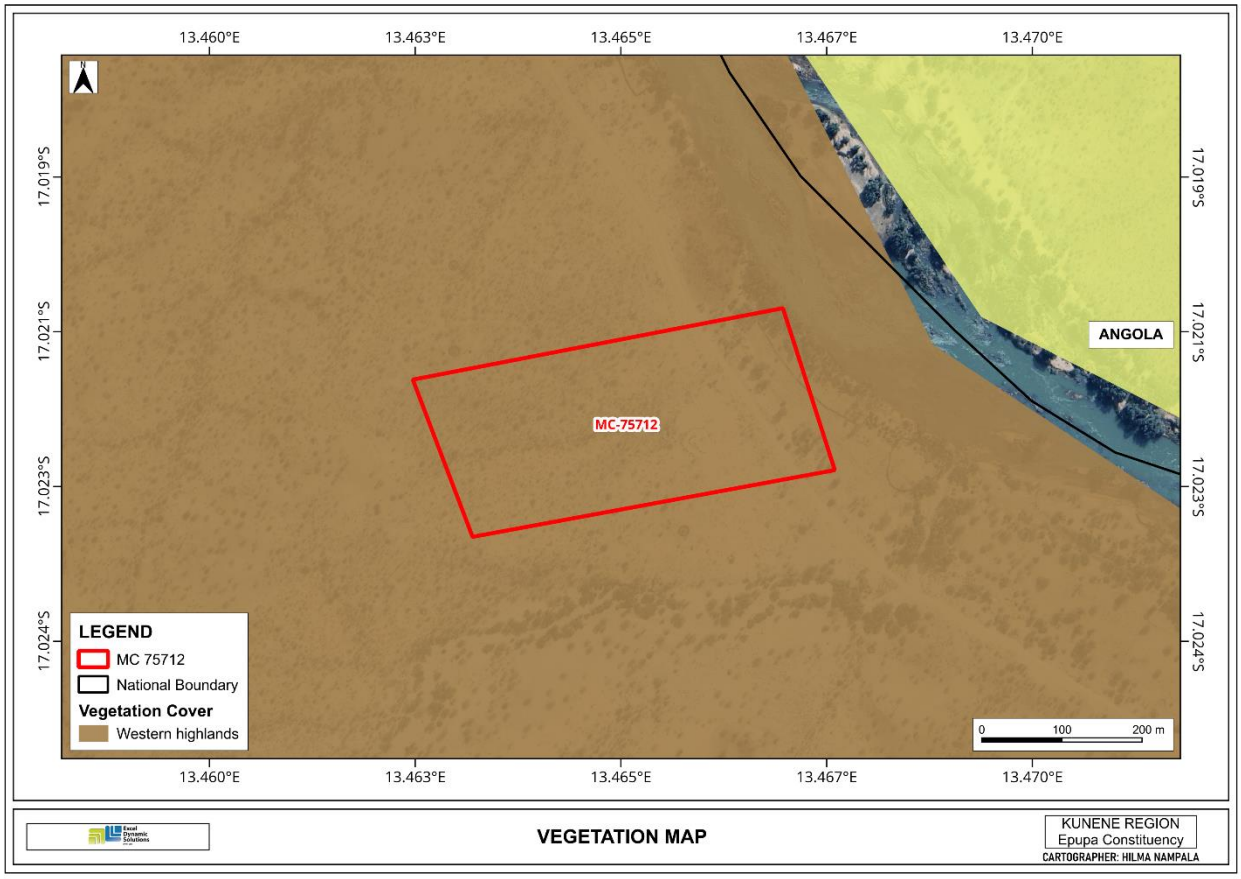

Figure 11: Vegetation map for MC 75712.

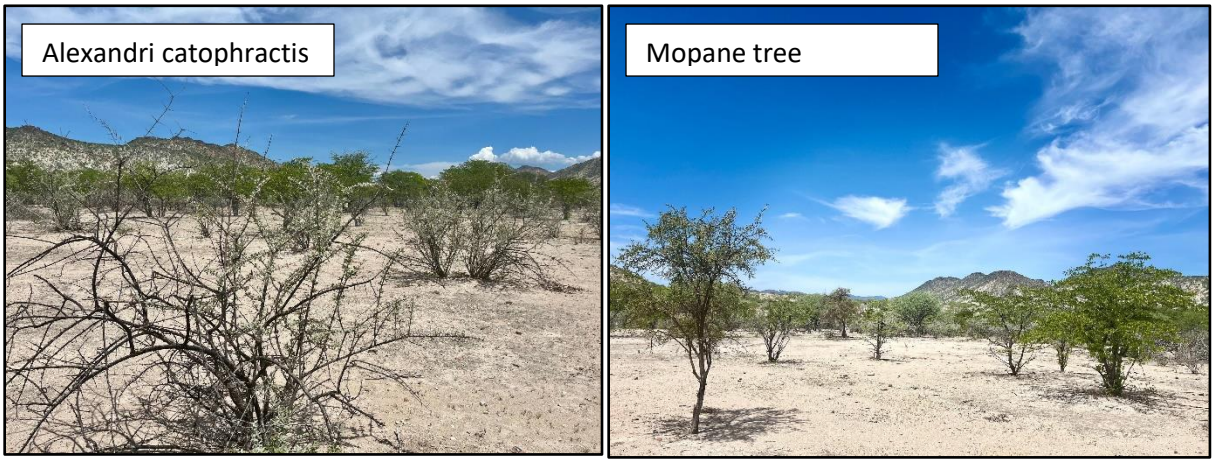

Figure 12: Typical vegetation observed on MC.

5.1.6.2 Fauna

The MC overlies the Epupa conservancy, according to the conservancy chairpersons Kudu, Zebra, Leopard, Cheetah, Jackal, Caracal can be found within this area. The proximity to the

Kunene River consists of additional crocodile specifically the Nile crocodile and the Kunene big 4 birds namely the Cinderella Waxbill, Rufous-Tailed Palm Thrust, Angola Cave Chat and the Grey Kerstel. Biodiversity data from the Atlas of Namibia Team (2022) indicates the area sustains a rich faunal collection, including an estimated 76–80 mammal species, of which 3–4 are large herbivores and 14–17 are large carnivores. The area also hosts at least 51 bird species, 51–60 reptile species, and approximately 9–12 amphibian species. Invertebrate diversity is comparatively lower, with fewer than two nematode species, 14–20 beetle species, and 3–4 solifuge species (Excel Dynamic Solution, 2026).

Figure 13: Livestock observed nearby MC.

5.2 Heritage and Archaeology

5.2.1 Local Level and Archaeological Findings

There are no nationally recognized archaeological sites recorded within the MC. There might be 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 and mining 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 MC is located within communal land used primarily as cattle posts for livestock grazing by residents of nearby settlements, such as Omurorororua, Onyungurura and Okandombo villages. It falls within the Epupa Conservancy as shown in **(Figure 14)**, established under the Nature Conservation Ordinance of 1975.

The main land use in the surrounding areas is communal livestock farming (cattle, goats, and sheep), which constitutes the primary livelihood source. However, many residents are increasingly engaging in mining due to recurring drought, livestock losses, and the comparatively faster income generation associated with mining.

Land tenure is communal, with rights administered by traditional authorities in collaboration with conservancy management committees. The interaction between mining, conservation, and tourism therefore requires coordinated management. 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.

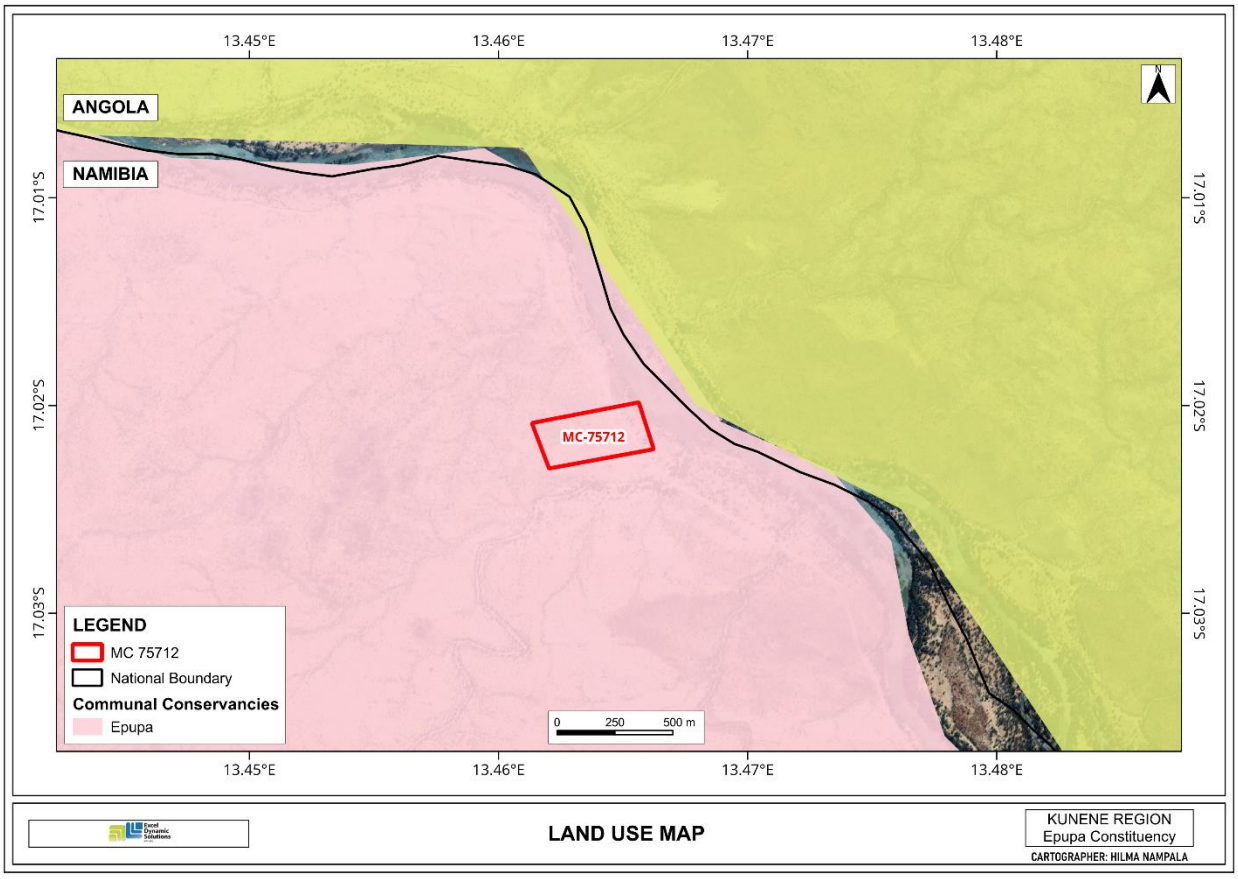

Figure 14: Land use map.

5.4 Description of the Existing environment conditions.

The MC site is easily noticeable by the number stockpiles of copper ore-bearing material and shallow excavations within the portions of the proposed MC. These excavations appear as dug pits accompanied by numerous piles of excavated ore material. Consultations with members of the local community indicated that these excavations were created by some local residents, Due to the prolonged drought conditions and limited agricultural productivity in recent years, where some community members attempted to supplement their livelihoods by informally extracting copper-bearing material from the area with the expectation that potential buyers or traders might purchase the ore.

At the time, there was limited awareness within the community regarding the formal mineral licensing procedures administered by the Ministry of Industries, Mines and Energy. However, no formal buyers or processing arrangements materialised, and as a result, the extracted material remained stockpiled at the locations where it was originally collected. These stockpiles have since remained for an extended period.

Mr. Uatembua Tjiramba (the proponent) has identified the area as having potential for economically viable mineralization and has therefore opted to pursue small-scale mining activities through the appropriate legal and regulatory framework. The presence of these existing small-scale excavations and ore stockpiles therefore reflects previous informal mineral extraction attempts by local community members rather than activities undertaken by the proponent**.**

Figure 15: Stockpiles of mineral bearing ore on MC.

Figure 16: Excavations on MC.

5.5 Socio-Economic conditions

According to the Kunene Regional Development Profile (2015), the Kunene region is geographically located in the north-western part of Namibia, the region's administrative capital is Opuwo. The region covers an area of 115 293 square km of the total Namibian land, making it the second largest region in Namibia after //Karas region. The MC lies northwest of Okanguati the socio-economic characteristics are linked to the Epupa constituencies.

5.5.1 Epupa constituency

According to the 2023 Population and Housing Census, Epupa constituency has a total population of 26,491 inhabitants, of which 12,436 are males, while 14,055 are females. The total area size of Epupa constituency is 23,617.36 square kilometers representing a population density of 1.1 inhabitants, among the least populated constituency in the region. Epupa constituency has 24,326 household population, 4,424 households representing an average household size of 5.5, the highest in the region (NSA, 2024). The area has a literacy rate of 29% of the total population of the area, 70% of the children from this constituency never attended school. The area has a 60% labor force participation rate; it is the lowest labor participation rate and the least developed in the Region. Epupa constituency has one proclaimed settlement Okangwati which is 120kms from

Opuwo, and several growth points such as Etanga, Etoto, Ohandungu. Okangwati settlement area is regarded as the Business and Administration Center of the Constituency.

5.5.2 Farming

According to the Economy Profile Report (First Capital, 2022), Kunene Region is one of the least economically developed regions in Namibia, with high poverty levels, limited access to basic services, and high unemployment rates. The local economy is predominantly based on subsistence agriculture and livestock farming, supplemented by remittances and government social support programs. Infrastructure is underdeveloped, with limited road networks, electricity access, and water supply systems. The local economy is largely dependent on livestock production, with sales in centres like Opuwo providing a critical income source. Gender dynamics show women bearing a dual burden of domestic and agricultural work, with little access to formal employment. The proposed small-scale mining project could address some these challenges by generating temporary jobs, transferring skills, empowering women, and stimulating local businesses through procurement (Kunene Regional Development Profile, 2015).

5.5.3 Tourism

The Kunene Region is a prime tourist destination, renowned for its rugged landscapes and rich cultural traditions. Its economy is significantly strengthened by tourism, cantered around a network of conservancies that host 46% of the nation's protected wildlife, including desert elephants and rhinos. Furthermore, potential investment areas include Epupa Constituency having potential to become a tourist hub as it hosts some of the tourism hot spots in the region, such as the Epupa falls and Kapika Traditional Homestead. Apart from that, the Epupa constituency has potential to become a national income (economic) source for the country, by the construction of Baynes Hydro Power Station and Agra-Fria Harbour. This will be an advantage to Namibia as currently, according to the 2011 Census, Epupa has 78% of residents still depending on wood, for cooking and lighting. Other areas of potential investment include: Tourism Facilities – Lodges, Hostels and Camping sites; Construction of roads and bridges; Construction of schools; Rural Electrification – Off Grid and On-grid electricity; Construction of a service station at Epupa Falls.

5.5.4 Mining

The MC in nearby an area that was previously a mining with drawn area due to the Baynes Hydro Power Station plant was shifted the area. This area is mountainous formations host significant mineral reserves, making it highly prospective for exploration. Advanced-stage projects there

have strong potential to become major drivers of regional economic growth which are pivotal for regional economic growth and development. Extensive mineral exploration activities are underway in and around mountainous areas in the region (Kunene Regional Development Profile, 2015). Within this context, the proposed exploration project presents potential socioeconomic opportunities. As noted in the Kunene Regional Development Profile (2015), such initiatives could contribute to local development through the creation of temporary employment, skills transfer, targeted empowerment of women, and the stimulation of local businesses via procurement spending.

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 3** 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 Industries, Mines and Energy
Regional, Local, and Traditional Authorities
Kunene Regional Council, Okanguati settlement and Epupa constituency
Kapika Traditional Authority
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 small-scale mining works was compiled and emailed to registered and Identified Interested and Affected Parties (I&APs), We also verbally contacted and briefed stakeholders without email access, extending a direct invitation to the meeting.
- Project Environmental Assessment notices were readvertised in the New Era Newspaper **(19 December 2025 and 06 January 2026),** and The Namibian Newspaper **(19 December 2025 and 06 January 2026),** briefly explaining the activity and its locality and inviting members of the public to register as I&APs and submit their comments/concerns.
- Public notice to inform members of the public about the EIA process was placed at Kunene Reginal Council **(Figure 15).**
- Public meeting was scheduled and held at Omuzorororua between Onyungurura village & Camp Cornie. The meeting took place on the 16 February 2026 at scheduled venue at 11h00. The issues and concerns raised were noted and used to form the basis for the ESA Report and EMP.

Figure 17: Public notices placed at (A) Kunene regional council and (B) Epupa police station.

Figure 18: Public Consultation meetings near Onyungurura village, Kunene region.

Issues raised by I&APs have been recorded and incorporated in the environmental report and EMP. The summarized issues raised during the public meeting are presented in **Table 4** below. The issues raised and responses by EDS are attached under **Appendix G.**

Table 4: Summary of main issues raised, and comments received during public meeting engagements

Issue	Concern
Existing graves should not be disturbed by proposed activities.	Existing graves should be protected.

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 5: 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 6: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 7: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, injury or illness / total loss of habitat, total alteration of ecological processes, extinction of rare species	Substantial deterioration, death, illness or injury, loss of habitat/diversity or resource, severe alteration or disturbance of important processes	Moderate deterioration, discomfort, partial loss of habitat/biodiversity or resource, moderate alteration	Low deterioration, slight noticeable alteration in habitat and biodiversity. Little loss in species numbers	Minor deterioration, nuisance or irritation, minor change in species/habitat/diversity or resource, no or 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 8: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 9: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, exploration (and possible analysis), and decommissioning. The potential negative impacts stemming from the proposed activities of the MC 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 MC are overlying communal land that has livestock. Although the area is already disturbed due to pre-existing mining that already took place further small-scale mining activities such as site clearing, trenching, and open pit mining can potentially lead to the disturbance of grazing land. This will potentially affect the grazing land available to livestock, and since the livestock greatly depends on the little available flora, their livelihood will be further impacted.

The effect of small-scale mining work on the land when not done correctly (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.

- **Impact:** Temporary loss of grazing land due to pitting, trenches, open pit mining or access roads.

- **Mitigation:** Minimize footprint by using existing tracks; rehabilitate already disturbed sites and disturbed site immediately where feasible to restore area; engage local herders prior to land access, and utilize existing roads and cleared areas to minimize new land disturbance.

The impact is assessed in **Table 10** below.

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

Mitigation Status	Extent	Duration	Intensity	Probability	Significance
Pre mitigation	M: -3	M: -3	M: -4	M/H: 5	M: -50
Post mitigation	L/M: -2	L/M: -2	L/M: -2	L/M: 3	L: -18

7.3.2 Land Degradation and Loss of Biodiversity

Fauna: The trenching, pitting, and small-scale mining 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. However, the area has already been disturbed and shows evidence of pre-existing mining activities. 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 livestock and 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 and mining activities 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 MC, the impact will be localised 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.

- **Impact:** Clearing of vegetation, disturbance of mopane woodland and other protected species, risk of invasive species.
- **Mitigation:** Limit clearing for mining and associated activities; Fence off area; rehabilitate cleared areas; train workers in biodiversity awareness appropriate mining methods; adopt no-go zones for ecologically sensitive areas; Establish secure perimeter fencing around all active and existing trenching and pitting areas.

The impact is assessed in **Table 11** below.

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

Mitigation Status	Extent	Duration	Intensity	Probability	Significance
Pre mitigation	M: -3	M/H: -4	M: -6	M/H: 4	M: -52
Post mitigation	L/M: -2	L/M: -2	L/M: -4	L/M: 3	L: -24

7.3.3 Generation of Dust (Air Quality)

Dust emanating from mining activities and 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.

- **Impact:** Dust from open pit mining, vehicle movement, and trenching.
- **Mitigation:** Water spraying during drilling; limit speed of vehicles; cover transported materials, dust-generating activities must be suspended during periods of high wind.

The impact is assessed in **Table 12** below.

Table 12: 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/M - 2	L/M - 2	L - 2	L/M - 2	L - 12

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 (communal and livestock) that depend on the same low potential groundwater resource (aquifer).

The impact of the project activities on the resources would be dependent on the water volumes required by each project activity. Small-scale mining activities do not use a lot of water, mainly for drilling. However, this depends on the type of drilling methods employed (diamond drilling is more water-consuming compared to drilling methods such as reverse circulation for instance) and the type of mineral being explored.

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.

- **Impact:** Pressure on limited groundwater; potential contamination from drilling fluids.
- **Mitigation:** Obtain water permits; monitor borehole abstraction; prevent leaks/spills; install drip trays at fuel storage; use biodegradable drilling fluids; Equip all fuel storage areas with spill containment.

Table 13: Assessment of the project impact on water resource use and availability.

Mitigation Status	Extent	Duration	Intensity	Probability	Significance
Pre mitigation	H - 5	M/H - 3	L/M - 4	M/H - 4	M - 48

Post mitigation	L/M - 2	L/M - 2	L - 2	L/M - 2	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.

- **Impact:** Fuel/oil leaks from machinery, improper waste disposal.
- **Mitigation:** Use spill kits; store fuel in bunded tanks; separate waste streams; dispose of waste at licensed facilities, Equip all fuel storage areas with spill containment.

The impact is assessed in **Table 14** below.

Table 14: Assessment of the project impact on soils and water resources (pollution)

Mitigation Status	Extent	Duration	Intensity	Probability	Significance
Pre mitigation	H - 5	M/L - 3	M - 6	M/H - 4	M - 56
Post mitigation	L/M - 2	L/M - 2	L/M - 4	L/M - 2	L - 16

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 MC or around the sites. The MC 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.

- **Impact:** Domestic and hazardous waste accumulation on site.
- **Mitigation:** Provide labelled bins; regular collection and transport to authorized landfill; no onsite burning or burying of waste.

The assessment of this impact is given in **Table 15** below.

Table 15: Assessment of waste generation impact

Mitigation Status	Extent	Duration	Intensity	Probability	Significance
Pre mitigation	M - 3	M - 3	L/M - 4	M - 5	M – 50
Post mitigation	L - 1	L - 1	L - 2	L - 1	L - 4

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.

- **Impact:** Injuries from drilling operations, dust inhalation, noise exposure.
- **Mitigation:** Enforce PPE usage; provide first aid kits; implement health & safety induction; limit working hours.

This impact is assessed in **Table 16** below and mitigation measures are provided.

Table 16: 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 MC are accessible via the D3700 road from Epupa. 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 MC. 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.

- **Impact:** Increased heavy vehicle movement causing road damage and safety risks.
- **Mitigation:** Use existing roads where possible; enforce speed limits; maintain vehicles; consult local authorities on road use.

Table 17: Assessment of the impacts of exploration on-road use (vehicular traffic)

Mitigation Status	Extent	Duration	Intensity	Probability	Significance
Pre mitigation	M/H - 4	M - 3	L/M - 4	M/H - 4	M - 44
Post mitigation	L/M - 2	L/M - 2	L - 2	M - 3	L - 18

7.3.9 Noise and vibrations

Small-scale mining activities, including drilling and jackhammering 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.

- **Impact:** Noise from drilling machinery disturbing communities and wildlife.
- **Mitigation:** Daytime operations only; fit silencers on equipment; maintain buffer zones around settlements.

Table 18: 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 Kunene region contains archaeological/cultural significant sites, and there is a possibility of unveiling/discovering new archaeological 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 19**.

- **Impact:** Possible destruction of graves, stone tools, or cultural sites.

- **Mitigation:** Conduct heritage surveys before works; enforce chance find procedures; demarcate no-go zones for discovered site.

Table 19: Assessment of the impacts of small-scale mining on archaeological & heritage resources

Mitigation Status	Extent	Duration	Intensity	Probability	Significance
Pre mitigation	L/M - 2	M - 3	L/M - 4	M/H - 4	M – 36
Post mitigation	L - 1	L/M - 2	L - 2	L/M - 2	L - 10

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.

- **Impact:** Increased frequency of heavy vehicle traffic, leading to accelerated road deterioration (e.g., potholes, rutting, and surface wear).
- **Mitigation:** Implement a scheduled, regular road maintenance program; Enforce and clearly signpost reduced speed limits for heavy vehicles.

The assessment of this impact is presented in **Table 20**.

Table 20: 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/H - 4	M – 52
Post mitigation	L/M - 2	L/M - 2	M/L - 4	M/L -2	L - 16

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, livestock, 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.

- **Impact:** Theft, property damage, community-worker tensions.
- **Mitigation:** Engage community leaders; enforce code of conduct; provide grievance redress mechanism.

The impact is assessed below **(Table 21)**.

Table 21: Assessment of the social impact of community property damage or disturbance

Mitigation Status	Extent	Duration	Intensity	Probability	Significance
Pre mitigation	M - 3	M - 3	L/M - 4	M/H - 3	M – 30
Post mitigation	L/M - 2	L - 1	M/L - 2	M/L -2	L - 10

7.4 Cumulative Impacts Associated with Proposed Exploration

According to the International Finance Corporation (2013), cumulative impacts are defined as “impacts that result from the successive, incremental, and/or combined effects of an action, project, or activity (collectively referred to in this document as “developments”) when added to other existing, planned, and/or reasonably anticipated future impacts”.

Like many other small-scale mining projects, some cumulative impacts to which the proposed project and associated activities potentially contribute are the following:

- **Impact on road infrastructure:** The proposed small-scale mining activity contributes cumulatively to various activities such as farming activities and traveling associated with tourism and local daily routines. The contribution of the proposed project to this cumulative impact is however not considered significant, given the short duration, and spatial extent of the intended small-scale mining activities.
- **Use of water**: While the contribution of this project will not be significant, mitigation measures to reduce water consumption during small-scale mining are essential.

8 RECOMMENDATIONS AND CONCLUSION

8.1 Recommendations

The potential positive and negative impacts of the proposed small-scale mining activities on MC 75712 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.

Based on the findings of the Environmental Scoping Assessment for MC 75712, the following recommendations are proposed:

- An Environmental Clearance Certificate (ECC): It is recommended that the Ministry of Environment, Forestry and Tourism (MEFT) grants the ECC for small -scale mining activities, subject to strict adherence to the Environmental Management Act (2007) and its regulations.
- Implementation of the Environmental Management Plan (EMP): The proponent must implement the EMP as an operational guide for managing all identified impacts. This should include regular monitoring, reporting, and compliance audits.
- Water Resource Management: Given the scarcity of water in the Kunene Region, strict water-use permits must be obtained. Groundwater abstraction should be monitored, and alternative water sources (such as water trucking) should be considered to minimize pressure on local aquifers.
- Community Engagement: Continuous stakeholder and community engagement with Local traditional authorities and the affected the Communities and relevant authorities is essential. Clear communication channels must be maintained to address grievances, promote transparency, and ensure local participation.
- Biodiversity Conservation: Site areas where small-scale mining activities have ceased are rehabilitated, as far as practicable. Rehabilitation of disturbed areas must be prioritized to restore natural vegetation.
- Health and Safety: All small-scale mining activities should adhere to occupational health and safety standards. Training, provision of PPE, and emergency preparedness must be mandatory for all employees and contractors.
- Cultural and Heritage Preservation: Heritage chance find procedures must be strictly implemented. Any cultural or archaeological resources encountered must be reported immediately to the National Heritage Council.

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.

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