

## **ENVIRONMENTAL IMPACT ASSESSMENT**

### **ENVIRONMENTAL SCOPING ASSESSMENT (ESA) REPORT:**

**THE PROPOSED MINERAL EXPLORATION ACTIVITIES IN RESPECT OF BASE AND RARE METALS, INDUSTRIAL MINERALS AND PRECIOUS METALS GROUP OF MINERALS ON EXCLUSIVE PROSPECTING LICENCE (EPL) 8613, LOCATED NORTH-WEST OF KHORIXAS IN THE KUNENE REGION, NAMIBIA.**

**Prepared By:**

Inga Metals and Commodities CC  
P.O. Box 1,  
Rosh Pinah,  
Namibia

**Prepared For:**

Ndeyapo Annasitansia Mungoba  
P.O. Box 3758,  
Windhoek,  
Namibia

**03 NOVEMBER 2023**

## DOCUMENT CONTROL

|                                     |  |
|-------------------------------------|--|
| <b>Report Title</b>                 | Environmental scoping assessment (ESA) report for the proposed mineral exploration activities on Exclusive Prospecting License (EPL) 8613, located north-west of Khorixas in the Kunene region, Namibia. |
| <b>Report Authors</b>               | Alexander Shapumba, Sylvia Murangi   |
| <b>Reviewer</b>                     | Shapua Kalomo  |
| <b>Client</b>                       | Ndeyapo Annasitansia Mungoba   |
| <b>ECC Application Reference No</b> | APP-00929  |
| <b>Version</b>                      | Final  |

| <b>Previous Versions</b> |                   |  |
|--------------------------|-------------------|--|
| <b>Version</b>           | <b>Issue Date</b> | <b>Update</b>  |
| Final                    | November 2023     | Update comments from I&APs from third round of consultative meetings (Meetings 5 & 6: 12-13 October 2023). Confirmation of conservancy inputs, and inputs from residents of Ruspoort, the largest settlement on the EPL8613. |
| Draft 2                  | March 2023        | Update comments from I&APs from second round of consultative meetings (Meetings 5 & 6: 24-25 February 2023). Inputs from affected conservancies through their management committees.   |
| Draft 1                  | January 2023      | Initial Document   |

# TABLE OF CONTENTS

|  |     |
|--|-----|
| TABLE OF CONTENTS .....  | ii  |
| LIST OF FIGURES.....   | iv  |
| LIST OF TABLES.....  | vi  |
| LIST OF APPENDICES.....  | vi  |
| LIST OF ABBREVIATIONS.....   | vii |
| 1. INTRODUCTION.....   | 1   |
| 1.1. Project Background.....   | 1   |
| 1.2. The Appointed Environmental Assessment Practitioner (EAP) ..... | 3   |
| 1.3. Terms of Reference and Scope of Works .....                     | 3   |
| 1.4. The Need for the Proposed Activities.....                       | 4   |
| 2. PROJECT DESCRIPTION: PROPOSED EXPLORATION ACTIVITY .....          | 4   |
| 2.1. Proposed Exploration Methods .....                              | 5   |
| 2.1.1. Conceptual and Detailed Planning .....                        | 6   |
| 2.1.2. Regional Prospecting and Target Generation.....               | 6   |
| 2.1.3. Targeted Prospecting .....                                    | 7   |
| 2.1.4. Site Accessibility .....                                      | 9   |
| 2.1.5. Human Resources.....  | 9   |
| 2.1.6. Material and Equipment.....                                   | 10  |
| 2.1.7. Project Crew Accommodation .....                              | 11  |
| 2.1.8. Infrastructure and Services.....                              | 11  |
| 2.1.9. Waste Management .....  | 12  |
| 2.2.0. Health and safety.....  | 12  |
| 2.2.1. Decommissioning and Rehabilitation.....                       | 13  |
| 3. PROJECT ALTERNATIVES .....  | 13  |
| 3.1 The “No-go” Alternative.....                                     | 13  |
| 3.2. Project Location .....  | 14  |
| 3.3. Alternative exploration methods.....                            | 14  |
| 4. LEGAL FRAMEWORK: LEGISLATION, POLICIES AND GUIDELINES.....        | 14  |
| 4.1. Applicable laws and policies.....                               | 15  |
| 4.1.1. The Namibian Constitution (1990).....                         | 15  |

|        |   |    |
|--------|---|----|
| 4.1.2. | The Minerals (Prospecting and Mining) (Act 33 of 1992).....                 | 16 |
| 4.1.3. | The Environmental Management Act (No. 7 of 2007).....                       | 17 |
| 4.2.   | International Policies, Treaties and Protocols .....                        | 24 |
| 4.3.   | Permits and other requirements .....  | 27 |
| 5.     | ENVIRONMENTAL BASELINE.....   | 27 |
| 5.1.   | Landscape and Topography.....   | 28 |
| 5.2.   | Climate .....   | 29 |
| 5.2.1. | Temperature .....   | 30 |
| 5.2.2. | Rainfall.....   | 30 |
| 5.2.3. | Wind .....  | 30 |
| 5.2.4. | Air Quality .....   | 30 |
| 5.2.5. | Noise .....   | 31 |
| 5.3.   | Geology and Soils .....   | 31 |
| 5.4.   | Water Resources (Hydrology and Groundwater) .....                           | 33 |
| 5.5.   | Biodiversity .....  | 34 |
| 5.5.1. | Flora and Fauna .....   | 34 |
| 5.6.   | Archaeology and Heritage.....   | 36 |
| 5.7.   | Land Use.....   | 37 |
| 5.7.1. | Closest Sensitive Receptors.....  | 38 |
| 5.8.   | Socio-Economic Status .....   | 43 |
| 5.8.1. | Population.....   | 43 |
| 5.8.2. | Infrastructure and Services.....  | 43 |
| 5.8.3. | Economy.....  | 43 |
| 6.     | PUBLIC CONSULTATION PROCESS.....  | 46 |
| 6.1.   | Pre-identified and Registered Interested and Affected Parties (I&APs) ..... | 46 |
| 6.2.   | Communication with I&APs.....   | 47 |
| 6.3.   | Feedback from Interested and Affected Parties .....                         | 53 |
| 7.     | IMPACT IDENTIFICATION, ASSESSMENT AND MITIGATION MEASURES .                 | 54 |
| 7.1.   | Impact Identification .....   | 54 |
| 7.1.1. | Positive impacts.....   | 54 |
| 7.1.2. | Negative impacts .....  | 54 |
| 7.2.   | Impact Assessment Methodology .....   | 55 |
| 7.3.   | Assessment of Potential Negative (Adverse) Impacts.....                     | 58 |

|   |    |
|---|----|
| 7.4. Mitigation Measures .....  | 64 |
| 7.4.1. Biodiversity: Potential impact on fauna and flora (general disturbance and clearing of vegetation) ..... | 64 |
| 7.4.2. Air Quality: Increase in dust levels.....  | 65 |
| 7.4.3. Noise: Increase in noise levels .....  | 66 |
| 7.4.4. Heritage: Possible damage to resources of archaeological or heritage importance .....                    | 66 |
| 7.4.5. Soil and Water Resources .....   | 67 |
| 7.4.6. Land use: Loss of land capability due to site clearance.....   | 68 |
| 7.4.7. Waste Management .....   | 68 |
| 7.4.8. Socio-economic impacts and community safety .....  | 69 |
| 7.5. Mitigations and Recommendations for Rehabilitation .....   | 72 |
| 8. RECOMMENDATIONS AND CONCLUSIONS .....  | 73 |

## LIST OF FIGURES

|   |    |
|---|----|
| Figure 1: Location of EPL 8613 north-west of Khorixas in the Kunene Region .....  | 2  |
| Figure 2: Farms covered by EPL8613.....   | 2  |
| Figure 3: Typical Life Cycle of a Mining Extraction Project (Government of Nova Scotia, n.d.) .....   | 5  |
| Figure 4: Stages of mineral exploration (from 2. Dos Santos, 2016).....   | 6  |
| Figure 5: Landscape map of EPL 8613 .....   | 28 |
| Figure 6: The topography on EPL8613 grades from high-lying flat plains in the northern portion to undulating hills in the southern portion.....   | 29 |
| Figure 7: Elevation profile along a North - South cross section on the EPL8613 area. The portion within the EPL is shaded (yellow), with the Northern and Southern EPL boundaries indicated by the green and red arrows respectively. (Adopted from Google Earth) ..... | 29 |
| Figure 8: Geology of EPL 8613 .....   | 32 |
| Figure 9: Soil types on EPL 8613 .....  | 33 |
| Figure 10: Ground water potential map of EPL 8613, with surface rivers.....   | 34 |
| Figure 11: Vegetation type map for EPL 8613 .....   | 35 |

|  |    |
|--|----|
| Figure 12: Grass, scattered trees and shrubs determine the vegetation structure around EPL8613. ....   | 36 |
| Figure 13: Archaeological and heritage site map for EPL 8613 .....   | 37 |
| Figure 14: Communal Conservancies and land use zonation map for area covering EPL8613. ....  | 39 |
| Figure 15: Land use zonation map for the #Khoadi-//Hôas and //Huab conservancies as relates to EPL 8613. Adapted from a Regional Human-Wildlife Conflict (HWC) map for Kunene South (2016 – 2022), as compiled by Community Conservation Fund of Namibia (CCFN)..... | 41 |
| Figure 16: The original shape of EPL8613, as applied for by the proponent.....   | 42 |
| Figure 17: The shape of EPL8613, as provisionally approved by the MME with advice from the MEFT towards mitigation of exploration - tourism/conservation land use conflicts .....  | 42 |
| Figure 18: Percent distribution of households by main source of income and area (Namibia Statistics Agency, 2011) .....  | 44 |
| Figure 19: Distribution of business establishments by starting period of operations and economic activities in the Kunene region (Namibia Statistics Agency, 2022)....   | 45 |
| Figure 20: Site notices placed at the Swartbooi Traditional Authority office in Fransfontein (top left), Choppies Supermarket in Khorixas (top right), and Khorixas Police Station (bottom) .....  | 49 |
| Figure 21: Swartbooi Traditional Office in Fransfontein where the first meeting was held (top left) and the EAP addressing attendees of the meeting (top right and bottom). ....   | 50 |
| Figure 22: The venue of the second meeting at the  Gao Daman Traditional Office in Anker (top left) and the Traditional Authority representative welcoming attendees to the meeting (top right and bottom). ....   | 51 |
| Figure 23: The follow-up meetings held with the management committees of the #Khoadi-//Hôas (top frame) and //Huab conservancies (bottom) on the 24th and 25th February 2023 respectively. ....  | 52 |

## LIST OF TABLES

|  |    |
|--|----|
| Table 1: Environmental Project Team .....  | 3  |
| Table 2: List of other applicable local and national laws standards governing the proposed prospecting and exploration activities..... | 20 |
| Table 3: List of applicable international policies, treaties and protocols .....   | 24 |
| Table 4: Summary of Interested and Affected Parties (I&APs).....   | 47 |
| Table 5: Summary of main concerns and comments received during the public meeting .....  | 53 |
| Table 6: Impact assessment criteria and the method of determining the significance of the impacts .....                                | 56 |
| Table 7: Environmental aspects and potential impacts associated with the proposed exploration activities on EPL 8613 .....             | 58 |

## LIST OF APPENDICES

**Appendix A:** Draft Environmental Management Plan (EMP)

**Appendix B:** Archaeological and Heritage Impact Assessment (AHIA) Study Report

**Appendix C:** References

**Appendix D:** Notice to applicant of preparedness to grant application for exclusive prospecting license no.8613

**Appendix E:** Map of EPL No 8613 northwest of Khorixas Town in the Kunene Region

**Appendix F:** Background Information Document (BID)

**Appendix G:** Copy of the Environmental Clearance Certificate (ECC) Application Form

**Appendix H:** Curricula Vitae (CV) for the Environmental Assessment Practitioner (EAP)

**Appendix I:** Proof of Consultation

**Appendix J:** Consent Letters

## LIST OF ABBREVIATIONS

|                    |  |
|--------------------|--|
| <b>AHIA</b>        | Archaeological and Heritage Impact Assessment  |
| <b>BID</b>         | Background Information Document  |
| <b>CITES</b>       | Convention on International Trade in Endangered Species of Wild<br>Fauna and Flora         |
| <b>CBNRM</b>       | Community-based natural resource management  |
| <b>CCFN</b>        | Community Conservation Fund of Namibia   |
| <b>CV</b>          | Curriculum Vitae   |
| <b>DEAF</b>        | Department of Environmental Affairs and Forestry   |
| <b>EA</b>          | Environmental Assessment   |
| <b>EAP</b>         | Environmental Assessment Practitioner  |
| <b>ECC</b>         | Environmental Clearance Certificate  |
| <b>EIA</b>         | Environmental Impact Assessment  |
| <b>EMA</b>         | Environmental Management Act   |
| <b>EMP</b>         | Environmental Management Plan  |
| <b>EPL</b>         | Exclusive Prospecting License  |
| <b>ESA</b>         | Environmental Scoping Assessment   |
| <b>GG &amp; GN</b> | Government Gazette & Government Notice   |
| <b>I&amp;APs</b>   | Interested and Affected Parties  |
| <b>IFC</b>         | International Finance Corporation  |
| <b>MAWLR</b>       | Ministry of Agriculture, Water and Land Reform   |
| <b>MEFT</b>        | Ministry of Environment, Forestry and Tourism  |
| <b>MME</b>         | Ministry of Mines and Energy   |
| <b>NACSO</b>       | The Namibian Association of CBNRM Support Organizations                                    |
| <b>NGO</b>         | Non-Governmental Organization  |
| <b>NNF</b>         | Namibia Nature Foundation  |
| <b>NPO</b>         | Non-Profit Organization  |
| <b>PPE</b>         | Personal Protective Equipment  |
| <b>Reg / S</b>     | Regulation / Section   |
| <b>SASSCAL</b>     | Southern African Science Service Centre for Climate Change and<br>Adaptive Land Management |
| <b>SRT</b>         | Save The Rhino Trust   |
| <b>TOR</b>         | Terms of Reference   |

# 1. INTRODUCTION

## 1.1. Project Background

Ms. Ndeyapo Annasitansia Mungoba (hereinafter referred to as *The Proponent*) intends to carry out prospecting and exploration activities on Exclusive Prospecting license (EPL) No. 8613. An application for the EPL was lodged on 16 September 2021, to which the Ministry of Mines and Energy (MME) responded with a “*Notice to applicant of preparedness to grant application for exclusive prospecting license no.8613*” on 15 July 2022 (Appendix D). The Proponent is interested in the prospecting and exploration of Base and Rare Metals, Industrial Minerals and Precious Metals Group of Minerals.

The EPL lies approximately 70km north-west of Khorixas, and 60km west of Fransfontein in the Khorixas Magisterial District of the Kunene region ([Figure 1](#)) and covers an area of ~ 8,047. 0576 hectares (ha). The EPL is overlain by three farms, namely Brakwater (Farm No. 670), Ruspoort (Farm No. 669), and Eersbegin (Farm No. 675) ([Figure 2](#)).

Prior to the commencement of the proposed exploration activities, environmental clearance is required from the Department of Environmental Affairs and Forestry (DEAF) of the Ministry of Environment, Forestry and Tourism (MEFT), on the basis of an approved Environmental Impact Assessment (EIA) process, in terms of the Environmental Management Act, No. 7 of 2007 and its associated regulations of 2012. An Environmental Scoping Report and Environmental Management Plan (EMP) are required as part of the Environmental Clearance Certificate (ECC) application, as well as to support the decision-making process.

The proponent has appointed Inga Metals and Commodities CC to conduct the required Environmental Assessment (EA) process as per the Environmental Management Act, 7 of 2007 and EIA Regulations of 2012.

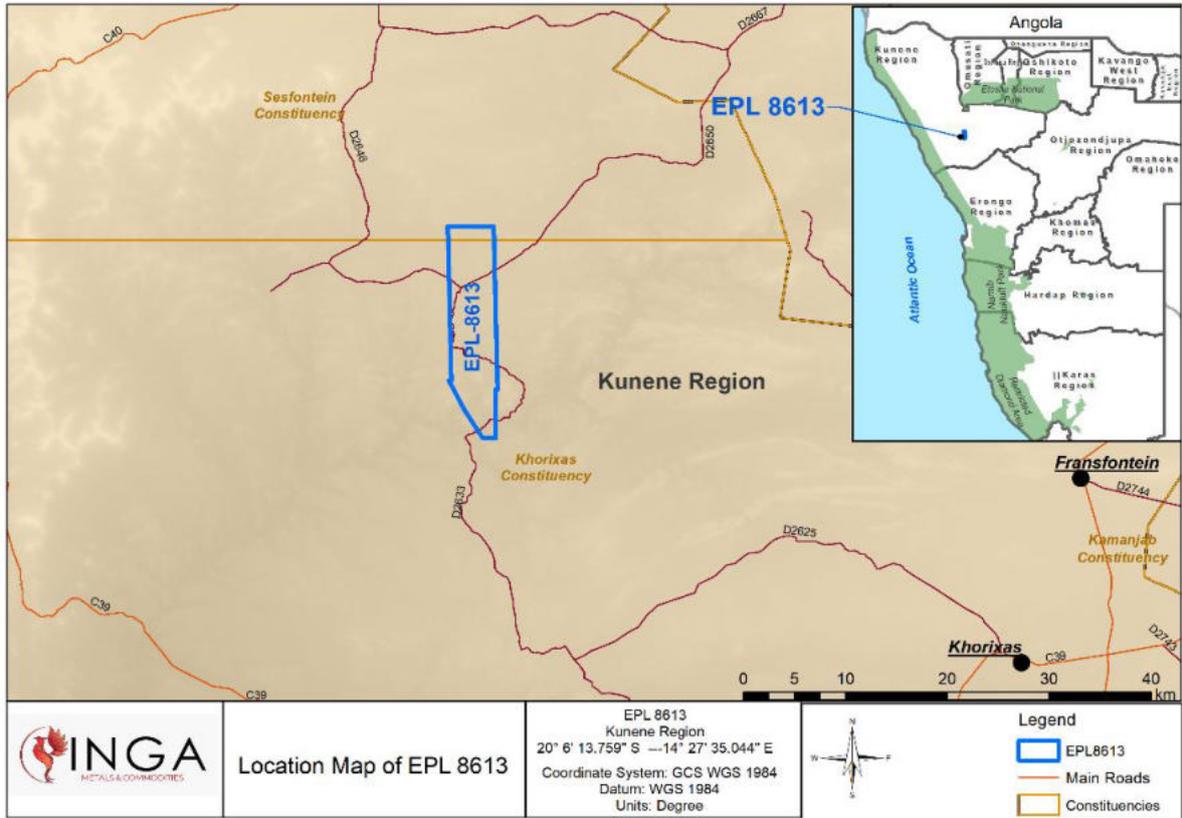


Figure 1: Location of EPL 8613 north-west of Khorixas in the Kunene Region

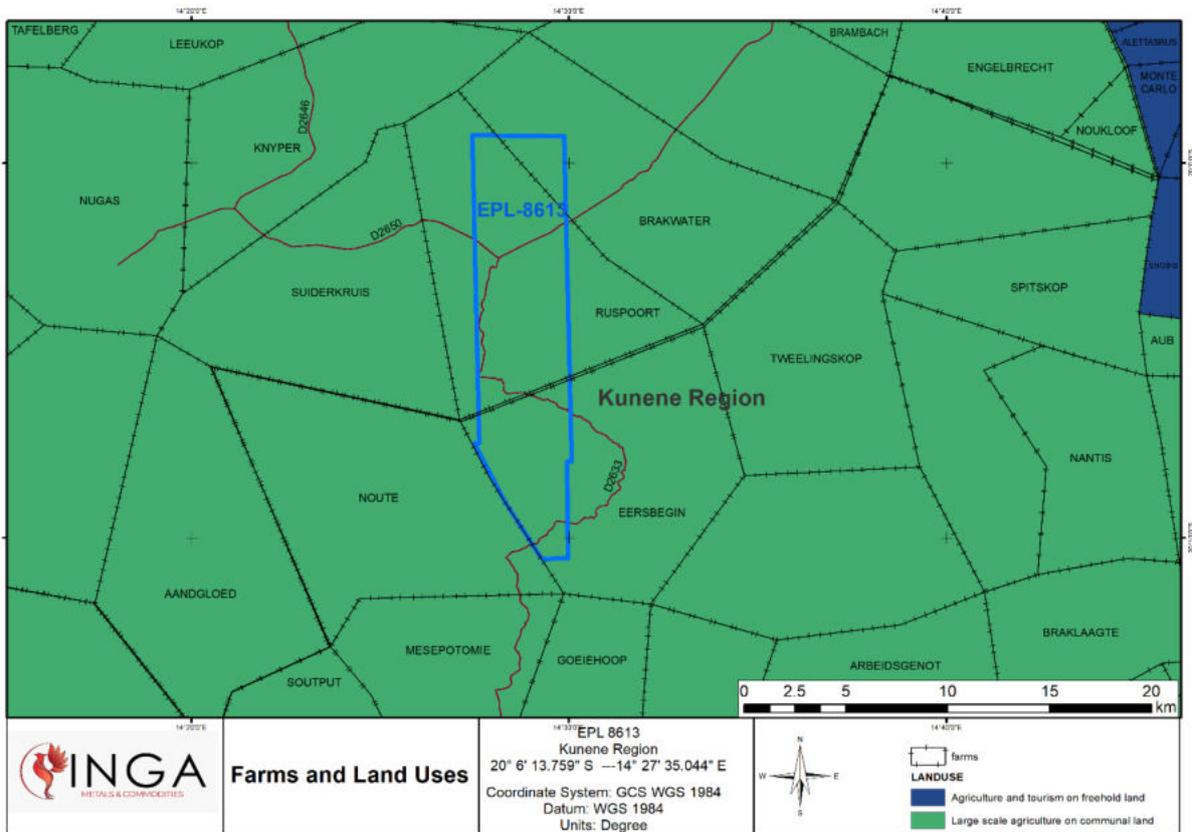


Figure 2: Farms covered by EPL8613

## 1.2. The Appointed Environmental Assessment Practitioner (EAP)

Inga Metals is the independent firm of consultants appointed by the proponent to undertake the EIA process as per the requirements of the EMA and its 2012 EIA Regulations. The findings of the EA process are incorporated into this report and the draft EMP – (Appendix A). These documents will be submitted as part of the ECC application to the Environmental Commissioner at the Department of Environmental Affairs and Forestry (DEAF), MEFT.

The EIA project is headed by Mr. Alexander Shapumba and Ms. Sylvia Murangi, professional and experienced environmental and earth scientists, supported by with the assistance of Mr. Shapua Kalomo, an experienced EAP.

The EAPs involved in this Environmental Assessment are summarized in [Table 1](#). Detailed curriculum vitae can be found in Appendix H.

Table 1: Environmental Project Team

| NAME               | DESIGNATION                  | ROLE  | COMPANY                |
|--------------------|------------------------------|---|------------------------|
| Alexander Shapumba | Project Manager              | <ul style="list-style-type: none"><li>•Management of the process, team members and other stakeholders.</li><li>•Report compilation.</li><li>•Review</li></ul> | Inga Metals            |
| Sylvia Murangi     | Project Management Assistant | <ul style="list-style-type: none"><li>•Stakeholder management.</li><li>•Report compilation.</li><li>•Review</li></ul>   | Inga Metals            |
| Shapua Kalomo      | Project Advisor              | <ul style="list-style-type: none"><li>•Report compilation.</li><li>•Review</li></ul>  | Independent consultant |
| Baron Mabhumbo     | Archaeologist                | <ul style="list-style-type: none"><li>•Conduct AHIA</li></ul>   | Independent consultant |

## 1.3. Terms of Reference and Scope of Works

There were no formal Terms of Reference (ToR) provided by the Proponent. The consultant, instead, relied on the requirements of the Environmental Management Act (No. 7 of 2007) (EMA) and its Environmental Impact Assessment (EIA) Regulations (GN. No. 30 of 2012) to conduct the study.

An application for an ECC was logged on behalf of the proponent on the MEFT's Environmental Clearance Certificate online portal. An environmental impact assessment process was started, culminating in an ESA and EMP for the project.

It is important to note that the ECC applied for here is for activities relating to the prospecting and exploration of Base and Rare Metals, Industrial Minerals and Precious Metals Group of Minerals. It is **not** an application for mining activities. Therefore, no blasting, excavation or related activities will be allowed in any zone of the conservancies. In the unlikely case that blasting and/or excavation is required for metallurgical test work samples, written approval should be sought from concerned Traditional Authorities and conservancy management.

#### **1.4. The Need for the Proposed Activities**

The mining sector plays an important role in the socio-economic development of many resource-rich economies across the world. The mining sector has been and remains the backbone of the Namibian economy. This is demonstrated by its average contribution to the GDP, annual economic growth and foreign exchange earnings. According to a study conducted by the National Planning Commission, the mining sector's annual contribution to GDP was 10.1% in 2020 and 9.1% in 2021 (Chamber of mines Annual Review 2020, 2021).

Furthermore, the mining sector continues to be a significant employment creator (N\$ 5.945 billion in 2021), while mining companies continue making significant corporate social investments in the communities that they operate in. In 2021, mining companies contributed N\$ 223.2 million towards local communities.

The proponent has determined the study area to be potentially prospective for mineral resources which could contribute to the GDP growth observed and discussed, and raises the need for the proposed activities.

## **2. PROJECT DESCRIPTION: PROPOSED EXPLORATION ACTIVITY**

The mining of mineral resources dates back as far back as 40,000 years. The practice has evolved over the years, with the process of developing of a mineral deposit towards becoming an operational mine becoming more structured. A refined "life cycle

of a mining project” has emerged in various versions, and is widely used and followed in modern-day mining (Figure 3).

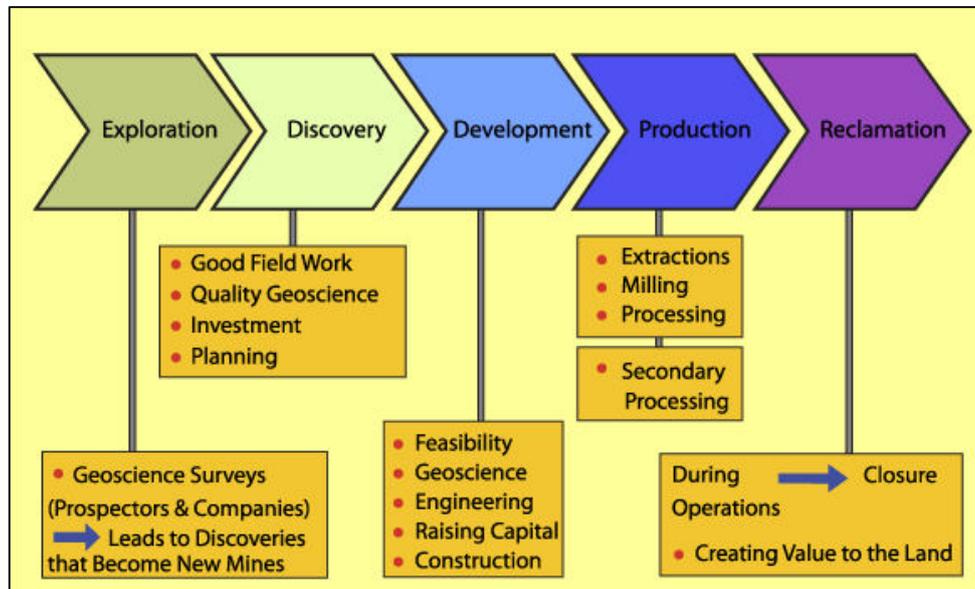


Figure 3: Typical Life Cycle of a Mining Extraction Project (Government of Nova Scotia, n.d.)

## 2.1. Proposed Exploration Methods

EPL 8613 was granted for the exploration of Base and Rare Metals, Industrial Minerals and Precious Metals Group of Minerals. Therefore, the scope of this project including the content of this work, as well as the ECC application that will be accompanied hereby, is for the exploration portion of this cycle only. Dos Santos (2016) breaks down the activity groups and process logic within the exploration phase (Figure 4).

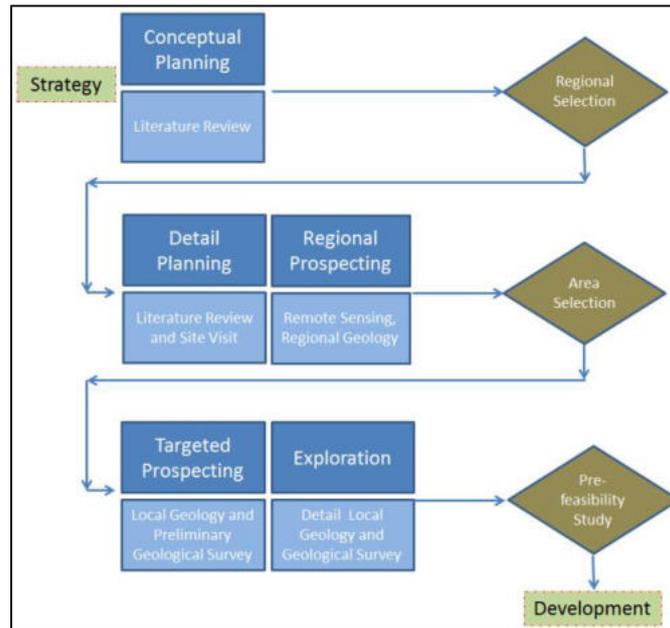


Figure 4: Stages of mineral exploration (from 2. Dos Santos, 2016)

The proponent intends to adopt a systematic prospecting and exploration approach aligned with industry standard. The prospecting and exploration activities to be undertaken after issuance of ECC are discussed below.

## 2.1.1. Conceptual and Detailed Planning

### A. Desktop and Review of Literature

The first step in the exploration program is aimed at the creation of a detailed understanding of the geology of the exploration area, as well as an understanding of the social, legal and infrastructural setting. This will entail research of geological material, as well as work done in the area, including surrounding areas by previous developer, if any. All work done at this stage will be office-based, and non-invasive/non-destructive.

## 2.1.2. Regional Prospecting and Target Generation

### A. Geological Mapping

Surface geological information will be collected by visual inspection of the ground by means of multiple traverses across the EPL. The traverse spacing is yet to be determined, but is typically at 200 to 300 meters at this stage. Mapping will be done

on foot by a geologist and their team. The teams will be dropped by a vehicle along existing trails, before they start their foot traverses.

### ***B. Regional Geochemical Surveys***

Sub-surface chemical information will be collected by geochemical sampling campaign. Samples collected at this stage are sent to analytical chemistry laboratories to determine and quantify the presence of elements of interest in the area.

This is done by digging small holes of roughly 20cm centimeters in width and depth, and collecting a sample of approximately 5kg across a pre-planned sampling grid of defined spacing. The hole is then covered, leaving no impact to the environment and very minimal activity footprint.

An initial sampling campaign over the extent of the EPL (about 100 x 100 m or 50 x 50 m grid).

#### **2.1.3. Targeted Prospecting**

##### ***A. Mapping***

Detailed mapping of exploration targets will be done at a closer spacing (50 to 100 meter spacing). This activity retains the same non-invasive nature as its predecessor.

##### ***B. Ground Geophysical Surveys***

Airborne geophysical surveys will be followed by detailed ground geophysical surveys after exploration targets have been identified. Ground geophysical surveys will be carried out using hand held equipment by the team as far as, with the use of vehicle mounted equipment to be kept at a minimum.

##### ***C. Local Geochemical Surveys***

The initial geochemical sampling campaign will be followed up by localized (25 x 25 m) sampling campaign after targets have been identified.

## ***D. Drilling***

In the case of satisfactory delineation of exploration targets on the EPL, a drilling program will then be formulated to facilitate the collection of sub-surface samples for physical and chemical analyses. Holes are drilled for collection of samples to be used for geological, geotechnical and mineralogical analysis and interpretations.

Drilling is done across a pre-determined grid, and in phases. The initial phase will be wider spaced (roughly 100 meters or more), with each phase filling in, bringing the final phase to at least 50 meters spacing. Drilling is the only invasive activity in this process.

Two types of drilling methods are available for use, with the choice only to be known close to commencement of this activity. It is however likely that both methods will be employed.

### **I. Diamond Drilling**

Diamond core drilling uses an ring-shaped diamond-embedded drill bit attached to the end of hollow drill rods to cut a cylindrical core of solid rock. This core provides geologists with geological and geotechnical data about the rock conditions that can be expected below ground. Samples are further cut from this core for laboratory analyses.

This method uses water pumped through holes within the bit to reach the cutting face for lubrication and cooling of the bit. Diamond drilling is much slower than reverse circulation (RC) drilling but allows for greater depths to be achieved due.

This method may be more difficult to achieve due to the fact that water is required, which will have to be abstracted from the ground and likely transported to site.

### **II. Reverse Circulation (RC) Drilling**

RC Drilling core is a relatively cheaper and faster option, compared to the above mentioned. However, it is considered to be less accurate, as rock samples are returned to the surface as powder or small cuttings and the below ground rock condition cannot be ascertained. The percussion chip samples are funneled through a cyclone into 1m x 1m plastic bags.

The drilling mechanism is a pneumatic reciprocating piston known as a "hammer" driving a tungsten steel drill bit. The drilling rigs, compressor and generators used for RC drilling are mounted on trucks suitable for most terrains.

Both methods require the creation of a path to the drilling site, and the clearing of an approximately 12 m x 12 m drilling pad/area where the drill core and geological samples can be stored and a storage area for drill equipment, fuel and lubricants. This area is cordoned off and off-limits to those not part of the exploration team.

#### **2.1.4. Site Accessibility**

The EPL is accessible via the D2633 turn-off from the C39 road between Khorixas and Bersig. It can also be accessed via the D2650 turn-off from the C35 road between Khorixas and Kamanjab via Fransfontein. Access to the EPL through both the D2650 and D2633 roads traverses several communal farms. Therefore, project related vehicles will be using these existing roads to access the EPL. As far as is practicable, all site particularly the basecamp and drill sites shall be accessed through existing tracks, therefore no new roads or tracks will be created. It is however anticipated that access to drill sites might require new tracks, and only in cases where no other options exist, will new tracks to the different targeted exploration sites be created.

Additionally, it is highly recommended that motorized access is minimized as much as practically possible, especially during geological mapping, sampling and geophysical surveys. Overall, all access by vehicles must be limited to existing tracks while all new access routes to the drill sites should be identified, agreed upon with the landowners and demarcated prior to the commencement of drilling activities.

The roads are maintained by government contract, but the proponent may need occasional maintenance in areas close to the EPL to ensure that they are fit to accommodate project related vehicles, such as heavy trucks.

#### **2.1.5. Human Resources**

The project will be staffed by a total of 15 people during the peak of exploration. Staffing of the project will depend on the stage of exploration as outlined below:

##### ***A. Pre-Drilling***

- One geologist to supervise mapping and geochemical sampling.

- One experienced Geophysicist or Geophysical Technician to supervise the survey operations.
- Two Geophysical Operators to maintain and operate the geophysical instruments.
- Two to four semi-skilled/unskilled workers to help with sampling and the geophysical survey setup

***B. During Drilling***

- One geologist to supervise drilling.
- Two geology technicians or junior geologists to assist geologist with field and administrative duties.
- Four semi-skilled/unskilled workers to help with sample management
- Maximum of eight people operating the drill rig for the drilling contractor.

**2.1.6. Material and Equipment**

Site vehicles will be as follows:

- Four 4x4 vehicles:
  - Two for the project team (Geologists, Geophysicists, etc.)
  - Two for drilling contractor
- Two drilling rigs – RC or Diamond drilling
- One support/utility truck for moving equipment
- One water truck
- One dedicated diesel truck
- One power generator
- 4 Water storage tanks (consumption and drilling)

Equipment and vehicles will be stored at a designated area near the accommodation site, or a storage site established within the EPL area on a farm upon agreement with the land users.

### **2.1.7. Project Crew Accommodation**

The exploration crew will be accommodated in a campsite to be set up on the settlement farms within the EPL. This is subject to an agreement being reached between the Proponent and the land users. The accommodation site will be established based on the part of the EPL being worked on/explored at the time. The campsite will be cordoned off and off-limits to those not part of the exploration team. The camp will host the above-mentioned staff members.

The camp site will consist of tents, caravans and temporary ablution facilities. The predominant type of waste that will be generated during the exploration activities, in small volumes, is domestic waste (non-hazardous).

### **2.1.8. Infrastructure and Services**

#### ***A. Water***

There is both a domestic and operational need for water for the exploration team. Potable water will be required for domestic use at exploration camp, while water is also required for drilling and dust suppression where necessary. Diamond drilling is known to use 10 – 15m<sup>3</sup> per day and therefore, a water source is crucial. This water can be supplied by existing farm boreholes (with the permission of and upon reaching a water purchasing agreement with the willing landowner(s)). Alternatively, a new water borehole can be used provided that landowners have been consulted, and are in agreement.

#### ***B. Power Supply and Storage***

**Fuel Supply (Domestic):** The Proponent will provide fuel for food preparation by the site workers as well as other domestic needs. No firewood will be collected on the farms or neighboring land, without the owners' permission. Furthermore, the use of wood for fire will be kept at a minimum so as to reduce the risk of veld fires from wood sparks.

**Fuel Supply (machinery and equipment):** A 5000-litre of fuel is estimated for machinery and equipment and fuel generator, per month. The various machinery and equipment required for drilling are self-powered by means of diesel engines and or

generators, hence there is need for on-site fuel (diesel) in either small mobile bowser or barrel drums on a concrete slab at the basecamp. The drill rigs will either be re-fueled with Jerry cans or directly from the bowser.

### **2.1.9. Waste Management**

#### **A. Sewage:**

Portable chemical toilets will be used at base camp and at each drill site as they are easy to pack up should camp have to relocate. The waste water will be transported offsite to a treatment facility either by the Proponent or a designated/appointed external waste management contractor.

#### **B. General and domestic waste:**

Sufficient waste bins will be made available at the exploration camp and drill sites. The bins will be emptied into the main onsite container for disposal at the nearest landfill site, when necessary.

#### **C. Hazardous waste:**

All vehicles, machinery and fuel consuming equipment will be provided with drip trays to capture potential fuel spills and waste oils. The waste fuel/oils will be carefully stored in a standardized container until such a time that it can be disposed of at the nearest approved hazardous waste management facility.

### **2.2.0. Health and safety**

#### ***A. First Aid***

Adequate and appropriate Personal Protective Equipment (PPE) will be provided to every project personnel while on and working at the site. A minimum of two first aid kits will be readily available at exploration site to attend to potential minor injuries, while major injuries will need to be attended to further by transporting the injured to the nearest health center for treatment and needed care.

#### ***B. Fire Management***

All heavy vehicles will be fitted with a fire extinguisher. Each drilling site, including base camp will also have a dedicated fire extinguisher.

### **2.2.1. Decommissioning and Rehabilitation**

Continuous rehabilitation will be enforced, with responsibilities to be clearly assigned between the project team and the drilling contractor.

At the end of exploration, a decommissioning and rehabilitation plan will be implemented to ensure that the area is as close to its original state as possible. This rehabilitation plan which will be set out in the EMP, includes some of the following key aspects:

- Backfilling of pits and trenches used for sampling.
- Closing and capping of exploration boreholes to ensure that they do not pose a risk to both people and animals in the area.
- Levelling of stockpiled topsoil. This will be done to ensure that the disturbed land sites are left close to their original state as much as possible.

## **3. PROJECT ALTERNATIVES**

Under section 56 of the Environmental Management Act of 2007 through the regulations of 2012, alternatives in relation to a proposed activity are defined as, “different means of meeting the general purpose and requirements of the activity, which may include alternatives to -

- a. the property on which or location where it is proposed to undertake the activity;
- b. the type of activity to be undertaken;
- c. the design or layout of the activity;
- d. the technology to be used in the activity; and
- e. the operational aspects of the activity;”

### **3.1 The “No-go” Alternative**

The no-go option implies that no further activities are undertaken on the EPL. Upon expiry of the EPL period, the mineral rights will revert back to the Ministry of Mines and Energy. In this case, no exploration activities would take place on public land and there will be no negative impacts on the environment and other land users. However,

the economic growth associated with the potential resource and its exploration will not be realized, and the local community and the Namibian economy at large will fail to benefit from a potential mineral resource.

### **3.2. Project Location**

The option of alternative locations for the proposed exploration activities was assessed. This alternative generally applies to infrastructural development projects for which several sites may be available as alternatives. This flexibility does not apply for mineral exploration projects as the potential in-situ mineral resource that is of interest to the proponent is not a movable object.

Therefore, alternative project locations for exploration would default to the “no-go” option discussed in the preceding section. Hence, this would also mean that no exploration activities would take place on public land and there will be no negative impacts on the environment and other land users. Similarly, the economic growth associated with the potential resource and its exploration will not be realized, and the local community and the Namibian economy at large will fail to benefit from a potential mineral resource.

However, due to the immovable nature of the potential in-situ resource, no alternative locations were identified as the Proponent has identified the area covered by EPL8613 for prospecting.

### **3.3. Alternative exploration methods**

The exploration technologies and methods proposed for EPL8613 are based on the standard practice in the mineral exploration industry. The methods used across the whole industry have been in use since the 1960s, with periodic changes to the underlying technologies. Therefore, the scope available for alternative exploration methods and/or technologies for is limited.

## **4. LEGAL FRAMEWORK: LEGISLATION, POLICIES AND GUIDELINES**

The Republic of Namibia has a number of policies relevant to environmental assessment and protection. Through the Constitution of the Republic of Namibia (1990), provision is made for the creation and enforcement of applicable legislation.

There therefore exists several laws that were created with the intention to protect the natural environment.

This section discusses the applicable and relevant pieces of Namibian legislation, policies, national developmental plans and guidelines that have been considered in the preparation of this scoping report for the proposed activities.

#### **4.1. Applicable laws and policies**

In terms of policies relevant to environmental assessment and protection, key policies currently in force include:

- Namibia's Environmental Assessment Policy for Sustainable Development and Environmental Conservation (1994)
- The EIA Policy (1995)

Applicable laws are discussed in the following section.

##### **4.1.1. The Namibian Constitution (1990)**

Articles 91, 95 and 144 of the Namibian constitution are of particular relevance to the Scoping Exercise of the planned development.

- Part of Article 95 recites: "*The State shall actively promote and maintain the welfare of the people by adopting policies aimed at...The maintenance of ecosystems, essential ecological processes and biological diversity of Namibia and utilization of living natural resources on a sustainable basis for the benefit of all Namibians, both present and future...*".
- Article 91 in part recites, "*The functions of the Ombudsman shall be defined and prescribed by an Act of Parliament and shall include the following... 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 144 further recites, "*Unless otherwise provided by this Constitution or Act of Parliament, the general rules of public international law and international agreements binding upon Namibia under this Constitution shall form part of the law of Namibia.*"

Therefore, through the articles highlighted above, the Namibian Constitution allows for regulation of natural resources through the various legislative means that followed it.

#### **4.1.2. The Minerals (Prospecting and Mining) (Act 33 of 1992)**

The Minerals (Prospecting and Mining) (Act 33 of 1992) sets out guidelines pertaining to the responsibilities of the Proponent with respect to the proposed activities. Sections 52, 54 and 68 stipulate The Proponent's responsibility and interaction with the affected land users, the relevant competent authorities in terms of Mining and Environment agencies and the receiving natural environment.

Below is a summary of some of the important provisions in this act.

- Section 52 (1): *“The holder of a 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 private land until such time as such holder -*
    - i. *has entered into an agreement 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 waked any right to such compensation and has submitted a copy of such agreement or waiver to the Commissioner; or*
    - ii. *has been granted an ancillary right as provided in section 110(4) to exercise such rights on such land”;*
- Section 52 (1) (b) through (f) further lists conditions where the Proponent needs prior permission from the Minister and or affected land user(s) before exercising the mineral rights conferred upon them by this Act, including:
  - 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 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 an exclusive prospecting license (EPL) 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 proposed steps to be taken to prevent or minimize any such effect.

Therefore, The Proponent is obliged to:

1. Enter into a written agreement(s) with landowners before carrying out exploration on EPL8613.
2. Carry out an assessment of the impact on the receiving environment.
3. Include as part of their application for the EPL, measures by which they will rehabilitate the areas where they intend to carry out mineral exploration activities.

The Proponent may not:

1. Carry out exploration activities within the areas limited by Section 52(1) of this Act.

#### **4.1.3. The Environmental Management Act (No. 7 of 2007)**

The Environmental Management Act (2007) aims to:

- Promote the sustainable management of the environment and the use of natural resources by establishing principles for decision making on matters affecting the environment;
- To establish the Sustainable Development Advisory Council;
- To provide for the appointment of the Environmental Commissioner and environmental officers;
- To provide for a process of assessment and control of activities which may have significant effects on the environment; and to provide for incidental matters.

The Act further sets out a number of environmental objectives that;

- Guide the implementation of the Act and any other law relating to the protection of the environment;
- Serve as the general framework within which environmental plans must be formulated; and

- Serve as guidelines for any organ of state when making any decision in terms of this Act or any other law relating to the protection of the environment.

These Environmental Objectives include (non-exhaustive list):

- The option that provides the most benefit or causes the least damage to the environment as a whole, at a cost acceptable to society, in the long term as well as in the short term must be adopted to reduce the generation of waste and polluting substances at source;
- A person who causes damage to the environment must pay the costs associated with rehabilitation of damage to the environment and to human health caused by pollution, including costs for measures as are reasonably required to be implemented to prevent further environmental damage;
- Damage to the environment must be prevented and activities which cause such damage must be reduced, limited or controlled.

Therefore, 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 Environmental Clearance Certificate (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, right of other forms of authorization, and the renewal of a license, right or other form 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 activities of EPL8613 and related activities are presented in [Table 2](#).

Table 2: List of other applicable local and national laws standards governing the proposed prospecting and exploration activities.

| <b>Legislation/Policy/<br/>Guideline</b>                              | <b>Relevant Provisions</b>  | <b>Implications for this<br/>project</b>  |
|---|---|---|
| Nature Conservation Amendment Act, No. 3 of 2017                      | National Parks are established and gazetted in accordance with the Nature Conservation Ordinance, 1975 (4 of 1975), as amended. The Ordinance provides a legal framework with regards to 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 PA's and prohibits certain acts therein as well as the purposes for which permission to enter game parks and nature reserves may be granted. | The Proponent will be required to enhance the conservation of biodiversity and the maintenance of the ecological integrity of protected areas and other State land. |
| The Parks and Wildlife Management Bill of 2008                        | Aims to provide a regulatory framework for the protection, conservation, and rehabilitation of species and ecosystems, the sustainable use and sustainable management of indigenous biological resources, and the management of protected areas, to conserve biodiversity and to contribute to national development.  |   |
| Mine Health & Safety Regulations, 10th Draft                          | Makes provision for the health and safety of persons employed or otherwise present in 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 with respect to their employees.   |
| Petroleum Products and Energy Act (No. 13 of 1990) Regulations (2001) | Regulation 3(2)(b) states that "No person shall possess [sic] or store any fuel except under 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 MME for the storage of fuel onsite.  |
| The Regional Councils Act (No.22 of 1992)                             | This Act sets out the conditions under which Regional Councils must be elected and administer each delineated region. From a land use and project planning point of view, their duties include, as described in section 28 "to undertake the planning of the development of the region for which it has been established with a view to physical, social and economic   | The relevant Regional Councils are I&APs and must be consulted during the Environmental Assessment (EA) process.  |

| Legislation/Policy/<br>Guideline               | Relevant Provisions   | Implications for this<br>project  |
|--|---|---|
|  | characteristics, urbanization patterns, natural resources, economic development potential, infrastructure, land utilization pattern and sensitivity of the natural environment.   | The project site falls under the Kunene Regional Council; therefore, they should be consulted.                            |
| Water Act 54 of 1956                           | The Water Resources Management Act 11 of 2013 is presently 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 duty of care to prevent pollution (S3 (k)). Provides for control and protection of groundwater (S66 (1), (d (ii)). Liability of clean-up costs after closure/abandonment of an activity (S3 (l)). (l)).  | The protection (both quality and quantity/abstraction) of water resources should be a priority.                           |
| Water Resources Management Act (No 11 of 2013) | The Act provides for the management, protection, development, use and conservation of water resources; and provides for the regulation and monitoring of water services and to provide for incidental matters. The objects of this Act are to: 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 (Section 68). |   |
| National Heritage Act No. 27 of 2004           | 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 Heritage Register; and to provide for incidental matters.  | The Proponent should ensure compliance with these Acts requirements. The necessary management measures and                |
| The National Monuments Act (No. 28 of 1969)    | The Act enables the proclamation of national monuments and protects archaeological sites.   | related permitting requirements must be taken. This done by the consulting with the National Heritage Council of Namibia. |

| Legislation/Policy/<br>Guideline                    | Relevant Provisions   | Implications for this<br>project   |
|---|---|--|
| Soil Conservation Act (No 76 of 1969)               | 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.   |
| Forestry Act (Act No. 12 of 2001)                   | The Act provides for the management and use of forests and forest products. Section 22. (1) provides: "Unless otherwise authorized by this Act, or by a license issued under subsection (3), no person shall on any land which is not part of a surveyed erven of a local authority area as defined in section 1 of the Local Authorities Act, 1992 (Act No. 23 of 1992) cut, destroy or remove - (a) vegetation which is on a sand dune or drifting sand or on a gully unless the cutting, destruction or removal is done for the purpose of stabilizing the sand or gully; or (b) any living tree, bush or shrub growing within 100 m of a river, stream or watercourse." | The Proponent will apply for the relevant permit under this Act if it becomes necessary.   |
| Public Health Act (No. 36 of 1919)                  | Section 119 states that "no person shall cause a nuisance or shall suffer to exist on any land or premises owned or occupied by him or of which he is in charge any nuisance or other condition liable to be injurious or dangerous to health."   | The Proponent and all its employees should ensure compliance with the provisions of these legal instruments.   |
| Health and Safety Regulations GN 156/1997 (GG 1617) | Details various requirements regarding health and safety of labourers.  |  |
| Atmospheric Pollution Prevention Ordinance (1976)   | This ordinance provides for the prevention of air pollution and is affected by the Health Act 21 of 1988. Under this ordinance, the entire area of Namibia, apart from East Caprivi, is proclaimed as a controlled area for the purposes of section 4(1) (a) of the ordinance.  | The proposed project and related activities should be undertaken in such a way that they do not pollute or compromise the surrounding air quality. Mitigation measures should be put in place and implemented on site. |

| <b>Legislation/Policy/<br/>Guideline</b>       | <b>Relevant Provisions</b>   | <b>Implications for this<br/>project</b>   |
|--|--|--|
| Hazardous Substance Ordinance, No. 14 of 1974  | 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 | 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 onto existing roads, the relevant permits will be required. | Mitigation measures should be provided for, if the roads and traffic impact cannot be avoided, the relevant permits must be applied for.               |
| Labour Act (No. 6 of 1992)                     | Ministry of Labour, Industrial Relations and Employment Creation is aimed at ensuring harmonious labour relations through promoting social justice, occupational health and safety and enhanced labour market services for the benefit of all Namibians. This ministry insures effective implementation of the Labour Act No.6 of 1992.  | The Proponent should ensure that the prospecting and exploration activities do not compromise the safety and welfare of workers.                       |

## 4.2. International Policies, Treaties and Protocols

The following international treaties and protocols applicable to the project:

Table 3: List of applicable international policies, treaties and protocols

| Legislation/Policy/<br>Guideline                                  | Relevant Provisions   | Implications for this<br>project   |
|---|---|--|
| Equator Principles  | <p>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 with to apply for approved funding by Equator Principles Financial Institutions (EPFIs). The principles apply to all new project financings globally across all sectors.</p> <p><b>Principle 1:</b> Review and Categorization<br/> <b>Principle 2:</b> Environmental and Social Assessment<br/> <b>Principle 3:</b> Applicable Environmental and Social Standards<br/> <b>Principle 4:</b> Environmental and Social Management System and Equator Principles Action Plan<br/> <b>Principle 5:</b> Stakeholder Engagement<br/> <b>Principle 6:</b> Grievance Mechanism<br/> <b>Principle 7:</b> Independent Review<br/> <b>Principle 8:</b> Covenants<br/> <b>Principle 9:</b> Independent Monitoring and Reporting<br/> <b>Principle 10:</b> Reporting and Transparency</p> | <p>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 upliftment and empowering interactions.</p> |
| The International Finance Corporation (IFC) Performance Standards | <p>The International Finance Corporation’s (IFC) Sustainability Framework articulates the Corporation’s strategic commitment to sustainable development and is an integral part of 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</p>   | <p>The Performance Standards are directed towards clients, providing guidance on how to identify risks and impacts, and are designed to help avoid, mitigate, and manage</p>   |

| Legislation/Policy/<br>Guideline        | Relevant Provisions   | Implications for this<br>project   |
|---|---|--|
|   | <p>describes IFC's commitments, roles, and 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 a project Proponents to meet throughout the life of an investment. These standard requirements are briefly described below.</p> <p><b>Performance Standard 1:</b> Assessment and Management of Environmental and Social Risks and Impacts</p> <p><b>Performance Standard 2:</b> Labour and Working Conditions</p> <p><b>Performance Standard 3:</b> Resource Efficient and Pollution Prevention and Management</p> <p><b>Performance Standard 4:</b> Community Health and Safety</p> <p><b>Performance Standard 5:</b> Land Acquisition, Restrictions on Land Use, and Involuntary Resettlement</p> <p><b>Performance Standard 6:</b> Biodiversity Conservation and Sustainable Management of Living Natural Resources</p> <p><b>Performance Standard 7:</b> Indigenous Peoples/Sub-Saharan African Historically Underserved Traditional Local Communities</p> <p><b>Performance Standard 8:</b> Cultural Heritage</p> <p><b>Performance Standard 9:</b> Financial Intermediaries (FIs)</p> <p><b>Performance Standard 10:</b> Stakeholder Engagement and Information</p> <p>A full description of the IFC Standards can be obtained from</p> <p><a href="https://www.worldbank.org/en/projects-operations/environmental-and-social-framework/brief/environmental-and-social-standards?cq_ck=1522164538151#ess1">https://www.worldbank.org/en/projects-operations/environmental-and-social-framework/brief/environmental-and-social-standards?cq_ck=1522164538151#ess1</a></p> | <p>risks and impacts as a way of doing business in a sustainable way, including stakeholder engagement and disclosure obligations of the Client (Borrower) in relation to 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.</p> |
| The United Nations Convention to Combat | 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 objective is to forge a global partnership to reverse and prevent desertification/land degradation and to mitigate the   | The project activities should not be such that they contribute to desertification.   |

| <b>Legislation/Policy/<br/>Guideline</b>                                     | <b>Relevant Provisions</b>   | <b>Implications for this<br/>project</b>   |
|--|--|--|
| Desertification<br>(UNCCD) 1992  | effects of drought in affected areas to support poverty reduction and environmental sustainability United Nation Convention  |  |
| Convention on<br>Biological Diversity<br>1992                                | Regulate or manage biological resources important for the conservation of biological diversity whether within or outside protected areas, with a view to ensuring their conservation and sustainable use. Promote the protection of ecosystems, 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<br>Declaration on the<br>Human<br>Environment,<br>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.   |

Furthermore, the following international treaties and protocols have been ratified by the Namibian Government:

- Convention on International Trade and Endangered Species of Wild Fauna and Flora (CITES) (1973)
- Vienna Convention for the Protection of the Ozone Layer (1985)
- Montreal Protocol on Substances that Deplete the Ozone Layer (1987)
- Basel Convention on the Control of Transboundary Movements of Hazardous Waste and their Disposal (1989)
- United Nations Framework Convention on Climate Change (1992)
- Kyoto Protocol on the Framework Convention on Climate Change (1998)
- World Heritage Convention (1972)
- Convention to Combat Desertification (1994)
- Stockholm Convention on Persistent Organic Pollutants (2001)

#### **4.3. Permits and other requirements**

In addition to the ECC which needs to be obtained from the MEFT before the commencement of the project as stipulated in the EIA Regulations, No.30 of 2012, The Proponent needs to obtain the following permits:

- Water abstraction permit, should any existing or new borehole be required for water during diamond drilling.
- Written agreement(s) with landowners before carrying out exploration on EPL8613.
- Landowner compensation agreements before accessing any areas of the EPL.

### **5. ENVIRONMENTAL BASELINE**

This chapter will discuss the baseline socio-economic as well as the natural receiving environments in the broader setting of the area within which the EPL is located.

The baseline information presented in this section has been compiled from literature (including similar studies done in surrounding areas), the heritage specialist's report, discussions with stakeholders and from the recent site visits undertaken by the EIA project team.

## 5.1. Landscape and Topography

Namibia is divided into a number of major landscapes and land forms based on topography (relief) and drainage, as a direct result of the geological processes to which the different parts of the country have been exposed.

EPL 8613 lies above the escarpment, between the Kamanjab Plateau and Karstveld (Mendelsohn, 2003). The landscape elevation generally decreases from east to west, conformant to movement towards the coastline. A north-south traverse across the EPL shows a drop in elevation from north to south. This is marked by a descend from a fairly flat topography of gently undulating hills in the north to a ragged and mountainous landscape to the southern parts of the EPL, riddled by tributaries of the Huab river cutting across the EPL.

In general, the elevation on the EPL ranges between 630 and 1020m above mean sea level (AMSL).

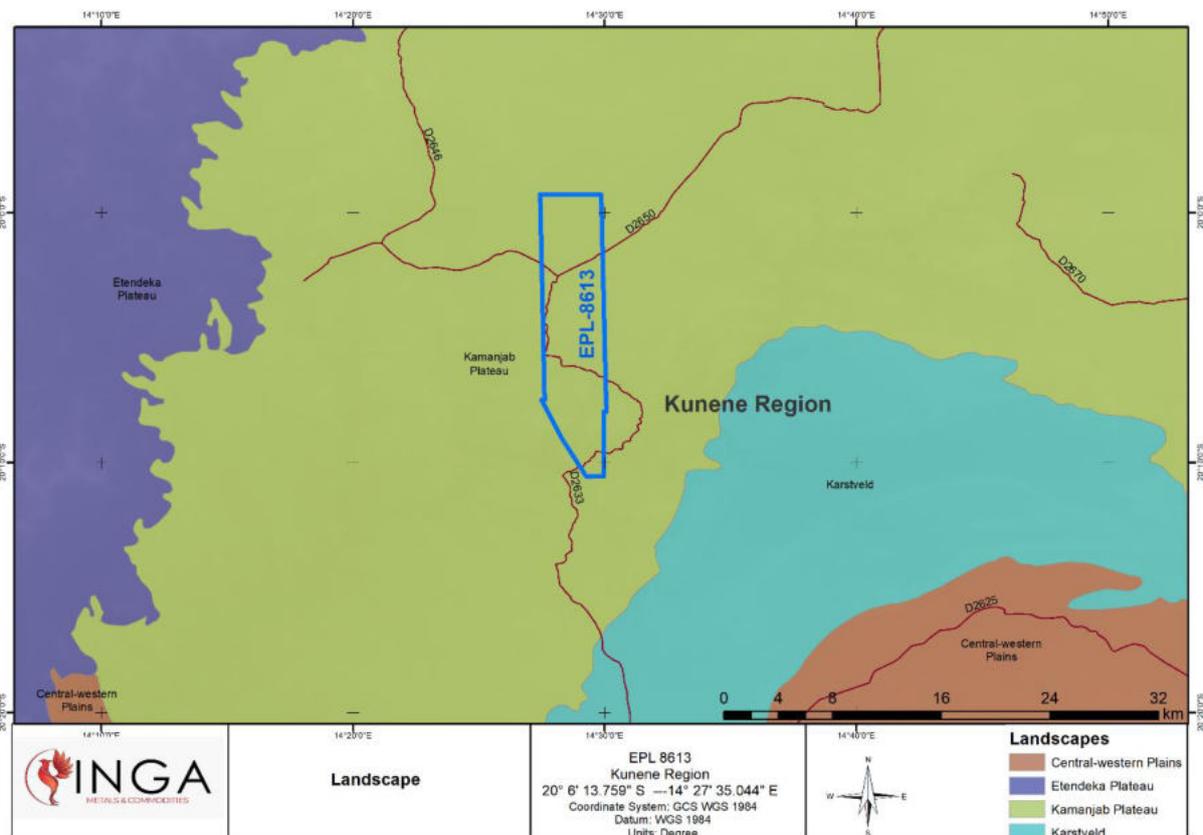


Figure 5: Landscape map of EPL 8613



Figure 6: The topography on EPL8613 grades from high-lying flat plains in the northern portion to undulating hills in the southern portion.



Figure 7: Elevation profile along a North - South cross section on the EPL8613 area. The portion within the EPL is shaded (yellow), with the Northern and Southern EPL boundaries indicated by the green and red arrows respectively. (Adopted from Google Earth)

## 5.2. Climate

While temperatures in Namibia are fairly variable, the country is generally hot and dry with sparse and erratic rainfall. Mean annual temperatures are 20.6°C (The World Bank, 2021). Maximum temperatures average around 32 - 34°C, mainly recorded during the afternoons between November and January. The north-central and north-eastern regions generally experience the highest temperatures. Minimum temperatures are around 6 - 8°C and are normally recorded during nights in June and

July. The central, eastern and southern regions generally experience the lowest temperatures.

Rainfall in the country is low and variable as demonstrated by the frequent droughts. The raining season is between October and April and is concentrated in the northern and eastern regions. Total annual rainfall is 278 mm, with a variation coefficient of 40 - 50% (Mendelsohn, et al., 2002).

### **5.2.1. Temperature**

The Konop/Kanep Pos weather station is 50km east of the EPL. Mean annual temperatures recorded in area are 23.3°C. The highest temperatures are recorded between November and March, at about 26 °C in March while the lowest temperatures of about 16.5 °C are observed in June (SASSCAL, n.d.).

### **5.2.2. Rainfall**

The raining season is between October and April in the EPL area, with peak rainfall experienced between February and March (230 mm during this period). In February 2022, rainfall in the area was recorded at 96.8 mm (SASSCAL, n.d.).

### **5.2.3. Wind**

As dictated by the rhythm of prevalent air pressure systems, the wind patterns over Namibia's interior remain fairly predictable. In the EPL area, the west and south-westerly winds are prevalent during the warmer months of September to February while east and south-easterly winds during the winter months of March to August (SASSCAL, n.d.). The mean annual wind speed in the EPL area is 1.6 m/s, with highest air movements (as high as 7.5 m/s) experienced during the afternoons and evenings (Mendelsohn, et al., 2002).

### **5.2.4. Air Quality**

Dust is the main air pollutant in the EPL area. This is generated by the movement of vehicles on the trunk roads that service the farms, as well as movement of large groups of livestock around the farms.

Smoke from burning biomass (veld fires) is also a significant contributor to air pollution, although the veld fires in the Khorixas area contributed only 7% of the total veld fires reported in the greater Kunene region between November 2021 and November 2022.

Veld fires in the Kunene region are known to start in mid-August, lasting for around 15 weeks (The World Resources Institute, n.d.).

The low density of moving vehicles, lack of major industrial activity and seasonal occurrences of veld fires suggest that the air quality in the area is good. However, no dust monitoring is currently taking place and the emissions listed above cannot be quantified.

#### **5.2.5. Noise**

EPL8613 is relatively far away from the economic centres of Khorixas and Fransfontein, and therefore unaffected by the urban noise associated with those built-up areas. As a result of the predominance of extensive agricultural activities and the rural setting around the EPL, ambient noise levels are low.

### **5.3. Geology and Soils**

EPL8613 lies within the south-western province of the palaeo-proterozoic Khoabendus Group and the associated Fransfontein Granitic Suite within the Kamanjab Inlier.

The EPL is dominated by extensive quartzites of the Tweelingskop formation, with alternating sheared acid pyroclastic rocks from the coeval intrusions.

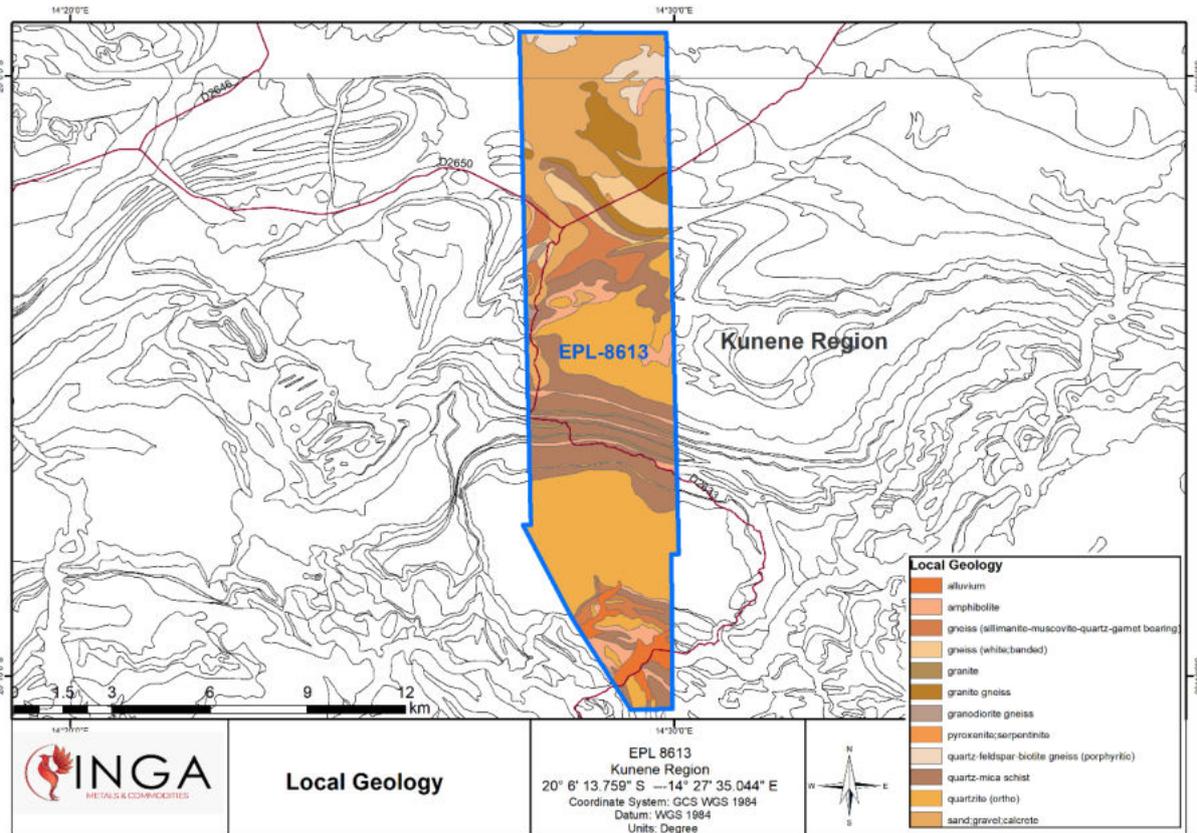


Figure 8: Geology of EPL 8613

EPL8613 is mostly covered by lithic leptosols which typically form in actively eroding landscapes such as hilly or undulating areas. Due to the close proximity of underlying hard-rock basement or intrusive rocks, lithic leptosols are characterised by their limited depth and their coarse texture due to high gravel content. As a result, the water-holding capacity of leptosols is low, and vegetation in areas in which they occur is often subject to drought. The rate of water runoff and water erosion can be high when heavy rains fall (Mendelsohn, 2003).

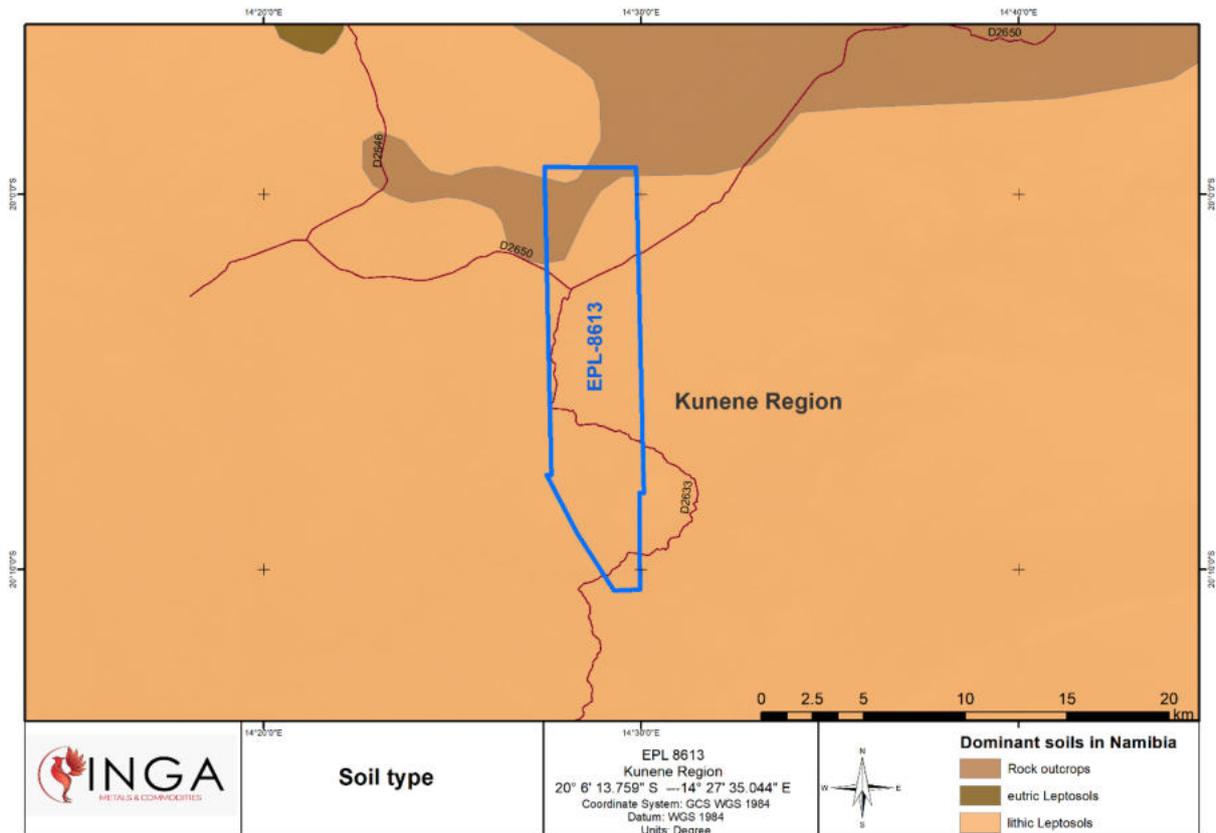


Figure 9: Soil types on EPL 8613

#### 5.4. Water Resources (Hydrology and Groundwater)

There are no permanent surface water bodies in the EPL area. The area is dissected by several watercourses, that feed into the ephemeral Huab River on the southern edge of the EPL. During rain events, water flows in the ephemeral watercourses of variable sizes, feeding into the Huab River. The washes only have water in them after heavy rainfalls for a short time (i.e., flash floods).

Groundwater is relatively deep and most farms have limited access to water. Mendelsohn et al. (2002) describes the area as having little or no groundwater. The general EPL area is underlain by rock bodies with little groundwater potential. These rocks are non-porous as they are mostly of igneous and/or metamorphic origin, and are not significantly fractured or faulted enough to hold groundwater.

However, delineation of local fractured underground water sources with moderate productivity is possible, as demonstrated by the local boreholes supplying communities in and around the EPL area.

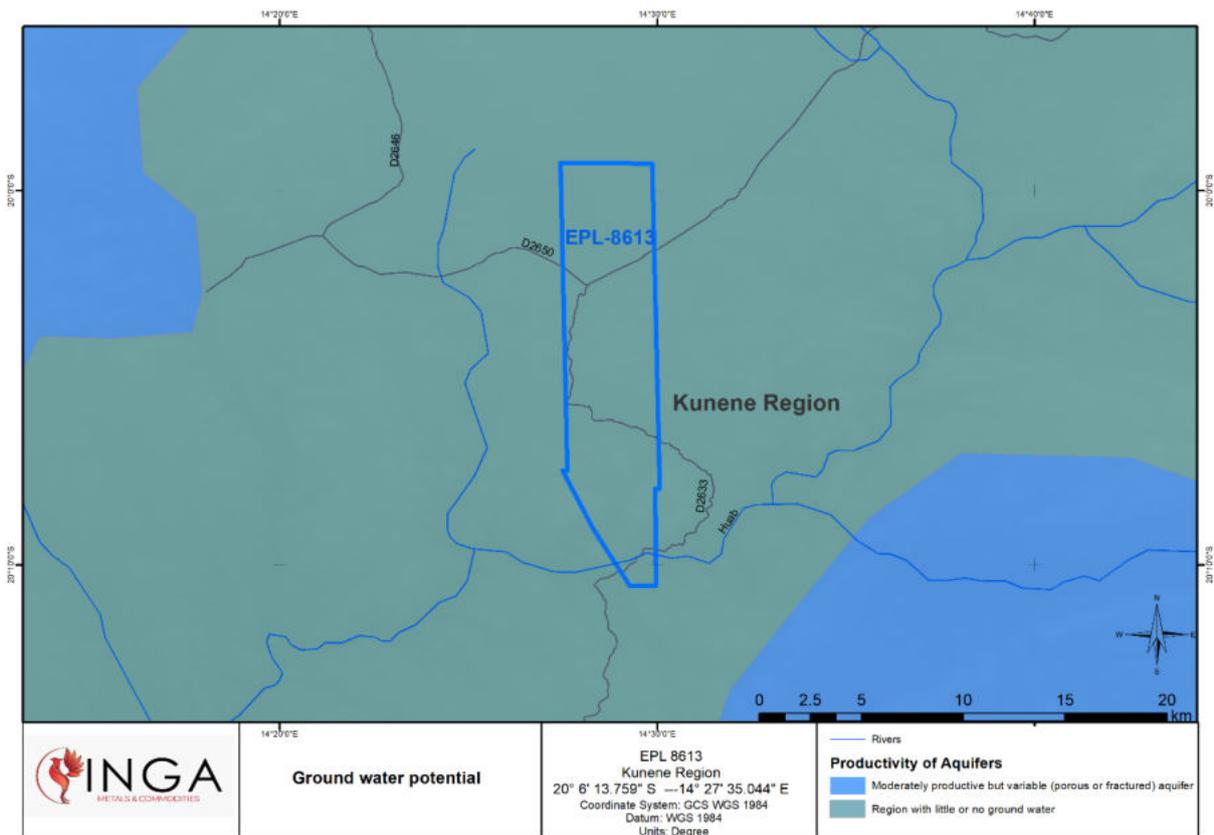


Figure 10: Ground water potential map of EPL 8613, with surface rivers.

## 5.5. Biodiversity

The overall terrestrial biodiversity of the area ranges from medium to high. The plant diversity in the biome that hosts the EPL is estimated between 150 and 299 species. The number of mammal species ranges between 61 and 75, the number of bird species is between 141 and 170, with 71 – 80 reptile species, 4 – 7 frog species and 14 – 15 scorpion species that could be expected (Mendelsohn et al., 2002).

### 5.5.1. Flora and Fauna

Vegetation in the EPL area is associated with the Western Highlands vegetation type, within the *Acacia Tree-and-shrub Savanna* sub-biome (Figure 11). This biome is characterised by large, open expanses of grasslands dotted with Acacia trees.

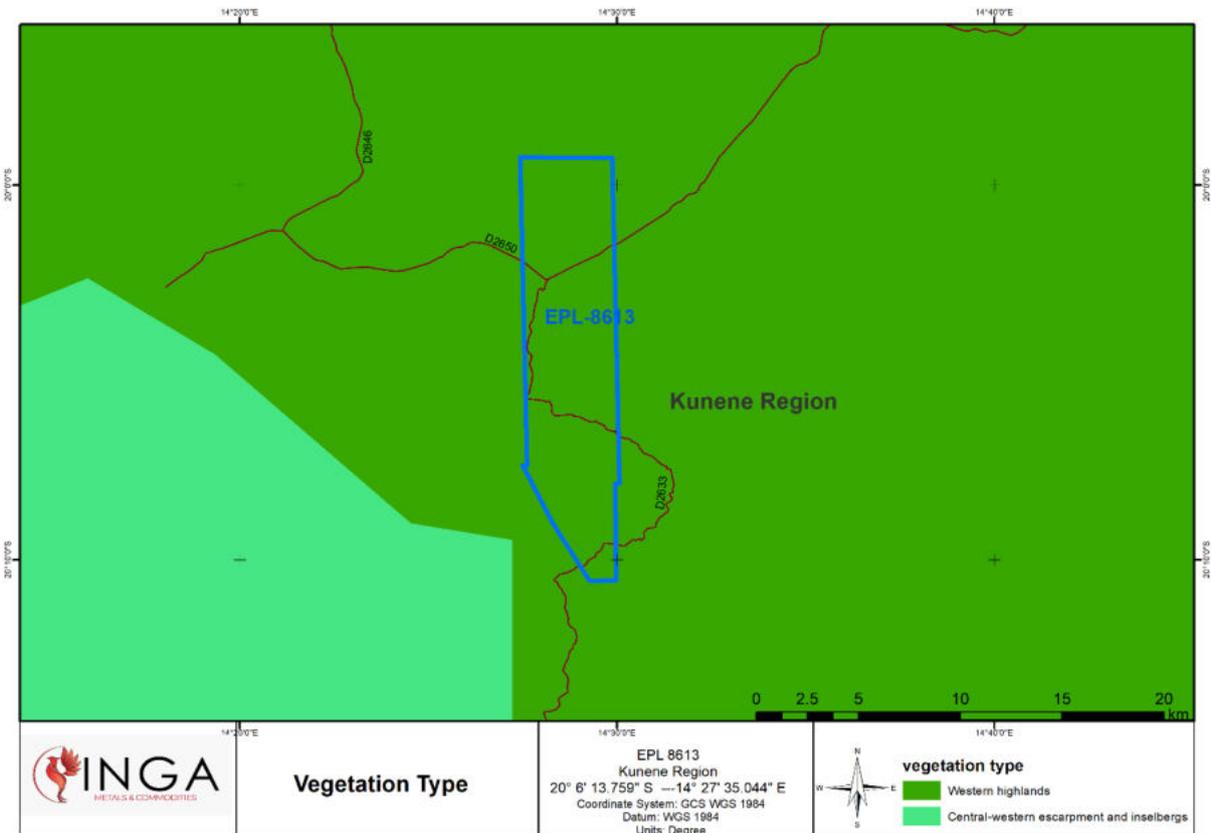


Figure 11: Vegetation type map for EPL 8613

The hilly southern portion of the EPL is dominated by the thorny obconical multi-stemmed *Acacia reficiens* species, which is locally known as the “Rooi Haak”. This species of the deciduous tree or shrub from the pea family (*Fabaceae*) is native to southern Africa, is commonly known as red-bark acacia or sometimes referred to as a red thorn or false umbrella thorn and often grows in an upside-down cone shape with a relatively flat crown. In addition to being a feed source for browsing wildlife, the tree has multiple human uses. Its branches are used for fencing, the bark used to curdle milk, while the thorns can be used to pierce ears. The seeds are baked in hot ash, crushed, ground and mixed with tobacco to use as snuff.

The *Euphorbia guerichiana* species is also common in the area. This small tree locally grows just over a meter and a half with a slender, upright canopy and appears generally on hillslopes in the area. It is also referred to as the “Paper-bark Euphorbia” because its smooth, waxy and dark brown bark tends to peel in cream-coloured to golden papery strips.

Bush density and grass composition varies across EPL 8613, which is influenced by the presence and density of livestock. Grazing resources are made up of a wide variety of grass species, which vary widely in palatability and in their abundance. Large stretches of land are affected by bush encroachment, with Mopane (*Colophospermum mopane*), Sickle bush (*Dichrostachys cinerea*), Deurmekaarbos (*Terminalia prunioides*) and Blackthorn (*Acacia mellifera*), the most abundant species.



Figure 12: Grass, scattered trees and shrubs determine the vegetation structure around EPL8613.

In terms of fauna, the EPL area is home to both domestic and wildlife. Subsistence livestock rearing is popular with cattle, sheep, goats, and horses. The border between the //Huab and #Khoadi-//Hôas conservancies cuts across the EPL, with various wildlife reported on the conservancies. These include elephant, leopard, mountain zebra, kudu, duiker, warthog, steenbok, klipspringer, ostrich, gemsbok, springbok, black rhino, black rhino, giraffe, spotted hyaena, black-backed jackal, cheetah (NACSO, n.d.).

## 5.6. Archaeology and Heritage

No previous archaeological survey has been carried out on EPL8613. An Archaeological and Heritage Impact Assessment Study for was conducted for the proposed activities on EPL 8613 (by Mabhumbo, 2022).

No sites of archaeological and/or heritage importance were identified in this study. However, the possibility of unearthing buried artefacts during the site clearing, creation of new tracks and prospecting and exploration activities exists. Therefore, it is recommended is that the Project Proponent/Developer follows the guidelines laid out in the “Chance Find Procedure” and its associated “Archaeological and Heritage Monitoring Measures” and “Archaeological and Heritage Management Plan” (Mabhumbo, 2022).

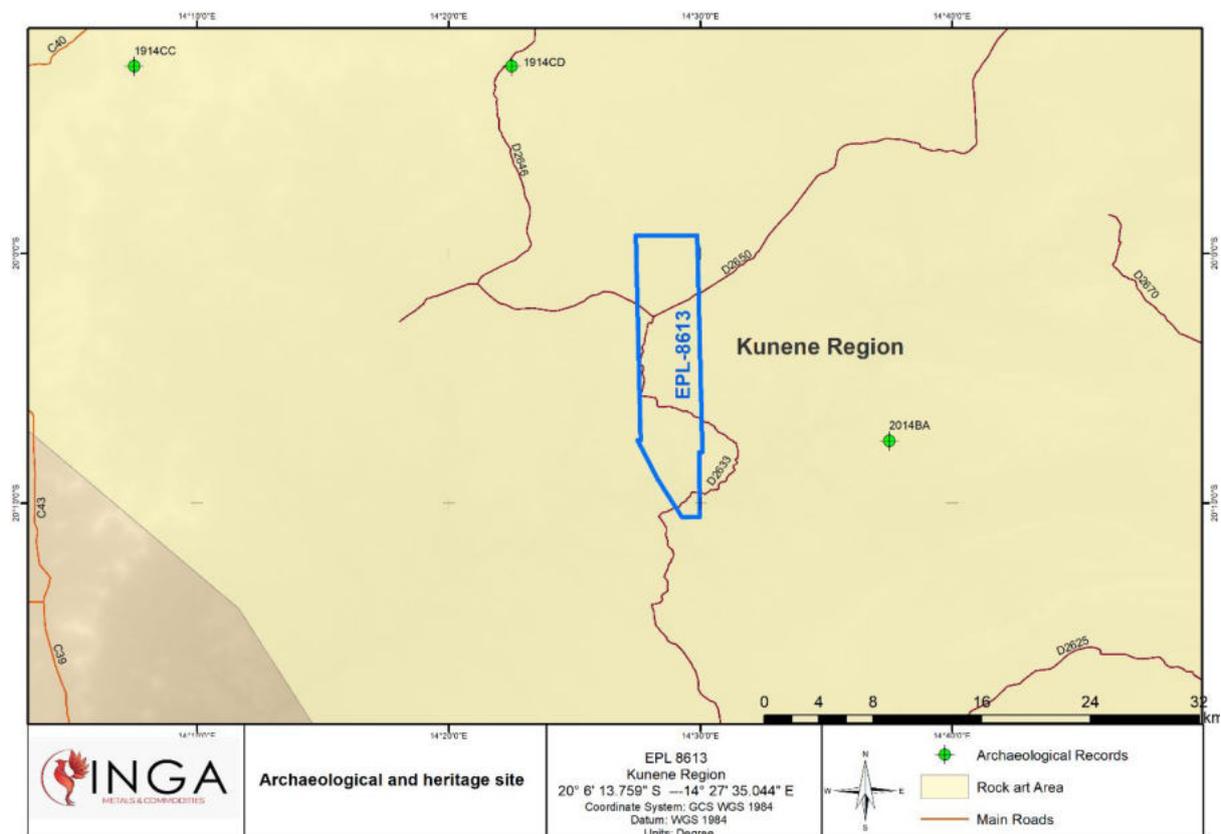


Figure 13: Archaeological and heritage site map for EPL 8613

## 5.7. Land Use

The EPLs are located on rural land that is sparsely populated. Land use on the EPL is mostly shared between communal farming and tourism. Communal farmers mainly keep livestock, which they must protect from predators in the area. The EPL is also home to two communal conservancies, the //Huab and #Khoadi-//Hôas conservancies which promote tourism through various activities.

### 5.7.1. Closest Sensitive Receptors

The EPL area stretches over 3 communal farms, Brakwater (670), Ruspoort (669) and Eersbegin (675). Therefore, the closest sensitive receptors to the proposed target areas include the residents of these three farms, as well as those on the surrounding farms (refer [Figure 1](#)).

Customary and local traditional law on the communal land that covers the EPL is administered by the local traditional authorities.

While the EPL area is sub-divided into different wards under the administration of the Swaartbooi and #Ao Daman Traditional Authorities, the #Ao Daman traditional authority is the recognized traditional authority responsible for the //Huab Conservancy.

The neighbouring land to the north of the EPL is administered by the |Gaijo-Daman Traditional Authority.

The EPL is shared between the #Khoadi-//Hôas conservancy to the north and the //Huab conservancy to the south. Communal conservancies are self-governing, democratic entities, run by their members, with fixed boundaries that are agreed with adjacent conservancies, communities or land owners. Conservancies are recognised by the MEFT, but not governed by the Ministry. The MEFT does, however, have powers to de-register a conservancy if it fails to comply with conservation regulation. Communal conservancies are obliged to have game management plans, to conduct annual general meetings, and to prepare financial reports. They are managed under committees elected by their members (NACSO, n.d.).

The local conservancies manage the aspects pertaining to the natural environment within their boundaries. The conservancies foster local economic growth by offering trophy hunting amongst other tourism activities. The #Khoadi-//Hôas Conservancy also derives income from the community-owned Grootberg Lodge, which is managed by a private sector partner.

In terms of land-use, the conservancies have further classified the land within their borders into different zones. This is to help them manage the risk and frequency of human-wildlife interactions in collaboration with the traditional authorities and all other

stakeholders. The northern part of EPL 8613 falls within the “multiple” land-use zone of the #Khoadi-//Hôas Conservancy, while the southern portion falls within the “Exclusive Wildlife Zone” of the //Huab Conservancy (Figure 14).

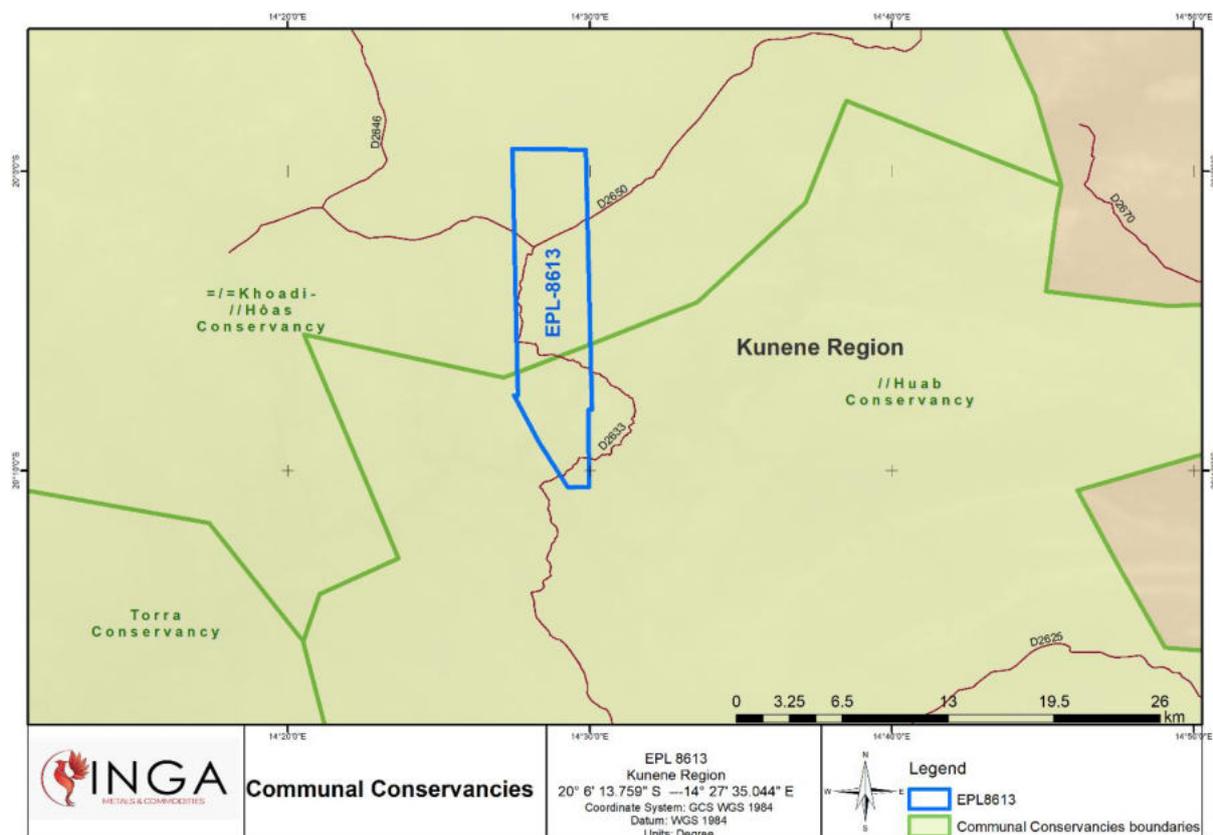


Figure 14: Communal Conservancies and land use zonation map for area covering EPL8613.

To ensure that potential receptors are identified prior to the commencement of the project, the relevant traditional chiefs and communal conservancies were identified as key stakeholders and engaged as I&APs.

**5.7.1.1. Land use conflict: Importance of tourism and the rhino population in the area**

The //Huab conservancy derives most of its income from tourism and related activities. The success of local tourism is driven by the fact that the area is home to one of the last truly free-ranging rhino populations in the world, which has allowed the local community to benefit through various means.

The //Huab Conservancy management, through a partnership with a private Joint Venture tourism partner, Ultimate Safaris have been able to achieve significant benefits to both the local community and local conservation efforts through

conservation levies and the support of the Conservation Travel Foundation Ultimate Safaris Namibia. (n.d.). Furthermore, the Rhino population has also generated jobs for the local community in terms of conservation efforts, through programmes aimed at shifting the rhino conservation agenda from what has been historically a government and NGO-led initiative to a more community-driven approach. This has yielded groups such as the conservancy rhino rangers, amongst others, which offer employment to local youths. These initiatives are supported by NPOs and NGOs such as the Community Conservation Fund of Namibia (CCFN), Save the Rhino Trust (SRT) and the Namibian Association of Community Based Natural Resource Management (CBNRM) Support Organisations (NACSO) and the Namibia Nature Foundation (NNF), amongst others. Therefore, the importance of the black rhino population to the local community cannot be under estimated.

The portion of EPL8613 that lies within the //Huab Conservancy is zoned as an “Exclusive Wildlife Zone: Tourism Only (No Hunting)” (Figure 15), and potentially holds some of the black rhino population in the area. Therefore, the MME, with the advice of the MEFT revised and modified the proposed shape for EPL 8613 as applied for by the proponent before provisional approval in an effort to mitigate or minimize the interaction between exploration and rhino conservation activities. The modification of the EPL 8613 entailed the exclusion of a westward’s extension into Farm Noute 674 (Figure 16), with the provisionally approved EPL 8613’s south-western boundary revised to run along the border of farms Eersbegin 675 and Noute 674 (Figure 17). The reason for the revision of the EPL shape as laid out above was verbally communicated to the Proponent upon enquiring at the MME. Further consultations and probing by the EAP revealed that the EPL shape revision by the MME could further have been influenced by a conflict between the //Huab Conservancy management and a mining operation on farm Mesopotamie 504. According to a press release by the //Huab Conservancy Management Committee titled “//Huab Conservancy prepares to take Minister Pohamba Shifeta to court” (4 February 2023), the conservancy management committee alleges that the mining operations have forced the displacement of the local rhino population away from the area, resulting in the closure of the “Huab Under Canvas” lodge by its operator, Ultimate Safaris. The move which has resulted in the loss of the main source of income in the area, could potentially

escalate into a legal matter between the conservancy and the minister of Environment, Forestry and Tourism amongst others.

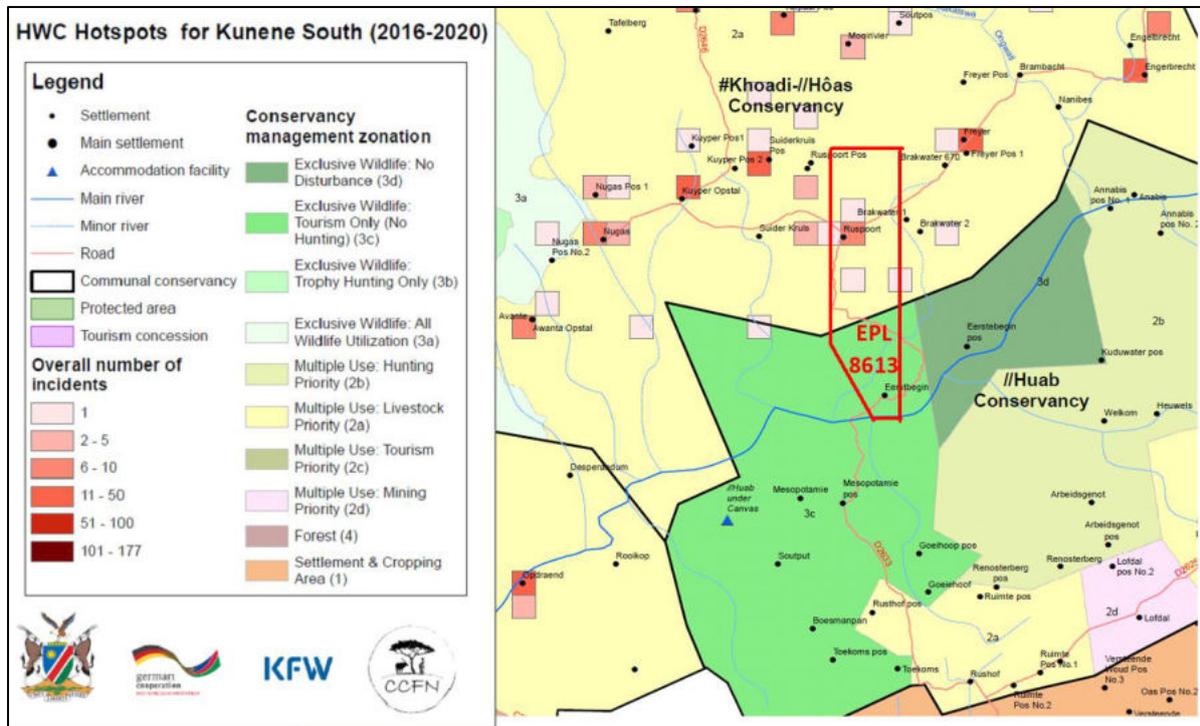


Figure 15: Land use zonation map for the #Khoadi-//Hôas and //Huab conservancies as relates to EPL 8613. Adapted from a Regional Human-Wildlife Conflict (HWC) map for Kunene South (2016 – 2022), as compiled by Community Conservation Fund of Namibia (CCFN).



## **5.8. Socio-Economic Status**

The Kunene Region is home to various Namibian ethnic groups, including the World-renowned OvaHimba people. The OvaHimba are a semi-nomadic, pastoralist people who have base homesteads where crops are cultivated, but may have to move within the year depending on rainfall and where there is access to water. The OvaHimba people and their traditions, the rugged nature of the greater Kunene region and the diverse wildlife of the region make it a popular tourist destination. The southern Kunene is home to Damara, OvaHerero and Hai//om inhabitants. The EPL area is dominated by Damara people, followed by the OvaHerero.

About 46% of the Namibia's conservancies are in the Kunene Region, highlighting the abundance and diversity of wildlife in the region.

The Kunene region is also home to numerous small mineral deposits, mostly Copper and some exploration and mining experts compare the Kaoko belt to world-class Copper belts such as the Central African Copper belt. Small scale mining within communities is therefore also prevalent.

### **5.8.1. Population**

The Kunene Region has a population of 86 856 people (34,237 females and 34,487 males), accounting to a 4.1% of the country's total population of Namibia of 2,104,900 in 2011 (Namibia Statistics Agency, 2021).

### **5.8.2. Infrastructure and Services**

The region has good coverage of basic services such as good road networks needed for transportation of goods and satisfactory telecommunication coverage. Water and electrical services are also available in the region, although quality of supply is concentrated around urban centres in the region.

Local to the EPL area, services such as schools, clinics, police stations and traditional authority offices are present.

### **5.8.3. Economy**

The region comprises seven constituencies. Economic activity in the region is concentrated within the four main urban centres of Opuwo, Khorixas, Kamanjab and Outjo. Opuwo is the administrative capital of the Region, housing the offices of the Kunene Regional Council.

The local economy is driven by the various modes of the proceeds of local tourism and the trading of farming and agricultural yields. These two main activities drive the economic engine of the region, enabling the emergence of a booming wholesale and retail market and public administration sector, among others.

The National Census of 2011 lists wages and salaries (41%) and farming (31.6%) as the two main sources of income in the Kunene region (Figure 18). The two are followed by “Business Activity (Not Farming)” 10 (Namibia Statistics Agency, 2014).

| Area       | Households | Farming | Business Activity - Not Farming | Wages and Salaries | Old-Age Pension | Cash Remittances | Retirement Fund | Orphan's Grant | Disability Grant | Other |
|------------|------------|---------|---------------------------------|--------------------|-----------------|------------------|-----------------|----------------|------------------|-------|
| Kunene     | 18 495     | 31.6    | 7.7                             | 41.0               | 11.0            | 5.2              | 0.7             | 0.5            | 0.7              | 1.6   |
| Urban      | 5 716      | 6.3     | 14.3                            | 53.6               | 11.2            | 9.0              | 1.6             | 0.8            | 0.9              | 2.3   |
| Rural      | 12 779     | 42.9    | 4.8                             | 35.3               | 10.9            | 3.5              | 0.4             | 0.4            | 0.6              | 1.2   |
| Epupa      | 2 781      | 77.7    | 5.1                             | 6.2                | 7.6             | 1.1              | 0.1             | 0.5            | 0.6              | 1.1   |
| Kamanjab   | 2 391      | 8.9     | 4.6                             | 74.7               | 6.5             | 2.7              | 0.2             | 0.1            | 0.1              | 2.0   |
| Khorixas   | 3 132      | 12.0    | 7.7                             | 45.5               | 19.3            | 9.0              | 2.0             | 0.7            | 1.2              | 2.6   |
| Opuwo      | 5 178      | 46.6    | 11.6                            | 27.0               | 9.2             | 3.4              | 0.4             | 0.5            | 0.5              | 0.9   |
| Outjo      | 3 279      | 5.2     | 6.8                             | 65.8               | 9.4             | 9.1              | 1.0             | 0.7            | 0.9              | 1.2   |
| Sesfontein | 1 734      | 29.9    | 6.2                             | 36.6               | 16.3            | 6.2              | 0.7             | 0.7            | 1.0              | 2.5   |

Figure 18: Percent distribution of households by main source of income and area (Namibia Statistics Agency, 2011)

There is no further classification of the sources of the wages and salaries, although it can be attributed to tourism as inferred in Figure 19 below. A Census of Business Establishments in the Kunene region was conducted by the Namibia Statistics Agency from October 2019 to April 2021. It covered all business establishments countrywide with a fixed location, irrespective of the number of employees except for open market and communal farming activities. In addition, establishments that were attached to household structures were excluded (Namibia Statistics Agency, 2022).

| Sector  | Year interval   |             |             |             |             | Total number of establishments |
|---|-----------------|-------------|-------------|-------------|-------------|--------------------------------|
|   | 2013 and before | 2014 - 2015 | 2016 - 2017 | 2018 - 2019 | 2020 - 2021 |                                |
| Agriculture, forestry, and fishing                      | 11              | 3           | 1           | 5           | -           | 20                             |
| Mining and quarrying                                    | 1               | -           | 1           | -           | 1           | 3                              |
| Manufacturing   | 25              | 2           | 6           | 9           | 6           | 48                             |
| Water supply  | 3               | -           | -           | 3           | -           | 6                              |
| Construction  | 6               | 1           | 2           | -           | -           | 9                              |
| Wholesale and retail trade                              | 181             | 54          | 66          | 147         | 76          | 524                            |
| Transportation and storage                              | 6               | 4           | 1           | 1           | -           | 12                             |
| Accommodation and food service activities               | 169             | 45          | 52          | 80          | 45          | 391                            |
| Information and communication                           | 4               | 1           | 1           | 1           | -           | 7                              |
| Financial and insurance activities                      | 9               | 1           | -           | 9           | 1           | 20                             |
| Professional, scientific, and technical activities      | 7               | -           | 2           | 7           | -           | 16                             |
| Administrative and support service activities           | 13              | 2           | 3           | 1           | -           | 19                             |
| Public administration and defence                       | 55              | 6           | 3           | 10          | -           | 74                             |
| Education   | 92              | 8           | 3           | 14          | 1           | 118                            |
| Human health and social work activities                 | 23              | 4           | 3           | 8           | -           | 38                             |
| Arts, entertainment, and recreation                     | 6               | 1           | 1           | 2           | 1           | 11                             |
| Other service activities                                | 41              | 10          | 10          | 24          | 6           | 91                             |
| Activities of extraterritorial organizations and bodies | -               | -           | -           | -           | -           | -                              |
| <b>Kunene region</b>                                    | <b>652</b>      | <b>142</b>  | <b>155</b>  | <b>321</b>  | <b>137</b>  | <b>1,407</b>                   |

Figure 19: Distribution of business establishments by starting period of operations and economic activities in the Kunene region (Namibia Statistics Agency, 2022).

The emergence of organized, small-scale mining has also proven to be a contributor to economic activity, although marginally so. Exploration companies have taken note of the mineral potential of the region in recent years, with conventional exploration activities on the rise in the area.

## **6. PUBLIC CONSULTATION PROCESS**

In terms of the Environmental Management Act (Act no. 7 of 2007) as well as the Environmental Impact Assessment Regulations (Government Notice No.30 of 2012), interested and affected persons (I&AP) must be consulted and involved in the EIA process through a Public Consultation Process.

Public consultation is an essential component of an EIA process. It provides potential I&APs an opportunity to comment on and raise any issues relevant to the project for consideration as part of the assessment process. These consultations therefore allow the I&APs to assist the EAP in identifying all the potential impacts and the extent to which investigations are necessary. Public consultations also serve in the process of identifying possible mitigation measures.

Public consultation for this project has been done under 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, local leaders, 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 more than two widely read national newspapers in the region (The Namibian Newspaper and the Namibia Media Holdings group of newspapers (The Namibian Sun, Die Republikein, Allgemeine Zeitung, among others)). The project advertisement/announcement ran for two consecutive weeks inviting members of the public to register as I&APs and submit their comments. The summary of pre-identified and registered I&APs is listed in [Table 4](#) below and the complete list of I&APs is provided in Appendix I.

Table 4: Summary of Interested and Affected Parties (I&APs)

| <b>National (Ministries and State-Owned Enterprises)</b>   |
|--|
| Ministries of: Environment, Forestry & Tourism; Mines & Energy, Agriculture; Water & Land Reform; Works & Transport; Urban and Rural Development |
| Urban and Rural Development; Labor, Industrial Relations & Employment Creation   |
| National Heritage Council of Namibia   |
| Roads Authority  |
| <b>Regional, and Local Authorities</b>   |
| Kunene Regional Council  |
| Khorixas Constituency  |
| Swartbooi Traditional Authority  |
| Gaio-Daman Traditional Authority   |
| <b>General Public</b>  |
| Land users   |
| Interested members of the public   |
| Namibian Chamber of Environment (NCE)  |

## 6.2. Communication with I&APs

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

- A Background Information Document (BID) containing brief information about the proposed facility was compiled (Appendix F) and sent by e-mail to all pre-identified I&APs.
- Project Environmental Assessment notices were published in The Namibian and the Namibia Media Holdings group of newspapers (The Namibian Sun, Die Republikein, Allgemeine Zeitung) dated 25 August 2022 and 02 September 2022 (Appendix I), briefly explaining the activity and its locality, inviting members of the public to register as I&APs and submit their comments/concerns.
- Consultation meetings were scheduled and held with the affected land users as follows:

- On the 10th of September 2022 at the Swartbooi Traditional Authority Office in Fransfontein at 11h30 (Figure 21).
- On the 11th of September 2022 at the |Gaiio-Daman Traditional Authority Office in Anker at 10h00 (Figure 22).
- Draft Environmental Scoping (ESR) and Environmental Management Plan (EMP) reports were circulated with I&APs on 7 February 2024. It was noted in I&AP feedback that there was reduced representation from the conservancies in the first round of the consultations. Follow-up meetings were set up to address this, and were held as follows:
  - 24th February 2023 – with the management committee of the #Khoadi-//Hôas conservancy at Anker.
  - 25th February 2023 – with management committee of the //Huab conservancy at Khorixas.
- A final round of meetings was held to clarify provisions in the draft EMP as follows:
  - 12th October 2023 – with management committee of the //Huab conservancy and representatives of the MEFT at the MEFT Office in Khorixas.
  - 13th October 2023 – with one member of the #Khoadi-//Hôas conservancy management committee and residents of Ruspoort settlement, which is the largest covered communal farm/settlement in the EPL8613.

The consultation meeting minutes were taken and are attached as Appendix I.



Figure 20: Site notices placed at the Swartbooi Traditional Authority office in Fransfontein (top left), Choppies Supermarket in Khorixas (top right), and Khorixas Police Station (bottom)



Figure 21: Swartbooi Traditional Office in Fransfontein where the first meeting was held (top left) and the EAP addressing attendees of the meeting (top right and bottom).



Figure 22: The venue of the second meeting at the |Gao Daman Traditional Office in Anker (top left) and the Traditional Authority representative welcoming attendees to the meeting (top right and bottom).

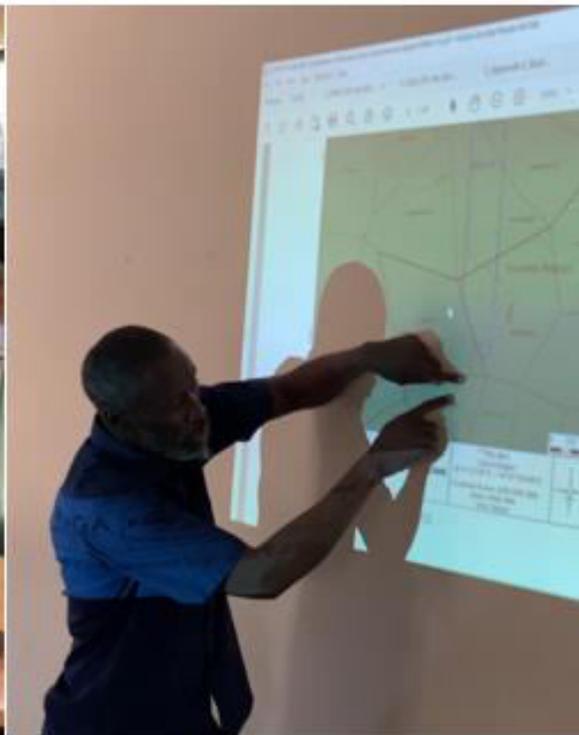


Figure 23: The follow-up meetings held with the management committees of the #Khoadi-//Hôas (top frame) and //Huab conservancies (bottom) on the 24th and 25th February 2023 respectively.

### 6.3. Feedback from Interested and Affected Parties

Issues raised by I&APs during the consultation meetings were recorded and incorporated in the ESA Report and EMP. The main concerns raised are summarised in [Table 5](#) below. Detailed concerns raised and responses by EAP are attached in Appendix I.

Table 5: Summary of main concerns and comments received during the public meeting

| <b>Issues</b>                                | <b>Concerns</b>  |
|--|--|
| Conflict between EPL and Mining Claim owners | EPLs are given over areas where mining claims exist, causing conflict  |
| Benefit to local communities                 | This area has a high number of unemployment and the project proponent must ensure that local individuals and organizations are prioritized for employment  |
| Co-existence                                 | Project team must consult with local communities before and during project execution to avoid conflict. Exploration Camp/s must be set up close to existing settlements to avoid allegations of poaching, should any arise during the time.  |
| Impact on wildlife                           | Potential loss of habitat or displacement of wildlife (especially black rhino) due to presence of exploration equipment. This concern is elevated by the mining activities at Mesopotamie 504, which disrupted the nearby black rhino population and impacted on the associated conservation activities. |

## **7. IMPACT IDENTIFICATION, ASSESSMENT AND MITIGATION MEASURES**

In addition to the positive benefits being sought through the proposed activities, exploration activities also have the potential to negatively impact on the environment. Environmental aspects and potential impacts relating to the proposed exploration activities have been identified as part of the EIA Scoping process and presented in this section, taking the current environment into consideration.

### **7.1. Impact Identification**

#### **7.1.1. Positive impacts**

- Boosting the local economic growth and regional economic development
- Socio-economic development through employment creation (primary, secondary, and tertiary employment) and skills transfer,
- Produce a trained workforce and small businesses that can service communities and may initiate related businesses,
- Open other investment opportunities and infrastructure-related development benefits,
- Potential for handing over any water boreholes to communities after project completion. Boreholes within wildlife zones may be become new water holes for wildlife.
- Increased support for local businesses through the procurement of consumable items such as Personal Protective Equipment (PPE), machinery spare parts, lubricants, foodstuff (meat, vegetables).

#### **7.1.2. Negative impacts**

- **Biodiversity:**
  - Potential disturbance of existing pastoral systems (grazing areas),
  - Physical land/soil disturbance (pollution),
  - Impact on local biodiversity (fauna and flora) and habitat disturbance, especially with respect to the black rhino populations in the area
- **Water Resources:**
  - Potential impact on water resources
    - Pollution by spillages

- Strain on existing water resources
- **Air Quality:**
  - Potential impact on air quality by dust and vehicle exhaust,
- **Services and Public Safety:**
  - Vehicular traffic and pedestrian safety and impact on services infrastructure such as local roads,
- **Noise:**
  - Vibrations and noise associated with exploration activities may be a nuisance to locals,
- **Heritage:**
  - Impact on archaeological or cultural heritage resources,
- **Socio-economic and land use:**
  - Loss of land capability due to site clearance
  - Potential increase in illegal wildlife hunting in the area, with poachers posing under the guise of the exploration project
  - Loss of income due to loss of biodiversity
  - Potential social nuisance and conflicts between affected farmers / landowners and or neighbouring land users and Proponent.

## 7.2. Impact Assessment Methodology

The proposed exploration activities on the EPL 8613 have the potential to impact on the environment. Environmental aspects and potential impacts were identified by the environmental team during the screening and scoping phases, in consultation with I&APs. The potential impacts were then qualitatively assessed as discussed in this section.

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 7](#). 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.
- Qualitative assessment of the significance of the impact without and with mitigation; and
- Description of recommended mitigation measures (**Error! Reference source not found.**)

The impact assessment method used for this project is in accordance with Namibia's Environmental Management Act (No. 7 of 2007) and its Regulations of 2012, as well as the International Finance Corporation (IFC) Performance Standards.

Table 6: Impact assessment criteria and the method of determining the significance of the impacts

| <b>Ranking the EXTENT</b>   |   |
|---|---|
| The physical and spatial scale of the impact  |   |
| Low (1)   | Impact is localized within the site boundary: <b>Site only</b>  |
| Low/Medium (2)  | Impact is beyond the site boundary: <b>Local</b>  |
| Medium (3)  | Impacts felt within adjacent biophysical and social environments (e.g., coast, basin, catchment, municipal region, district, etc.): <b>Regional</b> |
| Medium/High (4)   | Impacts extend beyond district or regional boundaries with national implications: <b>National</b>   |
| High (5)  | Impact extends beyond the national scale or may be transboundary: <b>International</b>  |
| <b>Ranking the DURATION</b>   |   |
| The timeframe over which the impact is expected to occur, measured in relation to the lifetime of the project |   |
| Low (1)   | Immediate mitigating measures, immediate progress (0-1 years)   |
| Low/Medium (2)  | Impact is quickly reversible, short-term impacts (1-3 years)  |
| Medium (3)  | Reversible over time; medium term (3-5 years)   |
| Medium/High (4)   | Impact is long-term (Life of the project)   |
| High (5)  | Long term; beyond closure; permanent; irreplaceable or Irretrievable commitment of resources  |
| <b>Ranking the NATURE and INTENSITY</b>   |   |
| The degree or magnitude to which the impact alters the functioning of an element of the environment           |   |
| Low (1)   | Minor deterioration, nuisance or irritation, minor change in species/habitat/diversity or resource, no or very little quality deterioration         |
| Low/Medium (2)  | Low deterioration, slight noticeable alteration in habitat and biodiversity. Little loss in species numbers   |
| Medium (3)  | Moderate deterioration, discomfort, partial loss of habitat/biodiversity or resource, moderate alteration   |

|                 |   |
|-----------------|---|
| Medium/High (4) | Substantial deterioration, death, illness or injury, loss of habitat/diversity or resource, severe alteration or disturbance of important processes             |
| High (5)        | Very high deterioration, high quantity of deaths, injury of illness/total loss of habitat, total alteration of ecological processes, extinction of rare species |

### Ranking the PROBABILITY

The likelihood of the impacts occurring (based on previous experience with similar projects and/or based on professional judgment)

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

### SIGNIFICANCE

The significance of the impact “without mitigation” is the main determinant of the nature and degree of mitigation required. Determined through a synthesis of the rankings of the above impact characteristics, carried through the formula:

$$\text{SIGNIFICANCE POINTS (SP)} = (\text{EXTENT} + \text{DURATION} + \text{INTENSITY}) \times \text{PROBABILITY}$$

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

| Significance      | Environmental Significance Points | Colour Code |
|-------------------|-----------------------------------|-------------|
| High (positive)   | >60                               | H           |
| Medium (positive) | 30 to 60                          | M           |
| Low (positive)    | 1 to 29                           | L           |
| Neutral           | 0                                 | N           |
| Low (negative)    | -1 to -29                         | L           |
| Medium (negative) | -30 to -60                        | M           |
| High (negative)   | < -60                             | H           |

### 7.3. Assessment of Potential Negative (Adverse) Impacts

Table 7: Environmental aspects and potential impacts associated with the proposed exploration activities on EPL 8613

| Activity   | Aspect       | Potential Environment Impact   | Significance Discussion  | Ref | With and Without mitigation | Extent  | Duration | Nature and intensity | Probability | Significance |
|--|--------------|--|--|-----|-----------------------------|---------|----------|----------------------|-------------|--------------|
| <b>Geological studies, field mapping, rock and soil sampling</b>     |              |  |  |     |                             |         |          |                      |             |              |
| Field mapping, ground geophysical surveys and rock and soil sampling | Biodiversity | Potential impact on fauna and flora (general disturbance and clearing of vegetation) | Disturbance of natural vegetation may occur as vehicles may have to drive off-road to access certain areas. However, it is of a very small scale, non-invasive, involving a limited number of vehicles. It is unlikely that significant clearing activities are used. In the case of dense stands of common species (e.g., Acacia, Mopane and Dichrostachys cinerea) access to the specific areas will be on foot. Cutting down any species will be avoided.   | 1   | Without                     | L/M: -2 | L/M: -2  | L/M: -2              | M/H: 4      | L: -24       |
|  |              |  |  |     | With                        | L: -1   | L: -1    | L: -1                | M: 3        | L: -9        |
|  | Air quality  | Increase in dust levels (nuisance and health impacts)                                | Where vehicles travel close to homesteads, the dust from the gravel tracks might be a nuisance to the people. Air pollution through vehicle emissions (i.e., exhaust fumes) and dust is, however, expected to be negligible due to the small scale of the project and limited number of vehicles to be used.   | 2   | Without                     | L/M: -2 | L/M: -2  | L: -1                | M/H: 4      | L: -20       |
|  |              |  |  |     | With                        | L: -1   | L: -1    | L: -1                | M: 3        | L: -9        |
|  | Heritage     | Activities could result in possible damage to or destruction of heritage resources   | With reference to Section 5.6, no known archaeological /heritage sites were identified within EPL 8613. However, the EPL is regarded as archaeologically sensitive and hidden and buried sites might be exposed as the project proceeds. Although unlikely, exploration activities could result in possible damage to or destruction of heritage sites. With the implementation of mitigation measures under the EMP as well as the applying of a Chance Finds Procedure, this risk can be reduced to low. | 3   | Without                     | L: -1   | M: -3    | H: -5                | M/H: 4      | M: -36       |
|  |              |  |  |     | With                        | L: -1   | L/M: -2  | M: -3                | M: 3        | L: -18       |

| Activity  | Aspect       | Potential Environment Impact  | Significance Discussion   | Ref | With and Without mitigation | Extent  | Duration | Nature and intensity | Probability | Significance |
|---|--------------|---|---|-----|-----------------------------|---------|----------|----------------------|-------------|--------------|
| <b>Drilling</b>   |              |   |   |     |                             |         |          |                      |             |              |
| Drill site establishment:<br><br><ul style="list-style-type: none"> <li>• Access the drill site (possibly creating a new access track)</li> <li>• Set-up drilling machine with drip trays and groundsheets</li> <li>• Establish temporary safety fencing around the drill site</li> <li>• Set-up portable toilet and ablution facilities</li> </ul> | Noise        | Noise generated by the establishment of access tracks and drill site.   | Should the activities take place in close proximity to a residence, the noise from these activities might be a nuisance impact.   | 4   | Without                     | L: -1   | L: -1    | M: -3                | M/H: 4      | L: -20       |
|   |              |   |   |     | With                        | L: -1   | L: -1    | L/M: -2              | M: 3        | L: -12       |
|   | Biodiversity | Potential impacts on fauna and flora (general disturbance and clearing of vegetation).<br>Potential loss of habitat for fauna due to presence of exploration equipment. Unsupervised drilling personnel can impact on the biodiversity through illegal collection of firewood, poaching, road kills, off-road driving, etc. | Due to the fact that the activities are relatively small-scale and the fact that the exploration team will not be very big, potential poaching, road kills and collection of firewood and organisms can easily be managed through appropriate management and mitigation measures outlined in the EMP, including supervision. Could result in possible loss of land available for livestock farming, however at a small scale. See also Impact Reference 1.<br>Potential loss of habitat or displacement of fauna (especially black rhino) due to presence of exploration equipment. This is mitigated by limiting the number of equipment operating in wildlife zones, prohibition of blasting and trenching activities, operating at controlled schedules, prohibition of camping within exclusive wildlife zones, aligning operational plans and schedules to animal locations and movements (conservancy approval of drill holes before commencement), and adhering to strict operational schedules. | 5   | Without                     | M/H: -4 | H: -5    | H: -5                | H: 5        | H: -75       |
|   |              |   |   |     | With                        | M: -3   | M: -3    | M/H: -4              | M: 3        | M: -30       |
|   | Heritage     | Exploration activities could result in possible damage to or destruction of heritage resources.   | See Impact Reference 3  | 6   | Without                     | L: -1   | M: -3    | H: -5                | M/H: 4      | M: -36       |
|   |              |   |   |     | With                        | L: -1   | L/M: -2  | M: -3                | M: 3        | L: -18       |
|   | Land use     |   |   | 7   | Without                     | L:      | M:       | H:                   | H:          | M:           |

| Activity   | Aspect   | Potential Environment Impact  | Significance Discussion   | Ref     | With and Without mitigation | Extent     | Duration   | Nature and intensity | Probability | Significance |
|--|--|---|---|---------|-----------------------------|------------|------------|----------------------|-------------|--------------|
|  |  |   |   |         |                             |            |            |                      |             |              |
|  |  | Loss off land capability due to site clearance.   | Possible loss of grazing- or agricultural land. The rehabilitation of the site will allow for the continued use for grazing and or agricultural activities.                         |         |                             | -1         | -3         | -4                   | 5           | -40          |
|  |  |   |   |         | With                        | L/M:<br>-2 | L:<br>-1   | L:<br>-1             | M:<br>3     | L:<br>-12    |
| Drilling   | Spillages of hydrocarbons, lubricants, or possible spills from portable toilet and ablation facilities                   | Soil pollution  | Soil loss and contamination could have an impact on grazing animals. However, the area to be disturbed is very localized and on a small-scale, and impacts can be easily mitigated. | 8       | Without                     | L/M:<br>-2 | M/H:<br>-4 | M/H:<br>-4           | M/H:<br>4   | L:<br>-40    |
|  |  |   |   |         | With                        | L:<br>-1   | M:<br>-3   | L/M:<br>-2           | L/M:<br>2   | L:<br>-12    |
|  | Surface water contamination  | With reference to Section 5.4, the southern portion of EPL 8613 holds tributaries of the Huab River. Significant hydrocarbon spills could run into these dry riverbeds during rain events. Given the small area to be impacted per hole and large hydrocarbon spills being unlikely the potential for this impact is likely to be small. Mitigation measures can be found in the EMP. | 9   | Without | M/H:<br>-4                  | M:<br>-3   | M/H:<br>-4 | M:<br>3              | L:<br>-33   |              |
|  |  |   |   | With    | L/M:<br>-2                  | L/M:<br>-2 | L/M:<br>-2 | L/M:<br>2            | L:<br>-12   |              |
|  | Groundwater could become polluted due to pollutants entering aquifers via surface water infiltration.                    | Given the magnitude of the project, small areas to be affected per hole and large hydrocarbon spills being unlikely, this impact is likely to be low, if mitigated. With reference to Section 5.4, EPL 8613 is located in areas where the groundwater potential is low to very low.   | 10  | Without | M/H:<br>-4                  | M:<br>-3   | M/H:<br>-4 | M:<br>3              | L:<br>-33   |              |
|  |  |   |   | With    | L/M:<br>-2                  | L/M:<br>-2 | M:<br>-3   | L/M:<br>2            | L:<br>-14   |              |
| Air quality deterioration. Increase in dust levels (Nuisance and health impacts) | Dust generated on access roads and tracks. Air pollution from exhaust fumes. Dust generation through drilling activities | Where drilling activities are close to residences, the noise and dust from the activities might be a nuisance to the residents. Air pollution through vehicle emissions (i.e., exhaust fumes) is expected to be negligible due to the small scale of the project and limited number of vehicles or machinery to be used.  | 11  | Without | L/M:<br>-2                  | L/M:<br>-2 | H:<br>-5   | M/H:<br>4            | L:<br>-36   |              |
|  |  |   |   | With    | L:<br>-1                    | L:<br>-1   | M:<br>-3   | M:<br>3              | L:<br>-15   |              |
|  | Noise generation   |   |   | 12      | Without                     | L:<br>-1   | L:<br>-1   | H:<br>-4             | M:<br>3     | L:<br>-18    |

| Activity                                    | Aspect                                       | Potential Environment Impact   | Significance Discussion  | Ref | With and Without mitigation | Extent  | Duration | Nature and intensity | Probability | Significance |
|---|--|--|--|-----|-----------------------------|---------|----------|----------------------|-------------|--------------|
|   |  | Noise generated by the drill rig could disturb nearby residences (nuisance).   |  |     | With                        | L: -1   | L: -1    | L/M: -2              | L/M: 2      | L: -8        |
|   | Land use                                     | Potential loss of land use and capability (very limited area) due to a combination of the above mentioned impacts. Potential loss of grazing and wildlife. | See Impact Reference 7   | 13  | Without                     | L/M: -2 | M: -3    | M/H: -4              | H: 4        | M: -36       |
|   |  |  |  |     | With                        | L: -1   | L/M: -2  | L/M: -2              | L/M: 2      | L: -10       |
| <b>Relevant to all activities</b>           |  |  |  |     |                             |         |          |                      |             |              |
| Socio-economic impacts and community safety | Occupational Health and Safety Risks         | Potential harm to project personnel in terms of accidental injury  | The risks associated with the operation of exploration machinery – primarily accidental injury, either minor (i.e., superficial physical injury) or major (i.e., involving heavy machinery or vehicles) accidents. However, occupational health risks are expected to be minimal due to small scale of the project and limited number of vehicles or machinery to be used; as well as the pre-emptive mitigation measures as discussed in section 7.4.8. | 14  | Without                     | L: -1   | L: -1    | H: -5                | H: 5        | M: -35       |
|   |  |  |  |     | With                        | L: -1   | L: -1    | M: -3                | M: 3        | L: -15       |
|   | Impact on Public Traffic Safety and Services | Potential increase in risk to pedestrian safety and increased impact on services infrastructure (e.g., roads)  | Increased local vehicular traffic as a result of the introduction of exploration vehicles will give rise to road user traffic in the area, and the associated increased risk to road users and pedestrians, as well as local road infrastructure. However, the expected risk to be negligible due to the small scale of the project and limited number of vehicles to be used in comparison to EPL area.   | 15  | Without                     | L: -1   | L: -1    | M/H: -4              | M/H: 4      | L: -24       |
|   |  |  |  |     | With                        | L: -1   | L: -1    | L/M: -2              | L/M: 2      | L: -8        |

| Activity | Aspect  | Potential Environment Impact   | Significance Discussion   | Ref | With and Without mitigation | Extent  | Duration | Nature and intensity | Probability | Significance |
|----------|---|--|---|-----|-----------------------------|---------|----------|----------------------|-------------|--------------|
|          | Social Nuisance: Local Property intrusion and Disturbance or Damage | Inconvenience to residents and impacts on way of life due to differing norms, culture and values | <p>In the case of the exploration team being allowed unsupervised access, there is the potential for an increased risk of criminal activities such as poaching and theft and possible disturbance to immediate neighbors.</p> <p>The potential impacts on agricultural land are regarded as insignificant as the field mapping, surveying activities and soil sampling are noninvasive and will not damage any land. Drilling activities will be more invasive, but localized and temporary. The necessary management and mitigation measures are provided in the EMPs.</p> <p>Moreover, all exploration activities are very small scale, involving a limited number of vehicles / people and can be easily managed through the implementation of the respective EMPs.</p> <p>Agreements between the Proponent and the relevant landowners will be drafted, signed and put in place, supported by access pass letters to be carried by project team at all times.</p> | 16  | Without                     | M: -3   | H: -5    | H: -5                | M: 3        | M: -39       |
|          |   |  |   |     | With                        | L/M: -2 | L/M: -2  | L/M: -2              | L/M: 2      | L: -12       |
|          | Social Nuisance: Community Involvement and Employment               | Social annoyance and community unrest due to perceived lack of community involvement.            | Social annoyance to the local community due to the presence of out-of-area workers and lack of local involvement. However, the Proponent's pre-determined intention to use local human resources as far as possible will reduce the likelihood of this.   | 17  | Without                     | M: -3   | M: -3    | H: -5                | H: 5        | M: -55       |
|          |   |  |   |     | With                        | L/M: -2 | L/M: -2  | M: -3                | L/M: 2      | L: -14       |
|          |   | Land use conflict and disruption of current income generating activities                         | Tourism and conservation is currently the primary economic driver and source of income, driven by the presence of the critically endangered black rhino in the area. The proposed activities may cause displacement of rhino populations, resulting in loss of tourism and  | 18  | Without                     | M: -3   | M/H: -4  | H: -5                | H: 5        | H: -60       |

| Activity  | Aspect                | Potential Environment Impact   | Significance Discussion  | Ref | With and Without mitigation | Extent  | Duration | Nature and intensity | Probability | Significance |
|---|-----------------------|--|--|-----|-----------------------------|---------|----------|----------------------|-------------|--------------|
|   |                       |  | conservation activities, and the associated loss of income.<br>However, impact on the presence of rhino populations is expected to be low due to the limited duration of exploration activities. Based on previous estimates, the most invasive exploration activity (drilling) is usually about 1.5 weeks per drill site, before moving to the next site.   |     | With                        | L/M: -2 | L/M: -2  | L/M: -2              | M: 3        | L: -18       |
|   | Waste Management      | The dumping of general and domestic waste within the exploration area and drilling sites could prove hazardous to wildlife and livestock, as well as impede agricultural production. This could also lead to general environmental degradation and visual impacts. | If suitable toilet facilities are not provided for the exploration team, they will relieve themselves in the environment which could lead to potential health and safety issues to 3rd parties. Waste generation is likely to be limited onsite, will be contained and will primarily be domestic waste. Waste will be removed daily and disposed of properly off-site. Through the effective implementation of the management and mitigation measures, as described in the EMP, the potential impacts relating to waste management can be avoided and or mitigated. | 19  | Without                     | M: -3   | L: -1    | H: -5                | M/H: 4      | M: -36       |
|   |                       |  |  |     | With                        | L/M: -2 | L: -1    | L/M: -2              | M: 3        | L: -15       |
| <b>Closure and rehabilitation of drill site</b>   |                       |  |  |     |                             |         |          |                      |             |              |
| Remove all waste and equipment from site. Rip compacted areas (including access roads and paths). | Biodiversity, Visual. | Loss of biodiversity   | Prolonged disturbance to natural state, including fauna and flora by presence of foreign objects/conditions left behind by exploration team.<br>The impacted sites will be rehabilitated in accordance with the EMP requirements to return site to natural state.  | 20  | N/A                         |         |          |                      |             |              |

As reflected in [Table 7](#) the activities and facilities associated with the exploration activities are unlikely to have highly significant impacts on the environment if mitigation measures are implemented in accordance with the EMPs. Furthermore, some of these impacts might have a moderate impact without any mitigation.

## **7.4. Mitigation Measures**

### **7.4.1. Biodiversity: Potential impact on fauna and flora (general disturbance and clearing of vegetation)**

With reference to Impact References 1 and 5 in [Table 7](#), the following mitigating actions are recommended to minimize the loss of biodiversity:

- Environmental awareness on the importance of biodiversity preservation should be provided to the workers.
- Drilling sites will be cleaned and rehabilitated immediately after the completion of drill holes, including capping of drillholes to prevent injuries to domestic animals and wildlife.
- Local guides are to be used as far as possible by exploration teams to foster transparency between land inhabitants and project team.
- The movement of exploration personnel should be tracked and managed, by restriction to drilling sites, base camps and general settlement areas to prevent workers from wandering. This encourages accountability and prevents potential poaching and slaughtering of wild animals and livestock in the area.
- Movement of vehicle and machinery should be restricted to existing roads and tracks to prevent unnecessary damage to the vegetation.
- Design access roads appropriately in a manner that disturbs minimal land areas as possible.
- No onsite vegetation should be cut or used for firewood related to the project's operations. The Proponent should provide fuel powered stoves for domestic use.
- Formulate and implement suitable and appropriate operational management guidelines for the cleared areas. Incorporated in the guidelines are the progressive rehabilitation measures. These should consider:

- Camping areas will be discussed with, and approved by Conservancy Management (and the Traditional Authorities) to align ensure camping in appropriate zones (No camping allowed in Exclusive Wildlife Zones).
- Drilled boreholes that will no longer be in use or to be used later after being drilled should be properly marked for visibility and capped/closed off.
- There will be no blasting allowed in the exclusive wildlife zones of EPL 8613. This applies to the //Huab Conservancy only.
- Any blasting required in other zones (Multiple Use) of EPL 8613 must be approved by the conservancy management and documented with written permission. This applies to the #Khoadi-//Hôas Conservancy only.
- Any trenching required on any zone of EPL 8613 must be approved by the conservancy management and documented with written permission. This applies to both the //Huab and #Khoadi-//Hôas Conservancies.
- Any drilling planned within the exclusive wildlife zones of EPL 8613 must be presented to, and approved by the conservancy management before drilling commences. This will help manage the potential impact on wildlife habitats at any given time.

#### **7.4.2. Air Quality: Increase in dust levels**

With reference to Impact References 2 and 11 in [Table 7](#), the following mitigating actions are recommended to minimize the impact on air quality:

- Exploration vehicles should adhere to national road regulations, including speed limits. When driving on off-road tracks and exploration access roads, exploration vehicles should not exceed a speed of more than 40 km/h.
- Operational schedules should be produced and adhered to, including vehicle schedules to manage movement of vehicles and associated dust levels.
- Reasonable amounts of water should be used on road sections where dust levels are considered to be high. Factors should include frequency of road use, proximity to settlements or homesteads and amount of water available for use.

### **7.4.3. Noise: Increase in noise levels**

With reference to Impact References 4 and 12 in [Table 7](#), the following mitigating actions are recommended to minimize the increase in noise levels:

- Operational schedules should be produced and adhered to. The exploration operational times should be limited to daytime hours. No exploration activities are to be carried out during the night or very early in the mornings to avoid noise and vibrations generated by exploration equipment and the movement of vehicles before or after hours.
- When operating the drilling machinery onsite, workers should be equipped with personal protective equipment (PPE) such as earplugs to reduce exposure to excessive noise.

### **7.4.4. Heritage: Possible damage to resources of archaeological or heritage importance**

With reference to Impact References 3 and 6 in [Table 7](#), the following mitigating actions are recommended to minimize the potential impact on archaeological or heritage resources:

- On-site personnel and contractor crews must be familiarized with the Archaeological and Heritage Management Plan with emphasis on the Chance Finds Procedure in the AHIA (Appendix B).
- Excavations as part of the exploration program must be kept to a minimum in order to limit the possibility of encountering chance finds within the EPL boundaries. The Proponent should keep a buffer of 50 meters on all the archaeological/cultural sites observed within the project site and broader area throughout their stay (duration of their presence) in the area.
- A “No-Go-Area” should be put in place where there is evidence of archaeological site, historical items or cultural objects. It can be a demarcation by fencing off or avoid the site completely by not working closely or near the known site.
- The Proponent and Contractors should adhere to the provisions of Section 55 of the National Heritage Act in event significant heritage and culture features are discovered while conducting exploration works.

- An archaeologist or Heritage specialist should be onsite to monitor all significant earth moving activities that may be implemented as part of the proposed project activities.
- In addition to these recommendations above, there should be a controlled movement of the contractor, exploration crews, equipment, setting up of camps and everyone else involved in the prospecting and exploration activities to limit the proliferation of informal pathways, gully erosion and disturbance to surface and sub-surface artifacts such as stone tools and other buried materials etc.

#### **7.4.5. Soil and Water Resources**

With reference to Impact References 8, 9 and 10 in [Table 7](#), the following mitigating actions are recommended to minimize the potential impact on soil and water resources:

- All project employees should be sensitized about the impacts of soil pollution and advised to follow appropriate fuel delivery and handling procedure through basic Spill Prevention, Control, and Countermeasure (SPCC) Plan training
- Spill control preventive measures should be put in place to manage soil contamination, in turn preventing and or minimizing the contamination from reaching water bodies. Some of the soil control preventive measures that can be implemented include:
  - Identification of suitable oil storage and use locations on site. Allocation of drip trays and polluted soil removal tools suitable for that specific surface (soil or hard rock cover) on the sites and mobile equipment.
  - Maintain equipment and fuel storage tanks to ensure that they are in good condition thus preventing leaks and spills.
  - The oil storage and use locations should be visually inspected for container or tank condition and spills.
- Polluted soil should be removed immediately and put in a designate waste type container for later disposal at an approved and appropriately classified hazardous waste treatment facility.
- Washing of equipment contaminated hydrocarbons, as well as the washing and servicing of vehicles should take place at a dedicated area, where contaminants are prevented from contaminating soil or water resources.

- An emergency plan should be available for major/minor spills at the site during operation activities (with consideration of air, groundwater, soil, and surface water) and during the transportation of the product(s) to the sites.

#### **7.4.6. Land use: Loss of land capability due to site clearance**

With reference to Impact References 7 and 13 in [Table 7](#), the following mitigating actions are recommended to minimize the potential loss of land capability due to site clearance:

- Environmental awareness on the importance of the preservation of grazing land for local livestock should be provided to the workers.
- Drilling sites will be cleaned and rehabilitated immediately after the completion of drill holes to restore sites to their natural/original states as far as possible.
- Design access roads appropriately in a manner that disturbs minimal land areas as possible.
- No onsite vegetation should be cut or used for firewood related to the project's operations. The Proponent should provide fuel powered stoves for domestic use.

#### **7.4.7. Waste Management**

With reference to Impact Reference 19 in [Table 7](#), the following mitigating actions are recommended towards the management of waste:

- Workers should be sensitized to dispose of waste in a responsible manner and not to litter.
- No waste may be buried or burned on site or anywhere else.
- Portable chemical toilets will be supplied on site to prevent workers from relieving themselves in the environment. Toilets will be periodically emptied out before reaching capacity and transported to a wastewater treatment facility for disposal.
- The exploration site should be equipped with separate waste bins for hazardous and general/domestic waste.
- All domestic and general operational waste produced daily should be contained onsite until such that time that it can be safely transported to designated waste

sites in accordance with municipal or regional waste disposal standards to prevent contamination of surrounding soils and eventually groundwater.

- Oil spills should be taken care of by removing and treating soils affected by the spill.

#### **7.4.8. Socio-economic impacts and community safety**

With reference to Impact References 14, 15, 16, 17 and 18 in [Table 7](#), the following mitigating actions are recommended towards the management of the potential impacts on socio-economic and community safety conditions.

#### **Occupational Health and Safety Risks**

- The Labour Act's Health and Safety Regulations should be complied with.
- As part of their induction, the project workers should be provided with an awareness training of the risks of mishandling equipment and materials on site as well as health and safety risk associated with their respective jobs.
- When working on site, employees should be properly equipped with adequate personal protective equipment (PPE) such as coveralls, gloves, safety boots, earplugs, dust masks, safety glasses, etc.
- The proponent shall ensure the presence of a dedicated Safety Officer during the drilling phase of the project.
- Heavy vehicle, equipment and fuel storage site should be properly secured, and appropriate warning signage placed where visible.
- An emergency preparedness plan should be compiled, and all personnel appropriately trained.
- Workers should not be allowed to drink alcohol prior to and during working hours nor allowed on site when under the influence of alcohol as this may lead to mishandling of equipment which results into injuries and other health and safety risks.

#### **Impact on Public Traffic Safety and Services**

- As per [7.4.2.](#), movement of project vehicles will be restricted and managed through operational schedules.

- The enforcement and compliance to exploration operational times as discussed in 7.4.3 will also manage and minimize the presence of exploration project traffic, thereby reducing interaction with the general population.
- Speed limits as discussed in 7.4.2. will also minimize the potential frequency and impact of traffic accidents.
- Drivers of all project phases' vehicles should be in possession of valid and appropriate driving licenses and adhere to the road safety rules.
- Project vehicles should be in a road worthy condition and serviced regularly to avoid accidents owing to mechanical faults.
- Project vehicles should be fitted with clear and visible signs to distinguish them easily.
- Vehicle drivers should not be allowed to operate vehicles while under the influence of alcohol.

### **Social Nuisance: Local Property Intrusion and Disturbance or Damage**

- As part of their induction, the project workers should be made aware of the restrictions in terms of access to surrounding land, including:
  - Respect of the community and local's private properties, values, and norms.
  - Restrictions from entering farms without prior permission from the Proponent, and awareness of said land user,
  - The prohibition of project workers from hunting and/or killing or in any way disturb local livestock and wildlife on farms.
  - The prohibition of project workers from the cutting down or damaging of vegetation belonging to the affected farmers or neighbouring.
- The following provisions from sections 7.4.1, 7.4.2. and 7.4.3 will also act as controls towards the management of the movement of project staff:
  - The exploration crew will be accommodated in a campsite to be set up within proximity of an existing the settlement, within the bounds of the EPL8613. This will encourage transparency of the project team and discourage inappropriate behaviour from project team.

- Agreements between the Proponent and the relevant landowners or administrators (Traditional Authorities and Conservancy Management) will be drafted, signed, and put in place. These will be supported by “access pass” letters to be carried by project team at all times, authorizing their presence on the grounds.
- Local guides are to be used as far as possible by exploration teams to foster transparency between land inhabitants and project team.
- Camping areas will be discussed with and approved by Traditional Authorities and Conservancy Management to align ensure camping in appropriate zones.
- As per 7.4.2., movement of project vehicles will be restricted and managed through operational schedules.
- The enforcement and compliance to exploration operational times as discussed in 7.4.3.

### **Social Nuisance: Community Involvement and Employment**

- The Proponent should prioritize the employment of more local people, with the exception of cases where specialised skills cannot be sourced locally. This is to avoid the influx of outsiders into the area for works that can be done the locals.
- The locals employed during exploration should be provided with the necessary training of skills required for the project to avoid bringing in many out-of-area employees. This way, skills development and transfer is ensured in the local community.
- Those out-of-area workers that may be employed (due to their unique work skills) on site should be sensitized on the importance of respecting the local values and norms, so that they can co-live-in harmony with the local communities during the duration of their employment period on site.

### **Social Nuisance: Land use conflict and disruption of current income generating activities**

- The Ministry of Mines and Energy, with the advice of MEFT revised and modified the proposed shape for EPL 8613 as applied for by the proponent

before provisional approval in an effort to mitigate or minimize the interaction between exploration and rhino conservation activities (see [Figure 15](#), [Figure 16](#), [Figure 17](#)).

- Towards the management of the co-existence between the proposed activities and conservation activities for the preservation of black rhino population and the associated activities, the following mitigation actions are recommended:
  - The exploration crew campsite will not be allowed within Exclusive Wildlife Zones. Campsite must be within zones demarcated for Settlement & Cropping or similar.
  - Local guides are to be used as far as possible by exploration teams to foster transparency between land inhabitants and project team. When exploration activities are undertaken within Exclusive Wildlife Zones, the local guides should be from the Rhino Rangers as they can guide the project team to avoid conflict with rhinos during mapping and sampling stages.
  - Agreements between the Proponent and the relevant landowners or administrators (Traditional Authorities and Conservancy Management) will be drafted, signed, and put in place. These will be supported by “access pass” letters to be carried by project team at all times, authorizing their presence on the grounds.
  - During the drilling stage, only one drill rig will be permitted to drill within the Exclusive Wildlife Areas, to minimize the disturbance generated by machinery and limit it to the drilling site only.
  - No blasting, excavation or related activities will be allowed in any zone of the conservancies. In the unlikely case that blasting and/or excavation is required for metallurgical test work samples, written approval should be sought from concerned Traditional Authorities and conservancy management.

## **7.5. Mitigations and Recommendations for Rehabilitation**

The rehabilitation of explored (disturbed) sites will include but not limited to the following:

- Backfilling of trenches and/or pits in such a way that subsoil is replaced first, and topsoil replaced last.
- Closing off, capping and clearly marking of all exploration drilling boreholes.
- Carrying away all waste generated from the last disposal to the last days on site.
- Transporting all machinery and equipment as well as vehicles to designated offsite storage facilities.
- Periodic reports, as required by MME and MEFT will be shared with the offices of community leaders (Conservancy Offices, TA) in order to foster transparent relations. The community will know the status of the project at any given time, including project closure. This will allow the community to know of project closure in advance, and allow inspection of sites before project team leaves site.

## **8. RECOMMENDATIONS AND CONCLUSIONS**

The potential positive and negative impacts stemming from the proposed exploration activities on EPL 8613 were identified, assessed and appropriate management and mitigation measures (to negative impacts) made thereof 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 (Section 21 to 24). Notice was given through more than two widely read national newspapers in the region (The Namibian Newspaper and the Namibia Media Holdings group of newspapers (The Namibian Sun, Die Republikein, Allgemeine Zeitung, among others)). Six consultative face-to-face meetings with interested and affected parties were held. The proposed activities were presented, as well as their pre-identified potential impacts, followed by comments and concerns by attendees. Participants were made aware of the fact that the ECC applied for here is for activities relating to the prospecting and exploration of Base and Rare Metals, Industrial Minerals and Precious Metals Group of Minerals. It is **not** an application for mining activities. Therefore, no blasting, excavation or related activities will be allowed in any zone of the conservancies. In the unlikely case that blasting and/or excavation is required for metallurgical test work samples, written approval should be sought from concerned Traditional Authorities and conservancy management.

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, in order 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. The effective implementation of the recommended management and mitigation measures will drive the reduction in the significance of adverse impacts that cannot be avoided completely (from medium rating to low). The potential impact of the proposed exploration activities on the existing tourism and conservation activities, especially with regards to the critically endangered black rhino population in the area was found to have the highest rating significance. However, the potential impact can be mitigated towards the successful coexistence of the proposed exploration and tourism activities. There were follow-up meetings held with the management committees of the #Khoadi-//Hôas and //Huab conservancies on the 24<sup>th</sup> and 25<sup>th</sup> February 2023 respectively. At these follow-up meetings, the draft ESA and EMP were presented for comment and review, with special focus on the potential impact on black rhino populations on the EPL 8613 using lessons drawn from the mining activities on Mesopotamie 504. The main finding at these meetings was that the involvement of the //Huab Conservancy in the exploration program will be critical toward the successful management of impacts on biodiversity.

Further recommendations include the implementation of management and mitigation measures be monitored by the Proponent directly, or by their Environmental Control Officer (ECO). The monitoring of this implementation will not only be done to maintain the impacts' rating or maintain 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.

An Archaeological & Heritage Impact Assessment (AHIA) was done by a specialist for this ESA Study. The findings of this AHIA and the Scoping assessment (ESA) were deemed sufficient and conclude that no further detailed assessments are required to the ECC application.

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 on monitoring the implementation of these measures.

It is therefore, recommended that the proposed prospecting and exploration activities be granted an Environmental Clearance Certificate, 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 ensuring 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 exploration activities have ceased are rehabilitated, as far as practicable, to their pre-exploration state.

In conclusion, should the ECC be issued, the Proponent will be expected to be compliant with the ECC conditions as well as legal requirements governing the mineral exploration and related activities.