



# ECC

**ENVIRONMENTAL  
COMPLIANCE CONSULTANCY**



ECC-84-346-REP-08-D

## **ENVIRONMENTAL SCOPING REPORT PLUS IMPACT ASSESSMENT**

**EXPLORATION ACTIVITIES ON EPL 5445 FOR BASE, RARE AND PRECIOUS  
METALS IN THE ERONGO AND KUNENE REGIONS, NAMIBIA**

*PREPARED FOR*

**AFRITIN MINING NAMIBIA (PTY) LTD**



May 2021

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## TITLE AND APPROVAL PAGE

<b>Project Name:</b>	Exploration activities on EPL 5445 for base, rare and precious metals in the Erongo and Kunene regions, Namibia
<b>Client Name:</b>	Afritin Mining Namibia (Pty) Ltd
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## EXECUTIVE SUMMARY

Afritin Mining Namibia (Pty) Ltd (herein referred to as the proponent or Afritin), intends to undertake exploration activities on Exclusive Prospecting Licence (EPL) 5445 for base and rare metals, and precious metals in the Erongo and Kunene regions of Namibia.

The proposed project triggers listed activities in terms of the Environmental Management Act, No. 7 of 2007, therefore an environmental clearance certificate is required. As part of the environmental clearance certificate application, an Environmental and Social Impact Assessment (ESIA) has been undertaken to satisfy the requirements of the Environmental Management Act, No. 7 of 2007. This environmental assessment report and Environmental Management Plan (EMP) is herewith submitted to the competent authority as part of the application for the environmental clearance certificate.

The proposed exploration activities on EPL 5445 may include drilling, aerial or remote sensing, ground or airborne geophysical surveys, and mineral sampling among other standardised exploration techniques. If mineralisation is identified, further exploration methods shall be applied; if not identified, then EPL 5445 shall be rehabilitated and returned to the government.

Activities are expected to be conducted over a 3-year period, which is the duration of the exploration licence. However, the period of each phase of the exploration programme may vary and will be refined as geological information becomes available. If exploration is successful, and a commercially viable mineral resource is defined, exploration operations can potentially transcend into mining operations. This phase will involve an application for a Mining Licence and will be assessed in a separate and detailed environmental impact assessment at the appropriate stage.

The main potential impacts for this EPL that was identified are the potential impacts associated with the generation of noise, air pollution (i.e., dust generation), increased movement of vehicles and people, effects on biodiversity, water resources and heritage sites. The area within and surrounding the EPL represents an area that has moderate species diversity and overall high biodiversity endemism, with various protected and flagship species that play an essential role within the local ecosystems. This area is home to critically endangered black rhinos which freely roam the area within and surrounding the EPL. Furthermore, desert-adapted elephants and lions are also found in these areas, and both have continuous declining populations. These species contribute to the revenue generated by the tourism industry and are a unique and iconic part of Namibia's biodiversity.

The EPL overlaps two communal conservancies, Tsiseb and Doro! Nawas. A communal conservancy represents a conservation area that is managed by a local community that aims

to manage the natural resources within their conservancy in a sustainable way to generate returns and other benefits. Community members are mainly employed by lodges, camps, farms, or the local's farm with livestock in the area. Tourism and consumptive wildlife use are the main benefit contributor to these local communities, in addition, income generated from plant products and local crafts.

An archaeological field site visit and reconnaissance survey was conducted by Dr John Kinahan, in selected focus areas on the EPLs 5445 and 5670 refer to Appendix D for the full archaeological assessment report, issued on the 10 May 2021. The EPLs 5445 and 5670 are located in the western parts of Namibia close to the Dâures massif, or Brandberg, a feature of outstanding archaeological importance. Both EPLs sites present a focus of mining activities in the past and there is a considerable legacy of damage to the archaeological landscape. However, the greater part of the two EPLs is undisturbed and contains a significant concentration of archaeological sites that would require mitigation during the proposed exploration activities.

A total of five archaeological sites were discovered within EPL 5445 that either has a high significance or high vulnerability value according to Dr John Kinahan. The small number of sites that indeed have significance values of 4 are multi-component sites forming an essential part of an archaeological landscape pattern according to Dr Kinahan. The proponent also agreed to set up buffer zones around the various archaeological sites as suggested by Dr. Kinahan.

The proposed exploration activities on the Afristin Mining EPLs 5445 and 5670 will be adopted in such a way that they avoid areas of heritage value and an application will be submitted to the National Heritage Council for heritage consent and on-site chance find procedures will be followed.

Exploration activities will be managed in accordance with the Environmental Management Plan and regular monitoring will be conducted to ensure compliance with the relevant legislation and the EMP.



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## LIST OF ACRONYMS AND ABBREVIATIONS

ABBREVIATIONS	DESCRIPTION
AEM	Airborne Electromagnetic
AIDS	Acquired Immune Deficiency Syndrome
AMT	Audio Magneto Telluric
CBNRM	Community-Based Natural Resource Management
COVID19	Corona Virus Disease 2019
DEA	Directorate of Environmental Affairs
ECC	Environmental Compliance Consultancy
EIA	Environmental Impact Assessment
EMA	Environmental Management Act
EMP	Environmental Management Plan
EPL	Exclusive Prospecting Licence
ESIA	Environmental and Social Impact Assessment
GSN	Geological Survey of Namibia
HIV	Human Immunodeficiency Virus
I&AP	Interested and Affected Parties
IFC	International Finance Corporation
MAWLR	Ministry of Agriculture and Land Reform
MEFT	Ministry of Environment, Forestry and Tourism
MME	Ministry of Mines and Energy
MPMRC	Minerals (Prospecting and Mining Rights) Committee
NBRI	National Botanical Research Institute
NDP5	National Development Plan Five
NSA	National Statistics Agency
RAB	Rotary Air Blast
RC	Reverse Circulation
SOP	Standard Operating Procedure
TB	Tuberculosis



## LIST OF TERMENOLOGIES

TERM	DESCRIPTION
<b>REMOTE SENSING</b>	Techniques in mineral exploration enable explorers to evaluate large areas of the earth remotely without having to undertake ground-based exploration operations. Remote sensing may be used to map the geology and structure that potentially localise the ore deposits, or may be used to identify rocks, which have been hydrothermally altered. Remote sensing involves the use of aircraft and satellite-based equipment to obtain data to record spectral data from the surface of the earth. Remote sensing includes several tools and techniques including geographical information systems, radar and sonar. Typically, satellites or high-flying aircraft are used in the data collection process. It is a useful tool when searching for minerals and can indicate where deposits could be located. Remote sensing aids in narrowing down the field survey area and helps to identify target areas that may be considered for more.
<b>AIRBORNE GEOPHYSICAL SURVEYS</b>	Using radiometric techniques, are a key aspect in mineral exploration, enabling explorers to probe underground, mapping geology and structure, including potentially direct identification of mineral deposits. Modern surveys are flown at a low level in a grid pattern, adhering fully to the safety margins prescribed by the Civil Aviation Authority (CAA) of Namibia.
<b>GEOLOGICAL MAPPING</b>	Of outcrops is used to describe the primary lithology and morphology of rock bodies as well as age relationships between rock units. Mapping is a crucial part of refining subsurface targets, as it provides structural information and can be used to predict subsurface geology. This will be conducted concurrently with the geochemical sampling process.
<b>GEOCHEMICAL SAMPLING</b>	<p>Soil and rock sampling is a non-invasive technique to determine the existence and extent of mineralization and a potential resource. Geochemical data are used to focus on areas of higher mineral potential as the project advances and help to define drill targets. They assist the company to drill more selectively and thereby increase the chances of intersecting mineralised zones during exploration and reduce the overall footprint of exploration and environmental impact in the area. Geochemical surveys will be the first ground exploration method to be undertaken by the proponent in the licence area.</p> <ul style="list-style-type: none"> <li>○ <b>SAMPLING</b> - Selecting a fractional but representative part of the soil or rock for analysis.</li> </ul>

<p><b>GROUND GEOPHYSICAL SURVEYS</b></p>	<p>Including Magnetic or Induced Polarization (IP) techniques, may be undertaken, as appropriate, to collect data that indicate essential rock properties, particularly at depth. They are also used to map geological structures. IP surveys involve sending electrical currents into the ground, measured via electrodes along linear cut-lines up to 3 km long to provide access to electrical cables. Small holes in the ground (0.2m x 0.2m x 0.3m) will be required for IP electrodes every 25 or 50m along a survey line. The majority of EM techniques are completely non-invasive and operate by sending electromagnetically induced currents into the ground. EM surveys are conducted along the same linear traverse lines. A variation is the Audio-Magneto Telluric (AMT) technique, in which surveys utilize the same lines and small holes in the ground, but without the application of high voltage electrical currents.</p>
<p><b>RAB DRILLING</b></p>	<p>(Rotary Air Blast drilling) is an open-hole technique that injects compressed air down the drill pipe and recovers the drill chip fragments, on the outside of the drill stem.</p>
<p><b>DIAMOND DRILLING</b></p>	<p>Entails the use of a diamond-studded drill bit to obtain core samples of two cm or more in diameter. Bio-degradable drill additives will be used during diamond core drilling. Soil, rock and drill core samples will be temporarily stored at the site office. Exploration activities are usually undertaken in phases, with periods of no field activity between them, whilst awaiting analytical results, and the integration and interpretation of data to decide on the next phase of exploration.</p>

## 1 INTRODUCTION

### 1.1 PROJECT OVERVIEW

Environmental Compliance Consultancy (ECC) has been engaged by the proponent (Afritin Mining Namibia (Pty) Ltd) to undertake an Environmental and Social Impact Assessment (ESIA) and an Environmental Management Plan (EMP) in terms of the Environmental Management Act, 2007 and its regulations. An environmental clearance application will be submitted to the relevant competent authorities, the Ministry of Mines and Energy (MME) and the Ministry of Environment, Forestry and Tourism (MEFT).

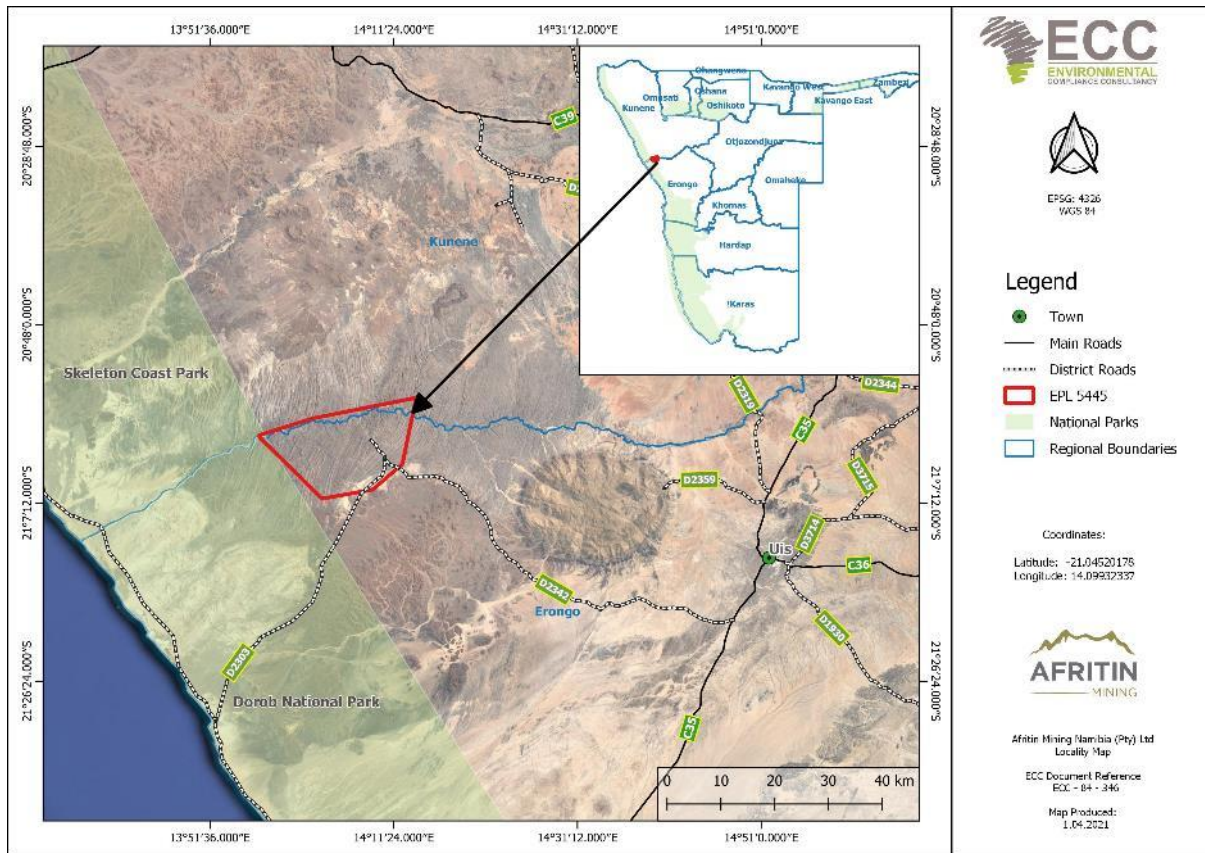
Afritin Mining is a mining company with a portfolio of tin assets in Namibia and South Africa. The Namibian registered company propose to undertake exploration activities on EPL 5445 in the Erongo and Kunene regions. Should exploration activities lead to the possibility of mining, a separate application will be made for specific Mining Licences (ML), and environmental norms and obligations will be assessed and implemented.

Afritin Mining intends to pursue exploration opportunities in Namibia to contribute to mining prospects. Namibia is rich in natural resources and the minerals sector is a key contributor to the nations GDP in Namibia. Exploration could lead to mining activities, which would contribute to the national and local economy.

### 1.2 BACKGROUND

AfriTin Mining Company (Pty) Ltd is currently operating a conventional opencast tin mine with three mining licence areas (ML 134, ML 129, and ML 133) located near the Uis settlement in the Erongo Region, Namibia. AfriTin is seeking to further explore for base, rare, precious metals and minerals and propose to undertake exploration activities on EPL 5445 in the Erongo Region. EPL 5445 extends slightly into the Kunene Region, approximately 90km from Uis along the C35 main road and D2342 district road (Figure 1).

The surface area of the EPL is approximately 35090 Ha. This EPL borders and slightly overlaps both the Dorob National Park and the Skeleton Coast Park and falls over two communal conservancies, Doro !nawas and Tsiseb, of which the largest area of the EPL falls within the latter (see figure 3). The Save the Rhino Trust camp also falls within the borders of the EPL and has been identified as a sensitive receptor due to critically endangered Black Rhinos (*Diceros bicornis*) roaming within this area (Emslie 2020). Due to the sensitive location all exploration work on the EPL will be operated and strictly controlled by AfriTin.



**FIGURE 1 - LOCATION OF AFRITIN EPL 5445**

### 1.3 SCOPE OF WORK

The purpose of this report is to present the findings of the assessment for the proposed project. This report has been outlined in terms of the requirements of the Environmental Management Act, No. 7 of 2007 and its regulations, promulgated in 2012 (referred to herein as the EIA Regulations).

ECC's terms of reference for the assessment is strictly to address potential effects, whether positive or negative and their relative significance, explore alternatives for technical recommendations and identify appropriate mitigation measures.

This report provides information to the public and stakeholders to aid in the decision-making process for the proposed project. The objectives are to:

- Provide a description of the proposed activity and the site on which the activity is to be undertaken, and the location of the activity on the site;
- Provide a description of the environment that may be affected by the activity;
- Identify the laws and guidelines that have been considered in the assessment and preparation of this report;

- Provide details of the public consultation process;
- Describe the need and desirability of the activity;
- Provide a high level of environmental and social impact assessment on feasible alternatives that were considered; and
- Report the assessment findings, identifying the significance of effects.

In addition to the environmental assessment, an EMP (Appendix A) is also required in terms of the Environmental Management Act, No. 7 of 2007. The attached EMP has been developed to provide a management framework for the planning and implementation of exploration activities. The EMP provides exploration standards and arrangements to ensure that the potential environmental and social impacts are mitigated, prevented or minimised as far as reasonably practicable and that statutory requirements and other legal obligations are fulfilled.

#### 1.4 THE PROPONENT OF THE PROPOSED PROJECT

The details of the proponent are set out in Table 1 below.

**TABLE 1 - PROPONENTS DETAILS**

CONTACT	POSTAL ADDRESS	EMAIL ADDRESS	TELEPHONE
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#### 1.5 ENVIRONMENTAL COMPLIANCE CONSULTANCY

ECC, a Namibian consultancy (registration number Close Corporation 2013/11401), has prepared this scoping report, impact assessment and EMP on behalf of the proponent. ECC operates exclusively in the environmental, social, health and safety fields for clients across Southern Africa, in both the public and private sectors. ECC is independent of the proponent and has no vested or financial interest in the proposed project, except for fair remuneration for professional services rendered.

All compliance and regulatory requirements regarding this EIA report should be forwarded by email or posted to the following address:

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## 1.6 ENVIRONMENTAL LEGAL REQUIREMENTS

The Environmental Management Act, No.7 of 2007 stipulates that an environmental clearance certificate is required to undertake listed activities in terms of the Act and its regulations. Listed activities triggered by the proposed project in terms of the Environmental Management Act, No. 7 of 2007 and its regulations are as follows:

**TABLE 2 - LISTED ACTIVITIES TRIGGERED BY THE PROJECT**

LISTED ACTIVITY	EIA SCREENING FINDING
<p><b>MINING AND QUARRYING ACTIVITIES</b></p> <p>3.1 The construction of facilities for any process or activities which requires a licence, right or other forms of authorisation, and the renewal of a licence, right or other forms of authorisation, in terms of the Minerals (Prospecting and Mining Act), No. 33 of 1992.</p> <p>3.2 Other forms of mining or extraction of any natural resources whether regulated by law or not</p> <p>3.3 Resource extraction, manipulation, conservation, and related activities</p>	<ul style="list-style-type: none"> <li>○ The proposed project requires an environmental clearance from DEA/MEFT for the search for base and rare metals, precious metals.</li> <li>○ Minerals (e.g., soil and sand) will be sampled within selected target areas of the project area.</li> </ul>
<p><b>WATER RESOURCE DEVELOPMENT</b></p> <p>8.1 The abstraction of ground or surface water for industrial or commercial purposes</p>	<ul style="list-style-type: none"> <li>○ Due to the drilling of exploration boreholes, the abstraction of groundwater may be possible, although it is intended that water will be obtained from existing boreholes in the proposed project area. Any additional borehole drilled for the intention of abstracting water for use on-site should be permitted by the authorities in the form of an abstraction permit</li> </ul>
<p><b>FOREST ACTIVITIES</b></p> <p>4. The clearance of forest areas, deforestation, timber harvesting or any other related activity that required authorisation in terms of the Forest Act, 2001 (Act No. 12 of 2001) or any other law.</p>	<ul style="list-style-type: none"> <li>○ Limited vegetation clearing may be required for tracks and survey access creation, and possibly for the set up of survey and drilling teams' field camps.</li> <li>○ Specially protected plant species will not be cleared without approval from the competent authority</li> </ul>
<p><b>HAZARDOUS SUBSTANCE TREATMENT, HANDLING AND STORAGE</b></p> <p>9.1 The manufacturing, storage, handling or</p>	<ul style="list-style-type: none"> <li>○ The possible storage and handling of hydrocarbons (diesel fuel) on-site may trigger pollution events if done incorrectly.</li> <li>○ Possible quarrying activities will emit dust</li> </ul>

LISTED ACTIVITY	EIA SCREENING FINDING
<p>processing of a hazardous substance defined in the Hazardous Substance Ordinance, 1974.</p> <p>9.2 Any process or activity which requires a permit, licence or another form of authorisation, or the modification of or changes to existing facilities for any process or activity which requires an amendment of an existing permit, licence or authorisation or which requires a new permit, licence or authorisation in terms of a law governing the generation or release of emissions, pollution, effluent or waste.</p>	<p>into the atmosphere.</p>

## 2 APPROACH TO THE IMPACT ASSESSMENT

### 2.1 PURPOSE OF THE ENVIRONMENTAL IMPACT ASSESSMENT

The EIA process in Namibia is governed and controlled by the Environmental Management Act, No. 7 of 2007 and its regulations, No. 30 of 2012, which is administered by the Office of the Environmental Commissioner through the DEA of the MEFT.

This preliminary assessment aims to identify, predict, evaluate and mitigate the potential impacts of the proposed project on the natural and human receiving environment, scope the available data and identify the gaps that need to be filled. The assessment process helps to determine the spatial and temporal scope and identify the assessment methodology which is most applicable for use. In addition, the assessment process and subsequent reports are to apply the principles of environmental management to the proposed activities; reduce the negative and increase the positive impacts arising from the project; provide an opportunity for the public to consider the environmental impacts of the proposed project through meaningful consultation, and to provide a vehicle to present the findings of the assessment process to competent authorities for decision making.

### 2.2 THE ASSESSMENT PROCESS

The ESIA methodology applied to this assessment has been developed using the International Finance Corporation (IFC) standards and models, in particular, Performance Standard 1, 'Assessment and management of environmental and social risks and impacts' (International Finance Corporation, 2017) (International Finance Corporation, 2012), which establishes the importance of:

- Integrated assessment to identify the environmental and social impacts, risks, and opportunities of projects;
- Effective community engagement through disclosure of project-related information and consultation with local communities on matters that directly affect them; and
- The client's management of environmental and social performance throughout the life of the project

Furthermore, the Namibian Draft Procedures and Guidance for ESIA and EMP (the Republic of Namibia, 2008) as well as the international and national best practice; and over 25 years of combined EIA experience, we're also drawn upon in the assessment process.

This impact assessment is a formal process in which the potential effects of the project on the biophysical, social and economic environments are identified, assessed and reported so that the significance of potential impacts can be taken into account when considering whether to grant approval, consent or support for the proposed project.

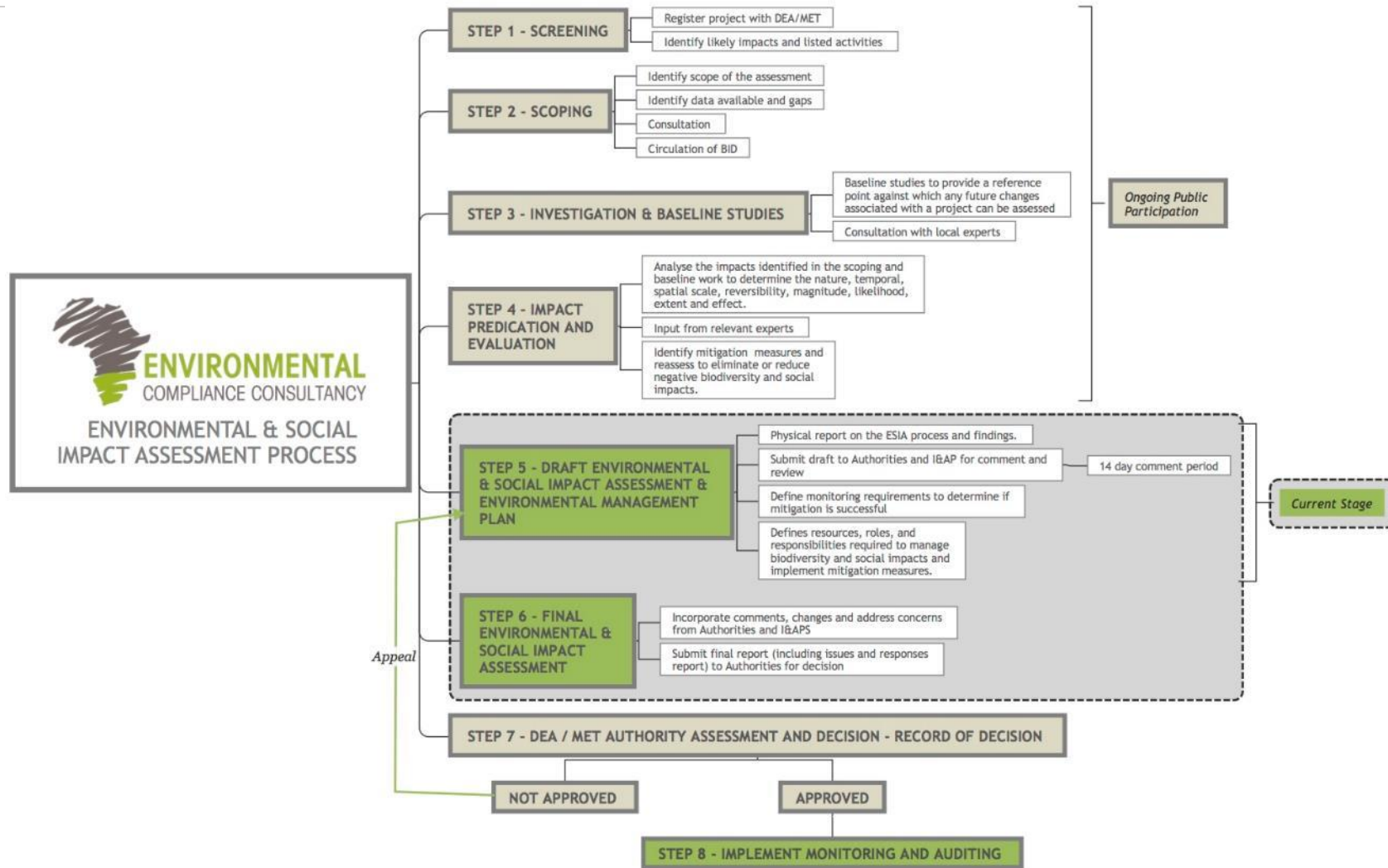


FIGURE 2 - ECC ESIA METHOD



## 2.3 SCREENING OF THE PROJECT

The first stages in the EIA process are to register the project with the DEA / MEFT (completed) and undertake a screening exercise to determine whether it is considered as a listed activity under the Environmental Management Act, No. 7 of 2007 and associated regulations and if significant impacts may arise from the project. The location, scale and duration of project activities will be considered against the receiving environment.

It was concluded that an ESIA (e.g. scoping report and EMP) is required, as the proposed project is considered as a listed activity and there may be potential for significant impacts to occur.

## 2.4 SCOPING OF THE ENVIRONMENTAL ASSESSMENT

Where an ESIA is required, the second stage is to scope the assessment. The main aims of this stage are to determine which impacts are likely to be significant (the main focus of the assessment); scope the available data and any gaps which need to be filled; determine the spatial and temporal scope, and identify the assessment methodology.

The screening phase of the project is a preliminary analysis to determine ways in which the project may interact with the biophysical, social and economic environment. Impacts that are identified as potentially significant during the screening and scoping phases are taken forward for further assessment in the ESIA process. The details and outcomes of the screening process are discussed further in sections 6 and 7.

Subsequently, scoping of the ESIA was undertaken by the EIA team. The scope of the assessment was determined through undertaking a preliminary assessment of the proposed project against the receiving environment obtained through a high-level desktop review. Feedback from consultation with the client and stakeholders also informed this process.

The following environmental and social topics and subtopics were scoped into the assessment, as there was potential for significant impacts to occur:

### **SOCIO-ECONOMIC ENVIRONMENT**

- Potential to unearth, damage or destroy undiscovered heritage remains;
- Minor disruption to the residents of the save the Rhino camp within the EPL, including some increase in noise levels and dust arising from drilling and vehicle use;
- Some jobs will be created because of the project; and

- There will be economic benefits due to increased investment and investor confidence in the Namibian minerals sector.

### **BIOPHYSICAL ENVIRONMENT**

- Dust emissions
- Soil and geology
- Terrestrial ecology
- Terrestrial biodiversity (including fauna and flora)
- Groundwater (potential indirect impact). Water management suggestions are contained in the EMP (Appendix A).
- Minor risk of spillage of hydrocarbon, chemical or drill fluids from exploration activities may potentially lead to localised ground contamination; this aspect will be controlled at all times.

### **HERITAGE**

An archaeological assessment was carried out on the proposed project site-specific area by an experienced and qualified Archaeologist - Dr John Kinahan. The archaeological study, issued on 10 May 2021, reviewed that the average significance of heritage value was found (refer to Appendix F for the detailed assessment report). In the unlikely event of a possible archaeological find, a Standard Operating Procedure (SOP) called a “chance-find” procedure outlined in the EMP should be utilised.

## **2.5 BASELINE STUDIES**

Baseline studies are undertaken as part of the scoping stage, which involves collecting all pertinent information from the current status of the receiving environment. This provides a baseline against which changes that occur as a result of the proposed project can be measured.

For the proposed project, baseline information was obtained through a desktop study, focussing on environmental receptors that could be affected by the proposed project, verified through site-specific information. The baseline information is covered in Section 5.

A robust baseline is required to provide a reference point against which any future changes associated with a project can be assessed, and it allows for suitable mitigation and monitoring actions to be identified.

The existing environment and social baseline for the proposed project were collected through various methods:

- Desktop studies;
- Specialist studies;

- Consultation with stakeholders; and
- Engagement with Interested and Affected Parties (I&APs). See Appendix C.

## 2.6 ESIA CONSULTATION

Public participation and consultation are requirements stipulated in Section 21 of the Environmental Management Act, No. 7 of 2007 and associated regulations for a project that needs an environmental clearance certificate. Consultation is a compulsory and critical component in the ESIA process in achieving transparent decision-making and can provide many benefits.

The objectives of the stakeholder engagement process are to:

- Provide information on the project to I&APs: introduce the overall concept and plan;
- Clarify responsibility and regulating authorities;
- Listen to and understand community issues, concerns and questions;
- Explain the process of the ESIA and timeframes involved; and
- Establish a platform for ongoing consultation.

### 2.6.1 INTERESTED AND AFFECTED PARTIES

EPL 5445 overlaps the communal conservancies Tsiseb and Doro!nawas. It also falls over two other sensitive receptors namely the Save the Rhino Camp Site and the Brandberg West Mine at the north-easterly side of the EPL (Figure 3). Other I&APs will include national, regional and local authorities. The main access routes to the EPL are the D2303 which intersects the EPL, and the D2342 which joins the C35 main road from Uis (Figure 4).

Onduli Ridge is a (N\$ 20 million Namibian dollar investment) newly constructed lodge, which is situated approximately 42 km away from EPL 5445. This is a big investment and due to these areas (i.e. Brandberg, Messum Crater, Twyfelfontein and Organ Pipes) being a tourism hotspot, a large number of tourists are attracted to these parts of Namibia (MET/NACSO, 2018). This newly constructed lodge, as well as various other lodges and camps in proximity to these sites of tourist attraction and landmarks, such as the Brandberg area are considered as sensitive receptors in this assessment. These sites are known for their aesthetic value and any major impacts (i.e. noise, dust, increased movement) might potentially have an effect on the tourism operation, job security for local communities, the Community-based natural resource management (CBNRM) programme in general and the stability of the biodiversity and surrounding environment. The proponent shall ensure that movements for the proposed exploration activities are minimised to the EPL area, designated routes to the site should be maintained. It is also important that constant communication between stakeholders and the proponent shall be maintained.

Overall, all sensitive receptors which the EPL 5445 overlaps were identified as I&APs, as well as the relevant authoritative bodies. Other I&APs were identified through invitations such as newspaper advertisements and site notices.

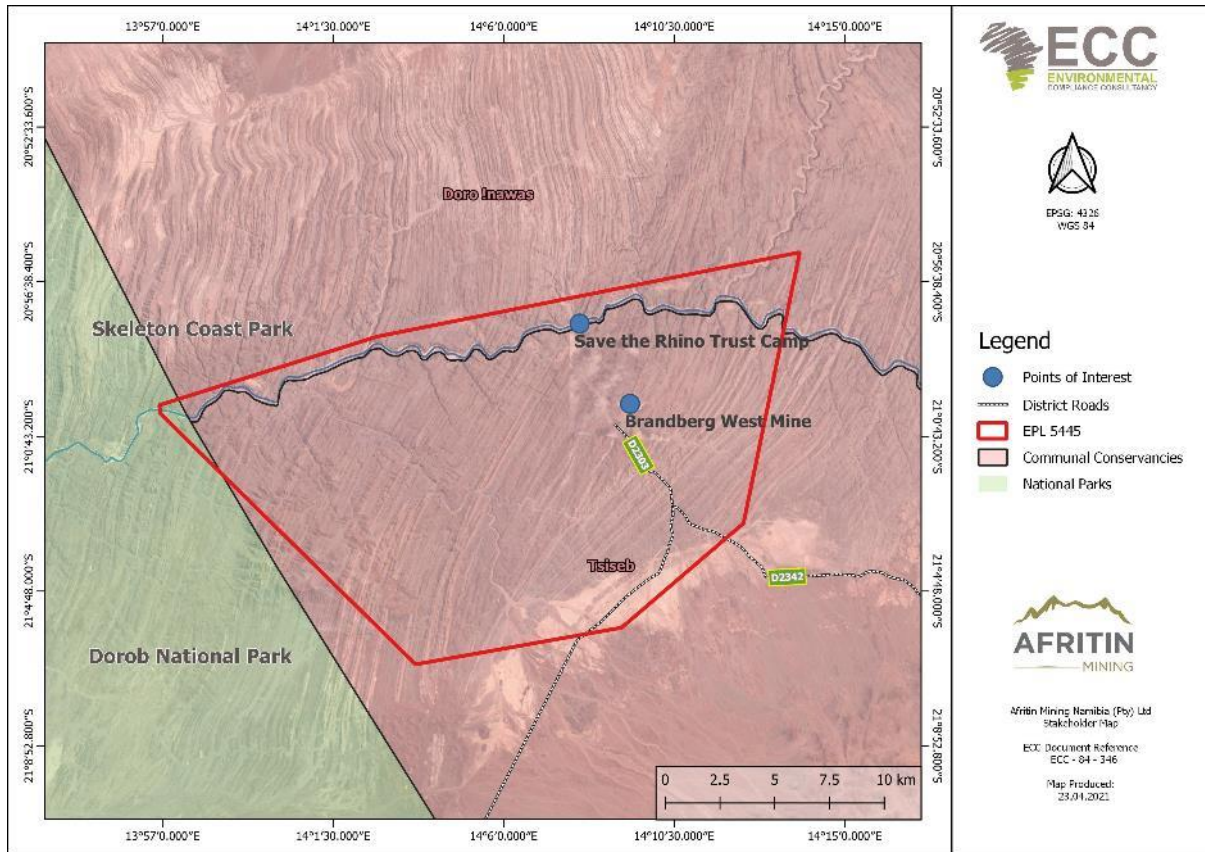
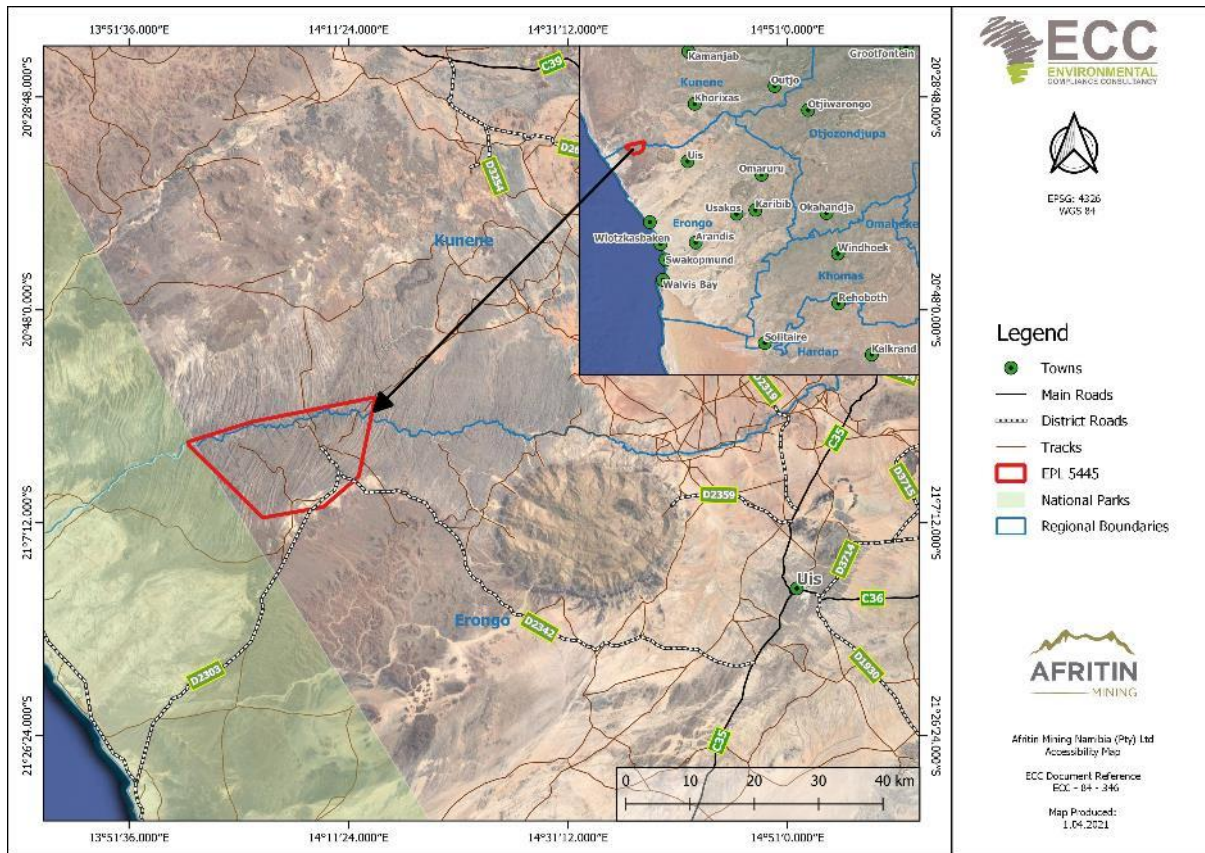


FIGURE 3 - EPL 5445 OVERLAPPING SEVERAL SENSITIVE RECEPTORS





**FIGURE 4 - EPL 5445 ACCESSIBILITY MAP**

## 2.6.2 NON-TECHNICAL SUMMARY

The Non-Technical Summary (NTS) presents a high-level description of the proposed project; sets out the ESIA process and when and how consultation is undertaken and provides contact details for further project-specific inquiries to all registered I&APs. The NTS was distributed to all registered I&APs and the NTS can be found in Appendix B.

## 2.6.3 NEWSPAPER ADVERTISEMENTS

Notices regarding the proposed project and associated activities were circulated in three newspapers namely the 'Republikein', 'Allgemeine Zeitung' and the Namibian 'Sun' on the 7<sup>th</sup> and the 14<sup>th</sup> of April 2021. The purpose of this was to commence the consultation process and enable I&APs to register an interest in the project. The adverts can be found in Appendix C.1.

## 2.6.4 SITE NOTICES

A site notice ensures neighbouring properties and stakeholders are made aware of a proposed project. A site notice was set up at the entrance of the Save the Rhino trust camp. Evidence of the site notice placement is illustrated in Appendix C.



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## 2.7 SUMMARY OF ISSUES RAISED

The initial public participation phase involved the notifications of the project through media such as the newspaper adverts, direct mail sent to identified I&APs and the display of site notices delivered very few interactive communications from the public.

The main issues that were raised for EPL 5445 and 5670 include the mention of protected species within the proposed exploration project area and suggested that a full botanical/biodiversity study should be conducted, as well as, the communal conservancies within the area and the recently built N\$ 20 million worth in value camps in the Doro !nawas conservancy. The local black Rhino population within the EPL is also a major concern. All the comments have been recorded in Appendix C.

## 2.8 DRAFT ESIA AND EMP

This report and EMP for the project's environmental clearance application includes an assessment of the biophysical and social environment, which satisfies the requirements of Step 5 (Figure 2).

The ESIA report documents the findings of the assessment process provides stakeholders with the opportunity to comment as part of continued consultation and forms part of the environmental clearance application. The EMP provides measures to manage the environmental and social impacts of the proposed project and outlines specific roles and responsibilities to fulfil the plan.

This ESIA report focuses on the significant impacts that may arise from the proposed project as described in Step 4 (Figure 2). These impacts are discussed in Chapter 6.

This ESIA draft report is open to stakeholders and I&APs for consultation for a 7 days review period (23/07/21 to 01/08/21), meeting the mandatory requirements set out in the Environmental Management Act, No. & of 2007 and its regulations, including the Environmental Impact Assessment Regulations, No. 30 of 2012. This stage aims to ensure all stakeholders and I&APs have the opportunity to provide final comments on the assessment process and findings and register their concerns.

## 2.9 FINAL ESIA AND EMP

The final ESIA report and associated appendices are available to all stakeholders on the ECC website [www.eccenvironmental.com](http://www.eccenvironmental.com) and MEFT portal. All I&APs will be informed via email.

The ESIA report and appendices are formally submitted to the Office of the Environmental Commissioner, DEA as part of the application for an environmental clearance certificate.

## 2.10 AUTHORITY ASSESSMENT AND DECISION MAKING

The Environmental Commissioner in consultation with other relevant authorities will assess if the findings of the ESIA presented in the ESIA report is acceptable. If deemed acceptable, the Environmental Commissioner will revert to the proponent with a record of decision and any recommendations.

## 2.11 MONITORING AND AUDITING

In addition to the EMP being implemented by the proponent, a monitoring strategy and audit procedure will be determined by the proponent and competent authority. This will ensure key environmental receptors are monitored over time to establish any significant changes from the baseline environmental conditions caused by project activities.

### 3 REGULATORY FRAMEWORK

This chapter outlines the regulatory framework applicable to the proposed project. Table 3 provides a list of applicable legislation and its relevance to the project. Environmental clearance is required for any activity listed as per Government Notice No 29 of 2012 of the EMA.

#### 3.1 NATIONAL LEGISLATION

**TABLE 3 - LEGAL FRAMEWORK**

NATIONAL REGULATORY REGIME	SUMMARY	APPLICABILITY TO THE PROJECT
<p><b>Constitution of the Republic of Namibia of 1990</b></p>	<p>The Constitution of the Republic of Namibia, 1990 clearly defines the country’s position concerning sustainable development and environmental management. The constitution refers that the state shall actively promote and maintain the welfare of the people by adopting policies aimed at the following:</p> <p><i>“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; in particular, the government shall provide measures against the dumping or recycling of foreign nuclear and toxic waste on Namibian territory.”</i></p>	<p>The proponent is committed to engaging the local community for the proposed project by providing local jobs as well as, exploring ways of finding rich resources that could contribute to the mining sector in Namibia.</p>
<p><b>Minerals (Prospecting and Mining) Act, No. 33 of 1992</b></p>	<p>Provides for the reconnaissance, prospecting and mining for, and disposal of, and the exercise of control, minerals in Namibia.</p> <p>Section 50 (i) requires <i>“an environmental impact assessment indicating the extent of any pollution of the environment before any prospecting operations or mining operations are being carried out and an estimate of any pollution, if any, likely to be caused by such prospecting operations or mining operations”</i></p> <p>Section 50 sets out that in addition to any term and condition contained in a mineral agreement and any term and condition contained in any</p>	<p>The proposed activity is prospecting for minerals; hence it requires an ESIA to be carried out as it triggers listed activities in the Environmental Management Act and its regulations. This report presents the findings of the EIA.</p> <p>Works shall not commence until all conditions in the Act are met, which includes an agreement with the landowners and conditions of</p>

NATIONAL REGULATORY REGIME	SUMMARY	APPLICABILITY TO THE PROJECT
	<p>mineral licence, it shall be a term and condition of any mineral licence that the holder of such mineral licence shall:</p> <p>Exercise any right granted to him or her in terms of the provisions of this Act reasonably and in such manner that the rights and interests of the owner of any land to which such licence relates are not adversely affected, except to the extent to which such owner is compensated.</p> <p>Section 52 sets out that the holder of a mineral licence shall not exercise any rights conferred upon such holder by this Act or under any terms and conditions of such mineral licence</p> <p>(a) In, on or under any private land until such time as such holder.</p> <p>(i) Has agreed in writing with the owner of such land containing terms and conditions relating to the payment of compensation, or the owner of such land has in writing waived any right to such compensation and has submitted a copy of such agreement or waiver to the Commissioner.</p>	<p>compensation has been agreed.</p> <p>The project shall be compliant with Section 76. With regards to records, maps, plans and financial statements, information, reports, and returns submitted.</p> <p>As the proponent will need to access privately owned land the proponent will ensure Sections 50 and 52 are complied with.</p>
<p><b>Environmental Management Act, (No. 7 of 2007) and its regulations, including the Environmental Impact Assessment Regulation, 2007 (No. 30 of 2012)</b></p>	<p>The Act aims to promote sustainable management of the environment and the use of natural resources by establishing principles for decision-making on matters affecting the environment.</p> <p>It sets the principles of environmental management as well as the functions and powers of the minister. The Act requires certain activities to obtain an environmental clearance certificate before project development. The Act states an EIA may be undertaken and submitted as part of the environmental clearance certificate application.</p> <p>The MEFT is responsible for the protection and management of Namibia's natural environment. The Department of Environmental Affairs under the MEFT is responsible for the administration of</p>	<p>This environmental scoping report (and EMP) documents the findings of the environmental assessment undertaken for the proposed project, which will form part of the environmental clearance application.</p> <p>The assessment and report have been undertaken in line with the requirements under the Act and associated regulations.</p>

NATIONAL REGULATORY REGIME	SUMMARY	APPLICABILITY TO THE PROJECT
	the EIA process.	
<b>Water Act, No. 54 of 1956</b>	<p>Although the Water Resources Management Act, no 11 of 2013 has been billed, not promulgated, it cannot be enacted as the regulations have not been passed – so the Water Act 54 of 1956 is still in effect. This act provides for <i>“the control, conservation and use of water for domestic, agricultural, urban and industrial purposes; to make provision for the control, in a certain respect and for the control of certain activities on or in water in certain areas”</i>.</p> <p>The Department of Water Affairs within the Ministry of Agriculture Water and Land Reform (MAWLR) is responsible for the administration of the act.</p> <p>The Minister may issue a permit in terms of regulations 5 and 9 of the government notice R1278 of 23 July 1971 as promulgated under section 30 (2) of the Water Act no. 54 of 1956, as amended.</p>	<p>The Act stipulates obligations to prevent pollution of water. Should wastewater be discharged, a permit is required. The EMP sets out measures to avoid polluting the water environment.</p> <p>Measures to minimise potential groundwater and surface water pollution are contained in the EMP.</p> <p>Abstraction of water from boreholes requires an abstraction permit. Abstraction rates need to be measured and reported to the authorities in accordance with the requirements of this legislation. In addition, annual reporting on the environmental impacts of water abstraction is recommendable. Should the project require drilling and abstraction of water from underground sources, an application should be submitted to the authorities.</p>
<b>Soil Conservation Act, No. 76 of 1969) and the Soil Conservation Amendment Act, No. 38 of 1971)</b>	Makes provision for the prevention and control of soil erosion and the protection, improvement and the conservation, improvement and manner of use of the soil and vegetation.	This will be taken into consideration during the intention of the works to be undertaken within EPL 5445 site. Measures in the EMP set out methods to avoid soil erosion.
<b>The Forestry Act, No. 12 of 2001 as amended by the Forest Amendment Act, No. 13 of</b>	Section 22 requires a permit for the cutting, destruction or removal of vegetation that are classified under rare and or protected species; clearing the vegetation on more than 15 hectares on any piece of land or several pieces of land situated in the same locality which has	The planned project activities will include minimal vegetation clearing to support exploration activities. The necessary permit should be obtained from the MEFT, where the application

NATIONAL REGULATORY REGIME	SUMMARY	APPLICABILITY TO THE PROJECT
<b>2005</b>	predominantly woody vegetation, or cut or remove more than 500 cubic metres of forest produce from any piece of land in a period of one year.	should satisfy that the cutting and removal of vegetation will not interfere with the conservation of soil, water or forest resources.
<b>National Heritage Act, No. 27 of 2004.</b>	<p>The Act provides provision of the protection and conservation of places and objects with heritage significance.</p> <p>Section 55 stipulates that exploration companies must report any archaeological findings to the National Heritage Council after which a heritage permit needs to be issued</p>	<p>There might be potential for heritage objects to be found on-site, therefore the stipulations in the Act have been taken into consideration and are incorporated into the EMP.</p> <p>Section 55 compels exploration companies to report any archaeological findings to the National Heritage Council after which a permit needs to be issued before the find can be disturbed. In cases where heritage sites are discovered the 'chance find procedure' will be used</p>
<b>The Traditional Authorities Act, No. 25 of 2000 and its Regulations of 2001</b>	The Act makes provision for the establishment of traditional authorities over communal land in Namibia. The Act also sets out the structure of the traditional authorities with different levels of authority and the appointment of office bearers to the various positions. The Ministry of Regional & Local Government & Housing (MRLGH) pays allowances for the chief, 12 councillors and the secretary, and also provides funds for stationery and communications.	EPL 7508 falls within communal land administered by a traditional authority. All communication of environmental matters and beyond should be directed to the relevant traditional authority who administers the land. All communication with the Board of Trustees of the traditional authority should be directed via the secretary of the Board.
<b>Communal Land Reform Act No. 5 of 2002</b>	To provide for the allocation of rights in respect of communal land; to establish Communal Land Boards; to provide for the powers of Chiefs and Traditional Authorities and boards in relation to communal land; and to make provision for incidental matters.	EPL 7508 falls within communal land. All communication of environmental matters and beyond should be directed to the relevant Communal Land Board. All communication with the Board of Trustees of the traditional

NATIONAL REGULATORY REGIME	SUMMARY	APPLICABILITY TO THE PROJECT
	Section 43 (1) stipulates that no person may occupy or use for any purpose any communal land other than under a right acquired in accordance with the provisions of this Act, including a right referred to in section 28(1) or 35(1). (2) A Chief or a Traditional Authority or the board concerned may institute legal action for the eviction of any person who occupies any communal land in contravention of subsection (1).	authority should be directed via the secretary of the Board.

### 3.2 NATIONAL REGULATORY REGIME

**TABLE 4 - NATIONAL POLICIES**

NATIONAL REGULATORY REGIME	SUMMARY	APPLICABILITY TO THE PROJECT
<b>Vision 2030</b>	Vision 2030 sets out the nation's development programmes and strategies to achieve its national objectives. It sets out eight themes to realise the country's long-term vision.  Vision 2030 states that the overall goal is to improve the quality of life of the Namibian people to a level in line with the developed world.	The planned project shall meet the objectives of Vision 2030 and shall contribute to the overall development of the country through continued employment opportunities.
<b>The Fifth National Development Plan (NDP5)</b>	NDP5 is the fifth in the series of seven five-year national development plans that outline the objectives and aspiration of Namibia's long-term vision as expressed in Vision 2030. NDP5 is structured on the pillars of economic progression, social transformation, environmental sustainability and good governance. Under the social transformation pillar is the goal of improved education.	The planned project supports meeting the objectives of NDP5 by creating opportunities for employment for the nearby community and the Namibian nation.
<b>Minerals Policy</b>	The Minerals Policy was adopted in 2002 and sets guiding principles and direction for the development of the Namibian mining sector while communicating the values of the Namibian people. It sets out to achieve several objectives in line with the sustainable development of	The objectives of the Minerals Policy are in line with the objectives of the NDP5, i.e., reduction of poverty, employment creation, and economic empowerment in



NATIONAL REGULATORY REGIME	SUMMARY	APPLICABILITY TO THE PROJECT
	<p>Namibia's natural resources. The policy strives to create an enabling environment for local and foreign investments in the mining sector and seeks to maximise the benefits for the Namibian people from the mining sector while encouraging local participation, amongst others.</p> <p>The objectives of the Minerals Policy are in line with the objectives of the Fifth National Development Plan that include reduction of poverty, employment creation and economic empowerment in Namibia.</p>	<p>Namibia. The proposed project conforms to the policy, which has been considered through the ESIA process and the production of this report.</p>
<p><b>Labour Act, No. 11 of 2007</b></p>	<p>The Labour Act, No. 11 of 2007 (Regulations relating to the Occupational Health &amp; Safety provisions of Employees at Work promulgated in terms of Section 101 of the Labour Act, No. 6 of 1992 - GN156, GG 1617 of 1 August 1997)</p>	<p>The proposed project will comply with stringent health and safety policies, including the compulsory use of specific PPE in designated areas to ensure adequate protection against health and safety risks. Proper storage and labelling of hazardous substances are required. The project will ensure employees in charge of and working with hazardous substances need to be aware of the specific hazardous substances in order not to compromise worker and environmental safety.</p>

### 3.3 PERMITS AND LICENCES

#### 3.3.1 EXCLUSIVE PROSPECTING LICENCES

The EPL 5445 was granted on the 01<sup>st</sup> of November 2013. In terms of the Minerals (Prospecting and Mining) Act, No. 33 of 1992, an EPL may be renewed, however, it may only be extended twice for two-year periods if demonstrable progress is shown. Renewals beyond seven years require special approvals from the Minister (MME, 2018).

Such renewals are subject to a reduction in the size of the EPL. When a company applies for renewal of an EPL, the application must be lodged 90 days before the expiry date of the EPL or, with good reason, no later than the expiry date (MET & MME, 2018).

If renewal is applied for, the MME must review the renewal application and make any comments or recommendations for consideration by the Minerals (Prospecting and Mining Rights) Committee (MPMRC). Amendments and revisions may be required for the ESIA and EMP. Due consideration must be given when renewing the licence to ascertain whether there is justification to renew the licence. Once an EPL expires and a new EPL is issued, even if it is to the previous holder, the full screening process must be followed with a full EIA process, before operations may commence (MET & MME, 2018).

The permits and licences that may be relevant to the proposed projects are outlined in Table 5.

**TABLE 5 – RELEVANT PERMITS AND LICENCES**

PERMIT AND LICENCES	RELEVANT AUTHORITY	VALIDITY/DURATION
<b>WATER ABSTRACTION PERMITS</b>	Ministry of Agriculture, Water and Land Reform	Permit dependent
<b>EXCLUSIVE PROSPECTING LICENCE</b>	Ministry of Mines and Energy - Windhoek	3 years
<b>NOTICE OF INTENTION TO DRILL</b>	Ministry of Mines and Energy - Windhoek	To be submitted before drilling
<b>EFFLUENT DISCHARGE PERMIT</b>	Ministry of Agriculture, Water and Land Reform	5 years

## 4 PROJECT DESCRIPTION

### 4.1 NEED FOR THE PROJECT

Namibia is relatively rich in a variety of minerals, and mining has always been a critical sector of the Namibian economy. The sector contributes significantly to the country's Gross Domestic Product (GDP), through taxation, royalties, fees and equities as well as export revenues. For this reason, exploration activities are encouraged in Namibia and the vision of the Minerals Policy being to "further attract investment and enable the private sector to take the lead in exploration, mining, mineral beneficiation and marketing" supports the development.

The proposed project is in line with the development goals and has the potential to create short term and limited employment in local communities such as Uis, Khorixas and the local settlement of Anixab to contribute to the national, regional and local income. If exploration activities are successful, and a resource with commercially viable mineral concentrations can be defined, the exploration operations can potentially transcend into mining operations which can result in multiple socio-economic benefits to the region and the country at large.

In Namibia, mining exploration is mainly done by the private sector focusing on base and rare metals (copper, lead, zinc, etc.). According to the Mineral Yearbook of 2016, Mining and quarrying accounted for 7.9% of the country's real GDP, of which about 59% was from diamond mining; 19%, from the mining of metal ores; and about 15%, from uranium mining. Namibia's economy heavily relies on its mining industry and its mineral resources include diamond, silver, tungsten, lead, zinc, tin, uranium, and copper. Nearly 25% of the country's income is contributed by this sector.

### 4.2 EXPLORATION

It is the process of sampling/collecting fragments of the earth's layers for testing of each sample's mineral composition, grade, and spatial dispersion to acquire an informed perspective of the target area's ore potential. Deeper probing is achieved through geophysical surveys.

### 4.3 EXPLORATION METHODOLOGY

Exploration work will be entirely conducted by contracted geological, geophysical consultants and in phase three and four onwards drilling consultants and companies. The below schedule of activities (Table 6) is presented for the project.

**TABLE 6 - LIST OF ACTIVITIES PLANNED PER PHASE**

PHASE	DATE	ACTIVITY DESCRIPTION
<b>Phase 1: 2021</b>	Field inspection commencement date unknown, desktop work commenced 2021:	Non-invasive Ground Penetrating Radar (GPR) will be done in the first three months. Desktop studies and Remote Sensing will take place
<b>Phase 2: 2022</b>	Actual commencement date unknown: Early 2022.	RC drilling will then commence soon after for another three months. Further planning will take place after the results of drilling has been obtained. If results are favourable subsequent exploration will continue. However, if not, the sites will be rehabilitated and vacated.

#### 4.4 ALTERNATIVES CONSIDERED

The proposed project has been subject to a process of design evolution, informed by both consultation and an iterative environmental assessment. In terms of the Environmental Management Act, No. 7 of 2007 and its regulations, alternatives considered should be analysed and presented in the scoping assessment and EIA report. This requirement ensures that during the design evolution and decision-making process, potential environmental impacts, costs, and technical feasibility have been considered, which leads to the best option(s) being identified.

Exploration activities range from extremely low impact exploration such as coarse line sampling and geophysical surveying to more invasive activities such as trenching or extensive close spaced drilling. The initial exploration results will define the need, if at all, for the more invasive activities.

The Environmental assessment has therefore taken a worst-case scenario, which includes a review of all likely exploration activities, thus no other technological alternatives are available for consideration at this stage.

Once the exploration programme is further defined, the best available option for methods shall be identified to ensure the impacts on the environment and society are minimised. The following activities are ongoing or proposed:

- Interpretation of Govt aeromagnetic and radiometric data (planned);
- Satellite image interpretation;
- Acquisition of low-level airborne electromagnetic data (coarse line spacing yet to be determined, planned);

- Initial field visits to exposed geology both in isolated outcrop and in streams (planned);
- Stream sediment and rock-chip sampling for geochemistry (planned); and
- Detailed geochemical sampling and ground geophysical follow-up of specific interpreted target localities (planned).

Once the exploration programme is further defined with new information generated from the initial geophysical surveying and data analysis activities, the following more invasive techniques will be employed at strategic locations informed by new data.

- RAB or RC drilling as the next stage of the programme, followed by
- Diamond core drilling.

The most suitable options and methods shall be identified to ensure the impacts on the environment and society from these activities are minimised.

#### 4.5 NO-GO ALTERNATIVE

Should exploration activities within EPL 5445 not take place, the anticipated environmental impacts from exploration activities would not occur, however, the social and economic benefits associated with the project would also not be materialized.

There would not be an opportunity to define resources within the project area, this would be a missed opportunity for geological mapping and data collection that would add to regional knowledge of Namibia's mineral wealth and, if found to be viable for mining, could benefit the Namibian economy.

#### 4.6 EQUIPMENT REQUIREMENTS

In the early exploration phase (1st and possible 2nd year) contractor vehicles and equipment will comprise:

- 4x4 vehicles for personnel and field equipment;
- Field equipment including tents, mobile toilets and ablution facilities, spades, axes, soil sampling equipment such as sieves, sample bags, surveying apparatus;
- Portable or semi-portable vehicle-mounted geophysical equipment such as magnetometers or Induced Polarization apparatus (all passive and non-invasive).
- In the ensuing phases, drilling is envisioned. The equipment requirements would therefore be a RAB/ Aircore Drill rig initially then followed by diamond core drilling. This is anticipated to be a specific provision within the tender documentation.

#### 4.7 POWER SUPPLY

The individual contractors will be responsible to supply their own energy needs throughout their stay within the field camps. The proponent prefers the use of solar panels and small-scale generators.

#### 4.8 WATER SUPPLY

Water will be required for various uses including human consumption and exploration activities. Water demand per day for the exploration project is broken down into two usage categories.

**SOURCE 1:** Potable water will be brought to the site. During drilling operations, water shall be used, recirculated and stored in lined collections ponds. If deemed clean and suitable will be discharged to the environment for evaporation or if not suitable for discharge will be transported to Walvis Bay for disposal at a suitable waste facility.

**SOURCE 2:** Supplied directly from already existing boreholes within the area (if any), with the relevant permission.

#### 4.9 WORKERS ACCOMMODATION

The workers will be deployed at various stages of exploration including soil sampling, geological mapping, geophysical surveys and drilling operations.

It is envisioned that for most of the exploration programme workers will reside in a dedicated campsite within the EPL. The proponent will provide transport. However, during the latter part of the prospecting (drilling) workers may be required to stay in field camps away from any buildings or camps within the EPL. It is anticipated that the contractor will be completely self-sufficient concerning the power supply and waste management.

The proponent shall provide suitable living facilities during this period. Furthermore, the camping equipment shall include tents and a portable kitchen.

#### 4.10 SOLID WASTE MANAGEMENT

Solid waste will be generated throughout the project, and will mainly consist of packaging materials and food waste. Contractors and employees will properly collect the waste, transport it and disposed of it at the appropriate disposal sites of a larger town (i.e., Uis) once a vehicle leaves the exploration site.



#### 4.11 WASTEWATER EFFLUENT

Wastewater will be diverted into a lined sump to evaporate. The remaining solid residue will be buried in the soil if not toxic. Hazardous waste (hydrocarbon contaminated soil, etc.) will be disposed of at the Walvis bay municipal landfill site.

Effluent waste will be generated by the project, whilst exploration work throughout the phases are ongoing. Waste produced on-site will include sewerage. Wastewater (e.g. water with drill additives) used during drilling will be recycled where possible. In case of the provision of mobile toilets to be used on-site, sewerage generated shall be managed by the toilet contractor. The proponent shall ensure waste transport certificates are provided by the toilet contractor for sewerage waste removed from the site. No toxic waste will be discharged into the environment. Otherwise, existing long drop or toilet facilities will be used, if any exist within the area.

#### 4.12 REHABILITATION

Once exploration activities are completed the areas shall be rehabilitated to a condition as close to the original state as far as possible. Rehabilitation shall be determined during the exploration programme and shall be agreed upon with the landowners and authorities as implied by legislation (discussed in Section 3). Before and after photographs will be used to monitor rehabilitation success. The proponent has committed to restoring any historic exploration disturbance on the site if identified.

## 5 BASELINE / CURRENT BIOPHYSICAL ENVIRONMENT

This section provides an overview of the existing biophysical environment through the analysis of the baseline data regarding the existing natural and socio-economic environment. Desktop studies on the national database are undertaken to get information on the current status of the receiving environment. This provides a baseline where changes that occur because of the proposed project can be measured.

### 5.1 CLIMATE

The area where this EPL is located has a climate that is characterised by mild summers and cool winters with the mean temperatures ranging between 17°C and 19°C. The minimum temperatures are between 6°C to 10°C and the maximum temperatures between 18°C to 22°C. The hottest month of the year is known to be February and the coolest is August. This area is not known to get frost in the winter months. The fog in this area is expected to be between 25 and 50 days per year (Bubenzer, 2002 & meteoblue, 2021).

Most fog is prevalent during mornings and evenings and dissipates as the day heats up. This is an important determining factor for outdoor activities during daytime hours within this area. The solar radiation in this area is also known to be between 5.6 to 6 kWh/m<sup>2</sup>/day. EPL 5445 is located in a part of Namibia, within the Namib Desert climatic zone (Bubenzer, 2002).

With regards to the relative humidity, the most humid month of the year is February at approximately 80% RH, and the driest month is June with approximately 30-40% RH. The average rainfall in this area during the year is between 50 to 110mm and rainfall events are limited to the summer months, mainly between December and March. Potential evaporation is between 2800 and 3200 mm per year, meaning an average water deficit of between 1,901 and 2,300 mm per year (Bubenzer, 2002).

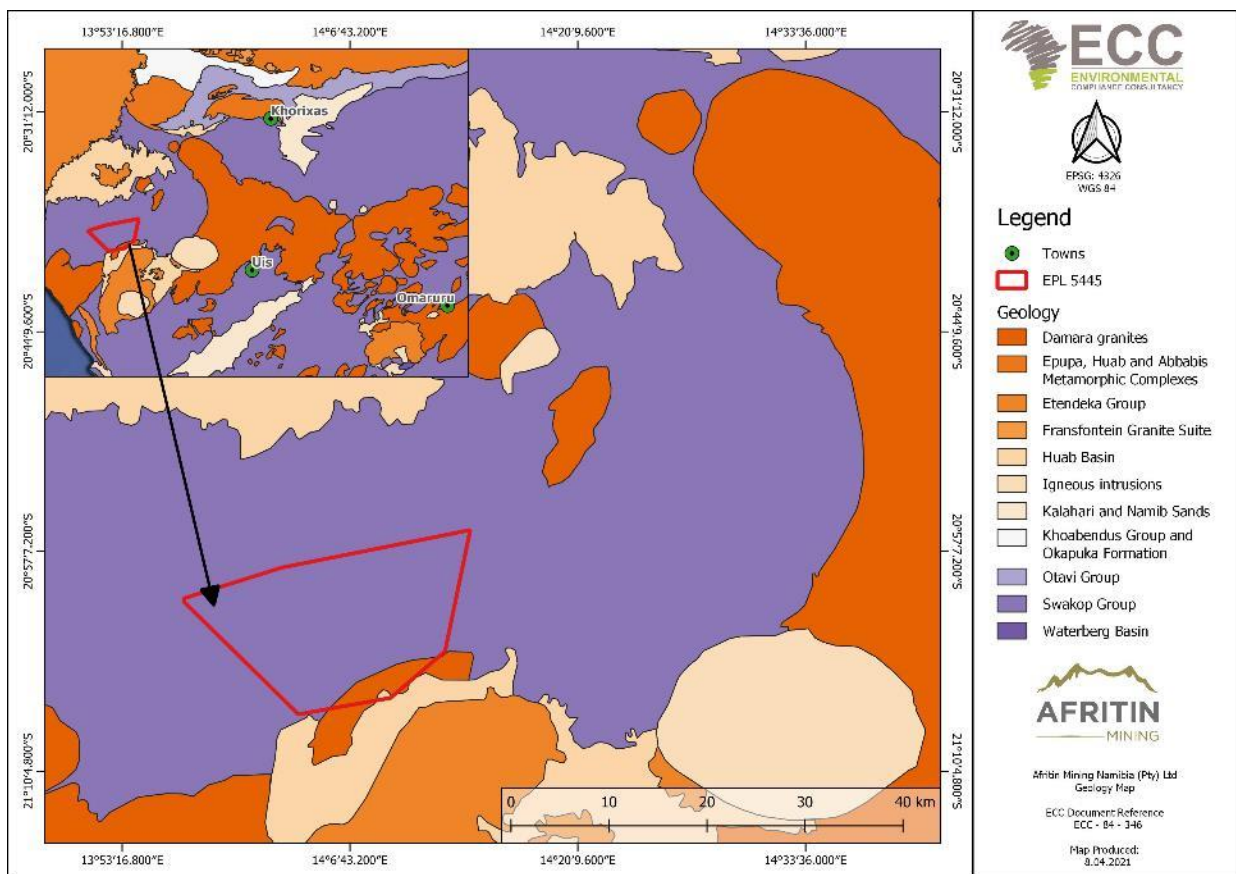
The closest town to this EPL with climatic data is Uis, which is known to have average wind speeds between 12 and 19 km/h. The months of October to January are known to have the strongest winds. Wind can occur any time of the day and the most predominant wind directions for this area are ENE, SW and SSW (Figure 4).



rare outcrops and underlying formations exposed along drainage lines and around isolated pans.

Apart from diamonds, most of Namibia’s valuable mineral resources have been found in the western part of Namibia where the oldest rocks are exposed to the surface, i.e., the metamorphic complexes and the Damara Supergroup which is where the EPL is situated (Mendelsohn et al., 2002).

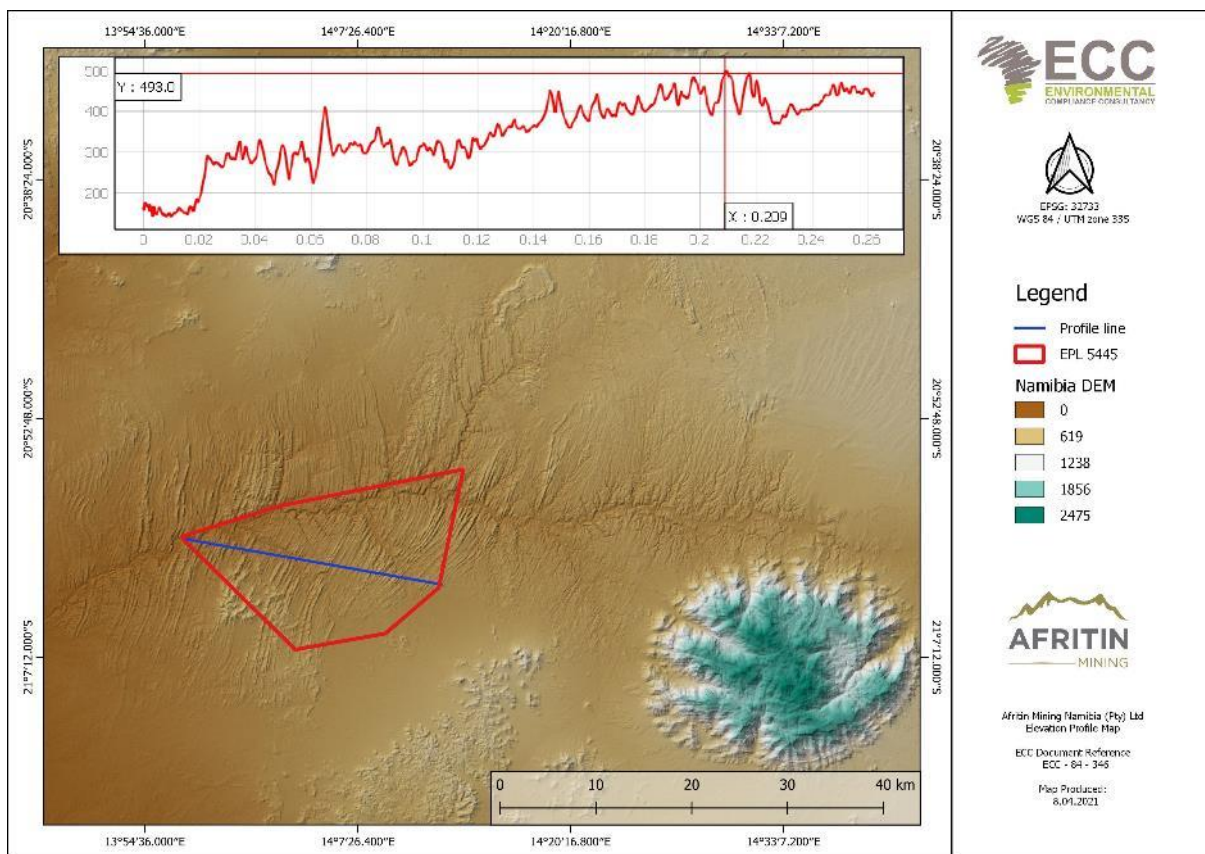
The regional geology of this EPL area consists of the Swakop Group, Damara Granites and Huab Basin. The main rock types of this area are Schists, Dolomites and Granite. The Swakop Group is part of the Damara Supergroup and Gariiep Complex (Bubenzer, 2002). The southern corner of the EPL falls within the Damara Granite intrusions. The different geological group formations associated with the EPL are illustrated in Figure 5.



**FIGURE 5 - REGIONAL GEOLOGICAL SETTING OF EPL 5445**

### 5.3 TOPOGRAPHY AND SOILS

The topography of the EPL is flat, varying between 493 and just below 200m above mean sea level. The surface geology appears to be rugged, and the entire landscape has a gentle gradient dipping from east to west (Figure 6). This EPL is situated close to the Brandberg which is highly elevated at about 2475m above mean sea level.



**FIGURE 6 - ELEVATION PROFILE FOR EPL 5445**

EPL 5445 is largely covered by lithic Leptosols soil and a small part of the EPL in the Southern corner is of eutric Regosols soil (Figure 7) (Bubenzer, 2002). Namibian soils vary a great deal, variations occur on a broad scale but there is even a great deal of variability at a local level.

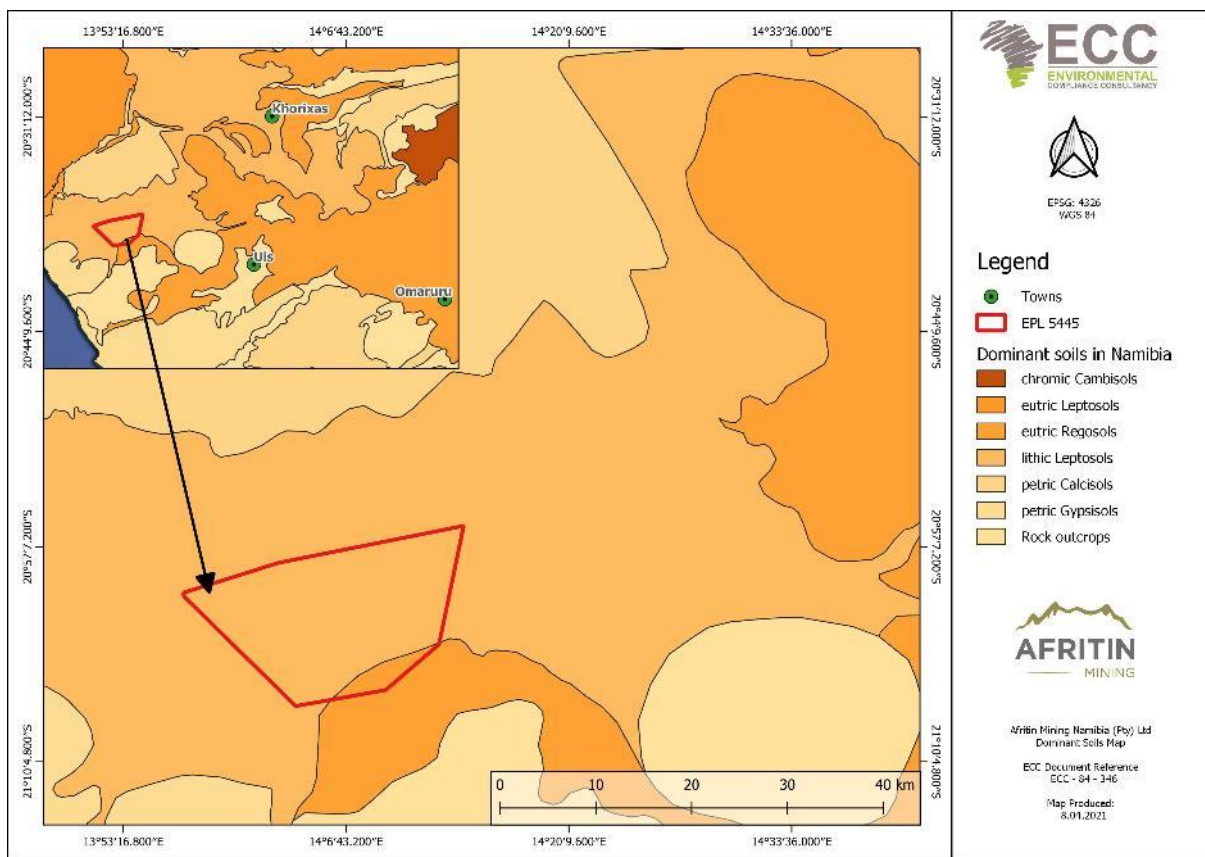
The first part of the soil name provides information on the properties of the soil, namely: Lithic soil is characterised as very thin or shallow soils whereas eutric soils are fertile with high base saturation. The second name reflects the conditions and processes which have led to the formation of the soils (Mendelsohn et al., 2002).

Leptosols are typically formed in areas that are actively eroding, especially in hilly or undulating areas which cover a large part of the southern and north-western parts of



Namibia, where the EPL is located. This type of soil is coarse-textured and offers limited depth due to the presence of hard-rock, highly calcareous or cemented layer within 30cm of the surface. Leptosols are the shallowest soils in Namibia and often contain gravel, this soil has a low water-holding capacity. Water run-off and water erosion can be very high in these areas if heavy rainfall occurs (Mendelsohn et al., 2002).

Regols are medium to fine-textured soils of actively eroding landscapes. These soils are not as shallow as Leptosols but these soils never reach depths of more than 50cm. This type of soil cannot provide vegetation with sufficient minerals or water (Mendelsohn et al., 2002).



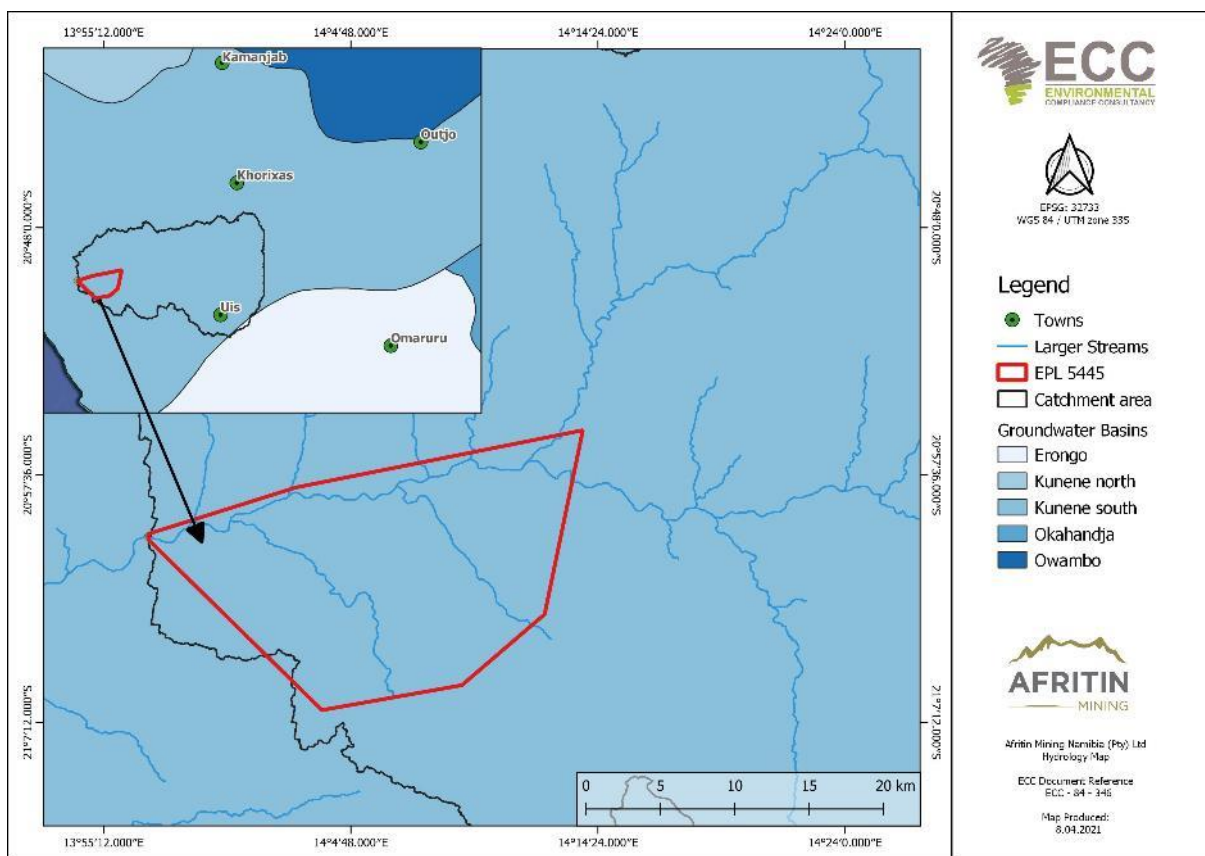
**FIGURE 7 - REGIONAL SOIL MAP OF EPL 5445**

## 5.4 HYDROLOGY

EPL 5445 falls within the Kunene south groundwater basin (figure 8)., in general, this region has little groundwater. This EPL falls within the Ugab catchment area The groundwater potential of fractured aquifers in the Swakop Group of the Damara Sequence is generally low (Christelis, 2011).

There are no farms located within or nearby EPL 5445, thus no borehole abstraction is used by the surrounding area for water supply. There is no indication of any boreholes in the nearby area, or surrounding the EPL, as per Namibian GIS data. The current and planned mining-related activities in the Kunene south Basin and other areas in the Erongo Region of Namibia may have impacts on the availability and quality of water resources.

The Erongo region in the central-western part of Namibia receives between 350 to less than 50 mm of rainfall per year, most of the EPL area is located in the arid part with rainfall of less than 150 mm per year (Bubenzer, 2002).



**FIGURE 8 - REGIONAL HYDROLOGY MAP OF EPL 5445**

## 5.5 VEGETATION

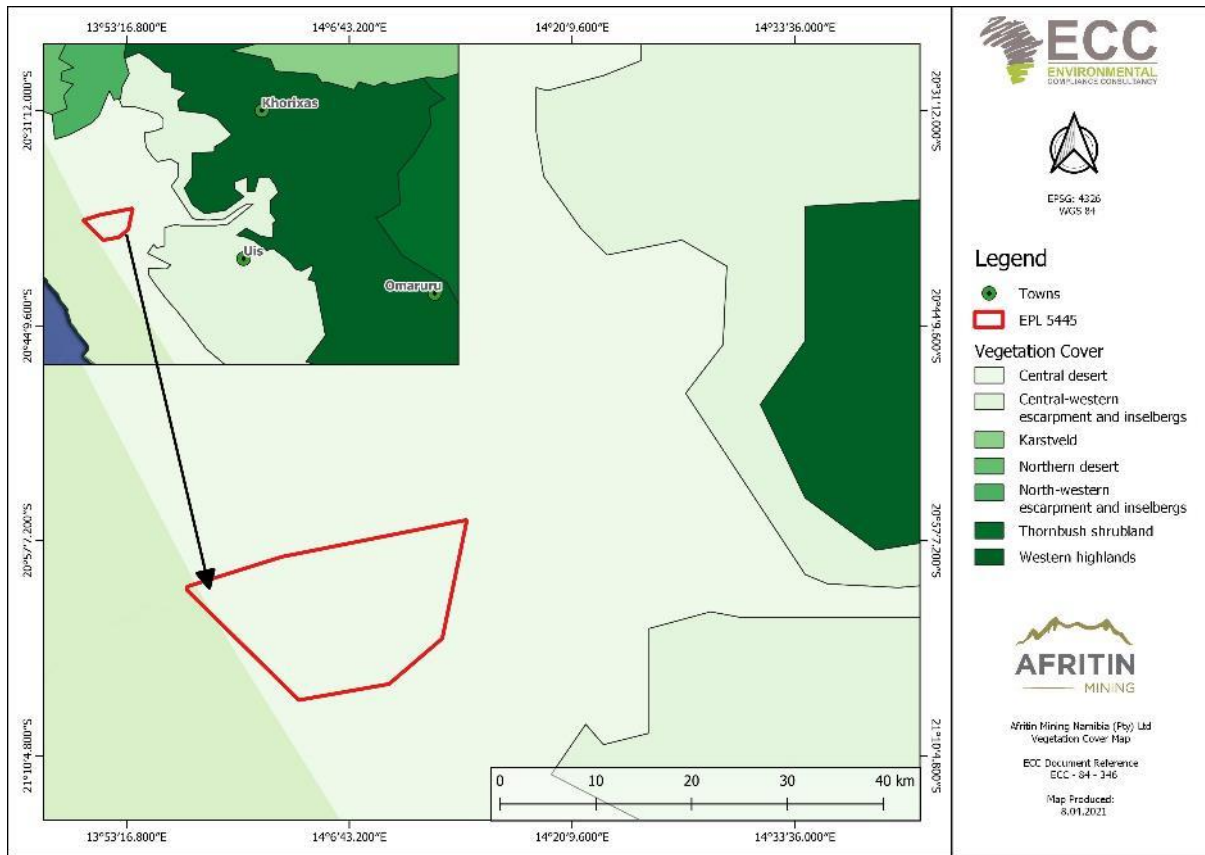
EPL 5445 falls within the central desert vegetation cover. The vegetation in Namibia is strongly influenced by rainfall. The plant diversity and tallest trees are most lush in the north-eastern parts of the country and contrast sparser and shorter to the west and south of the country. This gradient is not simple as other factors such as soil types and landscape may also influence the vegetation. The dominant vegetation structure of EPL 5445 is spare shrubs and grasses and the dominant landscape is mainly central-western plains (Bubenzer, 2002 & Mendelsohn et al., 2002).



The area has unique vegetation and wildlife species including reptiles and avifauna, many of which are endemic to the Namib Desert. EPL 5445 lies within the Desert Biome and Central Desert vegetation type, which tends to have grassland occupying the gravel plains. The grass cover is very sparse but dominates the little vegetation that grows on the gravel plains. The plant diversity of the areas is low (between 50 to 100 species) (Bubenzer, 2002 & Mendelsohn et al., 2002).

A list of plant species (mostly trees and shrubs) that might potentially be found within this EPL has been composed and can be seen in Appendix E. This list was created through a desktop study; thus, it is not certain that those species will be present within EPL 5445, but the EPL does fall within their possible distribution range. The sources used to compile this list can be seen in Appendix E. Additionally, a list of species was requested from the National Botanical Research Institute (NBRI) for this assessment.

According to the desktop study, a total of 22 tree and shrub species with some sort of legal protection might potentially occur within EPL 5445; the legal requirements that were used include, The Nature Conservation Ordinance 4 of 1975 (NCO), The Forest Act 12 of 2001 (FA), The Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) and the International Union for Conservation of Nature's (IUCN) Red List of Threatened Species (Appendix E). Additionally, from an I&AP the following plants were also identified that might potentially occur on-site, *Hoodia currorii subsp. Currorii*, *Aloe asperifolia*, *Moringa ovalifolia* and *Welwitschia mirabilis*.



**FIGURE 9 - REGIONAL VEGETATION MAP OF EPL 5445**

## 5.6 FAUNA SPECIES

The area within and surrounding the EPL has between 111 – 140 bird species, which is of medium diversity in comparison to the rest of Namibia, which has a total of 658 recorded bird species. The number of observed lizard species for this area is between 28 to 35 different species and the mammal diversity of this area has been recorded to be between 31 to 75 species. The carnivore diversity is approximately 5 species for this area, thus the overall terrestrial diversity for this area is low in comparison with the rest of the country (Bubenzer, 2002 & Mendelsohn et al., 2002).

Furthermore, the rodent diversity is between 12 to 19 species as recorded for this area and the different snakes recorded are between 10 to 19 different species (Bubenzer, 2002 & Mendelsohn et al., 2002).

The diversity of mammals and reptiles in the area is generally low and low respectively when compared to the rest of Namibia, but this area represents an area that has various important species that need to be protected of which some are critically endangered (Bubenzer, 2002, IUCN, 2021 & Mendelsohn et al., 2002). Although this area does not have the highest diversity of species in Namibia it surely has a unique and sensitive ecosystem

with high endemism and some High Conservation Value (HCVs) Species (Bubenzer, 2002, IUCN, 2021 & Mendelsohn et al., 2002).

This part of the Erongo and Kunene Regions are relatively untouched, as most people that live within the area are confined to settlements, lodges or camps or larger towns like Uis. This area also has no farms directly surrounding the EPL, thus human-wildlife conflict between the farmers and animals will be relatively low (human-wildlife conflict will be mostly confined to settlements or any nomadic lifestyle in the area); on the contrary conservation within this area is of very high priority, due to the Save the Rhino Trust camp that falls within the EPL and is responsible for the conservation of critically endangered Black Rhinos (*Diceros bicornis*).

In the last 60 years (since the 1960's) the black rhino (*Diceros bicornis*) population declined from approximately 100,000 individuals to only 3,142 mature individuals (total of 5,495). From these 5,495 black rhinos, there are only approximately 1,334 mature individuals (total 2,188) of the South-western black rhino (*Diceros bicornis ssp. bicornis*) (sub-species present across Namibia) left in the wild (Emslie 2020 & Save the Rhino Trust Namibia. n.d). These populations decreased drastically, due to poaching, combined with inadequate field protection and habitat loss. A total of 260 Black Rhinos have been poached in Namibia between 2010 and 2018, of which the majority were poached between 2015 and 2018 (226 individuals poached) (IUCN 2021); furthermore, during 2019 52 rhinos (black and white rhinos) were poached and in 2020, 31 rhinos have been poached (Rhino Recovery Fund 2021).

According to Save the Rhino Trust (n.d.), the “critically endangered black rhinos' last stand may be in north-western Namibia”. This is the last population of free-roaming black rhinos left in the world (Save the Rhino Trust Namibia. n.d). This “desert-specific” black rhino (*Diceros bicornis bicornis*) population is unique and the only population of its kind in the world and is has been rated by the African Rhino Specialist Group (AfRSG) as a Key 1 Population. Throughout Africa, there are only seven Key 1 populations, which shows the national and global importance of the Save the Rhino Trusts black rhino conservation work (Save the Rhino Trust Namibia. n.d.). Thus, any area hosting these majestic animals should be considered as an extremely sensitive ecosystem. From a study conducted by Hearn, Loutit and Uri-Khob (2000), the size of the black rhino's range (approximately 25 000 km<sup>2</sup>) in North-western Namibia.

A list of species that might potentially be found within this EPL has been composed and can be seen in Appendix E. This list was created through a desktop study; thus, it is not certain that those species will be present within EPL 5445, but the EPL does fall within their possible distribution range. Due to the desert climate of the area, some species might only be

encountered on the EPL during certain seasons of the year, for example during the rainy season when the Ugab River, small streams or rock pools have water within the EPL, it might attract certain species to the area.

This list shows mammal and bird species that have some sort of legal protection, either under the Nature Conservation Ordinance 4 of 1975 (NCO), The Forest Act 12 of 2001 (FA), the Marine Resources Act 27 of 2000 (MRA), The Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) and the International Union for Conservation of Nature's (IUCN) Red List of Threatened Species. In the tables, in Appendix E an IUCN or a Namibia Biodiversity link can be found to view the relevant species that could potentially be found within the EPL. The list only includes birds with at least two legal/regulatory requirements, because almost all bird species in Namibia fall under Schedule 4: Protected Game within the NCO.

In the area of EPL 5445, there are 53 bird species mentioned in Appendix E, that might potentially be found or encountered on the EPL during the year (depending on the season and migratory patterns); of these species five are Near-threatened, three are Vulnerable, five are endangered and one Critically Endangered (White-backed Vulture) according to the IUCN red list of threatened species (IUCN 2021).

In the area of the EPL 5445 there are approximately 18 protected mammal species of which five are classified as vulnerable, as well as one endangered and one Critically endangered (Black Rhino) according to the IUCN red list of threatened species (link to these species can be found in the tables in Appendix E) may be found within the surrounding area. Although Lions (*Panthera Leo*) are classified as vulnerable by the IUCN red list of threatened species, the unique desert lions of Namibia that are found within these North-western regions of Namibia should rather be seen as endangered due to their small population size, and the continuous threats associated human-wildlife conflict and trophy hunting within these north-western parts of Namibia (IUCN, 2021 & the Guardian, 2018). This small population of lions have a unique adaptation to their environment and can survive in harsh desert conditions and nowhere else in the world can free-ranging lions be seen on the beach or among sand dunes. Due to this "the iconic Desert lion has become a prominent feature in Namibia and is highly valued, both aesthetically and financially, by conservationists and the growing tourism industry alike". These lions need to be conserved and managed wisely and should be seen as a national asset to Namibia (www.desertlion.info. 2021). In figure 10 some useful lion distribution data can be seen, this figure also shows how drastically the lion distribution range shrank over the last 100 years and how small the current conservation areas (national parks and communal conservancies) is for lions in Namibia (Panthera.org., 2019).



FIGURE 10 - IMPORTANT INFORMATION ON LIONS (PANTHERA.ORG., 2019).

Additionally, within this area, there are also desert-adapted Elephants, which is not a distinct species, they are African bush elephants (*Loxodonta africana*), that are also specifically adapted to these harsh desert environments. There are only approximately 62 deserts adapted elephants left within the southern Kunene and northern Erongo regions; they mainly move within the ephemeral rivers, where they get water, food, and shelter from larger trees. A 32% decrease has been seen since 2016 among the desert-adapted elephants' residents to the Ugab River, which was partly due to human-caused and natural reasons (major drought) (Elephant-Human Relations Aid. 2020). In the Ugab and Huab rivers between 2014 and 2018, 9 out of 14 newborn elephant calves died, the exact causes were unknown, but human-caused stress factors and harsh environmental conditions contributed to this. These elephants are keystone species that play an essential role within these local desert ecosystems as they usually dig for water, making these resources available to other animals, as they break off large branches from trees, that assists smaller animals to also get access to green fodder in the drier seasons. Their deep tracks in the mud during the short rainy season also provide an ideal environment for seedlings, which is essential for vegetation growth. Thus, these Desert-adapted ecosystem engineers form an essential part to balance the desert ecosystem and they also contribute to the annual revenue of Namibia through tourism. The African Bush Elephant is an Endangered species (Elephant-Human Relations Aid. 2020).

There are also various reptile, amphibian, and insect species in, and surrounding the EPL. Marais' Lace-winged Katydid (*Pseudosaga maraisi*) is a critically endangered insect species that are found in the Brandberg Mountain area which is relatively close to the proposed site (22 km) (Bazelet & Naskrecki 2014).

## 5.7 SOCIO-ECONOMIC ENVIRONMENT

Namibia's GDP is recorded at 14 billion US Dollars as of 2019 (Plecher, 2020). The development of the services sector, which directly includes tourism-related products and services have created a significant positive impact on domestic and national economic growth levels; employment; and local and regional development. Examples of this are the continued development of small and medium-sized tourism-based accommodation developments throughout the country as well as large-scale tourism developments and eco-tourism with a strong focus on wildlife marketing.

EPL 5445 is located within the Erongo Region. It is named after Mount Erongo, a well-known landmark in Namibia and this area. Erongo contains the municipalities of Walvis Bay, Swakopmund, Henties Bay and Omaruru, as well as the towns Arandis, Karibib and Usakos. All the main centres within this region are connected by paved roads, the capital is Swakopmund. The area surrounding the town Uis and ELP 5445 is less developed than some of the larger towns in the Erongo Region, as mentioned above.

The EPL overlaps two communal conservancies, Tsiseb and Doro! Nawas (figure 3). A communal conservancy represents a conservation area that is managed by a local community that aims to manage the natural resources within their conservancy in a sustainable way to generate returns and other benefits (MET/NACSO, 2018). The locals of these communities are mainly employed by lodges, camps, farms, or the locals farm with livestock in the area. Tourism and consumptive wildlife use are the main benefit contributor to these local communities, in addition, income generated from plant products and local crafts (MET/NACSO,2018).

According to MET/NACSO (2018), "Wildlife is central in generating returns for conservancies", thus it is essential to ensure that the ecosystem and biodiversity is healthy within these communal conservancies to ensure a bright future for both wildlife and Namibia's local communities. Any major environmental or ecological impacts within these areas could compromise the success and future of the Community Based Natural Resource Management (CBNRM) programme, which mainly depends on healthy wildlife populations for tourism and consumptive wildlife use.

### 5.7.1 DEMOGRAPHY

Namibia is one of the least densely populated countries in the world, with a population of 2.5 million. Life expectancy is 65 years and expected years at schooling is 11.7 (National Planning Commission, 2017). Namibia's population is expected to increase from an estimated 2.11 million in 2011 to 3.44 million by 2041 (63%). It is predicted that



urbanisation will continue, with an increase from 43% population in urban areas in 2011 to 67% in 2041. The populations of Khomas and Erongo are projected to increase the most with over a third of Namibia's population living in these two regions (Namibia Statistics Agency, 2011). In the Erongo region, Swakopmund and Walvis Bay are the main towns expected to have an increase in urbanisation, mostly due to economic activities resulting from mining, tourism and the fishing industry.

In the 2011 Census, the population of the Erongo Region was 150 809, with a growth rate of 28.6% since 2001. The population of Namibia has been growing steadily; the population growth rate between 2001 and 2011 (the two census) was 1.4%, with urban areas growing quicker than rural areas. The highest growth rate in Namibia was recorded in the Erongo region (3.4%). This was mainly influenced by in-migration; more than 40% of residents in these regions were born elsewhere. Situated in the central Namib Desert, Swakopmund is the fourth-largest populated town in Namibia and the capital of the Erongo region administrative district with 44 725 inhabitants (Namibia Statistics Agency, 2011).

#### 5.7.2 GOVERNANCE

Namibia has achieved the level of 'medium human development and ranks 125th on the Human Development Index out of 188 countries (National Planning Commission, 2017). Namibia is divided into 14 regions, subdivided by 121 constituencies. Each region has a regional council, elected during regional elections per constituency. Towns are governed through local authorities, in the form of municipalities.

The Namibian constitution provides for the establishment of Local authorities by-laws under the Municipal Ordinance, 1963 (Ordinance 13 of 1963) and the Local Authorities Act, No. 23 of 1992. As such the Local Authorities have the power to pass by-laws for the effective administration of their Municipalities and Communities.

In this case, the Namibia Inter-censal Demographic Survey reported that for the Erongo Region with a growth rate of 3.8, there was a noticeable movement of people from rural to urban areas where the population in urban areas increased from 43 percent in 2011 to 48 percent in 2016.

#### 5.7.3 EMPLOYMENT

The rate of unemployment is estimated at 33.4% for Namibia, using the broad definition of unemployment. More than 60% of the population is over 15 years of age and about one-third of the total population can be regarded as part of the labour force. The unemployment rate in rural and urban areas is almost the same – 33.4% in urban areas and 33.5% in rural areas. The highest unemployment rates are found amongst persons with education levels



lower than junior secondary. The unemployment rate of persons with no formal education is 28.6%, with primary education 34.6% and with junior secondary education 32.7% (NSA, 2019).

#### 5.7.4 ECONOMY

Unemployment rates in Namibia, particularly among the youth, are high with approximately 44.79 % of all people unemployed in 2018. In terms of employment by occupation, it is demonstrated that skilled agricultural or fishery workers made up the largest occupational group in Namibia with 46.5%, followed by the category 'elementary occupation' (18.7%) and then service workers (12.5%).

Since 2016, Namibia has recorded slow economic growth, registering an estimated growth of only 1.1% in 2016. The primary and secondary industries contracted by 2.0 and 7.8% respectively. During 2017 the economy contracted by 1.7, 0.7 and 1.9% in the first, second and third quarters respectively (NSA, 2019). Despite the more positive expectations, the economy retracted to average growth of not more than 1% annually since 2017.

#### 5.7.5 HEALTH

Since independence in 1990, the health status of Namibia has increased steadily with a remarkable improvement in access to primary health facilities and medical infrastructure. In 2015 the World Health Organization (WHO) recommended strategic priorities of the health system in Namibia which entail improved governance and improved health information system, emergency preparedness, risk reduction and response, preventative health care and the combating of HIV/AIDS and TB (WHO, 2016).

According to the MoHSS health facility census (MoHSS, 2009), the Erongo Region has a record of approximately 150 facilities which include individual private health care practices, group private health care practices, primary health care clinics and workplace clinics. Erongo was recorded to have a high life expectancy, in Namibia. As of 2011, life expectancy, in Erongo was 63 years.

As of the beginning of 2020 the coronavirus disease (COVID-19), caused illness in humans at a pandemic scale and has resulted in an increasing number of deaths worldwide. The viral outbreak is adversely affecting various socio-economic activities globally, and with reports of the increasing number of people testing positive, it is anticipated that this may have significant impacts on the operations of various economic sectors in Namibia too. The disease caused many countries to enter a state of emergency and lockdown mode, with dire economic consequences. In addition, these measures have a detrimental effect on various sectors – and Namibia is in both cases no exception.

#### 5.7.6 HERITAGE

In Namibia, several mountains are closely coupled to heritage values. The Namib Desert has rich archaeological and heritage value and presents valuable information about the occupation of the area dating back 700,000 years. The archaeological finds reflect a combination of isolated finds and minor archaeological sites. For EPL 5445, there were only sites discovered with a significance value of isolated minor find and probable threat.

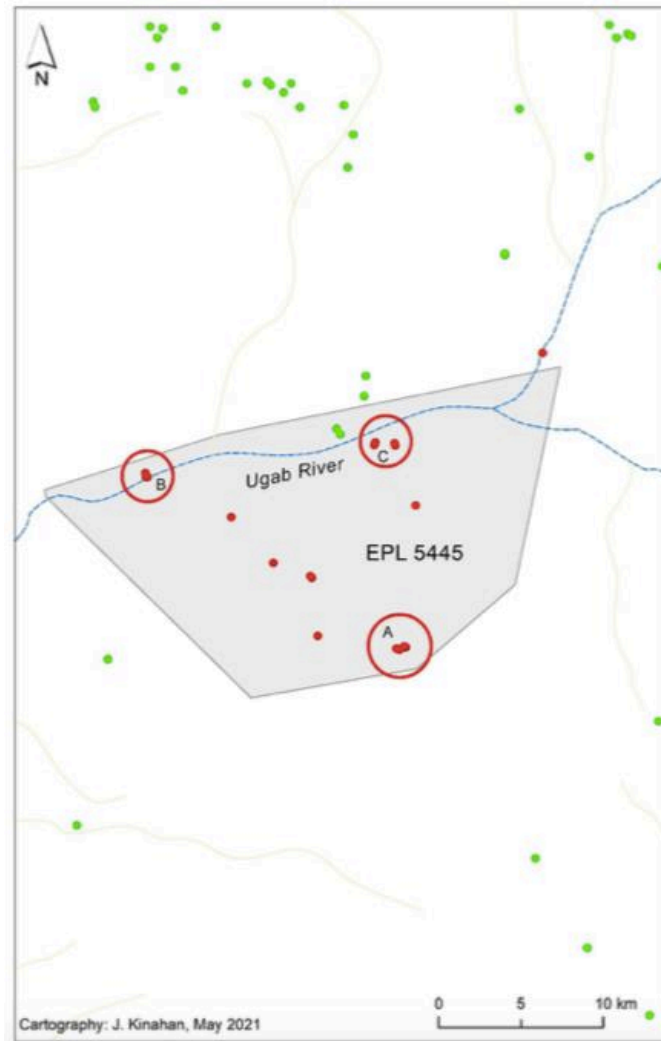
An archaeological field site visit and reconnaissance survey were conducted by Dr John Kinahan, in selected focus areas on the EPLs 5445 and 5670 refer to Appendix D for the full archaeological assessment report, issued on 10 May 2021. The EPLs 5445 and 5670 are located in the western parts of Namibia close to the Dâures massif, or Brandberg, a feature of outstanding archaeological importance. Both EPLs sites present a focus of mining activities in the past and there is a considerable legacy of damage to the archaeological landscape. However, the greater part of the two EPLs is undisturbed and contains a significant concentration of archaeological sites that would require mitigation during the proposed exploration activities.

The field survey of EPLs 5445 and 5670 reported evidence of late pre-colonial settlement. The evidence from the two EPLs shows a relationship between indigenous communities and mining operations, specifically tin, during the colonial era. The recent archaeological sites from the vicinity of the now-abandoned Brandberg West and Goantagab mines reflects indigenous artisanal mining and ore processing.

On EPL 5445 there are approximately 13 sites of heritage find, which were grouped as A, B and C as indicated on the site distribution (Figure 12). The group labelled "A" includes sites, all clustered around several small granite outcrops. The sites comprise approximately ten stone shelters of windbreak features as well as a number of storage cairns and other features. The group labelled "B" includes sites comprising three groups of substantial stone hut features built on the lower slopes of the hillside overlooking the Ugab. The sites are associated with the same pottery as found in the "A" group, suggesting that the sites on the river which represent permanent homesteads were contemporaneous with the temporary seed gathering camps. Included among the "B" group of sites is a well preserved grave or burial. The importance of these "A" and "B" groups of sites is that they represent the two main components of the late pre-colonial settlement pattern in this area. The group labelled "C" includes sites comprising a small livestock post and two groups of huts.

The sites outside the EPL 5670 area represent the activity of grass seed gathering as observed among the sites on EPL 5445. Although they lie outside the EPL area, these sites may be the path of the likely routes of access to the proposed exploration area. The sites

within the surrounding area represent small groups of huts associated with evidence of artisanal tin ore dressing. It is generally known in this area that artisanal miners processed ore from minor deposits and sold it to the tin mine at Uis.



**FIGURE 11 - ARCHAEOLOGICAL SITES DISTRIBUTION ON EPL 5445 (RED DOTS) (J. KINAHAN, MAY 2021)**

The proposed exploration activities on the Afritin Mining EPLs 5445 and 5670 will be adopted in such a way that they avoid areas of heritage value. It is therefore recommended that additional investigation on the EPLs should be carried out by the proponent as the project proceeds. An application will be submitted to the National Heritage Council for heritage consent and on site procedures requirements to follow.

It is recommended that the proponent should adopt the Chance Finds Procedure as part of the project, the EMP will adopt the chance-find procedure devised for mining related projects. Furthermore, If any other historically important or heritage value sites on or

around the project area are encountered during exploration activities and beyond the target areas, the same will be reported to the Monument's Council in Windhoek, and the site will be left untouched.

Archaeological remains in Namibia are protected under the National Heritage Act (27 of 2004) and National Heritage Regulations (Government Notice 106 of 2005). The archaeological assessment forms the basis of recommended management actions to avoid or reduce negative impacts, as part of the environmental assessment. The heritage study is intended to satisfy the requirements of the relevant legislation and regulations, in which the process of review and clearance may require further, or different mitigation measures to be adopted.

## 6 IDENTIFICATION AND EVALUATION OF IMPACTS

The key stage of the ESIA process is the impact prediction and evaluation stage. This stage is the process of bringing together project characteristics with the baseline environmental characteristics and ensuring all potentially significant environmental and social impacts are identified and assessed. Impact prediction and evaluation involve predicting the possible changes to the environment because of the proposed project. The recognised methodology was applied to determine the magnitude of impact and whether or not the impact was considered significant and thus warrant further investigation. The assessment considers all stages of the project's life cycle that is scoped into the assessment and is presented in this report. It is an iterative process that commences at project inception and runs through to the project implementation. The impact prediction and evaluation stages were undertaken in April and May 2021 and the findings of the assessment are presented in this document.

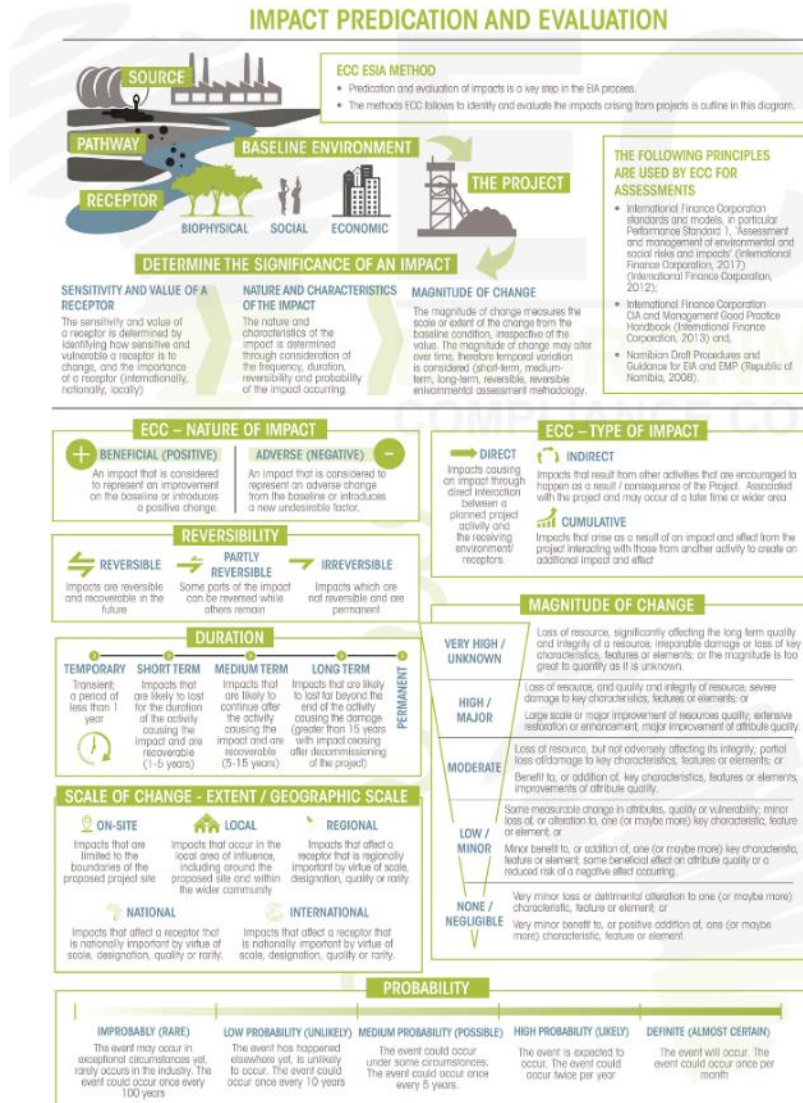
### 6.1 INTRODUCTION

Chapter 2 provides an overview of the approach used in this EIA process and details each of the steps undertaken to date. Prediction and evaluation of impacts is a key step in the EIA process. This chapter outlines the methods followed to identify and evaluate the impacts arising from the proposed project. The findings of the assessment are presented in this chapter.

This chapter provides the following:

- Details on the assessment guidance used to assess impacts;
- Lists the limitations, uncertainties and assumptions with regards to the assessment methodology;
- Details how impacts were identified and evaluated, and how the level of significance was derived; and
- Details how mitigation was applied in the assessment and how additional mitigation was identified.





		SIGNIFICANCE OF IMPACT					
		Biophysical	Social	Low	Minor (2)	Moderate (3)	Major (4)
Significance of Impact	Impacts are considered to be local factors that are unlikely to be critical to decision-making						
	Impacts are considered to be important factors but are unlikely to be key decision-making factors. The impact will be experienced, but the impact magnitude is sufficiently small (with and without mitigation) and well within accepted standards, and/or the receptor is of low sensitivity/value. Impacts are considered to be short-term, reversible and/or localized in extent.						
	Impacts are considered within acceptable limits and standards. Impacts are long-term, but reversible and/or have regional significance. These are generally (but not exclusively) associated with sites and features of national importance and resources/ features that are unique and which, if lost, cannot be replaced or restored.						
	Impacts are considered to be key factors in the decision-making process that may have an impact of major significance, or large magnitude impacts occur to highly valued/sensitive resource/receptors. Impacts are expected to be permanent and non-reversible on a national scale and/or have international significance or result in a legislative non-compliance.						
Sensitivity	A biophysical receptor that is protected under legislation or international convention (CITES) listed as rare, threatened or endangered IUCN species. Highly valued/ sensitive resource/ receptors.	High (3)	Minor (3)	Moderate (6)	Major (9)	Major (12)	
	Of value, importance/ rarity on a regional scale, and with limited potential for substitution; and/or not protected or listed (globally) but may be rare or threatened species in the country, with little assistance to ecosystem changes, important to ecosystem functions, or one under threat or population decline.	Medium (2)	Low (2)	Minor (4)	Moderate (6)	Major (8)	
	Those affected are able to adapt with some difficulty and maintain pre-impact status but only with a degree of support.						
	Not protected or listed as common/abundant, or not critical to other ecosystems functions.	Low (1)	Low (1)	Low (2)	Minor (3)	Moderate (4)	
		SENSITIVITY AND VALUE					
		Low	Medium	High			
		Of value, importance or rarity on a local scale; and/or not particularly sensitive to change or has considerable capacity to accommodate a change.	Of value, importance or rarity on a regional scale, and with limited potential for substitution; and/or moderate sensitivity to change, or moderate capacity to accommodate a change.	Of value, importance or rarity on an international and national scale, and with very limited potential for substitution; and/or very sensitive to change or has little capacity to accommodate a change.			
		MITIGATION					
		Mitigation comprises a hierarchy of measures ranging from preventative environmental impacts by avoidance, to measures that provide opportunities for environmental enhancement. The mitigation hierarchy is avoidance, reduction of source, reduction of receptor level, repairing and correcting, compensation, remediation, and enhancement.					
		Mitigation measures can be split into three distinct categories, broadly defined as:					
		Standard practice and other best practice measures for avoiding and minimizing environmental impacts. These are considered as good practice measures.	Actions undertaken by the EIA process that influence the design process, through implementation of design measures that would entirely avoid or eliminate an impact or modify the design through the inclusion of environmental features to reduce the magnitude of change. These are considered as embedded mitigation.	Specified additional measures or follow-up actions to be implemented to further reduce adverse impacts that remain after the incorporation of embedded mitigation. These are considered as additional mitigation.			
		The EIA is an iterative process whereby the outcomes of the environmental and social assessments inform the project. The EMP provides the good practice mitigation measures and specified additional measures or follow-up action ECC has recommended for the project.					
		Impacts are considered to be key factors in the decision-making process that may have an impact of major significance, or large magnitude impacts occur to highly valued/sensitive resource/receptors. Impacts are expected to be permanent and non-reversible on a national scale and/or have international significance or result in a legislative non-compliance.					

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FIGURE 12 - ECCS IMPACT PREDICTION AND EVALUATION PROCESS

## 6.2 LIMITATIONS, UNCERTAINTIES AND ASSUMPTIONS

Several limitations and uncertainties were acknowledged during the EIA process. In line with EIA best practice, assumptions have been made based on realistic worst-case scenarios, thereby ensuring that the worst-case potential environmental impacts are identified and assessed. Table 7 contains the assumptions and uncertainties identified during the assessment process.

Where uncertainties exist, a cautious approach has been applied, allowing the worst-case scenario for potential impacts to be identified. Where limitations and uncertainties exist, assumptions have been made and applied during the assessment process. These have been clearly described in the baseline section.

**TABLE 7 – SUMMARY OF LIMITATIONS, UNCERTAINTIES AND ASSUMPTIONS OF THE EIA PROCESS**

LIMITATION / UNCERTAINTY	ASSUMPTION
<b>Program of activities</b>	<p>As per the EPL award, work will take place over an initial three-year period to establish potential resources of interest. A detailed timeline of the activities is not available at this point, activities will be modified depending on work results.</p> <p>If commercially viable concentrations can be defined by preliminary drilling, the next phase of advanced resource drilling operations is possible.</p> <p>It is assumed that exploration activities are limited to these stipulated undertakings.</p>
<b>Number of workers and area they will come from</b>	<p>The numbers of contractors are expected to include the following teams: field sampling and mapping; ground geophysics; possible trenching; and preliminary drilling. Moreover, staff will be sourced from the local authority areas such as Uis and possibly nearby villages.</p>
<b>Water supply</b>	<p>Water will only be required for field camps once the drilling programme commences.</p> <p>Water is anticipated to be obtained from and transported to the site, using a mobile water-bowser, from either a local farm or from a local authority. This is subject to permission granted by relevant farm owners or a permit from the local authority. If new boreholes are to be created for water supply purposes for the advanced exploration phase, the exact placement would need to be confirmed in relation to a drill grid.</p>



LIMITATION UNCERTAINTY	/ ASSUMPTION
<b>Structures</b>	No permanent infrastructure development will take place in the greenfield phase of operations which will span the 3-year award period. Depending on results, the proponent will set up temporary field camps required to house field staff for sample collection, ground surveys and drilling. The camps will be such that their locations can be fully rehabilitated post completion of the fieldwork.

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## **7 IMPACT ASSESSMENT FINDINGS AND PROPOSED MITIGATION MANAGEMENT MEASURES**

This chapter presents the findings of the EIA for the proposed project as per the ESIA process, scope and methodology set out in Chapter 2 and Chapter 6. A range of potential impacts has been identified that may arise as a result of the proposed project. This ESIA report aims to focus on the significant impacts that may arise as a result of the proposed project. This chapter therefore only considers the significant impacts and or those that may have specific interest to the community and stakeholders. A summary of impacts that are considered significant is discussed in this section.

The following topics were considered during the scoping phase:

- Surface water and groundwater;
- Soils and topography;
- Landscape (visual impacts, sense of place);
- Socioeconomics (employment, demographics, Increased movement and land-use);
- Noise;
- Ecology (fauna and flora);
- Air quality (emissions, pollutants and dust); and
- Cultural heritage.

A summary of impacts that are not considered significant is discussed in Section 6.1.

### **7.1 IMPACTS NOT CONSIDERED SIGNIFICANT**

As a result of an iterative development process, mitigation has been incorporated and embedded into the project, thereby designing out potential environmental and social impacts or reducing the potential impact so that it is not significant. Best practice has also played a role in avoiding or reducing potential impacts. The EMP provides best practice measures, with practical management and monitoring for all impacts.

Impacts that have been assessed as not being significant are summarised in table 8 below and not discussed further.

**TABLE 8 - SUMMARY OF NON-SIGNIFICANT POTENTIAL ENVIRONMENTAL AND SOCIAL IMPACTS**

ENVIRONMENT OR SOCIAL TOPIC	POTENTIAL IMPACT	SUMMARY OF ASSESSMENT FINDINGS
<b>Waste management</b>	Solid waste may be produced during exploration activities	The proponent will develop a waste management plan to counter the impact of waste generation and dispersal on and surrounding the site.
<b>Increased people/foot traffic in the immediate vicinity.</b>	Increased footfall in the project area and surrounding vicinity.	Potential risk of negative social interactions to occur between the workforce and the public. An internal Health and Safety Management Plan will be developed by the proponent to address this topic and mitigation measures provided.
<b>Fire risks and occurrences</b>	Exploration activities may increase the risk of fire occurrences. Fire risks may result in property damage, possible injury and impacts caused by explosions or uncontrolled fires.	With the mitigation measures such as a fire protection and a prevention plan, with inclusion of an emergency response and firefighting, fire risk can be managed. The occurrence of fire is possible but very rare for the proposed exploration activities. The proponent will take precautions through the development and used of an EMP to avoid the occurrences of this impact. Therefore, this impact has been assessed to be of low to none significance.

## 7.2 SCOPING ASSESSMENT FINDINGS

Impacts that are considered significant or those of interest to the community and stakeholders are as follows:

- Socio-economic: Employment;
- Social: The need for the project and its potential to impact the tourist attractions and points of heritage value;
- Biophysical environment: Potential disturbance to protected species fauna and flora; and
- Ambient noise as a result of machinery use, and vehicle movement to receptors.

When undertaking the assessment exercise, the activities of the proposed project and best practice measures were considered to ensure the likely significant effects and any required additional mitigation measures were identified. A summary of the potential impacts and mitigation and/or control measures are discussed below.

Table 9 and 10 sets out the findings of the scoping assessment phase. Activities that could be the source of an impact have been listed, followed by receptors that could be affected. The pathway between the source and the receptor has been identified where both are present. Where an activity or receptor has not been identified, an impact is unlikely, thus no further assessment or justification is provided. Where the activity, receptor and pathway

have been identified, a justification has been provided documenting if further assessment is required or not required.

Due to the nature and scale of the exploration activities, and the environmental context of the EPL, the potential environmental effects are likely to be significant for EPL 5445, due to the site having various endangered species (High Conservation Value Species) and represents an area with high endemism. There are various protected plant and animal species in this area, which could be significantly impacted, these include the desert-adapted Lions and Elephants, Black Rhinos, White-backed vultures, Welwitschia, and various other protected species. The receptors are mainly the Communal Conservancies of Tsiseb and Doro!nawas, various lodges, camps and tourist attractions (Within a 50 km radius, i.e. Onduli Ridge, White Lady Lodge, Twyfelfontein, Organ Pipes, Brandberg etc.), as well as the Save the Rhino campsite and the Brandberg West Mine site that falls within the EPL.

TABLE 9 - IDENTIFICATION AND EVALUATION OF IMPACTS AND MITIGATION MEASURES (COMMUNITY)

Receptor	Description of activity	Description of impact	effect/description of magnitude	value of sensitivity	MAGNITUDE OF CHANGE	SIGNIFICANCE OF IMPACT	– IMPACT MANAGEMENT/CONTROL MEASURES	RESIDUAL IMPACT AFTER MITIGATION
Community	Movement of vehicles, exploration activities	Create conflict with Rhino trust camp owners and neighbours about access, leaving gates open, suspicious movements.	Adverse Indirect Reversible Minor Short term Onsite Likely	Low	Minor	Low (1)	<ul style="list-style-type: none"> <li>– Ensure documented permission to enter restricted areas (nearby save the Rhino Camp);</li> <li>– Residents shall be provided at least two weeks’ notice of exploration operations within 1 km of their property;</li> <li>– Existing water points and feeding areas need to be left unaffected;</li> <li>– Use existing roads for access, avoid new tracks, clearances;</li> <li>– Compliance with all applicable laws and agreements; and</li> <li>– Continuous engagement with residents to identify any concerns or issues, and mitigation and management measures</li> </ul>	Low (1)

Receptor	Description of activity	Description of impact	effect/description of magnitude	value of sensitivity	MAGNITUDE OF CHANGE	SIGNIFICANCE OF IMPACT	– IMPACT MANAGEMENT/CONTROL MEASURES	RESIDUAL IMPACT AFTER MITIGATION
							agreed upon	
Community	Exploration activities	Triggers job creation, skills development and opportunities for the local economy	Beneficial Direct Reversible Minor Short term Local Possible	Low	Minor	Low (2)	<ul style="list-style-type: none"> <li>– Maximize local employment.</li> <li>– As far as possible promote local procurement.</li> <li>– Enhance the development of local skills where possible.</li> </ul>	Low beneficial

TABLE 10 - IDENTIFICATION AND EVALUATION OF IMPACTS AND MITIGATION MEASURES (ENVIRONMENT)

RECEPTOR	DESCRIPTION OF ACTIVITY	DESCRIPTION OF IMPACT	EFFECT/DESCRIPTION OF MAGNITUDE	VALUE OF SENSITIVITY	MAGNITUDE OF CHANGE	SIGNIFICANCE OF IMPACT	IMPACT MANAGEMENT/CONTROL MEASURES	RESIDUAL IMPACT AFTER MITIGATION
Groundwater quality	Site operations such as maintenance activities, loss of containment,	Hydrocarbon leaks and spills could enter the aquifer causing contamination	Adverse Direct Partly Reversible Moderate Short term	Medium	Minor	Minor (4)	<ul style="list-style-type: none"> <li>– Good housekeeping;</li> <li>– Training through toolbox talks and induction;</li> <li>– All stationary vehicles and machinery must have drip trays to collect leakages of</li> </ul>	Low (2)



RECEPTOR	DESCRIPTION OF ACTIVITY	DESCRIPTION OF IMPACT	EFFECT/DESCRIPTION OF MAGNITUDE	VALUE OF SENSITIVITY	MAGNITUDE OF CHANGE	SIGNIFICANCE OF IMPACT	IMPACT MANAGEMENT/CONTROL MEASURES	RESIDUAL IMPACT AFTER MITIGATION
	accidental fuel / hydraulic fluid leaks and spills, or similar sources.	.	Regional Possible				lubricants and oil; <ul style="list-style-type: none"> <li>- Spill kits and absorption material available during fuel delivery, storage or use;</li> <li>- Accidental spills and leaks (including absorption material) to be cleaned as soon as possible;</li> <li>- Major spills to be reported, also to the authorities;</li> <li>- Maintenance and service schedules on equipment are in place;</li> <li>- Store bulk fuel inadequate containment areas (non-porous surface, bunded to 110% of the volume stored, within a fenced-in area)</li> <li>- Ensure integrity of containment with regular inspections);</li> </ul>	

RECEPTOR	DESCRIPTION OF ACTIVITY	DESCRIPTION OF IMPACT	EFFECT/DESCRIPTION OF MAGNITUDE	VALUE OF SENSITIVITY	MAGNITUDE OF CHANGE	SIGNIFICANCE OF IMPACT	IMPACT MANAGEMENT/CONTROL MEASURES	RESIDUAL IMPACT AFTER MITIGATION
							<ul style="list-style-type: none"> <li>- No damaged containers in use;</li> <li>- Preventative measures will be in place when service and maintenance activities are done (drip trays, non-porous surfaces, funnels, non-damaged containers);</li> <li>- Refuelling is done in areas with adequate preventative measures in place.</li> </ul>	
<b>Groundwater quality</b>	Potential spillages of drill fluid, lubrication, etc. or exploration activities that penetrate the groundwater table.	Hydrocarbon leaks and spills could enter the aquifer causing contamination.	Adverse Indirect Partly Reversible Minor Short term Local Possible	Medium	Minor	<b>Minor (4)</b>	<ul style="list-style-type: none"> <li>- Ensure spill kits and preventative measures (e.g. drill pads) are in place at exploration sites;</li> <li>- A drilling system should be dug to direct any accidental spills into sumps; and</li> <li>- Extraction volumes of water shall be minimal during exploration and</li> </ul>	<b>Low (2)</b>

RECEPTOR	DESCRIPTION OF ACTIVITY	DESCRIPTION OF IMPACT	EFFECT/DESCRIPTION OF MAGNITUDE	VALUE OF SENSITIVITY	MAGNITUDE OF CHANGE	SIGNIFICANCE OF IMPACT	IMPACT MANAGEMENT/CONTROL MEASURES	RESIDUAL IMPACT AFTER MITIGATION
							where possible, water from existing water sources shall be used.	
Water	Discharge and infiltration of non-contained wastewater	Wastewater can contaminate surface and groundwater	Adverse Direct Partly Reversible Minor Short term Regional Unlikely	Medium	Minor	Minor (4)	<ul style="list-style-type: none"> <li>- Wastewater discharges will be contained;</li> <li>- Workers will be made aware of the importance of wastewater management;</li> <li>- Good housekeeping; and</li> <li>- Ensure prompt clean-up of spills.</li> </ul>	Low (2)
Water	Inadequate management of waste	Waste items and litter can pollute drainage channels	Adverse Cumulative Reversible Minor Temporary Onsite Unlikely	Medium	Minor	Low (2)	<ul style="list-style-type: none"> <li>- Good housekeeping;</li> <li>- Training and awareness through toolbox talks and induction;</li> <li>- Implement a Standard Operational Procedure (SOP) on waste management, from cradle to grave for all kinds of waste possible onsite (e.g. domestic, mineral, hydrocarbons,</li> </ul>	Low (1)
Soil	Inadequate management	Pollution of	Adverse	Medium	Low	Minor (4)	<ul style="list-style-type: none"> <li>- Good housekeeping;</li> <li>- Training and awareness through toolbox talks and induction;</li> <li>- Implement a Standard Operational Procedure (SOP) on waste management, from cradle to grave for all kinds of waste possible onsite (e.g. domestic, mineral, hydrocarbons,</li> </ul>	Low (2)

RECEPTOR	DESCRIPTION OF ACTIVITY	DESCRIPTION OF IMPACT	EFFECT/DESCRIPTION OF MAGNITUDE	VALUE OF SENSITIVITY	MAGNITUDE OF CHANGE	SIGNIFICANCE OF IMPACT	IMPACT MANAGEMENT/CONTROL MEASURES	RESIDUAL IMPACT AFTER MITIGATION
	of hazardous and hydrocarbon waste	soil	Direct Reversible Minor Short term Onsite Possible				etc.); – Raise awareness about the importance of responsible waste management; – Implement a culture of correct waste collection, waste segregation and waste disposal; – Avoid hazardous waste onsite; and – Wastewater discharges will be contained – no disposal of wastewater or processing or tailings effluent.	
Soil	Vegetation clearing	Increased exposure of soil due to vegetation clearance can cause soil erosion	Adverse Direct Partly Reversible Moderate Medium Term On-site Likely	Medium	Moderate	<b>Moderate (6)</b>	– Ensure erosion control and prevention measures are in place when vegetation clearance is required, especially in upslope areas; – Where possible, plan access routes, drill pads	<b>Minor (4)</b>

RECEPTOR	DESCRIPTION OF ACTIVITY	DESCRIPTION OF IMPACT	EFFECT/DESCRIPTION OF MAGNITUDE	VALUE OF SENSITIVITY	MAGNITUDE OF CHANGE	SIGNIFICANCE OF IMPACT	IMPACT MANAGEMENT/CONTROL MEASURES	RESIDUAL IMPACT AFTER MITIGATION
							<ul style="list-style-type: none"> <li>and other activities outside of existing drainage lines;</li> <li>– Where necessary, install diversions to curb possible erosion, and</li> <li>– Restore drainage lines when disturbed.</li> </ul>	
Soil	Exploration activities, heavy equipment and vehicles	Loss of soil quality due to the mixing of earth matter, trampling and compaction	Adverse Direct Partly Reversible Moderate Medium-term On-site Likely	Medium	Moderate	<b>Moderate (6)</b>	<ul style="list-style-type: none"> <li>– Limit the possibility of compaction and creating of a hard subsurface;</li> <li>– Limit the possibility of trampling;</li> <li>– Compacted soil areas should be loosed by ripping methods;</li> <li>– Where possible, topsoil should be stockpiled separately, and re-spread during rehabilitation;</li> <li>– During exploration activities with heavy equipment, oil absorbent matting</li> </ul>	<b>Minor (4)</b>

RECEPTOR	DESCRIPTION OF ACTIVITY	DESCRIPTION OF IMPACT	EFFECT/DESCRIPTION OF MAGNITUDE	VALUE OF SENSITIVITY	MAGNITUDE OF CHANGE	SIGNIFICANCE OF IMPACT	IMPACT MANAGEMENT/CONTROL MEASURES	RESIDUAL IMPACT AFTER MITIGATION
							<p>should be placed under and around the equipment;</p> <ul style="list-style-type: none"> <li>- Equipment must be in a good condition to ensure that accidental oil spills do not occur and contaminate soil;</li> <li>- In the event of spills and leaks, polluted soils must be collected and disposed of at an approved site, and</li> <li>- Limit the possibility to mix mineral waste with topsoil.</li> </ul>	

**TABLE 11 - IDENTIFICATION AND EVALUATION OF IMPACTS AND MITIGATION MEASURES (BIODIVERSITY)**

RECEPTOR	DESCRIPTION OF ACTIVITY	DESCRIPTION OF IMPACT	EFFECT/DESCRIPTION OF MAGNITUDE	VALUE OF SENSITIVITY	MAGNITUDE OF CHANGE	SIGNIFICANCE OF IMPACT	IMPACT MANAGEMENT/CONTROL MEASURES	RESIDUAL IMPACT AFTER MITIGATION



RECEPTOR	DESCRIPTION OF ACTIVITY	DESCRIPTION OF IMPACT	EFFECT/DESCRIPTION OF MAGNITUDE	VALUE OF SENSITIVITY	MAGNITUDE OF CHANGE	SIGNIFICANCE OF IMPACT	IMPACT MANAGEMENT/CONTROL MEASURES	RESIDUAL IMPACT AFTER MITIGATION
Terrestrial ecology and biodiversity	Veld fires during high wind periods	Terrestrial biodiversity destruction due to uncontrolled fire outbreaks	Adverse Direct Partly Reversible Moderate Temporary Onsite	High	Moderate	<b>Moderate (6)</b>	<ul style="list-style-type: none"> <li>- No open fires are allowed to be lit by personnel associated with the proponent anywhere on the EPL outside of dedicated campsites;</li> <li>- The proponent to ensure that exploration campsites have proper cooking facilities available to use. Gas stoves are the preferred option;</li> <li>- No cigarette butts are allowed to be discarded into the environment. These should be contained in appropriate domestic containment bins and disposed of at the local landfill site;</li> <li>- No unauthorised movement beyond the exploration areas and campsites is allowed;</li> </ul>	<b>Minor (4)</b>

RECEPTOR	DESCRIPTION OF ACTIVITY	DESCRIPTION OF IMPACT	EFFECT/DESCRIPTION OF MAGNITUDE	VALUE OF SENSITIVITY	MAGNITUDE OF CHANGE	SIGNIFICANCE OF IMPACT	IMPACT MANAGEMENT/CONTROL MEASURES	RESIDUAL IMPACT AFTER MITIGATION
							<ul style="list-style-type: none"> <li>and</li> <li>– Proper fire hazard identification signage to be placed in areas that store flammable material (i.e. hydrocarbons and gas bottles).</li> </ul>	
<b>Terrestrial ecology and biodiversity</b>	Increased disturbance of areas with natural vegetation	Alien species and weeds can be introduced to the area and displace endemic and protected species	Adverse Direct Reversible  Minor  Short term  Onsite Possible	High	Low	<b>Minor (3)</b>	<ul style="list-style-type: none"> <li>– Monitor areas of activity for weed and alien species;</li> <li>– Eradicate weeds and alien species as soon as they appear, and</li> <li>– Make workers aware of alien species and weeds.</li> </ul>	<b>Minor (3)</b>

### 7.3 IMPACTS FOR FURTHER CONSIDERATION

#### 7.3.1 IMPACTS ON THE COMMUNITY

The EPL overlaps two communal conservancies, Tsiseb and Doro! Nawas. A communal conservancy represents a conservation area that is managed by a local community that aims to manage the natural resources within their conservancy in a sustainable way to generate returns and other benefits (MET/NACSO, 2018). The locals of these communities are mainly employed by lodges, camps, farms, or the local's farm with livestock in the area. Tourism and consumptive wildlife use are the main benefit contributor to these local communities, in addition, income generated from plant products and local crafts (MET/NACSO,2018).

According to MET/NACSO (2018), “Wildlife is central in generating returns for conservancies”, thus it is essential to ensure that the ecosystem and biodiversity are healthy within these communal conservancies to ensure a bright future for both wildlife and Namibia’s local communities. Any major environmental or ecological impacts within these areas could compromise the success and future of the Community Based Natural Resource Management (CBNRM) programme, which mainly depends on healthy wildlife populations for tourism and consumptive wildlife use.

Furthermore, any noise and dust nuisance within the EPL and surrounding areas might negatively impact the tourism potential of this area (i.e. tourists visit these areas for the aesthetic value of nature and noise and air pollution will have an impact on this); which, will directly impact the local communities that depend on the tourism and consumptive wildlife-related industry. The Brandberg (approximately 23 km from EPL 5445) is a UNESCO world heritage site and attracts many tourists during the year and is an important contributor to the economy (MEAC/MEFT, 2020); tourist accommodations within these areas might also be impacted by air pollution (i.e., suspended dust particles might cause murky skies, which can impact a large area and even lodges further away).

**TABLE 12 - SUMMARY OF EFFECTS ON THE COMMUNITY**

RECEPTOR	ACTIVITY	IMPACT	NATURE OF IMPACT	VALUE & SENSITIVITY	MAGNITUDE OF CHANGE	SIGNIFICANCE OF IMPACT
Community	Exploration activities, including dust, emissions and noise generation	Visual disturbance and temporary reduction in the sense of place for the local community and tourists.	Adverse Direct Reversible Negligible Temporary Local Likely	High	Moderate	Adverse

RECEPTOR	ACTIVITY	IMPACT	NATURE OF IMPACT	VALUE & SENSITIVITY	MAGNITUDE OF CHANGE	SIGNIFICANCE OF IMPACT
		Impacts the aesthetic nature of this area.				

Impact management/control measures may include, but not limited to the follow:

- Limit trenching and bulk sampling as far as possible;
- Position heavy equipment in such a way that it is out of sight from human receptors;
- Apply dust suppression where possible (drilling, loading, hauling, tipping);
- Restrict speed of vehicles (<30km/h);
- Specific activities that may generate dust and impact on residents shall be avoided during high wind events;
- All vehicles and machinery/equipment to be shut down or throttled back between periods of use;
- Barriers or fences shall be used if exploration occurs in locations that may affect people, livestock or wildlife;
- Residents need to be informed at least two weeks in advance that exploration operations are within 1km of their property;
- Maintain good housekeeping; and
- Continuous engagement with residents to identify any concerns or issues, and appropriate mitigation and management measures agreed upon.

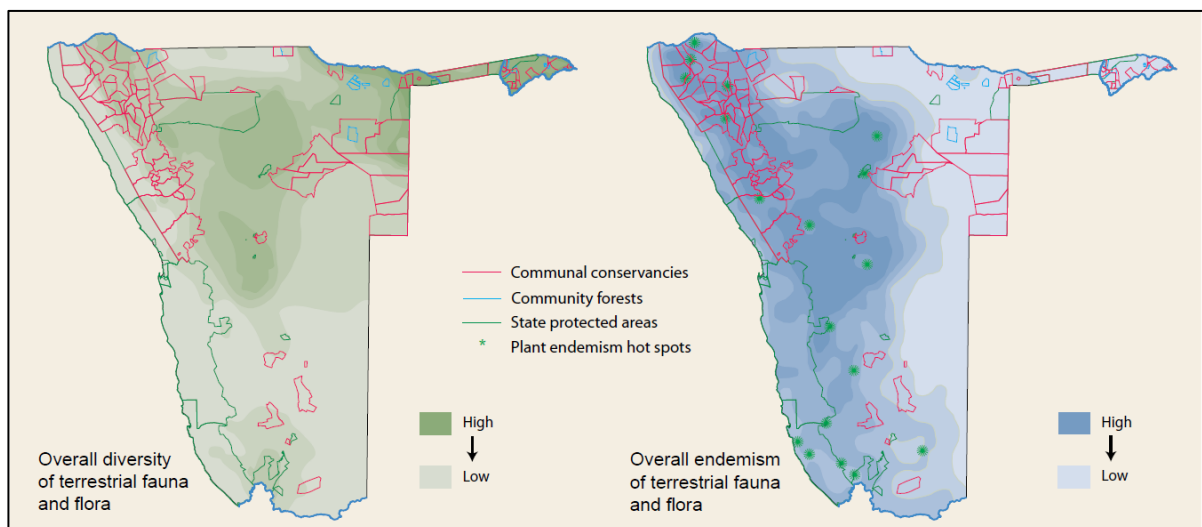
### 7.3.2 IMPACTS ON FAUNA AND FLORA

The north-western areas of Namibia, where the EPL is situated represents an area with moderate species diversity and High overall endemism of terrestrial fauna and Flora as seen in figure 12. The EPL also lies close to and might overlap a plant endemism hotspot, as seen in figure 12, of which there are only 18 of these hotspot areas in Namibia (MET/NACSO, 2018). These north-western parts of Namibia are home to the only population of free-roaming critically endangered black rhinos, desert-adapted elephants, and lions, as well as home to various other endangered and protected biodiversity. Biodiversity within these areas also plays an essential role in community-based conservation (communal conservancies), which depend largely on the presence of a healthy ecosystem, to benefit from either tourism or consumptive wildlife use (Trophy hunting) (MET/NACSO, 2018). Any

major negative impacts on biodiversity within this area can have major consequences on the future livelihoods of local communities, as biodiversity form an essential part of these communal conservancies in the form of job security, income, donations, food etc.

These two communal conservancies represent an area with moderate species richness, containing about 71 – 80% of species that historically occurred within these areas; But this area holds unhealthy population sizes of less than 25% of the historic percentages (MET/NACSO, 2018). Thus, this means that this ecosystem is vulnerable, and any major environmental impacts might push biodiversity numbers over the tipping point, where population recovery will be almost impossible without major conservation efforts. According to MET/NACSO (2018), a healthy population is one that is large enough that it could sustain itself, but currently the large wildlife species within these areas have a very unhealthy population size. Wildlife in this area already faces major threats such as human-wildlife conflict, poaching, climate change and other anthropogenic impacts (Elephant-Human Relations Aid. 2020 & MET/NACSO, 2018).

Poaching within these areas is also a major concern, which could potentially increase as a result of increased movement within these untouched parts of Namibia. Due to the illicit ivory trade, poaching will be a major threat to this area and previous reports showed that poaching in Namibia has been on the increase since 2015 (Herbig & Minnaar, 2019 and IUCN 2021). Poaching does not only take out targeted species but could also potentially be associated with deliberate mass vulture poisonings, due to poachers not wanting to alert authorities (Murn & Botha, 2018). If such an event occurs here it can have major consequences on vultures (i.e., the critically endangered white-backed vulture) and other scavengers or carnivores.



**FIGURE 13 - SHOWING THE OVERALL SPECIES DIVERSITY AND ENDEMISM IN NAMIBIA (MET/NACSO, 2018).**

Protected species such as the rhino are occasionally present in proximity to project's area, poaching of high-value conservation species in Namibia is illegal. There are various protected mammal and bird species identified that might potentially be found within or around EPL 5445 (Appendix E).

The extensions of exploration operations were found to have potential impacts on biodiversity namely birdlife due to the potential effects of vibration and ambient noise as there are various ground-nesting (i.e. Ludwigs Bustards) species that occur within and around EPL 5445. These birds are ground-nesting, and research has shown (Simmons and Brown., 2015) that these birds are susceptible to ground vibrations and therefore could potentially be directly affected by the project activities.

The exploration and hauling process will be restricted to daylight, whilst processing and drilling may continue at night. Mitigation measures outlined in the EMP include possible relocation of species at risk (if viable), ongoing monitoring to determine if activities are impacting biodiversity, altering exploration plans to avoid activities that impact nesting during nesting periods (the egg-laying season is from February-May in Namibia) and other species movement during different seasons (i.e. rainy season attracts more biodiversity).

**TABLE 13 - SUMMARY OF EFFECTS ON AVIAN FAUNA AND HIGH-VALUE CONSERVATION SPECIES**

RECEPTOR	ACTIVITY	IMPACT	NATURE OF IMPACT	VALUE & SENSITIVITY	MAGNITUDE OF CHANGE	SIGNIFICANCE OF IMPACT
Terrestrial ecology and biodiversity	Vegetation clearing for access routes and exploration activities	High-Value Conservation Species: Loss/alteration of terrestrial habitats and loss of species. Various protected plant species (i.e. Welwitschia, a very slow-growing plant) might be negatively impacted.	Adverse Direct Partly-Reversible High/Major Short term Regional Likely	High	High / Major	<b>Adverse</b>
Terrestrial ecology and biodiversity	Ambient noise as a result of machinery use (i.e.	High Value Conservation Species: With various species	Adverse Direct Reversible Moderate	High	Moderate	<b>Adverse</b>



RECEPTOR	ACTIVITY	IMPACT	NATURE OF IMPACT	VALUE & SENSITIVITY	MAGNITUDE OF CHANGE	SIGNIFICANCE OF IMPACT
	drill rigs), hammering on metal surfaces the diesel generator, and vehicle movement (also through the use of airborne equipment)	protected by legislation including, mammal species (Black Rhinos, Elephants, desert-adapted Lions), birds (white back vultures) and various other animals that might be disturbed. Additionally Ground nesting birds could also be impacted.	Short Term Local Likely			
Community and Terrestrial Biodiversity	The increased movement of vehicles and people during the conducting of exploration activities.	Could potentially increase the risk of poaching, of critically endangered Black rhinos or other threatened species. This could lead to poisoning of the carcasses to hide the act, which in turn could be responsible for the death of other endangered species, such as	Adverse Cumulative Partly reversible High Medium Term National Likely	High	Major	<b>Adverse</b>

RECEPTOR	ACTIVITY	IMPACT	NATURE OF IMPACT	VALUE & SENSITIVITY	MAGNITUDE OF CHANGE	SIGNIFICANCE OF IMPACT
		the critically endangered white back vulture.				

Impact management/control measures may include, but not limited to the follow:

- Restrict excessive noise to areas of activities only and use existing roads for access;
- Minimise clearance areas through proper planning of the exploration activities, especially at drill areas;
- Where necessary, rescue and relocate plants of significance and promote revegetation of cleared areas upon completion of exploration activities.
- Prevent the removal of protected plants or acquire the appropriate permits for relocation;
- Restrict excessive noise to daytime hours (7 am to 5 pm weekdays and 7 am until 1 pm on Saturday);
- No activities between dusk and dawn and avoid night driving as practically as possible;
- Exploration equipment shall be suitably positioned to ensure that noisy equipment is away from receptors;
- All equipment to be shut down or throttled back between periods of use;
- Have an anti-poaching unit on-site 24/7 and keep track of Rhinos in the area as well as other high target species;
- Have MEFT, police and anti-poaching unit contact details on-site;
- Relevant authorities must be notified immediately in case of a poaching event;
- Company vehicles must be clearly marked and relevant roadblocks should be set up to check vehicles entering and exiting the area; and
- No unauthorised personnel/people/vehicles should be allowed on-site.

### 7.3.3 IMPACTS ON HERITAGE

Archaeological sites provide a snapshot of the past, showing where people lived at particular times (Mendelsohn et al., 2002). Record worldwide shows that hunting and

gathering was the predominant lifestyle during human history and only in the past few thousand years has a nomadic and crop growing lifestyle emerged. Namibia has an archaeological record of up to 1.8 million years ago and the Brandberg (UNESCO world heritage site) close to EPL 5445 represents an area with archaeological records between 2000 – 10000 years old (Mendelsohn et al., 2002).

The Afritin EPLs 5445 and 5670 are located in the western parts of Namibia close to the Dâures massif, or Brandberg, a feature of outstanding archaeological importance. Both EPLs sites present a focus of mining activities in the past and there is a considerable legacy of damage to the archaeological landscape. However, the greater part of the two EPLs is undisturbed and contains a significant concentration of archaeological sites that would require mitigation during the proposed exploration activities.

**TABLE 14 – SUMMARY OF EFFECTS ON HERITAGE**

RECEPTOR	ACTIVITY	IMPACT	NATURE OF IMPACT	VALUE & SENSITIVITY	MAGNITUDE OF CHANGE	SIGNIFICANCE OF IMPACT
Heritage	Exploration activities, movement of machinery and vehicles	Potential damage to cultural heritage sites	Adverse Direct Partly Reversible Negligible Permanent Onsite Possible	High	Major	Adverse

Impact management/control measures may include, but not limited to the follow:

- Raise awareness about possible heritage finds;
- Report all finds that could be of heritage importance;
- In case archaeological remains to be uncovered, cease activities and the site manager has to assess and demarcate the area;
- Project manager to visit the site and determine whether work can proceed without damage to findings, mark exclusion boundaries and inform ECC with GPS position;
- If needed, further investigation has to be requested for a professional assessment and the necessary protocols of the Chance Find Procedure have to be followed;
- The archaeologist will evaluate the significance of the remains and identify appropriate action, (record and remove; relocate or leave premises, depending on the nature and value of the remains);

- Inform the police if the remains are human; and
- Obtain appropriate clearance or approval from the competent authority, if required, and recover and remove the remains to the National Museum or National Forensic Laboratory as directed.

## 8 ENVIRONMENTAL MANAGEMENT PLAN

The EMP for the proposed project is presented in Appendix A. It provides management options to ensure the impacts of the proposed project are minimised. An EMP is a tool used to take proactive action by addressing potential problems before they occur. This should limit the corrective measures needed, although additional mitigation measures might be included if necessary.

The management measures should be adhered to during all stages of the exploration activities. All persons involved and partaking in the proposed activities should be made aware of the measures outlined in the EMP to ensure activities are conducted in an environmentally responsible manner.

The objectives of the EMP are:

- To include all components of the development and operations of the project;
- To prescribe the best practicable control methods to lessen the environmental impacts associated with the project;
- To monitor and audit the performance of operational personnel in applying such controls; and
- To ensure that appropriate environmental training is provided to responsible operational personnel.

## 9 CONCLUSION

ECC's EIA methodology was used to undertake the environmental assessment for the proposed project to identify if there is potential for significant effects to occur because of the proposed project. Through the scoping process, there were various environmental and social risks and concerns identified for EPL 5445. The main risks for this EPL that was identified are the potential impacts of noise, increased movement of vehicles and people and other exploration activities on biodiversity, the soil, water resources and heritage. The area within and surrounding the EPL represents an area with high species endemism, home to various endangered species and has species that play an essential role in the local ecosystems. This area is home to critically endangered black Rhinos that freely roam the areas within and surrounding the EPL. Furthermore, desert-adapted elephants and lions also live or pass through these areas and both of these species have continuous declining populations. These species contribute to the revenue generated by the tourism industry and is a unique and iconic part of Namibia's biodiversity heritage, which is well known around the world.

If the recommended mitigations are closely followed and strictly adhered to these negative impacts could be minimised, but due to the sensitive nature of this site, any major impacts might still negatively affect the biodiversity of this untouched area, local tourism and the CBNRM programme. Various best practices and mitigation measures have been identified to avoid and reduce effects as far as reasonably practical, as well as ensure the environment is protected and unforeseen effects and environmental disturbances are avoided.

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## APPENDIX A- EMP



**ECC**  
**ENVIRONMENTAL**  
COMPLIANCE CONSULTANCY



ECC-84-346-REP-11-D

## **ENVIRONMENTAL MANAGEMENT PLAN**

**EXPLORATION ACTIVITIES ON EPL 5445 FOR BASE, RARE AND PRECIOUS METALS IN  
THE ERONGO AND KUNENE REGIONS, NAMIBIA**

*PREPARED FOR*

**AFRITIN MINING NAMIBIA (PTY) LTD**



**MAY 2021**

## TITLE AND APPROVAL PAGE

<b>Project Name:</b>	Exploration activities on EPL 5445 for base, rare and precious metals in the Erongo and Kunene regions, Namibia
<b>Project Number:</b>	ECC-84-346-REP-11-D
<b>Client Name:</b>	Afritin Mining Namibia (Pty) Ltd
<b>Ministry Reference:</b>	APP- 002477
<b>Status of Report:</b>	For Public Review
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## DEFINITIONS AND ABBREVIATIONS

ECC	Environmental Compliance Consultancy
EIA	Environmental Impact Assessment
EMA	Environmental Management Act
EMP	Environmental Management Plan
EPL	Exclusive Prospecting Licence
I&AP	Interested and Affected Parties
MEFT	Ministry of Environment, Forestry, and Tourism
MME	Ministry of Mines and Energy
MSDS	Safety Data Sheets
SOP	Standard Operating Procedure
GPS	Geographical Positioning System
AEM	Airborne Electromagnetic

# 1 INTRODUCTION

## 1.1 BACKGROUND TO THE PROPOSED PROJECT

Environmental Compliance Consultancy (ECC) has been engaged by the proponent Afritin Mining Namibia (Pty) Ltd to undertake an Environmental and Social Impact Assessment (ESIA) and an Environmental Management Plan (EMP) in terms of the Environmental Management Act, No. 7 of 2007 and its regulations. An application for an environmental clearance certificate was submitted to the relevant competent authorities, the Ministry of Mines and Energy (MME) and the Ministry of Environment, Forestry and Tourism (MEFT).

The proponent intends to pursue exploration opportunities in Namibia to contribute to mining prospects. Namibia is rich in natural resources and the minerals sector is a key contributor to the nations GDP in Namibia. Exploration could lead to mining activities, which would contribute to the national and local economy.

The proponent is currently operating a conventional opencast tin mine with three mining licence areas (ML 134, ML 129, and ML 133) located near the Uis settlement in the Erongo Region, Namibia. AfriTin is seeking to further explore for base, rare, precious metals and minerals and propose to undertake exploration activities on EPL 5445 in the Erongo Region. EPL 5445 extends slightly into the Kunene Region, approximately 90km from Uis along the C35 main road and D2342 district road (Figure 1).

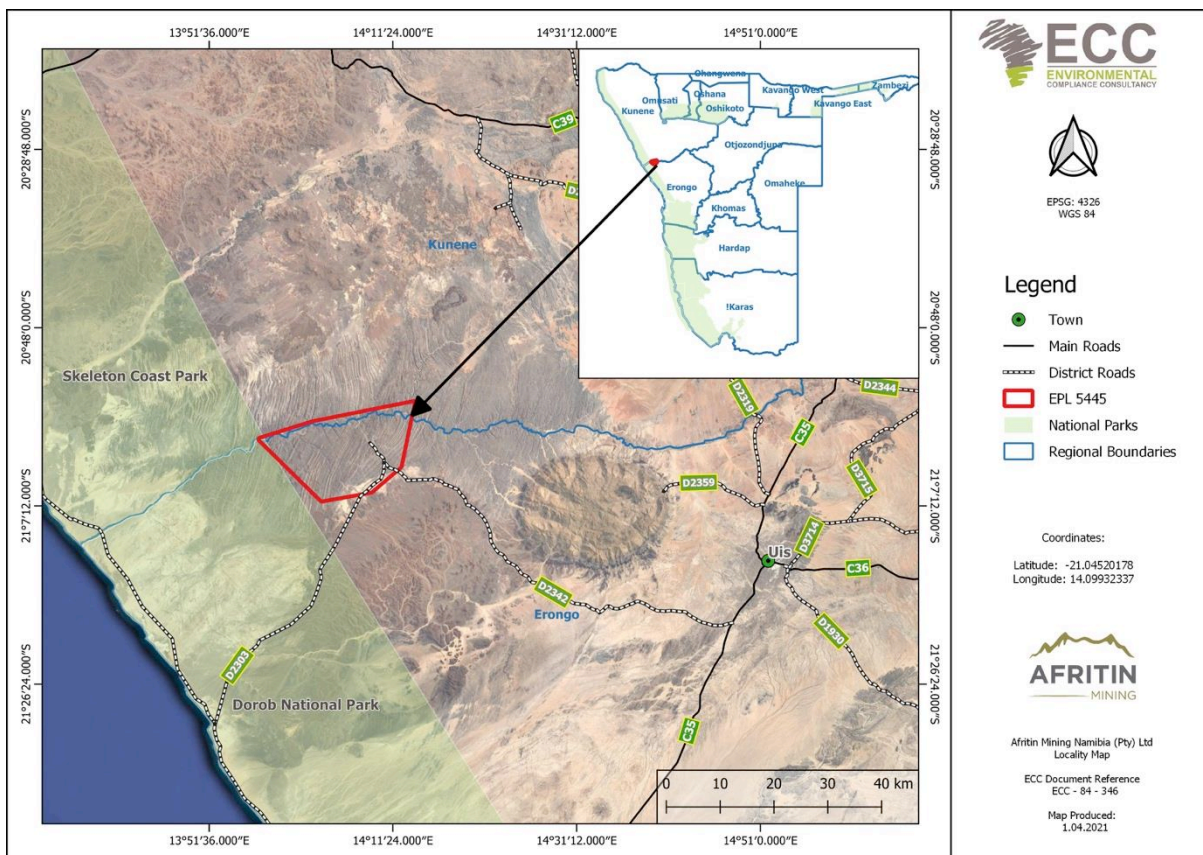
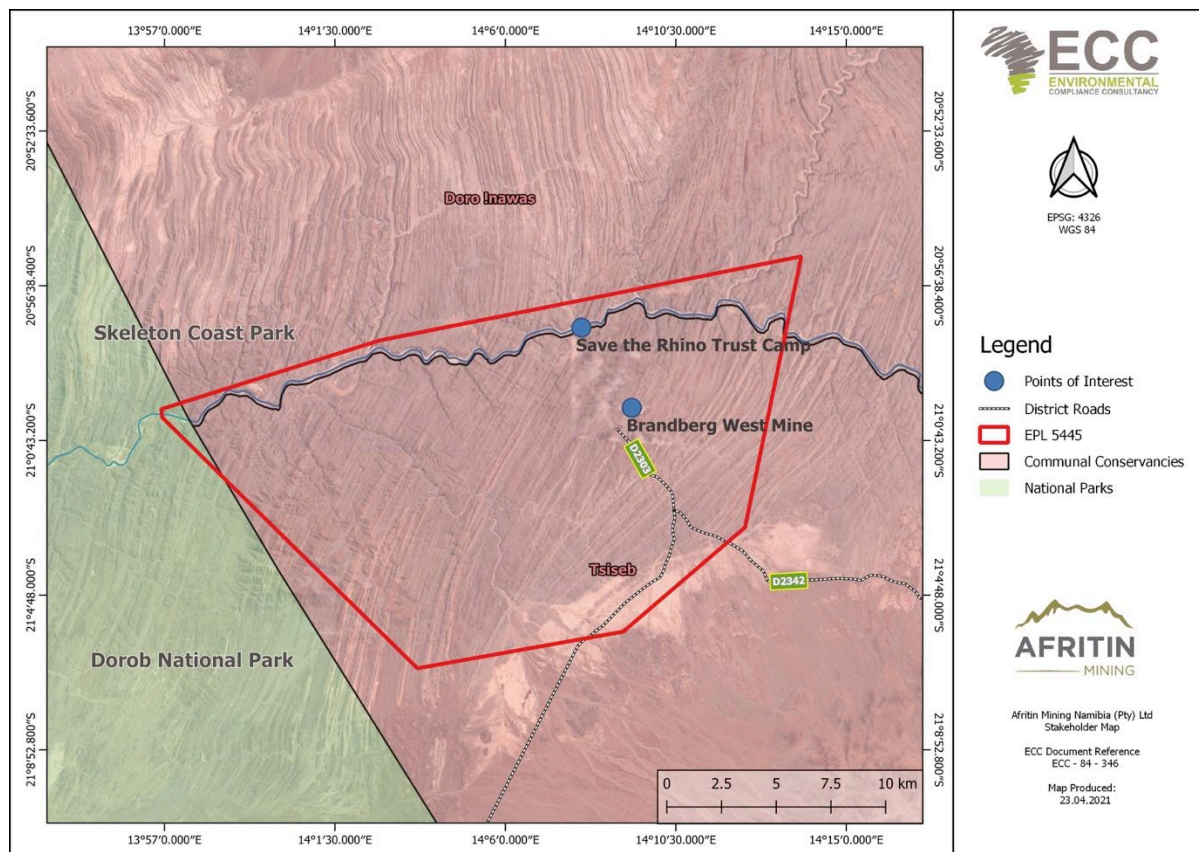


FIGURE 1 - LOCATION OF THE AFRITIN EPL 5445.

The surface area of the EPL is approximately 35090 Ha. This EPL borders and slightly overlaps both the Dorob National Park and the Skeleton Coast Park and falls over two communal conservancies, Doro Inawas and Tiseb, of which the largest area of the EPL falls within the latter (Figure 2). The Save the Rhino Trust camp also falls within the borders of the EPL and has been identified as a sensitive receptor due to critically endangered Black Rhinos (*Diceros bicornis*) roaming within this area and various other protected species.



**FIGURE 2 - EPL 5445 OVERLAPPING TWO COMMUNAL CONSERVANCIES**

## 1.2 ENVIRONMENTAL REGULATORY REQUIREMENTS

The proposed project is considered as a listed activity as stipulated in the Environmental Management Act, No. 7 of 2007 and the Environmental Impact Assessment Regulation, No. 30 of 2012. As a listed activity an application for an environmental clearance certificate is required. An environmental scoping report and EMP are required as part of the environmental clearance certificate application, as well as to support the decision-making process. This report presents the EMP and has been undertaken in accordance with the requirements of the Environmental Management Act, No. 7 of 2007 and its regulations.

## 1.3 PURPOSE AND SCOPE OF THIS REPORT

This EMP provides a logical framework, proposed mitigation measures and management strategies for the exploration activities associated with the proposed project. In this way ensuring that the potential environmental and social impacts are mitigated and minimised as far as



practically possible and that statutory and other legal obligations are adhered to and fulfilled. Outlined in the EMP are the protocols, procedures and roles and responsibilities to ensure the management arrangements are effectively and appropriately implemented.

This EMP forms an appendix to the environmental scoping report and was based on the findings of the assessment; therefore, the environmental scoping report should be referred to for further information on the proposed project, assessment methodology, applicable legislation, and assessment findings.

This EMP is a live document and shall be reviewed at predetermined intervals, and updated when the scope of works alters, or when further data or information can be added. All personnel working on the project will be legally required to comply with the standards set out in this EMP.

The scope of this EMP includes all activities carried out during the exploration stage in search of base and rare metals, precious metals on EPL 5445.

#### 1.4 MANAGEMENT OF THIS EMP

The proponent will hold the environmental clearance certificate for the proposed project and shall be responsible for the implementation and management of this EMP. The implementation and management of this EMP and thus the monitoring of compliance shall be undertaken through daily duties and activities as well as by monthly inspections.

This EMP shall be circulated to all contractors and made available on ECC's website.

#### 1.5 LIMITATIONS, UNCERTAINTIES AND ASSUMPTIONS OF THIS EMP

This EMP does not include measures for compliance with statutory occupational health and safety requirements. This will be provided in the safety management plan to be developed by the proponent.

Where there is any conflict between the provisions of this EMP and any contractor's obligations under their respective contracts, including statutory requirements (such as licences, project approval conditions, permits, standards, guidelines and relevant laws), the contract and statutory requirements are to take precedence.

The information contained in this EMP has been based on the project description as provided in the environmental assessment report. Where the design or exploration methods alter, this EMP may require updating and potential further assessment undertaken.

#### 1.6 ENVIRONMENTAL CONSULTANCY

Environmental Compliance Consultancy, a Namibian consultancy with registration number CC/2013/11401, has prepared this document on behalf of the proponent. ECC operates exclusively in the environmental, social, health and safety fields for clients across Southern Africa in the public and private sector. ECC is independent of the proponent and has no vested or financial interest in the proposed project except for fair remuneration of professional services rendered.

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## 2 PROJECT MANAGEMENT PERSONNEL

### 2.1 ORGANISATIONAL STRUCTURE, ROLES AND RESPONSIBILITIES

The proponent shall be responsible for:

- Ensuring all members of the project team, including contractors comply with the procedures set out in this EMP;
- Ensuring that all personnel are provided with sufficient training, supervision, and instruction to fulfil this requirement; and
- Ensuring that any persons allocated specific environmental management responsibilities are notified of their appointment and confirm, in writing, that their responsibilities are clearly understood.

Contractors shall be responsible for ensuring and demonstrating that all personnel employed by them are compliant with this EMP, and meet the responsibilities listed above. The key personnel and environmental responsibilities of each role through the project life are presented in Table 1.

**TABLE 1 - ROLES AND RESPONSIBILITIES**

ROLE	RESPONSIBILITIES & DUTIES
<p><b>Proponent</b></p>	<ul style="list-style-type: none"> <li>- Overall responsibility for the implementation and management of this EMP;</li> <li>- Ensure the environmental policy is communicated to all personnel throughout the proposed project and ensure that employees, contractors and visitors understand and adhere to the EMP;</li> <li>- Responsible for providing the required resources (including financial and technical) to complete the required tasks;</li> <li>- Appoint supervisors such as an exploration (project) manager and a site manager; and</li> <li>- Ensure that all employees, contractors and visitors are inducted on safety measures.</li> </ul>
<p><b>Exploration Manager</b></p>	<ul style="list-style-type: none"> <li>- Responsible for ensuring compliance with this EMP including overseeing all day-to-day activities throughout the duration of the project, including routine and non-routine maintenance works, as well as the decommissioning of the project;</li> <li>- Ensure adequate resources are made available for the implementation of this EMP;</li> <li>- Responsible for the management, utilisation and possible future revisions of this EMP;</li> <li>- Ensure all personnel are aware of the commitments made in this EMP and any other relevant regulatory requirements applicable to the project;</li> <li>- Ensure all employees and contractors participate in a site induction process prior to commencing with work on the project;</li> <li>- Maintain the community issues and concern register, and keep records of complaints received;</li> <li>- Ensure that best environmental practice is undertaken throughout the duration of the project; and</li> </ul>



	<ul style="list-style-type: none"> <li>– Report any non-compliance or accidents to the regulatory authority.</li> </ul>
<b>Site Manager (or nominated supervisor)</b>	<ul style="list-style-type: none"> <li>– Ensure that all employees, contractors and visitors to the site are conversant with the requirements of this EMP, relevant to their roles on site and adhere to this EMP at all times;</li> <li>– Provide environmental awareness or management training and site inductions for all employees, contractors and visitors;</li> <li>– Monitor daily operations and ensure adherence by personnel to the EMP;</li> <li>– Receive, respond to and record complaints; and</li> <li>– Report any non-compliance or accidents to the exploration manager.</li> </ul>
<b>Employees (and contractors and visitors where applicable)</b>	<ul style="list-style-type: none"> <li>– Responsible for being compliant with this EMP throughout the project;</li> <li>– Adhere to this EMP at all times;</li> <li>– Ensure attendance of site inductions;</li> <li>– Ensure appropriate briefings for certain activities have been provided and are fully understood; and</li> <li>– Report any operations and conditions that deviate from the EMP or any non-compliant issues or accidents to the site manager and exploration manager.</li> </ul>

## 2.2 CONTRACTORS

Any contractors hired during the exploration activities or for any accessory works for the project, or contractors appointed for maintenance activities, shall be compliant with this EMP, and shall be responsible for the following:

- Undertaking activities in accordance with this EMP as well as relevant policies, procedures, management plans, statutory requirements, and contract requirements;
- Implementing appropriate environmental management measures;
- Reporting of environmental issues, including actual or potential environmental incidents and hazards, to the exploration manager;
- Ensuring appropriate corrective or remedial action is taken to address all environmental hazards and incidents reported; and
- Adhere to the safety management plan developed by the proponent.

## 2.3 EMPLOYMENT

The proponent (and all contractors) shall comply with the requirements of the national regulations for Labour, health and safety and any amendments to these regulations. The following shall be complied with:

- In liaison with local government, community, stakeholders and relevant authorities the proponent shall ensure that local people have access to information about job opportunities and are considered first for exploration or maintenance contract employment positions;

- The number of job opportunities shall be made known together with the associated skills and qualifications;
- The maximum length of time the job is likely to last for shall be clearly indicated;
- Foreign workers with no proof of permanent legal residence shall not be hired; and
- Every effort shall be made to recruit from the pool of unemployed workers living in the local area for labour positions.

### 3 COMMUNICATION AND TRAINING

In order to ensure that potential risks and impacts are minimised, it is vital that personnel are appropriately informed and trained on operational procedures that include the above mitigation measures. It is also important that regular communications are maintained with all the stakeholders and that they are made aware of potential impacts and how to minimise or avoid them. This section sets out the framework for communication and training in relation to the EMP.

#### 3.1 COMMUNICATIONS

During exploration, the exploration manager or the site manager shall communicate all environmental issues to the project team through the following means (as and when required):

- Site induction;
- Audits and site inspections;
- Toolbox talks, including instruction on incident response procedures; and
- Briefings on key project-specific environmental issues.

This EMP shall be distributed to the exploration team including any contractors and personnel working on the exploration site to ensure that the environmental requirements are adequately communicated. Key activities and environmentally sensitive operations shall be briefed to workers and contractors in advance.

During the exploration activities, communication between the management team shall include discussing any complaints received and actions to resolve them, any inspections, audits or non-conformance with this EMP, and any objectives or target achievements.

#### 3.2 ENVIRONMENTAL EMERGENCY AND RESPONSE

Table 2 contains a list of numbers to be contacted in case of an emergency. All personnel will be made aware of these numbers.

**TABLE 2 - EMERGENCY CONTACT DETAILS**

TOWN	AMBULANCE	POLICE	FIRE BRIGADE
Uis	+264(67)504011	+264(67)10111	-
Khorixas	+ 264(67)331064	+264 (62) 1-0111	+264 (67) 33-1057

#### 3.3 COMPLAINTS HANDLING AND RECORDING

Any complaints received verbally by any personnel on the project site shall be recorded by the site manager or the receiver, including the name and contact details of the complainant, the date and time of the complaint, and the nature of the complaint. The information shall be given to the exploration manager who is responsible for the overall management of complaints and will provide a written response to the complainant. The site manager shall inform the exploration manager of issues, concerns or complaints in a timely manner. It is the duty of both the site

manager and exploration manager to maintain a complaint register that details the name of the complainant, the date and time of the complaint and action taken to resolve the issues.

The workforce shall be informed about the complaints register, its location and the person responsible, in order to refer residents or the general public who wish to lodge a complaint. The complainant shall be informed in writing of the results of the investigation and action to be taken to rectify or address the matter(s). Where no action is taken, the reasons why are to be recorded in the register.

The complaints register shall be kept for the duration of the project and will be available for government or public review upon request.

### 3.4 TRAINING AND AWARENESS

All personnel working on the project shall be competent to perform tasks that have the potential to cause an environmental impact. Competence is defined in terms of appropriate education, training, and experience.

#### 3.4.1 SITE INDUCTION

All personnel involved in the project shall be inducted to the site with a specific environment and social awareness training component. The environment and social awareness training shall ensure that personnel are familiar with the principles of this EMP, the environment and social aspects and impacts associated with their activities, the procedures in place to control these impacts and the consequences of departure from these procedures.

The exploration manager shall ensure an up-to-date register of completed training is maintained.

The site induction should include, but not be limited to the following:

- A general site-specific induction that outlines:
  - o What is meant by “environment” and “social”;
  - o Why the environment needs to be protected and conserved;
  - o How exploration activities can impact on the environment; and
  - o What can be done to mitigate against such impacts.
- The inductee’s role and responsibilities with respect to implementing the EMP;
- The site’s environmental rules;
- Details of how to deal with, and who to contact if environmental problems occur;
- Basic vegetation clearing principles and species ID sheets;
- Noise control measures for drilling in proximity to residents;
- Focal themes such as compliance, reporting of accidents and incidents, good housekeeping and standard procedures for waste management;
- The potential consequences of non-compliance with this EMP and relevant statutory requirements; and
- The role of people responsible for the project.

## 4 REPORTING, COMPLIANCE AND ENFORCEMENT

### 4.1 ENVIRONMENTAL INSPECTIONS AND COMPLIANCE MONITORING

#### 4.1.1 DAILY COMPLIANCE MONITORING

A copy of this EMP shall be on-site throughout the project and shall be available upon request. It is the responsibility of the exploration manager to ensure this EMP is complied with through their daily roles. Daily, weekly and monthly inspections will be undertaken. Any environmental problems or risks identified shall be reported to the exploration manager and actioned as soon as is reasonably practicable.

#### 4.1.2 MONTHLY COMPLIANCE MONITORING

Monthly inspections shall be undertaken by the exploration manager to check that the standards and procedures as set out in this EMP are being complied with and pollution control measures are in place and working correctly. Any non-conformance shall be recorded, including the following details: a brief description of non-conformance, the reason for the non-conformance, the responsible party, the result (consequence), and the corrective action to be taken and any necessary follow up measures required.

#### 4.1.3 REPORTING

There shall be a requirement to ensure that any incident or non-compliance, including any environmental issue, failure of equipment or an accident, is reported to the exploration manager in a timely manner.

### 4.2 ENVIRONMENTAL PERMITS

Whilst the Water Resources Management Act, No. 11 of 2013 is not enforced, it is best practice to adhere to its stipulations while ensuring compliance with the Water Act, No. 54 of 1956, which is still maintained.

Should water not be sourced directly from a private borehole or from a local Municipal source, a licence to abstract water is required in terms of the Water Act, No. 54 of 1956 and shall operate in accordance with any conditions of the licence.

In the event that vegetation is to be cleared all requirements under the Forest Act, No. 12 of 2001 as amended by the Forest Amendment Act, No. 13 of 2005 and its regulations of 2015 will be complied with.

### 4.3 CHANCE FINDS PROCEDURES

A heritage site survey was conducted by Dr John Kinahan, An archaeological assessment was carried out on the proposed project site-specific areas by an experienced and qualified Archaeologist - Dr John Kinahan. The archaeological study, issued on 10 May 2021, reviewed that an average significance of heritage values was found. This survey is based on surface indications alone, and it is, therefore, possible that additional sites or items of heritage significance will be

found in the course of development work. The procedure set out here cover the reporting and management of such finds.

**Scope:** The “chance finds” procedure covers the actions to be taken from the discovery of a heritage site or item to its investigation and assessment by a trained archaeologist or another appropriately qualified person.

**Compliance:** The “chance finds” procedure is intended to ensure compliance with relevant provisions of the National Heritage Act (27 of 2004), especially Section 55 (4): *“a person who discovers any archaeological .... object .....must as soon as practicable report the discovery to the Council”*.

The procedure of reporting set out below must be observed so that heritage remains reported to the NHC are correctly identified in the field.

ROLE	RESPONSIBILITIES & DUTIES
Operators and contractors	To exercise due caution if archaeological remains are found
Site manager	To secure site and advise management timeously
Proponent and Exploration managers	To determine safe working boundary and request inspection
Archaeologist	To inspect, identify, advise management, and recover remains

#### 4.3.1 PROCEDURES

Action by a person identifying archaeological or heritage material:

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

Action by site manager:

- Report findings, site location and actions are taken by proponent and exploration managers
- Cease any works in the immediate vicinity

Action by proponent and exploration managers:

- Visit the site and determine whether work can proceed without damage to findings
- Determine and mark exclusion boundary
- Site location and details to be added to project GIS for field confirmation by archaeologist

Action by archaeologist:

- Inspect site and confirm the addition to project GIS
- Advise NHC and request written permission to remove findings from the work area
- Recovery, packaging and labelling of findings for transfer to National Museum

In the event of discovering human remains, procedures are to be carried out as per the above. Moreover, a field inspection by the archaeologist is to be actioned to confirm that remains are human, following a liaison with NHC and Police. Thereafter, the recovery of remains and removal to the National Museum or National Forensic Laboratory should be actioned as directed.

#### 4.4 NON-COMPLIANCE

##### 4.4.1 NON-COMPLIANCE EVENT

Where it has been identified that works are not compliant with this EMP, the exploration manager shall employ corrective actions so that the works return to being compliant as soon as possible. In instances where the requirements of the EMP are not upheld, a non-conformance and corrective action notice shall be produced. The notice shall be generated during the inspections and the exploration manager shall be responsible for ensuring a corrective action plan is established and implemented to address the identified shortcoming.

A non-compliance event or situation, for example, is considered if:

- There is evidence of a contravention of this EMP and associated indicators or objectives;
- The exploration manager or contractor have failed to comply with corrective or other instructions issued by the exploration manager or qualified authority; or
- The exploration manager or contractor fails to respond to complaints from the public.

Activities shall be stopped in the event of serious non-compliance until corrective action(s) has been completed.

#### 4.5 INCIDENT REPORTING

The exploration manager must ensure that an accident and incident (including minor or a near-miss) reporting system is maintained so that all applicable statutory requirements are covered. For any serious incident involving a fatality, or permanent disability, the incident scene must be left untouched until witnessed by a representative of the police. This requirement does not preclude immediate first aid being administered and the location being made safe.

The exploration manager must investigate the cause of all work accidents and significant incidents and must provide the results of the investigation and recommendations on how to prevent a recurrence of such incidents. A formal root-cause investigation process should be followed.

##### 4.5.1 DISCIPLINARY ACTION

This EMP is a legally binding document and non-compliance with it shall result in disciplinary action being taken against the perpetrator(s). Such action may take the form of (but is not limited to):

- Fines or penalties;
- Legal action;
- Monetary penalties imposed by the proponent on the contractor;



- Withdrawal of licence(s); and
- Suspension of work.

The disciplinary action shall be determined according to the nature and extent of the transgression or non-compliance, and penalties are to be weighed against the severity of the incident.

## 5 ENVIRONMENTAL AND SOCIAL MANAGEMENT

### 5.1 ENVIRONMENTAL PERFORMANCE MEASUREMENT

This chapter provides a register of environmental risks and issues, which identifies mitigation and monitoring measures, as well as the responsible roles. This register will be subject to regular review by the exploration manager and updated when necessary.

The exploration manager or the site manager (if applicable) will use this register to undertake monthly inspections (see next section) to ensure the project is compliant with this EMP.

### 5.2 OBJECTIVES AND TARGETS

Environmental objectives for the project are as follows:

- Zero pollution incidents;
- Minimal vegetation clearing and earthworks;
- Protect local flora and fauna;
- No harm or destruction of biodiversity;
- Minimise the generation of waste; and
- Minimal interruption to Save the Rhino Trust activities.

### 5.3 REGISTER OF ENVIRONMENTAL RISKS AND ISSUES

An environmental review of the proposed project was completed which identified all the commitments and agreements made within the environmental assessment report. From this, a schedule of environmental commitments and risks has been produced (Table 3), which details deliverables including measures identified for the prevention of pollution or damage to the environment during exploration.

Table 3 provides a register of environmental risks and issues, which identifies mitigation and monitoring measures, as well as the responsible person. This register will be subject to regular review by the exploration manager and updated when necessary. The exploration manager will use this register to undertake monthly inspections to ensure the project is compliant with this EMP.

### 5.4 IMPACTS IDENTIFIED FOR FURTHER ACTIONS

#### 5.4.1 IMPACTS ON THE COMMUNITY

The EPL overlaps two communal conservancies, Tsiseb and Doro! Nawas. A communal conservancy represents a conservation area that is managed by a local community that aims to manage the natural resources within their conservancy in a sustainable way to generate returns and other benefits.

Furthermore, any noise and dust nuisance within the EPL and surrounding areas might negatively impact the tourism potential of this area (i.e. tourists visit these areas for the aesthetic value of nature and noise and air pollution will have an impact on this); which, will directly impact the local communities that depend on the tourism and consumptive wildlife-related industry. The Brandberg (approximately 23 km from EPL 5445) is a UNESCO world heritage site and attracts many tourists during the year and is an important contributor to the economy; tourist accommodations within these areas might also be impacted by air pollution (i.e., suspended particles might cause murky skies).

Mitigation measures identified include adhering to speed limits in the proposed project area, avoiding certain activities that are likely to trigger noise and or dust during high wind periods. The proponent should ensure consistent communication the community and stakeholders. Ensure that only designated routes are used for access.

#### 5.4.2 IMPACTS ON FAUNA AND FLORA

The north-western areas of Namibia, where the EPL is situated represents an area with moderate species diversity and High overall endemism of terrestrial fauna and Flora. The EPL also lies close to and might overlap a plant endemism hotspot, of which there are only 18 of these hotspot areas in Namibia.

These two communal conservancies represent an area with moderate species richness, containing about 71 – 80% of species that historically occurred within these areas. Thus, this means that this ecosystem is vulnerable, and any major environmental impacts might effect the biodiversity. Wildlife in this area already faces major threats such as human-wildlife conflict, poaching, climate change and other anthropogenic impacts.

Mitigation measures identified are to possibly relocate species at risk (if viable), ongoing monitoring to determine if activities are impacting wildlife/ organism, altering exploration plans to avoid activities that impact residing or nesting organisms during nesting periods. Avoiding species habitant areas, exclusion of areas where protected species are identified.

#### 5.4.3 IMPACTS ON HERITAGE

On EPL 5445 there are approximately 13 sites of heritage find, which were grouped as A, B and C. The sites comprise approximately ten stone shelters of windbreak features as well as a number of storage cairns and other features.

Mitigation measures identified include avoiding certain areas during the proposed exploration activities, ensuring buffers are placed around points of heritage value. In an event where additional heritage finds are discovered the chances find procedure set out in section 4.3 of this EMP cover the reporting and management of such finds.

**TABLE 3 - ENVIRONMENTAL RISKS AND ISSUES, AND MITIGATION AND MONITORING MEASURES**

ACTIVITY	POTENTIAL IMPACTS	MANAGEMENT / MITIGATION MEASURES	MONITORING REQUIREMENTS	RESPONSIBILITY
Access and site preparation	<ul style="list-style-type: none"> <li>- Miscommunication with the local conservancies, Doro Inawas, Tsiseb and the other sensitive receptors such as the sav the Rhino camp and Brandberg west mine.</li> <li>- Disruption of any of the local conservancy activities or that of the other sensitive receptors; and</li> <li>- Potential conflict with any of the local conservancy activities or that of the other sensitive receptors, such as the save the rhino camp (suspicious movement, poaching of protected animals or field fires)</li> </ul>	<ul style="list-style-type: none"> <li>- Ensure documented permission are in order;</li> <li>- No normal access point of local conservancies or sensitive receptors should be influenced;</li> <li>- Existing water points and feeding areas need to be left; unaffected;</li> <li>- Use existing roads for access to avoid new tracks and cut lines; and</li> <li>- Compliance with all applicable laws and agreements.</li> </ul>	Daily	Exploration manager or site manager (or nominated site supervisor)
	<ul style="list-style-type: none"> <li>- Potential grievances and complaints; and</li> <li>- Social discomfort and anxiety.</li> </ul>	<ul style="list-style-type: none"> <li>- Develop and implement an environmental and social operation manual or procedures to work on the property of local conservancies or sensitive receptors and implement monitoring programmes thereafter;</li> <li>- Maintain continuous communication with I&amp;APs to identify concerns and mitigation measures;</li> <li>- Compliance with all applicable laws and agreements;</li> <li>- Train personnel and raise awareness to sensitize them about contentious issues such as stock theft and poaching;</li> <li>- Ensure appropriate supervision of all activities daily; and</li> </ul>	Weekly, monthly	

ACTIVITY	POTENTIAL IMPACTS	MANAGEMENT / MITIGATION MEASURES	MONITORING REQUIREMENTS	RESPONSIBILITY
		<ul style="list-style-type: none"> <li>- Accidents and incidents need to be reported to the exploration manager and recorded in the incident register.</li> </ul>		
<p><b>General on-ground exploration activities</b></p>	<p>Residing and nesting organisms can be disturbed, injured or killed by the movement of vehicles and equipment.</p>	<ul style="list-style-type: none"> <li>- Restrict movements to areas of activities only;</li> <li>- Use existing tracks and routes as far as practically possible;</li> <li>- Identify rare, endangered, threatened and protected species in advance such as the white or black rhino;</li> <li>- Route new tracks around sensitive areas inhabited by protected species (i.e., Rhinos, etc.);</li> <li>- Restrict movements to daytime hours;</li> <li>- Training and raise awareness to sensitize employees and notify them on avoiding some areas where protected species reside;</li> <li>- No driving off designated access routes (into the bush) or any off-road driving; and</li> <li>- No animals or birds may be collected, caught, consumed or removed from the site.</li> <li>- Trees and cliffs should be carefully evaluated for signs of nesting birds, especially endangered or critically endangered raptors or vultures that might be nesting in large trees, cliffs or even manmade structures (such as telephone or electrical poles) within the EPL.</li> </ul>	<p>Weekly</p>	

ACTIVITY	POTENTIAL IMPACTS	MANAGEMENT / MITIGATION MEASURES	MONITORING REQUIREMENTS	RESPONSIBILITY
	<ul style="list-style-type: none"> <li>- Birdlife disturbance and habitats disruption</li> <li>- High-value conservation species that are residing, ground-nesting and slow-moving can be disturbed as a result of an increase in ambient noise and vibration from operations and movements of vehicles; and</li> <li>- Conflict with farmers and neighbours about the rising of ambient noise levels.</li> <li>- Potential impact on nesting birds, especially ground-nesting birds.</li> <li>- Disrupt biodiversity (i.e. impacts on ecosystems and species' habitats)</li> </ul>	<ul style="list-style-type: none"> <li>- Restrict excessive noise to areas of activities only;</li> <li>- Restrict excessive noise to daytime hours (7 am to 5 pm weekdays and 7 am until 1 pm on Saturdays);</li> <li>- No activities are allowed between dusk and dawn;</li> <li>- Drill equipment shall be suitably positioned to ensure that noisy equipment is away from receptors;</li> <li>- Residents shall be provided at least two weeks' notice of drilling operations within 1 km of their property;</li> <li>- All equipment to be shut down or throttled back between periods of use; and</li> <li>- Comply with national civil aviation regulations about the use of a drone, if necessary.</li> <li>- Trees and cliffs should be carefully evaluated for signs of nesting birds, especially endangered or critically endangered raptors or vultures that might be nesting in large trees, cliffs or even manmade structures (such as telephone or electrical poles) within the EPL.</li> <li>- Exploration activities should be minimised during the breeding season.</li> <li>- Exploration equipment must be suitably positioned to ensure that noisy equipment is away from receptors; and</li> <li>- Minimise clearance areas through proper planning of the exploration activities.</li> </ul>	Daily	Site manager (or nominated site supervisor)
	<ul style="list-style-type: none"> <li>- Visual disturbances.</li> <li>- Loss of sense of place</li> </ul>	<ul style="list-style-type: none"> <li>- Position drill equipment and other heavy equipment in such a way that it is out of sight from human receptors;</li> <li>- Barriers or fences shall be used if drilling occurs in locations that may affect residents or livestock;</li> <li>- Maintain good housekeeping standards on site; and</li> <li>- Maintain continuous communication with I&amp;APs to</li> </ul>	Daily, weekly	

ACTIVITY	POTENTIAL IMPACTS	MANAGEMENT / MITIGATION MEASURES	MONITORING REQUIREMENTS	RESPONSIBILITY
		<p>identify concerns and mitigation measures.</p>		
	<ul style="list-style-type: none"> <li>- Dust and emissions.</li> </ul>	<ul style="list-style-type: none"> <li>- All vehicles and machinery or equipment to be shut down or throttled back between periods of use;</li> <li>- Use existing access roads and tracks where possible;</li> <li>- Apply dust suppression where possible;</li> <li>- Restrict the speed of vehicles (<math>\leq 30\text{km/h}</math>); and</li> <li>- Specific activities that may generate dust and impact on residents shall be avoided during high wind events.</li> <li>- Residents need to be informed at least two weeks in advance that drilling operations are within 1km of their property;</li> <li>- Vehicles and machinery are to be regularly serviced according to the manufacturers' specifications and kept in good working order so as to minimise exhaust emissions.</li> </ul>	Daily	
	<ul style="list-style-type: none"> <li>- Loss of soil quality due to mixing of earth matter, trampling, compaction and pollution, and</li> <li>- Enhanced soil erosion.</li> </ul>	<ul style="list-style-type: none"> <li>- Where possible, plan access routes, drill pads and camps outside of existing drainage lines;</li> <li>- Where necessary, install diversions to curb possible erosion;</li> <li>- Restore drainage lines when disturbed;</li> <li>- Topsoil should be stockpiled separately, and re-spread during rehabilitation;</li> <li>- Limit the possibility of compaction and creation of a hard subsurface,</li> <li>- Limit the possibility of trampling;</li> <li>- During drilling, oil absorbent matting should be</li> </ul>	Weekly	



ACTIVITY	POTENTIAL IMPACTS	MANAGEMENT / MITIGATION MEASURES	MONITORING REQUIREMENTS	RESPONSIBILITY
		<p>placed under and around the drill rig;</p> <ul style="list-style-type: none"> <li>- Equipment must be in a good condition to ensure that accidental oil spills do not occur and contaminate soil;</li> <li>- In the event of spills and leaks, polluted soils must be collected and disposed of at an approved site; and</li> <li>- Limit the possibility of mixing mineral waste with topsoil.</li> </ul>		
	Groundwater contamination	<ul style="list-style-type: none"> <li>- Ensure drill pads and spill kits are in place on site;</li> <li>- Consider alternative sites when the water table is too high;</li> <li>- Wastewater shall be contained; and</li> <li>- Where possible, water from existing water sources shall be used.</li> </ul>	Weekly	
<b>Exploration Activities (i.e. increased human and vehicle movement)</b>	Potential damage to cultural heritage sites	<ul style="list-style-type: none"> <li>- Implement a Chance Find Procedure</li> <li>- Raise awareness about possible heritage finds</li> <li>- Report all finds that could be of heritage importance</li> <li>- In case archaeological remains to be uncovered, cease activities and the project manager has to assess and demarcate the area</li> <li>- Project manager to visit the site and determine whether work can proceed without damage to findings, mark exclusions boundary and inform ECC with GPS position</li> <li>- If needed, further investigation have to be requested for a professional assessment and the necessary protocols of the Chance Find Procedure have to be followed,</li> <li>- Archaeologist will evaluate the significance of the remains and identify appropriate action, for example, record and remove; relocate or leave premises (depending on the nature and value of the</li> </ul>	Monthly	Site manager (or nominated site supervisor)

ACTIVITY	POTENTIAL IMPACTS	MANAGEMENT / MITIGATION MEASURES	MONITORING REQUIREMENTS	RESPONSIBILITY
		<p>remains),</p> <ul style="list-style-type: none"> <li>- Inform the police if the remains are human,</li> <li>- Obtain appropriate clearance or approval from the competent authority, if required, and recover and remove the remains to the National Museum or National Forensic Laboratory as directed.</li> </ul>		
<p><b>Vegetation clearance for access routes, drill sites and temporary contractor camps</b></p>	<ul style="list-style-type: none"> <li>- Loss of plant species;</li> <li>- Loss of habitat;</li> <li>- Create landscape scars; and</li> <li>- Loss of Sense of Place.</li> <li>- Potential negative impacts to endangered and protected plant species</li> </ul>	<ul style="list-style-type: none"> <li>- Use existing roads for access to avoid new tracks and cut lines;</li> <li>- Minimise clearance areas through proper planning of the exploration activities;</li> <li>- Protected plant species should not be removed, without the relevant permission or permits.</li> <li>- Field team should not drive in the veld or create new tracks, without evaluating the plant species within that area.</li> <li>- Route new tracks around established and protected trees, and clumps of vegetation;</li> <li>- Large trees or shrubs should not be removed (could be essential for breeding birds);</li> <li>- Identify rare, endangered, threatened and protected species;</li> <li>- During toolbox talks and induction sessions, highlight to workers that the removal of significant plants should be avoided;</li> <li>- Where possible rescue and relocate plants of significance; and</li> <li>- Promote revegetation of cleared areas upon completion of exploration activities.</li> <li>- <i>Euphorbia damarana</i> should not be removed within this area, due to it being an important food source for the critically endangered Black Rhinos.</li> </ul>	<p>Daily</p>	<ul style="list-style-type: none"> <li>- Exploration Manager</li> </ul>

ACTIVITY	POTENTIAL IMPACTS	MANAGEMENT / MITIGATION MEASURES	MONITORING REQUIREMENTS	RESPONSIBILITY
	<ul style="list-style-type: none"> <li>- Alien plants and weeds can accidentally be introduced.</li> </ul>	<ul style="list-style-type: none"> <li>- All project equipment arriving on site from an area outside of the project or coming from an area of known weed infestations (not present on the project site) should have an internal weed and seed inspection completed prior to such equipment being used;</li> <li>- Ensure contractors receive induction on preventing the spread of alien weed;</li> <li>- Ensure the potential introduction and spread of alien plants is prevented;</li> <li>- Ensure the correct removal of alien invasive vegetation and prevent the establishment and spread of alien invasive plants;</li> <li>- Eradicate weeds and alien species as soon as they appear; and</li> <li>- Make workers aware about alien species and weeds.</li> </ul>	<p>Monthly</p>	<ul style="list-style-type: none"> <li>- Employees, contractors</li> <li>- Site manager (or nominated site supervisor)</li> </ul>
<p><b>Protection of Biodiversity</b></p>	<ul style="list-style-type: none"> <li>- Increased potential of poaching of the rhinos at the sensitive receptor Save the Rhino Camp.</li> <li>- Disturbance of nesting birds or local biodiversity</li> </ul>	<ul style="list-style-type: none"> <li>- Ensure that strict rules and regulations are implemented to ensure that the rhinos stay protected;</li> <li>- Minimise movement and noise close to this sensitive receptor;</li> <li>- None of the save the rhino daily activities should be disrupted;</li> <li>- Emergency contact details of the anti-poaching unit should readily available</li> <li>- Emergency contact details of the police should readily available</li> <li>- Any poaching or biodiversity crime incidents should be reported to MEFT, Police and any anti-poaching unit immediately.</li> <li>- Prosecution of individuals that threaten the</li> </ul>	<p>-Daily inspection</p>	<ul style="list-style-type: none"> <li>- Site manager (or nominated site supervisor)</li> </ul>

ACTIVITY	POTENTIAL IMPACTS	MANAGEMENT / MITIGATION MEASURES	MONITORING REQUIREMENTS	RESPONSIBILITY
		<p>protection of these animals must be maintained;</p> <ul style="list-style-type: none"> <li>- Vehicle stops, where vehicles are searched or vehicle movement recorded;</li> <li>- Ensure that there is no movement of unauthorised vehicles;</li> <li>- Company vehicles must be clearly marked;</li> <li>- No night time driving;</li> <li>- Stay strictly within designated areas and tracks;</li> <li>- Absolute no communication regarding the location of any endangered game, especially important for the critically endangered Black Rhinos.</li> <li>- No harming, damaging, or killing of any biodiversity.</li> <li>- Keep within the appropriate speed limits and on tracks within the EPL vehicles should not travel faster than 20km/h.</li> <li>- Save the Rhino Trust team should be made aware of all exploration activities, as well as the relevant dates and times that exploration teams will be on-site; as well as where exploration activities will be taking place.</li> <li>- No exploration activities should be allowed within the Ugab river as this is an essential part of the Desert Ecosystem and is a very important habitat for various endangered species.</li> </ul>		
<p><b>Fuel handling and storage, maintenance on equipment, machinery and vehicles</b></p> <p><b>Inadequate control or</b></p>	<ul style="list-style-type: none"> <li>- Soil contamination;</li> <li>- Water contamination; and</li> <li>- Enhanced accidental veld fires during high wind periods.</li> </ul>	<p><b>Storage</b></p> <ul style="list-style-type: none"> <li>- Label chemicals appropriately.</li> <li>- Chemicals with different hazard symbols should not be stored together - clear guidance on the compatibility of different chemicals can be obtained from the Materials Safety Data Sheets (MSDS) which should be readily available;</li> <li>- Store chemicals in a dedicated, enclosed and</li> </ul>	<ul style="list-style-type: none"> <li>- Daily observations</li> <li>- Weekly inspections</li> </ul>	<ul style="list-style-type: none"> <li>- Site manager (or nominated site supervisor)</li> </ul>

ACTIVITY	POTENTIAL IMPACTS	MANAGEMENT / MITIGATION MEASURES	MONITORING REQUIREMENTS	RESPONSIBILITY
accidental release of hazardous substances on site		<p>secure facility with a roof and a concrete floor. Chemical tanks should be completely contained within secondary containment such as bunding;</p> <ul style="list-style-type: none"> <li>- Consider the feasibility of substituting hazardous chemicals with less hazardous alternatives;</li> <li>- Storage and handling of fuels and chemicals shall comply with relevant legislation and regulations; and</li> <li>- Fuels, lubricants, and chemicals are to be stored within appropriately sized, impermeable bunds or trays with a capacity not less than 110% of the total volume of products stored.</li> </ul> <p><b>Fire risk</b></p> <ul style="list-style-type: none"> <li>- No open fires are allowed to be lit by personnel, associated with the proponent anywhere on the EPL outside of dedicated campsites;</li> <li>- The proponent to ensure that exploration campsites have proper cooking facilities available to use. Gas stoves are the preferred option;</li> <li>- No cigarette butts are allowed to be discarded into the environment. These should be contained in appropriate domestic containment bins and disposed of at the local landfill site;</li> <li>- No unauthorised movement beyond the exploration areas and campsites is allowed;</li> <li>- Proper fire hazard identification signage to be placed in areas that store flammable material (e.g., hydrocarbons and gas bottles);</li> <li>- Control and reduce the potential risk of fire by</li> </ul>		

ACTIVITY	POTENTIAL IMPACTS	MANAGEMENT / MITIGATION MEASURES	MONITORING REQUIREMENTS	RESPONSIBILITY
		<p>segregating and safe storage of materials;</p> <ul style="list-style-type: none"> <li>- Avoid potential sources of ignition by prohibiting smoking in and around facilities; and</li> <li>- Fire extinguishers should always be at designated areas and should be inspected regularly.</li> </ul> <p><b>Spills</b> Spill kits with the following items as a minimum should be made available on site:</p> <ul style="list-style-type: none"> <li>- Absorbent materials;</li> <li>- Shovels;</li> <li>- Heavy-duty plastic bags;</li> <li>- Protective clothing (e.g., gloves and overalls);</li> <li>- Major servicing of equipment shall be undertaken offsite or in appropriately equipped workshops;</li> <li>- For small repairs and unavoidable and necessary maintenance activities all reasonable precautions to avoid oil and fuel spills must be taken (e.g., spill trays, impervious sheets);</li> <li>- Provision of adequate and frequent training on spill management, spill response and refueling must be provided to all onsite personnel;</li> <li>- No refueling is to take place within 50 meters of groundwater boreholes, surface water or streams;</li> <li>- Vehicles and machinery are to be regularly serviced to minimise oil and fuel leaks; and</li> <li>- All major petroleum product spills (spill of more than 200 liters per spill) should be reported to the Ministry of Mines and Energy (MME) on Form PP/11 titled "Reporting of major petroleum</li> </ul>		

ACTIVITY	POTENTIAL IMPACTS	MANAGEMENT / MITIGATION MEASURES	MONITORING REQUIREMENTS	RESPONSIBILITY
		<p>product spill', attached as Appendix B.</p> <p><b>The following points therefore apply to all areas on the site:</b></p> <ul style="list-style-type: none"> <li>- Assess the situation for potential hazards;</li> <li>- Do not come into contact with the spilled substance until it has been characterised and the necessary Personal Protective Equipment (PPE) is provided; and</li> <li>- Isolate the area as required.</li> </ul> <p><b>The following measures are to be implemented in response to a spill:</b></p> <ul style="list-style-type: none"> <li>- Spills are to be stopped at the source as soon as possible (e.g., close valve or upright drum);</li> <li>- Spilt material is to be contained to the smallest area possible using a combination of absorbent material, earthen bunds or other containment methods;</li> <li>- Spilt material is to be recovered as soon as possible using appropriate equipment. In most cases, it will be necessary to excavate the underlying soils until clean soils are encountered;</li> <li>- All contaminated materials recovered subsequent to a spill, including soils, absorbent pads and sawdust, are to be disposed of at appropriately licensed facilities; and</li> <li>- A written incident report must be submitted to the general manager.</li> </ul>		



ACTIVITY	POTENTIAL IMPACTS	MANAGEMENT / MITIGATION MEASURES	MONITORING REQUIREMENTS	RESPONSIBILITY
<b>Generation of waste</b>	<ul style="list-style-type: none"> <li>- Soil contamination;</li> <li>- Water contamination;</li> <li>- Nuisance (visual impacts and litter); and</li> <li>- Ecological risks.</li> </ul>	<ul style="list-style-type: none"> <li>- Good housekeeping standards applied on site;</li> <li>- Training and raise awareness through toolbox talks and induction;</li> <li>- Implement a Standard Operational Procedure (SOP) on waste management, for all kinds of waste possible on-site (e.g., hydrocarbons, domestic, waste water);</li> <li>- Implement a culture of correct waste collection, waste segregation and waste disposal, complementary to the waste hierarchy – avoid, re-use, recycle; and</li> <li>- Wastewater discharges will be contained – no disposal of wastewater directly into the environment is allowed.</li> </ul>	<ul style="list-style-type: none"> <li>- Daily and weekly</li> </ul>	<ul style="list-style-type: none"> <li>- Employees, contractors</li> <li>- Site manager (or nominated site supervisor)</li> </ul>
<b>Water use</b>	<ul style="list-style-type: none"> <li>- Soil contamination;</li> <li>- Ground and surface water contamination; and</li> <li>Nuisance (visual and odour).</li> </ul>	<ul style="list-style-type: none"> <li>- Minimise the operational consumption of water throughout the lifespan of the project;</li> <li>- Visual monitoring and a photographic record should be kept of any surface and or groundwater intersected;</li> <li>- Recycle wastewater, where possible.</li> <li>- Install devices to prevent spills and overfills, e.g., shutoff devices for large volume tanks (e.g., &gt; than 2000lts).</li> <li>- Install an impermeable hardstand in areas of high-risk contamination to prevent ground infiltration by pollutants;</li> <li>- Segregation of wastewater (domestic and industrial effluent); and</li> <li>- During operation, monitoring of wastewater discharges (specific to a wastewater discharge permit conditions) should be conducted on a regular basis (quarterly).</li> </ul>	<ul style="list-style-type: none"> <li>- Daily inspection of operations</li> </ul>	<ul style="list-style-type: none"> <li>- Exploration Manager</li> <li>- Employees, contractors</li> <li>- Site manager (or nominated site supervisor)</li> </ul>

ACTIVITY	POTENTIAL IMPACTS	MANAGEMENT / MITIGATION MEASURES	MONITORING REQUIREMENTS	RESPONSIBILITY
<b>Terrestrial biodiversity destruction due to uncontrolled fire outbreaks</b>	<ul style="list-style-type: none"> <li>- Veld fires during high wind periods</li> </ul>	<ul style="list-style-type: none"> <li>- No open fires are allowed to be lit by personnel associated with the proponent anywhere on the EPL outside of dedicated campsites;</li> <li>- The proponent to ensure that exploration campsites have proper cooking facilities available to use. Gas stoves are the preferred option;</li> <li>- No cigarette butts are allowed to be discarded into the environment. These should be contained in appropriate domestic containment bins and disposed of at the local landfill site;</li> <li>- No unauthorised movement beyond the exploration areas and campsites is allowed; and</li> <li>- Proper fire hazard identification signage to be placed in areas that store flammable material (i.e. hydrocarbons and gas bottles).</li> </ul>	<ul style="list-style-type: none"> <li>- Daily inspection of operations</li> </ul>	<ul style="list-style-type: none"> <li>- Exploration Manager</li> <li>- Employees, contractors</li> <li>- Site manager (or nominated site supervisor)</li> </ul>

ACTIVITY	POTENTIAL IMPACTS	MANAGEMENT / MITIGATION MEASURES	MONITORING REQUIREMENTS	RESPONSIBILITY
<b>Heritage</b>	<ul style="list-style-type: none"> <li>- Disruption of heritage sites.</li> </ul>	<p>In case of discovering or unearthing heritage sites, the following measures (chance-find procedure) shall be applied:</p> <ul style="list-style-type: none"> <li>- Works to cease and the area to be demarcated with appropriate tape by the site supervisor, and the site manager to be informed;</li> <li>- The site manager to visit the site and determine whether work can proceed without damage to findings, mark exclusions boundary and inform the environment and social manager with the GPS position if possible</li> <li>- If works cannot proceed without damage to findings, the site manager to inform the environmental manager who will get in touch with an archaeologist who will provide advice.</li> <li>- Exploration manager or an archaeological specialist to evaluate the significance of the remains and identify appropriate action, for example, record and remove; relocate or leave in situ (depending on the nature and value of the remains);</li> <li>- Inform the police if the remains are human, and</li> <li>- Obtain appropriate clearance or approval from the competent authority. if required, recover and remove the remains to the national museum or national forensic laboratory as directed.</li> <li>- A buffer of 50 m around groups "A" and "B" in figure two of the Archeological report should be established, where no disturbance is allowed.</li> </ul>	<ul style="list-style-type: none"> <li>- Daily inspection</li> </ul>	<ul style="list-style-type: none"> <li>- General Manager, and</li> <li>- Deputy Manager (or nominated supervisor)</li> </ul>
<b>Job creation, skills development and business</b>	<ul style="list-style-type: none"> <li>- Beneficial socio-economic impacts on a local and regional scale.</li> </ul>	<ul style="list-style-type: none"> <li>- Maximise local employment and local business opportunities;</li> <li>- Enhance the use of local labour and local skills as far as reasonably possible; and</li> </ul>	<ul style="list-style-type: none"> <li>- Monthly</li> </ul>	<ul style="list-style-type: none"> <li>- Exploration Manager</li> </ul>

ACTIVITY	POTENTIAL IMPACTS	MANAGEMENT / MITIGATION MEASURES	MONITORING REQUIREMENTS	RESPONSIBILITY
<b>opportunities</b>		<ul style="list-style-type: none"> <li>- Ensure that goods and services are sourced from the local and regional economy as far as reasonably possible.</li> </ul>		

## 6 IMPLEMENTATION OF THE EMP

Exploration work will be carried out in compliance with the relevant requirements of the Minerals (Prospecting and Mining) Act, 1992. No significant impacts are anticipated for the activities that have been identified. Management and mitigation measures are in place for potential risks.

This EMP:

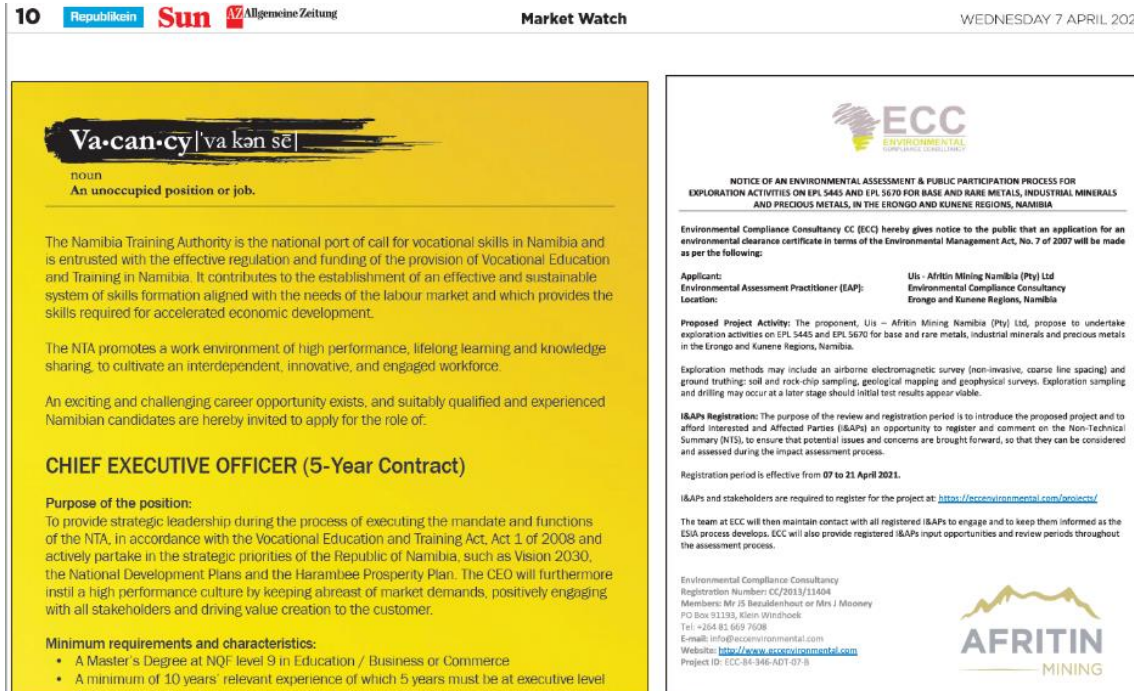
- A. Has been prepared pursuant to a contract with the proponent;
- B. Has been prepared on the basis of information provided to ECC up to May 2021;
- C. Is for the sole use of the proponent, for the sole purpose of an EMP;
- D. Must not be used (1) by any person other than the proponent or (2) for a purpose other than an EMP; and
- E. Must not be copied without the prior written permission of ECC.

ECC has prepared the EMP on the basis of information provided by the proponent, specialist reports and the environmental scoping report.

## APPENDIX B - NON-TECHNICAL SUMMARY

## APPENDIX C- EVIDENCE OF PUBLIC CONSULTATION

The following was advertised in the 'Republikein, Sun, and Allgemeine Zeitung' newspapers on the 7<sup>th</sup> April 2021.



**10** Republikein **Sun** Allgemeine Zeitung **Market Watch** WEDNESDAY 7 APRIL 2021

**Va·can·cy** |'va kən sə|  
noun  
An unoccupied position or job.

The Namibia Training Authority is the national port of call for vocational skills in Namibia and is entrusted with the effective regulation and funding of the provision of Vocational Education and Training in Namibia. It contributes to the establishment of an effective and sustainable system of skills formation aligned with the needs of the labour market and which provides the skills required for accelerated economic development.

The NTA promotes a work environment of high performance, lifelong learning and knowledge sharing, to cultivate an interdependent, innovative, and engaged workforce.

An exciting and challenging career opportunity exists, and suitably qualified and experienced Namibian candidates are hereby invited to apply for the role of:

**CHIEF EXECUTIVE OFFICER (5-Year Contract)**

**Purpose of the position:**  
To provide strategic leadership during the process of executing the mandate and functions of the NTA, in accordance with the Vocational Education and Training Act, Act 1 of 2008 and actively partake in the strategic priorities of the Republic of Namibia, such as Vision 2030, the National Development Plans and the Harambee Prosperity Plan. The CEO will furthermore instil a high performance culture by keeping abreast of market demands, positively engaging with all stakeholders and driving value creation to the customer.

**Minimum requirements and characteristics:**

- A Master's Degree at NQF level 9 in Education / Business or Commerce
- A minimum of 10 years' relevant experience of which 5 years must be at executive level

**NOTICE OF AN ENVIRONMENTAL ASSESSMENT & PUBLIC PARTICIPATION PROCESS FOR EXPLORATION ACTIVITIES ON EPL 5445 AND EPL 5670 FOR BASE AND RARE METALS, INDUSTRIAL MINERALS AND PRECIOUS METALS, IN THE ERONGO AND KUNENE REGIONS, NAMIBIA**

Environmental Compliance Consultancy CC (ECC) hereby gives notice to the public that an application for an environmental clearance certificate in terms of the Environmental Management Act, No. 7 of 2007 will be made as per the following:

**Applicant:** Uis - Afritin Mining Namibia (Pty) Ltd  
**Environmental Assessment Practitioner (EAP):** Environmental Compliance Consultancy  
**Location:** Erongo and Kunene Regions, Namibia

**Proposed Project Activity:** The proponent, Uis - Afritin Mining Namibia (Pty) Ltd, propose to undertake exploration activities on EPL 5445 and EPL 5670 for base and rare metals, industrial minerals and precious metals in the Erongo and Kunene Regions, Namibia.

Exploration methods may include an airborne electromagnetic survey (non-invasive, coarse line spacing) and ground truthing: soil and rock-chip sampling, geological mapping and geophysical surveys. Exploration sampling and drilling may occur at a later stage should initial test results appear viable.


**I&APs Registration:** The purpose of the review and registration period is to introduce the proposed project and to afford interested and Affected Parties (I&APs) an opportunity to register and comment on the Non-Technical Summary (NTS), to ensure that potential issues and concerns are brought forward, so that they can be considered and assessed during the impact assessment process.

Registration period is effective from **07 to 21 April 2021**.

I&APs and stakeholders are required to register for the project at: <https://eccenvironmental.com/projects/>

The team at ECC will then maintain contact with all registered I&APs to engage and to keep them informed as the EIA process develops. ECC will also provide registered I&APs input opportunities and review periods throughout the assessment process.

Environmental Compliance Consultancy  
Registration Number: CC/2013/11404  
Members: Mr JS Besudenhout or Mrs J Moseley  
PO Box 91193, Klein Windhoek  
Tel: +254 81 669 7608  
E-mail: [info@eccenvironmental.com](mailto:info@eccenvironmental.com)  
Website: <http://www.eccenvironmental.com>  
Project ID: ECC-84-346-ADT-07-B



The following was advertised in the 'Republikein, Sun, and Allgemeine Zeitung' newspapers on the 14<sup>th</sup> April 2021.



**2** Republikein **Sun** Allgemeine Zeitung **Market Watch** WEDNESDAY 14 APRIL 2021

**NOTICE OF AN ENVIRONMENTAL ASSESSMENT & PUBLIC PARTICIPATION PROCESS FOR EXPLORATION ACTIVITIES ON EPL 5445 AND EPL 5670 FOR BASE AND RARE METALS, INDUSTRIAL MINERALS AND PRECIOUS METALS, IN THE ERONGO AND KUNENE REGIONS, NAMIBIA**

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**Location:** Erongo and Kunene Regions, Namibia

**Proposed Project Activity:** The proponent, Uis - Afritin Mining Namibia (Pty) Ltd, propose to undertake exploration activities on EPL 5445 and EPL 5670 for base and rare metals, industrial minerals and precious metals in the Erongo and Kunene Regions, Namibia.

Exploration methods may include an airborne electromagnetic survey (non-invasive, coarse line spacing) and ground truthing: soil and rock-chip sampling, geological mapping and geophysical surveys. Exploration sampling and drilling may occur at a later stage should initial test results appear viable.

**I&APs Registration:** The purpose of the review and registration period is to introduce the proposed project and to afford interested and Affected Parties (I&APs) an opportunity to register and comment on the Non-Technical Summary (NTS), to ensure that potential issues and concerns are brought forward, so that they can be considered and assessed during the impact assessment process.

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Website: <http://www.eccenvironmental.com>  
Project ID: ECC-84-346-ADT-07-B



**Scheme worth R200 billion**  
**SA extends Covid-19 loan scheme deadline**

**The aim was to encourage banks to lend more on favourable terms, to businesses affected by the coronavirus crisis.**

South Africa has extended by a further three months the deadline of a loan scheme that is central to efforts to counter the economic impact of the Covid-19 pandemic, the Treasury said on Monday.

President Cyril Ramaphosa announced the bank loan scheme for businesses, worth up to R200 billion in total and partly guaranteed by the government, in April 2020.

The availability of the loans in the scheme has been extended to July 11, from an earlier deadline of April 11, the Treasury said in a statement issued jointly with the South African Reserve Bank and

South African president Cyril Ramaphosa announced the R200 billion loan scheme in April last year. PHOTO: NAMPA/REUTERS

“The scheme has not been as effective as originally envisaged, as many distressed companies have been reluctant to assume more liabilities with little certainty of the length and severity of the


into its largest annual contraction in a century. But the uptake has been low, with just 18.16 billion paid out as of March 27.

“The scheme has not been as effective as originally envisaged, as many distressed companies have been reluctant to assume more liabilities with little certainty of the length and severity of the

**“The scheme has not been as effective as originally envisaged, as many distressed**



## APPENDIX C.2 SITE NOTICE AND STAKEHOLDERS LETTER



**NOTICE OF ENVIRONMENTAL ASSESSMENT AND PUBLIC PARTICIPATION PROCESS FOR  
EXPLORATION ACTIVITIES ON EPL 5445 FOR BASE AND RARE METALS, PRECIOUS METALS, IN THE ERONGO AND KUNENE  
REGIONS, NAMIBIA**

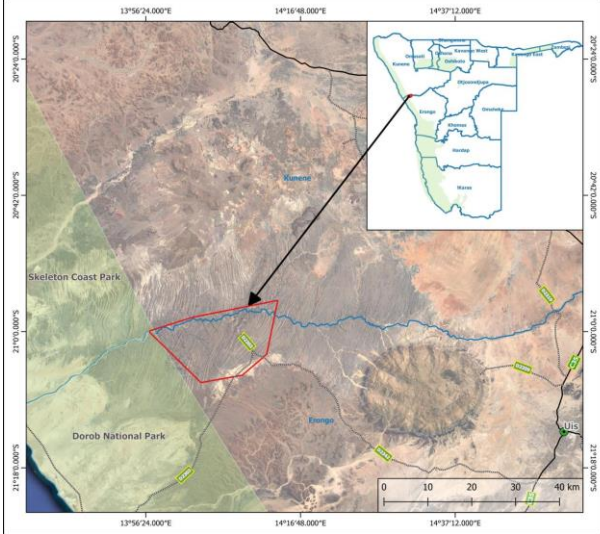
Environmental Compliance Consultancy cc (ECC) hereby gives notice to the public that an application for an environmental clearance certificate in accordance with the Environmental Management Act, No. 7 of 2007 will be made as per the following:


<b>Applicant:</b>	Uis – Afritin Mining Namibia (Pty) Ltd
<b>Environmental Assessment Practitioner (EAP):</b>	Environmental Compliance Consultancy
<b>Location:</b>	Erongo and Kunene regions, Namibia
<b>Project ID:</b>	ECC-84 - 346

**Proposed Project Activity:** The proponent, Uis – Afritin Mining Namibia (Pty) Ltd, propose to undertake exploration activities on EPL 5445 and EPL 5670 for base and rare metals, precious metals in the Erongo and Kunene regions, Namibia.

The site can be accessed via the D2303 road. Exploration methods may include an airborne electromagnetic survey (non-invasive, coarse line spacing) and ground truthing: soil and rock-chip sampling, geological mapping and geophysical surveys. Exploration sampling and drilling may occur at a later stage should initial test results appear viable.

**Location:** Erongo and Kunene Regions, Namibia






EPSG: 4326  
WGS 84

**Legend**

- Town
- Main Roads
- District Roads
- EPL 5445
- National Parks
- Regional Boundaries

Coordinates:  
Latitude: -21,02202473  
Longitude: 14,19208492




Uis Afritin Mining Namibia (Pty) Ltd  
Site/Map  
ECC Document Reference  
ECC - 84 - 346  
Map Produced:  
1/14/2023

**I&APs Registration:** The purpose of the review and registration period is to introduce the proposed project and to afford Interested and Affected Parties (I&APs) an opportunity to register and comment on the Non-Technical Summary (NTS), to ensure that potential issues and concerns are brought forward, so that they can be considered and assessed during the impact assessment process.

I&APs and stakeholders are required to register for the project at: <https://eccenvironmental.com/projects/>

The team at ECC will then maintain contact with all registered I&APs to engage and to keep them informed as the ESIA process develops. ECC will also provide registered I&APs input opportunities and review periods throughout the assessment process.



Contact: Mr JS Bezuidenhout or Mrs J Mooney  
Environmental Compliance Consultancy  
Registration Number CC/2013/11404  
PO Box 91193, Klein Windhoek  
Tel: +264 81 669 7608  
E-mail: [info@eccenvironmental.com](mailto:info@eccenvironmental.com)  
Website: <http://www.eccenvironmental.com>

SITE NOTICE



S 20.96370°; E 14.13387°

## APPENDIX C.3

Commentary log of comments received from registered I&APs.

## APPENDIX D – ARCHAEOLOGICAL REPORT

## APPENDIX F – ECC CVs