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ECC-90-302-REP-07-A

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

PROPOSED EXPLORATION ACTIVITIES ON EPL 7769 FOR BASE AND RARE METALS, DIMENSION STONES, INDUSTRIAL MINERALS AND PRECIOUS METALS, IN THE HARDAP AND KHOMAS REGIONS

*PREPARED FOR*

*JIN PENG INVESTMENTS (PTY) LTD*

**DECEMBER 2020**

## TITLE AND APPROVAL PAGE

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## EXECUTIVE SUMMARY

Jin Peng Investments (Pty) Ltd (herein referred to as Jin Peng or the proponent), registration number 2018/1724, intends to undertake exploration activities for base and rare metals, dimension stones, industrial minerals, and precious metals on Exclusive Prospecting Licence (EPL) 7769 located in the Hardap and Khomas regions. The bulk of the licence lies in the Hardap region and a small portion in the Khomas region. The proposed project area surrounds the Rehoboth town and can be accessed via the B1 and C25 roads. The total surface area of the EPL is 23 665 Hectares and overlays 15 farms.

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 Impact Assessment (EIA) has been undertaken to satisfy the requirements of the Environmental Management Act, No. 7 of 2007. This environmental scoping report plus impact assessment and Environmental Management Plan (EMP) shall be submitted to the competent authority as part of the application for the environmental clearance certificate.

The proposed exploration activities on EPL 7769 may include soil sampling, geological mapping, installations and sinking of exploration drill holes and thereafter possible trenching in a selected focus area in search of economically viable granite deposits. Standard exploration for dimension stone does not typically involve the use of trenching techniques. However, should the proponent decide to apply for a bulk sampling license from the Ministry of Mines and Energy to conduct exploration under, then this more invasive technique may become a possibility. In the event that bulk sampling should be implemented on site this report covers the activity in sufficient detail and address and mitigates the expected environmental impacts that may arise from it.

Some limited bush-clearing may be required for access track creation where necessary. All sites of activity will be managed according to stringent environmental requirements and standards. Access agreements will be entered into with all landowners affected prior to any exploration activities taking place. A number of state- and privately-owned activities are located within the general area of the EPL. Communication with these stakeholders was initiated during the public participation phase of the project and is included in Appendix C.

Exploration activities will commence if an environmental clearance certificate is granted by the Environmental Commissioner. Activities are expected to be conducted over a 3-year period, which is the duration of the exclusive prospecting licence (EPL). However, the period of each phase of the exploration programme may vary and will be refined as geological information becomes available. In the event that exploration is successful, and a commercially viable mineral resource is defined, exploration operations can potentially transcend into mining operations. This phase will involve the application of a Mining Licence and will be assessed in a separate and detailed environmental impact assessment at the appropriate stage.

EPL 7769 is located in the southern Kalahari vegetation type of the Acacia tree-and-shrub savanna sub-biome. The furthest western part is covered with the dwarf shrub savanna vegetation type of the Nama Karoo sub-biome. The vegetation is characterized by open expanses of grass, dotted by trees and bushes. (Mendelsohn et al., 2002). The area supports a terrestrial diversity range of animal and plant life, with the plant diversity in the area supporting 400 and 499 species, mainly as a direct result of the higher elevations.

Over the eastern parts of the EPL, the estimate plant diversity drops to 150 – 299 species. Plant endemism is also expected to be lower further eastwards, not exceeding five species (Mendelsohn et al., 2002).

EPL 7769 is located in the South-eastern Kalahari Groundwater Basin. Groundwater is of a low to moderate potential yield over the largest part of the EPL. The potential for contamination from the proposed exploration activities is regarded as minimal. However, the protection of water quality is addressed in the EMP. The Oanob dam is an endoreic surface water body and is located within the EPL. NamWater is responsible for the treatment and distribution of this resource to the local residents of Rehoboth.

Through the scoping process, the surrounding environment was assessed by undertaking desktop reviews. The impacts of standard exploration activities (not including dimension stone mining) with respect to airborne dust are expected to be limited to vehicular traffic on the district roads passing through the area of interest. There will be some release of exhaust fumes from machinery that will impact the immediate vicinity but will be of short duration. Additionally, there will be noise associated drilling and machinery, which could be a disturbance to immediate neighbours, but this will be of short duration. All other impacts related to environmental features are assessed in section 7 of this report.

Through further investigation, it was determined that the effects from noise are considered to be of moderate significance due to the receptors in the area i.e. Lake Oanob Resort, the Karoo Ochse auction house, a private dwelling south of the focus area and the NDF military housing base and several livestock farms. However, with additional mitigation, the significance is reduced to low.

The additional mitigation measures include:

- Residents shall be provided at least two weeks' notice of drilling operations within 1km of their property;
- Activities will be minimized to allocated daylight working hours;
- Continual engagement with residents shall be undertaken by the proponent to identify any concerns or issues, and appropriate mitigation and management measures shall be further agreed; and
- Noise suppression measures shall be applied if drilling occurs in locations that may affect residents or wildlife.

This study also concluded that a potential visual disturbance risk (which may require further investigation) is related to the exploration exercise and its adhoc activities within the focus area. All activities located near the D1237 road that runs east to west through the project area should be barricaded and masked from view of the road users with netting material in a colour pallet closely resembling the biophysical environment.

Receptors are farm owners, neighbours, tourists and local visitors to the resort utilising the C25 District road. Through further investigation, it was determined that the visual disturbance and loss of the sense of place is considered to be of moderate significance, however with additional mitigation, the significance can be reduced to minor. These additional mitigation measures include:

- Positioning of drill equipment and temporary accommodation structures in such a way that it is out of sight from human receptors utilising the C25 and D1237 roads;

- Barriers or fences shall be used if drilling occurs in locations that may affect road users, residents or livestock;
- Residents need to be informed at least two weeks in advance that drilling operations are within 1km of their property; and
- Continuous engagement with residents to identify any concerns or issues, and appropriate mitigation and management measures agreed upon.

The overall potential impact of this proposed project is not considered significant as it does not widely exceed recognised levels of acceptable change, does not threaten the integrity of the receptors, and it is not material to the decision-making process. The assessment is considered to be comprehensive and sufficient to identify impacts, and it is concluded that no further assessment is required.

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## DEFINITIONS AND ABBREVIATIONS

ECC	Environmental Compliance Consultancy
DEA	Directorate of Environmental Affairs
EIA	Environmental Impact Assessment
EMP	Environmental Management Plan
EPL	Exclusive Prospecting Licence
GDP	Gross Domestic Product
HIV/AIDS	Human Immunodeficiency Virus / Acquired Immunodeficiency Syndrome
IP	Induced Polarization
I&AP	Interested and affected parties
IFC	International Finance Cooperation
NECFU	Namibia Emerging Commercial farmers Union
MAWLR	Ministry of Agriculture, Water and Land Reform
MET	Ministry of Environment and Tourism
MEFT	Ministry of Environment, Forestry and Tourism
MHSS	Ministry of Health and Social Services
NDP5	Fifth National Development Plan
MME	Ministry of Mines and Energy
NTS	Non-Technical Summary
RAB	Rotary Air Blast (drilling)
RC	Reverse Circulation (drilling)
TB	Tuberculosis
WHO	World Health Organization

# 1 INTRODUCTION

## 1.1 PROJECT OVERVIEW

Jin Peng Investments (Pty) Ltd (herein referred to as Jin Peng or the proponent), registration number 2018/1724, intends to undertake exploration activities for base and rare metals, dimension stones, industrial minerals, and precious metals on Exclusive Prospecting Licence (EPL) 7769 located in the Hardap and Khomas regions, but with a priority focus on dimension stone (granite) resources. The bulk of the licence lies in the Hardap region and a small portion in the Khomas region. The proposed project area surrounds the Rehoboth town and can be accessed via the B1 and C25 roads. The total surface area of the EPL is 23 665 Hectares and overlays 15 farms.

## 1.2 PURPOSE OF THIS REPORT

The purpose of this report is to present the findings of the environmental assessment conducted for the proposed exploration project (Figure 1).

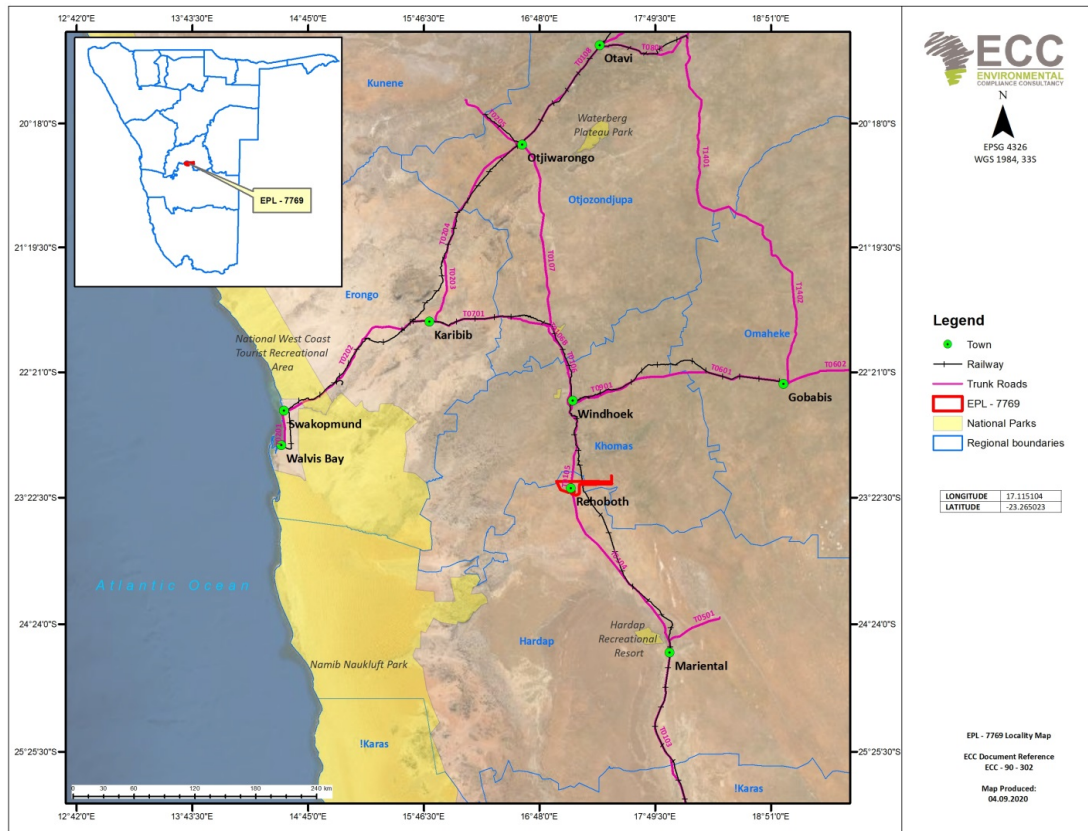


FIGURE 1 - LOCATION OF EPL 7769 FROM A NATIONAL PERSPECTIVE

The proposed project area surrounds the Rehoboth Townlands in a cone shape and can be accessed via the B1 and C25 roads. EPL 7769 is located approximately 5 km south of the Uisib settlement and 1 km north of the Rehoboth Town (Figure 2).

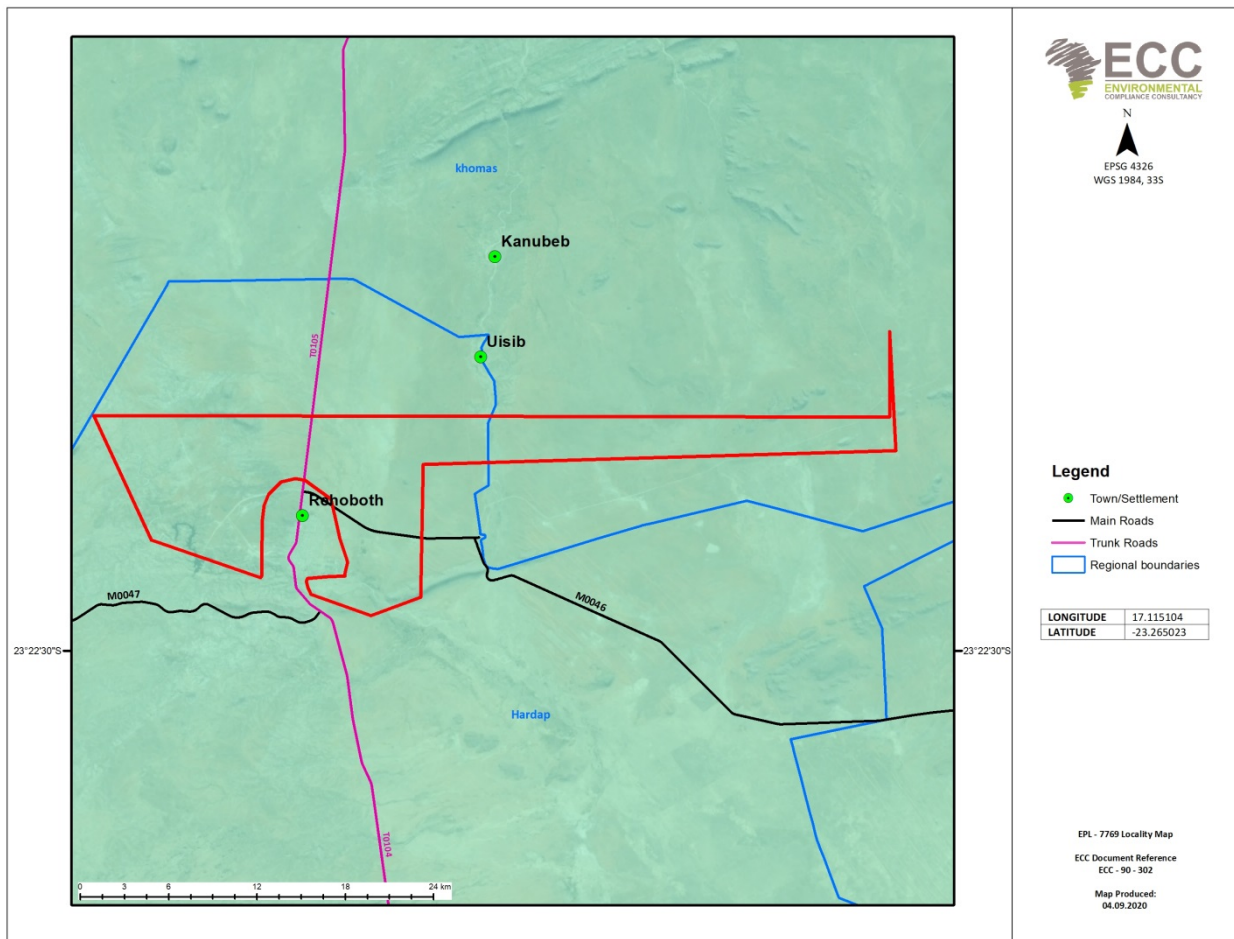


FIGURE 2 - ZOOMED-IN LOCALITY MAP OF EPL 7769

### 1.3 SCOPE OF WORK

This assessment has been prepared by ECC. 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 and 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.

This report plus appendices were submitted to the Ministry of Mines and Energy (MME) and the Directorate of Environmental Affairs (DEA) at the Ministry of Environment, Forestry and Tourism (MEFT) for review as part of the applications for an environmental clearance certificate.

#### 1.4 THE PROPONENT OF THE PROPOSED PROJECT

The EPL ownership and 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 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 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>FOREST ACTIVITIES</b> 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>○ The proposed project may require limited vegetation clearing for possible new access tracks, site camps and trenching activities. Specially protected plant species will not be cleared without approval from the competent authority.</li> </ul>
<p><b>WATER RESOURCE DEVELOPMENTS</b> 8.1 The abstraction of groundwater or surface water for industrial or commercial purposes.</p>	<ul style="list-style-type: none"> <li>○ The abstraction of groundwater is possible through the sinking of drill holes, although it is intended that water will be sourced from the nearby local authority in Rehoboth and transported in mobile water tanks to the project area and. Should water be intercepted by a drill hole, the necessary abstraction permit should be applied for.</li> </ul>
<p><b>MINING AND QUARRYING ACTIVITIES</b> 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.  3.2 Other forms of mining or extraction of any natural resources whether regulated by law or not 3.3 Resource extraction, manipulation, conservation, and related activities</p>	<ul style="list-style-type: none"> <li>○ The proposed project operates under a licence that permits for the construction of temporal exploration campsites, drill sites and access roads. <ul style="list-style-type: none"> <li>▪ Furthermore, this listed activity, infers the provisions of the Minerals Act (Prospecting and Mining) Act 33 of 1992, under different licenses as basis upon which certain activities qualify for an EIA. Part X of the Minerals Act (1992) defines prospecting/exploration activities under the lawful ownership of an exploration license (EPL). An exploration license excludes any mining activities, but includes activities strictly relating to exploration work. Hence the current project strictly focuses on exploration and not mining.</li> </ul> </li> <li>○ Minerals will be sampled and explored for within EPL 7769.</li> <li>○ The proposed project will explore for dimension stones.</li> </ul>
<p><b>HAZARDOUS SUBSTANCES TREATMENT, HANDLING AND STORAGE</b> 9.1 The manufacturing, storage, handling, or processing of a hazardous substance defined in the Hazardous Substance Ordinance, 1974.</p>	<p>The project may store hydrocarbons within their exploration camp and therefore need to comply with the appropriate storage and handling requirements of the ordinance. If hydrocarbon storage volumes surpass 30 000liters a storage and handling permit is required from the Ministry of Mines and Energy.</p>
<p><b>WASTE MANAGEMENT, TREATMENT, HANDLING, AND DISPOSAL ACTIVITIES</b> 2.1 The construction of waste sites, treatment of</p>	<p>Household waste will be generated during exploration, which shall be collected and removed from the site for re-use, recycling, or final disposal at the Rehoboth municipal dump</p>

LISTED ACTIVITY	EIA SCREENING FINDING
waste and disposal of waste. 2.2 Any activity entailing a scheduled process referred to in the Atmospheric Pollution Prevention Ordinance, 1976. 2.3 The import, processing, use and recycling, temporary storage, transit, or export of waste.	site.  It is envisioned that wastewater will be managed by means of recycling and a temporary treatment system.

### 1.7 TERMINOLOGIES APPLIED IN THIS REPORT

This section provides definitions of key terms to enable the reader to form a technical understanding of the type of work associated with exploration programmes.

or the mineral sought.

- **GEOLOGICAL MAPPING** 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 the subsurface geology. This may be conducted concurrently with the geochemical sampling.
- **GEOCHEMICAL SAMPLING** (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.
  - o **SAMPLING** - Selecting a fractional but representative part of the soil or rock for analysis.
- **GROUND GEOPHYSICAL SURVEYS** may be undertaken to collect data that give an indication of rock properties, particularly at depth. They are also used to map the geological structures of interest to the proponent.
- **DIAMOND CORE DRILLING** entails the use of a diamond-studded drill in order 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 stored temporarily 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.
- **DIMENSION STONE** is a collective term used for various natural stones used for structural or decorative purposes in construction and monumental applications (I, Ashmole, et al., 2008).

## 2 APPROACH TO THE IMPACT ASSESSMENT

### 2.1 PURPOSE OF THE ENVIRONMENTAL IMPACT ASSESSMENT

The aim of this assessment is 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.

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 EIA methodology applied here has been developed using the IFC standards and models (IFC, 2012; 2017), in particular Performance Standard 1: *'Assessment and management of environmental and social risks and impacts'* 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 EIA and EMP (GRN, 2008) as well as the international and national best practice documents to our disposal and over 25 years of combined EIA experience, were also drawn upon in the assessment process.

An impact assessment is a formal process in which the effects of certain types of development on the biophysical, social and economic environments are identified, assessed and reported so that the effects can be taken into account when considering whether to grant development consent or to provide financial support. Final mitigation measures and recommendations are based on the cumulative experience of the consulting team and the client, taking into consideration the potential environmental and social impacts.

The process followed through the basic assessment is illustrated in Figure 3 and detailed further in the following sections.

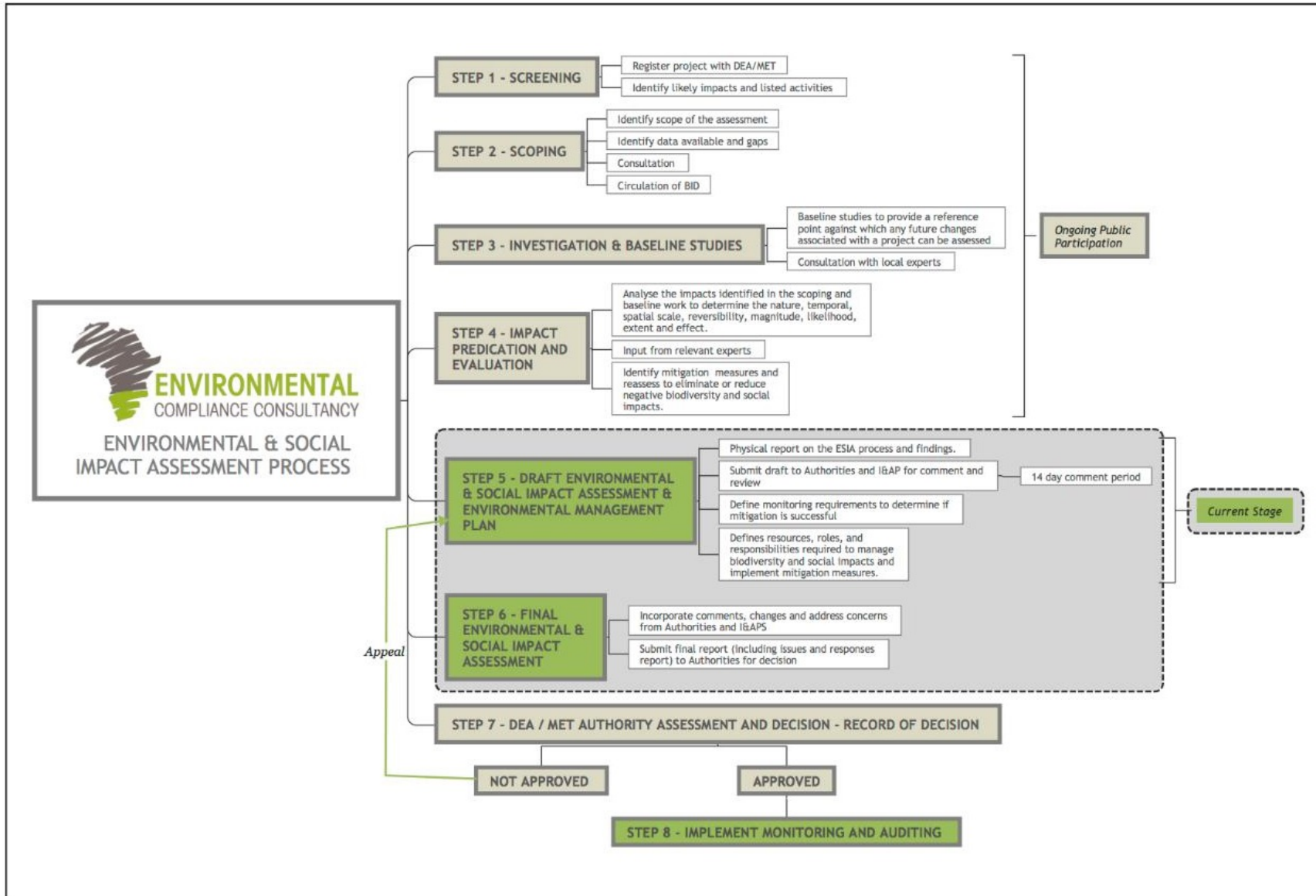


FIGURE 3 - ECC SCOPING PROCESS



## 2.3 METHODOLOGY FOR THE IMPACT ASSESSMENTS

Desktop studies on the national database are undertaken as part of the scoping stage to get information on the current status of the receiving environment. This provides a baseline where changes that occur as a result of the proposed project can be measured. This is verified through site data collection.

The environmental and social topics that may be affected by the proposed project are described in this section. The baseline focuses on receptors, which could be affected by the proposed project.

## 2.4 SCREENING OF THE PROPOSED PROJECT

The first stages of the EIA process are to register the project with the competent authority (completed) and undertake a screening exercise, which was registered on the MEFT online portal referenced (APP-001906). The screening exercise determines whether the proposed project is considered as a listed activity in terms of the Environmental Management Act, No. 7 of 2007 and associated regulations, and if significant impacts may arise. The location, scale and duration of project activities will be considered against the receiving environment.

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

## 2.5 SCOPING OF THE ENVIRONMENTAL ASSESSMENT

The purpose of the scoping stage in the EIA process is to identify the scope of the assessment, undertake a high-level assessment to identify potential impacts, and confirm if further investigation is required to assign the severity of potential significant effects and allocate appropriate mitigation.

This report presents the findings of the scoping phase and high-level assessment and confirms that no further investigation is required.

Dimension stone 'mining' is an invasive form of mineral extraction. Dimension stone mining is usually undertaken under bulk sampling, which is not a standard exploration method. Bulk sampling is therefore not considered part of this assessment. Should the proponent wish to undertake bulk sampling it would require an application for a separate mineral licence and an independent assessment of the related environmental and social impacts be undertaken. Bulk sampling was therefore scoped out of this assessment and not considered further.

## 2.6 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 in order 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:

- Desk-top studies,
- Archaeological field survey,
- Consultation with stakeholders, and
- Engagement with Interested and Affected Parties (I&APs). See Appendix C.

## 2.7 ESIA CONSULTATION

Public participation and consultation are a requirement in terms of Section 21 of the Environmental Management Act, No. 7 of 2007 and its regulations for a project that requires an environmental clearance certificate. Consultation is a compulsory and critical component in the EIA process, aimed at 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 EIA and timeframes involved, and
- Establish a platform for ongoing consultation.

### 2.7.1 INTERESTED AND AFFECTED PARTIES

All relevant authoritative bodies were identified and listed as I&APs, as well as organisations and individuals with an implied interest. Other I&APs were identified through invitations such as the newspaper advertisements and site notices. To all of these stakeholders a formal letter was sent. The letter and the list of registered I&APs are provided in Appendix C.

### 2.7.2 NON-TECHNICAL SUMMARY

The Non-Technical Summary (NTS) presents a high-level description of the proposed project; sets out the EIA 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 registered I&APs and the NTS can be found in Appendix B.

### 2.7.3 NEWSPAPER ADVERTISEMENTS

Notices regarding the proposed project and associated activities were circulated in two newspapers namely the 'Namibian, Republikein, Sun, and Allgemeine Zeitung' on 21<sup>st</sup> and 28<sup>th</sup> September 2020 (see Appendix C). The purpose of this was to commence the consultation process by informing the public about the project and providing the necessary communication channels to I&APs to register any comments and interest raised for the project.

### 2.7.4 SITE NOTICES

A site notice ensures neighbouring properties and stakeholders are made aware of the proposed project. The notice was set up at the boundary of the EPL as illustrated in Appendix C.

#### 2.7.5 CONSULTATION FEEDBACK

The I&APs were encouraged to provide constructive input during the consultation periods. Matters of concern raised during the initial consultations (Adverts published and the availability of the NTS) are presented in table 3 below.

The public review of the scoping report and the EMP was set between 06-20 November 2020. ECC contacted the Namibian Emerging Commercial Farmers Union (NECFU) who graciously accepted to distribute the draft assessment reports to all its Rehoboth based members for comments on the 05<sup>th</sup> of November 2020 (Appendix C). However, no issues or matters of concern were raised during the review period of the scoping report and EMP.

**TABLE 3: SUMMARY OF ISSUES RAISED FROM PUBLIC CONSULTATION**

NO.	CHAPTER	SECTION	I&AP/ STAKEHOLDER COMMENT RECEIVED	STAKEHOLDER DETAILS	RESPONSE/ CLARIFICATION
1.	Chapter 4 Chapter 7	5.8.1 Table 7	<p>Dear Ms. Amwele</p> <p>Kindly find the attached registration form from Rehoboth Town Council Main concern area is:</p> <ul style="list-style-type: none"> <li>- Removal of protected vegetation</li> <li>- Disturbing the natural state of the ground</li> </ul> <p>This is because the Rehoboth Townland No.302 is demarcated into grazing camps, therefore natural state of the ground as well as the vegetation needs to be maintained as much as possible to minimize the change the chances of loss of biodiversity and shift in ecosystems.</p>	<p>Mr. Andrew Kanime (CEO Rehoboth town Council)</p> <p>04.10.2020</p>	<p>Response from ECC on 05.10.2020.</p> <p>Standard acknowledgement email response provided to Mr Kanime.</p>
2	Chapter 4 Chapter 5	4.3 5.6	<p>More details needed for mining activity water security?</p> <p>and much more points</p>	<p>Werner &amp; Renate Bader (Farm Wiese 62) (Agriculture, hunting and tourism farm)</p> <p>Springbokstreet 12 Suiderhof Windhoek 9000 Namibia</p> <p>12.10.2020</p>	<p>Response from ECC on 13.10.2020.</p> <p>Standard acknowledgement email response provided to Werner and Renate Bader.</p>

## 2.8 DRAFT ESIA AND EMP

This report and the EMP for the project's environmental clearance includes an assessment of the biophysical and social environment, which satisfies the requirements of Step 5 (Figure 3).

The ESIA report documents the findings of the assessment process, provides stakeholders with the opportunity to comment and 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 3). These impacts are discussed in Chapter 7.

This EIA report was open to stakeholders and I&APs for consultation for a period of 14 days (06/11/2020 – 20/11/2020), exceeding the mandatory requirement of 7 days as set out in the Environmental Management Act, No. 36 of 2002 and its regulations, including the Environmental Impact Assessment Regulations, No. 30 of 2012. The aim of this stage was to ensure all stakeholders and I&APs have the opportunity to provide final comments on the assessment process and findings and register their concerns. However, none of the I&APs consulted throughout this process raised any issues or concerns that could influence the decision-making process.

## 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). All I&APs were informed via email. The ESIA report and appendices were formally submitted to the Office of the Environmental Commissioner, DEA as part of the application to 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 the relevance to the project.

#### 3.1 NATIONAL LEGISLATION

TABLE 4 - LEGAL COMPLIANCE

NATIONAL REGULATORY REGIME	SUMMARY	APPLICABILITY TO THE PROJECT
<b>Constitution of the Republic of Namibia of 1990</b>	<p>The Constitution of the Republic of Namibia, 1990 clearly defines the country’s position in relation to 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 engage the local community for the proposed project by providing local jobs as well as, exploring ways of finding rich recourses that could contribute to the mining sector in Namibia.</p>
<b>Minerals (Prospecting and Mining) Act, No. 33 of 1992</b>	<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 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</p>	<p>The proposed activity is prospecting for minerals; hence it requires an EIA 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 compensation have 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>

NATIONAL REGULATORY REGIME	SUMMARY	APPLICABILITY TO THE PROJECT
	<p>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 entered into an agreement in writing with the owner of such land containing terms and conditions relating to the payment of compensation, or the owner of such land has in writing waived any right to such compensation and has submitted a copy of such agreement or waiver to the Commissioner.</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.</p> <p>The Act requires certain activities to obtain an environmental clearance certificate prior to 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 the EIA process.</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>
<p><b>Water Act, No. 54 of 1956</b></p>	<p>Although the Water Resources Management Act, No 11 of 2013 has been billed, but 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 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 the 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</p>

NATIONAL REGULATORY REGIME	SUMMARY	APPLICABILITY TO THE PROJECT
		and abstraction of water from underground sources, an application should be submitted to the authorities.
<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 7769 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 2005</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 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.	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 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>	The Act provides provision of the protection and conservation of places and objects with heritage significance. 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	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. 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

**TABLE 5 - 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	The planned project shall meet the objectives of Vision 2030 and shall



NATIONAL REGULATORY REGIME	SUMMARY	APPLICABILITY TO THE PROJECT
	<p>objectives. It sets out eight themes to realise the country's long-term vision.</p> <p>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.</p>	<p>contribute to the overall development of the country through continued employment opportunities.</p>
<p><b>The Fifth National Development Plan (NDP5)</b></p>	<p>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.</p>	<p>The planned project supports meeting the objectives of NDP5 by creating opportunities for employment to the nearby community and the Namibian nation.</p>
<p><b>Minerals Policy</b></p>	<p>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 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>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 Namibia. The proposed project conforms to the policy, which has been considered through the EIA 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>

### 3.2 PERMITS AND LICENCES

#### 3.2.1 EXCLUSIVE PROSPECTING LICENCE

EPL 7769 was granted on the 02nd of December 2019 and expires on the 01st of December 2022. 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 prior to 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 EIA 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 licenses that may be relevant to the proposed project are outlined in Table 6.

**TABLE 6 - PERMITS AND LICENCES REQUIREMENTS**

PERMIT AND LICENCES	RELEVANT AUTHORITY	VALIDITY/DURATION
1. Water abstraction permits	Ministry of Agriculture, Water and Land Reform	Permit dependent
2. Exclusive prospecting licence	Ministry of Mines and Energy - Windhoek	three years
3. Notice of intention to drill	Ministry of Mines and Energy - Windhoek	To be submitted prior to drilling
4. Consumer installation certificate for fuel storage	Ministry of Mines and Energy	Permit dependent
5. Bulk sampling licence (Not applicable to the current exploration project)	Ministry of Mines and Energy – Windhoek	Permit dependent

## 4 PROJECT DESCRIPTION

### 4.1 NEED FOR THE PROPOSED PROJECT

The mining sector in Namibia significantly contributes to the country's Gross Domestic Product (GDP), government tax receipts and 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 this vision and has the potential to support skilled employment in local communities of the Hardap region. In the event that exploration activities are successful, and a resource can be defined, with commercially viable mineral concentrations, exploration operations can potentially transcend into mining operations, which can result in socio-economic development in the area. Should this materialise a separate EIA must be undertaken for mining activities.

### 4.2 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.

In general exploration activities range from extremely low impact exploration such as geochemical sampling and mapping to more invasive methods such as extensive close-spaced drilling methods and potentially trenching. The methods used shall be determined, based on the exploration programme, which is further designed once more information and data is obtained. At this stage of the project, the exploration activities are yet to be finalised and therefore a range of options remain open.

Once the exploration programme is further defined, the most suitable options and methods shall be identified to ensure the impacts on the environment and society are minimised.

#### 4.2.1 NO-GO ALTERNATIVE

Should exploration activities within EPL 7769 not take place, the anticipated environmental impacts from exploration activities would not occur, however, the social and economic benefits associated with 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.

### 4.3 PROPOSED EXPLORATION ACTIVITIES

The proponent intends to explore for economically viable granite resources within EPL 7769. Granite outcrops are easily spotted on the EPL as exposed outcrops of a moderate height. If suitable outcrops are identified they will serve as the starting point for exploration activities.

Exploration activities may include some or all of the following methods: remote sensing, geological mapping, geochemical sampling, geophysical surveys and diamond core drilling. Details of these methods are described below. Ground-based exploration techniques are inevitable in the search for dimension stones. Data obtained by geological mapping are also used to refine selected target areas in the focus area delineated.

Existing tracks will be used as far as reasonably practical. In the event that new tracks are required they will be developed by hand or through the use of a bulldozer, terrain dependent and with full cognisance of sustainable landscape alteration and rehabilitation once work is completed. Vegetation clearance may be required for drill access tracks, drill pads and for the geophysical survey team and drillers' temporary camps and trenching. This may also be carried out by hand or a bulldozer depending on the bush thickness and the required clearance distances.

- **DESKTOP STUDIES** analyse satellite imagery and aerial photographs to identify a broad focus area.
- **GEOCHEMICAL SAMPLING (rock sampling)** is a non-invasive technique to determine the existence and extent of mineralization and a potential resource. Geochemical data is 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.
- **GEOLOGICAL MAPPING** 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 the subsurface geology. This will be conducted concurrently with the geochemical sampling.
- **GEOPHYSICAL GROUND SURVEYS** will be undertaken to collect data that give an indication of rock properties, particularly at depth.
- **DIAMOND CORE DRILLING** entails the use of a diamond-studded drill in order to obtain core samples. Bio-degradable drill additives will be used during diamond core drilling. Soil, rock and drill core samples will be stored at the site office. Exploration activities are usually undertaken in phases, with periods of no field activity between them, which allows for awaiting analytical results, and the integration and interpretation of data to decide on the next phase of exploration. Diamond drilling may occur and the number of holes and aerial extent within the focus area will be determined by the geochemical and geophysical anomalies obtained.

Vegetation removal may be limited to clearing for access tracks and site camps. Should additional areas be cleared for exploration activities the Forest Act, No. 12 of 2001 and its regulations will be complied with (the relevant forestry permits will be applied for if required). Whenever track and drill pad areas are cleared the root system must be left intact to allow revegetation of the area. Any established or large trees or specially protected plant species shall not be removed, and access

tracks will be routed to avoid these wherever possible and permits will be obtained as necessary. Impacts and effects of the geochemical surveys and drilling programmes are likely to be low.

#### 4.3.1 EXPLORATION SCHEDULE

The exploration activities are executed and managed from the Jin Peng exploration office in Windhoek. Field exploration activities, using the techniques as discussed above, are anticipated to be carried out over the licence validity period of three years if granted. Geological mapping studies and the planning phase for the prospecting programme will require between 2-6 months.

The duration of drilling is variable, and usually depends on the information that is gained from initial exploration activities.

Applications for the environmental clearance certificate, along with all required permits will be submitted during this period should a second renewal of the EPL be required.

#### 4.3.2 FOCUS AREA UNDER CONSIDERATION

The proposed target area is indicated with a white circle in the images below.

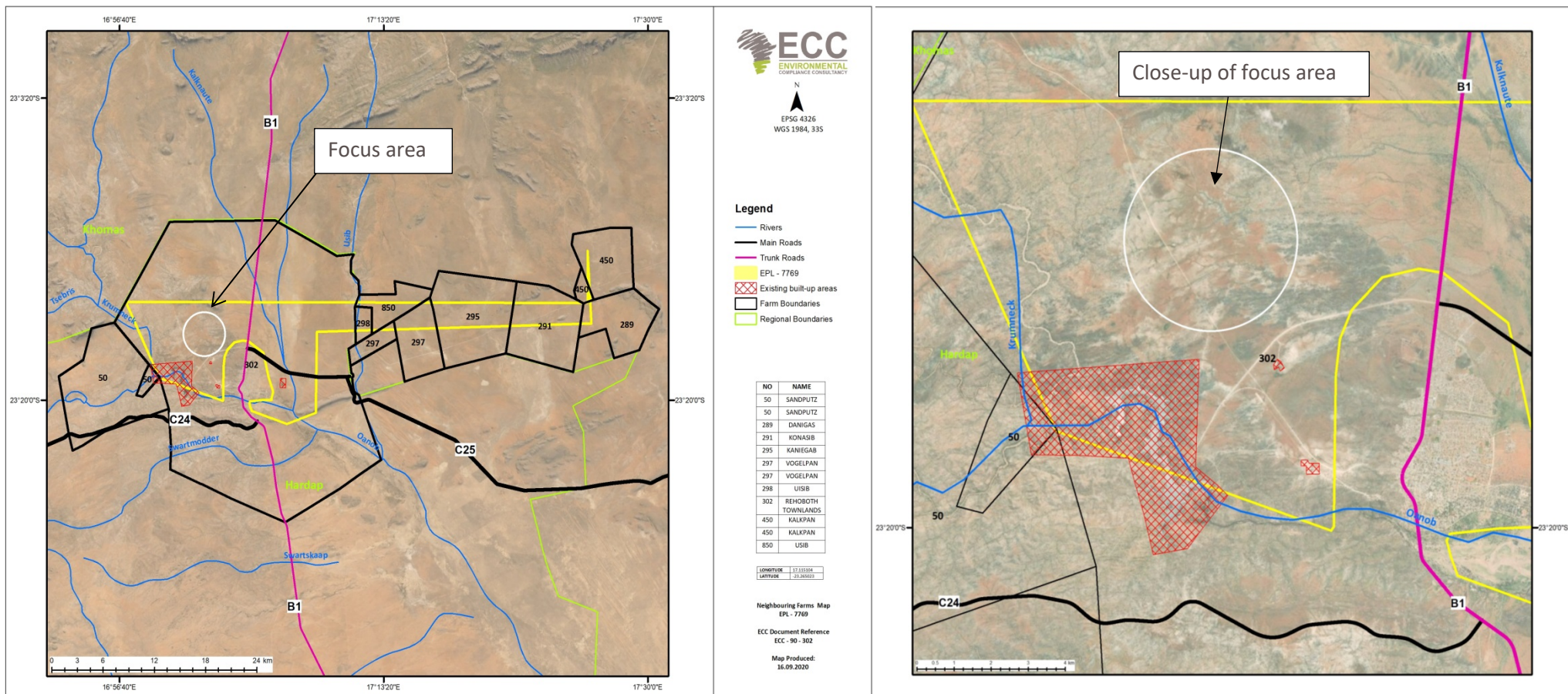


FIGURE 4 IDENTIFICATION OF THE FOCUS AREA

#### 4.3.3 EQUIPMENT AND MATERIALS

During the exploration phase double and single cab vehicles will be used to transport workers to, from and around the site. The contractor's camp infrastructure may include tents and chemical toilets for the workers housing units to be temporarily set up on the site. A drill rig (track-mounted) will be brought to site for core drilling, along with a water truck and supporting equipment (rods truck, water and potentially fuel bowsers, and RC compressor) for use during drilling. Drilling equipment, diesel fuel and consumables shall be brought to the exploration site to support exploration activities as and when needed.

Additional equipment requirements are:

- An excavator;
- A front end loader;
- One bakkie (pick-up);
- A 10-ton truck,
- Disk saw; and a
- Rock cutter

#### 4.3.4 WORKERS AND ACCOMMODATION

Ten possible job opportunities are foreseen for the duration of onsite exploration and workers will be sourced from the nearest town such as Rehoboth for available positions. The workers will be deployed at various stages of exploration including for soil sampling, geological mapping, and geophysical surveys and drilling operations.

It is envisaged that for most of the exploration programme workers will reside in temporary wood and steel-constructed panel houses built by the proponent and positioned on stilts to avoid foundation excavations.

#### 4.3.5 RESOURCE USE AND WASTE MANAGEMENT

Water will be required for various uses including human consumption during the planned exploration activities and to support any of the exploration activities such as diamond drilling. The water will most likely be sourced from the local municipality via a prepaid system and carted to site with mobile water carts owned by the proponent.

Waste produced on site will include sewerage and solid waste such as packaging material. Wastewater (e.g., water with drill additives) used during drilling is contained in lined sumps, recycled and allowed to evaporate after use. The drill-sludge will be disposed of at the Rehoboth municipal waste disposal site. In case of the provision of mobile toilets on site, sewerage generated shall be managed by the toilet contractor. Wastewater that is discharged into the environment must comply with wastewater discharge specifications on the relevant permit.

#### 4.3.6 FUEL

16000 litres of fuel shall be kept and used on site. Effective precautions against spills which can lead to soil contamination are contained in the EMP.

#### 4.3.7 SITE REHABILITATION

Once exploration activities are completed the disturbed areas shall be rehabilitated to a condition as close to the original state as possible in a collaborative effort between all parties involved. Rehabilitation shall be determined during the exploration programme and shall be agreed with the landowners and authorities as implied by legislation (discussed in Section 3). Before and after photographs will be used to monitor rehabilitation success.



## 5 ENVIRONMENTAL AND SOCIAL BASELINE

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 as part of the scoping stage to get information of the current status of the receiving environment. This provides a baseline where changes that occur as a result of the proposed project can be measured. This section also incorporates consultation and public participation of the proposed project.

### 5.1 THE PROJECT SITE AND LOCATION

EPL 7769 was granted by the MME on the 02nd of December 2019 for base and rare metals, dimension stones, industrial minerals, and precious metals. The EPL is located in the Hardap Region and extended into the Khomas Region. The region has a trunk road, which links the region to both the south and the north of the country. Rehoboth is the nearest town to the proposed project area.

### 5.2 SITE AND SURROUNDING ENVIRONMENT

EPL 7769 is located within the Rehoboth townland which is located at the intersection of the B1 and the C25 roads. The B1 connects Rehoboth with Mariental to the south and Windhoek to the north. A number of district roads crisscross the Hardap Region, while a network of farm roads and tracks provide access to the EPL (Figure 5).

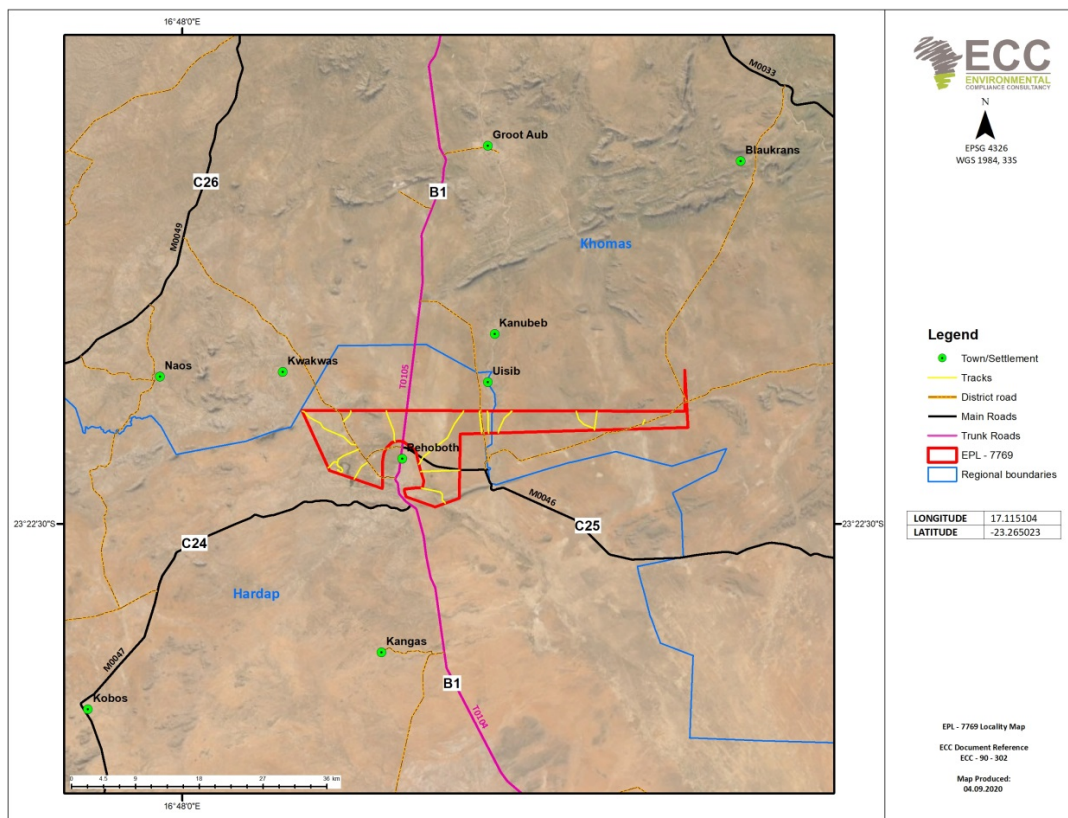


FIGURE 5 - ACCESSIBILITY MAP OF EPL 7769

Rehoboth is a town in central Namibia, north of the Tropic of Capricorn, with approximately 40 000 inhabitants (this includes the immediate surroundings, rural community). Located 87 km south of the Namibian capital Windhoek, Rehoboth lays on a high elevation plateau with several natural hot-water springs located within the town. Rehoboth is divided into eight neighbourhoods, called blocks. The oldest parts of the town are blocks A and C, of which block B contains most public services and shops. Rehoboth is governed by a town council; its economy relies on small businesses and many surrounding game/cattle farms. The Region has tourist potential, considering it provides access to the Naukluft Park and Sossus vlei via the C14 gravel road. Rehoboth is seen as an important growth point in the Hardap region, as such it can make an important contribution to the overall development of the region (Rehoboth Town Profile, 2005).

EPL 7769 overlaps with 15 commercial farms (Figure 6). The farms have well-kept boundary fences with tracks, which can be used for access during exploration. Pro-active communication between the proponent, farmers and neighbouring property owners need to be maintained when planning to access the EPL and to keep them updated on exploration activities as they occur.

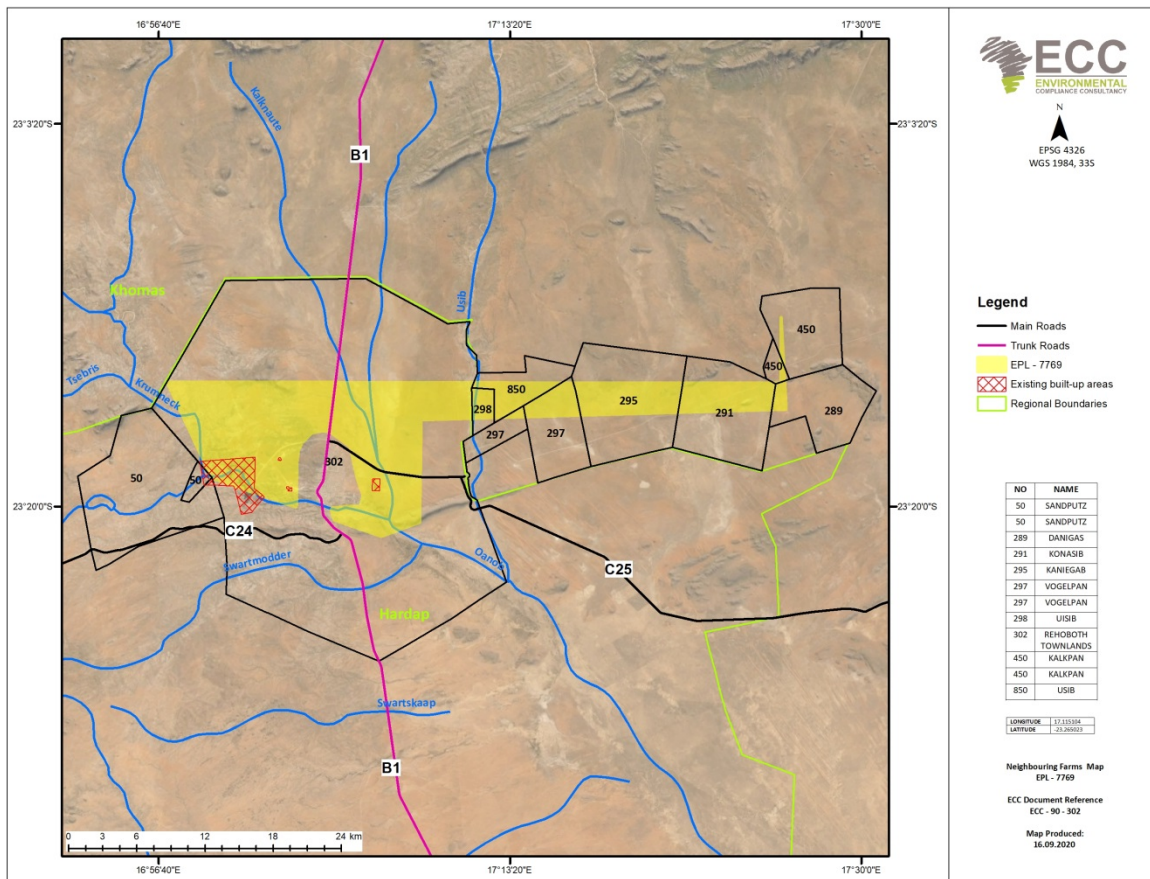


FIGURE 6 - LOCATION OF EPL 7769 RELATIVE TO NEIGHBOURING FARMS

### 5.3 CLIMATE

EPL 7769 is located in a part of Namibia which receives between 250 and 300 mm of rain per year, with a variation coefficient of 40 - 50%. Rainfall events are limited to the summer months, mainly between January and April, in the form of thunderstorms often associated with heavy downpours. Potential evaporation is between 2,240 and 2,380 mm per year, meaning an average water deficit of between 1,900 and 2,100 mm per year can be expected. Relative humidity is low, rarely more than 20% in winter but may reach 85% in summer before or after thunderstorm build-up. Maximum temperatures average around 32 - 34°C, mainly recorded during the afternoons between November and January, while minimum temperatures are around 2 - 4°C and are normally recorded during nights in June and July. Deviations from these averages are common, with the highest temperatures reaching 38 - 40°C and the lowest temperatures below 0°C. Frost may occur during the winter months (Mendelsohn et al., 2002).

Due to the rhythm of the air pressure systems over the interior of the country, the wind patterns over the interior remain fairly predictable. Prevailing wind over EPL 7769 is expected to be from the east and northeast, with occasional airflow from the southeast and southwest. Wind speed is expected to be low with more than two-thirds of the time lower than 2 m/s and an expected frequency of calms of 35%. The stronger air movements during the afternoons and evenings are the result of the ground being heated more in some places than others. During the winter months wind speed is slightly higher (Mendelsohn, et al., 2002).

### 5.4 GEOLOGY AND GEOMORPHOLOGY

Formations of the Damara Supergroup, between 850 and 600 million years old, cover a large part of the central and western parts of Namibia north of the Tropic of Capricorn. South of the Damara Supergroup is the Namaqua Metamorphic Complex (between 1,400 and 1,050 million years old), the Nama Group (600 – 543 million years old) and the Karoo Supergroup (300 – 180 million years old). To the east the much younger Kalahari deposits (<70 million years old) dominate, overlaying most of the older formations (Mendelsohn et al., 2002). The predominance of flat-lying Kalahari sediments on the surface means that there is almost no geological variation over this vast area (that also covers the largest part of the central interior of southern Africa) and not many exposures of rocks occur.

EPL 7769 is located on a transition zone between the Namaqua Metamorphic Complex and the Kalahari Group. The eastern part of the EPL is covered by Kalahari sediments (calcretes and sand) while its western parts are covered by Gamsberg granites (the target mineral sought) of the Namaqua Metamorphic Complex and rocks associated with the Rehoboth Group, which is older than 1,400 million years. Further northwest these two formations are bordered by the much younger Hakos-sandstones and Witvlei-limestones and sandstones of the Damara Supergroup (Figure 7). To the east and the south, the vast Kalahari sediments, predominantly sand, cover all other formations.

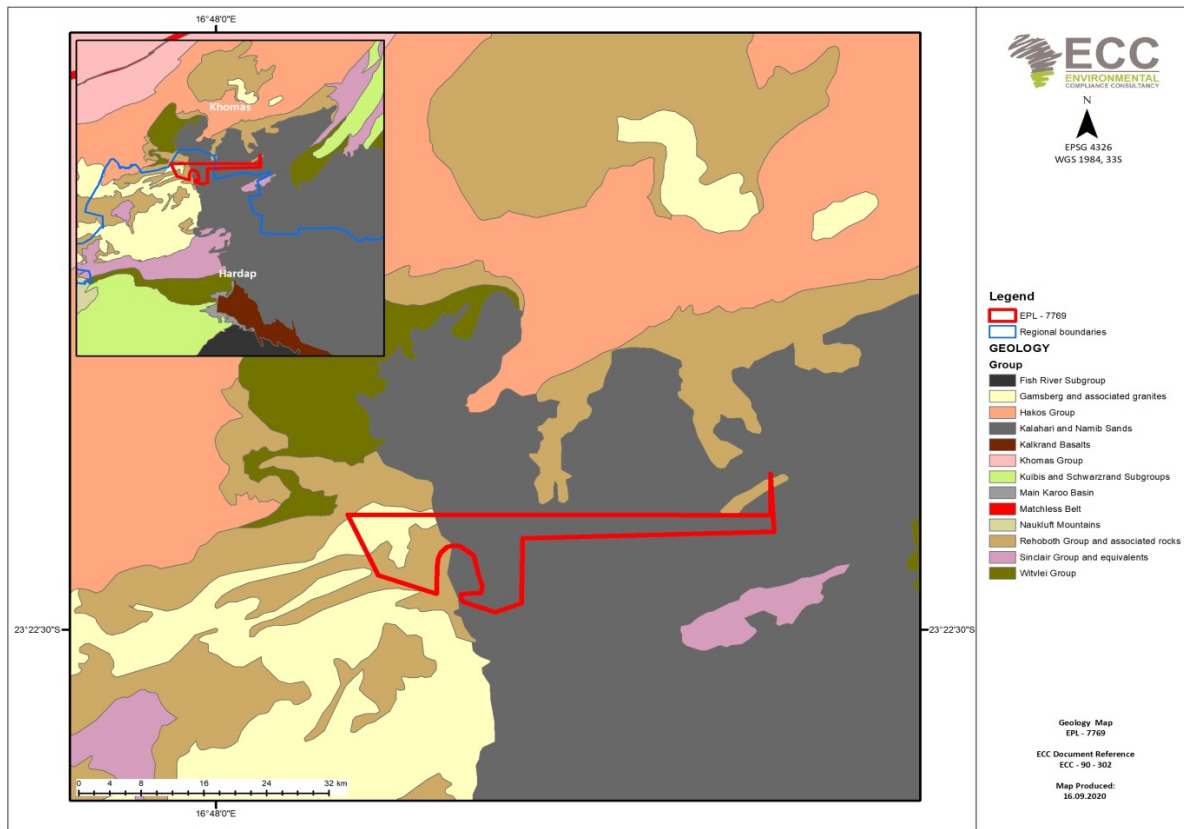
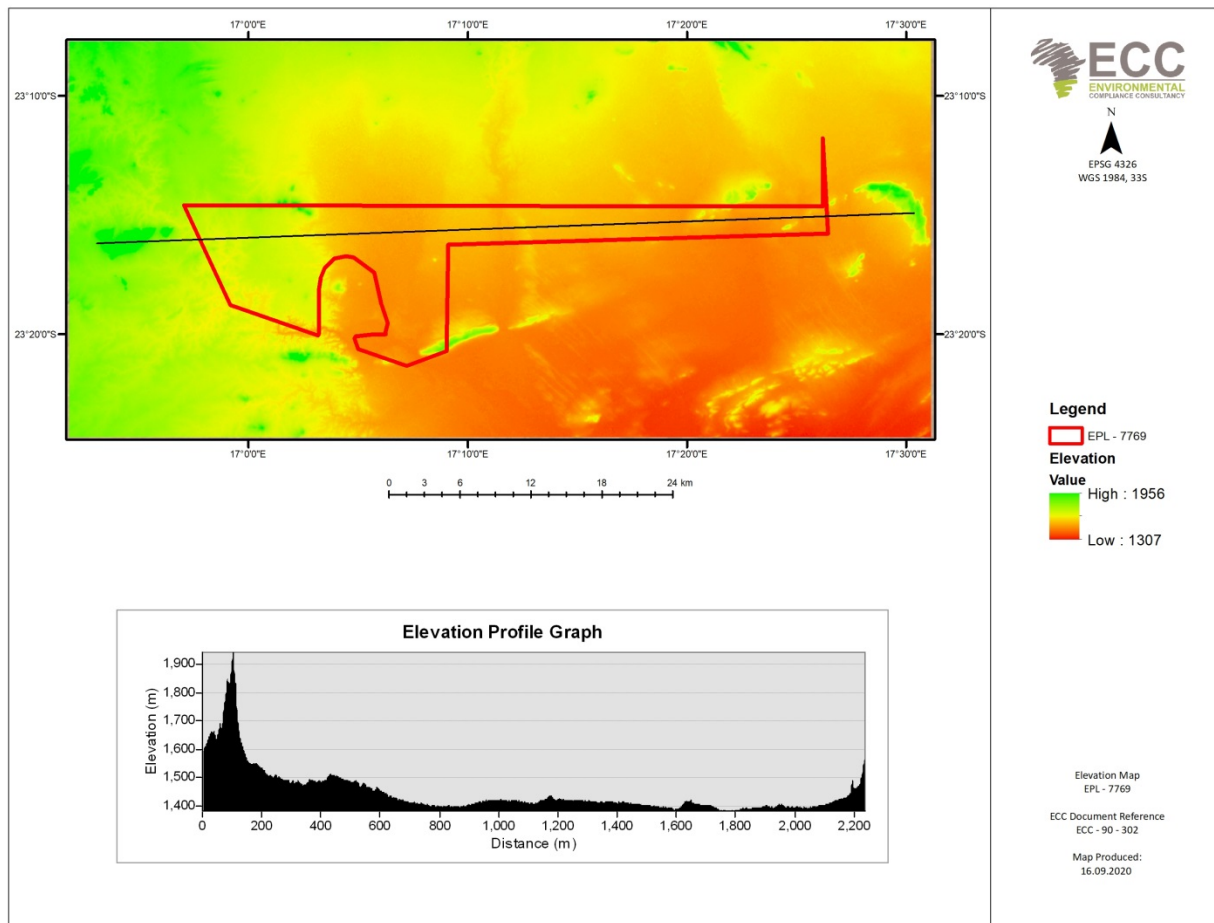


FIGURE 7 - EPL 7769 REGIONAL AND LOCAL GEOLOGY

## 5.5 TOPOGRAPHY AND SOIL

Over the eastern parts of the EPL the topography is flat, varying between 1,956 and 1,307 m above mean sea level. This monotonous flat landscape is steeply elevated towards the Gamsberg granites and the mountains of the Rehoboth Group, exceeding 1,800 m above mean sea level in the west. The highlands are rugged, heavily weathered, with jagged edges. Over the largest part of EPL 7769, however, the surface geology appears to be uniform, and the entire landscape has a gentle gradient dipping towards the south and east (Figure 8). The general landscape to the south is also flatter, as the Kalahari landscape dominates. Linear dunes become also more prominent towards the southeast, generally oriented in a NW-SE direction. These dunes are permanent features and do not migrate like dunes of the Namib Desert. The dunes are also stabilized by permanent vegetation.



**FIGURE 8 - ELEVATION PROFILE ALONG EPL 7769**

The western parts of EPL 7769 are covered by rocky outcrops associated with leptosols (Figure 9). These soils are coarse-textured, typically associated with actively eroding landscapes, especially in undulating terrains. Leptosols form thin layers, are shallow (not exceeding 50 cm) and are underlain by continuous hard rock. The soils often contain gravel and are calcareous in many cases. Their water-holding capacity is low, and a sparse vegetation cover associated with these soils is the reason for a low organic content. Overall, these soils are susceptible to erosion (Mendelsohn, et al., 2002).

The eastern part of the EPL is covered with regosols (Figure 9). These soils are medium- or fine-textured soils, formed as accumulated sediments from recently and actively eroded landscapes. Regosols often form thin layers lying directly above the rock surfaces from which they formed. Soil depth can exceed 500 mm and these soils contain less coarse material than leptosols. Like leptosols, regosols are susceptible to erosion (Mendelsohn, et al., 2002).

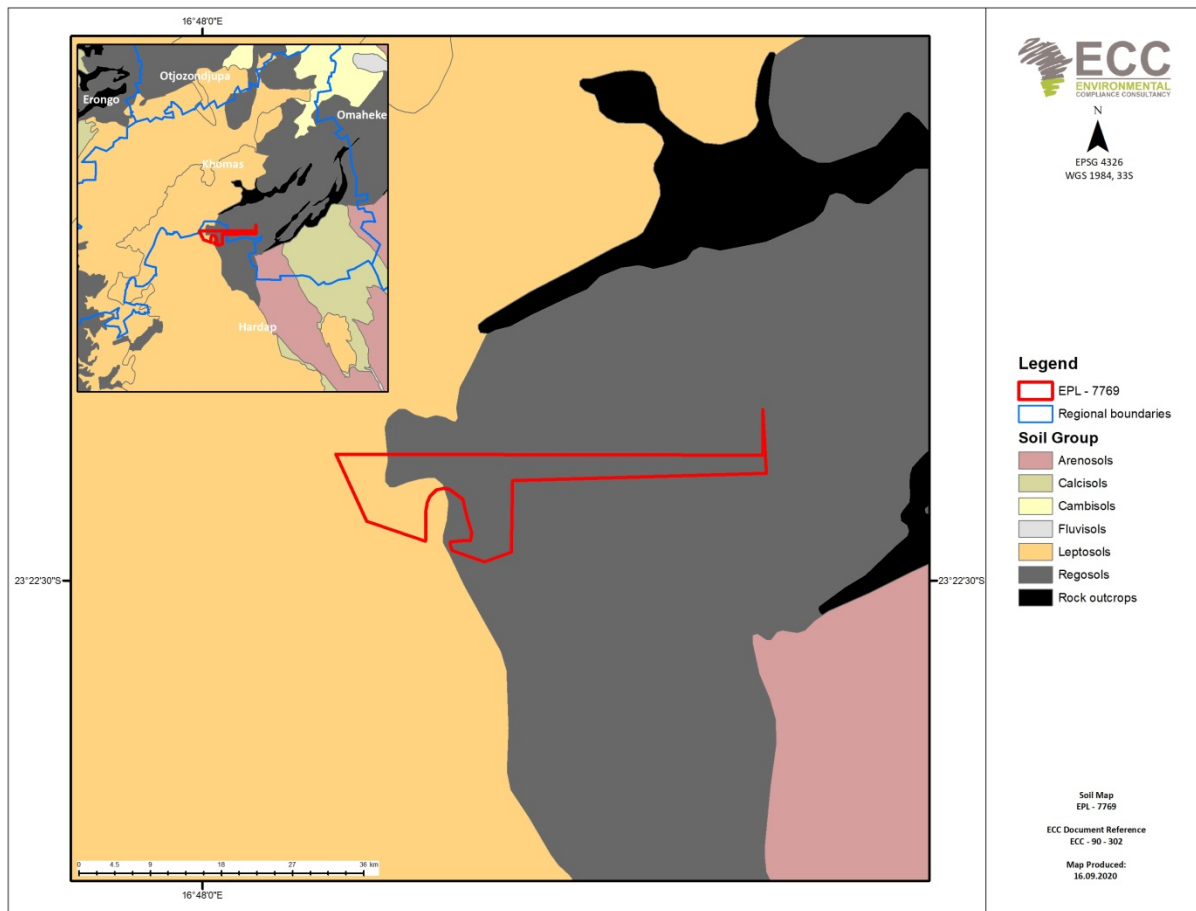


FIGURE 9 - EPL 7769 REGIONAL AND LOCAL SOIL MAP

## 5.6 HYDROLOGY

Surface water flow is in a southern direction, following the general landscape gradient. The EPL is located within the basins of the Oanob River, which originates west and northwest from Rehoboth. This river is also impounded 5 km west of Rehoboth, and the Oanob Dam provides the town of water. East of Rehoboth the Kalknaute and Usib Rivers join the Oanob, which then turns into a more southeast direction. The Oanob River and all its tributaries are ephemeral, i.e., they only contain water for brief periods shortly after sufficient run-off is received in their headwaters as a result of downpours. The Oanob River is endorheic, i.e., it ends in the interior and does not drain into an ocean or into another river system. Runoff from the river dissipates in an area just south of the Tropic of Capricorn between Tsumis and Uhlenhorst, southwest of the EPL.

EPL 7769 in its entirety is located in the South-eastern Kalahari Groundwater Basin (Figure 10). Groundwater is of a low to moderate yield potential over the largest part of the EPL. The general direction of the groundwater flow is southeast and the groundwater potential increases from moderate to high in the same direction (Christelis and Struckmeier, 2001).

On the farmland located within and nearby EPL 7769 drinking water for humans and animals is obtained from borehole abstraction. Recorded boreholes of relevance to EPL 7769 are indicated in Figure 10.

Should the project require the drilling and abstraction of water from an additional borehole, an application must be submitted to the authorities.

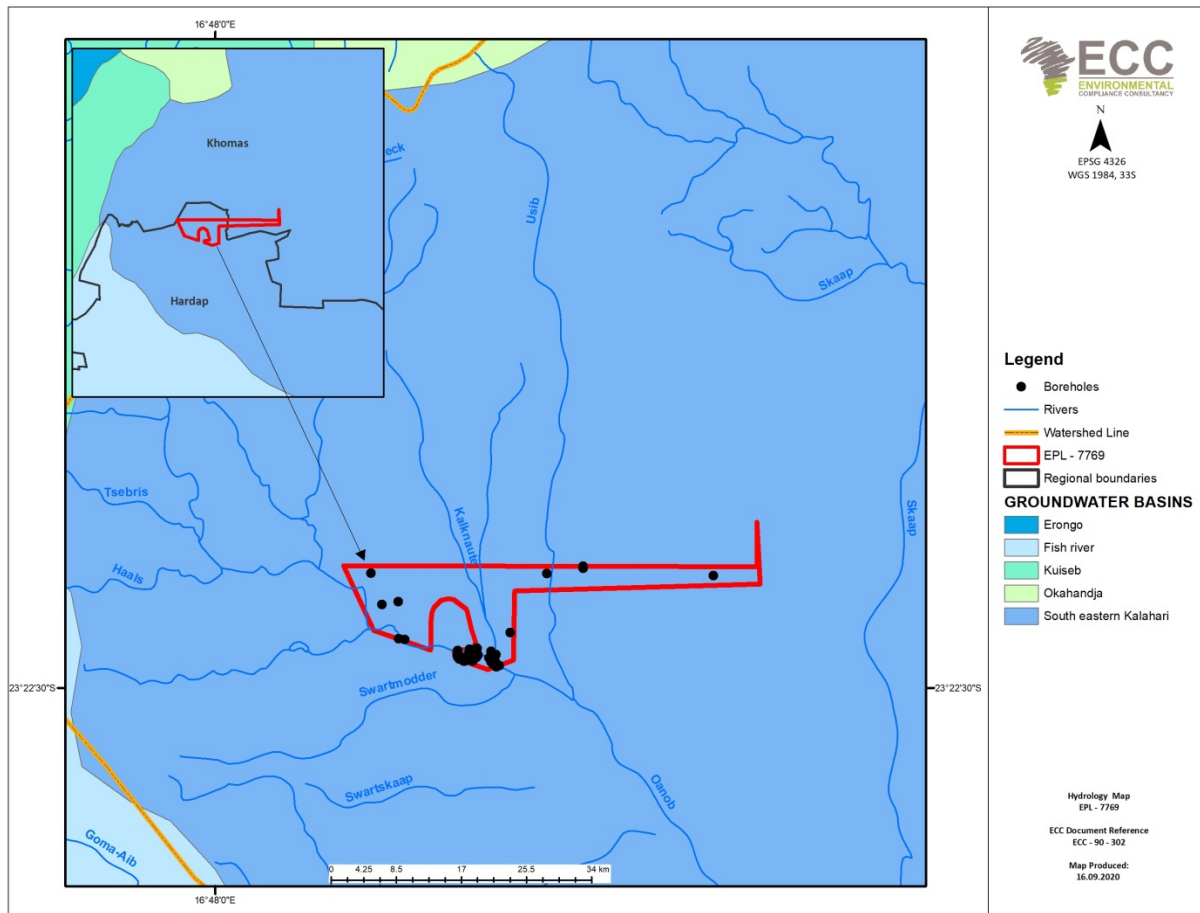


FIGURE 10 - HYDROLOGY MAP OF THE EPL 7769

## 5.7 BIODIVERSITY

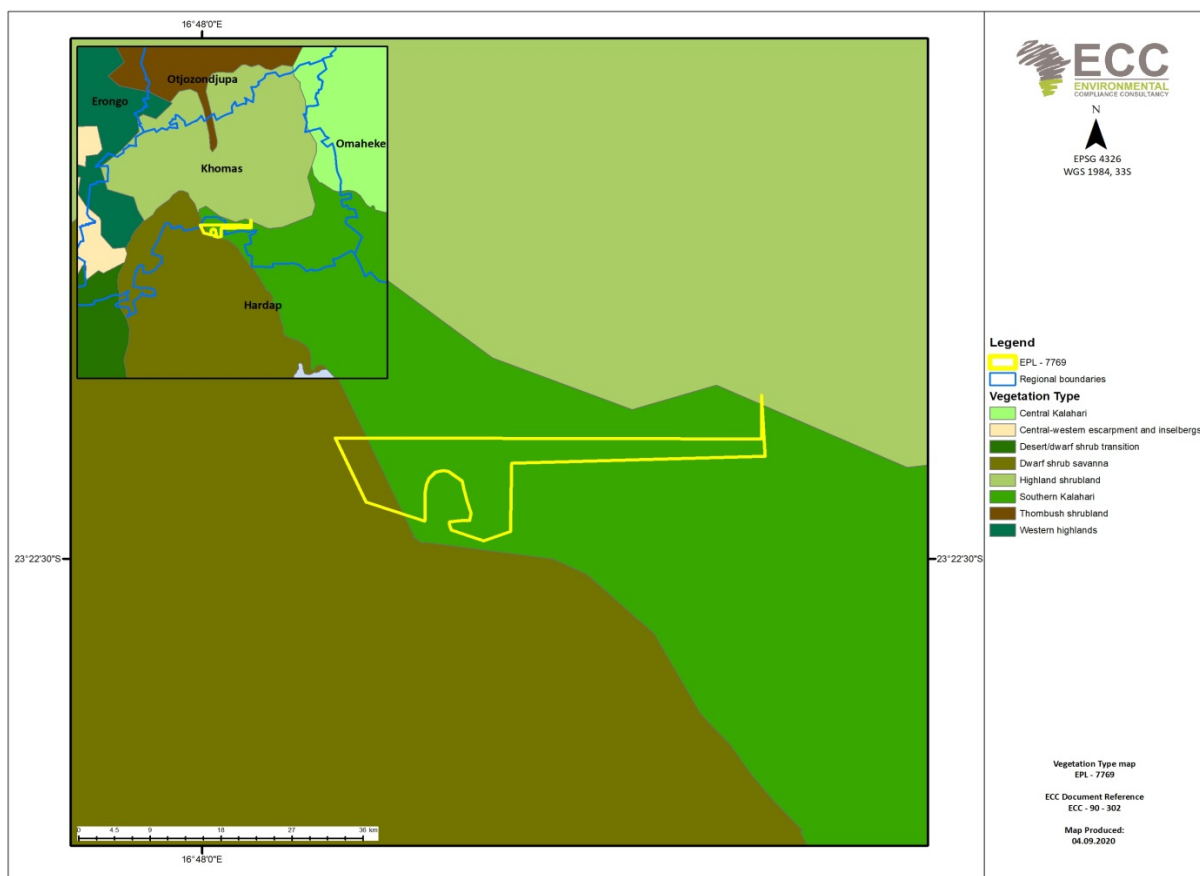
### 5.7.1 VEGETATION

The largest part of EPL 7769 is covered with the southern Kalahari vegetation type of the Acacia tree-and-shrub savanna sub-biome. Only the furthest western part is covered with the Dwarf shrub savanna vegetation type of the Nama Karoo sub-biome (Figure 11). Where the soils are shallower and the landscape hillier, plant growth tends to be shrubby. Eastwards, where the soils become deeper and the landscape flattens, vegetation is characterized by large, open expanses of grass dotted by small trees and bushes (Mendelsohn et al., 2002). Most of the woody vegetation vary between 1 and 2m in height. Along the dry rivers, vegetation is slightly denser, and the trees are of a higher length as well. As a result, the linear belts associated with the ephemeral rivers form a stark contrast with the adjacent vegetation. South of Rehoboth the Oanob River sustains a dense stand of Camelthorn trees, for example.

The most important environmental variable affecting the vegetation in this part of the country is rain and to a lesser extent frost, but micro-habitat conditions and rangeland management practices

determine bush density and grass composition. Grazing resources are made up of a wide variety of grass species, which vary widely in palatability and abundance. Bush encroachment is noticeable, mainly on farmland north of Rehoboth. Exposed to continuous periods of selective grazing by livestock many of these farms are marked by densification of bush and a decreased carrying capacity.

Plant diversity in the west is high, estimated between 400 and 499 species, mainly as a direct result of the higher elevations. Over the eastern parts of the EPL the estimate plant diversity range drops to 150 – 299 species. Plant endemism is also expected to be lower to the east, (Mendelsohn et al., 2002). Exploration activities are not likely to extend onto the eastern parts of the EPL. Local differentiation as a result of topographical variance and availability of water is possible though. As a rule of thumb, diversity increases over rocky, elevated areas and along drainage lines which merits a cautious approach to exploration activities in these landscapes.



**FIGURE 11 - EPL 7769 REGIONAL AND LOCAL VEGETATION MAP**

5.7.2 FAUNA SPECIES

Overall terrestrial biodiversity where EPL 7769 is located ranges from medium to low. As endemism trends in Namibia show a clear decline to the east, the number of endemic fauna species possible in EPL 7769 is expected to be low. The number of mammal species ranges between 61 and 75, the number of bird species is between 171 and 200. Furthermore can 61 – 70 reptile species, 8 – 11 frog species and 16 – 17 scorpion species be expected (Mendelsohn et al., 2002). On a local scale it is expected that diversity increases with the increase in habitats, which is closely coupled to shelter, food and water



availability and migration routes. Elevation and water availability play a prominent role in this regard and is directly related to the increase in terrestrial diversity towards the west. The linear belts of higher and denser vegetation along drainage lines play an important role in the migration patterns of mobile organisms, in addition.

The EPL is entirely covered with land used for extensive agriculture. Predators are common and to protect their livestock, farmers are required to manage predators such as jackals, cheetahs, leopards and caracals.

#### 5.7.3 SOCIO-ECONOMIC ENVIRONMENT

The largest part of EPL 7769 is located within the Hardap region, with the eastern part of the EPL jutting into the Khomas region.

The Khomas region is the central region of Namibia and is named after the Khomas hochland, the prominent highland that surrounds Namibia's capital. In the west and northwest, the region is bordered by the Erongo region, by the Otjozondjupa region to the northeast, the Omaheke region to the east and the Hardap region to the south. Although the Khomas region only occupies 4.5% of the land area of Namibia, it accommodated the largest percentage (18%) of the national population total in 2016 (NSA, 2017).

Three times the size of the Khomas region, the Hardap region stretches from the Atlantic Ocean in the west to the border with Botswana and South Africa in the east. In the north it borders the Erongo, Khomas and Omaheke regions and in the south the Karas region. The region is named after the Hardap Dam, the man-made lake in the Fish River north of Mariental. Only 4% of all Namibians reside in the Hardap Region (NSA, 2017).

#### 5.7.4 DEMOGRAPHIC PROFILE

Namibia is one of the least densely populated countries in the world (2.8 person per km<sup>2</sup>). Vast areas of Namibia are without people, in contrast to some fairly dense concentrations, such as the central-north and along the Kavango River.

Population density in the Khomas region is 4.2 times higher (12 persons per km<sup>2</sup>) than the national figure while the figure for the Hardap Region is four times lower (0.7 person per square km). The projected total population for the Hardap region was 87,186 and for the Khomas region 415,780 in 2016. Whereas 95% of all people in the Khomas region lived in an urban place in 2016, only 40% of all people in Hardap region live in an urban place. Oshiwambo is the most spoken language in the Khomas region (41% of all households) whereas Khoekhoegowab (49% of all households) is the most common language in the Hardap region. Average household size in the Hardap Region is 2.9 and in the Khomas Region 3.5. Literacy rate in the Khomas region is 97% for people older than 15, in contrast to the figure of 85% in the Hardap region. Living in an urban environment implies better living conditions In the Hardap region 98% of all households have access to safe water, 44% have no toilet facility, 56% have electricity for lighting and 58% of all households make use of open fires to prepare food. These figures are lower than that of the Khomas region where 100% of all households have access to safe water, only 25% have no toilet facility, 64% have electricity for lighting and only 7% of the population depend on open fires to prepare food (NSA, 2017).

In 2011 the population of Rehoboth, the closest town to the EPL, was counted as 28,843 and with a generalized urbanization growth rate of 4.0% the current estimated population is estimated to be 41,053 residents.

The urban population pyramid for Namibia shows a very clear dominance of the age group 20 – 35 as well as for infants (0 – 4 years of age). As the majority of people in the Khomas region are living in an urban area, the dominance of Windhoek is further apparent – the population of the Khomas region is young, most of them within the child-bearing age range. The urban population pyramid for Namibia contrasts sharply with the one for rural population. The base of the pyramid reflects people younger than 25 and forms the majority of the total population – meaning that most people are young Namibians (NSA, 2017).

#### 5.7.5 GOVERNANCE

Namibia is divided in 14 regions, subdivided into 121 constituencies. The Khomas region is divided into ten constituencies. Each region has a regional council, elected during regional elections per constituency. Towns are governed through local authorities, in the form of municipalities.

Windhoek is the national capital and also the capital of the Khomas region while Mariental is the capital of the Hardap region. As the country's capital Windhoek hosts many of the national head offices as well as the head offices of the Khomas regional council, while Mariental hosts the regional head offices of the Hardap region. Rehoboth is the closest town to EPL 7769 and is governed by a local authority. Windhoek is governed by a local authority in the form of a city council while Rehoboth and Mariental (as well as Aranos) are governed by their respective town councils. Villages are governed by village councils and settlements by the central government.

The dominance of Windhoek as a place of residence in the Khomas region is apparent – all other urban places in the Khomas region are classified as settlements – the lowest order of governed populated places in Namibia. Places such as Baumgartsbrunn, Groot Aub, Seeis and Dordabis are managed directly by the central authority. In contrast the population of the Hardap region is more dispersed and spread across several governed populated places, namely three towns (Rehoboth, Mariental and Aranos), five villages (Kalkrand, Stampriet, Maltahöhe, Gochas and Gibeon) and several tiny settlements (Schlip, Hoachanas, Rietoog, Uibis, Klein Aub, Khauxas).

#### 5.7.6 INFECTIOUS DISEASES

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. Despite the progress, the World Health Organization (WHO) in 2015 recommended strategic priorities of the health system in Namibia which include improved governance, an improved health information system, emergency preparedness, risk reduction and response, preventative health care and the combating of HIV/AIDS and TB (WHO, 2016).

HIV/AIDS remains a major reason for low life expectancy and is one of the leading causes of death in Namibia. There is a high HIV prevalence among the whole population, but since the peak in 2002 (15,000 new cases of HIV per year, and 10,000 yearly deaths due to AIDS) the epidemic started to stabilise (UNICEF, 2011). Although new infections as well as fatalities halved during the next decade, life expectancy for females returned to pre-independence levels but for males it did not reach pre-

independence levels yet. HIV/AIDS remains the leading cause of death and premature mortality for all ages, killing up to half of all males and females aged 40 - 44 years in 2013 (IHME, 2016).

Tuberculosis (TB) is a leading killer of people infected by HIV/AIDS, and Namibia has a high burden – in 2018, 35% of people notified with TB were infected with HIV. The country is included among the top 30 high-burden TB countries in the world, with an estimated incidence rate of 423 per 100,000 people and 60 fatalities per 100,000 people in 2018 (retrieved from [www.mhss.gov.na](http://www.mhss.gov.na)).

Over the period 2000 – 2013 significant rises were observed for stroke, ischemic heart diseases, diabetes, and depressive disorders, but HIV/AIDS remained the top cause of premature mortality. Over the same period significant decreases were observed for diarrheal diseases, neonatal conditions, and malaria. Risk factors are key drivers of premature mortality, and social ills were identified as the leading factor for death – particularly unsafe sex and alcohol and drug abuse. TB and malaria are compounded by the AIDS epidemic, and the risk of contracting malaria and TB is 15% greater if a person is also infected with HIV, with a risk of 50% higher to die as a result (IHME, 2016).

As of the beginning of 2020 the coronavirus disease (COVID-19), a communicable respiratory disease, causes 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.

#### 5.7.7 EMPLOYMENT

In 2018, 53.4% of all working Namibians were employed in the private sector and 21.5% by the state. State-owned enterprises employ 7.6% Namibians and private individuals 16.6%. Wages and salaries represented the main income source of 47.4% of households in Namibia. Agriculture (combined with forestry and fishing) is the economic sector with the most employees – 23% of all employed persons in Namibia work in this sector. Agriculture is also the sector that employs the most informal workers in Namibia, calculated at 87.6%. Wages of employees in the agriculture sector are lower than all other sectors except for workers in accommodation and food services and domestic work in private households (NSA, 2019).

Low education levels affect employability and prevents many households to earn a decent income. Of all people employed in Namibia, 63.5% are not higher qualified than junior secondary level (Grade 10 and lower). In total 11.8% of all people employed had no formal education. In total 29.1% of all people employed fall in the category “elementary occupation” and 15.2% in the category “skilled agriculture” (NSA, 2019).

Overall, the rate of unemployment is estimated at 33.4% for Namibia, using the broad definition of unemployment. Unemployment in the Hardap region is expected to be higher than the national average while it is expected to be lower than the national average in the Khomas region. 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).

#### 5.7.8 ECONOMIC ACTIVITIES

In the Hardap region 61.1% of all households depend on salaries and wages as their main source of income, subsistence farming provides the main income for 1.6% of households and non-farming business activities are responsible for the main income of 3.7% households.

In the Khomas region 74.5% of all households depend on salaries and wages as their main income source, only 0.2% of households depend on subsistence farming as the main income and 9.7% of all households get their main income from non-farming business activities (NSA, 2019).

The economy of the Hardap region is predominantly agriculture-based. Extensive livestock farming is a common activity over the entire region, but intensive farming is also practiced at the irrigation scheme below the Hardap Dam near Mariental. Where EPL 7769 is located, the dominant land use and economic activity is extensive agriculture. The prominence of agriculture as a primary economic sector in the Hardap region is responsible for the high figure of informally-employed people – 71.3%. In contrast to most of Namibia's other regions, agriculture is less prominent in the Khomas region where the majority of people are urbanized. The figure for informal-employed people is also lower (55.6%) as people are employed in a wider range of secondary and tertiary economic sectors such as administration, services and manufacturing (NSA, 2019).

Mining plays a pivotal role in the economy of Namibia. Since independence, it has consistently been the biggest contributor to Namibia's economy in terms of revenue and accounts for 25% of the country's income. Mining is one of the main contributors to GDP, and one of the largest economic sectors of Namibia. The main commodities are uranium, gold, diamonds, copper, zinc, lead, salt and dimension stone. However, mining in the Khomas and the Hardap regions is not as pronounced as in the Erongo, Karas, Otjozondjupa and Oshikoto regions of Namibia. Past mining operations have ceased as the resources were exhausted and commodity prices made business uneconomical.

Since 2016, Namibia 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 an average growth of not more than 1% annually since 2017.

#### 5.7.9 CULTURAL HERITAGE

A review of the National Heritage Council database was conducted, and no known heritage sites were identified in EPL 7769. In cases where heritage sites are discovered the chance find procedure will be used. In Namibia several mountains are closely coupled to heritage values, and it is possible that this applies to some of the landforms on EPL 7769 as well. Drainage lines were also important routes for early inhabitants, and it could be expected that some heritage assets along the drainage lines could be found.

An archaeological site survey was conducted by Dr John Kinahan, in the selected focus area on a portion of EPL7769 as indicated in Figure 4. The focus area lies within the north-western parts of the EPL. All exploration work will commence within this area; therefore, the heritage survey was directed to assess

the heritage potential of this area. The survey did not locate any archaeological sensitivity. Additionally, no landforms were considered to be significant in terms of possibly being a habitat in which archaeological artefacts could be found and therefore require special mitigation measures. The EMP will adopt the chance-find procedure devised for mining projects.

If any historically important or heritage sites on or around the project area are encountered during exploration activities beyond the initial target area, the same will be reported to the Monument's Council in Windhoek, and the site will be left untouched.

#### 5.7.10 NOISE AND SENSE OF PLACE

EPL 7769 is located where the predominant land use is extensive subsistence farming, a tourism establishment, a military base and a livestock auction house with the only signs of human influence in the form of agricultural infrastructure, i.e. water installations, fences, tracks and buildings. Sensitive receptors associated with the EPL area may include farm owners and farm workers, visitors and tourists and neighbours.

The naturalness of the area can be disrupted by the addition of exploration activities and its impacts – in the form of noise, dust, movements of heavy machinery, landscape scars and visual obtrusions. This may alter and affect the lifestyle of receptors, although the exploration activities are short-term and reversible.

EPL 7769 lies over 15 farms and it is likely that noise will become a nuisance to farmers / residents of the area only when in earshot distance to any homestead or lodge. The proponent will continue to communicate with the adjacent occupiers or owners of land, should this be a pertinent issue, and further mitigation measures will be applied.

Additionally, work will be planned in advance and an agreement will be met with the affected land owners on the most suitable timing of work to reduce the effects of noise from drilling and other adhoc exploration activities.

## 6 IDENTIFICATION AND EVALUATION OF IMPACTS

The key stage of the EIA 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 envisaging the possible changes to the environment as a result of the proposed project. The recognized 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 final design and project implementation. The impact prediction and evaluation stage were undertaken up to October 2020 and the findings of the assessment are presented in this document.

### 6.1 INTRODUCTION

Section 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.

### 6.2 LIMITATIONS, UNCERTAINTIES AND ASSUMPTIONS

Some limitations and uncertainties were acknowledged during the EIA process, which are summarised in Table 7, along with the assumptions made to manage them. 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 - LIMITATIONS, UNCERTAINTIES AND ASSUMPTIONS**

LIMITATION / UNCERTAINTY	ASSUMPTION
<b>Number of access roads and temporary drill campsites</b>	The creation of new tracks or access roads will be avoided, and existing tracks and routes will be used as far as possible. While every effort will be made to minimize environmental damage, in some cases it may be necessary to clear some bush to create

LIMITATION / UNCERTAINTY	ASSUMPTION
	small roads or access lines, which may be required for equipment to reach the site and for temporary campsites. If needed, cut lines may need to be created through the clearing of vegetation to gain access to some parts of the EPL.
<b>The program of exploration works is not confirmed</b>	It is assumed that exploration work shall take a couple of months with two to three-week sampling projects at different times on different sites and with follow-up exploration drilling projects possible. Activities may involve diamond core drilling; aerial or remote sensing; geophysical surveys; and mineral sampling. Pitting and trenching are unlikely although not ruled out completely.
<b>Number of workers, where they will come from and accommodation</b>	It is planned that approximately 10 people will be contracted for the proposed project. Most of the employees may stay in Rehoboth; contractors may camp on exploration site, depending on approval of farm owners. It is also assumed that vacancies may be filled with Rehoboth residents wherever possible.

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

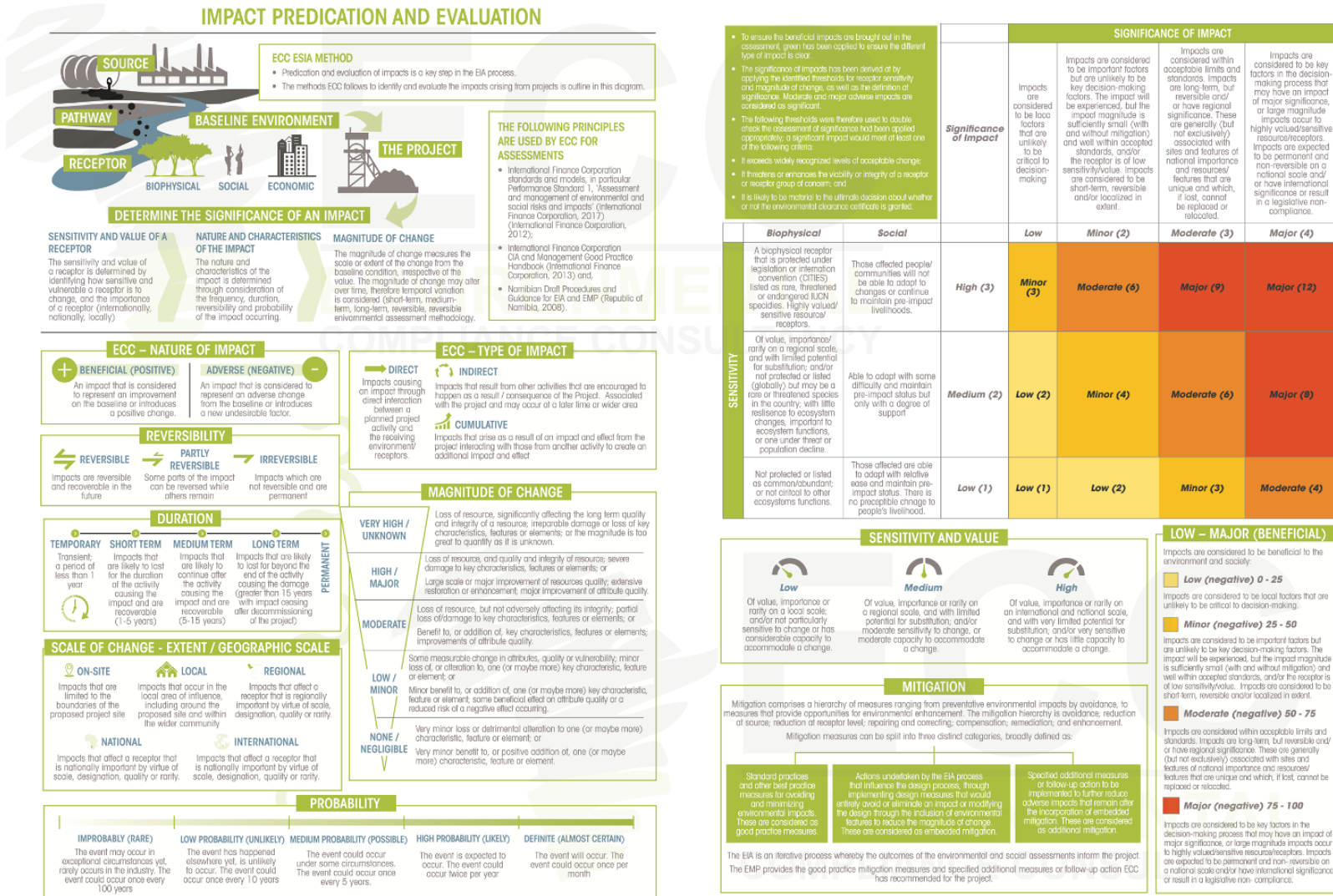


FIGURE 12 - ECCs IMPACT PREDICTION AND EVALUATION METHODOLOGY



## 7 IMPACT ASSESSMENT FINDINGS AND PROPOSED MITIGATION MEASURES

This section sets out the overall approach that was adopted to assess the potential environmental and social impacts associated with the project. To fully understand the significance of each of the potential impacts, each impact must be evaluated and assessed.

### 7.1 SCOPING ASSESSMENT FINDINGS

When undertaking the scoping exercise, the design 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 or control measures are discussed below. The following topics were considered during the scoping phase:

- Surface water and groundwater;
- Soils and topography;
- Socioeconomics (employment, demographics, and land-use);
- Noise;
- Ecology (fauna and flora);
- Air quality (including dust); and
- Cultural heritage.

Table 8 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 and / 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 localised scale of the exploration activities, and the environmental context of the site, the potential environmental and social effects are limited and unlikely to be significant. The only area where uncertainty remained during the scoping phase was the potential effects on human receptors from the increase in noise levels and visual impacts, namely residents in the near farmhouse and visitors and occupiers of surrounding tourism and agriculture-based businesses. Further consideration of the potential effects on humans was therefore undertaken and results are presented in the next section.

TABLE 8- SCOPING ASSESSMENT FINDINGS AND PROPOSED MITIGATION MEASURES

DESCRIPTION OF ACTIVITY	RECEPTOR	DESCRIPTION OF IMPACT	EFFECT/DESCRIPTION OF MAGNITUDE	VALUE OF SENSITIVITY	MAGNITUDE OF CHANGE	SIGNIFICANCE OF IMPACT	IMPACT MANAGEMENT/CONTROL MEASURES	RESIDUAL IMPACT AFTER MITIGATION
Site operations such as maintenance activities, loss of containment, accidental fuel / hydraulic fluid leaks and spills, or similar sources.	<b>Groundwater quality</b>	Hydrocarbon leaks and spills could enter the aquifer causing contamination.	Adverse Direct Partly Reversible Moderate Short term Regional Possible	Medium	Minor	Minor (4)	<ul style="list-style-type: none"> <li>- Good housekeeping</li> <li>- Provide ongoing training through toolbox talks and induction</li> <li>- All stationary vehicles and machinery must have drip trays to collect leakages of lubricants and oil</li> <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 (more than 200 litres) to be reported, also to the authorities</li> <li>- Maintenance and service schedules on equipment is in place</li> <li>- Ensure integrity of</li> </ul>	Low (2)

DESCRIPTION OF ACTIVITY	RECEPTOR	DESCRIPTION OF IMPACT	EFFECT/DESCRIPTION OF MAGNITUDE	VALUE OF SENSITIVITY	MAGNITUDE OF CHANGE	SIGNIFICANCE OF IMPACT	IMPACT MANAGEMENT/CONTROL MEASURES	RESIDUAL IMPACT AFTER MITIGATION
							containment of hydrocarbons with regular documented inspections (non-porous surface, bunded, within a fenced-in area) - No damaged containers in use - Preventative measures will be in place when service and maintenance activities are done (drip trays, non-porous surfaces, funnels, non-damaged containers) - Refuelling will be done in areas with adequate preventative measures in place	
Potential spillages of drill fluid, lubrication, etc. or drilling that penetrate the groundwater	<b>Groundwater quality</b>	Hydrocarbon leaks and spills could enter the aquifer causing contamination.	Adverse Indirect Partly Reversible Minor Short term Local	Low	Minor	Low (2)	- Ensure drill pads and spill kits are in place - Consider alternative sites when water table is too high - Drill system should be dug	Low (1)

DESCRIPTION OF ACTIVITY	RECEPTOR	DESCRIPTION OF IMPACT	EFFECT/DESCRIPTION OF MAGNITUDE	VALUE OF SENSITIVITY	MAGNITUDE OF CHANGE	SIGNIFICANCE OF IMPACT	IMPACT MANAGEMENT/CONTROL MEASURES	RESIDUAL IMPACT AFTER MITIGATION
table.			Possible				to direct any accidental spills into sumps - Extraction volumes of water shall be minimal during exploration and where possible, water from existing water sources shall be used	
Discharge and infiltration of non-contained wastewater	<b>Surface Water</b>	Wastewater can contaminate surface and groundwater if not properly contained.	Adverse Direct Partly Reversible Minor Short term Regional Unlikely	Low	Minor	Low (2)	- Wastewater discharges will be contained - Workers will be made aware about the importance of wastewater management - Good housekeeping	Low (1)
Inadequate management of waste	<b>Surface water</b>	Waste items and litter can pollute drainage channels	Adverse Cumulative Reversible Minor Temporary On-site Unlikely	Low	Low	Low (1)	- Good housekeeping standards to be applied on site. - Provide ongoing training and awareness through toolbox talks and induction - Implement a Standard Operational Procedure on waste management, from	Low (1)

DESCRIPTION OF ACTIVITY	RECEPTOR	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>cradle to grave for all kinds of waste possible on-site (e.g. domestic, mineral, hydrocarbons, hazardous, etc.)</p> <ul style="list-style-type: none"> <li>- Raise awareness about the importance of responsible waste management through site posters and documented training sessions</li> <li>- Implement a culture of correct waste collection, waste segregation and waste disposal</li> <li>- Avoid hazardous waste on site</li> <li>- Wastewater discharges will be contained – no disposal of wastewater is allowed</li> </ul>	
Inadequate management of hazardous and hydrocarbon	Soil	Pollution of soil	Adverse Direct Reversible Minor	Low	Minor	Low (2)	<ul style="list-style-type: none"> <li>- Good housekeeping.</li> <li>- Provide ongoing Training and awareness through toolbox talks and</li> </ul>	Low (1)

DESCRIPTION OF ACTIVITY	RECEPTOR	DESCRIPTION OF IMPACT	EFFECT/DESCRIPTION OF MAGNITUDE	VALUE OF SENSITIVITY	MAGNITUDE OF CHANGE	SIGNIFICANCE OF IMPACT	IMPACT MANAGEMENT/CONTROL MEASURES	RESIDUAL IMPACT AFTER MITIGATION
waste			Short term On-site Possible				<ul style="list-style-type: none"> <li>induction.</li> <li>- Implement a Standard Operational Procedure (SOP) on waste management, from cradle to grave, for all kinds of waste possible on-site (e.g., domestic, mineral, hydrocarbons, hazardous).</li> <li>- Implement a culture of correct waste collection, waste segregation and waste disposal.</li> </ul>	
Vegetation clearing for access routes, drill pads and temporary contractors camp	<b>Terrestrial ecology and biodiversity</b>	Loss / alteration of terrestrial habitats and loss of species	Adverse Direct Reversible Minor Short term On-site Possible	Low	Minor	Low (2)	<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. Avoid <i>Acacia erioloba</i> tree species.</li> <li>- Where necessary, rescue and relocate plants of significance.</li> <li>- Promote revegetation of</li> </ul>	Low (1)

DESCRIPTION OF ACTIVITY	RECEPTOR	DESCRIPTION OF IMPACT	EFFECT/DESCRIPTION OF MAGNITUDE	VALUE OF SENSITIVITY	MAGNITUDE OF CHANGE	SIGNIFICANCE OF IMPACT	IMPACT MANAGEMENT/CONTROL MEASURES	RESIDUAL IMPACT AFTER MITIGATION
							cleared areas upon completion of exploration activities.	
Ambient noise as a result of machinery use and movement (also through the use of airborne equipment)	<b>Terrestrial ecology and biodiversity</b>	Residing and nesting organisms can be disturbed	Adverse Direct Reversible Minor Short term On-site Likely	Low	Minor	Low (2)	<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 Saturday).</li> <li>- No activities between dusk and dawn.</li> <li>- Drill equipment shall be suitably positioned to ensure that noisy equipment is away from receptors.</li> <li>- All equipment to be shut down or throttled back between periods of use.</li> <li>- Respect civic aviation regulations about the use of a drone.</li> </ul>	Low (1)
Increased movement of machinery	<b>Terrestrial ecology and biodiversity</b>	Residing and nesting organisms such	Adverse Direct Partly Reversible	Low	Minor	Low (2)	<ul style="list-style-type: none"> <li>- Restrict movements to areas of activities only.</li> <li>- Use existing tracks and</li> </ul>	Low (1)

DESCRIPTION OF ACTIVITY	RECEPTOR	DESCRIPTION OF IMPACT	EFFECT/DESCRIPTION OF MAGNITUDE	VALUE OF SENSITIVITY	MAGNITUDE OF CHANGE	SIGNIFICANCE OF IMPACT	IMPACT MANAGEMENT/CONTROL MEASURES	RESIDUAL IMPACT AFTER MITIGATION
		as reptiles can be disturbed, injured or killed	Moderate Short term On-site Possible				routes only. - Identify rare, endangered, threatened and protected species in advance and avoid these. - Route new tracks around protected species and sensitive areas. - Restrict movements to daytime hours. - Make workers aware and notify them on avoiding some areas. - No driving off designated access routes (into the bush) / off-road driving. - No animals or birds may be collected, caught, consumed or removed from site.	



DESCRIPTION OF ACTIVITY	RECEPTOR	DESCRIPTION OF IMPACT	EFFECT/DESCRIPTION OF MAGNITUDE	VALUE OF SENSITIVITY	MAGNITUDE OF CHANGE	SIGNIFICANCE OF IMPACT	IMPACT MANAGEMENT/CONTROL MEASURES	RESIDUAL IMPACT AFTER MITIGATION
Increased disturbance of areas with natural vegetation	<b>Terrestrial ecology and biodiversity</b>	Alien species and weeds can be introduced to the area	Adverse Direct Reversible Minor Short term On-site Possible	Low	Minor	Low (2)	<ul style="list-style-type: none"> <li>- Eradicate weeds and alien species as soon as they appear.</li> <li>- Make workers aware about alien species and weeds.</li> <li>- Do not disturb natural vegetation in and outside dedicated camp areas and drill sites. Avoid <i>Acacia erioloba</i> tree species.</li> <li>- Stockpile excavated topsoil for revegetation purposes of disturbed areas.</li> </ul>	Low (1)
Uncontrolled veld fires during high wind periods	<b>Terrestrial ecology and biodiversity</b>	Terrestrial biodiversity destruction	Adverse Direct Partly reversible Moderate Temporary Onsite to local	High	Moderate	Moderate (6)	<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.</li> </ul>	Minor (4)

DESCRIPTION OF ACTIVITY	RECEPTOR	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>Gas stoves are the preferred option.</p> <ul style="list-style-type: none"> <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 (i.e. hydrocarbons and gas canisters)</li> </ul>	
Vegetation clearing	Soil	Increased exposure due to vegetation clearance can cause soil	Adverse Direct Reversible Moderate Short-term	Low	Minor	Low (2)	<ul style="list-style-type: none"> <li>- Ensure erosion control and prevention measures are in place when vegetation clearance is required.</li> </ul>	Low (1)

DESCRIPTION OF ACTIVITY	RECEPTOR	DESCRIPTION OF IMPACT	EFFECT/DESCRIPTION OF MAGNITUDE	VALUE OF SENSITIVITY	MAGNITUDE OF CHANGE	SIGNIFICANCE OF IMPACT	IMPACT MANAGEMENT/CONTROL MEASURES	RESIDUAL IMPACT AFTER MITIGATION
		erosion	On-site Possible				<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> </ul>	
Drilling and associated equipment used	Soil	Loss of soil quality due to mixing of earth matter, trampling and compaction	Adverse Direct Reversible Moderate Short term On-site Possible	Low	Minor	Low (2)	<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>- Topsoil should be stockpiled separately, and re-spread during rehabilitation.</li> <li>- During drilling oil absorbent matting should be placed under and around the rig.</li> <li>- Equipment must be in a good condition to ensure that accidental oil spills do</li> </ul>	Low (1)

DESCRIPTION OF ACTIVITY	RECEPTOR	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>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.</li> <li>- Limit the possibility to mix mineral waste with topsoil.</li> </ul>	
Diamond core drilling activities, movement of machinery and vehicles	<b>Heritage</b>	Potential damage to cultural heritage sites	Adverse Direct Partly Reversible High Permanent On-site Possible	High	Minor	Moderate (6)	<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 site 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</li> </ul>	Minor (4)

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

DESCRIPTION OF ACTIVITY	RECEPTOR	DESCRIPTION OF IMPACT	EFFECT/DESCRIPTION OF MAGNITUDE	VALUE OF SENSITIVITY	MAGNITUDE OF CHANGE	SIGNIFICANCE OF IMPACT	IMPACT MANAGEMENT/CONTROL MEASURES	RESIDUAL IMPACT AFTER MITIGATION
							recover and remove the remains to the National Museum or National Forensic Laboratory as directed.	
Drilling activities, including dust and emissions.	<b>Community</b>	Visual disturbance and loss of Sense of Place for tourists on route to the Oanob resort	Adverse Direct Reversible Moderate Temporary Local Likely	High	Minor	Moderate (6)	<ul style="list-style-type: none"> <li>- Position heavy equipment in such a way that it is out of sight from human receptors,</li> <li>- Apply dust suppression where possible,</li> <li>- Restrict speed of vehicles (&lt;30km/h),</li> <li>- Specific activities that may generate dust and impact on residents shall be avoided during high wind events,</li> <li>- All vehicles and machinery / equipment to be shut down or throttled back between periods of use,</li> <li>- Barriers (excavated topsoil and subsoil) or fences shall be used as visual barriers</li> </ul>	Minor (4)

DESCRIPTION OF ACTIVITY	RECEPTOR	DESCRIPTION OF IMPACT	EFFECT/DESCRIPTION OF MAGNITUDE	VALUE OF SENSITIVITY	MAGNITUDE OF CHANGE	SIGNIFICANCE OF IMPACT	IMPACT MANAGEMENT/CONTROL MEASURES	RESIDUAL IMPACT AFTER MITIGATION
							to hide site operations if exploration occurs in locations that may affect residents or livestock, <ul style="list-style-type: none"> <li>– Residents need to be informed at least two weeks in advance that drilling operations are within 1km of their property,</li> <li>– Maintain good housekeeping standards on site, and</li> <li>– Continuous engagement with residents to identify any concerns or issues, and appropriate mitigation and management measures agreed upon.</li> </ul>	
Open drill holes	<b>Possible domestic animals and wildlife in the area</b>	Animals may get their legs caught in the tight spacing of unplugged drill	Adverse Direct Reversible Minor Temporary	Medium	Minor	Low (2)	<ul style="list-style-type: none"> <li>– Ensure awareness training is conducted on site,</li> <li>– Ensure effective relocation of drill cuttings,</li> <li>– Remove pegs, cut collars</li> </ul>	Low (1)

DESCRIPTION OF ACTIVITY	RECEPTOR	DESCRIPTION OF IMPACT	EFFECT/DESCRIPTION OF MAGNITUDE	VALUE OF SENSITIVITY	MAGNITUDE OF CHANGE	SIGNIFICANCE OF IMPACT	IMPACT MANAGEMENT/CONTROL MEASURES	RESIDUAL IMPACT AFTER MITIGATION
		holes causing injury to the animal	On-site Likely				and plug holes with plastic cones 300mm below ground level.	
Movement of vehicles, exploration activities	<b>Community</b>	Create conflict with farm owners and neighbours about access, leaving gates open, suspicious movements, loss of farming area, etc.	Adverse Indirect Reversible Minor Short term On-site Likely	Low	Minor	Low (2)	<ul style="list-style-type: none"> <li>- Ensure documented permission to enter farms is in place.</li> <li>- Farmers should have access to all farm areas at all times.</li> <li>- Residents shall be provided at least two weeks' notice of drilling operations within 1 km of their property.</li> <li>- Existing water points and feeding area need to be left unaffected.</li> <li>- Use existing roads for access, avoid new tracks / cut lines.</li> <li>- Compliance with all applicable laws and agreements.</li> <li>- Continuous engagement with residents to identify</li> </ul>	Low (1)



DESCRIPTION OF ACTIVITY	RECEPTOR	DESCRIPTION OF IMPACT	EFFECT/DESCRIPTION OF MAGNITUDE	VALUE OF SENSITIVITY	MAGNITUDE OF CHANGE	SIGNIFICANCE OF IMPACT	IMPACT MANAGEMENT/CONTROL MEASURES	RESIDUAL IMPACT AFTER MITIGATION
							any concerns or issues, and mitigation and management measures agreed upon.	
Movement of vehicles, exploration activities	<b>Community</b>	Presence of exploration team can be blamed for stock theft and poaching	Adverse Cumulative Reversible Minor Temporary Local Unlikely	Low	Low	Low (1)	<ul style="list-style-type: none"> <li>- Develop and implement an operation manual or procedures to work on private farms and implement monitoring programmes thereafter.</li> <li>- Maintain continuous engagement with residents to identify any concerns or issues, and appropriate mitigation and management measures agreed upon.</li> <li>- Ensure appropriate supervision of all activities.</li> <li>- Raise awareness and sensitize employees about contentious issues such as stock theft and poaching.</li> <li>- Accidents and incidents need to be reported to</li> </ul>	Low (1)

DESCRIPTION OF ACTIVITY	RECEPTOR	DESCRIPTION OF IMPACT	EFFECT/DESCRIPTION OF MAGNITUDE	VALUE OF SENSITIVITY	MAGNITUDE OF CHANGE	SIGNIFICANCE OF IMPACT	IMPACT MANAGEMENT/CONTROL MEASURES	RESIDUAL IMPACT AFTER MITIGATION
							project manager and recorded in incident register.	
Exploration activities	<b>Community</b>	Triggers job creation, skills development and opportunities for the local economy	Beneficial Direct Reversible Minor Short term Local Possible	Medium	Low	Low (2)	<ul style="list-style-type: none"> <li>- Maximize local employment.</li> <li>- As far as possible promote local procurement.</li> <li>- Enhance development of local skills where possible.</li> </ul>	<b>Low beneficial</b>

7.1.1 FURTHER CONSIDERATION: NOISE AND VISUAL IMPACTS FORM DRILLING ACTIVITIES

Exploration and mining activities have the potential to disrupt the sense of place of an established area, a collective term to describe the special and uniqueness of an area, mostly through the amplifying effects of noise, dust, machinery movements, and visual intrusion. Collectively, the activities have a negative impact on the naturalness of the landscape with the result to temporarily alter and affect the lifestyles of receptors (neighbours, farm owners, tourists). Such disturbances brought about by exploration activities are often-short term and reversible. For the duration of the proposed project, communication with the affected parties and key stakeholders shall be maintained. In the event where the drill site is located in proximity to the receptors, measures will be taken to reduce the visual impacts.

Through the application of the EIA methodology presented in Section 2 the conclusion of the assessment is that with additional mitigation, the significance of effect is expected to be minor. No additional studies are considered necessary to further assess this impact.

TABLE 9 - SUMMARY OF EFFECTS

ACTIVITY	RECEPTOR	IMPACT	NATURE OF IMPACT	VALUE & SENSITIVITY	MAGNITUDE OF CHANGE	SIGNIFICANCE OF IMPACT
Placement and operations of heavy machinery and drill rigs, equipment and the creation of laydown areas on site	Neighbours / farm owners / tourists	Visual impacts (obscure views, create visual contrast, dust, intrusive objects), movement of heavy machinery, loss of naturalness	Adverse Direct Reversible Local / on-site Short term Certain	Medium	Minor	Minor (4) Adverse
Placement and operations of heavy machinery and drill rigs, equipment and the creation of laydown areas on site	Neighbours / farm owners / tourists	Noise nuisance impacts	Adverse Direct Reversible Local / on-site Short term Certain	Medium	Minor	Minor (4) Adverse

The following additional mitigation measures have been identified in addition to those presented in the EMP and shall be communicated to the proponent to ensure environmental effects are minimised as reasonably practicable:

- Interested and affected parties will be communicated to prior to the commencement of the exploration activities,
- Reasonable time frames for duty will be in place i.e. no drilling or trenching when it is dark,
- Site notice of project will be available at the site during the course of the proposed project,
- Adequate procedures for drilling activities will be encouraged i.e. no hammering of drill rods with steel hammers,
- Drill equipment shall be suitably positioned to ensure that noisy equipment is as far away from human receptors as possible,
- Noise suppression measures shall be applied by all drilling staff (e.g., earmuffs are mandatory) and if drilling occurs in locations that may affect residents,
- Residents shall be provided at least two weeks' notice of drilling operations within 1km of their property, and
- The proponent shall undertake continual engagement with residents, and

The potential impact therefore is not considered significant as it does not widely exceed recognised levels of acceptable change; does not threaten the integrity of the receptors, nor is it material to the decision-making.

## **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 pro-active 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.

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## 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 as a result of the proposed project. Through the scoping process, the only risk to the environment was the potential for visual impacts and noise levels to increase thereby impacting human and animal receptors in the area. All other social and environmental receptors were scoped out as significant effects were unlikely and therefore no further assessment was deemed necessary. Through further analysis and identification of mitigation and management methods, the assessment concludes that the likely significance of effects on humans from visual and noise impacts are expected to be minor and prior awareness and communication about the project shall be encouraged. Various best practice 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 effect and environmental disturbances are avoided.

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## APPENDIX A- ENVIRONMENTAL MANAGEMENT PLAN



## APPENDIX B - NON-TECHNICAL SUMMARY

## APPENDIX C- EVIDENCE OF PUBLIC CONSULTATION

The following advertisements were published in the 'Republikein, Sun, and Allgemeine Zeitung' on 21<sup>st</sup> September and 28<sup>th</sup> September 2020.

MONDAY 28 SEPTEMBER 2020

Market Watch

Republikein Sun Allgemeine Zeitung 3



The agriculture and forestry sector surged to 47.2 percent in real value added during the second quarter of 2020. PHOTOS NAMPA



Acceleration in the health sector is owed to the easing of the fiscal consolidation policy in the sector, coupled with the emergence of the pandemic.

### ➤ Easing of fiscal consolidation policy

# Agriculture, ICT, health drives growth

**ICT grew due to increased activities in the usage of data as demand surged up for data and calls as workers switch from working from offices to homes.**

The real Gross Domestic Product contracted by 11.1 percent during the period under review, compared to a decline of 3.6 percent in the same quarter of 2019.

**Drivers**

The deeper reduction in the domestic economy was observed across all sectors of the economy,

except for agriculture and forestry, ICT and health. The poor performance of the economy was mainly due to the impact of measures that were put in place to combat the spread of the coronavirus pandemic, NSA says.

The agriculture and forestry sector surged to 47.2 percent in real



**Statistician-General (SG) of the Namibia Statistics Agency (NSA) Alex Shimuafeni.**  
PHOTO NAMPA

value added during the second quarter of 2020, relative to a steeper contraction of 31.8 percent registered during the same quarter of 2019, NSA added.

The main driver for the improved performance stems from an increase in activities of the crop farming sub-sector, which posted a massive

growth of 296.7 percent in real value added compared to decline of 61.0 percent in the corresponding quarter of 2019. The positive performance in the sector is attributed to the number of minutes used that increased during the period under review, the report further indicates.

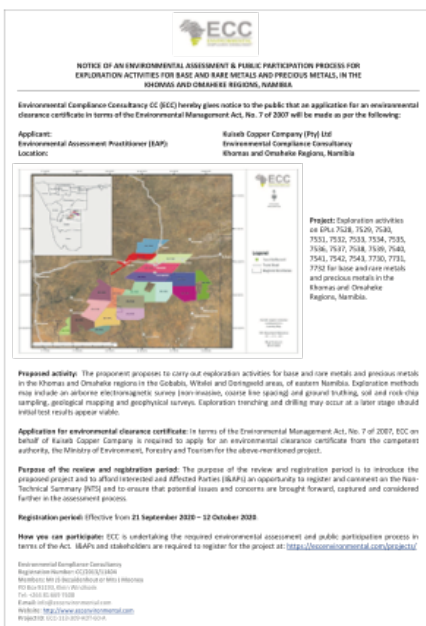
- Nampa

The Namibian Statistics Agency (NSA) recorded improved performances in the agriculture and forestry, information and communication technology (ICT) and health sectors, according to the Producer Precise Index report.

The improved growth rates of 47.2 percent were recorded for agriculture and forestry, 11.0 percent for ICT, and 6.0 percent for the health sector, compared to the previous quarter in 2019.

The ICT sector's growth results from increased activities in the usage of data as demand surged up for data and calls as workers switch from working from offices to homes," NSA pointed out.

This was further exacerbated by demand from higher institutions switching from face-to-face teaching to online learning. Acceleration in the health sector is owed to the easing of the fiscal consolidation policy in the sector, coupled with the emergence of the pandemic that saw increased activities resulting in the employment of more health workers to assist in containing the disease, NSA emphasised.



**NOTICE OF AN ENVIRONMENTAL ASSESSMENT & PUBLIC PARTICIPATION PROCESS FOR EXPLORATION ACTIVITIES FOR BASE AND RARE METALS AND PRECIOUS METALS, IN THE HARDAP AND OSHANAHE REGIONS, NAMIBIA**

Environmental Compliance Consultancy (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:** Kuluhi Copper Company (Pty) Ltd  
**Environmental Assessment Practitioner (EAP):** Environmental Compliance Consultancy  
**Location:** Hardap and Oshanahe Regions, Namibia

**Project:** Exploration activities on EPL 7769, 7526, 7528, 7531, 7532, 7533, 7534, 7535, 7536, 7537, 7538, 7539, 7540, 7541, 7542, 7543, 7730, 7731, 7732 for base and rare metals and precious metals in the Hardap and Oshanahe Regions, Namibia.

**Proposed activity:** The proponent proposes to carry out exploration activities for base and rare metals and precious metals in the Hardap and Oshanahe regions in the Gobabis, Witkar and Oshanahe areas, of eastern 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 trenching and drilling may occur at a later stage should initial test results appear viable.

**Application for environmental clearance certificate:** In terms of the Environmental Management Act, No. 7 of 2007, ECC on behalf of Kuluhi Copper Company is required to apply for an environmental clearance certificate from the competent authority, the Ministry of Environment, Forestry and Tourism for the above-mentioned project.

**Purpose of the review and registration period:** 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) and to ensure that potential issues and concerns are brought forward, captured and considered further in the assessment process.

**Registration period:** Effective from 21 September 2020 – 12 October 2020

**How you can participate:** ECC is undertaking the required environmental assessment and public participation process in terms of the Act. I&APs and stakeholders are required to register for the project at: <https://www.environmental.com.na/>

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Tel: +264 81 609 7028  
E-mail: [info@environmental.com](mailto:info@environmental.com)  
Website: <http://www.environmental.com>  
Project ID: ECC-90-302-AD1-02-0



**NOTICE OF AN ENVIRONMENTAL ASSESSMENT AND PUBLIC PARTICIPATION PROCESS EXPLORATION ACTIVITIES ON EPL 7769 HARDAP AND OSHANAHE REGIONS, NAMIBIA**

Environmental Compliance Consultancy (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:** Jin Peng Investments (Pty) Ltd  
**Environmental Assessment Practitioner (EAP):** Environmental Compliance Consultancy  
**Location:** Hardap and Oshanahe Regions, Namibia

**Project:** Exploration activities on EPL 7769 for base and rare metals, dimension stones, industrial minerals, and precious metals in the Hardap and Oshanahe Regions, Namibia.

**Proposed activity:** The proponent proposes to carry out exploration activities for base and rare metals, dimension stones, industrial minerals, and precious metals on EPL 7769. The EPL surrounds the Rehoboth town, within the Hardap Region and extends into the Oshanahe Region to the east. Exploration methods may include geological mapping, soil sampling, geophysical surveys, trenching and drilling.

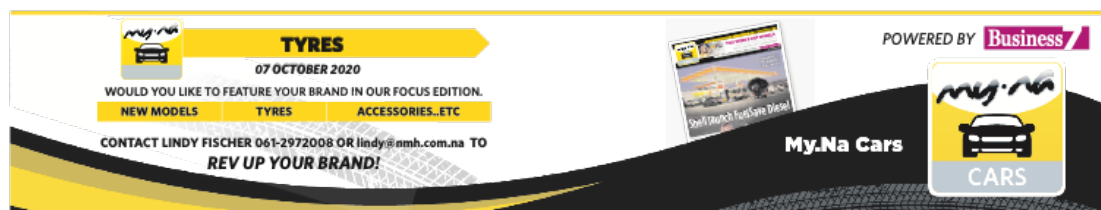
**Application for environmental clearance certificate:** In terms of the Environmental Management Act, No. 7 of 2007, ECC on behalf of Jin Peng Investments (Pty) Ltd is required to apply for environmental clearance to the competent authority (Ministry of Mines and Energy) and the Ministry of Environment, Forestry and Tourism for the above-mentioned project.

**Purpose of the review and registration period:** The purpose of the review and registration period is to introduce the proposed project and afford Interested and Affected Parties (I&APs) an opportunity to register and comment on the Non-Technical Summary (NTS) and to ensure that potential issues and concerns are brought forward, captured and considered further in the assessment process.

**Registration period:** Effective from 21 September to 12 October 2020.

**How you can participate:** ECC is undertaking the required environmental assessment and public participation process in terms of the Act. I&APs and stakeholders are required to register for the project at: <https://www.environmental.com.na/>

**Environmental Compliance Consultancy**  
Registration Number: EC2019/11404  
Members: Mr JS Buzakhorobu or Mrs J Khosney  
PO Box 51202, Namibia  
Tel: +264 81 609 7028  
E-mail: [info@environmental.com](mailto:info@environmental.com)  
Website: <http://www.environmental.com>  
Project ID: ECC-90-302-AD1-02-0



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**095 Regskenningsgewings Legal Notices**

**REPUBLIC OF NAMIBIA** MINISTRY OF TRADE & INDUSTRY, LIQUOR ACT, 1998. NOTICE OF APPLICATION TO A COMMITTEE IN TERMS OF THE LIQUOR ACT, 1998 (regulations 14, 26 & 33).

Notice is given that an application in terms of the Liquor Act 1998, particulars of which appear below, will be made to the Regional Liquor Licensing Committee, Region: Khomas.

1. Name and postal address of applicant: Fashion Bar, PO Box 10899, Khomasdal, Windhoek, Republic of Namibia.

2. Name of business or proposed business to which application relates: Fashion Bar.

3. Address/ location of premises to which application relates: Erf 1957, Shop 1, 37 Bahnhof Street, Windhoek.

4. Nature and details of application: Application for the grant of extended hours from 10h00 - 02h00 (Mondays to Sundays) to 10h00 - 05h00 (Mondays to Sundays).

5. Clerk of the Court with whom application will be lodged: Clerk of the Magistrate's Court for the District of Windhoek.

6. Date on which application will be lodged: 30 September 2020.

7. Date of meeting of Committee at which application will be heard: 11 November 2020.

Any objection or written submission in terms of section 28 of the Act in relation to the application must be sent or delivered to the Secretary of the Committee, to reach the Secretary not less than 21 days before the date of the meeting of the Committee at which the application will be heard.

DM0202000368990  
.....  
DM0202000368990

**IN THE High Court of Namibia.** (Main Division). Windhoek. Case Number: HC-MD-CIV-ACT-CON-2020/00144. In the matter between: **BUSINESS PARTNERS INTERNATIONAL SMALL AND MEDIUM ENTERPRISES FUND NAMIBIA - PLAINTIFF** and **DAVIS WINDOW TINTING AND WINDSCREENS CC - 1st Defendant, DAVID KAMPELO - 2nd Defendant.**

**NOTICE OF SALE IN EXECUTION-MOVABLE PROPERTY** In execution of a Judgment granted against the second Execution Debtor/ Defendant by the above Honourable Court in the above mentioned suit, the undermentioned goods will be sold by Public Auction by the Deputy Sheriff for the district of Windhoek at the premises at 422 Independence Avenue, Windhoek on Saturday, 3 October 2020 at 10h00 or soon thereafter as may be sold:

The items to be sold on auction will be:  
1 Black BMW X6 Model (REG: N67676W).

Terms and conditions of the sale: "voetstoets" and cash to the highest bidder. Dated at Windhoek on 17 September 2020.

Engling Stritter & Partners  
Per: Michael Noelle Legal Practitioners for the Plaintiff  
12 Love Street  
Windhoek

Our Ref: MN/B377198  
DM0202000368990  
.....  
DM0202000368990

**IN THE Magistrate's Court for the District of Tsumeb.** Held at Tsumeb. Case No: 123/2019. In the matter between: **M-FORCE TRADING CC - Plaintiff and JONAS SIMUKETA T/A EXECUTIVE CITY CONSTRUCTION - Defendant.**

**NOTICE OF SALE IN EXECUTION** In execution of a Judgment against the above named Defendant by the above Honourable Court on 1 June 2020, the following movable property will be sold by the Messenger of the Court for the district of Rundu on 1 October 2020 at 10h00 in front of the Magistrate's Office, Rundu, Namibia.

1x White Isuzu Pick-up (Registration No N13909BW), (Engine No: 4UJ29289).

Terms of sale: Cash and voetstoets to the highest bidder. Dated at Tsumeb this 16 September 2020.

FA PRETORIUS & CO Legal Practitioners for Plaintiff  
Pretco Building Erf 4, Suite 5, Jordan Street Tsumeb.  
DM020200039006

**095 Regskenningsgewings Legal Notices**

**IN THE Magistrate's Court for the District of Windhoek.** Held at Windhoek. Case No. 1942/2020.

In the matter between: **SQUIRREL INVESTMENTS 95 CC - Execution Creditor and TALENI LOGISTICS CC - 1st Execution Debtor, ABEL DANIEL LANGNER - 2nd Execution Debtor.**

**NOTICE OF SALE IN EXECUTION** The following goods will be sold in execution by the Messenger of the Court for the district of Windhoek on Saturday, 3 October 2020 at 09:30 at 422 Independence Avenue, Windhoek, Namibia. Goods:

1x LG top loader washing machine, 1x Dely fridge / freezer double door(silver), 1x dishwasher (silver), 1x wooden table with 6x chairs (brown), 3x floor carpets, 1x 3-piece leather lounge suite (brown), 1x flat screen TV - Hisense, 1x brown cupboard with 5x drawers and 2x doors, 1x brown wooden table with 6x chairs and 6x pillows, 1x steel cabinet (grey), 1x Ryobi generator, 1x Hi-sense 378, 20 Channel sound bar.

Terms: Voetstoets and cash to the highest bidder. Dated at Windhoek on 25 August 2020.

ETZOLD - DUVENHAGE  
Per: Ulrich Etzold  
Legal Practitioner for Plaintiff  
No. 33 Feld Street  
Windhoek  
JE/SQUS/0001  
DM0202000368995  
.....  
DM0202000368995

**IN THE Magistrate Court Of Namibia.** The District Of Windhoek. Held At Windhoek. Case No: 6320/2016. In the matter between: **M. PUPKEWITZ & SONS (PTY) LIMITED - Plaintiff and OUME CONSTRUCTION CC - 1st Defendant, AMOS N DAVID - 2nd Defendant.**

**NOTICE OF SALE IN EXECUTION** Pursuant to a Judgement of the above Honourable Court granted on 14 December 2016, the following goods will be sold in execution by public auction on 1 October 2020 at 10h00 in front of the Magistrate's Court, Rundu, Republic of Namibia, namely:

1x Toyota Land Cruiser, Engine No. 1H2D652625, Registration Number N 9513 RU.

Terms : Cash to the highest bidder. Dated at Windhoek on 7 September 2020.

FISHER, QUARMBY & PFEIFER  
Legal Practitioners for Plaintiff  
Care: Robert Mugabe Ave & Thorer Str  
Entrance in Burg Street  
PO Box 37,  
Windhoek  
(Ref:SM/Th/241968)  
DM0202000368996  
.....  
DM0202000368996

**IN THE Magistrate's Court for the District of Tsumeb.** Held at Tsumeb. Case No: 171/20019.

In the matter between: **M-FORCE TRADING CC - Plaintiff and MR VICTOR M.S. LOUREIRO T/A RCAG CONSTRUCTION - Defendant.**

**NOTICE OF SALE IN EXECUTION** In execution of a Judgment against the above named Defendant by the above Honourable Court on 1 June 2020, the following movable property will be sold by the Messenger of the Court for the district of Rundu on 1 October 2020 at 10h00 in front of the Magistrate's Office, Rundu, Namibia.

1x White Nissan pick-up (Registration No N5924RU), (Engine No: A14524879F).

Terms of sale: Cash and voetstoets to the highest bidder. Dated at Tsumeb this 16 September 2020.

FA PRETORIUS & CO Legal Practitioners for Plaintiff  
Pretco Building Erf 4, Suite 5, Jordan Street Tsumeb.  
DM020200039007

**095 Regskenningsgewings Legal Notices**

**IN THE High Court Of Namibia,** Main Division, Held At Windhoek. Case No: HC-MD-CIV-ACT-DEL-2019/04650.

In the matter between: **LIBRA GUEST HOUSE CC - Plaintiff and ANDREAS J NAMBAHU - Defendant.**

**NOTICE OF SALE** In execution of a judgment in the High Court of Namibia, Main Division, held at Windhoek given on 18 March 2020 the above-mentioned case, a judicial sale by public auction will be held on 3 October 2020 at 09h30 at the premises of the office of the Messenger of the Court at 422 Independence Avenue, Windhoek, Republic of Namibia.

The following goods will be sold:  
1 x Kitchen table and 2 chairs,  
1 x Samsung microwave, 1 x Whirlpool fridge, 1 x 3 piece lounge suite, 1 x led TV, 1 x Dstv explorer, 1 x dining room table and 6 chairs, 1 x wall mirror, 1 x wall painting, 1 x coffee table.

Conditions of sale:  
1. The sale will be held without reserve and goods will be sold to the highest bidder.

2. The property will be sold "voetstoets"

3. Payment shall be made in cash or bank guaranteed cheques. Dated at Windhoek this 15th day of September 2020.

KLOPPERS LEGAL PRACTITIONERS  
Legal Practitioners for Plaintiff  
Unit 44, Maerua Mall, Centaurus Street,  
Windhoek PO Box 97816,  
Maerua,  
Windhoek  
Tel: 061-222307  
WindhoekSANI/0016  
DM0202000368997

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**NOTICE OF AN ENVIRONMENTAL ASSESSMENT AND PUBLIC PARTICIPATION PROCESS EXPLORATION ACTIVITIES ON EPL 7769 HARDAP AND KHOMAS REGIONS, NAMIBIA**

Environmental Compliance Consultancy (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:** Jin Peng Investments (Pty) Ltd  
**Environmental Assessment Practitioner (EAP):** Environmental Compliance Consultancy  
**Location:** Hardap and Khomas Regions, Namibia

**Project:** Exploration activities on EPL 7769 for base and rare metals, dimension stones, industrial minerals, and precious metals in the Hardap and Khomas Regions, Namibia.

**Proposed activity:** The proponent proposes to carry out exploration activities for base and rare metals, dimension stones, industrial minerals, and precious metals on EPL 7769. The EPL surrounds the Rehoboth town, within the Hardap Region and extends into the Khomas Region to the east. Exploration methods may include geological mapping, soil sampling, geophysical surveys, trenching and drilling.


**Application for environmental clearance certificate:** In terms of the Environmental Management Act, No. 7 of 2007, ECC on behalf of Jin Peng Investments (Pty) Ltd is required to apply for environmental clearance to the competent authority (Ministry of Mines and Energy) and the Ministry of Environment, Forestry and Tourism for the above-mentioned project.

**Purpose of the review and registration period:** The purpose of the review and registration period is to introduce the proposed project and afford interested and Affected Parties (I&APs) an opportunity to register and comment on the Non - Technical Summary (NTS) and to ensure that potential issues and concerns are brought forward, captured and considered further in the assessment process.

**Registration period:** Effective from 21 September to 12 October 2020.

**How you can participate:** ECC is undertaking the required environmental assessment and public participation process in terms of the Act. I&APs and stakeholders are required to register for the project at: <https://eccenvironmental.com/projects/>

**Environmental Compliance Consultancy**  
Registration Number: CC/2013/11464  
Members: Mr JS Beaudouinout or Mrs J Mooney  
PO Box 912123, Klein Windhoek  
Tel: +264 81 609 7008  
E-mail: [info@eccenvironmental.com](mailto:info@eccenvironmental.com)  
Website: <http://www.eccenvironmental.com>  
Project ID: ECC-90-302-A01-00-9




**Multiple Sclerosis**  
NAMIBIA

**WHAT IS MULTIPLE SCLEROSIS?**

**A chronic disease of the brain and central nervous system**

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

[info@msnamibia.org](mailto:info@msnamibia.org)



**NAMWATER**  
Namibia Water Corporation Ltd

**PUBLIC NOTICE TO OUR CUSTOMERS**

As part of our commitment to creating long-term value for our stakeholders, NamWater is pleased to announce the upgrade in its emailing system. This new system will help improve customer service and enable the Water Utility to send out monthly water statements to customers.

The Water Corporation, therefore, would like to inform all its customers across the country to send through their respective email addresses including their customer account numbers to [customer@namwater.com.na](mailto:customer@namwater.com.na). This automated system will provide an opportunity for each customer to receive his or her water statement at the end of each month, at no cost.

**For more information regarding this new system, contact:**  
**Johannes Shigwedha**  
**Telephone:** +264 61 71 2277 / +264 811 222 858  
**Email:** [ShigwedhaJ@namwater.com.na](mailto:ShigwedhaJ@namwater.com.na)

**Water for All, Forever!**



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•RESTAURANTE •SKOLE  
•VERPAKKINGSMATERIAAL

per kg

**Prys op aanvraag**

**SKAKEL AGNES: 330 500 OF CHANTEL: 330 502**  
**2 - 4 EIDERSTRAAT, LAFREZ INDUSTRIEL**

## SITE NOTICE

The site notice as depicted in the images below were placed on site on 3 October 2020.



---

From: Lester Harker <lester@eccenvironmental.com>  
Subject: Documents available for public review: Proposed exploration activities on EPL 7769 in the Hardap and Khomas regions  
Date: 6 November 2020 at 2:06:05 PM CAT  
To: danielmahua@necfu.org  
Cc: "Jessica Bezuidenhout (Mooney)" <jessica@eccenvironmental.com>, lovisa Nanula <lovisa@eccenvironmental.com>, Mariska Kuschke <mariska@eccenvironmental.com>

Dear Mr Mahua

I refer to our telephone conversation earlier and acknowledge your willingness to partake in the consultations with farmers affected by the proposed project.

ECC herewith notifies you of the availability of the environmental scoping, plus impact Assessment report and the Environmental Management Plan (EMP) draft reports on behalf of Jin Peng Investments (Pty) Ltd for public review.

The reports can be located on our website by following the link provided below:  
<https://eccenvironmental.com/project/exploration-activities-on-epl-7769-for-base-and-rare-metals-industrial-minerals-dimension-stones-and-precious-stones/>

**Review period:** Fourteen days (14) has been allocated to all interested and or affected parties (I&APs) starting on the 06th November 2020 and ending on the 20th November 2020 to review the reports.

Please assist us to relay this notification to all farmers within the Rehoboth Farmers Union who did not provide us with their email addresses. Please also ensure that all comments on the contents of the reports are forwarded to us by using the contact details below and that comments are in writing and reach us on or before the 20th November 2020.

Please do not hesitate to contact us should you have any questions.

Please also find attached the list of farm details as requested.

**Kind regards,**

**Lester Harker**

**Environmental Compliance Consultancy (ECC)**

**Position:** Environmental Assessment Practitioner

Office Tel: +264 81 669 7608

Postal: PO BOX 91193 | Klein Windhoek | Namibia

Address: 1 Jan Jonker Str | Wasserberg Park | Klein Windhoek | Namibia

Email: [lester@eccenvironmental.com](mailto:lester@eccenvironmental.com)

Website: [www.eccenvironmental.com](http://www.eccenvironmental.com)

Environmental Compliance Consultancy Notice: This message and any attached files may contain information that is confidential or subject of legal privilege intended only for use by the intended recipient. If you are not the intended recipient or the person responsible for delivering the message to the intended recipient, be advised that you have received this message in error and that any dissemination, copying or use of this message or attachment is strictly forbidden, as is the disclosure of the information therein. If you have received this message in error please notify the sender immediately and delete the message.

APPENDIX D - ECC CVS

Additional CV's available on request.



**CURRICULUM VITAE**  
**STEPHAN BEZUIDENHOUT**

**Name of Consultant:** Stephan Bezuidenhout  
**Position / Profession:** Managing Member & Senior Environmental Practitioner  
**Date of Birth:** 11 April 1989  
**Nationality:** Namibian  
**Professional Memberships:** EAPAN, FSC Environmental Chamber, NCE, NCA, N-BiG  
**Email:** stephan@eccenvironmental.com  
**Website:** www.eccenvironmental.com  
**Contact:** +264 81 262 7872



**QUALIFICATIONS:**

<b>University of Pretoria:</b>	<b>2011 – 2012</b>	Postgraduate Degree in Environmental Analysis	Degree in Management and
<b>University of Stellenbosch:</b>	<b>2007 – 2010</b>	Bachelor of Applied Science	

**PROFILE:**

ECC's proudly Namibian Principal leads the ECC team as the lead Environmental Practitioner with a strong and dedicated environmental background. Mr Bezuidenhout has leading practical experience in Identifying and applying legislative requirements to proposed projects. Identifying impacts and mitigations for projects within different sectors, including mining, energy, agriculture and construction.

**KEY AREAS OF EXPERTISE:**

Agriculture and Ecology	-	Aftercare, rehabilitation & restoration methodology & implementation Forest Stewardship Council (FSC) implementation and compliance
Environmental (and social) Impact Assessments (EIAs) (ESIAs) & Environmental Management	-	Compiling EIA Reports and EMPs Coordinate and review specialist studies Review EIA reports Environmental Management Systems (EMS) Public Participation & Stakeholder Management

Project Management

-

Management of teams through Southern Africa for various projects

## LANGUAGES:

	Read	Write	Speak
English	Excellent	Excellent	Excellent
Afrikaans	Excellent	Excellent	Excellent

## SUMMARY OF EXPERIENCE AND CAPABILITY:

Since 2010, Stephan has been working as an environmental assessment practitioner. Stephan has a strong ecological background and has gained more than ten years' experience in the environmental industry. As a lead practitioner, Stephan has successfully driven environmental impact assessments and compliance assessments within Southern Africa. His hands on and practical experience and knowledge of international standards, such as FSC, IFC and World Bank standards allows Stephan to advise his clients and teams constructively and effectively.

## PROJECT EXPERIENCE

PROJECT	DATE	ROLE
Best Practice Guide: Environmental Principles for Mining in Namibia	2017 - 2019	Team member
The FSC National Forest Stewardship Standard of Namibia	(2018-2020)	Part of the working group who compiled the National Standard for Forest Stewardship Council (FSC) in Namibia allowing for a higher rate of certification and improved compliance.
Jumbo Charcoal FSC Group Scheme Management	2015 - 2020	Jumbo Charcoal FSC Group Scheme Management
Biophysical Rehabilitation Plan for ML 42, 43, 44 and 45 as well as an overarching 5-year Biophysical Rehabilitation Plan for Namdeb	2018 - 2019	Part of the ECC team who completed the reporting and aided in the implementation of the Biophysical Rehabilitation Plans for Namdeb.
ESIA amendment for B2Gold Namibia Mining Licence (ML 169) to developed underground working for the Otjikoto (gold mine)	2018 - 2019	Lead Environmental Assessment Practitioner managing the EIA process (including stakeholder engagement, PPP and report review).
Kunene Regional Counsel sustainable water supply Pipeline and Ancillary works	2017 - 2018	Lead Environmental Assessment Practitioner managing the EIA process (including stakeholder engagement, PPP and report review).
ESIA application for B2Gold Namibia 10.8 megawatt PV solar upgrade to the B2Gold Power Plant	2017 - 2018	Lead Environmental Assessment Practitioner managing the EIA process (including stakeholder engagement, PPP and report review).
ESIA application for Otjiwarongo Wastewater Treatment and Bulk Water Supply	2019	Lead Environmental Assessment Practitioner managing the EIA process (including stakeholder engagement, PPP and report review).



		review).
ESIA for the Wastewater Treatment facilities for Gondwanan Collection	2019	Lead Environmental Assessment Practitioner managing the EIA process (including stakeholder engagement, PPP and report review).
MAWF permit application for Water Abstraction and Discharge for Gondwanan Collection	2019	Lead Environmental Assessment Practitioner managing the EIA process (including stakeholder engagement, PPP and report review).
EIA application for various exploration activities for Votorantim Metals Namibia Pty Ltd	2018 - Present	Lead Environmental Assessment Practitioner managing the EIA process (including stakeholder engagement, PPP and report review).
Abengoa Solar SA, Kaxu Solar One 100MW Concentrating Solar Plants (CSP) Trough	2015 - 2017	Environmental Control Officer during commissioning and rehabilitation phases
Konkoonsies II PV Solar Energy Facility, On-site substation and a 132kV power line Northern Cape, South Africa	2015 - 2017	Environmental Assessment Practitioner during EIA process
Abengoa Solar SA Paulputs CSP (Pty) Ltd. 150 MW CSP Trough Northern Cape, South Africa	2015 - 2017	Environmental Assessment Practitioner during EIA Process
Abengoa Solar SA, Xina Solar One 200 MW CSP Trough Northern Cape, South Africa	2015 - 2017	Environmental Control Officer during construction phase
Soil Remediation and Commissioning report of NGALA Camp for Isondlo Project Support (IPS) (Pty) Ltd Gauteng, South Africa	2015	Lead consultant and project manager.
375 km 26-inch natural gas installation for SASOL & ROMPCO Mozambique representing Worley Parsons (Pty) LTD. South Africa	2013 - 2015	Environmental Coordinator and Manager
Department of Water Engineering (working on a catchment management project for the Municipality of Stellenbosch)	2011 - 2012	Intern at Aurecon South Africa
Other projects	2011-2020	Stephan has successfully completed various other projects in the sectors of Agriculture, Mining, Energy and Tourism where he acted as the Lead Environmental Assessment Practitioner managing the EIA process (including stakeholder engagement, PPP, and report review).

## PUBLICATIONS

N.S., et al., Some ecological side-effects of chemical and physical bush clearing in a southern African rangeland ecosystem, Southern African Journal of Botany (2015), <http://dx.doi.org/10.1016/j.sajb.2015.07.012>  
The FSC National Forest Stewardship Standard of Namibia (Draft V 4). Co-authored by S Bezuidenhout, P Cunningham, A Ashby, F Detering, W Enslin & D Honsbein

**CERTIFICATION:**

I, the undersigned, certify that to the best of my knowledge and belief, these data correctly describe me, my qualifications, and experience.

DATE: \_\_\_/\_\_\_/\_\_\_20\_\_

\_\_\_\_\_  
FULL NAME OF CONSULTANT

## APPENDIX E

Archaeological field survey report.

# ARCHAEOLOGICAL ASSESSMENT OF PORTION OF EPL7769 AS INDICATED BY A CIRCULAR AREA MARKED ON LOCALITY MAP FURNISHED BY ECC, NAMIBIA

PREPARED BY

J.KINAHAN, Archaeologist

P.O. Box 22407, Windhoek, Namibia

Email [jkinahan@iafrica.com.na](mailto:jkinahan@iafrica.com.na)

PREPARED FOR:



21 October 2020

## DECLARATION

I hereby declare that I do:

- (a) have knowledge of and experience in conducting assessments, including knowledge of Namibian legislation, specifically the National Heritage Act (27 of 2004), as well as regulations and guidelines that have relevance to the proposed activity;
- (b) perform the work relating to the application in an objective manner, even if this results in views and findings that are not favourable to the applicant;
- (c) comply with the aforementioned Act, relevant regulations, guidelines and other applicable laws.

I also declare that I have no interests or involvement in:

- (i) the financial or other affairs of either the applicant or his consultant
- (ii) the decision-making structures of the National Heritage Council of Namibia.



John Kinahan, Archaeologist

## **EXECUTIVE SUMMARY**

An archaeological field survey was carried out on a portion of EPL7769 as indicated by a circular area (the Area of Interest/ AoI) marked on a map furnished by ECC. The AoI lies within the north-western parts of the Rehoboth Townlands which has been selected for exploration purposes and the possible mining of dimension stone as a commodity of interest. The field survey did not locate any archaeological sites considered to be significant or to require special mitigation measures. It is however recommended that the project adopt the attached Chance Finds Procedure devised for mining projects.

## TABLE OF CONTENTS

1. Introduction
  2. Legal requirements
  3. The receiving environment
  4. Conclusions & recommendations
- Appendix 1      Chance finds procedure

## 1. INTRODUCTION

### 1.1 Background

Environmental Compliance Consultancy (ECC) is carrying out an environmental assessment of a portion of EPL7769 on behalf of Jin Peng Investments (Pty) Ltd. for a potential dimension stone mining project. Mining is listed in the Environmental Management Act (2007) as an activity requiring environmental assessment and the issuance of an Environmental Clearance Certificate.

ECC has prepared a non-technical summary entitled Proposed Exploration Activities on EPL7769 for Base and Rare Metals, Industrial Minerals, Dimension Stones and Precious Metals, Hardap and Khomas Regions<sup>1</sup> which forms the background source for project data cited here.

Archaeological remains in Namibia are protected under the National Heritage Act (2004) and National Heritage Regulations (Government Notice 106 of 2005), and ECC has accordingly appointed the undersigned, J. Kinahan, archaeologist, to carry out an assessment of the project Aol. A field visit to the site was carried out on 20<sup>th</sup> October 2020.

### 1.2 Terms of Reference

The primary task of the archaeological assessment reported here was to identify sensitive archaeological sites that could be affected by the proposed exploration and mining activities. The archaeological assessment forms the basis of recommended management actions to avoid or reduce negative impacts, as part of the environmental assessment. The 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.

Specifically, the archaeological assessment addresses the following primary elements:

1. The identification and assessment of potential impacts on archaeological/heritage resources, including historical sites arising from the proposed exploration and mining activities.
2. The identification and demarcation of highly sensitive archaeological/heritage sites requiring special mitigation measures to eliminate, avoid or compensate for possible destructive impacts.
3. Formulation and motivation of specific mitigation measures for the project to be considered by the authorities for the issuance of clearance certificates.
4. Identify permit requirements as related to the removal or destruction of heritage resources.

### 1.3 Assumptions & Limitations

Archaeological assessment relies on the indicative value of surface finds recorded in the course of field survey. Field survey results are augmented wherever possible by inference from the results of surveys and excavations

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<sup>1</sup> ECC DOCUMENT CONTROL: ECC-90-302-NTS-05-B, September 2020

carried out in the course of previous work in the same general area as the proposed project, as well as other sources such as historical documentation. Based on these data, it is possible to predict the likely occurrence of further archaeological sites with some accuracy, and to present a general statement (see Receiving Environment, below) of the local archaeological site distribution and its sensitivity. However, since the assessment is limited to surface observations and existing survey data, it is necessary to caution the proponent that hidden, or buried archaeological or palaeontological remains might be exposed as the project proceeds

## 2. LEGAL REQUIREMENTS

The principal instrument of legal protection for archaeological/heritage resources in Namibia is the National Heritage Act (27 of 2004). Part V Section 46 of the Act prohibits removal, damage, alteration or excavation of heritage sites or remains. Section 48 *ff* sets out the procedure for application and granting of permits such as might be required in the event of damage to a protected site occurring as an inevitable result of development. Section 51 (3) sets out the requirements for impact assessment. Part VI Section 55 Paragraphs 3 and 4 require that any person who discovers an archaeological site should notify the National Heritage Council. Heritage sites or remains are defined in Part 1, Definitions 1, as “any remains of human habitation or occupation that are 50 or more years old found on or beneath the surface”.

It is important to be aware that no specific regulations or operating guidelines have been formulated for the implementation of the National Heritage Act in respect of archaeological assessment. However, archaeological impact assessment of large projects has become accepted practice in Namibia during the last 25 years, especially where project proponents need also to consider international guidelines. In such cases the appropriate international guidelines are those of the World Bank OP/ BP 4.11 in respect of “Physical Cultural Resources” (R2006-0049, revised April 2013). Of these guidelines, those relating to project screening, baseline survey and mitigation are the most relevant.

Archaeological impact assessment in Namibia may also take place under the rubric of the Environmental Management Act (7 of 2007) which specifically includes anthropogenic elements in its definition of environment. The List of activities that may not be undertaken without Environmental Clearance Certificate: Environmental Management Act, 2007 (Govt Notice 29 of 2012), and the Environmental Impact Assessment Regulations: Environmental Management Act, 2007 (Govt Notice 30 of 2012) both apply to the management of impacts on archaeological sites and remains whether these are considered in detail by the environmental assessment or not.

## 3. THE RECEIVING ENVIRONMENT

The proposed mining activities are to be carried out on portion of EPL7769 as indicated by a circular area (the Area of Interest/ Aoi) marked on a map furnished by ECC (see Figure 1). The Aoi consists of deeply incised granites and metasedimentary terrain with valley fill deposits of Tertiary gravels and sand as well as some aeolian Kalahari sand cover. The eastern side of the Aoi is characterized by typical Kalahari savanna vegetation while the western side is dominated by dwarf shrub savanna typical of dry montane conditions. The Aoi is



bisected by the Krumneck River, a major tributary of the Oanob River, forming a deep ravine with a narrow margin of riparian vegetation.

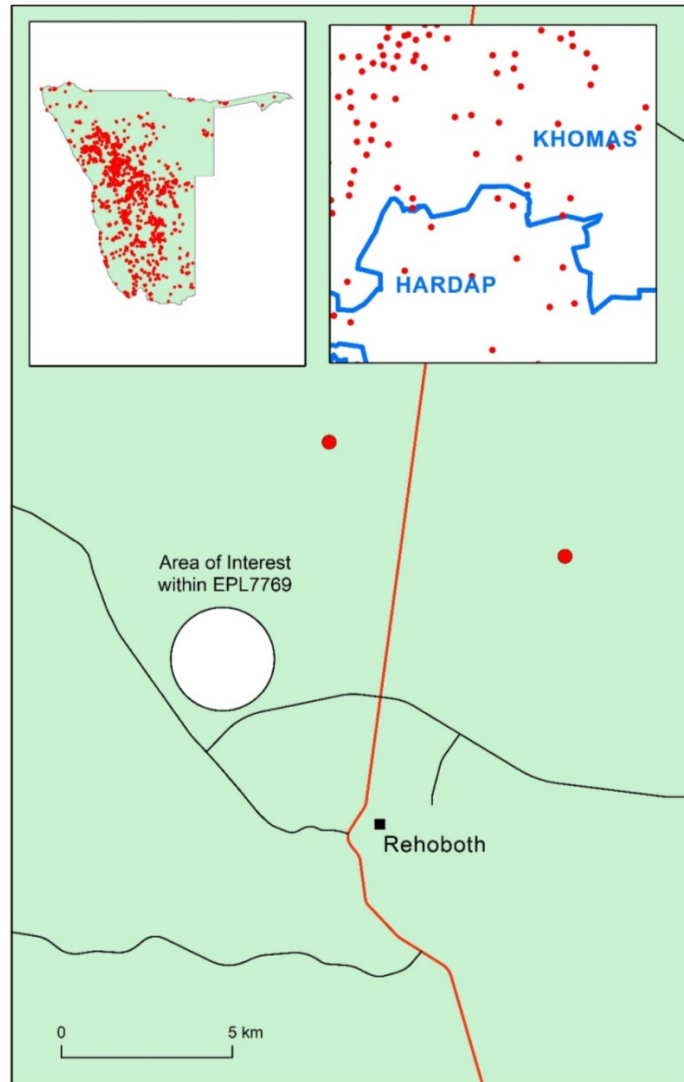


Figure 1: The EPL7769 Area of Interest, showing the known distribution of archaeological sites (red dots) in the adjacent area and regions.

Earlier surveys provide an indication of the archaeological importance of this general area, although the intensity of survey varies considerably and large parts of the area are archaeologically unknown, including that of the AoI itself. The general sequence and archaeological characteristics of the area under consideration, based on current knowledge, are as follows:

- a. **Early to mid-Pleistocene (ca. 2my to 0.128my; OIS 6, 7, 19 &c):** represented by surface scatters of stone tools and artefact debris, usually transported from original context by fluvial action, and seldom occurring in sealed stratigraphic context.
- b. **Mid- to upper Pleistocene (ca. 0.128my to 0.040my; OIS 3, 4 & 5a-e):** represented by dense surface scatters and rare occupation evidence in sealed stratigraphic context, with occasional associated evidence of food remains.
- c. **Late Pleistocene to late Holocene (ca. 0.040my to recent; OIS 1 & 2):** represented by increasingly dense and highly diverse evidence of settlement, subsistence practices and ritual art, as well as grave sites and other remains.
- d. **Historical (the last ca. 250 years):** represented by remains of crude buildings, livestock enclosures, wagon routes and watering points, as well as graves, comprising small cemeteries near farm settlements or isolated burial sites.

In summary, early to mid-Pleistocene sites are associated with pans, outwash gravels, drainage lines and river gravels. These sites are difficult to detect and because they are easily overlooked in the course of mining or construction work they are often damaged or destroyed in the process. Mid- to upper Pleistocene sites occur in similar contexts to the earlier material, but hill foot-slopes and outcrops of rock suitable for artefact production (e.g. chert, fine-grained quartzites) are also focal points. Late Pleistocene to late Holocene sites occur in almost every terrain setting, with the exception of very steep slopes and mountain tops. These sites often exhibit locally integrated distribution patterns which allow some reconstruction of land-use and subsistence. Major Holocene sites include stratified occupation deposits, containing an array of organic and inorganic residues. Heritage sites relating to the historical period relate mainly to farming settlement in the vicinity of Rehoboth and outlying villages.

### 3.2 Observations

A detailed foot survey of the area indicated in Figure 1 found no significant archaeological sites and the AoI is therefore considered to have a low archaeological sensitivity. Rocky ridges overlooking the Krumneck River were however found to have localized scatters of stone artefact production debris, mainly hydrothermal vein quartz. The scatters were dispersed and showed a very low artefact density (<1 object/m<sup>2</sup>), indicating either ephemeral occupation or post-occupation disturbance. Although the artefact scatters contained no typologically diagnostic pieces, the material can be attributed to Late Pleistocene to late Holocene (ca. 0.040my to recent; OIS 1 & 2) hunter-gatherer occupation. The rugged and rocky nature of the terrain probably excludes the likelihood of human burial sites although the possibility cannot be dismissed entirely.

## 4. CONCLUSIONS & RECOMMENDATIONS

On the basis of the field survey reported here the portion of EPL7769 forming the Area of Interest for a possible dimension stone mining operation is not considered to be archaeologically sensitive. No archaeological sites

requiring further investigation or mitigation were located in the course of the survey. It is however recommended that the proponent should adopt the Chance Finds Procedure in Appendix 1 as part of the project Environmental Management Plan.

## Appendix 1: Chance Finds procedure

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

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

### Responsibility:

Operator	To exercise due caution if archaeological remains are found
Foreman	To secure site and advise management timeously
Superintendent	To determine safe working boundary and request inspection
Archaeologist	To inspect, identify, advise management, and recover remains

### Procedure:

#### Action by 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 foreman

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

#### Action by superintendent

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

#### In the event of discovering human remains

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