ENVIRONMENTAL
COMPLIANCE CONSULTANCY






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

NOVEMBER 2020

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Environmental Compliance Consultancy CC
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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, intend to undertake exploration activities on Exclusive Prospecting Licence (EPL) 7769 for base and rare metals, dimension stones, industrial minerals, and precious metals in the Hardap and Khomas regions. The bulk of the licence lies 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.

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 include sediment sampling and analysis, geological mapping, installations and sinking of exploration drill holes in a selected focus area. Some limited bush-clearing and access tracks creation may occur with the exclusion of specially protected plant species. All sites of activity will be managed according to stringent environmental requirements. 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.

The exploration activities will commence if an environmental clearance certificate is granted by the Environmental Commissioner, which will see activities occurring expected to be conducted over a 3-year period, which is the duration of the mineral licence, also known as an 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 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 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. The proposed project will have no influence on the operations of NamWater in this area.

Through the scoping process, the surrounding environment was assessed by undertaking desktop reviews. The impacts of exploration activities with respect to airborne dust are expected to be limited to vehicular traffic. 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 associated drilling and machinery noise, 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 north 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 with a colour pallet closely resembling the surrounding 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 in such a way that it is out of sight from human receptors;
- 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.

On this basis, it is of the opinion of ECC that an environmental clearance certificate could be issued, on conditions that the management and mitigation measures specified in the EMP are implemented and adhered to.

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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
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 PURPOSE OF THIS REPORT

The purpose of this report is to present the findings of the environmental assessment for the proposed exploration project. The proposed project is to undertake mineral exploration activities on EPL 7769 located in the Hardap and Khomas regions of Namibia for base and rare metals, dimension stone, industrial minerals, and precious metals (Figure 1), but with a priority focus on dimension stone (granite) exploration.

1.2 BACKGROUND OF THE PROPOSED PROJECT

The EIA has been undertaken in terms of the requirements of the Environmental Impact Assessment Regulations, No. 30 of 2012, gazetted under the Environmental Management Act, No.7 of 2007 (referred to herein as the EIA Regulations).

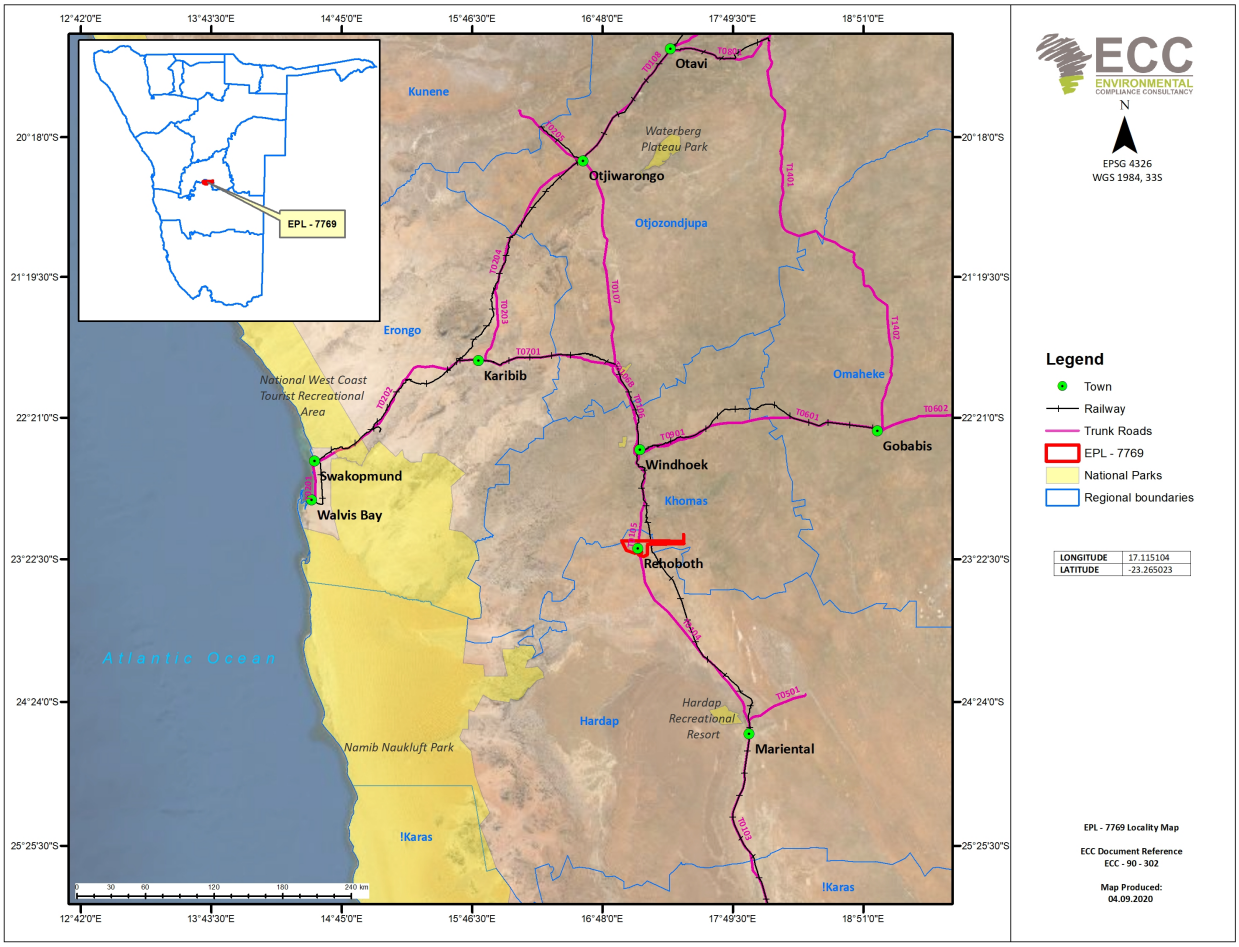

FIGURE 1 - LOCATION OF EPL 7769 FROM A NATIONAL PERSPECTIVE

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).

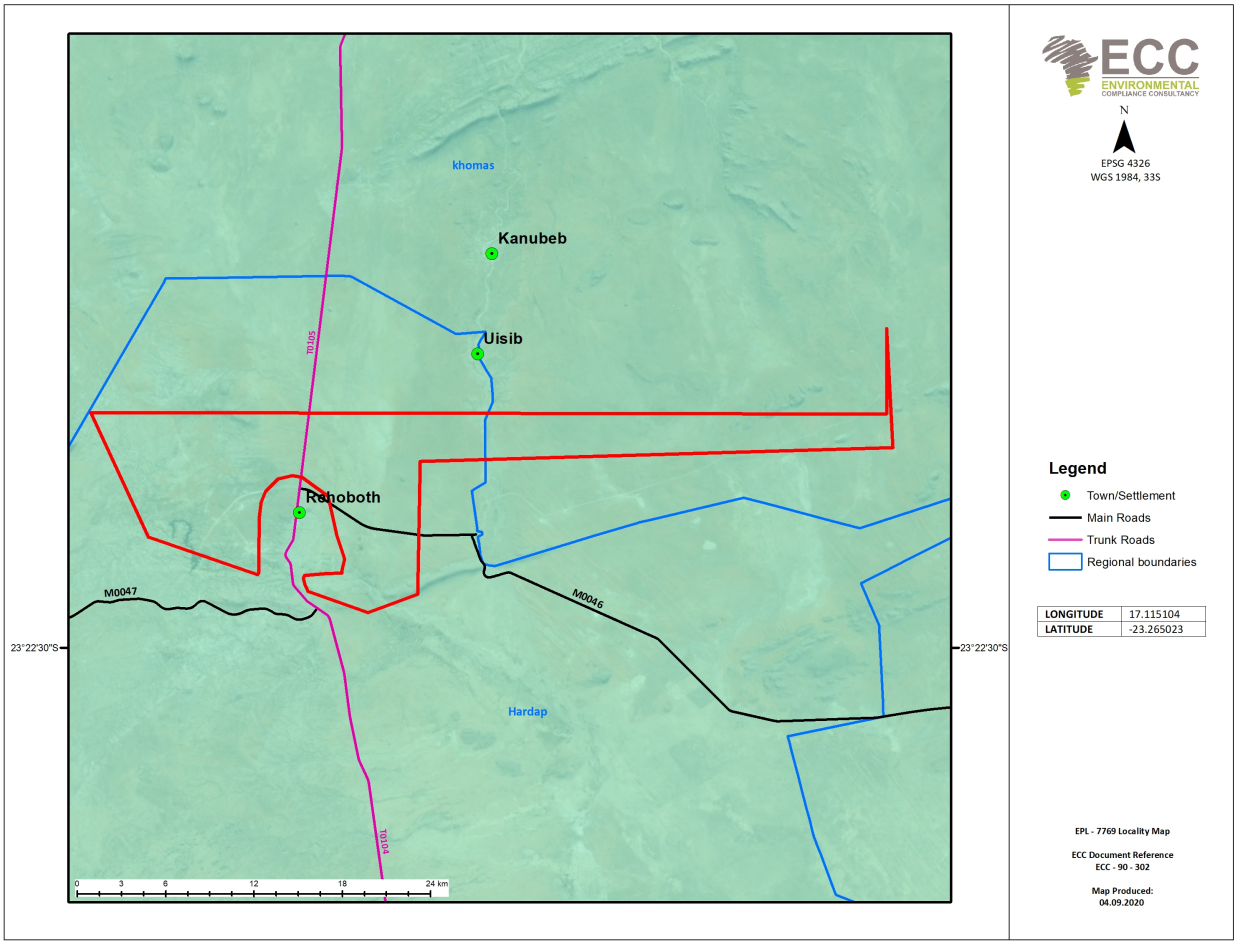

FIGURE 2 - ZOOMED-IN LOCALITY MAP OF EPL 7769

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, identifying the significance of effects, including cumulative 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. An 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 and/or minimised as far as reasonably practicable, and that statutory requirements and other legal obligations are fulfilled.

This report plus appendices will be 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 Environmental Consultancy

ECC, a Namibian consultancy (registration number Close Corporation 2013/11401), has prepared this scoping report and impact assessment 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:

Environmental Compliance Consultancy

PO BOX 91193

Klein Windhoek, Namibia

Tel: +264 81 669 7608

Email: info@eccenvironmental.com

1.5 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
Jin Peng Investments (Pty) Ltd (2018/1724) Mrs Maggie Shi	P O Box 26826, Windhoek, Namibia	maggieming2012@hotmail.com	+264 816790612

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
FOREST ACTIVITIES 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.	○ The proposed project may require limited vegetation clearing for possible new access tracks and site camps. Specially protected plant species will not be cleared without approval from the competent authority.
WATER RESOURCE DEVELOPMENTS 8.1 The abstraction of groundwater or surface water for industrial or commercial purposes.	○ The abstraction of groundwater is possible through the sinking of drill holes, although it is intended that water will be transported in mobile water tanks to the project area. Moreover, water may be sourced from the nearby local authority in Rehoboth.
MINING AND QUARRYING ACTIVITIES 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	○ The proposed project operates under a licence that permits for the construction of temporal exploration campsites, drill sites and access roads. ▪ 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. ○ Minerals will be sampled and explored for within EPL 7769. ○ The proposed project will explore for base and rare metals, dimension stones, industrial minerals, and precious metals.
HAZARDOUS SUBSTANCES TREATMENT, HANDLING AND STORAGE 9.1 The manufacturing, storage, handling, or processing of a hazardous substance defined in the Hazardous Substance Ordinance, 1974.	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 000litres a storage and handling permit is required from the Ministry of Mines and Energy.
WASTE MANAGEMENT, TREATMENT, HANDLING, AND DISPOSAL ACTIVITIES 2.1 The construction of waste sites, treatment of 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.	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 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.

- **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.
- **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..
    - **SAMPLING** - Selecting a fractional but representative part of a mineral deposit for analysis.
- **GEOPHYSICAL GROUND SURVEYS** will be undertaken to collect data that give an indication of rock properties, particularly at depth. They are also used to map the geological structures. Induced Polarization (IP) surveys will be undertaken involving high voltage electrical currents measured via electrodes in the ground along linear cut-lines up to 3 km long to provide access to electrical cables. Small holes in the ground (0.2m x 0.2m x 0.3m) will be required for IP electrodes every 50m along a survey line. Copper sulphate solution will be used to improve the conduction of electrodes during the IP survey. During Audio-Magneto telluric (AMT) surveys the same lines and small holes in the ground will be used, but without the application of high voltage electrical currents.
- **RAB DRILLING** (Rotary Air Blast drilling) is ana open-hole technique that injects compressed air down the drill pipe and collects/recover the cut-up fragments created on the outside of the drill stem.
- **DIAMOND DRILLING** entails the use of a diamond 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 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.

2 APPROACH TO THE IMPACT ASSESSMENT

2.1 PURPOSE OF THE ENVIRONMENTAL IMPACT ASSESSMENT

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

The aim of this preliminary 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, which is most applicable for use. In addition the assessment process and subsequent reports are to apply the principles of environmental management to the proposed activities; reduce the negative and increase the positive impacts arising from the project; provide an opportunity for the public to consider the environmental impacts of the proposed project through meaningful consultation; and to provide a vehicle to present the findings of the assessment process to competent authorities for decision making.

2.2 THE ASSESSMENT PROCESS

The EIA methodology applied to this assessment 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.

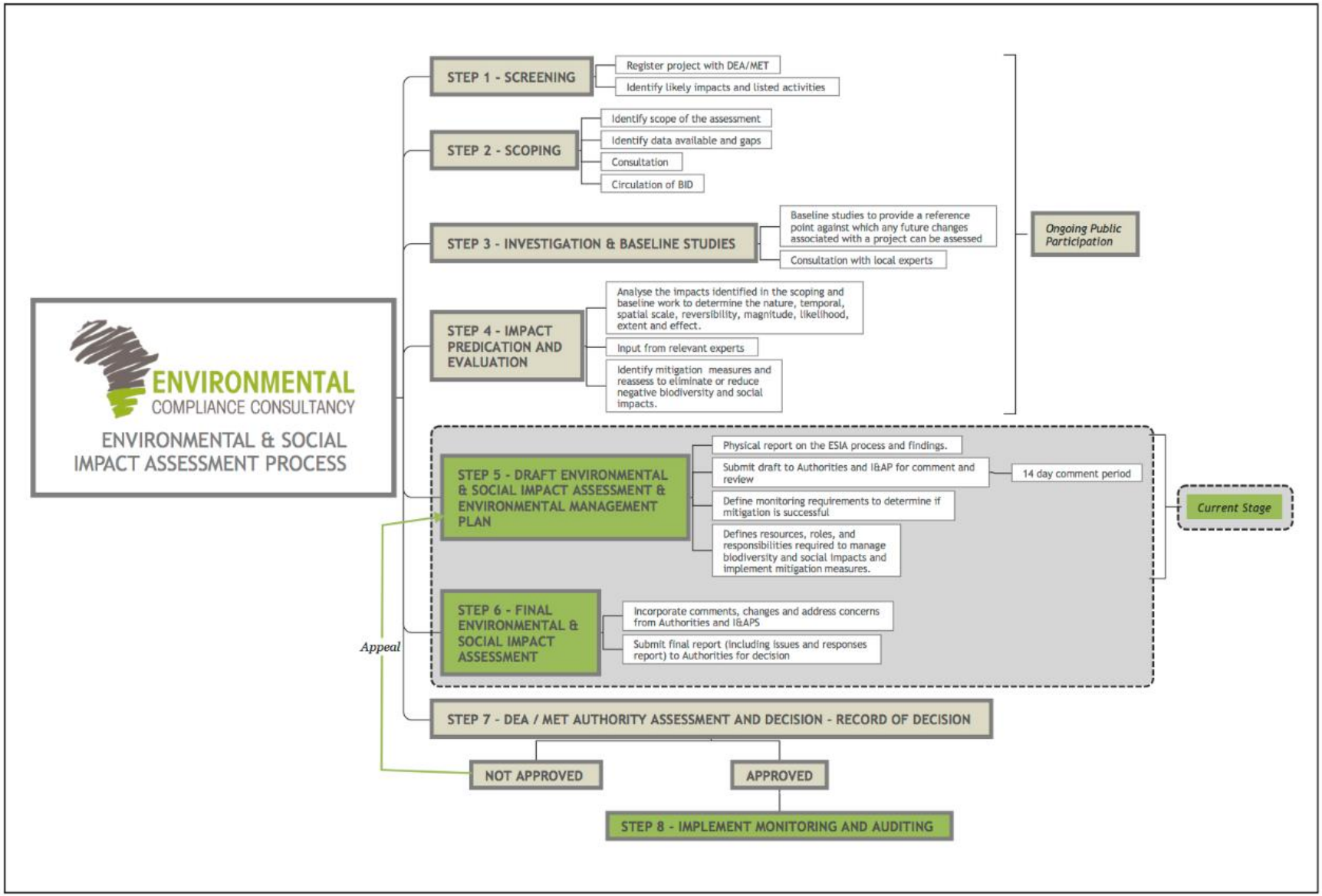

FIGURE 3 - ECC SCOPING PROCESS

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 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 and EMP) is required, as the proposed project is considered as a listed activity and there may be potential for significant impacts to occur.

2.5 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.

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 EIA 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 21st and 28th 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 are encouraged to provide constructive input during the consultation periods. Matters of concern raised during consultations will be presented in Appendix C in the final draft.

The public review of the scoping report and the EMP is set between 06-20 November 2020. All issues or concerns raised by the I&APs during this consultation period will be captured and addressed in the final assessment report.

2.8 DRAFT EIA 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 EIA 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 EIA 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. & of 2007 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 EIA AND EMP

The final EIA report and associated appendices will be available to all stakeholders on the ECC website www.eccenvironmental.com. All I&APs will be informed via email. The EIA report and appendices will be 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 EIA presented in the EIA 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 3 - LEGAL COMPLIANCE

NATIONAL REGULATORY REGIME	SUMMARY	APPLICABILITY TO THE PROJECT
Constitution of the Republic of Namibia of 1990	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: *"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."*	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 to that could contribute to the mining sector in Namibia.
Minerals (Prospecting and Mining) Act, No. 33 of 1992	Provides for the reconnaissance, prospecting and mining for, and disposal of, and the exercise of control, minerals in Namibia. Section 50 (i) requires *"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"* 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: 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. Section 52 sets out that the holder of a mineral	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. 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. The project shall be compliant with Section 76. With regards to records, maps, plans and financial statements, information, reports, and returns submitted. As the proponent will need to access privately owned land the proponent will ensure Sections 50 and 52 are complied with.

NATIONAL REGULATORY REGIME	SUMMARY	APPLICABILITY TO THE PROJECT
	licence shall not exercise any rights conferred upon such holder by this Act or under any terms and conditions of such mineral licence (a) In, on or under any private land until such time as such holder. (i) Has entered into an agreement in writing with the owner of such land containing terms and conditions relating to the payment of compensation, or the owner of such land has in writing waived any right to such compensation and has submitted a copy of such agreement or waiver to the Commissioner.	
Environmental Management Act, (No. 7 of 2007) and its regulations, including the Environmental Impact Assessment Regulation, 2007 (No. 30 of 2012)	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. It sets the principles of environmental management as well as the functions and powers of the minister. The Act requires certain activities to obtain an environmental clearance certificate prior to project development. The Act states an EIA may be undertaken and submitted as part of the environmental clearance certificate application. 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.	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. The assessment and report have been undertaken in line with the requirements under the Act and associated regulations.
Water Act, No. 54 of 1956	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 *"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".* The Department of Water Affairs within the Ministry of Agriculture Water and Land Reform (MAWLR) is responsible for the administration of the act. 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.	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. Measures to minimise potential groundwater and surface water pollution are contained in the EMP. 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

NATIONAL REGULATORY REGIME	SUMMARY	APPLICABILITY TO THE PROJECT
		abstraction is recommendable. Should the project require drilling and abstraction of water from underground sources, an application should be submitted to the authorities.
Soil Conservation Act, No. 76 of 1969) and the Soil Conservation Amendment Act, No. 38 of 1971)	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.
The Forestry Act, No. 12 of 2001 as amended by the Forest Amendment Act, No. 13 of 2005	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.
National Heritage Act, No. 27 of 2004.	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 4 - NATIONAL POLICIES

NATIONAL REGULATORY REGIME	SUMMARY	APPLICABILITY TO THE PROJECT
Vision 2030	Vision 2030 sets out the nation's development programmes and strategies to achieve its national objectives. It sets out eight themes to realise the country's long-term vision. Vision 2030 states that the overall goal is to improve the quality of life of the Namibian people to a level in line with the developed world.	The planned project shall meet the objectives of Vision 2030 and shall contribute to the overall development of the country through continued employment opportunities.
The Fifth National Development Plan (NDP5)	NDP5 is the fifth in the series of seven five-year national development plans that outline the objectives and aspiration of Namibia's long-term vision as expressed in Vision 2030. NDP5 is structured on the pillars of economic progression, social transformation, environmental sustainability and good governance. Under the social transformation pillar is the goal of improved education.	The planned project supports meeting the objectives of NDP5 by creating opportunities for employment to the nearby community and the Namibian nation.
Minerals Policy	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. 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.	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.
Labour Act, No. 11 of 2007	The Labour Act, No. 11 of 2007 (Regulations relating to the Occupational Health & 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)	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

NATIONAL REGULATORY REGIME	SUMMARY	APPLICABILITY TO THE PROJECT
		hazardous substances need to be aware of the specific hazardous substances in order not to compromise worker and environmental safety.

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 and/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 license that may be relevant to the proposed projects are outlined in Table 5.

TABLE 5 - PERMITS AND LICENCES REQUIREMENTS

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

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 and 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 exploration activities on EPL 7769 will include some or all of the following methods: remote sensing, geological mapping, geochemical sampling, geophysical surveys and drilling and trenching. Details of these methods are described below. Ground-based exploration techniques are inevitable in the search of base and rare metals, dimension stones, industrial minerals, and precious metals. Data obtained by geological mapping are also used to refine selected focus areas.

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. Vegetation clearance shall be required for drill access tracks, drill pads and for the geophysical survey team and drillers' temporary camps.

This will also be carried out by hand or 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 (soil and 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. They are also used to map the geological structures. Induced Polarization (IP) surveys will be undertaken involving high voltage electrical currents measured via electrodes in the ground along linear cut-lines up to 3 km long to provide access to electrical cables. Small holes in the ground (0.2m x 0.2m x 0.3m) will be required for IP electrodes every 50m along a survey line. Copper sulphate solution will be used to improve the conduction of electrodes during the IP survey. This method may be included in the exploration program.
- **RAB DRILLING** (Rotary Air Blast drilling) is ana open-hole technique that injects compressed air down the drill pipe and collects/recover the cut-up fragments created on the outside of the drill stem.
- **DIAMOND DRILLING** entails the use of a diamond 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 and possible Rotary Air Blast (RAB) drilling could occur and the number of holes and aerial extent within the focus area will be determined by the geochemical and geophysical anomalies obtained.

Vegetation clearing will 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 programs is variable, and usually depends on the information that is gained from drilling. 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.

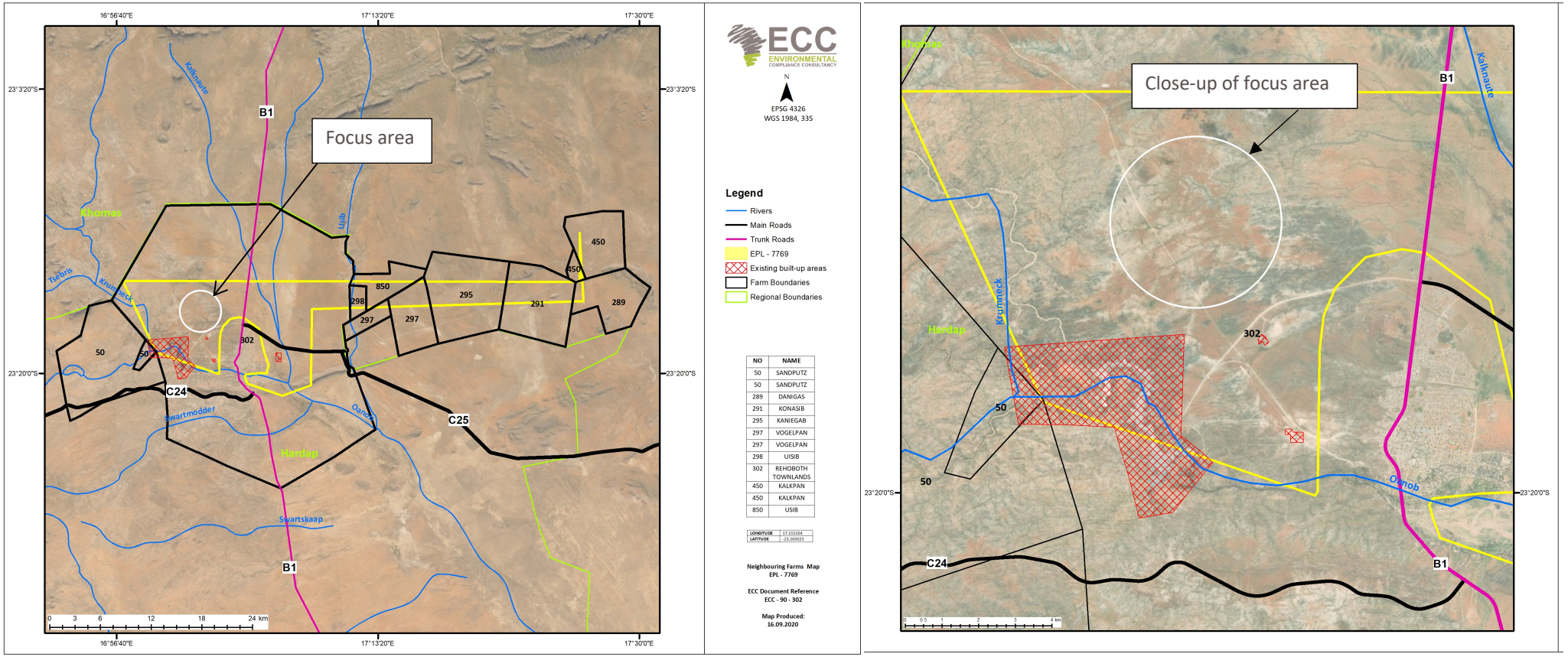

FIGURE 4 - IDENTIFICATION OF THE FOCUS AREA

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. Field activities will be organized from Windhoek. The contractor's camp infrastructure may include tents and chemical toilets for the workers housing section 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.

4.3.4 WORKERS AND ACCOMMODATION

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

It is envisaged that for most of the exploration programme workers will reside in temporary wood and steel-based panel houses constructed 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 RAB and diamond drilling. The water will most likely be sourced from the local municipality 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 recycled, contained and allowed to evaporate after use. The drill-sludge is disposed of at the Rehoboth municipal waste disposal site. In case of provision of the mobile toilets to be used on site, sewerage generated shall be managed by the toilet contractor. Wastewater that is discharged into the environment must comply with wastewater discharge specifications.

4.3.6 SITE REHABILITATION

Once exploration activities are completed the areas shall be rehabilitated to a condition as close to the original state as far as possible. Rehabilitation shall be determined during the exploration programme and shall be agreed 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

5.1 INTRODUCTION

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.

5.2 THE PROJECT SITE AND LOCATION

EPL 7769 was granted by the MME on the 02th 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.

5.3 SITE AND SURROUNDING ENVIRONMENT

Rehoboth 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).

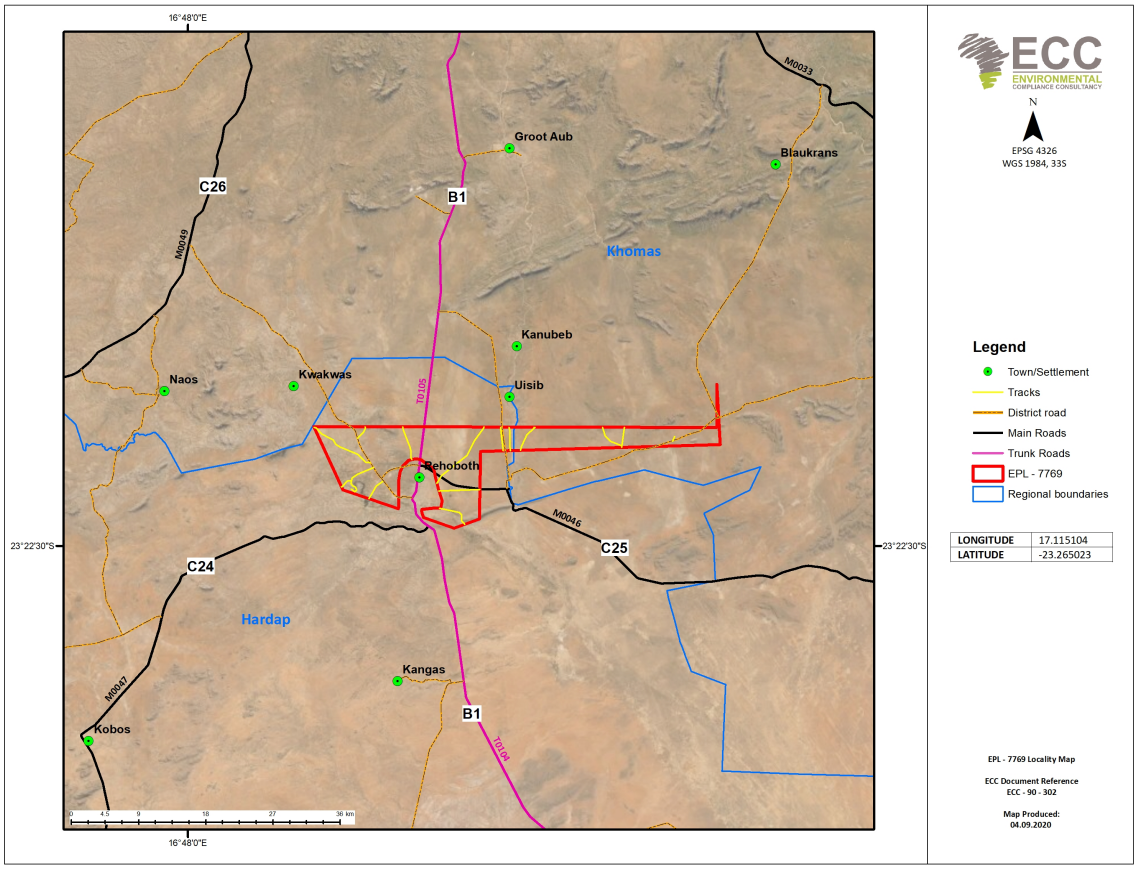

FIGURE 5 - ACCESSIBILITY MAP OF EPL 7769

Rehoboth is a town in central Namibia, north of the Tropic of Capricorn, with approximately 40 000 inhabitants (this include the immediate surrounding, rural community). Located 87 km south of the Namibian capital Windhoek, Rehoboth lies on a high elevation plateau with several natural hot-water springs. Rehoboth is divided into eight neighborhoods, called blocks. The oldest part of the town is 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 access to the Naukluft Park and Sossus Vlei via Mariental or via Rehoboth. 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. The whole Region has well developed infrastructure (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 and movements during the exploration activities. Pro-active communication between the proponent, farmers and neighboring property owners, need to be maintained when planning to access the EPL and to keep them updated on exploration activities.

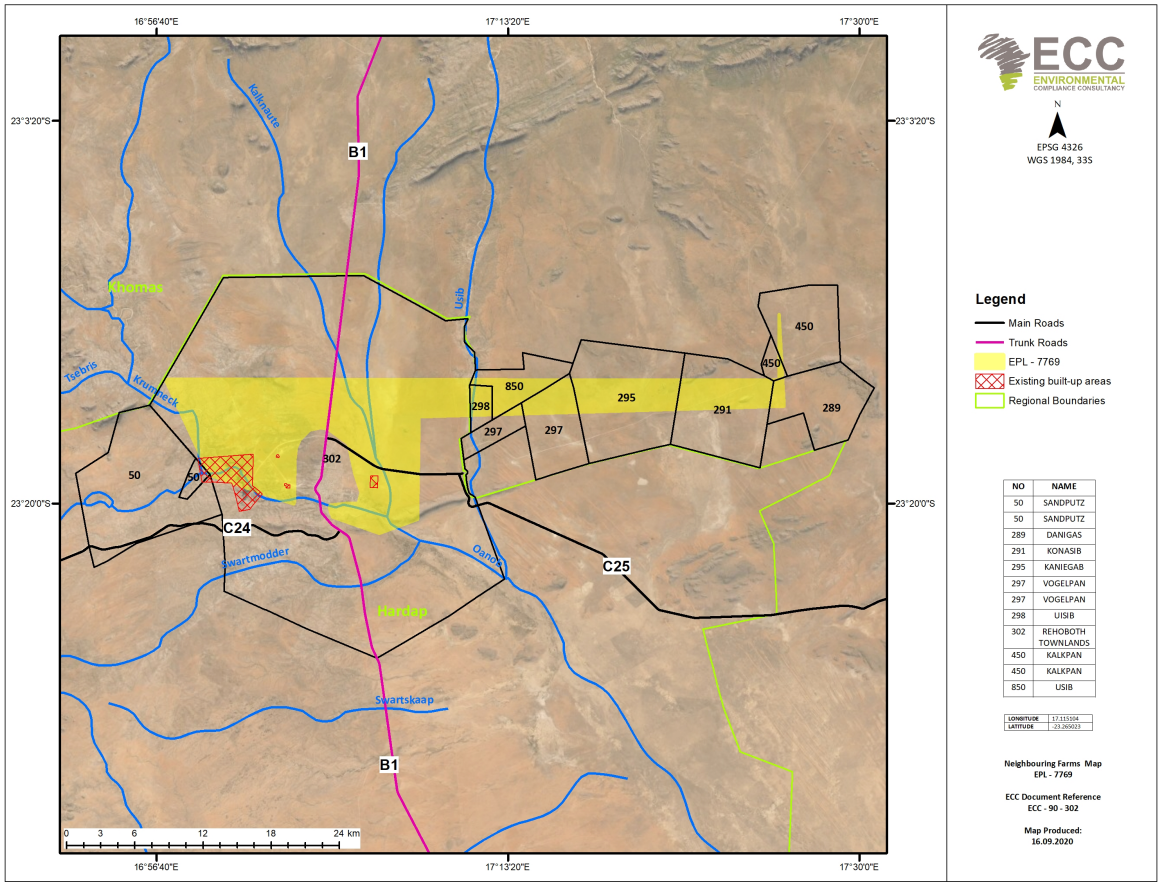

FIGURE 6 - LOCATION OF EPL 7769 RELATIVE TO NEIGHBOURING FARMS

5.4 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. 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).

On the globe, Namibia is located in the belt that is dominated by prevailing high-pressure cells. Off the coast the South Atlantic High is the reason for constant southwest winds, the Benguela Current, the upwelling cells of the ocean, and the subsiding air over the Namib Desert. Over the interior the Kalahari High dominates during winter and the subsiding air causes cloudless days with stable sinking air. During summer the positions of the high-pressure cells fluctuate more, allowing low pressure cells to develop over the heated interior, which in turn pull moist air from the inter-tropical convergence zone. As the moist air from the north and the east moves south and west, the northeast parts of Namibia receive the most rain – diminishing in a direction to the south and west.

Due to the rhythm of the air pressure systems, 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).

5.5 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 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 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.

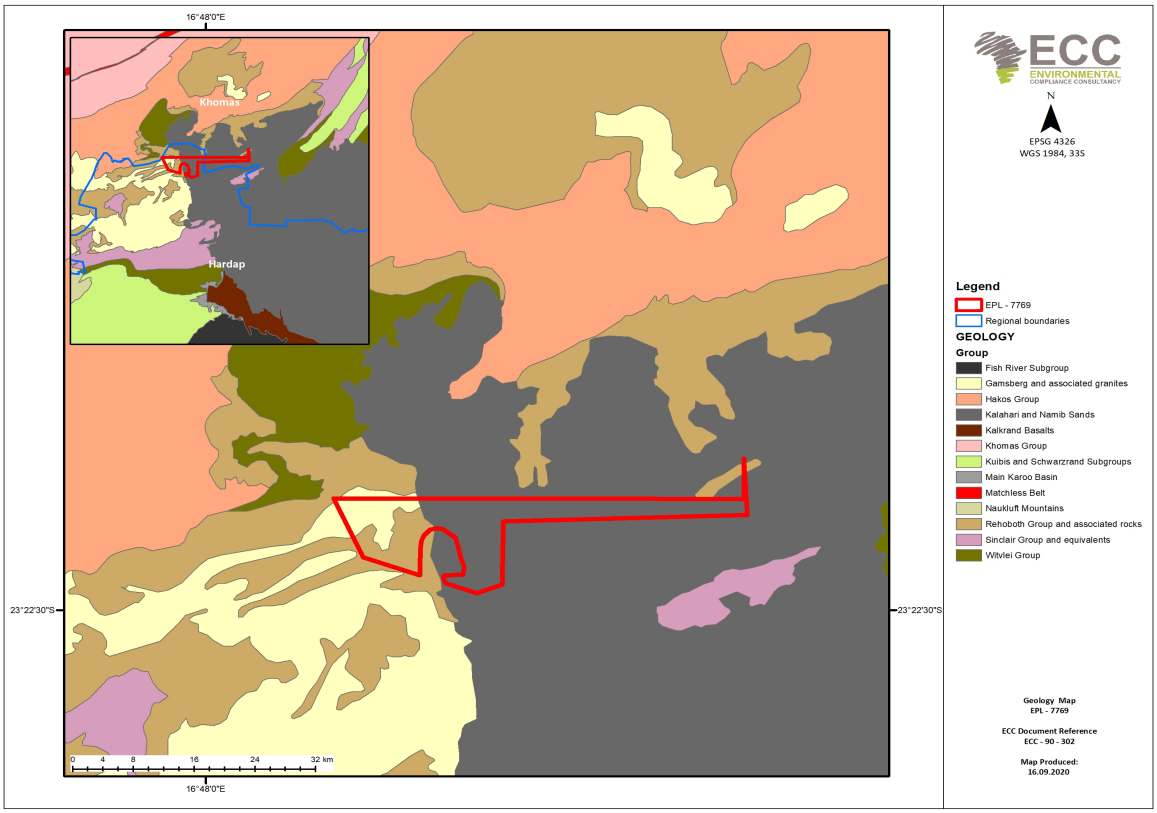

FIGURE 7 - EPL 7769 REGIONAL AND LOCAL GEOLOGY

5.6 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.

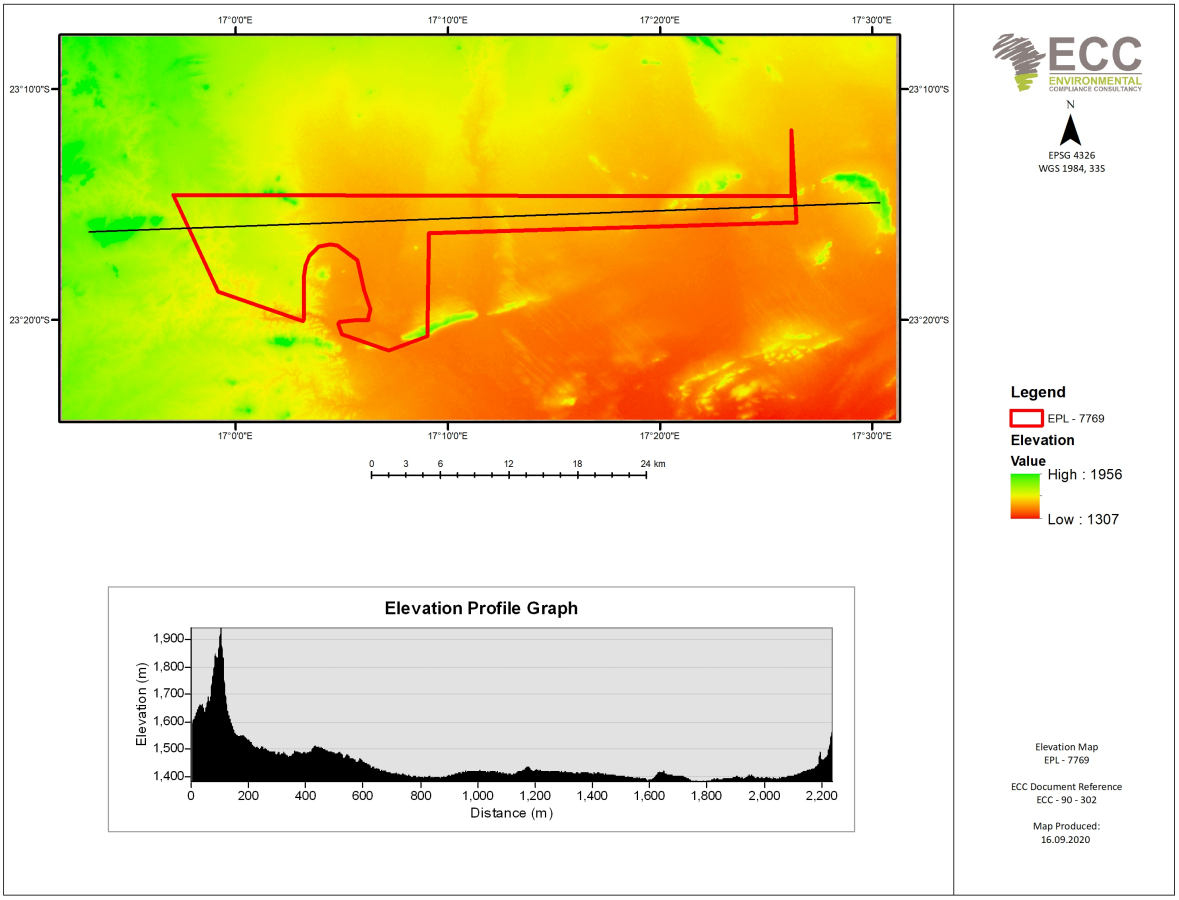

FIGURE 8 - ELEVATION PROFILE ALONG EPL 7769

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).

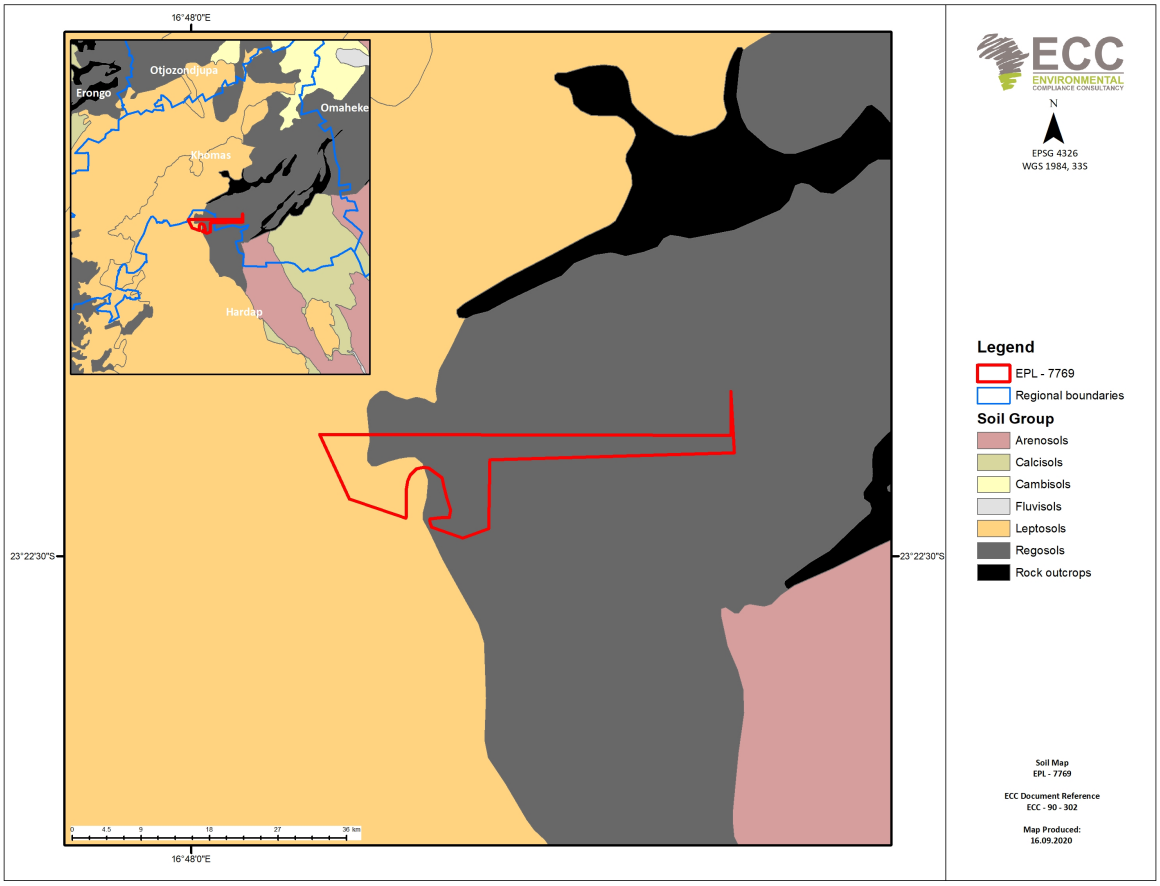

FIGURE 9 - EPL 7769 REGIONAL AND LOCAL SOIL MAP

5.7 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 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 Figure10. Should the project require the drilling and abstraction of water from an additional borehole, an application must be submitted to the authorities.

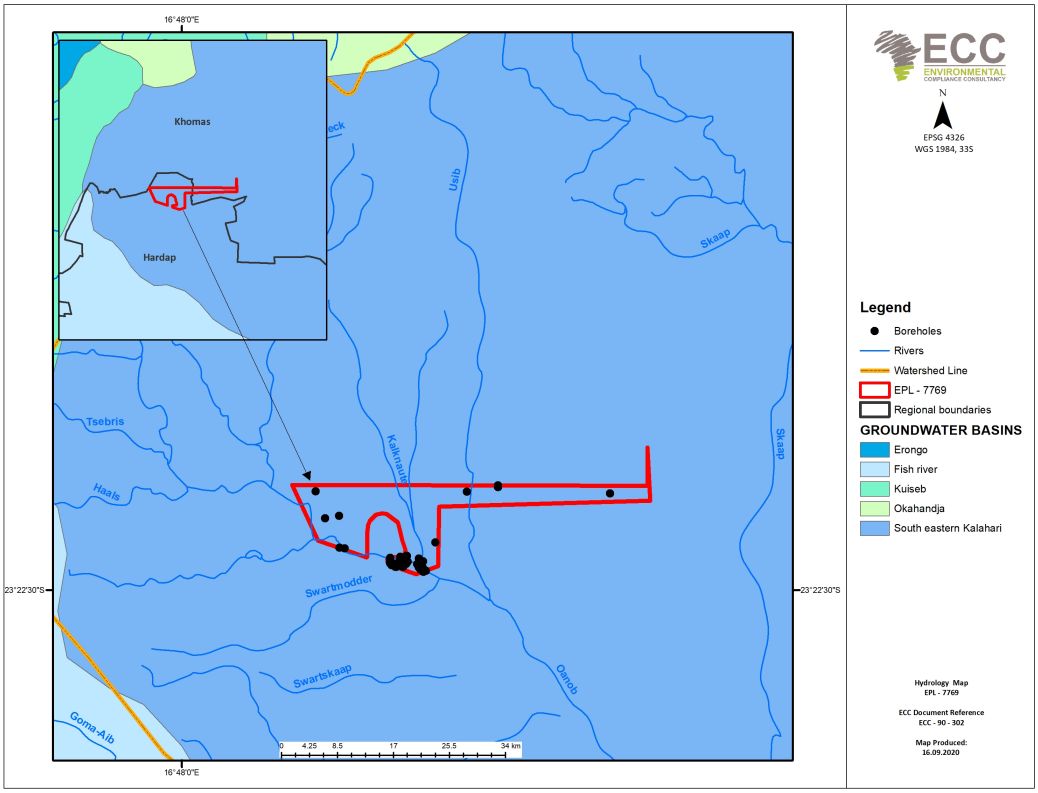

FIGURE 10 - HYDROLOGY MAP OF THE EPL 7769

5.8 BIODIVERSITY

5.8.1 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 a 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). 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.

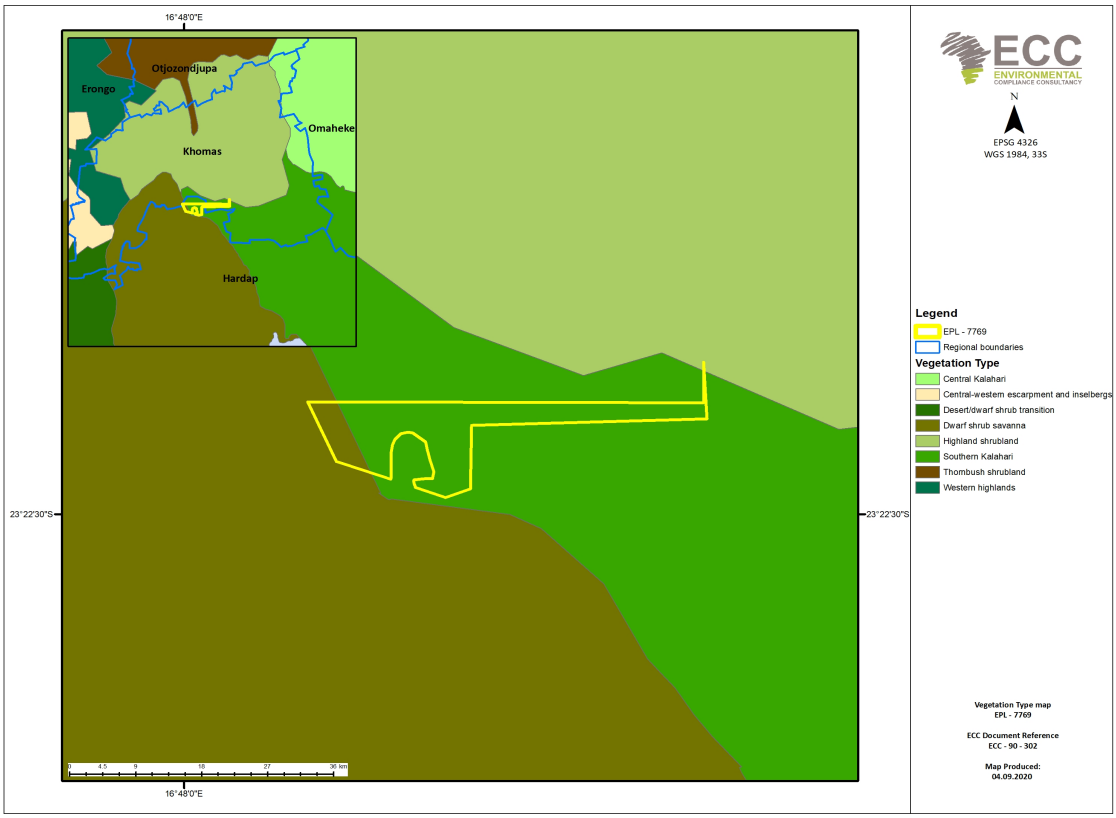

FIGURE 11 - EPL 7769 REGIONAL AND LOCAL VEGETATION MAP

5.8.2 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.

5.8.3 SOCIO-ECONOMIC BASELINE

The largest part of EPL 7769 is located within the Hardap Region, with the eastern part of the EPL jotting 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 accommodates 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).

5.8.4 DEMOGRAPHIC PROFILE

Namibia is one of the least densely populated countries in the world (2.8 person per km^2). 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 km2) 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)

5.8.5 GOVERNANCE

Namibia is divided in 14 regions, subdivided into 121 constituencies. 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).

5.8.6 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).

Charcoal processing activities are associated with charcoal dust exposure, which may increase the risk of workers developing adverse respiratory outcomes. There are no documented studies on dose–response relationships between respiratory symptoms and dust levels exposure among charcoal workers.

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.

5.8.7 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 for 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 that 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).

5.8.8 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. Several crops are produced here, but there are also activities such as piggeries, a diary super farm and abattoirs. Elsewhere irrigation is practiced by utilizing groundwater from the Stampriet artesian aquifer, although at a localized and small-scale. The prominence of agriculture as a primary economic sector in the Hardap region is responsible for a 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).

Where EPL 7769 is located, the dominant land use and economic activity is extensive agriculture. Extensive livestock farming forms the livelihood of many people in the Hardap Region as well as the rural parts of the Khomas Region and is one of the reasons for the low intensity land use, the low total population as well as the low population density. Farming forms the livelihood of many rural people and is one of the reasons for the low intensity land use over much of the rural parts of Namibia. Large parts are covered by commercial and communal farms, mainly for livestock farming, in the Hardap region increasingly for small livestock. Guest farms and hunting farms are also common, especially in the western parts of the Hardap Region around tourist attractions such as Sossusvlei and the Namib-Naukluft National Park. Guest farms and other tourism-related economic activities are also common in the Khomas Region, mainly as a result of its strategic location in Namibia, because of the attraction of Windhoek as the capital and because of the international airport at Hosea Kutako. Income and employment from tourism is growing, subsequently.

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. 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.

5.8.9 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.

A heritage site survey was conducted by Dr John Kinahan, on a selected focus area and 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 field survey report did not locate and or observe any archaeological sensitivity. Additionally, no landforms were considered to be significant or require special mitigation measures. The EMP will adopt the chance finds Procedure devised for mining projects.

If any historical importance 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.

5.8.10 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 combined and amplified effects of exploration activities – 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 farm owners on the most suitable timing of work and amelioration noise during drilling 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 in August and September 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. Predication 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 ASSESSMENT GUIDANCE

The principal documents used to inform the assessment method are:

- International Finance Corporation standards and models, in particular Performance Standard 1, 'Assessment and management of environmental and social risks and impacts' (International Finance Corporation, 2017) (International Finance Corporation, 2012);
- International Finance Corporation CIA and Management Good Practice Handbook (International Finance Corporation, 2013); and,
- Namibian Draft Procedures and Guidance for EIA and EMP (Republic of Namibia, 2008).

6.3 LIMITATIONS, UNCERTAINTIES AND ASSUMPTIONS

Some limitations and uncertainties were acknowledged during the EIA process, which are summarised in Table 6, 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 6 - LIMITATIONS, UNCERTAINTIES AND ASSUMPTIONS

LIMITATION / UNCERTAINTY	ASSUMPTION
Number of access roads and temporary drill campsites	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 will be necessary to clear some bush to create small roads, which may be required for equipment to reach the site and for temporary campsites. If needed, cut lines have to be created through the clearing of vegetation to gain access to some parts of the EPL.
The program of exploration works is not confirmed	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 involve drilling; aerial or remote sensing; geophysical surveys; and mineral sampling. Pitting and trenching are unlikely.
Number of workers, area they will come from and accommodation	It is planned that approximately 10 people will be contracted for the proposed project. Most of the employees will stay in Rehoboth; contractors may camp on exploration sites / farms, depending on approval of farm owners.

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.

6.4 DETERMINATION OF SIGNIFICANCE

The evaluation and identification of the environmental and social impacts require the assessment of the project characteristics against the baseline characteristics, ensuring all potentially significant impacts are identified and assessed. The significance of an impact is determined by taking into consideration the combination of the sensitivity and importance/value of environmental and social receptors that may be affected by the proposed project, the nature and characteristics of the impact, and the magnitude of potential change. The magnitude of change (the impact) is the identifiable changes to the existing environment which may be negligible, low, minor, moderate, high, or very high; temporary/short term, long-term or permanent; and either beneficial or adverse.

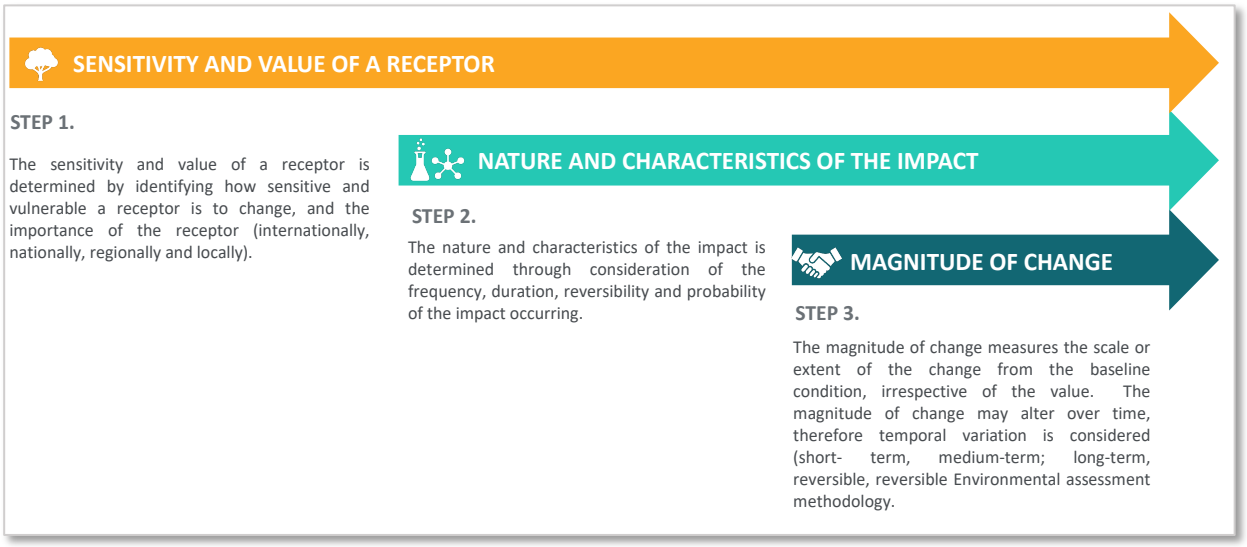

FIGURE 12 - DETERMINATION OF SIGNIFICANCE

The tables below set the description and thresholds used in determining impact significance.

TABLE 7 - NATURE OF IMPACT

NATURE	
Term	**Description**
Beneficial (Positive)	An impact that is considered to represent an improvement on the baseline or introduces a positive change.
Adverse (Negative)	An impact that is considered to represent an adverse change from the baseline or introduces a new undesirable factor.

TABLE 8 - TYPE OF IMPACT

TYPE	
Term	**Description**
Direct	Impacts causing an impact through direct interaction between a planned project activity and the receiving environment/receptors.
Indirect	Impacts that result from other activities that are encouraged to happen as a result / consequence of the Project. Associated with the project and may occur at a later time or wider area
Cumulative	Impacts that arise as a result of an impact and effect from the project interacting with those from another activity to create an additional impact and effect

TABLE 9 - REVERSIBILITY OF IMPACT

REVERSIBILITY	
Term	**Description**
Reversible	Impacts are reversible and recoverable in the future
Partly Reversible	Some parts of the impact can be reversed while others remain
Irreversible	Impacts which are not reversible and are permanent

TABLE 10 - MAGNITUDE OF CHANGE

MAGNITUDE OF CHANGE	
Term	**Description**
None / negligible	Very minor loss or detrimental alteration to one (or maybe more) characteristic, feature or element; or Very minor benefit to, or positive addition of, one (or maybe more) characteristic, feature or element.
Low / Minor	Some measurable change in attributes, quality or vulnerability; minor loss of, or alteration to, one (or maybe more) key characteristic, feature or element; or Minor benefit to, or addition of, one (or maybe more) key characteristic, feature or element; some beneficial effect on attribute quality or a reduced risk of a negative effect occurring.
Moderate	Loss of resource, but not adversely affecting its integrity; partial loss of/damage to key characteristics, features or elements; or Benefit to, or addition of, key characteristics, features or elements; improvements of attribute quality.
High / Major	Loss of resource, and quality and integrity of resource; severe damage to key characteristics, features or elements; or Large scale or major improvement of resources quality; extensive restoration or enhancement; major improvement of attribute quality.
Very high / unknown	Loss of resource, significantly affecting the long-term quality and integrity of a resource; irreparable damage or loss of key characteristics, features or elements; or the magnitude is too great to quantify as it is unknown.

TABLE 11 - DURATION OF IMPACT

DURATION	
Term	**Description**
Temporary	Transient; a period of less than 1 year
Short term	Impacts that are likely to last for the duration of the activity causing the impact and are recoverable (1-5 years)
Medium term	Impacts that are likely to continue after the activity causing the impact and are recoverable (5-15 years)
Long term	Impacts that are likely to last far beyond the end of the activity causing the damage (greater than 15 years with impact ceasing after decommissioning of the project)
Permanent	Permanent

TABLE 12 - SCALE OF CHANGE

SCALE OF CHANGE - EXTENT / GEOGRAPHIC SCALE	
Term	**Description**
On-site	Impacts that are limited to the boundaries of the proposed project site
Local	Impacts that occur in the local area of influence, including around the proposed site and within the wider community
Regional	Impacts that affect a receptor that is regionally important by virtue of scale, designation, quality or rarity.
National	Impacts that affect a receptor that is nationally important by virtue of scale, designation, quality or rarity.
International	Impacts that affect a receptor that is internationally important by virtue of scale, designation, quality or rarity.

TABLE 13 - PROBABILITY OF CHANGE

PROBABILITY	
Term	**Description**
Improbably (Rare)	The event may occur in exceptional circumstances yet, rarely occurs in the industry. The event could occur once every 100 years
Low probability (Unlikely)	The event has happened elsewhere yet, is unlikely to occur. The event could occur once every 10 years
Medium Probability (Possible)	The event could occur under some circumstances. The event could occur once every 5 years.
High Probability (Likely)	The event is expected to occur. The event could occur twice per year
Definite (Almost certain)	The event will occur. The event could occur once per month

TABLE 14 - SIGNIFICANCE DESCRIPTION

SIGNIFICANCE OF IMPACT	DESCRIPTION
Low – Major (Beneficial) All scores	Impacts are considered to be beneficial to the environment and society:
Low (negative) 0 - 25	Impacts are considered to be local factors that are unlikely to be critical to decision-making.
Minor (negative) 25 - 50	Impacts are considered to be important factors but are unlikely to be key decision-making factors. The impact will be experienced, but the impact magnitude is sufficiently small (with and without mitigation) and well within accepted standards, and/or the receptor is of low sensitivity/value. Impacts are considered to be short-term, reversible and/or localized in extent.
Moderate (negative) 50 - 75	Impacts are considered within acceptable limits and standards. Impacts are long-term, but reversible and/or have regional significance. These are generally (but not exclusively) associated with sites and features of national importance and resources/features that are unique and which, if lost, cannot be replaced or relocated.
Major (negative) 75 - 100	Impacts are considered to be key factors in the decision-making process that may have an impact of major significance, or large magnitude impacts occur to highly valued/sensitive resource/receptors. Impacts are expected to be permanent and non- reversible on a national scale and/or have international significance or result in a legislative non- compliance.

TABLE 15 - SENSITIVITY AND VALUE OF RECEPTOR

SENSITIVITY AND VALUE	DESCRIPTION
Low	Of value, importance or rarity on a local scale; and/or not particularly sensitive to change or has considerable capacity to accommodate a change.
Medium	Of value, importance or rarity on a regional scale, and with limited potential for substitution; and/or moderate sensitivity to change, or moderate capacity to accommodate a change.
High	Of value, importance or rarity on an international and national scale, and with very limited potential for substitution; and/or very sensitive to change or has little capacity to accommodate a change.

TABLE 16 - SIGNIFICANCE OF IMPACT

				Signifance of Impact			
			Signifance of Impact	Impacts are considered to be local factors that are unlikely to be critical to decision-making.	Impacts are considered to be important factors but are unlikely to be key decision-making factors. The impact will be experienced, but the impact magnitude is sufficiently small (with and without mitigation) and well within accepted standards, and/or the receptor is of low sensitivity/value. Impacts are considered to be short-term, reversible and/or localized in extent.	Impacts are considered within acceptable limits and standards. Impacts are long-term, but reversible and/or have regional significance. These are generally (but not exclusively) associated with sites and features of national importance and resources/features that are unique and which, if lost, cannot be replaced or relocated.	Impacts are considered to be key factors in the decision-making process that may have an impact of major significance, or large magnitude impacts occur to highly valued/sensitive resource/receptors. Impacts are expected to be permanent and non- reversible on a national scale and/or have international significance or result in a legislative non- compliance.
	Biophysical	Social		Low	Minor (2)	Moderate (3)	Major (4)
Sensitivity	A biophysical recepeotr that is protected under legislation or internaiton conventions (CITES) listed as rare, threatened or endangered IUCN specidices. Highly valued/sensitive resource/receptors	Those affected people/communities will not be able to adapt to changes or continue to maintain-pre impact livelihoods.	High (3)	Minor (3)	Moderate (6)	Major (9)	Major (12)
	Of value, importance or rarity on a regional scale, and with limited potential for substitution; and/or Not protected or listed (gloabbally) but may be a rare or threatened species in coutnry; with little reslisence to ecosystem changes, imporant to ecosystem functions, or one under threat or popultion declinet.	Able to adapt with some difficulty and maintain preimpact status but only with a degree of support	Medium (2)	Low (2)	Minor (4)	Moderate (6)	Major (8)
	Not protected or listed as common / abundant; or not crtical to other ecosystems functions	Those affected are able to adapt with relative ease and maintain preimpacrt status. There is no perceptible change to people's livelihood.	Low (1)	Low (1)	Low (2)	Minor (3)	Moderate (4)

To ensure the beneficial impacts are brought out in the assessment, green has been applied to ensure the different type of impact is clear. The description for each level of significance presented in Table 14 was also followed when determining the level of significance of a beneficial impact.

The significance of impacts has been derived by applying the identified thresholds for receptor sensitivity and magnitude of change, as well as the definition of significance. Moderate and major adverse impacts are considered as significant. The following thresholds were therefore used to double check the assessment of significance had been applied appropriately; a significant impact would meet at least one of the following criteria:

- It exceeds widely recognized levels of acceptable change;
- It threatens or enhances the viability or integrity of a receptor or receptor group of concern; and
- It is likely to be material to the ultimate decision about whether or not the environmental clearance certificate is granted.

6.5 MITIGATION

Mitigation comprises a hierarchy of measures ranging from preventative environmental impacts by avoidance, to measures that provide opportunities for environmental enhancement. The mitigation hierarchy is avoidance; reduction at source; reduction at receptor level; repairing and correcting; compensation; remediation; and enhancement.

Mitigation measures can be split into three distinct categories, broadly defined as:

1. Actions undertaken by the EIA process that influence the design process, through implementing design measures that would entirely avoid or eliminate an impact or modifying the design through the inclusion of environmental features to reduce the magnitude of change. These are considered as embedded mitigation.
2. Standard practices and other best practice measures for avoiding and minimizing environmental impacts. These are considered as good practice measures.
3. Specified additional measures or follow-up action to be implemented to further reduce adverse impacts that remain after the incorporation of embedded mitigation. These are considered as additional mitigation.

The EIA is an iterative process whereby the outcomes of the environmental assessments inform the project. Considerable mitigation has been built into the proposed project as potentially significant adverse environmental impacts have been identified and design changes have been identified to overcome or reduce them. The EMP (Appendix A) provides the good practice measures and specified additional measures or follow-up action.

Embedded mitigation and good practice mitigation have been taken into account in the assessment. Additional mitigation measures have been identified when the significance of impact requires it and causes the impact to be further reduced. Where additional mitigation has been identified, a final assessment of the significance of impacts (residual impacts) was carried out taking into consideration the additional mitigation.

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 and/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 17 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 17- 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.	**Groundwater quality**	Hydrocarbon leaks and spills could enter the aquifer causing contamination.	Adverse Direct Partly Reversible Moderate Short term Regional Possible	Medium	Minor	Minor (4)	- Good housekeeping - Provide ongoing training through toolbox talks and induction - All stationary vehicles and machinery must have drip trays to collect leakages of lubricants and oil - Spill kits and absorption material available during fuel delivery, storage or use - Accidental spills and leaks (including absorption material) to be cleaned as soon as possible - Major spills to be reported, also to the authorities - Maintenance and service schedules on equipment is in place - Ensure integrity of containment of hydrocarbons with regular documented inspections (non-porous surface, bunded, within a fenced-in area)	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
							- 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 table.	**Groundwater quality**	Hydrocarbon leaks and spills could enter the aquifer causing contamination.	Adverse Indirect Partly Reversible Minor Short term Local Possible	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 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	Low (1)
Discharge and infiltration of non-contained wastewater	**Surface Water**	Wastewater can contaminate surface and groundwater if not properly contained.	Adverse Direct Partly Reversible Minor Short term	Low	Minor	Low (2)	- Wastewater discharges will be contained - Workers will be made aware about the importance of wastewater management	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
			Regional Unlikely				- Good housekeeping	
Inadequate management of waste	**Surface water**	Waste items and litter can pollute drainage channels	Adverse Cumulative Reversible Minor Temporary On-site Unlikely	Low	Low	Low (1)	- Good housekeeping - Provide ongoing training and awareness through toolbox talks and induction - Implement a Standard Operational Procedure on waste management, from cradle to grave for all kinds of waste possible on-site (e.g. domestic, mineral, hydrocarbons, hazardous, etc.) - Raise awareness about the importance of responsible waste management through site posters and documented training sessions - Implement a culture of correct waste collection, waste segregation and waste disposal - Avoid hazardous waste on site - Wastewater discharges will be contained – no disposal of wastewater is allowed	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
Inadequate management of hazardous and hydrocarbon waste	**Soil**	Pollution of soil	Adverse Direct Reversible Minor Short term On-site Possible	Low	Minor	Low (2)	- Good housekeeping - Provide ongoing Training and awareness through toolbox talks and induction - 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) - Implement a culture of correct waste collection, waste segregation and waste disposal	Low (1)
Vegetation clearing for access routes, drill pads and temporary contractors camp	**Terrestrial ecology and biodiversity**	Loss / alteration of terrestrial habitats and loss of species	Adverse Direct Reversible Minor Short term On-site Possible	Low	Minor	Low (2)	- Use existing roads for access to avoid new tracks and cut lines - Minimise clearance areas through proper planning of the exploration activities - Where possible, rescue and relocate plants of significance - Promote revegetation of cleared areas upon completion of exploration activities	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
Ambient noise as a result of machinery use and movement (also through the use of airborne equipment)	**Terrestrial ecology and biodiversity**	Residing and nesting organisms can be disturbed	Adverse Direct Reversible Minor Short term On-site Likely	Low	Minor	Low (2)	- Restrict excessive noise to areas of activities only. - Restrict excessive noise to daytime hours (7 am to 5 pm weekdays and 7 am until 1 pm on Saturday). - No activities between dusk and dawn. - Drill equipment shall be suitably positioned to ensure that noisy equipment is away from receptors. - All equipment to be shut down or throttled back between periods of use. - Respect civic aviation regulations about the use of a drone.	Low (1)
Increased movement of machinery	**Terrestrial ecology and biodiversity**	Residing and nesting organisms such as reptiles can be disturbed, injured or killed	Adverse Direct Partly Reversible Moderate Short term On-site Possible	Low	Minor	Low (2)	- Restrict movements to areas of activities only. - Use existing tracks and routes only. - Identify rare, endangered, threatened and protected species in advance and avoid these. - Route new tracks around protected species and sensitive areas.	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
							- 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.	
Increased disturbance of areas with natural vegetation	**Terrestrial ecology and biodiversity**	Alien species and weeds can be introduced to the area	Adverse Direct Reversible Minor Short term On-site Possible	Low	Minor	Low (2)	- Eradicate weeds and alien species as soon as they appear. - Make workers aware about alien species and weeds. - Do not disturb natural vegetation outside dedicated camp areas and drill sites. - Stockpile excavated topsoil for revegetation purposes of disturbed areas.	Low (1)
Uncontrolled veld fires during high wind periods	**Terrestrial ecology and biodiversity**	Terrestrial biodiversity destruction	Adverse Direct Partly reversible Moderate Temporary Onsite to local	High	Moderate	Moderate (6)	- No open fires are allowed to be lit by personnel associated with the proponent anywhere on the EPL outside of dedicated campsites. - The proponent to ensure	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
							that exploration campsites have proper cooking facilities available to use. Gas stoves are the preferred option. - 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. - No unauthorised movement beyond the exploration areas and campsites is allowed. - Proper fire hazard identification signage to be placed in areas that store flammable material (i.e. hydrocarbons and gas canisters)	
Vegetation clearing	**Soil**	Increased exposure due to vegetation clearance can cause soil erosion	Adverse Direct Reversible Moderate Short-term On-site Possible	Low	Minor	Low (2)	- Ensure erosion control and prevention measures are in place when vegetation clearance is required. - Where possible, plan access routes, drill pads and camps outside of existing drainage lines.	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
							- Where necessary, install diversions to curb possible erosion. - Restore drainage lines when disturbed.	
Drilling and trenching 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)	- Limit the possibility of compaction and creating of a hard subsurface. - Limit the possibility of trampling. - Topsoil should be stockpiled separately, and re-spread during rehabilitation. - During drilling oil absorbent matting should be placed under and around the rig. - Equipment must be in a good condition to ensure that accidental oil spills do not occur and contaminate soil. - In the event of spills and leaks, polluted soils must be collected and disposed of at an approved site. - Limit the possibility to mix mineral waste with topsoil.	Low (1)
Drilling and possible trenching activities,	**Heritage**	Potential damage to cultural heritage sites	Adverse Direct Partly Reversible	High	Minor	Moderate (6)	- Implement a Chance Find Procedure. - Raise awareness about	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
movement of machinery and vehicles			High Permanent On-site Possible				possible heritage finds. - Report all finds that could be of heritage importance. - In case archaeological remains to be uncovered, cease activities and the site manager has to assess and demarcate the area. - Project manager to visit the site and determine whether work can proceed without damage to findings, mark exclusions 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	

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
							the remains), - Inform the police if the remains are human, and - Obtain appropriate clearance or approval from the competent authority, if required, and recover and remove the remains to the National Museum or National Forensic Laboratory as directed.	
Drilling and possible trenching activities, including dust and emissions	**Community**	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)	– Position drill equipment in such a way that it is out of sight from human receptors, – Apply dust suppression where possible, – Restrict speed of vehicles (<30km/h), – Specific activities that may generate dust and impact on residents shall be avoided during high wind events, – All vehicles and machinery / equipment to be shut down or throttled back between periods of use, – Barriers or fences shall be used if drilling occurs in locations that may affect	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
							residents or livestock, – Residents need to be informed at least two weeks in advance that drilling operations are within 1km of their property, – Maintain good housekeeping, and – Continuous engagement with residents to identify any concerns or issues, and appropriate mitigation and management measures agreed upon.	
Open drill holes	**Possible domestic animals and wildlife in the area**	Animals may get their legs caught in the tight spacing of unplugged drill holes causing injury to the animal	Adverse Direct Reversible Minor Temporary On-site Likely	Medium	Minor	Low (2)	– Ensure awareness training is conducted on site, – Ensure effective relocation of drill cuttings, – Remove pegs, cut collars and plug holes with plastic cones 300mm below ground level.	Low (1)
Movement of vehicles, exploration activities	**Community**	Create conflict with farm owners and neighbours about access, leaving gates open, suspicious movements, loss of	Adverse Indirect Reversible Minor Short term On-site Likely	Low	Minor	Low (2)	– Ensure documented permission to enter farms is in place. – Farmers should have access to all farm areas at all times. – Residents shall be provided at least two weeks' notice of drilling operations within 1	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
		farming area, etc.					km of their property. – Existing water points and feeding area need to be left unaffected. – Use existing roads for access, avoid new tracks / cut lines. – Compliance with all applicable laws and agreements. – Continuous engagement with residents to identify any concerns or issues, and mitigation and management measures agreed upon.	
Movement of vehicles, exploration activities	**Community**	Presence of exploration team can be blamed for stock theft and poaching	Adverse Cumulative Reversible Minor Temporary Local Unlikely	Low	Low	Low (1)	– Develop and implement an operations manual or procedures to work on private farms and implement monitoring programmes thereafter. – Maintain continuous engagement with residents to identify any concerns or issues, and appropriate mitigation and management measures agreed upon. – Ensure appropriate supervision of all activities. – Raise awareness and	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
							sensitize employees about contentious issues such as stock theft and poaching. – Accidents and incidents need to be reported to project manager and recorded in incident register.	
Exploration activities	**Community**	Triggers job creation, skills development and opportunities for the local economy	Beneficial Direct Reversible Minor Short term Local Possible	Medium	Low	Low (2)	– Maximize local employment. – As far as possible promote local procurement. – Enhance development of local skills where possible.	Low beneficial

7.1.1 Further Consideration: Noise and Visual impacts

Exploration and mining activities have the potential to disrupt the sense of place, 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 18 - 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 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.

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.

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 noise impacts is 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.

On this basis, it is of the opinion of ECC that an environmental clearance certificate could be issued, on conditions that the management and mitigation measures specified in the EMP are implemented and adhered to.

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APPENDIX A- ENVIRONMENTAL MANAGEMENT PLAN

Can be accessed via the ECC website by clicking on the “Documents for public review “

APPENDIX B - NON-TECHNICAL SUMMARY

Can be accessed on the website using the link below

https://eccenvironmental.com/project/exploration-activities-on-epl-7769-for-base-and-rare-metals-industrial-minerals-dimension-stones-and-precious-stones/

APPENDIX C- EVIDENCE OF PUBLIC CONSULTATION

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

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 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.

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

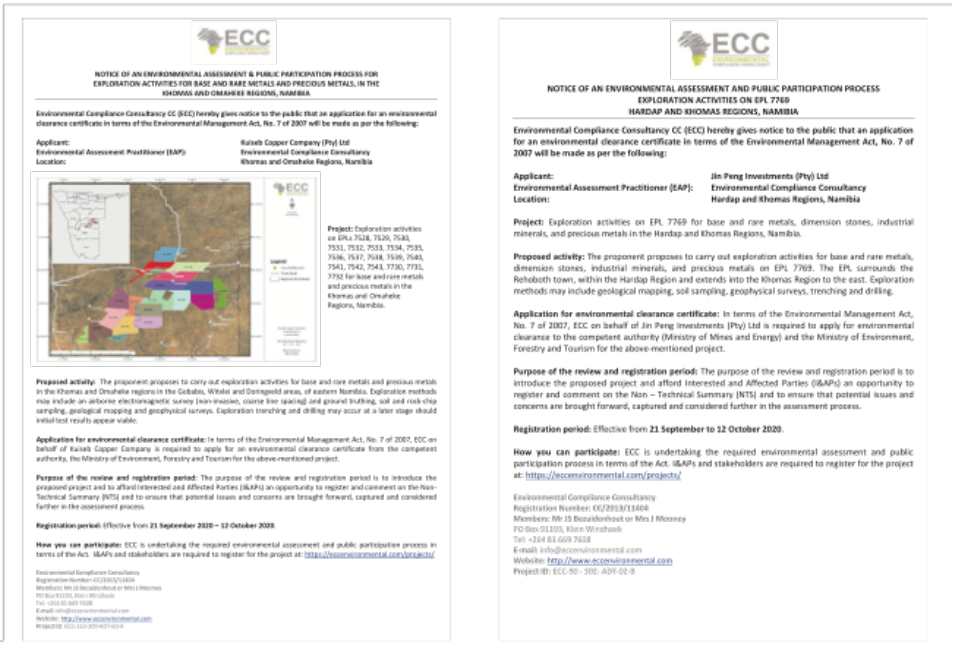
The deeper reduction in the domestic economy was observed across all sectors of the economy, except for agriculture and forestry, ICT and health. The poor performance of the economy was mainly due to the impact of measures that were put in place to combat the spread of the coronavirus pandemic, NSA says.

The agriculture and forestry sector surged to 47.2 percent in real 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

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



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

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

Applicant: Kuiseb Copper Company (Pty) Ltd
Environmental Assessment Practitioner (EAP): Environmental Compliance Consultancy
Location: Khomas and Omaheke Regions, Namibia

Project: Exploration activities on EPLs 7528, 7529, 7530, 7531, 7532, 7533, 7534, 7535, 7536, 7547, 7548, 7539, 7540, 7541, 7542, 7543, 7730, 7731, 7752 for base and rare metals and precious metals in the Khomas and Omaheke Regions, Namibia.

Proposed activity: The proponent proposes to carry out exploration activities for base and rare metals and precious metals in the Khomas and Omaheke regions in the Gobabis, Witvlei and Dordingveld 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 Kuiseb 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://eccenvironmental.com/projects/

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

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

Applicant: 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/

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Website: http://www.eccenvironmental.com
Project ID: ECC-90 - 302- ADV-02-B

035 Regskennisgewings 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 Bahnhoff 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

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: "voetstoots" 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
DM0202000368994

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 N139098W), (Engine No: 4JJ1929289).
Terms of sale: Cash and voetstoots 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.
DM0202000369006

035 Regskennisgewings 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
Kindly take notice that the undermentioned assets, in execution of a Judgment granted on 20 July 2020 against the Defendants, 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 Defy fridge / freezer double door(silver), 1x dishwasher (silver), 1x wooden table with 8x 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: Voetstoots 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/SQU3/0001
DM0202000368995

IN THE Magistrate Court Of Namibia For 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. 1HZ0652625, 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
Cnr. Robert Mugabe Ave & Thorer Str
Entrance in Burg Street
PO Box 37,
Windhoek
(Ref:SM/ffh/241968)
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.G 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: A145248791).
Terms of sale: Cash and voetstoots 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.
DM0202000369007

035 Regskennisgewings 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 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 explora, 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 "voetstoots"
3. Payment shall be made in cash or bank guaranteed cheques. Dated at Windhoek this 15th day of September 2020.
KLOPPERS LEGAL PRACTIONERS
Legal Practitioners for Plaintiff
Unit 44, Maerua Mall, Cenaturus Street,
WindhoekPO Box 97816,
Maerua,
Windhoek
Tel: 061-222307
WindhoekSAN1/0016
DM0202000368997

ECC

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

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

Applicant:	**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/2013/11404
Members: Mr JS Bezuidenhout or Mrs J Mooney
PO Box 91193, Klein Windhoek
Tel: +264 81 669 7608
E-mail: info@eccenvironmental.com
Website: http://www.eccenvironmental.com
Project ID: ECC-90 - 302- ADT-02-B

SITE NOTICE

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

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:

University of Pretoria:	**2011 – 2012**	Postgraduate Degree in Environmental Management and Analysis
University of Stellenbosch:	**2007 – 2010**	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 Counsil (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	2018 - 2019	Part of the ECC team who completed the

45 as well as an overarching 5-year Biophysical Rehabilitation Plan for Namdeb		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).
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*

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;

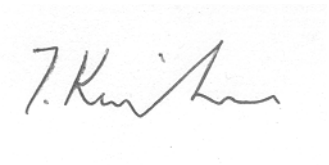
(b) perform the work relating to the application in an objective manner, even if this results in views and findings that are not favourable to the applicant;

(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

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[1] 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 AoI. A field visit to the site was carried out on 20th 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 and/or destruction of heritage resources.

1.3 Assumptions & Limitations

[1] ECC DOCUMENT CONTROL: ECC-90-302-NTS-05-B, September 2020

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 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.

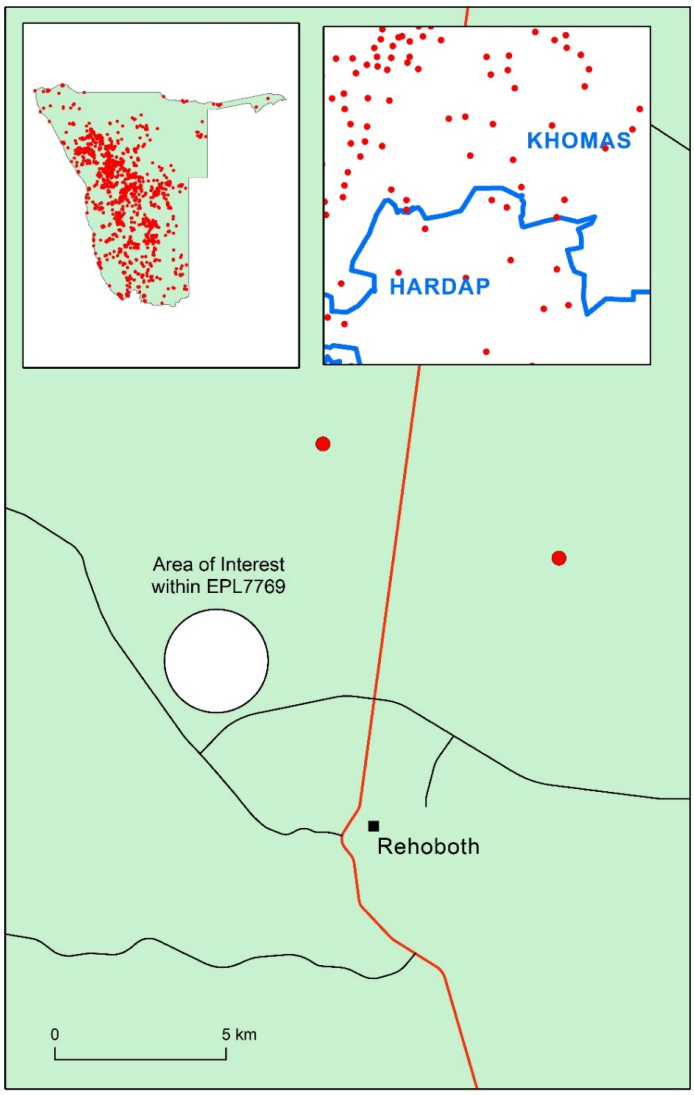


Figure 1: The EPL7769 Area of Interest, showing the known distribution of archaeological sites (red dots) in the adjacent area and regions.

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^2), 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

a) If operating machinery or equipment stop work

b) Identify the site with flag tape

c) Determine GPS position if possible

d) Report findings to foreman

Action by foreman

a) Report findings, site location and actions taken to superintendent

b) Cease any works in immediate vicinity

Action by superintendent

a) Visit site and determine whether work can proceed without damage to findings

b) Determine and mark exclusion boundary

c) Site location and details to be added to project GIS for field confirmation by archaeologist

Action by archaeologist

a) Inspect site and confirm addition to project GIS

b) Advise NHC and request written permission to remove findings from work area

c) Recovery, packaging and labelling of findings for transfer to National Museum

In the event of discovering human remains

a) Actions as above

b) Field inspection by archaeologist to confirm that remains are human

c) Advise and liaise with NHC and Police

d) Recovery of remains and removal to National Museum or National Forensic Laboratory, as directed.