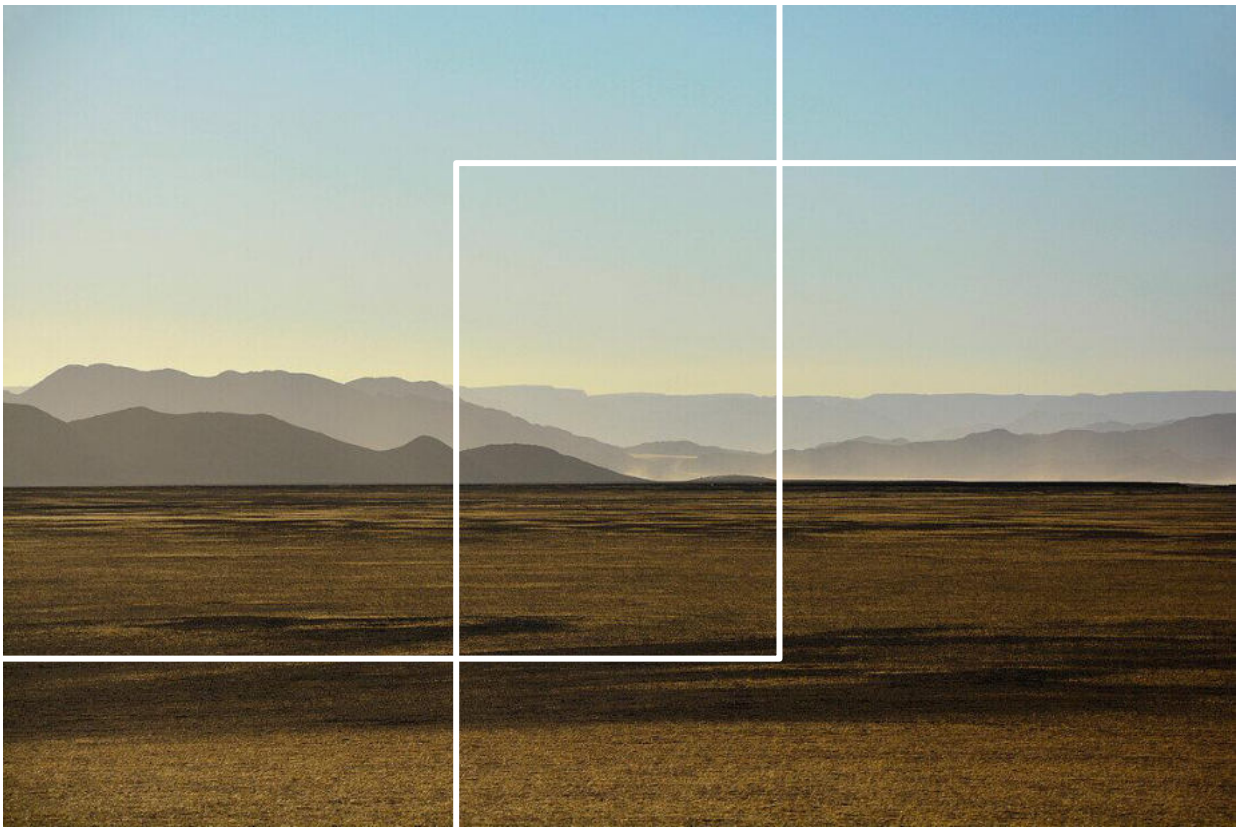

Submitted to: Mertens Mining and Trading (Pty) Ltd
Attention: Mr Andre Neethling

P O BOX 1182
Tsumeb
Namibia

REPORT:

ADDITION OF MINING CLAIMS 68853 AND 68854 AMENDMENT REPORT

PROJECT NUMBER: ECC-105-457-REP-02-D

REPORT VERSION: REV 01

DATE: JUNE 2023

Prepared by:

ECC
ENVIRONMENTAL
COMPLIANCE CONSULTANCY

TITLE AND APPROVAL PAGE

Project Name:	Addition of mining claims 68853 and 68854 Amendment Report
Client Company Name:	Mertens Mining and Trading (Pty) Ltd
Client Name:	Mr Andre Neethling
Ministry Reference:	APP-001429
Authors:	Environmental Compliance Consultancy
Status of Report:	Final Amendment for Government record of decision
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Date of issue:	June 2023
Review Period:	Government review and approval period

ENVIRONMENTAL COMPLIANCE CONSULTANCY CONTACT DETAILS:

We welcome any enquiries regarding this document and its content. Please contact:

Environmental Compliance Consultancy
PO Box 91193, Klein Windhoek, Namibia
Tel: +264 81 669 7608
Email: info@eccenvironmental.com

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EXECUTIVE SUMMARY

Environmental Compliance Consultancy (ECC) has been engaged by Andre Neethling on behalf of Mertens Mining and Trading (Pty) Ltd, the Proponent, as their environmental assessment practitioner (EAP) to compile an amendment application for his environmental clearance certificate for exploration activities on EPL 7699 and mining claims 68855 - 68861 and 67633 in terms of the Environmental Management Act No. 7 of 2007 (EMA). The proponent intends to add two additional mining claims 68853 and 68854 to his existing environmental clearance for mining claims 68855 - 68861 and 67633 which was converted into one large site and consolidated as part of EPL 7699. EPL 7699 is located 25km east-southeast of Rehoboth. The largest part of the EPL is located within the Khomas Region with a small portion that overlaps with the Hardap Region.

The environmental management plan (EMP) (Appendix A) and original scoping report (Appendix B) are still valid and cover the additional mining claims. The purpose of the report was to assess what the impact exploration activities would have on the additional mining claims based on the baseline (biophysical and social) environment of these additional areas. An updated EIA was conducted but because the baseline environment of the additional mining claims is the same as the existing mining claims, the impacts of the receiving environment are the same. This report provides updated assessment of the impacts the proposed exploration activities may have on the additional mining claims in relation to existing mining claims.

From the original scoping report plus impact assessment and of EPL 7699 and existing mining claims (Appendix B) it was determined that the impact of all the proposed exploration activities on the receiving biophysical and social environment after mitigation is of low to minor significance. The addition of mining claims 68853 and 68854 is located on Mertens farm (No. 63) involving similar small-scale exploration activities to that of the existing mining claims. It has also been determined that no additional stakeholders will be affected by the added mining claims because the mining claims are on the same farm as the existing mining claims and EPL owned by the same farmer.

On this basis, it is of the opinion of ECC that a revised environmental clearance certificate could be issued, on condition that the management and mitigation measures specified in the original environmental management plan (Appendix A) are implemented and adhered to.

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ABBREVIATIONS

Abbreviation	Description
EAP	environmental assessment practitioner
ECC	Environmental Compliance Consultancy
ECC	environmental clearance certificate
e.g.	example
EIA	environmental impact assessment
EMA	Environmental Management Act
EMP	environmental management plan
EPLs	exclusive prospecting licences
Ltd.	Limited
Mertens Mining and Trading	Mertens Mining and Trading (Pty) Ltd
No.	Number
Pty	proprietary
Reg	registration
SW-NE	southwest - northeast

1 INTRODUCTION

1.1 BACKGROUND

Environmental Compliance Consultancy (ECC) has been engaged by Andre Neethling on behalf of Mertens Mining and Trading (Pty) Ltd, the Proponent, as their environmental assessment practitioner (EAP) to compile an amendment application for his environmental clearance certificate for exploration activities on EPL 7699, mining claims 68855-68861 and 67633 as well as additional mining claims 68853 and 68854 in terms of the Environmental Management Act No. 7 of 2007 (EMA). The mineral exploration licence of EPL 7699 is located 25km east-southeast of Rehoboth. The largest part of the EPL is located within the Khomas Region with a small portion that overlaps with the Hardap Region.

An environmental clearance certificate (ECC) for the exploration activities on EPL 7699 including the exploration and small-scale mining activities on mining claims 68855 – 68861 and 67633 was granted in October 2021 by the Ministry of Environment, Forestry and Tourism (MEFT). The reasons for the amendment to the current environmental clearance is to continue exploration and small-scale mining on additional two mining claims, 68853 and 68854.

1.2 PURPOSE OF THE REPORT AND TERMS OF REFERENCE

The purpose of the report is to address potential impacts that may occur as a result of the additional mining claims 68853 and 68854, whether positive or negative, and their relative impact of significance. In addition, explore alternatives for the amendments, for technical recommendations and identify appropriate mitigation measures.

The original scoping report and impact assessment sets out the need and justification, legal framework, full Project description, environmental and social baseline, Project alternatives, consultation process and assessment findings for the full scheme. To avoid repetition, the scoping report has been used as a foundation to develop this amendment report and therefore should be read in conjunction.

EPL 7699 includes most of the former EPL 4034, the mining claims 68855 - 68861 and 67633 on farm Mertens, and overlaps and borders several other farms. The addition of mining claims 68853 and 68854 will be converted into one large area along with the existing mining claims and consolidated as part of EPL 7699.

1.3 ENVIRONMENTAL REQUIREMENTS

The Environmental Management Act, No.7 of 2007 (EMA) and associated 2012 Regulations, stipulates that an environmental clearance certificate is required to undertake listed activities under the Act and associated Regulations. During the initial environmental scoping report

and impact assessment process, the exploration activities was screened and the project triggers listed activities therefore an environmental clearance is required.
In accordance with Section 39 of the EMA, the activities on the additional mining claims will not trigger any new listed activities.

2 PROJECT CHANGES, ASSESSMENT METHOD AND FINDINGS

2.1 ADDITION OF MINING CLAIMS 68853 AND 68854

2.1.1 EPL 7699 AND EXISTING MINING CLAIMS

EPL 7699 and existing mining claims involve exploration activities that include sampling/collecting fragments of the earth's layers for testing of each sample's mineral composition, grade, and spatial dispersion to acquire an informed perspective of the target area's ore potential. Exploration activities range from extremely low impact exploration such as remote sensing from satellites to more invasive methods such as extensive close spaced drilling, bulk sampling and trenching. All the existing mining claims are located on the farm Mertens (No. 63). On the same farm some mining infrastructure exists, which is composed of a 10t/h pilot flotation plant, a crusher and a mill. Associated infrastructure includes a diesel generator and electrical gen-set, water pump and reservoirs and sheds while accessory works include a small quarry, waste and a small single-point depository retainer tailings dam.

Batches of ore are obtained from bulk sampling, crushed and milled before trial processing and metallurgical testing are done by means of froth flotation in the small plant. The flotation plant is fully containerised and located within a shed area. No chemicals are used during processing.

Once exploration activities are completed the areas shall be rehabilitated to a condition as close to the original state as far as possible.

2.1.2 ADDITIONAL MINING CLAIMS

The additional mining claims are also located on farm Mertens (No. 63), and similar small-scale mining and exploration activities will take place (Figure 1).

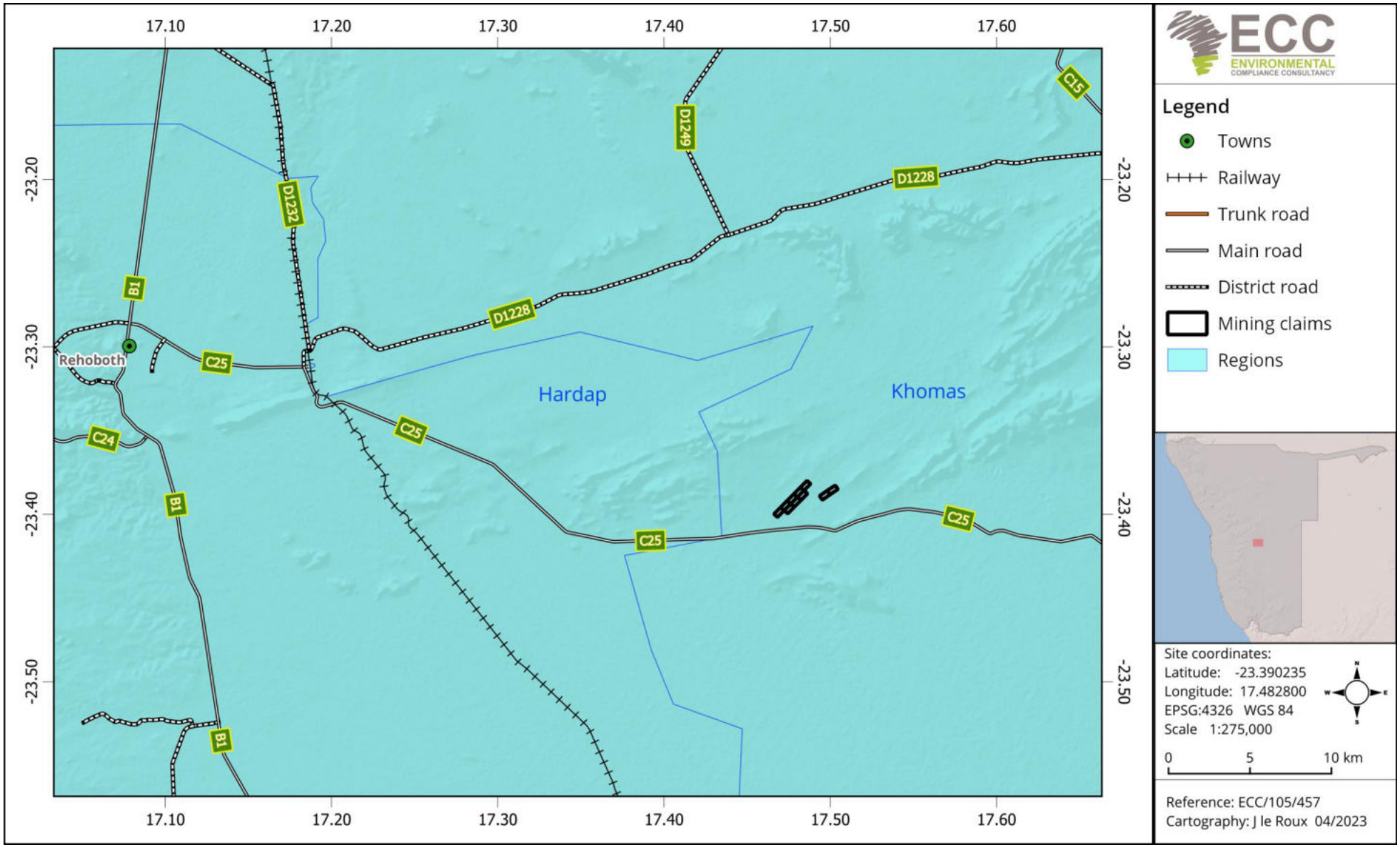

Figure 1 - Locality Map of the additional mining claims and existing mining claims part of EPL 7699

2.2 SUMMARY OF SURROUNDING ENVIRONMENT

Table 1 gives a brief description of the area and environment surrounding the proposed additional mining claims mentioned.

Table 1 – Summary of the environment surrounding the additional mining claims.

Summary of the local environment	
Climate	Maximum temperatures average around 30 - 32°C, while minimum temperatures are around 2 - 4°C. This area receives an average of 200 – 250 mm rainfall per year (Mendelsohn, *et al* 2002).
Geology	The entire EPL 7699 is located on the edge of the Kalahari Group. Low ridges of the Sinclair Complex, the youngest group of the Namaqua Metamorphic Complex, are oriented in a SW-NE direction on the EPL.
Topography and soil	The topography of the EPL is flat, varying between 1,370 and 1,290 m above sea level. These soils are medium to fine-textured, typically associated with weathered landscapes and reasonably fertile.
Hydrogeology and hydrology	The EPL is located between the basins of the Oanob River in the west and the Skaap River in the east. Both rivers are ephemeral. The largest part of EPL 7699 is located in the South-eastern Kalahari Groundwater Basin. The farmers located within and nearby EPL 7699 obtain water from the number of boreholes in the area, which is of good quality.
Vegetation	Consist of a combination of dense highland shrubland and the southern Kalahari vegetation types of the Acacia tree-and-shrub savanna sub-biome. Plant diversity is estimated between 150 and 299 species and plant endemism is low, not exceeding five species (Mendelsohn *et al*., 2002).
Fauna Species	Overall terrestrial biodiversity in the areas east of Rehoboth, where EPL 7699 is located, ranges from medium to high. the number of endemic fauna species potentially occurring on EPL 7699 is expected to be low.
Socio-economic baseline	EPL 7699 is entirely located in a rural area, where the predominant land use is extensive livestock farming, with occasional guest and hunting farms in between. People live remotely from each other, and the population density is low.

2.3 IMPACT ASSESSMENTS FINDINGS

The same impact assessment method was used for the inclusion of the two additional mining claims. There were no potential impacts assessed through the addition of mining claims 68853 and 68854.

As no new impacts were identified there are also no additional mitigation measures required as those covered in the original assessment will apply to these two additional mining claims.

3 CONCLUSIONS AND RECOMMENDATIONS

The addition of mining claims 68853 and 68854 is located on Mertens farm (No. 63) involving similar small-scale mining and exploration activities to that of the existing mining claims. It was found that the additional mining claims will have no potential impacts. It was also determined that no additional stakeholders will be affected by the added mining claims.

On this basis, it is of the opinion of ECC that a revised environmental clearance certificate could be issued, on condition that the management and mitigation measures specified in the original environmental management plan (Appendix A) are implemented and adhered to.

4 BIBLIOGRAPHY

Environmental Compliance Consultancy. (2022). *Report: Upgrade of the fuel railway line in Walvis Bay amendment report.*

Mendelshon, J., Jarvis, A., Roberts, C., & Robertson, T. (2002). *Atlas of Namibia; A Portrait of the Land and its People.* Cape Town: David Philip Publishers.

Wilhelm, L., Bezuidenhout, J & Smit, P. (2021). *Environmental Scoping Report plus Impact Assessment*: *Exploration activities on EPL 7699 including the exploration and small-scale mining activities on mining claims 68855 – 68861 and 67633 in the Khomas and Hardap Regions.* Environmental Compliance Consultancy.

APPENDIX A – ENVIRONMENTAL MANAGEMENT PLAN

APPENDIX B – ORIGINAL SCOPING REPORT (2021)

APPENDIX C – ENVIRONMENTAL CLEARANCE CERTIFICATES ISSUED FOR THE PROJECT






ECC-105-235-REP-06-D

ENVIRONMENTAL SCOPING REPORT PLUS IMPACT ASSESSMENT

EXPLORATION ACTIVITIES ON EPL 7699 INCLUDING THE EXPLORATION AND SMALL-SCALE MINING ACTIVITIES ON MINING CLAIMS 68855 – 68861 AND 67633 IN THE KHOMAS AND HARDAP REGIONS

PREPARED FOR

MERTENS MINING AND TRADING (PTY) LTD

June 2021

ENVIRONMENTAL COMPLIANCE CONSULTANCY CC/2013/11404
1 JAN JONKER WAY KLEIN WINDHOEK NAMIBIA|PO BOX 91193 WINDHOEK NAMIBIA
WWW.ECCENVIRONMENTAL.COM

TITLE AND APPROVAL PAGE

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Project Number	ECC-105-235-REP-06-D
Client Name:	Mertens Mining and Trading (Pty) Ltd
Authors:	Laina Wilhelm, Jessica Bezuidenhout and Piet Smit
Ministry Reference:	APP - 002276
Status of Report:	Final for Government submission
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Environmental Compliance Consultancy Contact Details:
We welcome any enquiries regarding this document and its content. Please contact:

Stephan Bezuidenhout
Environmental Consultant & Practitioner
Tel: +264 81 699 7608
Email: stephan@eccenvironmental.com
www.eccenvironmental.com

Jessica Bezuidenhout Mooney
Environmental Consultant & Practitioner
Tel: +264 81 699 7608
Email: jessica@eccenvironmental.com
www.eccenvironmental.com

Confidentiality

Please note, at ECC we care about lessening our footprint on the environment, therefore all documents are printed double-sided.

EXECUTIVE SUMMARY

Mertens Mining and Trading (Pty) Ltd propose to undertake exploration activities, bulk sampling and trial processing on Exclusive Prospecting Licence (EPL) 7699. The existing mining claims 68855 - 68861 and 67633 will be converted and consolidated as part of EPL 7699. EPL 7699 is located 25km east-southeast of Rehoboth. The largest part of EPL 7699 is located within the Khomas Region and a small portion overlaps with the Hardap Region.

The proposed project triggers listed activities in the regulations 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 and Environmental Management Plan (EMP) will be submitted as part of the application for the environmental clearance certificate.

The proposed project will entail various types of exploration activities within EPL 7699, which may involve mapping, soil sampling, electromagnetic surveys, drilling and trenching and bulk sampling (6 months with exploration, two trucks per month transportation for processing). Samples are crushed and milled before metallurgical testing is done in an onsite pilot 10t/h flotation plant. Existing onsite infrastructure involves a crusher, mill, flotation plant and a small tailings facility in a retainer dam. A diesel generator provides power onsite to the project. Exploration activities normally cover a three year period of a licence, and is planned to continue over a two-year period to establish a viable resource while metallurgical testing at the pilot plant is taking place at the same time to optimize the processing method for a larger scale and feasible project. If commercially viable concentrations can be defined, the next phase can potentially transcend into mining operations. This phase will be assessed in a separate and detailed environmental impact assessment at the appropriate stage, and therefore is not included in the scope of this assessment.

EPL 7699 is located in the transition zone between the highland shrubland and southern Kalahari vegetation type of the Acacia tree-and-shrub savanna sub-biome. The vegetation is characterized by open expanses of grass, dotted by trees and bushes. Along drainage lines and towards the east the vegetation becomes denser and higher. Like the largest part of Namibia, climatic conditions can be described as semi-arid. Average maximum temperatures vary between 30 and 32°C, and average minimum temperatures between 2 and 4°C. Deviations from these averages are common, with the highest temperatures reaching 38 – 40°C and the lowest temperatures below 2°C. Frost occurs occasionally during winter. Rainfall is highly erratic and unpredictable over the entire area, occurring mostly in the summer months, with average rainfall between 200 and 250mm per year. Average rainfall is subject to a variation coefficient of between 50 and 60%; potential evaporation can reach 2,200mm per year and the average length of sunshine per day varies between 9 and 10

hours. EPL 7699 overlaps with at least 16 farms and the predominant land use is agriculture – more specific extensive livestock farming.

This ESIA was undertaken using a methodology developed by Environmental Compliance Consultancy (ECC) which is based on the International Finance Corporation (IFC) standard for impact assessments and compliant with Namibian laws. Through the assessment process, a review of the site and surrounding environment was completed by undertaking desktop reviews and verification of site data.

Some vegetation will be cleared to create access tracks, working areas, and as a result of exploration activities. Where possible, existing tracks will be used for access and limited areas need to be cleared for the movement and placement of equipment. Removal of big trees is not recommended. In addition, the EMP recommends minimising damage to plants, residing animals and soil.

The impacts of exploration activities with respect to airborne dust are expected to be limited to vehicular and machinery movements, crushing and drilling activities. Milling, crushing and trial processing activities are limited to a small, confined area and tailings are deposited in a small single-point depository retainer dam. The EMP recommends minimizing adverse impacts from these facilities. 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 residing organisms and immediate neighbours.

Water is a scarce commodity in Namibia and, as such, must always be treated with caution. The hydrology of the area is limited to ephemeral streams and groundwater. The potential for contamination from the proposed activities as well as the existing generator is regarded as minimal if the correct mitigation measures are put in place and if the recommended water studies are undertaken. These mitigation measures for safe guarding water quality are addressed in the EMP. The water study recommendations are made in the hydrology section 5.5 of this report.

Cumulative impacts, which were identified as non-significant, may occur as a result of the potential visual and noise impacts to human receptors. These impacts do not require further assessment and can be mitigated by means of:

- Positioning drill equipment in such a way that it is out of sight from human receptors;
- Limit trenching and bulk sampling as far as possible;
- Barriers or fences shall be used if exploration occurs in locations that may affect 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 potential environmental impacts that may require further investigation are those related to activities that could cause groundwater contamination and impacts on avian fauna and or high value conservation species.

The extensions of exploration and mining operation were found to have potential significant effects on biodiversity namely birdlife due to the effects of vibration and ambient noise as there are (Ludwig's and Kori Bustards) species that occur within the project area. These birds are ground nesting, and research has shown (Simmons, *et al.*, 2015) that these birds are susceptible to ground vibrations and therefore could potentially be directly affected by the project activities.

Mitigation measures outlined in the EMP included possible relocation of species at risk (if viable), ongoing monitoring to determine if activities are impacting birds, altering exploration or mine plans to avoid activities that impact on nesting during nesting periods (egg-laying season is from February-May in Namibia).

Through the ESIA investigation and I&AP consultations, it was determined that these impacts, groundwater and avian fauna, are recommended for further studies and assessments as operational activities of the project expand. Other impacts identified through this assessment and I&AP consultation, could be managed by the implementation of the EMP and recommended mitigation measures to ensure ongoing compliance thereof.

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DEFINITIONS AND ABBREVIATIONS

ABBREVIATIONS	DESCRIPTION
AEM	Airborne electromagnetic
AIDS	Acquired Immune deficiency Syndrome
AMT	Audio Magneto telluric
COVID -19	Corona Virus Disease 2019
DEA	Directorate of Environmental Affairs
ECC	Environmental Compliance Consultancy
EMA	Environmental Management Act
EMP	Environmental Management Plan
EPL	Exclusive Prospecting License
EIA	Environmental Impact Assessment
ESIA	Environmental and Social Impact Assessment
GSN	Geological Survey of Namibia
HIV	Human Immunodeficiency Virus
I&AP	Interested & Affected Parties
IFC	International Finance Corporation
IHME	Institute for Health Metrics and Evaluation
MAWLR	Ministry of Agriculture, Water and Land Reform
MEFT	Ministry of Environment, Forestry and Tourism
MME	Ministry of Mines and Energy
MPMRC	Minerals (Prospecting and Mining Rights) Committee
NDP5	National Development Plan five
NSA	National Statistics Agency
RAB	Rotary Air Blast
SOP	Standard Operating Procedure
SWRD	Stormwater Return Dam
TSF	Tailing Storage Facilities
WRD	Waste Rock Dumps
TB	Tuberculosis

1 INTRODUCTION

1.1 PURPOSE OF THIS REPORT

The purpose of this report is to present the findings of the assessment for the proposed project. The proposed project is to undertake exploration activities, bulk sampling and trial processing on EPL 7699, which are described in detail throughout the report. The existing mining claims 68855 - 68861 and 67633 will be converted and consolidated as part of EPL 7699. The ESIA 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).

1.2 BACKGROUND OF THE PROPOSED PROJECT

Mertens Mining and Trading (Pty) Ltd propose to undertake mineral exploration activities on EPL 7699 as well as exploration and small-scale mining activities on mining claims 68855 - 68861 and 67633 in the Khomas and Hardap Regions. EPL 7699 is located 25km east-southeast of Rehoboth. The largest part of EPL 7699 is located within the Khomas Region and a small portion overlaps with the Hardap Region (refer to Figure 1 for the location of EPL 7699).

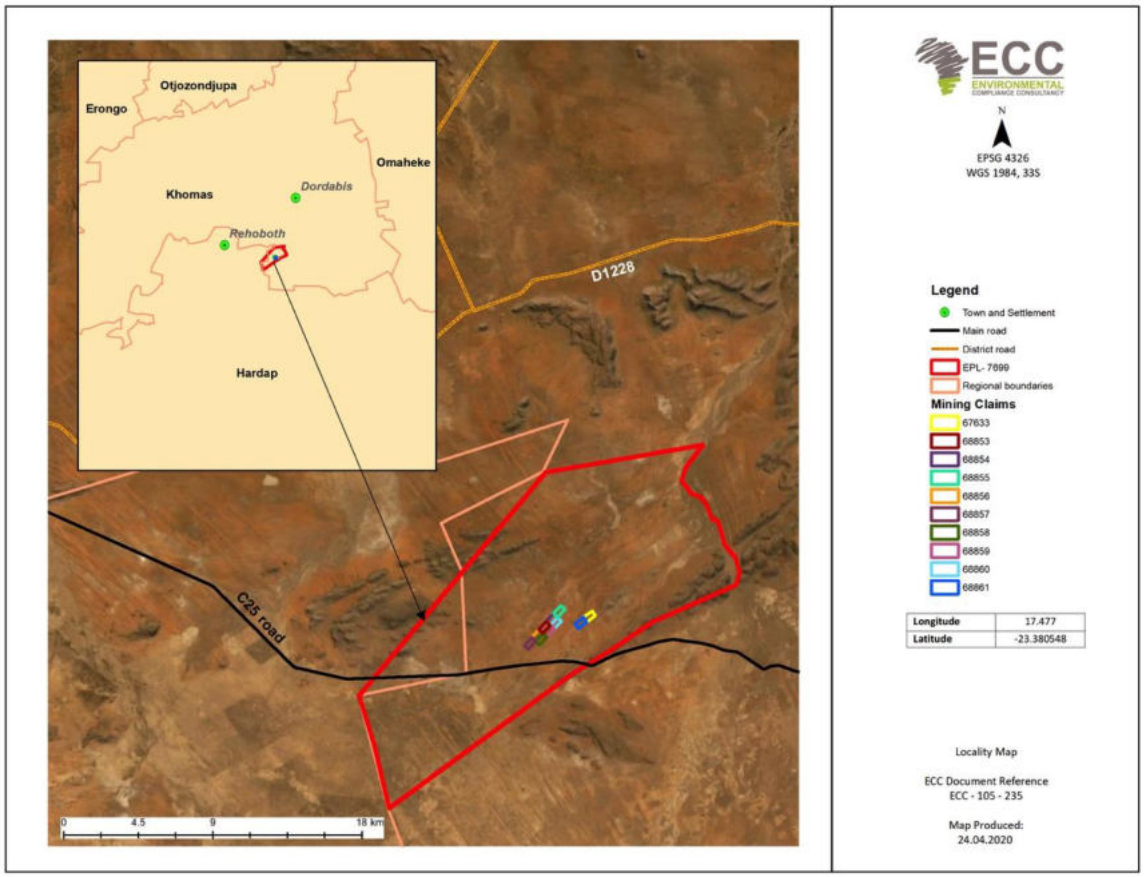

FIGURE 1 - LOCALITY MAP OF EPL 7699

1.3 SCOPE OF WORK

Environmental Compliance Consultancy (ECC) has been engaged by the proponent, to undertake the ESIA and an Environmental Management Plan (EMP) in terms of the Environmental Management Act, 2007 and its regulations.

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

An environmental clearance application was submitted to the relevant competent authorities; the Ministry of Mines and Energy (MME) and Ministry of Environment, Forestry and Tourism (MEFT).

ECC has prepared this report. 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. The attached EMP has been developed to provide a management framework for the planning and implementation of exploration activities. The EMP provides exploration standards and arrangements to ensure that the potential environmental and social impacts are mitigated, prevented and/or minimised as far as reasonably practicable, and that statutory requirements and other legal obligations are fulfilled.

1.4 THE PROPONENT OF THE PROPOSED PROJECT

Mertens Mining and Trading (Pty) Ltd is a Namibian registered company (registration number 2007/0308), and holds the mineral exploration licence of EPL 7699. The project started in 2008 in phases resulting in the initial proclamation of EPL 4034, which covered an area of 34,824.80ha. Mining claims 68855 - 68861 and 67633 were proclaimed too – all of them located on the farm Mertens (No.63), which was part of EPL 4034. Bulk sampling and trenching exploration commenced and an onsite crushing and milling plant and a pilot 10t/h flotation plant were established to conduct trial processing and metallurgical testing. Power is provided by a diesel generator onsite and some heavy mining equipment is used for the ongoing exploration activities. Since 2008 the project was exposed to several potential "take-overs" and mergers, which is an ongoing process.

The existing mining claims will be converted and consolidated as part of EPL 7699, including the current operational activities at the pilot plant and the associated facilities and infrastructure. EPL 7699 includes most of the former EPL 4034, the mining claims 68855 - 68861 and 67633 on farm Mertens, and overlaps and borders several other farms.

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

TABLE 1 – PROPONENT DETAILS

CONTACT	POSTAL ADDRESS	EMAIL ADDRESS	TELEPHONE	WEBSITE
Mertens Mining and Trading (Pty) Ltd The Director	P O BOX 1182 Tsumeb Namibia	baasco@afol.com.na	+264 81 1228502	N/A

1.5 ENVIRONMENTAL CONSULTANCY

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

All compliance and regulatory requirements regarding this ESIA 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

1.6 Environmental Requirements

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

TABLE 2 - LISTED ACTIVITIES TRIGGERED BY THE PROJECT

LISTED ACTIVITY	EIA SCREENING FINDING
ENERGY GENERATION, TRANSMISSION AND STORAGE ACTIVITIES 1. The construction of facilities for the generation, the transmission and supply of electricity	○ Power will be generated onsite by a diesel generator
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 licences 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 licence (EPL). An exploration licence excludes any mining activities, but includes activities strictly relating to exploration work. Hence the current project strictly focuses on exploration and not mining. ○ Soil will be sampled and explored for within the EPL 7699. ○ The proposed project will explore for base and rare metals, industrial minerals, precious metals, precious stones, and semi-precious stones.
WATER RESOURCE DEVELOPMENT 8.1. The abstraction of ground or surface water for industrial or commercial purposes	○ Due to the drilling of exploration boreholes, the abstraction of groundwater may be possible, although it is intended that water will be obtained from existing boreholes in the proposed project area. Any additional borehole drilled for the intention of abstracting water for use on site should be permitted by the authorities in the form of an abstraction permit

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.

- **REMOTE SENSING** techniques in mineral exploration enable explorers to evaluate large areas of the earth remotely without having to undertake ground-based exploration operations. Remote sensing may be used to map the geology and structure that potentially localise the ore deposits, or may be used to identify rocks, which have been hydrothermally altered. Remote sensing involves the use of aircraft and satellite-based equipment to obtain the data to record spectral data from the surface of the earth. Remote sensing includes a number of tools and techniques including geographical information systems, radar and sonar. Typically, satellites or a high-flying aircraft are used in the data collection process. It is a useful tool when searching for minerals and can give an indication of where deposits could be located. Remote sensing aids in narrowing down the field survey area and helps to identify target areas that may be considered for more.
- **AIRBORNE GEOPHYSICAL SURVEYS**, using magnetic, radiometric and electromagnetic techniques, are a key aspect in mineral exploration, enabling explorers to probe under cover, mapping geology and structure, including potentially direct identification of mineral deposits. Modern surveys are flown at a low level in a grid pattern, adhering fully to the safety margins prescribed by the Civil Aviation Authority (CAA) of Namibia.
- **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. Geochemical surveys will be the first ground exploration method to be undertaken by the proponent in the licence area.
    - **SAMPLING** - Selecting a fractional but representative part of a mineral deposit for analysis.
- **GROUND GEOPHYSICAL SURVEYS** including Magnetic Induced Polarization (IP) and Electromagnetic (EM) techniques, may be undertaken, as appropriate, to collect data that

give an indication of essential rock properties, particularly at depth. They are also used to map the geological structures. IP surveys involve sending electrical currents into the ground, measured via electrodes along linear cut-lines up to 3 km long to provide access to electrical cables. Small holes in the ground (0.2m x 0.2m x 0.3m) will be required for IP electrodes every 25 or 50m along a survey line. Copper sulphate solution will be used to improve the conduction of electrodes during the IP survey. The majority of EM techniques are completely non-invasive and operate by sending electromagnetically induced currents into the ground. EM surveys are conducted along the same linear traverse lines. A variation is the Audio-Magneto Telluric (AMT) technique, in which surveys utilize the same lines and small holes in the ground, but without the application of high voltage electrical currents.

- **RAB DRILLING** (Rotary Air Blast drilling) is an open-hole technique that injects compressed air down the drill pipe and recovers 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 METHODOLOGY AND APPROACH

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 AND METHODOLOGY

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

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

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

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

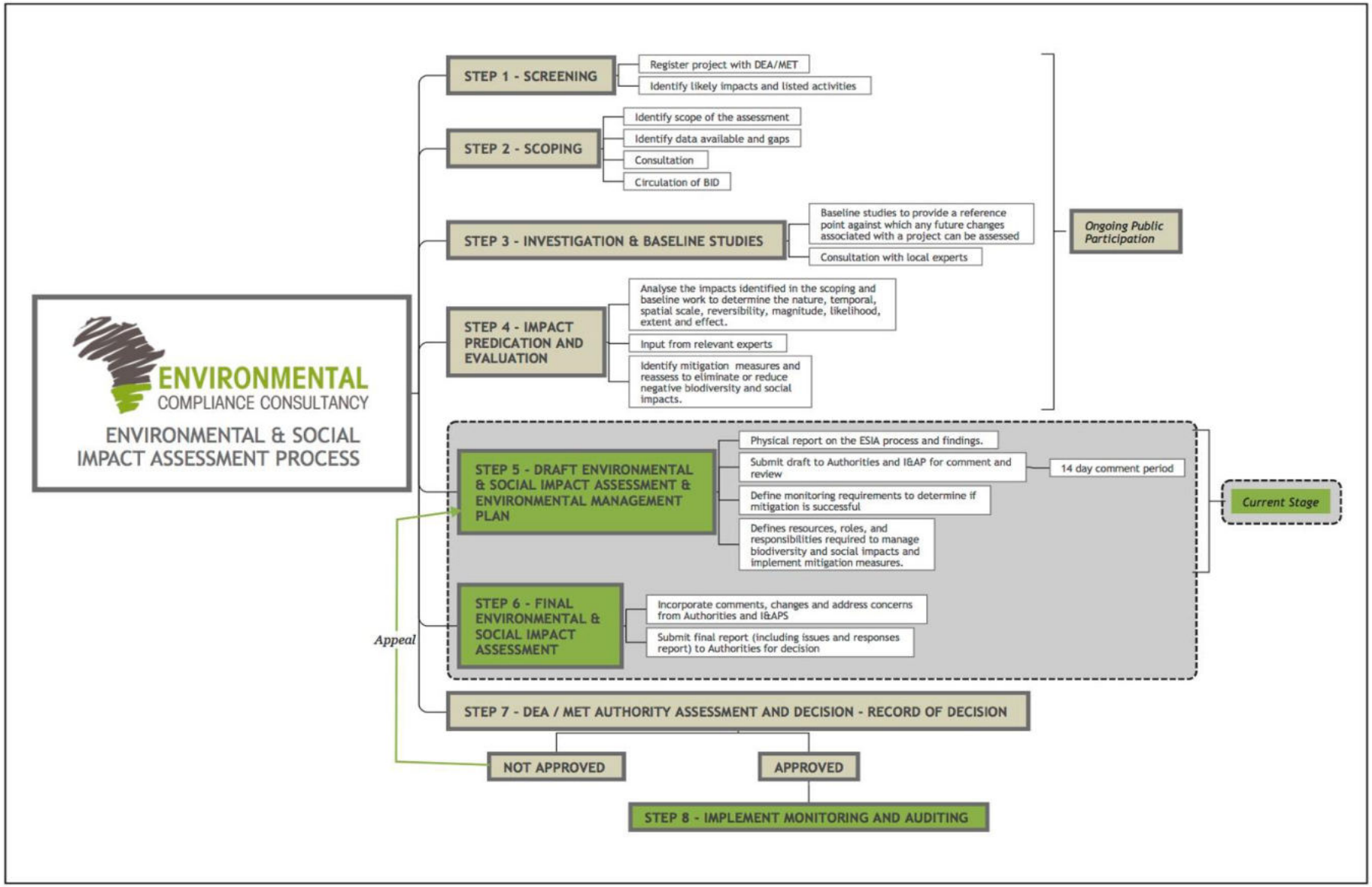

FIGURE 2 – ECC SCOPING PROCESS

2.3 SCREENING OF THE PROJECT

STATUS: COMPLETE

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

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

2.4 SCOPING OF THE ENVIRONMENTAL ASSESSMENT

STATUS: COMPLETE

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

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

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

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

SOCIO-ECONOMIC ENVIRONMENT

- Limited goods and services procurement within the local economy.

BIOPHYSICAL ENVIRONMENT

- Dust emissions
- Soil and geology
- Terrestrial ecology

- Terrestrial biodiversity (including fauna and flora)
- Groundwater (potential cumulative impact). Water management suggestions are contained in the EMP (Appendix A).

The following topic were scoped out of the ESIA, as no likely significant impacts are predicted as the proposed project poses little to no change from the current baseline, therefore is not discussed further in this report.

- Heritage: An archaeological assessment was carried out on the proposed project site specific area by an experienced and qualified Archaeologist - Dr. John Kinahan. The archaeological study, issued on the 22 February 2021, reviewed that no significance of heritage value was found (refer to Appendix E for the detailed assessment report). In the unlikely event of a possible archaeological find a Standard Operating Procedure (SOP) called a "chance-find" procedure outlined in the EMP should be utilised.

2.5 BASELINE STUDIES

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

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

A robust baseline is required 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:

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

2.6 IMPACT PREDICATION AND EVALUATION

Impact prediction and evaluation involves predicting the possible changes to the environment as a result of the development/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 impact prediction and

evaluation methodology used is presented in Section 6 of this report. The findings of the assessment are presented in Section 7.

2.7 ESIA CONSULTATION

STATUS: COMPLETE

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

The objectives of the stakeholder engagement process are to:

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

2.7.1 INTERESTED AND AFFECTED PARTIES

EPL 7699 overlaps with at least 16 farms (Figure 3). A regional border runs through the EPL, with the largest part of the EPL located within the Khomas Region (Windhoek District) and the smallest part falling in the Hardap Region (Rehoboth District). The entire EPL is located between two endorheic drainage systems – on the western side the Oanob and on the eastern side the Skaap River.

Extensive livestock farming is the predominant land use in this part of Namibia. (Figure 3 below) indicates the farm units which may be affected by the location of EPL 7699. The listed farms are:

- Wiese (three parts, all No. 62)
- Mertens (No. 63)
- Strife (No. 64)
- Gravenstein (No 65)
- Kous (No. 66)
- Versailles (No. 67)
- Ganeib-suid (No. 215)
- Rooiwal-oos (No. 382)
- Heide-oos (No. 407)
- Atsigas-noord (No. 757)
- Kartatsaus (No. 757)

- Atsigas (No. 757)
- Teenspoed (No. 793) and Hexenkessel (No. 887)

All owners of the farms that overlap or border EPL 7699 were identified as I&APs, as well as the relevant regional authoritative bodies. Other I&APs were identified through invitations such as the newspaper advertisements and site notices.

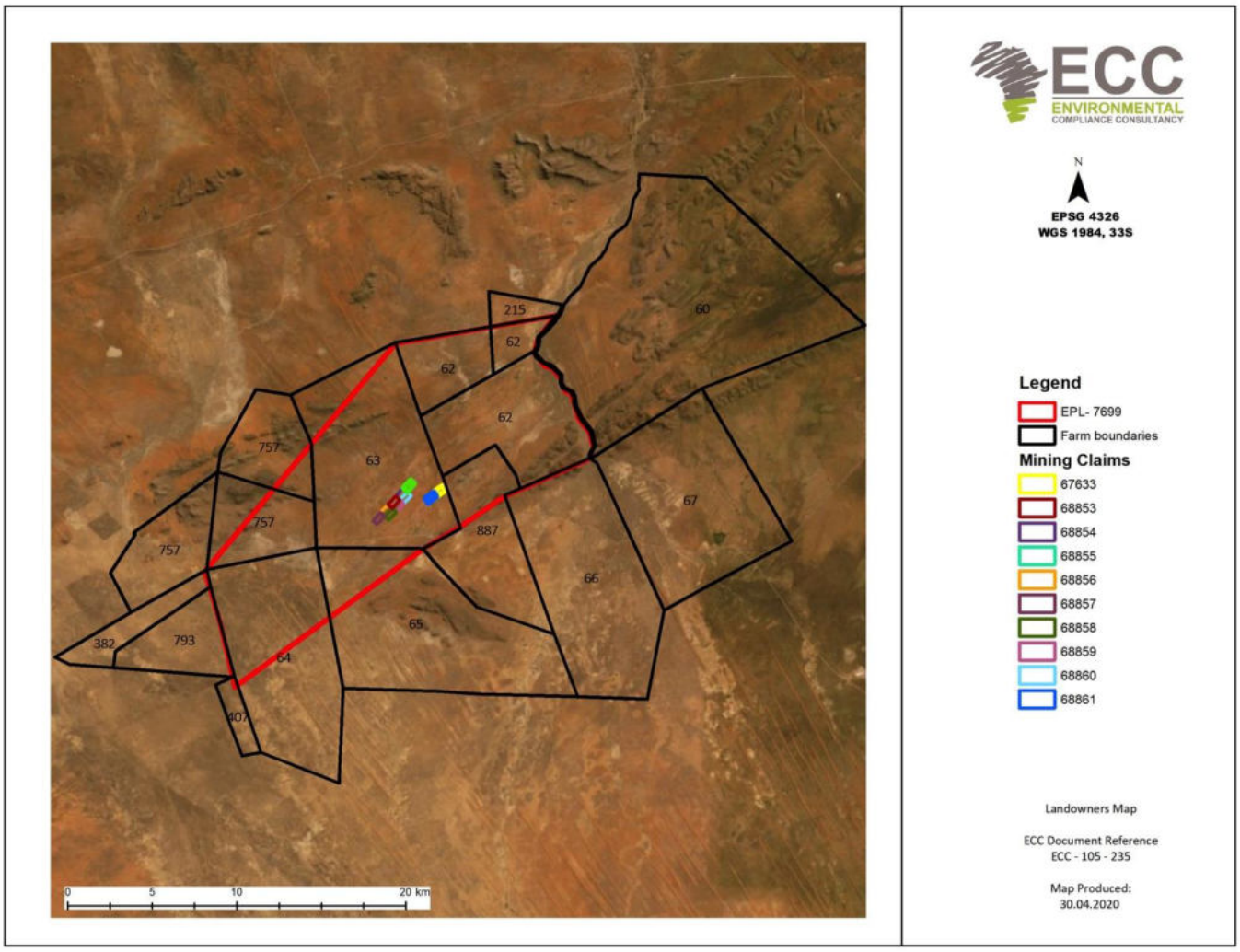

FIGURE 3 – FARM BOUNDARIES RELEVANT TO EPL 7699

Access to the farms are possible from the C25 (from the main road between Rehoboth to Uhlenhorst) and the D1228. The C25 also provides the main access to the EPL and mining claims. Several tracks are present on the farms; all of them are private roads (Figure 4).

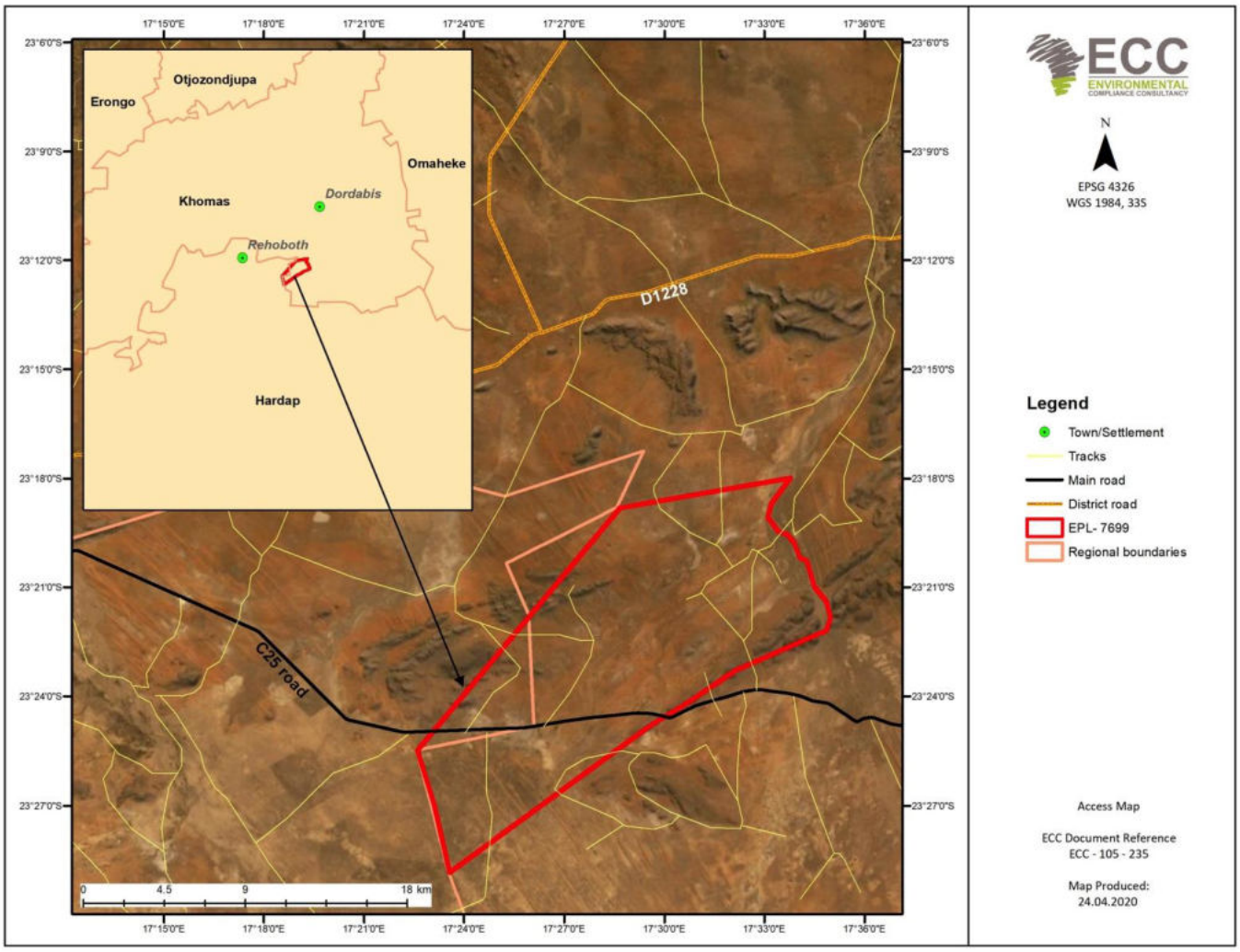

FIGURE 4 – ROADS AND ACCESS TO EPL 7699

2.7.2 SITE NOTICES

A site notice ensures neighbouring properties and stakeholders are made aware of a proposed project. A site notice was set up along the main road to the proposed project site. Evidence of the site notice placement is illustrated in Appendix C.2.

2.7.3 NEWSPAPER ADVERTISEMENTS

Notices regarding the proposed project and associated activities were circulated in three newspapers namely the 'Republikein', Allgemeine Zeitung' and the Namibian 'Sun" on the 09th and 16th of September 2020. The purpose of this was to commence the consultation process and enable I&APs to register an interest with the project. The adverts can be found in Appendix C.

2.7.4 NON-TECHNICAL SUMMARY

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

2.7.5 PUBLIC MEETING

A public meeting was held on the 29 September 2020 (during the public consultation period) as it was deemed necessary due to the concerns and comments from the I&AP identified and registered. The purpose of the meeting was to introduce the project, afford I&APs an opportunity to interact and openly express their concerns and decide on the best means of communication with the affected farm owners. See appendix C.3 for the record of meeting held.

2.7.6 SUMMARY OF ISSUED RAISED

The initial public participation phase involved the notifications of the project through media such as the newspaper adverts, direct mail sent to identified I&APs and the display of site notices delivered very few interactive communications from the public. The full log of comments received from this phase are contained in appendix C.3.

The main concerns received from the I&APs during public consultation are summarized below.

- Information on the proposed projects, scheduled program for exploration and operations on the EPL and mining claims, (discussed in section 4.5.1);
- The nature of the proposed exploration site area and aftercare procedures to be carried out (corrosion concerns on site), (discussed in section 4.11 with mitigation included in the EMP on small scale mining impacts on soil and surface-water);
- Water supply for exploration activities and groundwater abstraction constraints and potential impacts to groundwater, (discussed in section 4.8 and 5.5); and
- Clarity on the potential impacts of exploration on the biodiversity of the area, (discussed in section 5.7).

2.8 DRAFT ESIA AND EMP

STATUS: COMPLETE AND ON GOING

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

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

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

This ESIA report will be open to stakeholders and I&APs for consultation for a period of 7 days (10/06/2021 – 18/06/2021), meeting 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 purpose of this stage is to ensure all stakeholders and I&APs have the opportunity to provide final comments on the assessment process and findings and register their concerns.

2.9 Final ESIA and EMP

STATUS: COMPLETE AND ONGOING

The final ESIA report and associated appendices will be available to all stakeholders on the ECC website www.eccenvironmental.com. All I&APs are informed via email. The ESIA 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.

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

2.10 Authority Assessment and Decision Making

STATUS: FUTURE STAGE

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

2.11 Monitoring and Auditing

STATUS: FUTURE STAGE

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 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, as amended	The constitution clearly defines the country's overarching position in relation to the well-being of Namibians, 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*	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

NATIONAL REGULATORY REGIME	SUMMARY	APPLICABILITY TO THE PROJECT
	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 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 waked any right to such compensation and has submitted a copy of such agreement or waiver to the Commissioner.*	submitted. As the proponent will need to access privately owned land the proponent will ensure sections 50 and 52 are complied with.
Environmental Management Act, No. 7 of 2007 and its regulations, including the Environmental Impact Assessment Regulations, 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	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.

NATIONAL REGULATORY REGIME	SUMMARY	APPLICABILITY TO THE PROJECT
	Namibia's natural environment. The DEA under the MEFT is responsible for the administration of the EIA process.	
Water Resources Management Act, No. 11 of 2013	This act provides a framework for managing water resources based on the principles of integrated water resource management, i.e. the full array of management, development, protection, conservation, and use of water resources. The Department of Water Affairs within the Ministry of Agriculture, Water and Land Reform (MAWLR) is responsible for the administration of the Act. As such the department is responsible for ensuring that Namibia achieves sustainable water resources management by controlling the abstraction of water (also from the ocean and groundwater), disposal of domestic and industrial effluent, and potable and effluent quality monitoring. This Act has not been approved by parliament; however it is best practice to comply with this Act.	The Act sets out obligations in order to avoid water pollution and stipulates licence requirements; however, as the Act is not enforced (but only applied as best practice); no regulations support the Act to stipulate how a licence should be obtained.
Water Act, No. 54 of 1956	The Water Act 54 of 1956 remains in force and 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 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	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 abstraction is recommendable.

NATIONAL REGULATORY REGIME	SUMMARY	APPLICABILITY TO THE PROJECT
	amended.	Should the project require drilling and abstraction of water from underground sources, an application should be submitted to the authorities.
Electricity Act, No. 4 of 2007	The Act stipulates that any potential generator of electricity must apply for such a licence from the Electricity Control Board. The application is evaluated and a recommendation is provided to the minister of Mines and Energy, who ultimately makes the decision whether a licence is granted or refused.	The area where the generation activities will take place should be accurately depicted on a map in the application, as well as proof of right to the land, particulars of the applicant and particulars of the generation station. In a case that a generator and power supply is not off-grid, an agreement with NamPower or the regional distributor should be in place. As a listed activity the application requires an EIA.
Forest Act, No. 12 of 2001 as amended by the Forest Amendment Act, No. 13 of 2005 and its regulations of 2015	This Act presents laws relating to the management and use of forests and forest produce. It also presents provisions for the protection of the environment and the control and management of forest fires.	Ecological impacts may occur as a result of operational activities. Permission is required if predominantly woody vegetation needs to be cleared on more than 15 hectares. Tree species and any vegetation within 100m from a watercourse may not be removed without a permit. Protected species will be identified prior to construction works and measures to protect them, as set out in the EMP. Permits for protected species under the act must be obtained prior to any disturbance.
Soil Conservation Act, No. 76 of 1969	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.	Taken into consideration during the design of the works to be undertaken within EPL 7699. Measures in the EMP set out methods to avoid soil erosion.
National Heritage Act, No. 27 of 2004.	The Act makes provision for the protection and conservation of places and objects with heritage significance.	There is potential for heritage objects to be found during the exploration activities and operations, therefore the stipulations in the act have been taken

NATIONAL REGULATORY REGIME	SUMMARY	APPLICABILITY TO THE PROJECT
	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.	into consideration and are incorporated into the EMP. The project shall be compliant with section 55.

3.2 NATIONAL REGULATORY REGIME

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 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 ESIA process and the production of this report.

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

3.3 Licences and Permits

3.3.1 Exclusive Prospective Licence

The EPL 7699 was granted on the 09th of January 2020 and expires on the 08th of January 2023. 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 ESIA and EMP. Due consideration must be given when renewing the licence to ascertain whether there is justification to renew the licence. Once an EPL expires and a new EPL is

issued, even if it is to the previous holder, the full screening process must be followed with a full ESIA process, before operations may commence (MET & MME, 2018).

3.3.2 Mining Rights

The existing mining claims 68855 – 68861 and 67633 were allocated to Mertens Mining and Trading (Pty) Ltd, the company who holds the mineral exploration licence of EPL 7699. The existing mining claims will be converted and consolidated as part of EPL 7699, including the current operational activities at the pilot plant and the associated facilities and infrastructure.

3.3.3 Water abstraction permit

Abstraction of water from a borehole is regulated by means of a permit from the Department of Water Affairs under the MAWLR. Abstraction rates need to be measured and reported to the authorities in accordance with the requirements of the legislation. In addition, monitoring and annual reporting on the environmental impacts of water abstraction is recommendable.

A water abstract permit with an indefinite validity period for borehole WW 200791, for the purpose mining and prospecting, was issued in May 2009. The overall classification of the water is group B, i.e. good quality water (based on analyses conducted in June 2009 and in January 2020).

Should the project require further drilling and abstraction of water from underground sources, an application should be submitted to the authorities.

3.3.4 Electricity generation licence

Any potential generator of electricity must apply for such a licence from the Electricity Control Board, which evaluates the application and make a recommendation to the Minister of Mines and Energy, who ultimately makes the decision whether a licence is granted or refused.

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

TABLE 5 – PERMITS AND LICENCES

PERMIT AND LICENCES	RELEVANT AUTHORITY	VALIDITY/DURATION
WATER ABSTRACTION PERMITS	MAWLR	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

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

The proposed project is in line with this vision and has the potential to create short term and limited employment and to contribute to the national income. In the event that exploration activities are successful, and a resource with commercially viable mineral concentrations can be defined, the exploration operations can potentially transcend into mining operations which can result in multiple socio-economic benefits to the region and the country at large.

4.2 EXPLORATION

Exploration activities are the process of sampling/collecting fragments of the earth's layers for testing of each sample's mineral composition, grade, and spatial dispersion to acquire an informed perspective of the target area's ore potential. Exploration shall only be carried out within the boundaries of EPL 7699. No exploration activities shall be carried out without an approved environmental clearance certificate.

4.3 EXPLORATION METHODOLOGY

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

TABLE 6 - LIST OF ACTIVITIES PLANNED PER PHASE

PHASE	DATE	ACTIVITY DESCRIPTION
Phase 1: 2020	Field inspection commencement date unknown, desktop work commenced 2019:	Exploration activities involve desktop interpretation of available airborne magnetic, radiometric and electromagnetic data, mapping, analysis satellite imagery and archival data from the GSN. Additionally, preliminary field inspection of onsite geology and possibly initial stream sediment sampling may take place.
Phase 2: 2021	Actual	Airborne electromagnetic (AEM) survey, as above, and interpretation

	commencement date unknown:	of this data, coupled with the commencement of soil sampling and geological mapping in specific target localities, to be determined by the above desktop interpretation and AEM results. Limited follow-up ground geophysical surveys may be needed to target drill sites.
Phase 3: 2022	Actual commencement date unknown	RAB and/or Aircore drilling in select areas only (locations unknown), depending on results from the first two phases.
Phase 4: 2021-2023	Actual commencement date unknown	Desktop reviews of all data and subsequent planning activities, which may lead to diamond core drilling, the timing of which will be dependent on progress of the previous phases. Trenching and bulk-sampling may be part of this phase but is not favoured in the light of emphasis on drilling.

4.4 Alternatives Considered

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

Exploration activities range from extremely low impact exploration such as remote sensing from satellites to more invasive methods such as extensive close spaced drilling, bulk sampling and trenching over a two-year period. Three-hole sections are planned every 500m of a strike of 3000m, with infill drilling to follow. As the drilling program can establish a viable resource, metallurgical testing at the pilot plant onsite is taking place at the same time to optimize the processing method for a larger scale and feasible project. If commercially viable concentrations can be defined, the next phase can potentially transcend into mining operations.

4.4.1 No-go alternative

Should exploration activities within EPL 7699 and the small-scale mining activities on mining claims 68855 – 68861 and 67633 not take place, the anticipated environmental impacts from these activities would not occur. The social and economic benefits associated with the project would also not be realised.

There would not be an opportunity to define resources within the project area, a missed opportunity for geological mapping and data collection that, if found to be viable for mining, could benefit the Namibian economy.

4.5 Small-scale Mining Activities

All the existing mining claims are located on the farm Mertens (No. 63). On the same farm some mining infrastructure exists, which is composed of a 10t/h pilot flotation plant, a crusher and a mill. Associated infrastructure includes a diesel generator and electrical gen-set, water pump and reservoirs and sheds while accessory works include a small quarry, waste and a small single-point depository retainer tailings dam.

Batches of ore are obtained from bulk sampling, crushed and milled before trial processing and metallurgical testing are done by means of froth flotation in the small plant. The flotation plant is fully containerized and located within a shed area. No chemicals are used during processing.

The mill and crusher only runs when a batch of feed is put through for metallurgical testing. At the tipping point dust suppression measures (e.g. water sprayers) are not in place, but the occurrence of dust is limited to a small area, and only on occasion.

Tailings are deposited in a small single-point depository retainer dam, below the plant. Although unlined, the facility is small, less than 1ha, and its surface is covered with grass. Tailings are led with an open-end gravitation pipeline to the depository where the tailings are retained with an earth wall. No additional preventative arrangements such a monitoring borehole, cut-off trench or toe-paddocks are in place, as the facility is small and is only being used on occasion. Depending on the running times of the plant, disposal is not continuous.

4.5.1 SCHEDULE OF EXPLORATION ACTIVITIES

Exploration techniques as discussed above are anticipated to be carried out over two years of the three-year period of the licence. The duration of the bulk sampling and drilling programs is variable, and usually depends on the data that is gained. It is possible that some areas may require follow-up exploration activities.

4.5.2 SCHEDULE OF SMALL-SCALE MINING ACTIVITIES

Trial processing and metallurgical testing are being done to optimize the processing method for a larger scale and feasible mining project while exploration drilling is done to define a viable resource at the same time. Testing at the pilot plant is done simultaneously with exploration activities and about 100t of concentrate from the plant will go for electro winning.

4.6 EQUIPMENT REQUIREMENTS

Equipment used for the drilling activities include two drill rigs and a support truck. Other equipment includes an excavator, one dump truck with a loader and five light pick-up trucks for supervision tasks as well as a compressor, welder and other mining support equipment. Fuel and consumables are brought to site to support the activities as and when needed.

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

- 4x4 vehicles for personnel and field equipment;
- Field equipment including tents, mobile toilets and ablution facilities, spades, axes, soil sampling equipment such as sieves, sample bags, surveying apparatus;
- Portable or semi-portable geophysical equipment such as magnetometers, electromagnetic or Induced Polarization apparatus (all passive and non-invasive).

- In the ensuing phases (2nd and 3rd year) drilling is envisioned. The equipment requirements would therefore be an RAB/ Aircore Drill rig initially then followed by diamond core drilling. This is anticipated to be a specific provision within tender documentation.

4.7 POWER SUPPLY

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

Bulk diesel is kept onsite, within a bunded area, within a fenced-in yard. The diesel tank has a capacity of 20 000 litres.

4.8 WATER SUPPLY

Water is required for various uses including human consumption, for exploration activities and for dust suppression. Water is sourced from an existing borehole, which is approved and monitored. Processing water will be circulated, water is as well circulated whilst drilling and at the pilot plant.

Water demand per day for the exploration project is broken down into two usage categories. These are:

- Water for domestic use: 5m³ per day; and
- Water for exploration activities (drilling): 20m³.

Water can be sourced directly from the existing and registered mine borehole. Alternatively, should the proponent require an additional borehole to be drilled in the area, the required water borehole permits, and abstraction permit shall be obtained from the MAWLR.

4.9 WORKERS AND ACCOMMODATION

A team of 28 workers will be employed. The workers will not reside onsite but at the Bahnhoff outpost (15km east of Rehoboth), in houses. The team will consist of eight workers for the drilling, five for trenching and fifteen people at the pilot plant, including supervisors. The workers will be sourced from the local communities of Rehoboth, Tsumeb and Windhoek.

4.10 WASTE MANAGEMENT

Waste will be produced onsite, which will include sewerage and solid waste such as packaging. Items included timber (pallets and crates), plastics and chemical containers. All

solid waste shall be collected, recycled as far as possible and non-recyclable items will be taken off-site and disposed of at the Rehoboth municipal waste site.

Mobile toilets will be used onsite, sewerage and wastewater generated shall be contained. The proponent will ensure waste transport certificates are in place when sewerage waste is removed from site. No waste shall be discharged or uncontained on site.

4.11 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 BASELINE / CURRENT BIOPHYSICAL ENVIRONMENT

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 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.

EPL 7699 was granted to Mertens Mining and Trading (Pty) Ltd by the MME in an area 25km east-southeast of Rehoboth. A gravel road, the C25 from Rehoboth to Uhlenhorst, runs from west to east through the EPL while another district road, the D1228 runs 10 km north of the EPL – also from west to east (refer to Figure 1).

5.2 CLIMATE

The EPL is located in an area that receives between 200 – 250 mm of rain per year, with a variation coefficient of 50 - 60% (Mendelsohn, et al 2002), meaning that rainfall is fairly unpredictable. Rainfall events are limited to the summer months, mainly between December and March, in the form of sudden thunderstorms often associated with heavy downpours. Potential evaporation can reach 2,200 mm per year. Relative humidity is low, rarely exceeding 20% in winter but may reach 80% in summer before or after thunderstorm build-up. Maximum temperatures average around 30 - 32°C, mainly recorded during afternoons between October and February, 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 2°C. Frost occurs occasionally during winter (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. The sinking air spirals outward and is the reason for the predominant east and northeast winds. During summer the positions of the high pressure cell fluctuate more, allowing low pressure cells to develop over the heated interior, which in turn pull-in moist air from the inter-tropical convergence zone.

Due to the rhythm of these pressure systems, the wind patterns remain fairly predictable. Prevailing wind over EPL 7699 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. Wind speed is generally low over the interior, decreasing even more to the north. 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).

5.3 GEOLOGY

Formations of the Damara Supergroup, between 850 and 600 million years old, cover a large part of western Namibia north of Rehoboth. West of Rehoboth, and south of the Damara Supergroup is the Namaqua Metamorphic Complex (between 1,400 and 1,050 million years old), and east of Rehoboth is the much younger Kalahari Group of recent deposits (<70 million years old), which cover 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 covers the largest part of the central interior of southern Africa and not many exposure of rocks occur.

Although recent, shallow deposits of unconsolidated material, mainly of aeolian origin cover most of the Kalahari, the underlying geology of Karoo sediments and volcanic intrusions of 300 – 180 million years old, is more complex. Most of the knowledge about the sediments of the Kalahari has been derived from boreholes, rare outcrops and along drainage lines and around isolated pans.

The entire EPL 7699 is located on the edge of the Kalahari Group. Low ridges of the Sinclair Complex, the youngest group of the Namaqua Metamorphic Complex, are oriented in a SW-NE direction on the EPL. Except for these outcrops the surface geology appears to be uniform, and the entire landscape has a gentle gradient (Figure 5).

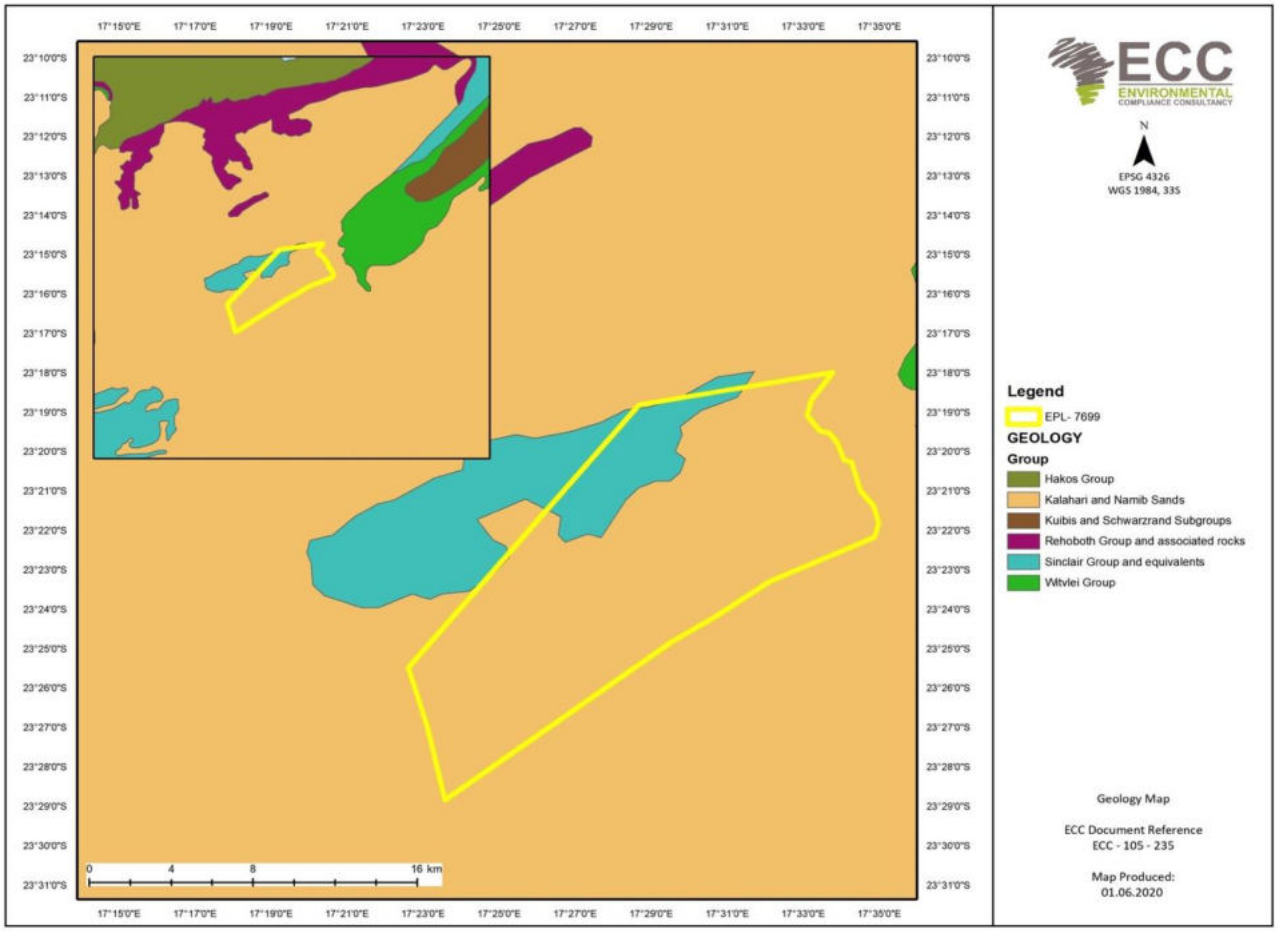

FIGURE 5 – GEOLOGY RELEVANT TO EPL 7699

5.4 TOPOGRAPHY AND SOIL

The topography of the EPL is flat, varying between 1,370 and 1,290 m above sea level. A few hills and ridges, associated with Karubeams Mountains interrupt the flatness. The terrain generally dips towards the east and south (Figure 6). The low ridges of the Karubeams Mountains in the southeast corner of the EPL contain the highest point at 1,470 m above mean sea level. The areas outside the EPL are flatter, as the Kalahari landscape dominates towards the east. Linear dunes become also more prominent towards the south and east, generally oriented in a NW-SE direction.

In the immediate surroundings of the outcrops eutric regosols are common. These soils are medium to fine-textured, typically associated with weathered landscapes. Although reasonably fertile, these soils form thin layers (not exceeding 50 cm) lying directly above the rock surfaces from which they originated. Regosols are susceptible to water erosion, especially where there is any degree of slope (Mendelsohn, et al., 2002).

Further away from the outcrops petric calcisols and ferralic arenosols dominate. Calcisols are associated with depressions and low-lying areas and typically contain accumulations of calcium carbonate, in most cases cemented as calcrete and visible on the surface as white blocks or forming a solid subsurface layer that remains hard even when wet. Arenosols are associated with the aeolian surface deposits of the Kalahari. These soils derived from wind-blown processes and usually extend to depths of several meters. Arenosols drain rapidly, due to a sand component of more than 70%. The high contents of combined oxides of iron aluminium (sesquioxides) give arenosols its typical reddish colour, and a fertility based on these minerals. However, due to its high porosity, the lack of organic matter and its inability to retain nutrients the cultivation potential of arenosols are limited.

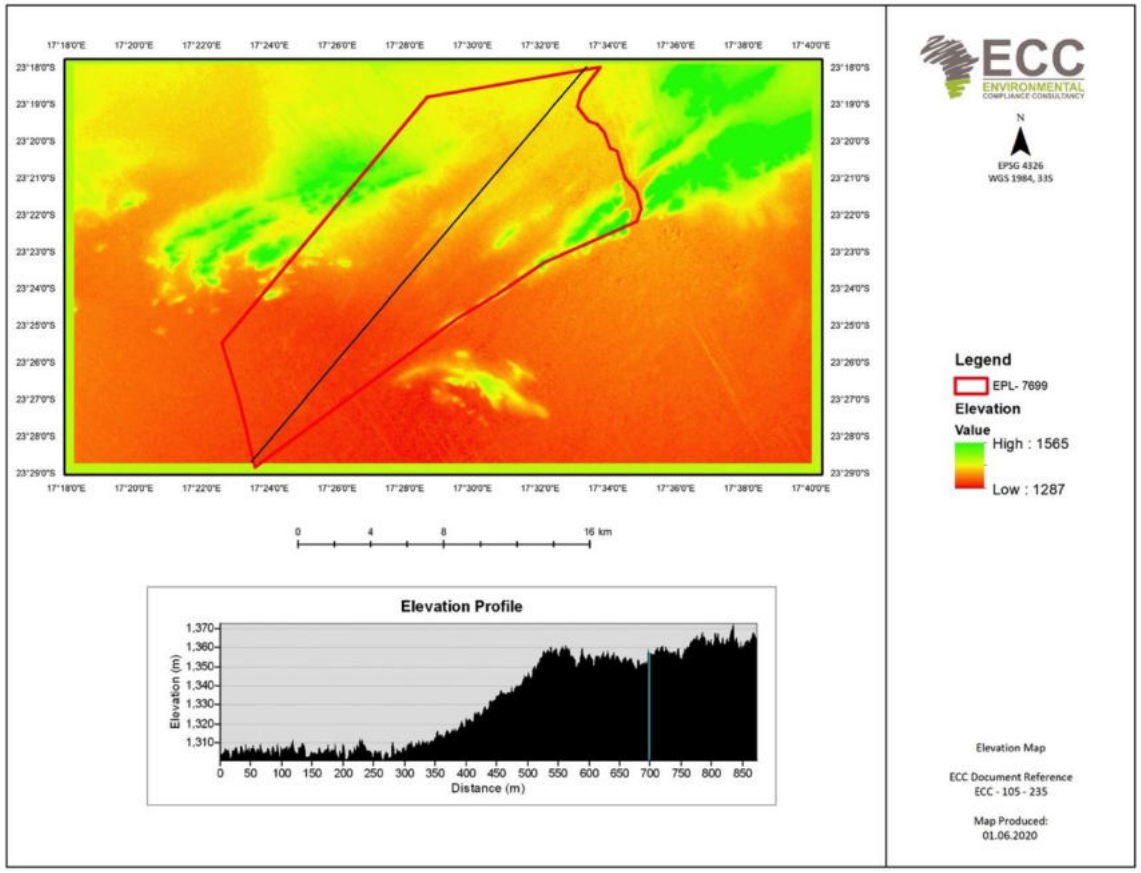

FIGURE 6 – ELEVATION RELEVANT TO EPL 7699

5.5 HYDROGEOLOGY AND HYDROLOGY

Surface water flow is in a southeast direction, following the general gradient of the Kalahari. The EPL is located between the basins of the Oanob River in the west and the Skaap River in the east. Both rivers originate in the Khomas Hochland in central Namibia. Both rivers are ephemeral, i.e. they only contain water for short periods shortly after sufficient run-off is received in their headwaters as a result of downpours. Both rivers are endorheic, i.e. they end on the interior and not into an ocean or into another river system. Both rivers dissipate in an area just south of the Tropic of Capricorn between Tsumis and Uhlenhorst, southwest of the EPL.

The Oanob River originates in the Khomas Hochland to the southwest of Windhoek and is dammed 5 km west of Rehoboth, to provide water to the town. South of Rehoboth the Oanob River sustains a dense stand of Camelthorn trees before turning in a more southerly direction. The Skaap River originates in the Auas Mountains south of Windhoek, heads east and then south through Dordabis, before turning southwest alongside the low ridges of the Karubeams Mountains. Figure 6 shows the general drainage direction of surface water flow. Land-use can be managed by encouraging run-off reduction through greater interception of rainfall and flow in generation areas.

The largest part of EPL 7699 is located in the South-eastern Kalahari Groundwater Basin. The farmers located within and nearby EPL 7699 obtain water from the number of boreholes in the area (Figure 7). The general direction of the groundwater flow is south to southeast and the Merten's mining site is located upstream. The South-eastern Kalahari Groundwater Basin shows a generally low to moderate potential of groundwater with an increased potential to the south. Therefore, groundwater contamination in the nearby boreholes occurring in the southern areas of the site may be possible. It is recommended that any open water accumulating in the pits be controlled by methods of dewatering (sump pumping) and sampling of surface water on a monthly basis for chemical constituents highlighted from the leach tests to track any potential risk to water quality affecting the quality of drinking water.

A water sample was taken in June 2009 at the Merten's borehole no. 3 and it showed that the overall classification of the water was in Group B, which is good quality water. In January 2020, a similar control sample was taken, confirming the same quality water. (Results can be found in Appendix C). Additionally, a water abstraction permit application was approved in May 2009 by the MAWLR for the drilling of a borehole to abstract water for mining and prospecting purposes.

Wastewater is produced during operational activities of the mine, for the current small scale mining activities, wastewater is contained in a Stormwater Return Dam (SWRD). The SWRD is unlined but it is equipped with a pump in order to ensure that no freestanding water remains for a long duration within the SWRD, thereby reducing potential seepage to groundwater. The effectiveness of these management and mitigation measures, to reduce the potential impact of groundwater contamination, should be monitored on a monthly basis, by taking groundwater level measurements and water quality sampling.

The tailings dam design and the nature of the tails play a role in the impact to groundwater systems. Management and mitigation measures to reduce potential impacts to groundwater from the tailings dam comprise of the inclusion of a liner beneath the dam, long-term rehabilitation plans, chemical and physical properties of the tailings, and water level management in the tailings dam (Journal of Mining and Metallurgy, 44 A (1) (2008)).

An environmental site audit was conducted by ECC, at the Mertens mining site in August 2020, to verify the on-site compliance with various pieces of Namibian environmental legislation and international environmental best practice. The site audit was limited to the operational footprint of EPL 7699, including the existing mining claims 68855 – 68861 and 67633. This included the areas of bulk sampling site, trial processing plant, trial tailings storage facility, and springbokbloed drilling and bulk sampling sites.

As per the environmental audits and recommendations, it is suggested that Applied Behaviour Analysis (ABA) time sampling and analyses be completed for the Waste Rock Dumps (WRD) and Tailing Storage Facilities (TSF) with complementing leach tests to understand and analyse the extent pollution potential of the site. The development of a formal storm water management plan is suggested to manage stormwater run-off and reduce the impacts of soil erosion and the drilling of at least one groundwater monitoring borehole down-gradient of the site. The return water facility should be lined or operational procedures should clearly indicate that no water should be stored in the facility to reduce the risk of seepage losses. Mitigation measures are included in the EMP.

Moreover, should the proposed exploration programme produce results that indicate a viable and minable resource, this could potentially lead to the extension of mining activities. For this purpose, the proponent is required to apply for a mining licence, whereby a full environmental impact assessment has to be performed.

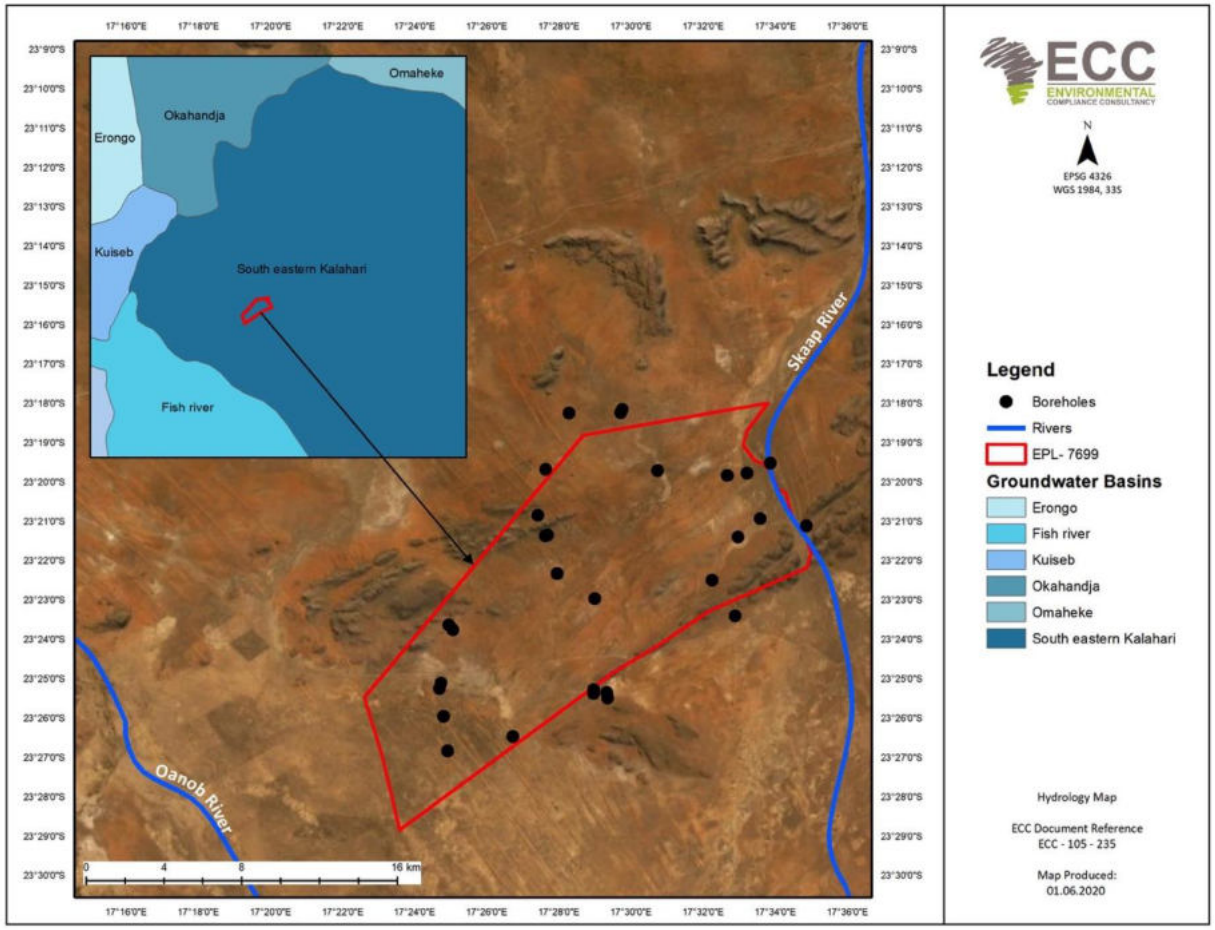

FIGURE 7 – HYDROLOGY RELEVANT TO EPL 7699

5.6 VEGETATION

To the east of Rehoboth, where EPL 7699 is located, a marked transition between the dense highland shrubland and the southern Kalahari vegetation types of the Acacia tree-and-shrub savanna sub-biome is noticeable (Figure 8). Where the soils are shallower, the landscape more hilly and the rainfall lower, plant growth tends to be shrubby. Eastwards, where the soils become deeper, rainfall increases and the landscape flattens, vegetation is characterized by large, open expanses of grass dotted by trees and bushes (Mendelsohn et al., 2002).

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 exposed to continuous periods of selective grazing by livestock. Moreover, the densification of bush has led to a decreased carrying capacity on some farms in the area where EPL 7699 is located.

Plant diversity is estimated between 150 and 299 species and plant endemism is low, not exceeding five species (Mendelsohn et al., 2002). Local differentiation as a result of topographical variance and availability of water is possible though. Vegetation on the Kalahari dunes and on the sandy plains between dunes differs markedly, while diversity around pans and along drainage channels increases and plants become denser and higher. On rocky, elevated areas such as the hills and ridges associated with the Karubeams Mountains, diversity increases too.

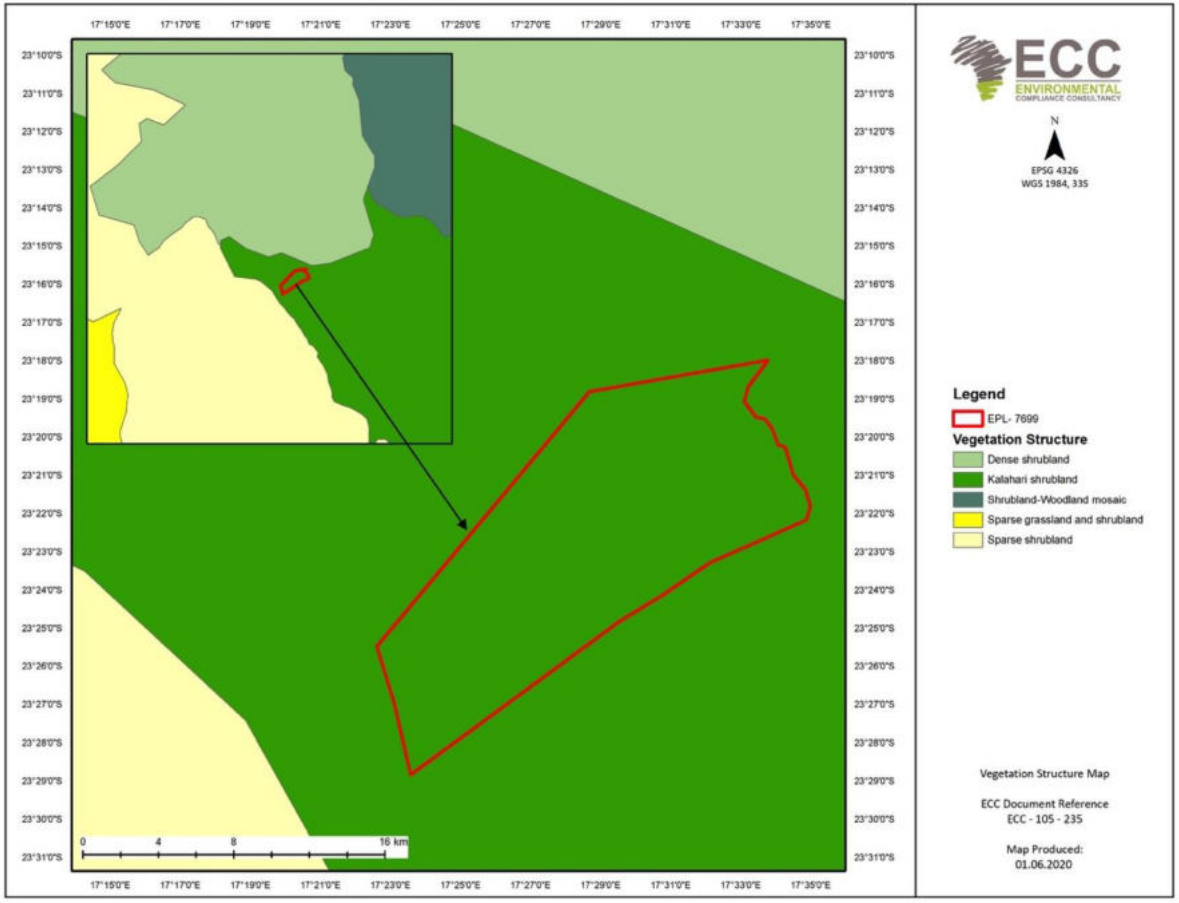

FIGURE 8 – VEGETATION MAP RELEVANT TO EPL 7699

5.7 FAUNA SPECIES

Overall terrestrial biodiversity in the areas east of Rehoboth, where EPL 7699 is located, ranges from medium to high. As endemism trends in Namibia show a clear decline to the east, the number of endemic fauna species potentially occurring on EPL 7699 is expected to be low. The number of mammal species ranges between 46 and 60, the number of bird species is between 171 and 200, with 61 – 70 reptile species, 8 – 11 frog species and 16 – 17 scorpion species that could 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 northwest.

Protected species such as the rhino are occasionally present in the area, poaching of high value conservation species in Namibia is illegal. The proponent and business partners should avoid the disruption of protected and threatened species (rhinos that occur in the area) and birds such as the Ludwig's Bustards and Kori Bustards. It has been recorded that these birds may move extensively in response to rain and availability of food and are particularly prone to collisions with power lines.

The Ludwig's Bustard is near-endemic to southern Africa, with a range centred on the dry biomes of the Karoo and Namib. It is found predominantly in the western Namibia. In Namibia's protected areas, it occurs in the Skeleton Coast Park, the Namib- Naukluft (Boyer & Bridgeford 1988), Etosha and Tsau// Khaeb (Sperrgebiet) national parks, as well as the (private) NamibRand Nature Reserve.

The Ludwig's Bustard occurs in areas receiving less than 500 mm rainfall, including open lowland and upland plains with grass and light thornbush, sandy open shrub veld and semi-desert in the arid and semi-arid Namib and Karoo biomes. It is typically found on flat terrain. In the Namib-Naukluft National Park, 65% of birds occurred on sandy plains, 20% on rocky plains and 15% on gravel plains (Birds to watch in Namibia, Simmons, *et al.*, 2015).

It has been studied from the 2016 Wiese Birding report, that Farm Wiese is rich in birdlife. The farm supports a number of locally as well as globally threatened and or near threaten species It was reported that birdlife and species are threaten due to human activities (Kremper J., 2016). Farm Wiese has been noted to be one of the top bird ringing hotspots in Namibia. Annual gatherings are held for the purpose of concerted bird ringing efforts (with the aim of yielding crucial re-sighting data).

The Bustards are large, heavy flyers with poor manoeuvrability. These birds tend to roam nomadically, not following regular flight paths, and often fly in the half-light of dawn and dusk.

Biodiversity and ecosystem services are of particular importance to the tourism, agriculture and fisheries sectors in Namibia, which alongside mining, form the basis of the Namibian economy. Around 70 per cent of Namibia's population also depends on the natural resource base their income; food; medicinal needs; fuel and shelter. Against this background, the maintenance and enhancement of biodiversity and ecosystem health is of vital importance to Namibia's socio-economic development (MEFT – Convention of biological diversity, 2014).

The EPL is entirely covered with land used predominantly for extensive grazing. Like elsewhere in Namibia, some farms are also used as guest and hunting farms, aimed at tourism. Predators are common and to protect their livestock, farmers are required to manage predators such as jackals, cheetahs, leopards and caracals.

5.8 Socio-economic Baseline

The largest part of EPL 7699 is located within the Khomas Region, but a small portion overlaps with the Hardap Region.

The Khomas Region is the central region of Namibia and is named after the Khomas Hochland, the prominent highland landscape 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 (Namibia Statistics Agency, 2017a).

Three times the size of the Khomas Region, 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 (Namibia Statistics Agency, 2017a).

5.8.1 Demographic profile

Namibia is one of the least densely populated countries in the world (2.8 persons 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. Windhoek, the capital, functions as a primate city – not only is it the urban area with the biggest population, but the concentration of private and public head offices attracts Namibians from all parts of the country in search for a better life. National population growth rate is estimated at less than 2%, lower than most African countries. Namibia's population is young - although 57% falls in the age group 15 – 59, 37% of the total population is younger than 15 (Namibia Statistics Agency, 2017). Since 2005 a steady improvement in life expectancy was recorded, currently estimated at 65 years. In 2018 it was estimated that 50% of all Namibians are urbanized, in other words living in an urban settlement (retrieved from www.worldpopulationreview.com). The last national census was conducted in 2011 and counted 2.1 million Namibians (Namibia Statistics Agency, 2011). An inter-censal demographic survey was conducted in 2016 and estimated the total population at 2.3 million (Namibia Statistics Agency, 2017a).

Population density in the Khomas Region is 4.2 times higher (12 persons per km^2) 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 (Namibia Statistics Agency, 2017a).

The dominance of Windhoek as a place of residence in the Khomas Region is apparent – except for the capital all other urban places in the Khomas Region are classified as settlements – the lowest order of governed populated places in Namibia. In contrast the population of the Hardap Region is more dispersed and spread between 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).

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 (Namibia Statistics Agency, 2017a).

5.8.2 GOVERNANCE

Namibia is divided into 14 regions, subdivided by 121 constituencies. The Khomas Region is divided into ten constituencies and the Hardap Region has eight 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 7699 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.

5.8.3 EMPLOYMENT

The labour force participation rate is the proportion of the economically active population, given as a percentage of the working age portion of the population (i.e. older than 15 years of age). Rates of labour force participation for the Hardap and Khomas Regions were 74.1% and 79% respectively, compared to the average of 69.4% for Namibia in 2016 (Namibian Statistics Agency, 2017b).

In 2016, 48.5% of all working Namibians were employed in the private sector and 18% by the state. State-owned enterprises employ 5.3% and private individuals 28.1%. Agriculture (combined with forestry and fishing) is the economic sector with the most employees – 20.1% of all employed persons in Namibia work in this sector. Of all people employed, 40% fall in the occupational group of general labourers and other unskilled occupations. Wages and salaries represented the main income source of 61.7% of households in Namibia, especially pronounced in the Khomas Region with 74.5% (Namibian Statistics Agency, 2017b).

Low education levels affects employability and prevents many households to earn a decent income. Of all employed people in Namibia, 61% are not higher qualified than junior secondary level (Grade 10 and lower). In total 9.5% of all employed people have no formal education. Overall the rate of unemployment is estimated at 34% for Namibia, using the broad definition of unemployment. The unemployment rate in rural areas is higher (39.2%), compared to urban places (30.3%). The highest unemployment rates are found amongst persons with education levels lower than junior secondary, and the unemployment rate of persons with no formal education is 34.5%. In the Hardap Region the unemployment rate is 37.7% and in the Khomas Region it is 28.4% (Namibian Statistics Agency, 2017b).

Of all employed Namibians, 2.2% are directly employed by the mining sector, of which 47.5% are regarded as informal workers. Employees in the mining sector receive better wages when compared to other sectors (Namibian Statistics Agency, 2017b). The multiplying effect of income from employment in the mining sector is also significant – it is estimated that the mining industry contributes to the livelihood of about 100,000 Namibians (BDO, 2019).

Although declining over time, agriculture (combined with forestry and fishing) is the sector that employs most Namibians (20.1%) and it is also the sector with the most employers. It is also the sector that employs the most informal workers in Namibia, calculated at 89.6%. Wages of employees in the agriculture sector are lower than all other sectors except for domestic work in private households (Namibian Statistics Agency, 2017b).

5.8.4 Economy

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 (Namibian Statistics Agency, 2017b).

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 piggery, 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%. 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 (Namibian Statistics Agency, 2017b).

Extensive livestock farming forms the livelihood of many people in the Hardap Region, and is one of the reasons for the low intensity land use, the low total population as well as the low population density. Large parts of the region are covered by commercial and communal farms, mainly for small livestock farming. Guest farms and hunting farms are also common, especially in the western parts 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.

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 Hardap Regions is not as pronounced as in the Erongo, Karas, Otjozondjupa and Oshikoto Regions of Namibia. Mining operations in both regions ceased in the past 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 (Namibian Statistics Agency, 2018). Despite the more positive expectations, the economy retracted to an average growth of not more than 1% annually since 2017.

5.8.5 HEALTH

Since independence in 1990, the health status of Namibia has increased steadily with a remarkable improvement in access to primary health facilities and medical infrastructure. In 2015 the World Health Organization (WHO) recommended strategic priorities of the health system in Namibia, which entail improved governance, 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 deaths due to AIDS) the epidemic started to stabilise.

The Khomas region has 33 facilities which provide basic health care services which caters for outpatient care for sick children and adult services for STI's, temporary methods of family planning, etc. (ICF, Macro, 2011)

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

5.8.6 CULTURAL HERITAGE

In Namibia several mountains are closely coupled to heritage values, and it is possible that this applies to the Karubeams Mountains as well. The EPL overlaps with some of the elevated areas related to these mountains. Little is known about the cultural heritage potential of the mountains.

A review of the National Heritage Council database was conducted, and no known heritage sites were identified in EPL 7699. Moreover, an archaeological site survey was conducted by Dr John Kinahan, in the project area. An archaeological assessment report was issued on the 22 February 2021 (refer to Appendix E). The focus area lies within the EPL. All exploration work will be conducted within this area; therefore, the heritage survey was directed to assess the heritage potential of this area. A detailed foot survey concentrating on the area of Mining Claims 68855-68861 and 67633 found no significant archaeological sites and is therefore considered to have a low archaeological sensitivity.

Additionally, no landforms were considered to be significant in terms of possibly being a habitat in which archaeological artefacts could be found and therefore require special mitigation measures. The EMP (Appendix A) will adopt the chance-find procedure devised for mining projects. The heritage study

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

5.8.7 SENSE OF PLACE

EPL 7699 is entirely located in a rural area, where the predominant land use is extensive livestock farming, with occasional guest and hunting farms in between. No settlement, other than isolated farm homesteads occur within the area. People live remotely from each other and the population density is low. The area is undeveloped, with the only signs of human influence are in the form of farm infrastructure, i.e. water installations, fences, tracks and buildings. Sensitive receptors associated with EPL 7699 include farm owners and farm workers, private visitors, 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. The proponent will ensure that prior communication and noise simulation are practiced.

6 IDENTIFICATION AND EVALUATION OF IMPACTS

The key stage of the ESIA process is the impact prediction and evaluation stage. This stage is the process of bringing together project characteristics with the baseline environmental characteristics and ensuring all potentially significant environmental and social impacts are identified and assessed. Impact prediction and evaluation involve 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 (construction and operations). The impact prediction and evaluation stage were undertaken in September 2020 and the findings of the assessment are presented in this document.

6.1 INTRODUCTION

Chapter 2 provides an overview of the approach used in this ESIA process and details each of the steps undertaken to date. Predication and evaluation of impacts is a key step in the ESIA 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.

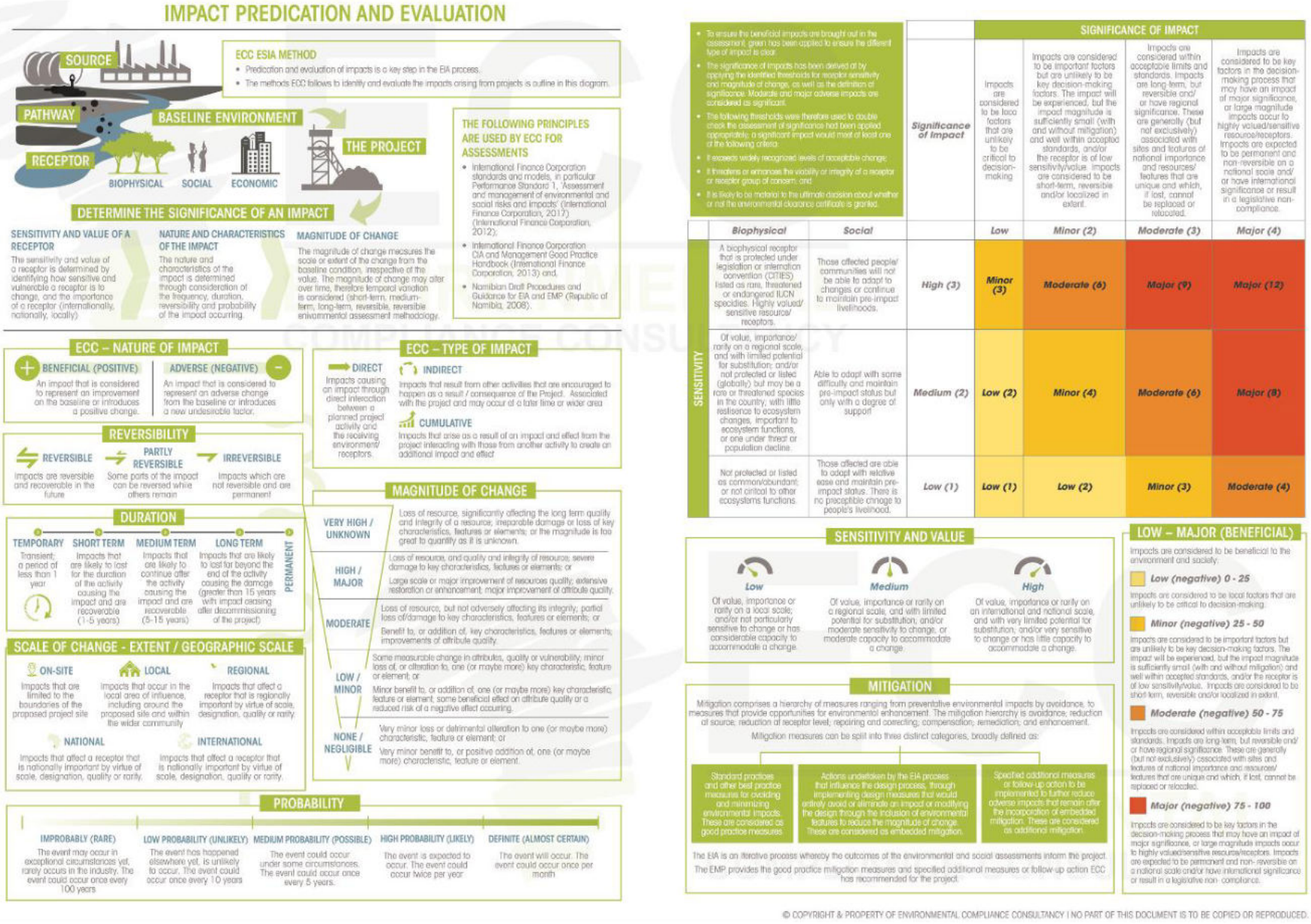

FIGURE 9 - ECCS IMPACT PREDICTION AND EVALUATION PROCESS

6.2 LIMITATIONS, UNCERTAINTIES AND ASSUMPTIONS

The following limitations and uncertainties associated with the assessment methodology were observed:

- Topic specific assessment guidance has not been developed in Namibia. A generic assessment methodology was applied to all topics using IFC guidance and professional judgement.

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

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

TABLE 7 – SUMMARY OF LIMITATION, UNCERTAINTIES AND ASSUMPTION OF THE EIA PROCESS

LIMITATION / UNCERTAINTY	ASSUMPTION
Program of activities	It is assumed that exploration work shall take place over a two-year period to establish a viable resource while metallurgical testing at the pilot plant onsite is taking place at the same time to optimize the processing method for a larger scale and feasible project. If commercially viable concentrations can be defined, the next phase can potentially transcend into mining operations.
	Exploration activities involve mapping, electromagnetic surveys and drilling, trenching and bulk sampling. The exact number of boreholes to be created is unconfirmed but three-hole sections are planned every 500m of a strike of 3000m, with infill drilling to follow. Trenching and bulk-sampling are part of this phase. It is assumed that exploration activities are limited to these stipulated undertakings.
	Crushing, milling, trial processing and metallurgical testing are part of the activities at the small scale pilot plant to determine optimized methods. A diesel generator onsite provides power for these operations. Tailings from the plant are deposited in a small single-point depository retainer dam. Expansion of the current facilities is not foreseen.
Number of workers and area they will come from	It is planned that the full-time team will exist of 28 staff members. The numbers of contractors are unknown, however.
Water supply	The existing borehole onsite is approved and monitored and supplies the current and planned operations with water for domestic as well as other uses. It is assumed that no additional abstraction borehole would be required.
Access route and creation of new tracks	The making 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 areas to create small roads and to conduct exploration activities.
Structures	No permanent infrastructure is planned for the first phase of the project. The existing pilot plant, crushing and milling plants and the diesel generator are all non-permanent structures.

7 IMPACT ASSESSMENT FINDINGS AND PROPOSED MITIGATION MANAGEMENT MEASURES

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

When undertaking the assessment 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;
- Landscape (visual impacts, sense of place);
- Socioeconomics (employment, demographics, and land-use);
- Ambient noise and vibrations;
- Ecology (fauna and flora);
- Air quality (emissions, pollutants and dust); and
- Cultural heritage.

Table 8 sets out the findings of the scoping assessment phase. Activities that could be the source of an impact have been listed, followed by receptors that could be affected. The pathway between the source and the receptor has been identified where both are present. Where an activity and/or receptor has not been identified, an impact is unlikely, thus no further assessment or justification is provided. Where the activity, receptor and pathway have been identified, a justification has been provided documenting if further assessment is required or not required.

Due to the nature and localised scale of the exploration activities, and the environmental context of the EPL, the potential environmental and social effects are limited and of minor significance. The main area where uncertainty remained during the scoping phase was the potential impacts of groundwater contamination and impacts on avian fauna. Correct mitigation measure should be in place to ensure that these impacts are kept minimal.

TABLE 8 – SUMMARY OF POTENTIAL IMPACTS

RECEPTOR	DESCRIPTION OF ACTIVITY	DESCRIPTION OF IMPACT	EFFECT/DESCRIPTION OF MAGNITUDE	VALUE OF SENSITIVITY	MAGNITUDE OF CHANGE	SIGNIFICANCE OF IMPACT	IMPACT MANAGEMENT/CONTROL MEASURES	RESIDUAL IMPACT AFTER MITIGATION
Groundwater quality	Site operations such as maintenance activities, loss of containment, accidental fuel / hydraulic fluid leaks and spills, or similar sources.	Hydrocarbon leaks and spills could enter the aquifer causing contamination.	Adverse Direct Partly reversible Moderate Short term Regional Possible	Medium	Minor	Minor (4)	- Good house keeping - 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 - Store bulk fuel in adequate containment areas (non-porous surface,	Low (2)

RECEPTOR	DESCRIPTION OF ACTIVITY	DESCRIPTION OF IMPACT	EFFECT/DESCRIPTION OF MAGNITUDE	VALUE OF SENSITIVITY	MAGNITUDE OF CHANGE	SIGNIFICANCE OF IMPACT	IMPACT MANAGEMENT/CONTROL MEASURES	RESIDUAL IMPACT AFTER MITIGATION
							bunded, within a fenced-in area) - Ensure integrity of containment with regularly inspections) - 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 is done in areas with adequate preventative measures in place	
Groundwater quality	Potential spillages of drill fluid, lubrication, etc. or exploration activities that	Hydrocarbon leaks and spills could enter the aquifer causing contamination.	Adverse Indirect Partly Reversible Minor Short term Local	Low	Minor	Low (2)	- Ensure spill kits and preventative measures (e.g. drill pads) are in place at exploration sites - Drill system should be dug to direct any accidental spills into sumps	Low (1)

RECEPTOR	DESCRIPTION OF ACTIVITY	DESCRIPTION OF IMPACT	EFFECT/DESCRIPTION OF MAGNITUDE	VALUE OF SENSITIVITY	MAGNITUDE OF CHANGE	SIGNIFICANCE OF IMPACT	IMPACT MANAGEMENT/CONTROL MEASURES	RESIDUAL IMPACT AFTER MITIGATION
	penetrate the groundwater table.		Possible				- Extraction volumes of water shall be minimal during exploration and where possible, water from existing water sources shall be used	
Water	Discharge and infiltration of non-contained wastewater and processing effluent (including effluent from the plant and tailings dam)	Wastewater can contaminate surface and groundwater	Adverse Direct Partly Reversible Minor Short term Regional Unlikely	Low	Minor	Low (2)	- Wastewater discharges will be contained - Workers will be made aware about the importance of wastewater management - Good housekeeping - At the plant - all processing activities are containerized and water is recycled - At the tailings dam - install toe paddocks, and if necessary, cut-off trenches. In the worst case, establish monitoring boreholes - Ensure prompt clean-up of processing and tailings	Low (1)

RECEPTOR	DESCRIPTION OF ACTIVITY	DESCRIPTION OF IMPACT	EFFECT/DESCRIPTION OF MAGNITUDE	VALUE OF SENSITIVITY	MAGNITUDE OF CHANGE	SIGNIFICANCE OF IMPACT	IMPACT MANAGEMENT/CONTROL MEASURES	RESIDUAL IMPACT AFTER MITIGATION
							spills - Monitor change in groundwater level	
Water	Inadequate management of waste	Waste items and litter can pollute drainage channels	Adverse Cumulative Reversible Minor Temporary Onsite Unlikely	Low	Minor	Low (2)	- Good housekeeping - 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 onsite (e.g. domestic, mineral, hydrocarbons, etc.) - Raise awareness about the importance of responsible waste management - Implement a culture of correct waste collection, waste segregation and waste disposal - Avoid hazardous waste onsite - Wastewater discharges	Low (1)
Soil	Inadequate management of hazardous and hydrocarbon waste	Pollution of soil	Adverse Direct Reversible Minor Short term Onsite Possible	Low	Low	Low (1)		Low (1)

RECEPTOR	DESCRIPTION OF ACTIVITY	DESCRIPTION OF IMPACT	EFFECT/DESCRIPTION OF MAGNITUDE	VALUE OF SENSITIVITY	MAGNITUDE OF CHANGE	SIGNIFICANCE OF IMPACT	IMPACT MANAGEMENT/CONTROL MEASURES	RESIDUAL IMPACT AFTER MITIGATION
							will be contained – no disposal of wastewater or processing or tailings effluent	
Terrestrial ecology and biodiversity	Vegetation clearing for access routes and exploration activities	Loss / alteration of terrestrial habitats and loss of species	Adverse Direct Reversible Minor Short term Onsite Possible	Low	Minor	Low (2)	- Use existing roads for access to avoid new tracks - Minimise clearance areas through proper planning of the exploration activities, especially at drill areas - Where possible, rescue and relocate plants of significance - Promote revegetation of cleared areas upon completion of exploration activities	Low (1)
Terrestrial ecology and biodiversity	Ambient noise as a result of machinery use, the diesel generator, the crusher and mill, the pilot	Residing, nesting and slow moving birds that occur in the project area can be disturbed	Adverse Direct Reversible Minor Short term Onsite Likely	Low	Low	Low (1)	- 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	Low (1)

RECEPTOR	DESCRIPTION OF ACTIVITY	DESCRIPTION OF IMPACT	EFFECT/DESCRIPTION OF MAGNITUDE	VALUE OF SENSITIVITY	MAGNITUDE OF CHANGE	SIGNIFICANCE OF IMPACT	IMPACT MANAGEMENT/CONTROL MEASURES	RESIDUAL IMPACT AFTER MITIGATION
	plant and movement (also through the use of airborne equipment)						and dawn - Exploration equipment shall be suitably positioned to ensure that noisy equipment is away from receptors - All equipment to be shut down or throttled back between periods of use, - Respect civic aviation regulations about the use of a drone	
Terrestrial ecology and biodiversity	Increased movement of vehicles and equipment, as well as trenching	Residing, nesting and slow moving species in the areas of the proposed can be disturbed, injured or killed such as the birds (Ludwig's bustard and Kori bustard)	Adverse Direct Partly reversible Moderate Short term Onsite Possible	Low	Moderate	Minor (3)	- Restrict movements to areas of activities only - Use existing tracks and routes only - Identify rare, endangered, threatened and protected species in advance - Route new tracks around protected species and sensitive areas - Restrict movements to daytime hours - Make workers aware and	Low (1)

RECEPTOR	DESCRIPTION OF ACTIVITY	DESCRIPTION OF IMPACT	EFFECT/DESCRIPTION OF MAGNITUDE	VALUE OF SENSITIVITY	MAGNITUDE OF CHANGE	SIGNIFICANCE OF IMPACT	IMPACT MANAGEMENT/CONTROL MEASURES	RESIDUAL IMPACT AFTER MITIGATION
							notify them on avoiding some areas - No driving off designated access routes / off-road driving - No animals or birds may be collected, caught, consumed or removed from site	
Terrestrial ecology and biodiversity	Increased disturbance of areas with natural vegetation	Alien species and weeds can be introduced to the area	Adverse Direct Reversible Minor Short term Onsite Possible	Low	Low	Low (1)	- Monitor areas of activity for weed and alien species - Eradicate weeds and alien species as soon as they appear - Make workers aware about alien species and weeds	Low (1)
Soil	Vegetation clearing	Increased exposure due to vegetation clearance can cause soil erosion	Adverse Direct Reversible Moderate Short term Onsite Possible	Low	Moderate	Minor (3)	- Ensure erosion control and prevention measures are in place when vegetation clearance is required - Where possible, plan access routes, drill pads and other activities	Low (1)

RECEPTOR	DESCRIPTION OF ACTIVITY	DESCRIPTION OF IMPACT	EFFECT/DESCRIPTION OF MAGNITUDE	VALUE OF SENSITIVITY	MAGNITUDE OF CHANGE	SIGNIFICANCE OF IMPACT	IMPACT MANAGEMENT/CONTROL MEASURES	RESIDUAL IMPACT AFTER MITIGATION
							outside of existing drainage lines - Where necessary, install diversions to curb possible erosion - Restore drainage lines when disturbed	
Soil	Exploration activities, heavy equipment and vehicles	Loss of soil quality due to mixing of earth matter, trampling and compaction	Adverse Direct Reversible Moderate Short term Onsite Possible	Low	Moderate	Minor (3)	- Limit the possibility of compaction and creating of a hard subsurface - Limit the possibility of trampling - Where possible, topsoil should be stockpiled separately, and re-spread during rehabilitation - During exploration activities with heavy equipment, oil absorbent matting should be placed under and around the equipment - Equipment must be in a good condition to ensure that accidental oil spills do	Low (1)

RECEPTOR	DESCRIPTION OF ACTIVITY	DESCRIPTION OF IMPACT	EFFECT/DESCRIPTION OF MAGNITUDE	VALUE OF SENSITIVITY	MAGNITUDE OF CHANGE	SIGNIFICANCE OF IMPACT	IMPACT MANAGEMENT/CONTROL MEASURES	RESIDUAL IMPACT AFTER MITIGATION
							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	
Heritage	Exploration activities, movement of machinery and vehicles	Potential damage to cultural heritage sites	Adverse Direct Partly Reversible Negligible Permanent Onsite Possible	High	Major	Major (12)	- Implement a Chance Find Procedure - Raise awareness about possible heritage finds - Report all finds that could be of heritage importance - In case archaeological remains to be uncovered, cease activities and the site manager has to assess and demarcate the area - Project manager to visit the site and determine whether work can proceed without damage to findings, mark exclusion boundaries and inform	Minor (4)

RECEPTOR	DESCRIPTION OF ACTIVITY	DESCRIPTION OF IMPACT	EFFECT/DESCRIPTION OF MAGNITUDE	VALUE OF SENSITIVITY	MAGNITUDE OF CHANGE	SIGNIFICANCE OF IMPACT	IMPACT MANAGEMENT/CONTROL MEASURES	RESIDUAL IMPACT AFTER MITIGATION
							ECC with GPS position - If needed, further investigation have to be requested for a professional assessment and the necessary protocols of the Chance Find Procedure have to be followed, - Archaeologist will evaluate the significance of the remains and identify appropriate action, (record and remove; relocate or leave premises, depending on the nature and value of the remains), - Inform the police if the remains are human, - Obtain appropriate clearance or approval from the competent authority, if required, and recover and remove the	

RECEPTOR	DESCRIPTION OF ACTIVITY	DESCRIPTION OF IMPACT	EFFECT/DESCRIPTION OF MAGNITUDE	VALUE OF SENSITIVITY	MAGNITUDE OF CHANGE	SIGNIFICANCE OF IMPACT	IMPACT MANAGEMENT/CONTROL MEASURES	RESIDUAL IMPACT AFTER MITIGATION
							remains to the National Museum or National Forensic Laboratory as directed.	
Community	Exploration activities, including dust and emissions	Visual disturbance and loss of sense of place	Adverse Direct Reversible Negligible Temporary Local Likely	High	Moderate	Major (9)	- Limit trenching and bulk sampling as far as possible - Position heavy equipment in such a way that it is out of sight from human receptors - Apply dust suppression where possible (loading, hauling, tipping) - Restrict speed of vehicles (<30km/h) - Specific activities that may generate dust and impact on residents shall be avoided during high wind events - All vehicles and machinery / equipment to be shut down or throttled back between periods of use - Barriers or fences shall be	Minor (4)

RECEPTOR	DESCRIPTION OF ACTIVITY	DESCRIPTION OF IMPACT	EFFECT/DESCRIPTION OF MAGNITUDE	VALUE OF SENSITIVITY	MAGNITUDE OF CHANGE	SIGNIFICANCE OF IMPACT	IMPACT MANAGEMENT/CONTROL MEASURES	RESIDUAL IMPACT AFTER MITIGATION
							used if exploration occurs in locations that may affect people, livestock or wildlife - Residents need to be informed at least two weeks in advance that exploration operations are within 1km of their property - Maintain good housekeeping - Continuous engagement with residents to identify any concerns or issues, and appropriate mitigation and management measures agreed upon	
Community	Movement of vehicles, exploration activities	Create conflict with farm owners and neighbours about access, leaving gates	Adverse Indirect Reversible Minor Short term Onsite	Low	Minor	Low (1)	- Ensure documented permission to enter farms - Farmers should have access to all farm areas at all times - Residents shall be	Low (1)

RECEPTOR	DESCRIPTION OF ACTIVITY	DESCRIPTION OF IMPACT	EFFECT/DESCRIPTION OF MAGNITUDE	VALUE OF SENSITIVITY	MAGNITUDE OF CHANGE	SIGNIFICANCE OF IMPACT	IMPACT MANAGEMENT/CONTROL MEASURES	RESIDUAL IMPACT AFTER MITIGATION
		open, suspicious movements, loss of farming area, etc.	Likely				provided at least two weeks' notice of exploration operations within 1 km of their property - Existing water points and feeding areas need to be left unaffected - Use existing roads for access, avoid new tracks, clearances - Compliance with all applicable laws and agreements - Continuous engagement with residents to identify any concerns or issues, and mitigation and management measures agreed upon	
Community	Movement of vehicles, exploration activities	Presence of exploration team can be blamed for stock theft and poaching	Adverse Cumulative Reversible Minor Temporary	Low	Minor	Low (2)	- Develop and implement an operations manual or procedures to work on private farms and implement monitoring	Low (1)

RECEPTOR	DESCRIPTION OF ACTIVITY	DESCRIPTION OF IMPACT	EFFECT/DESCRIPTION OF MAGNITUDE	VALUE OF SENSITIVITY	MAGNITUDE OF CHANGE	SIGNIFICANCE OF IMPACT	IMPACT MANAGEMENT/CONTROL MEASURES	RESIDUAL IMPACT AFTER MITIGATION
			Local Unlikely				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 sensitize employees about contentious issues such as stock theft and poaching - Accidents and incidents need to be reported to the project manager and recorded in an incident register	
Community	Exploration activities	Triggers job creation, skills development and opportunities for the local	Beneficial Direct Reversible Minor Short term Local	Low	Minor	Low (2)	- Maximize local employment - As far as possible promote local procurement - Enhance development of local skills where possible	Low beneficial

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

7.1 IMPACTS FOR FURTHER CONSIDERATION

7.1.1 IMPACTS ON GROUNDWATER

Wastewater is produced during operational activities of the mine. Stormwater runoff can accumulate in the pits and for the current small scale mining activities, wastewater is contained in a SWRD. The SWRD is unlined but it is equipped with a pump in order to ensure that no freestanding water remains for a long duration within the SWRD, thereby reducing potential seepage to groundwater. The effectiveness of these management and mitigation measures, to reduce the potential impact of groundwater contamination, should be monitored on a monthly basis, by taking groundwater level measurements and water quality sampling. The development of a formal storm water management plan is suggested to manage stormwater run-off and reduce the impacts of soil erosion and the drilling of at least one groundwater monitoring borehole down-gradient of the site. The return water facility should be lined or operational procedures should clearly indicate that no water should be stored in the facility to reduce the risk of seepage losses. Mitigation measures are included in the EMP.

Through the ESIA investigation and I&AP consultations, it was determined that these impacts on groundwater, are recommended for further studies and assessments. Other impacts identified through this assessment and I&AP consultation, could be managed by the implementation of the EMP and recommended mitigation measures to ensure ongoing compliance thereof.

TABLE 9 – SUMMARY OF EFFECTS ON GROUNDWATER

ACTIVITY	RECEPTOR	IMPACT	NATURE OF IMPACT	VALUE & SENSITIVITY	MAGNITUDE OF CHANGE	SIGNIFICANCE OF IMPACT
Small scale mining activities impacts from mining excavations and processing procedures	– Groundwater quality	Groundwater contamination due to the exploration and small scale mining activities could result in water potentially becoming extremely acidic with very high electrical conductivity and high heavy	Adverse Cumulative Partially-reversible Local Moderate Medium term Possible	Medium	Moderate	Minor Adverse

ACTIVITY	RECEPTOR	IMPACT	NATURE OF IMPACT	VALUE & SENSITIVITY	MAGNITUDE OF CHANGE	SIGNIFICANCE OF IMPACT
		metal concentrations.				

7.1.2 Impacts on Avian Fauna and High Value Conservation Species

Protected species such as the rhino are occasionally present in proximity to project's area, poaching of high value conservation species in Namibia is illegal. The identified protected bird species on Farm Wiese are the Ludwig's and Kori's Bustard birds. These birds typically roost communally on raised, open ground and coastal dunes, they are extremely wary, they take off clumsily and fly low when startled. The Bustards are large, heavy flyers with poor manoeuvrability. These birds tend to roam nomadically, not following regular flight paths, and often fly in the half-light of dawn and dusk.

In Namibia, a status of endangered is recommended, on the basis of its global conservation status, the comparatively better researched situation of the Bustards birds in South Africa and the limited data from power line collision surveys available in Namibia. This categorisation requires confirmation, pending the results of current initiatives to assess local population size and trends and to estimate power line mortality rates in Namibia. It should be given specially protected status under any revised or future Parks and Wildlife legislation. (Simmons, *et al.*, 2015).

The extensions of exploration and mining operation were found to have potential impacts on biodiversity namely birdlife due to the potential effects of vibration and ambient noise as there are (Ludwigs and Kori Bustards) species that occur in proximity to the project's area. These birds are ground nesting, and research has shown (Simmons, *et al.,* 2015) that these birds are susceptible to ground vibrations and therefore could potentially be directly affected by the project activities.

The mining and hauling process will be restricted to daylight, whilst processing and drilling may continue at night. Mitigation measures outlined in the EMP include possible relocation of species at risk (if viable), ongoing monitoring to determine if activities are impacting birds, altering exploration or mine plans to avoid activities that impact on nesting during nesting periods (egg-laying season is from February-May in Namibia). It is further recommended for proposed activities to be carried out before dawn and dusk, as these birds are known to fly often fly at dusk.

TABLE 10 – SUMMARY OF EFFECTS ON AVIAN FAUNA AND HIGH VALUE CONSERVATION SPECIES

ACTIVITY	RECEPTOR	IMPACT	NATURE OF IMPACT	VALUE & SENSITIVITY	MAGNITUDE OF CHANGE	SIGNIFICANCE OF IMPACT
Cumulative exploration activities and small scale mining activities Increased movement of vehicles and machinery operation	– High value conservation species (such a the rhino) – Avian fauna species of (Ludwig's and Kori Bustard birds)	Small scale mining activities and exploration activities such as drilling and blasting may potentially result in the increased vibrations disrupting habitants and disturbing birdlife	Adverse Cumulative Partially-reversible Moderate onsite Short term Possible	Medium	Moderate	Minor Adverse

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 sound 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

The environmental assessment that was undertaken for the proposed project followed ECC's ESIA methodology to identify if there is potential for significant effects to occur as a result of the proposed project. Through the scoping process, the main significant impacts identified are the potential of groundwater contamination as a result to small scale mining activities of mining excavation and processing procedures. Additional to the identified effects are on the disruption and disturbance to the avian fauna (birdlife) on farm Weisse, as a result of the combined effects of vibration and noise from machinery and movement of vehicles. With the suggested mitigation measures, impacts are likely to be kept at minimal. The assessment concludes that with the likely significant effects on the groundwater's quality, a water study should be carried out as operations expand. Various best practice and mitigation measures have been identified to avoid and reduce effects as far as reasonably practicable, as well as to ensure the environment is protected and unforeseen effects are avoided.

10 REFERENCES

BDO Namibia. (2019). Retrieved from https://www.bdo.com.na/en-gb/industries/natural-resources/mining-in-namibia

Government of the Republic of Namibia (GRN) (2008) Namibian Draft Procedures and Guidance for Environmental Impact Assessment and Environmental Management Plan. Windhoek: GRN.

International Finance Corporation. (2012). *IFC Performance Standards on Environmental and Social Sustainability.* Washington, DC: The World Bank.

International Finance Corporation. (2017). *A Guide to Biodiversity for the Private Sector. The Social and Environmental Impact Assessment Process.* Washington, DC: The World Bank.

Journal of Mining and Metallurgy, 44 A (1) (2008). Retrieved from *https://scindeks-clanci.ceon.rs/data/pdf/1450-5959/2008/1450-59590801059D.pdf*

Kremper, J. (2016). *Farm Wiese an surrounding areas: a birding ringing hotspot in Namibia* (*Birding on Farm Wiese 2016 Report).* Lüderitz

MEFT (2014). *Fifth National Report to the Convention on Biological Diversity (2010-2014)*

Mendelshon, J., Jarvis, A., Roberts, C., & Robertson, T. (2002). *Atlas of Namibia; A Portrait of the Land and its People.* Cape Town: David Philip Publishers.

Namibia Statistics Agency. (2011). *Namibia 2011 Population and housing census main report.* Windhoek: Namibia Statistics Agency.

Namibia Statistics Agency. (2017a). *Namibia inter-censal demographic survey 2016 report.* Windhoek: Namibia Statistics Agency.

Namibia Statistics Agency. (2017b). *Namibia labour force survey 2016 report.* Windhoek: Namibia Statistics Agency.

World population review. (2020). *Namibian Population 2020* retrieved from http://worldpopulationreview.com/countries/namibia-population/

Simmons, R.E. and Brown, C.J., (2015). Birds to Watch in Namibia: Red, rare and endemic species. National Biodiversity Programme, Windhoek, Namibia.

Scott, HA. Shaw, JM. Pallett, JR (2012*).* Birds to Watch in Namibia*: LUDWIG'S BUSTARD, Neotis ludwig*. Retrieved from: iihttp://www.the-eis.com/atlas/sites/default/files/Ludwig%27s_Bustard.pdf

APPENDIX A- EMP

APPENDIX B - NON-TECHNICAL SUMMARY

APPENDIX C- EVIDENCE OF PUBLIC CONSULTATION

The following was advertised in the 'Republikein, the Namibian Sun, and Allgemeine Zeitung' newspapers on the 09th September 2020.

AFRICA IN BRIEF

MASS HUNGER FEARS IN MOZAMBIQUE

Tens of thousands of people are being deprived of humanitarian aid in northern Mozambique as extremist militants intensify an Islamist insurgency, the UN agency World Food Programme has said. Jihadists have been waging a violent campaign in the gas-rich Cabo Delgado province since 2017, launching sporadic attacks on towns and villages in a bid to establish a caliphate.

The insurgency has claimed more than 1 500 lives and displaced at least 250 000 - a tenth of the total provincial population.

Lola Castro, the WFP's regional director for Southern Africa, said that of those 250 000 internally displaced, "we are accessing 180 000" - leaving 70 000 people without aid.

Cabo Delgado's insurgency has increasingly hampered humanitarian assistance in the area in recent months, forcing the International Committee for the Red Cross and Doctors Without Borders to suspend operations in the town of Macomia in June.

- Nampa/AFP

NIGERIAN DOCTORS STRIKE OVER PAY, PPE

Nigerian doctors in state-run hospitals began an indefinite strike on Monday over pay, overcrowded facilities and a lack of personal protective equipment, union leaders said.

The industrial action by the National Association of Resident Doctors (NARD), which represents some 40% of doctors, is the latest in a string of stoppages by medics to hit Africa's most populous nation as it struggles to curb the spread of the coronavirus.

There are over 40 000 resident doctors in Nigeria's state-run hospitals. Doctors have long complained of a lack of beds and drugs in hospitals and inadequate protective kits. Sokomba said other demands include life insurance coverage, a pay rise and payment of unsettled wages.

"We have arrears of 2014, 2015, 2016, salary shortfalls that were supposed to have been paid over six years ago, still pending," he said.

- Nampa/AFP

BURKINA FASO'S GOLD MINES RAIDED

Jihadists have made US$140 million from attacks on gold mines in Burkina Faso since 2016, according to a report commissioned by the government.

The sector made up 11.4% of economic output in 2018. It accounts for 9 200 direct jobs and 26 100 indirect jobs, while the gold panning sub-sector employs 1.5 million people.

But the industry has also become a welcome source of funding for jihadists and other armed movements in areas lacking in central authority, according to the report's author Ollo Kambou of the Burkina Economic and Social Observatory (OES).

The report estimated the total cost of the attacks in terms of damage to property and wider effects to be 600 billion CFA francs (US$1.1 billion) since 2016, roughly one third of the state's entire revenue.

A spiral of jihadist violence began five years ago in parallel with a gold rush.

- Nampa/AFP

MOROCCO LOCKS DOWN CASABLANCA

Morocco imposed a lockdown on Casablanca and shut its schools Monday, the day pupils were due to return to classes, in a bid to stop the spread of Covid-19.

The new measures, which include restrictions on movement and a night-time curfew, would be in place for two weeks in the commercial capital, the authorities said a statement issued late Sunday.

"We risk being overwhelmed by the virus," said health minister Khalid Ait Taleb.

Morocco has seen a spike in coronavirus cases in recent weeks. It recorded 2 234 new infections on Sunday, a record for a single day, with 42% of them in Casablanca, home to 3.3 million people.

Authorities decided on Monday to close educational institutions including primary, middle and high schools as well as universities.

- Nampa/AFP

SUDAN DECLARES STATE OF EMERGENCY

Sudan on Saturday declared a three-month national state of emergency after record-breaking torrential floods that cost 99 lives.

Floods caused by more than a month of heavy rains have killed 99 people, injured 46 and left 100 000 damaged properties in their wake, one of the worst natural disasters in decades, according to state news agency *SUNA*.

North Darfur in the country's west and Sennar state in the south were among the hardest hit areas.

Heavy rains usually fall in Sudan from June to October, and the country faces severe flooding every year.

"The Blue Nile has reached an all-time high since records began more than a century ago," said the irrigation and water ministry last week.

- Nampa/AFP

ECC

NOTICE OF ENVIRONMENTAL ASSESSMENT AND PUBLIC PARTICIPATION PROCESS
EXPLORATION ACTIVITIES ON EPL 7699
KHOMAS AND HARDAP 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: Mertens Mining and Trading (Pty) Ltd
Environmental Assessment Practitioner (EAP): Environmental Compliance Consultancy
Location: Khomas and Hardap Region, Namibia

Project: Exploration activities on EPL 7699 as well as small-scale mining activities on mining claims 68855 – 68861 and 67633 in the Khomas and Hardap Regions, Namibia.

Proposed activity: The proponent proposes to carry out low impact, non-intrusive exploration activities and small-scale mining activities on EPL 7699 in an area 25km east-southeast of Rehoboth. The largest part of the EPL is located in the Khomas Region but a small portion overlaps with the Hardap Region. Exploration methods may include mapping, soil sampling, electromagnetic surveys, drilling, trenching and bulk sampling, and crushing and trial processing in an on-site pilot 10t/h flotation plant, including on-site power generation by a diesel generator.

Application for environmental clearance certificate: In terms of the Environmental Management Act, No. 7 of 2007, ECC on behalf of Mertens Mining and Trading (Pty) Ltd is required to apply for environmental clearance to the competent authority 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 to afford Interested and Affected Parties (I&APs) an opportunity to register and comment on the Non-Technical Summary (NTS) and preliminary scoping assessment.

Public participation: The public participation period is effective from **1 September 2020 to 30 September 2020.** Within this period the public is invited to register as an Interested and Affected Party (I&AP) on ECCs website, alternatively send us an email or WhatsApp and we will register you as an I&AP. Once you are registered, we shall provide you with the preliminary scoping study and management plan for your review and commentary. Based on the comments received it will be decided whether a public meeting is required or not (this decision will also be influenced by Covid-19 restrictions).

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-105-235-ADT-02-B

Coordinating Editor: Jo-Maré Duddy • Tel (061) 297 2073 • E-mail: business7@nmh.com.na
NMH Marketing Manager: Publications: Hennie Geldenhuys • Tel (061) 297 2201 • E-mail: hennie@nmh.com.na
Gen. Murtala Muhammed AVE P.O. BOX 3436, Windhoek Tel: 061 297 2000; Fax: 061 223 721

The following was advertised in the 'Republikein, Sun, and Allgemeine Zeitung' newspapers on the 16th September 2020.

8 Republikein Sun Allgemeine Zeitung — Market Watch — WEDNESDAY 16 SEPTEMBER 2020

034 Erwe te koop / Erven for Sale

8.5 HA PLOT, 10 km outside Okahandja on the Gross Barmen Road. NamPower, Namwater, fenced. Great deal at only N$920 000. Call Johan 081-1272927.
DM02020003673 68

5 HECTARE PLOT, 30 km east of Windhoek. Beautiful development. Fenced, Namwater and 3-phase Nampower. Absolute bargain from N$1.2 million. Call Johan 081-1272927.
DM02020003673 70

5 HECTARE PLOT 30 km east of Windhoek, with brand new house, 194 m². Beautiful, valuation N$3.15 mil. Price N$2.75 mil. Call Johan 081-1272927.
DM02020003673 73

AMAZING KINGDOM PROPERTIES CC For sale: Plot of 5 ha situated 8 km before Windhoek International Airport with 3-phase Nampower, Namwater, and fenced. Selling price was N$1.5 million. Now selling at N$1 230 000. Call Cosmos: 081-1295473.
DM02020003686 90

035 Regskennisgewings / Legal Notices

IN THE High Court of Namibia. Main Division. Case No. HC-MD-CIV-ACT-CON-2020/00713.
In the matter between:
BURGERS EQUIPMENT AND SPARES NAMIBIA CC - Execution Creditor and INDEPENDENT TYRES (PTY) LTD T/A ITYRE - 1st Execution Debtor LAURENCE DURANDT - 2nd Execution Debtor.
NOTICE OF SALE IN EXECUTION
TO: THE DEPUTY SHERIFF, WINDHOEK A sale in execution will be held by public auction on Saturday 3 October 2020 at 09H30 at The Deputy Sheriff's Premises, 422 Independence Avenue, Windhoek, Republic of Namibia, during which there will be sold in execution as a result of an attachment made on 4 September 2020 under a Writ of Execution issued on 26 May 2020 by the above named Independent Tyres (Pty)Ltd T/A Ityre and Laurence Durandt (The Execution Debtors).
GOODS:
2x Lifts, 2x couches, desk and 3 chairs, 2x filing units, Dell computers, 3x desks, 3x computers, 3x chairs, 4x filing units.
CONDITIONS OF SALE:
The sale will be held without reserve and goods will be sold to the highest bidder.
The goods will be sold "voetstoots".
Payment shall be made in cash or by bank guaranteed cheque.
Dated at Windhoek on 11 September 2020.
KOEP& PARTNERS
Legal Practitioners for Execution Creditor
33 Schanzen Road
Windhoek
(REF: CV/76172-MAT5679).
DM02020003686 58

IN THE Magistrate's Court Windhoek for the District of Windhoek. Held at Windhoek. Case No: 8061/2018.
In the matter between:
FIRST NATIONAL BANK OF NAMIBIA LTD - Plaintiff and LUNZA GETRUDE KAWANA - Defendant.
NOTICE OF SALE IN EXECUTION
In execution of a judgement against the above Defendant granted by the above Clerk of the Court on 30 November 2018 , the following will be sold by public auction on 15 October 2020 at 12h00 at Erf 567, Mpacha Road, Katima Break down Services, Katima Mulilo, by the Messenger of Court, Katima Mulilo:
1x TV JVC flat screen, 1x TV-cupboard, 1x lounge suite, 3x fridges, 1x microwave.
Terms of sale: Voetstoots and cash tothe highest bidder.
Dated at Windhoek on 11 August 2020.
DR WEDER KAUTA & HOVEKA INC
C POTGIETER
WKH House
Jan Jonker Road
Windhoek
P9011921.
DM02020003686 99

035 Regskennisgewings / Legal Notices

IN THE Magistrate's Court For The District Of Tsumeb. Held At Tsumeb. Case No: 142/2020.
In the matter between:
OSHIKOTO REFRIGERATION CC T/A SNOWMAN REFRIGERATION - Plaintiff and OSHIKOTO FRESH FRUIT & VEGETABLES - Defendant.
NOTICE OF SALE IN EXECUTION
Pursuant to a Judgement granted by the above Honorable Court, the following goods will be sold in execution by public auction on Thursday, 1 October 2020 at 15h00 at Erf 1631 Ndilimani Cultural Troupe Street, Tsumeb, Republic Of Namibia, namely:
1x U/D truck with Transfrig MT450(N143-724W), 1x Yamaha 4-wheel bike.
Terms: Cash to the highest bidder.
Dated at Tsumeb on 1 September 2020.
Maronel du Plessis Legal PractitionerErf 515, Corner of Sam Nujoma and Ndilimani Cultural Troupe Streets,
Tsumeb
Tel 067 227 694
Fax 067 227 697
(OSHI/0009)
DM02020003687 07

MUNCIPALITY OF HENTIES BAY NOTICE: Henties Bay; Sale of Erf 2924 Henties Bay (Ext 12) zoned Residential by way of Private Treaty.
By virtue of Council Resolution C04/05/02/2020/01st/2020 and in terms of Section 63 (2) (b) of the Local Authorities Act (Act 23 of 1992) as amended, read in conjunction with Section 30 (1) (t) of the Local Authorities Act 1992 (Act 23 of 1992) as amended, notice is hereby given that the Municipal Council of Hentiesbaai intends to sell by way of private treaty, a single residential erf, 2924 Hentiesbaai (Ext 12), measures 1068 m² to Mr J.S Brinkman, at a selling price of N$350 p/m² which equates to N$373 800 (Three hundred and seventy three thousand eight hundred Namibian Dollars only) for housing purposes.
Further take note that the locality and the layout plan of the property lies open for inspection during office hours at the offices of the Municipal Council situated at the corner of Jakkalsputz Road and Nickey Iyambo Avenue.
Any person(s) having objection(s) to the intended lease of the property may lodge such objection (s) fully motivated thereof to the undersigned, within fourteen (14) days after the second placement of the advert.
THE CHIEF EXECUTIVE OFFICER
PO Box 61
Henties Bay.
DM02020003682 36

035 Regskennisgewings / Legal Notices

REZONING NOTICE DUNAMIS CONSULTING TOWN, REGIONAL PLANNERS AND DEVELOPERS on behalf of the owner of Erf 2526 Delius Street No. 4 Windhoek intends to apply to the Windhoek Municipal Council for the following:
Rezoning of Erf 2526 Delius Street No. 4, Windhoek from 'General Residential' with a density of 1:150 to 'Office' with a bulk of 0.75,
Consent to commence with the construction of the office development on Erf 2526 Windhoek with the interim bulk of 0.4 while the Windhoek Spatial Development Framework Study and the rezoning are finalized.
Erf 2526 Windhoek is located in Delius Street. The property is currently zoned 'General Residential' with a density of 1:150 and measures 902 m².
The new zoning of office with a bulk of 0.75 will enable the owner to use the Erf solely for office purposes. On-site parking as required in terms of the Windhoek Town Planning Scheme and proposed activities will be provided.
Further, take note that the locality plan of the Erf can be inspected at the Windhoek Town Council Customer Care Centre Town Planning Notice Board, 80 Independence Avenue, Windhoek.
Further take note that any person objecting to the proposed land use as set out above may lodge such objection together with the grounds thereof in Writing at the Windhoek Urban Planning Offices Room 518, 5th Floor, Town House Main Building within 14 days of the last publication of this notice (final date for objections is October 13, 2020).
Cell: +264 855 512 173
E-mail: ndimuhona@dunamisplan.com
DM02020003687 04

ECC ENVIRONMENTAL

NOTICE OF ENVIRONMENTAL ASSESSMENT AND PUBLIC PARTICIPATION PROCESS
EXPLORATION ACTIVITIES ON EPL 7699
KHOMAS AND HARDAP 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: Mertens Mining and Trading (Pty) Ltd
Environmental Assessment Practitioner (EAP): Environmental Compliance Consultancy
Location: Khomas and Hardap Region, Namibia

Project: Exploration activities on EPL 7699 as well as small-scale mining activities on mining claims 68855 – 68861 and 67633 in the Khomas and Hardap Regions, Namibia.

Proposed activity: The proponent proposes to carry out low impact, non-intrusive exploration activities and small-scale mining activities on EPL 7699 in an area 25km east-southeast of Rehoboth. The largest part of the EPL is located in the Khomas Region but a small portion overlaps with the Hardap Region. Exploration methods may include mapping, soil sampling, electromagnetic surveys, drilling, trenching and bulk sampling, and crushing and trial processing in an on-site pilot 10t/h flotation plant, including on-site power generation by a diesel generator.

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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 preliminary scoping assessment.

Public participation: The public participation period is effective from **1 September 2020 to 30 September 2020.** Within this period the public is invited to register as an Interested and Affected Party (I&AP) on ECCs website, alternatively send us an email or WhatsApp and we will register you as an I&AP. Once you are registered, we shall provide you with the preliminary scoping study and management plan for your review and commentary. Based on the comments received it will be decided whether a public meeting is required or not (this decision will also be influenced by Covid-19 restrictions).

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 7606
E-mail: info@eccenvironmental.com
Website: http://www.eccenvironmental.com
Project ID: ECC-105-235-ADT-02-B

APPENDIX C.2 SITE NOTICE, LETTERS AND REGISTRATION FORM

NOTICE OF ENVIRONMENTAL ASSESSMENT AND PUBLIC PARTICIPATION PROCESS EXPLORATION ACTIVITIES ON EPL 7699

KHOMAS AND HARDAP REGIONS, NAMIBIA

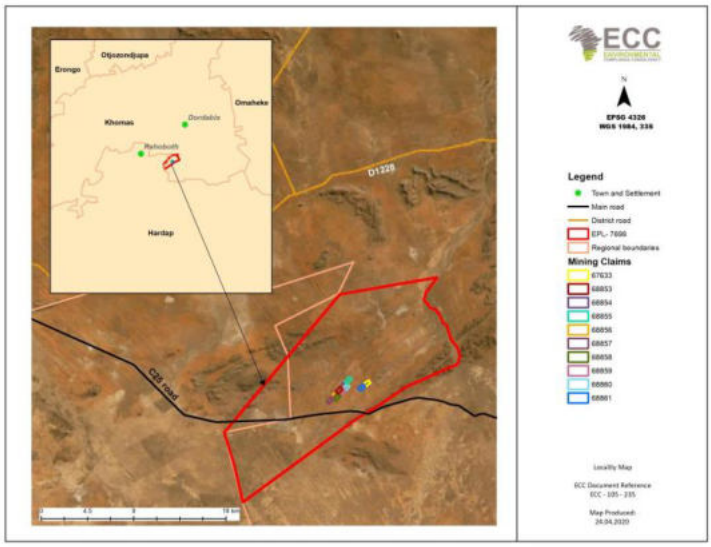
Environmental Compliance Consultancy cc (ECC) hereby gives notice to the public that an application for an Environmental Clearance Certificate in accordance with the Environmental Management Act, No. 7 of 2007 will be made as per the following:

Applicant:	**Mertens Mining and Trading (Pty) Ltd**
Environmental Assessment Practitioner (EAP):	**Environmental Compliance Consultancy**
Project ID:	**ECC-105-235**

Project: Exploration activities on EPL 7699 as well as exploration and small-scale mining activities on mining claims 68855 – 68661 and 67633 in the Khomas and Hardap Regions, Namibia.

Proposed activity: The proponent proposes to carry out low impact, non-intrusive exploration activities on EPL 7699 as well as exploration and small-scale mining activities on mining claims 68855 – 68661 and 67633 in the Khomas and Hardap Regions, Namibia. The EPL is located 25km southeast of Rehoboth. Exploration methods may include mapping, soil sampling, electromagnetic surveys, drilling, trenching and bulk sampling, and crushing and trial processing in an on-site pilot 10t/h flotation plant, including on-site power generation by a diesel generator.

Location of EPL 7699:



Application for environmental clearance certificate: In terms of the Environmental Management Act, No. 7 of 2007, ECC on behalf of the proponent is required to submit an application for environmental clearance to the competent authority 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 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.

Public participation: The public participation period is effective from **1 September 2020 to 30 September 2020**. Within this period the public is invited to register as an Interested and Affected Party (I&AP) on ECCs website, alternatively send us an email or WhatsApp and we will register you as an I&AP. Once you are registered, we shall provide you with the preliminary scoping study and management plan for your review and commentary. Based on the comments received it will be decided whether a public meeting is required or not (this decision will also be influenced by Covid-19 restrictions).

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


ECC

+264 81 669 7608
info@eccenvironmental.com
www.eccenvironmental.com

REFERENCE: ECC-105-235-LET-05-A
29th September 2020

Identified Stakeholder and or Potentially Interested Party for:
Exploration activities on EPL 7699

Dear Sir or Madam:

RE: NOTIFICATION OF ENVIRONMENTAL ASSESSMENT FOR EXPLORATION ACTIVITIES ON EPL 7699, INCLUDING THE EXPLORATION AND SMALL-SCALE MINING ACTIVITIES ON MINING CLAIMS 68855 – 68861 AND 67633.

Environmental Compliance Consultancy (ECC) has been engaged by Mertens Mining and Trading (Pty) Ltd, the Proponent, to act on their behalf for the application of an environmental clearance certificate for the proposed exploration activities on EPL 7699. The largest part of the EPL is located in the Khomas Region, but a small part of the EPL overlaps with the Hardap Region. The exact location of the project is visible on the map hereto attached.

ECC is conducting the Environmental Impact Assessment (EIA) in terms of the Environmental Management Act, No. 7 of 2007 and will be submitted to the competent authority and the Ministry of Environment, Forestry and Tourism for a record of decision.

The proposed project is to conduct mineral exploration activities only on EPL 7699. As part of the exploration program the following activities are envisaged, which shall be confirmed, as the exploration program is refined:

- Potential creation of access tracks, where existing tracks are not available;
- Limited vegetation clearing for the creating of access routes and exploration activities;
- Exploration methods may include mapping, soil sampling, electromagnetic surveys, and may evolve into drilling, trenching and bulk sampling if necessary,
- Crushing and trial processing in an on-site pilot 10t/h flotation plant, and
- On-site power generation by a diesel generator.

This letter is intended to engage stakeholders and potentially Interested and Affected Parties (I&APs) of the project and provide a communication channel to ECC for the project. You have been

ENVIRONMENTAL COMPLIANCE CONSULTANCY CC
PO BOX 91193 WINDHOEK, NAMIBIA
MEMBERS: J L MOONEY & JS BEZUIDENHOUT
REGISTRATION NUMBER: CC/2013/11404

identified as either a stakeholder, interested or affected party, therefore ECC wishes to inform you of how you can become involved in the project.

Public participation is an important part of the EIA process, as it allows the public and stakeholders to obtain information about the proposed project. Public participation occurs at various stages throughout a project lifecycle including:

- Advertising in newspapers;
- Distributing a Non-Technical Summary (NTS) to identified stakeholders and I&APs;
- Registered I&APs will also be informed of the available draft scoping report for a 14-day comment and review period, during this period I&APs will have the opportunity to review the draft document and raise any issues or concerns, and
- Stakeholders and I&APs who wish to register as an I&AP must do so on the ECC website as per the link provided below: https://eccenvironmental.com/projects/

If you are unable to complete the registration form online please email info@eccenvironmental.com and request an electronic copy of the form that you can complete, sign, scan and return via email to info@eccenvironmental.com to register as an I&AP for the project.

ECC values community input and participation in our projects and we look forward to working with you as the project develops.

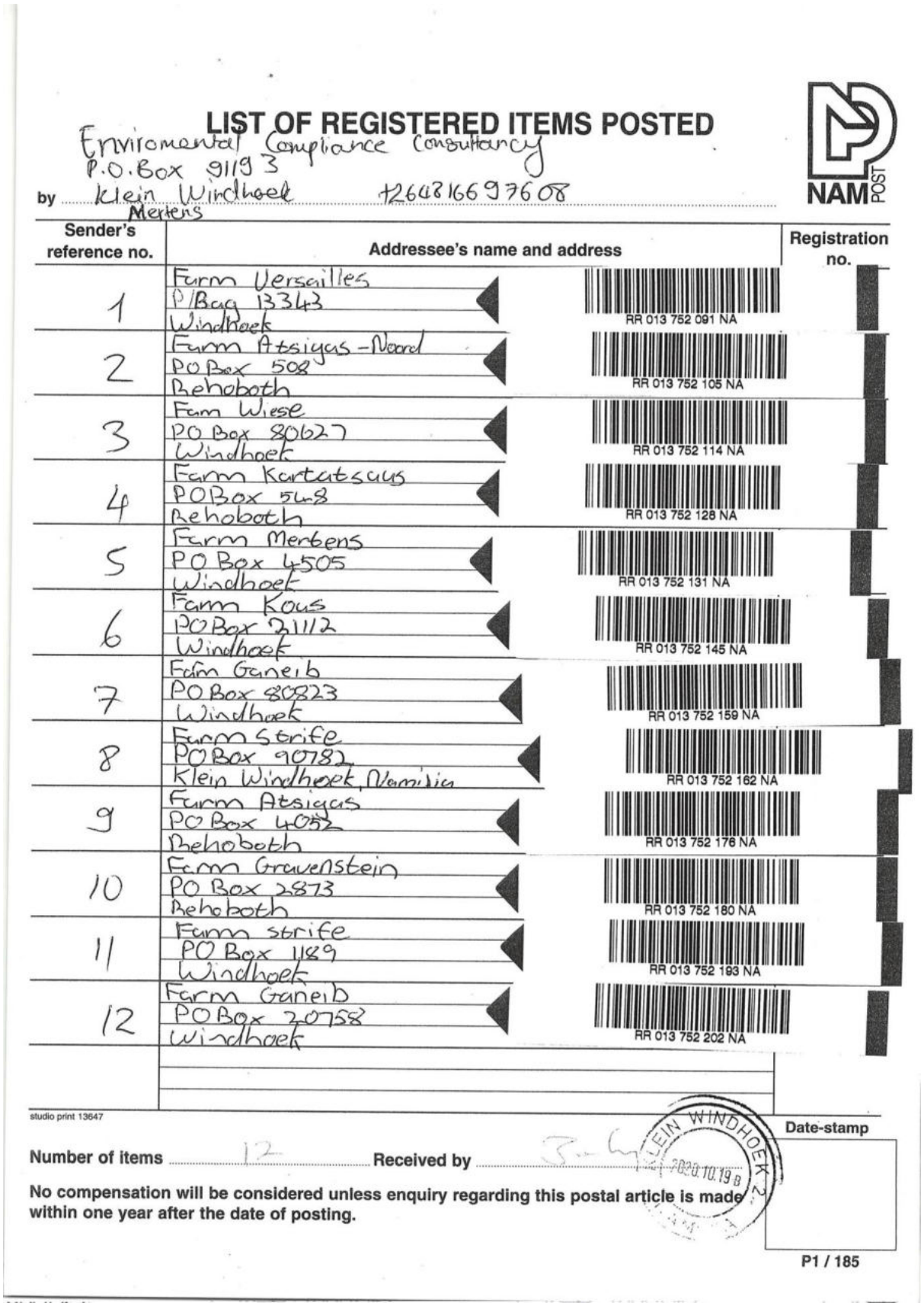
The NTS can also be obtained from our website and provides a brief overview of the proposed project https://eccenvironmental.com/projects/

Should you have any questions or require additional information please do not hesitate to contact either of us.

Yours sincerely,

Stephan Bezuidenhout
Environmental Compliance Consultancy
Office: +264 81 669 7608
Email: stephan@eccenvironmental.com

Jessica Bezuidenhout Mooney
Environmental Compliance Consultancy
Office: +264 81 669 7608
Email: jessica@eccenvironmental.com



LIST OF REGISTERED ITEMS POSTED

NAM POST

Enviromental Compliance Consultancy
P.O.Box 91193
by Klein Windhoek +26481669 7608
Mertens

Sender's reference no.	Addressee's name and address	Registration no.
1	Farm Versailles P/Bag 13343 Windhoek	RR 013 752 091 NA
2	Farm Atsigas-Noord PO Box 508 Rehoboth	RR 013 752 105 NA
3	Fam Wiese PO Box 80627 Windhoek	RR 013 752 114 NA
4	Farm Kartatscus POBox 548 Rehoboth	RR 013 752 128 NA
5	Farm Mertens PO Box 4505 Windhoek	RR 013 752 131 NA
6	Fam Kous PO Box 21112 Windhoek	RR 013 752 145 NA
7	Fam Ganeib PO Box 80823 Windhoek	RR 013 752 159 NA
8	Farm Strife PO Box 90782 Klein Windhoek, Namibia	RR 013 752 162 NA
9	Farm Atsigas PO Box 4052 Rehoboth	RR 013 752 176 NA
10	Fam Gravenstein PO Box 2873 Rehoboth	RR 013 752 180 NA
11	Farm strife PO Box 1189 Windhoek	RR 013 752 193 NA
12	Farm Ganeib PO Box 20758 Windhoek	RR 013 752 202 NA

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Number of items 12 Received by

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Date-stamp

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P1 / 185

INTERESTED AND AFFECTED PARTIES REGISTRATION FORM

PROJECT DETAILS

ECC Project Reference:	ECC - 105 - 235 Mertens Mining and Trading
Project Title:	Exploration Activities on EPL 7699 including the exploration and small-scale mining activities on Mining Claims 68855 – 68661 and 67633
Applicant:	Mertens Mining and Trading (Pty) Ltd

This form serves to register Interested and Affected Parties (I&AP's) for the above-mentioned project(s) and to solicit input and participation. This form will be submitted to the competent authority for consideration in the decision-making process.

INTERESTED AND AFFECTED PARTIES (I&AP) DETAILS	
Title (Mr/Mrs/Dr/Prof.):	
First Name:	
Surname:	
Cell Phone:	
Telephone other:	
Email Address:	
Postal Address:	
Organisation and/or property description (if landowner/lawful occupier)	
Stakeholder Group *(please tick)*	☐ **Member of Affected Community** ☐ **Non-Governmental Organisation (NGO)** ☐ **Provincial or Government Official** ☐ **Local or District Official**
GENERAL INTEREST IN THE PROJECT	
Please describe the nature of your interest in this project.	

INTERESTED AND AFFECTED PARTIES REGISTRATION FORM

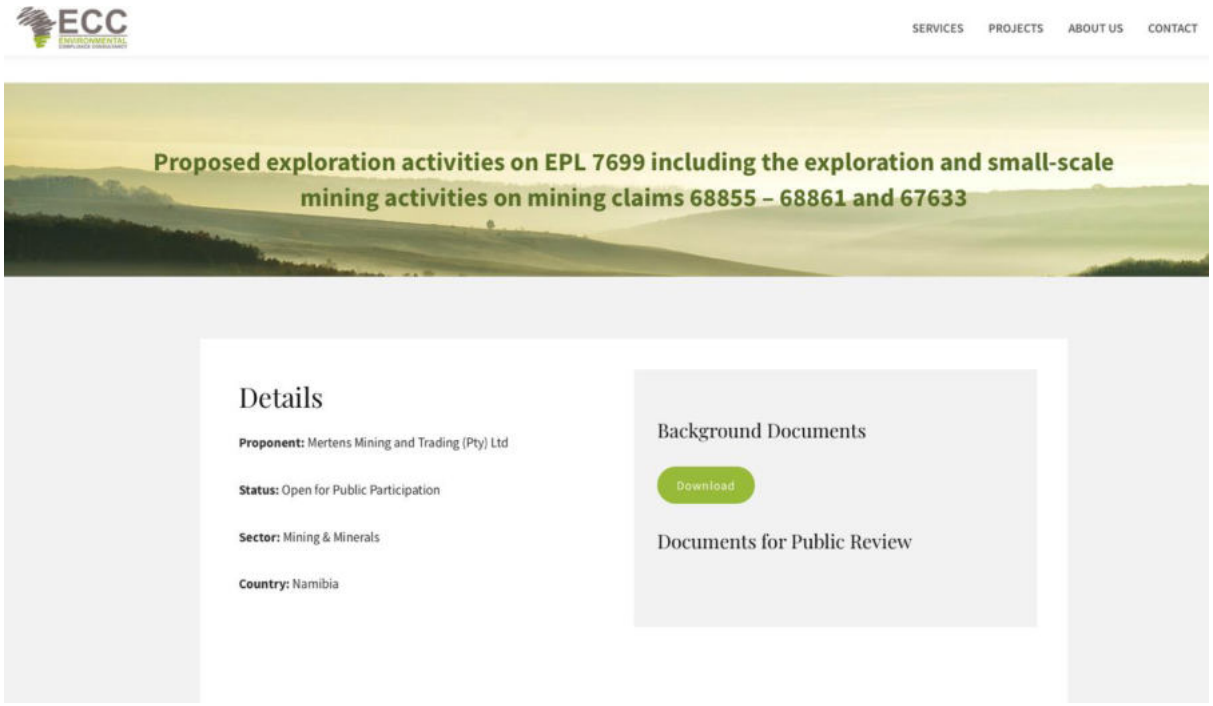
GENERAL INTEREST IN THE PROJECT	
Do you have any specific concerns associated with the Project (for example: water, soil, pollution) Cultural or historical?	
If you know of anyone else who should be informed about the project, please provide their contact details:	
Title (Mr/Mrs/Dr/Prof.):	
First Name:	
Surname:	
Cell Phone:	
Telephone other:	
Email Address:	
Postal Address:	
Organisation and/or property description (if landowner/lawful occupier)	

ECC respectfully requests that you please sign this letter and return it to info@eccenvironmental.com to confirm that you have received notification with regard to the above, and to ensure that your comments, concerns or objections are recorded. All comments, queries, and concerns must be received via this I&AP registration form and questionnaire or alternate means. Please note that only registered I&AP's will included in future correspondence regarding this process.

Signed..... Name..... Date.....

Environmental Compliance Consultancy website:

www.eccenvironmental.com



APPENDIX C.3

LOG OF ALL COMMENTS AND RESPONSES GENERATED THROUGH PUBLIC MEETING

APPENDIX D - WATER QUALITY RESULTS

APPENDIX E - HERITAGE STUDY (ARCHEOLOGICAL ASSESSMENT)

APPENDIX F - ECC CVS

ECC – 01697 Serial: ijR2ts1697

REPUBLIC OF NAMIBIA

MINISTRY OF ENVIRONMENT, FORESTRY AND TOURISM

OFFICE OF THE ENVIRONMENTAL COMMISSIONER

ENVIRONMENTAL CLEARANCE CERTIFICATE

ISSUED

In accordance with Section 37(2) of the Environmental Management Act (Act No. 7 of 2007)

TO

Mertens Mining and Trading (Pty) Ltd.
P. O. Box 1182, Tsumeb.

TO UNDERTAKE THE FOLLOWING LISTED ACTIVITY

PROPOSED EXPLORATION ACTIVITIES ON EPL 7699, INCLUDING THE EXPLORATION AND SMALL-SCALE MINING ACTIVITIES ON MINING CLAIMS 68855 – 68861 AND 67633 IN THE KHOMAS AND HARDAP REGIONS.

MINISTRY OF ENVIRONMENT, FORESTRY AND TOURISM
Private Bag 13306
WINDHOEK NAMIBIA
26 OCT 2021
ENVIRONMENTAL COMMISSIONER
ENVIRONMENTAL COMMISSIONER
REPUBLIC OF NAMIBIA

Issued on the date: **2021-10-26**

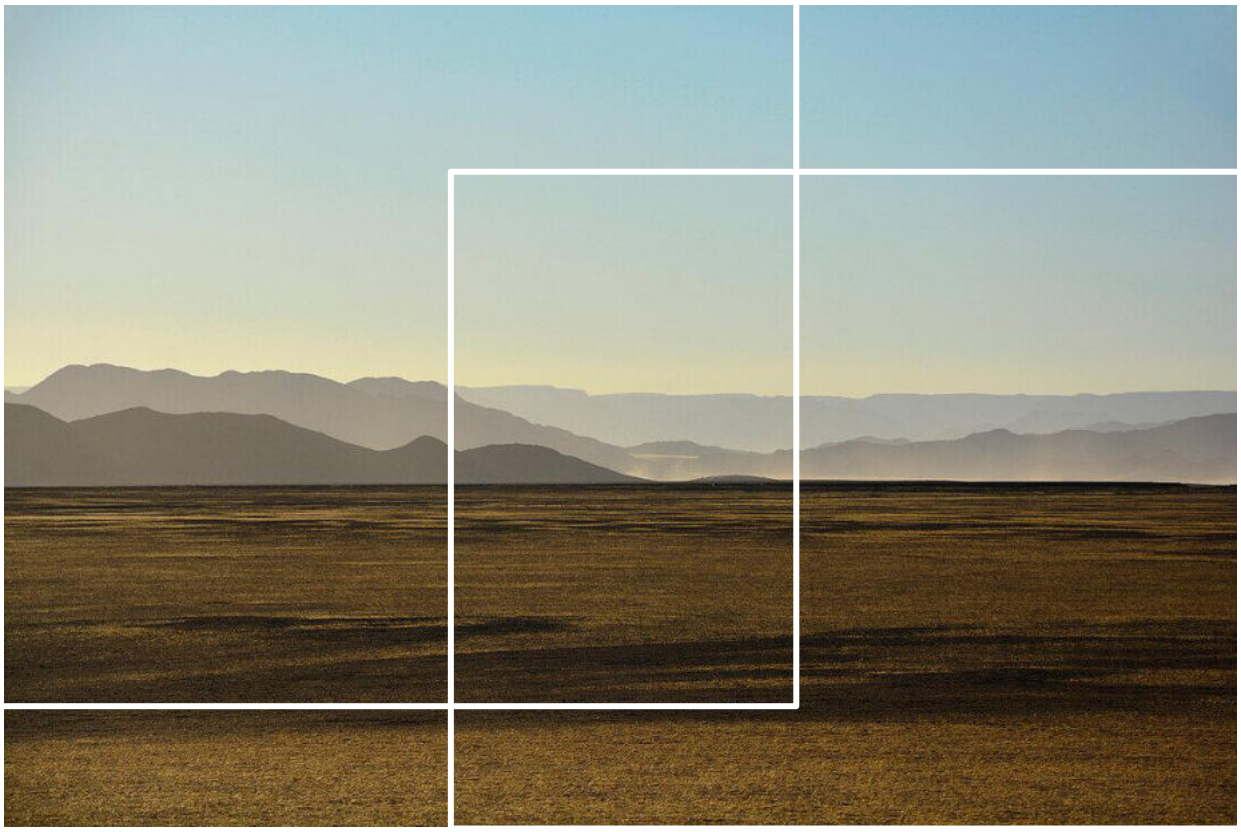
Expires on this date: **2024-10-26**

(See conditions printed over leaf)

ECC –

CONDITIONS OF APPROVAL

1. This environmental clearance is valid for a period of 3 (three) years, from the date of issue unless withdrawn by this office
2. This certificate does not in any way hold the Ministry of Environment and Tourism accountable for misleading information, nor any adverse effects that may arise from these activities. Instead, full accountability rests with the proponent and its consultants
3. This Ministry reserves the right to attach further legislative and regulatory conditions during the operational phase of the project
4. All applicable and required permits are obtained and mitigation measures stipulated in the EMP are applied particularly with respect to management of ecological impacts.
5. Strict compliance with national heritage guidelines and regulations is expected throughout the life-span of the proposed activity, therefore any new archaeological finds must be reported to the National Heritage Council for appropriate handling of such.



Submitted to: Mertens Mining and Trading (Pty) Ltd.
Attention: Mr Andre Neethling
13 Feld Street
P O Box 3489
Windhoek, Namibia.

REPORT:

EMP FOR EXPLORATION ACTIVITIES AND SMALL-SCALE MINING ON EPL 7699 ON MC 68853-68861 AND 67633 IN THE KHOMAS/HARDAP REGIONS.

PROJECT NUMBER: ECC-105-457-REP-03-D

REPORT VERSION: REV 01

DATE: JUNE 2023

TITLE AND APPROVAL PAGE

Project Name:	EMP for Exploration activities and Small-scale Mining on EPL 7699 on MC 68853-68861 and 67633 in the Khomas/Hardap regions.
Client Company Name:	Mertens Mining and Trading (Pty) Ltd.
Client Name:	Mr Andre Neethling
Ministry Reference:	APP-001429
Authors:	Environmental Compliance Consultancy
Status of Report:	Final for Government submission
Project Number:	ECC-105-457-REP-03-D
Date of issue:	June 2023
Review Period	N/A

ENVIRONMENTAL COMPLIANCE CONSULTANCY CONTACT DETAILS:

We welcome any enquiries regarding this document and its content. Please contact:

Environmental Compliance Consultancy
PO Box 91193, Klein Windhoek, Namibia
Tel: +264 81 669 7608
Email: info@eccenvironmental.com

DISCLAIMER

The report has been prepared by Environmental Compliance Consultancy (Pty) Ltd (ECC) (Reg. No. 2022/0593) on behalf of the Proponent. Authored by ECC employees with no material interest in the report's outcome, ECC maintains independence from the Proponent and has no financial interest in the Project apart from fair remuneration for professional fees. Payment of fees is not contingent on the report's results or any government decision. ECC members or employees are not, and do not intend to be, employed by the Proponent, nor do they hold any shareholding in the Project. Personal views expressed by the writer may not reflect ECC or its client's views. The environmental report's information is based on the best available data and professional judgment at the time of writing. However, please note that environmental conditions can change rapidly, and the accuracy, completeness, or currency of the information cannot be guaranteed.

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ABBREVIATIONS

Abbreviations	Description
ECC	Environmental Compliance Consultancy
EIA	environmental impact assessment
EMP	environmental management plan
EPL	Exclusive Prospecting Licence
ESIA	environmental and social impact assessment
GIS	geographic information systems
GPS	Global Positioning System
ha	hectares
I&APs	interested and affected parties
IECO	independent environmental control officer
IFC	International Finance Cooperation
km	kilometre
Ltd.	Limited
MC	mining claims
Mertens Mining and Trading	Mertens Mining and Trading (Pty) Ltd.
NHC	National Heritage Council
No.	number
Pty	Propriety
t/h	tonnes per hour
SWRD	stormwater return dam
TSF	tailings storage facilities
WRD	waste rock dumps

1 INTRODUCTION

1.1 PROJECT BACKGROUND

Environmental Compliance Consultancy (ECC) has been contracted by Mertens Mining and Trading (Pty) Ltd to compile an Environmental Management Plant (EMP) in accordance with the Environmental Management Act, No. 7 of 2007. The purpose of this EMP is to include the addition of mining claims 68853 and 68854 with the existing mining claims with the proposed exploration activities on Exclusive Prospecting Licence (EPL) 7699, which is located 25 km east-southeast of Rehoboth. The largest part of EPL 7699 is located within the Khomas Region, but a small portion overlaps with the Hardap Region (Figure 1).

Mertens Mining and Trading (Pty) Ltd, is a Namibian registered company (registration number 2007/0308) and holds the mineral exploration licence of EPL 7699. The project started in 2008 in phases resulting in the initial proclamation of EPL 4034, which covered an area of 34,824.80ha. Mining claims 68855 - 68861 and 67633 were proclaimed too – all of them located on the farm Mertens (No.63), which was part of EPL 4034. Bulk sampling and trenching exploration commenced, and an onsite crushing and milling plant and a pilot 10 t/h flotation plant were established to conduct trial processing and metallurgical testing. The plant is fully containerised. A small tailings facility (<1ha) in a retainer dam – a single point depository – was also established. Power is provided by a diesel generator on site and mining equipment is used for the ongoing exploration activities. Bulk diesel is kept on site, within a bunded area, in a fenced-in yard. Water is sourced from an existing borehole, which is approved and monitored. Since 2008 the project was exposed to several potential acquisitions and mergers, which is still ongoing. In 2023 Mertens Mining and Trading (Pty) Ltd requested the addition of mining claim 68853 and 68854 to the existing mining claims which is also located on the farm Mertens (No. 63). Similar exploration and small-scale mining activities will commence on the added mining claims.

The existing mining claims were converted and consolidated as part of EPL 7699, including the current operational activities at the pilot plant and the associated facilities and infrastructure. EPL 7699 includes most of the former EPL 4034, the mining claims 68855 - 68861 and 67633 on farm Mertens, and overlaps and borders several other farms. Mining claims 68853 and 68854 will be consolidated and converted as part of EPL 7699 similarly to the existing mines.

Simultaneous drilling, bulk sampling and pilot testing will be conducted to evaluate the prospect of the proposed project. Should the proposed exploration programme produce results that indicate a viable and minable resource, this could potentially lead to the extension of mining activities. For this purpose, the proponent is required to apply for a mining licence, whereby a full environmental impact assessment has to be performed.

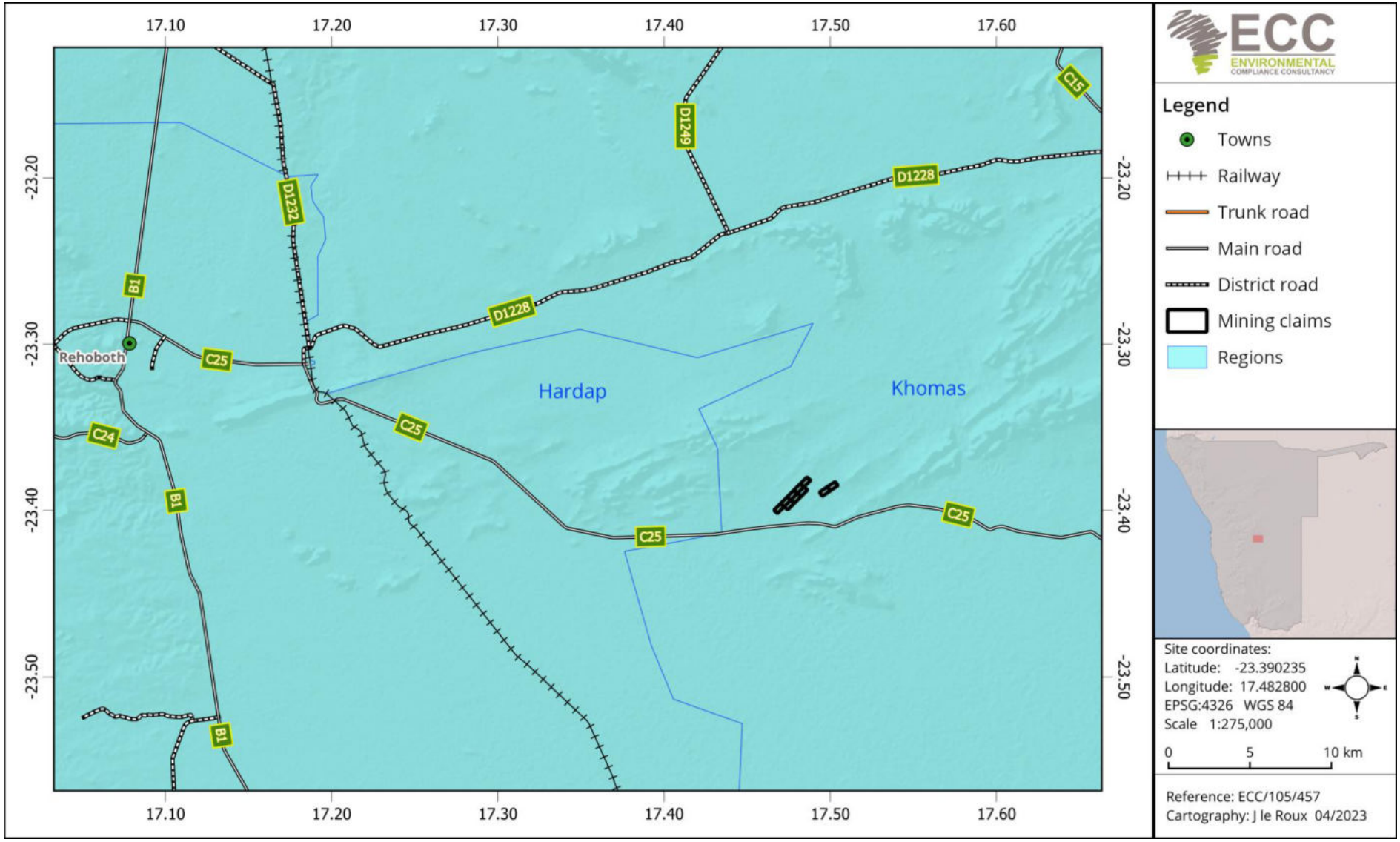

Figure 1- Location of Mining claims on EPL 7699

1.2 ENVIRONMENTAL REGULATORY REQUIREMENTS

In terms of the Environmental Impact Assessment (EIA) Regulations and the Environmental Management Act, No. 7 of 2007, the proposed project qualifies as a listed activity. Therefore, an application for an environmental clearance certificate is to be submitted. An environmental scoping report and EMP are required to be submitted as part of the application process, as well as to support the decision-making process. This report presents the EMP and has been undertaken in terms of the requirements of the act and its regulations.

1.3 PURPOSE AND SCOPE OF THIS REPORT

The purpose of this EMP is to provide a management framework for the proposed activities in EPL 7699 so that the potential environmental impacts are avoided, minimised and mitigated as far as reasonably practicable, and that statutory requirements and other legal obligations are fulfilled.
This EMP also presents protocols, procedures, roles and responsibilities to ensure the management arrangements are appropriately and effectively implemented. This EMP forms an appendix to the environmental scoping report and has been based on the findings of the assessment; therefore, the environmental scoping report should be referred to for further information on the proposed project, assessment methodology, applicable legislation, and assessment findings.

This EMP is a live document and will be reviewed at predetermined intervals, and or updated when the scope of works alters, or when further data / information can be added. All personnel working on the project will be legally required to comply with the standards set out in this EMP.
The scope of this EMP includes all exploration and bulk sampling activities carried out on EPL 7699.

1.4 MANAGEMENT OF THIS EMP

The proponent, Mertens Mining and Trading (Pty) Ltd will hold the environmental clearance certificate for the proposed project and will be responsible for the implementation and management of this EMP. Prior to the exploration activities commencing, this EMP will be reviewed, amended as required and approved ready for implementation. The implementation and management of this EMP and thus the monitoring of compliance (Appendix C) will be undertaken through daily duties and activities and monthly inspections.

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

1.5 LIMITATIONS, UNCERTAINTIES AND ASSUMPTIONS OF THE EMP

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

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

The information contained in this EMP has been based on the project description as provided in the environmental scoping report. Where the design or construction methods alter, this EMP may require updating and potential further assessment to be undertaken. This EMP does not address full scale mining and should full scale mining be required a detailed assessment and EMP for such would be required.

1.6 Environmental Consultancy

Environmental Compliance Consultancy (ECC) (Reg. No. CC 2022/0593) has prepared this EMP on behalf of the Proponent.

This report has been authored by employees of ECC, who have no material interest in the outcome of this report, nor do any of the ECC team have any interest that could be reasonably regarded as being capable of affecting their independence in the preparation of this report. ECC is independent from the Proponent and has no vested or financial interest in the Project, except for fair remuneration for professional fees rendered which are based upon agreed commercial rates. Payment of these fees is in no way contingent on the results of this report or the assessment, or a record of decision issued by Government. No member or employee of ECC is, or is intending to be, a director, officer, or any other direct employee of Mertens Mining and Trading. No member or employee of ECC has, or has had, any shareholding in Mining and Trading.

All compliance and regulatory requirements regarding this 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

2 PROJECT MANAGEMENT PERSONNEL

- This EMP provides measures, guidelines, and procedures for managing and mitigating potential environmental impacts. The EMP also indicates monitoring and reporting requirements and sets responsibilities for those carrying out management and mitigation measures. Mertens Mining and Trading (Pty) Ltd will provide a project team to oversee activities and responsibilities.

2.1 ORGANISATION STRUCTURE, ROLES, AND RESPONSIBILITIES

- The proponent will be responsible for:
- Ensuring all members of the project team, including contractors, comply with the procedures set out in this EMP
- Ensuring that all persons are provided with sufficient training, supervision, and instruction to fulfil this requirement, and
- Ensuring that any person allocated specific environmental responsibilities are notified of their appointment and confirm that their responsibilities are clearly understood.
- Contractors will be responsible for ensuring and demonstrating that all personnel employed by them are compliant with this EMP, and meet the responsibilities listed in Table 1.

- Table 1- Key roles and responsibilities

Role	Responsibility and duties
Proponent	– Overall responsibility for the implementation and management of this EMP – Ensure the environmental policy is communicated to all personnel throughout the proposed project and ensure that employees, contractors and visitors understand and adhere to the EMP – Responsible for providing the required resources (including financial and technical) to complete the required tasks – Appoint a project manager and a site manager (or nominated supervisor), and – Ensure that all employees, contractors and visitors are inducted on safety measures.
Project Manager	– Responsible for ensuring compliance with this EMP including overseeing all day-to-day activities during the duration of the project, including routine and non-routine maintenance works, as well as the decommissioning of the project – Ensure adequate resources are made available for implementation of this EMP

Role	Responsibility and duties
	– Responsible for the management, maintenance and revisions of this EMP – Ensure all personnel are aware of the commitments made in this EMP and any other relevant regulatory requirements applicable to the project – Ensure all employees and contractors participate in a site induction process prior to commencing work on the project – Maintain the community issues and concern register, and keep records of complaints (Appendix D) – Ensure that best environmental practice is undertaken throughout the duration of the project, and – Report any non-compliance or accidents to the regulatory authority.
Site Manager (or nominated supervisor)	– Ensure that all employees, contractors and visitors to the site are conversant with the requirements of this EMP, relevant to their roles on site and adhere to this EMP at all times – Provide environmental awareness / management training and site inductions for all employees, contractors and visitors – Monitor daily operations and ensure adherence by personnel to the EMP – Receive, respond to and record complaints, and – Report any non-compliance or accidents to the project manager.
Employees (and contractors and visitors where applicable)	– Responsible for being compliant with this EMP throughout the project – Adhere to this EMP at all times – Ensure attendance of site inductions – Ensure appropriate briefings for certain activities have been provided and are fully understood, and – Report any operations and conditions that deviate from the EMP or any non-compliant issues or accidents to the site manager and project manager.

2.2 EMPLOYMENT

The proponent (and all contractors) will comply with the requirements of the Regulations for Labour, Health and Safety, and any amendments to these regulations. The following will be complied with:

- In liaison with the relevant authorities, the proponent will ensure that local people have access to information about job opportunities and are considered first for contract employment positions

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

2.3 REGISTER OF ENVIRONMENTAL ASPECTS AND IMPACTS

An environmental review of the proposed Project has been completed to identify all the commitments and agreements made. A list of environmental commitments and impacts has been produced, which details deliverables including measures identified for the prevention of pollution or damage to the environment during the construction phase.

Table 2 provides a list of environmental aspects and impacts, as well as associated mitigation (as derived from the previous ESIA's) and monitoring measures, and the roles responsible for compliance. Each monitoring plan and programme are further explained in detail further in this document. They will be subject to regular review by the Environmental manager and updated when necessary.

The independent environmental control officer (IECO) will use this register to undertake regular inspections to ensure the Project is compliant with this EMP.

Table 2 - Environmental aspects, impacts, mitigation and monitoring requirements

Receptors	Potential impacts	Management / mitigation measures	Monitoring requirements	Responsibility
Access and site preparation	– Limiting access to the farms, – Disruption of farm operations (leaving gates open, loss of farming area, interference at feeding areas and water points) – Potential conflict with farm owners and neighbours (suspicious movement, poaching, stock theft, field fires, etc.)	– Ensure documented permission to enter farms, – Farmers should have access to all farm areas at all times, – Residents will be provided at least two weeks' notice of exploration operations within 1 km of their property – Ensure appropriate supervision of all activities, – Existing water points and feeding area need to be left, unaffected, – Raise awareness and sensitise employees about contentious issues such as stock theft and poaching – Use existing roads for access to avoid new tracks, – Restrict movements to areas of activities only, – Restrict vehicle and equipment movements to daytime hours, – Make workers aware and notify them on avoiding some areas, – No driving off designated access routes / off-road driving, – No animals or birds may be collected, caught, consumed or removed from site, – Compliance with all applicable laws and agreement, – Develop and implement an operations manual or procedures to work on private farms and implement monitoring programmes thereafter,	Daily visual observations during activity	Project manager and or site manager (or nominated site supervisor

Receptors	Potential impacts	Management / mitigation measures	Monitoring requirements	Responsibility
		– Accidents and incidents need to be reported to project manager and recorded in incident register – Continuous engagement with residents and I&APs to identify any concerns or issues, and mitigation and management measures agreed upon		
	Potential damage to cultural heritage sites	– Implement a Chance Find Procedure – Raise awareness about possible heritage finds – Report all finds that could be of heritage importance – In case archaeological remains to be uncovered, cease activities and the project 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 have 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, for example, record and remove; relocate or leave premises (depending on the nature and value of the remains), – Inform the police if the remains are human, – Obtain appropriate clearance or approval from the competent authority, if required, and recover and	Monthly	

Receptors	Potential impacts	Management / mitigation measures	Monitoring requirements	Responsibility
		remove the remains to the National Museum or National Forensic Laboratory as directed.		
General exploration activities	– Potential grievances and complaints, – Social discomfort and anxiety	– Develop and implement an operations manual or procedures to work on private farms and implement monitoring programmes thereafter, – Residents will be provided at least two weeks' notice of exploration operations within 1 km of their property – Continuous engagement with residents and I&APs to identify any concerns or issues, and mitigation and management measures agreed upon, – Compliance with all applicable laws and agreements – Training and raise awareness to sensitise employees about contentious issues such as stock theft and poaching – Restrict movements to areas of activities only, – Restrict vehicle and equipment movements to daytime hours, – Make workers aware and notify them on avoiding some areas, – No animals or birds may be collected, caught, consumed or removed from site – Ensure appropriate supervision of all activities – Accidents and incidents need to be reported to project manager and recorded in incident register	Weekly and monthly Quarterly meetings with the I&APs	Project manager and or site manager (or nominated site supervisor

Receptors	Potential impacts	Management / mitigation measures	Monitoring requirements	Responsibility
		– Proposal for better communication, as suggested by the proponent to hold quarterly meetings on the mine with the I&APs		
	– Conflict with farmers and neighbours about ambient noise	– Restrict excessive noise to areas of activities only, – Restrict excessive noise to daytime hours (7 am to 7 pm weekdays and 7 am until 1 pm on Saturday), – No activities between dusk and dawn, – Exploration equipment will be suitably positioned to ensure that noisy equipment is away from receptors, – Residents will be provided at least two weeks' notice of exploration operations within 1 km of their property, – Processing in shed will be silent and containerised however the noise will be assessed; surveys will be conducted and coordinated with neigbours – All equipment to be shut down or throttled back between periods of use, – Respect civic aviation regulations about the use of a drone	Daily and weekly	
	– Visual disturbances – Loss of sense of place	– Limit trenching and bulk sampling as far as possible – Position heavy equipment in such a way that it is out of sight from human receptors, – Barriers or fences will be used if exploration occurs in, locations that may affect residents or livestock,	Daily and weekly	

Receptors	Potential impacts	Management / mitigation measures	Monitoring requirements	Responsibility
		– Residents need to be informed at least two weeks in advance that drilling operations are within 1 km of their property, – Maintain good housekeeping, – Restrict speed of vehicles (<30 km/h) – Apply dust suppression where possible (loading, hauling, tipping), – Continuous engagement with residents and I&APs to identify any concerns or issues, and appropriate mitigation and management measures agreed upon		
	– Dust and emissions	– All vehicles and machinery / equipment to be shut down or throttled back between periods of use, – Use existing access roads and tracks where possible, – Apply dust suppression where possible (drilling, trenching / excavating, loading, hauling, tipping), – Restrict speed of vehicles (<30 km/h), – Specific activities that may generate dust and impact on residents will be avoided during high wind events.	Daily	
	– Loss of soil quality due to mixing of earth matter, trampling, compaction and pollution, – Enhanced soil erosion	– Where possible, plan access routes and exploration activities outside of existing drainage lines – Where necessary, install diversions to curb possible erosion – Restore drainage lines when disturbed – Where possible, topsoil should be stockpiled separately, and re-spread during rehabilitation	Weekly and monthly	

Receptors	Potential impacts	Management / mitigation measures	Monitoring requirements	Responsibility
		– Limit the possibility of compaction and creating of a hard subsurface – Limit the possibility of trampling – During exploration activities with heavy equipment oil absorbent matting should be placed under and around the equipment – Equipment must be in a good condition to ensure that accidental oil spills do not occur and contaminate soil – In the event of major spills and leaks, it will be reported (Appendix B) and polluted soils must be collected and disposed of at an approved site, – Limit the possibility to mix mineral waste with topsoil		
	Water contamination	– Ensure spill kits and preventative measures (e.g. drill pads) are in place at exploration sites, – Consider alternative sites when the water table is too high, – Exploration equipment should be dug to direct any accidental spills into sumps, – Waste water will be contained for which a permit is required (Appendix A), – Extraction volumes of water will be minimal during exploration and where possible, water from existing water sources will be used	Weekly	
Vegetation clearance for access	– Loss of plant species – Loss of habitat – Create landscape scars	– Use existing roads for access to avoid new tracks and cut lines	Daily	– Employees, contractors

Receptors	Potential impacts	Management / mitigation measures	Monitoring requirements	Responsibility
routes, drill pads and temporary contractor camps	– Loss of sense of place	– Minimise clearance areas through proper planning of the exploration activities – Route new tracks around established and protected trees, and clumps of vegetation – Identify rare, endangered, threatened and protected species. – During toolbox talks and induction, highlight to workers so that the removal of significant plants are avoided – Where possible rescue and relocate plants of significance – Promote revegetation of cleared areas upon completion of exploration activities		– Site manager (or nominated site supervisor
	– Alien plants and weeds can accidentally be introduced	– All project equipment arriving onsite from an area outside of the project or coming from an area of known weed infestations (not present on the project site) should have an internal weed and seed inspection completed prior to equipment being used – Ensure the potential introduction and spread of alien plants is prevented, and – Ensure the correct removal of alien invasive vegetation and prevent the establishment and spread of alien invasive plants. – Eradicate weeds and alien species as soon as they appear – Make workers aware about alien species and weeds	Monthly	Site manager (or nominated site supervisor

Receptors	Potential impacts	Management / mitigation measures	Monitoring requirements	Responsibility
Fuel handling and storage, maintenance on equipment, machinery and vehicles	– Soil contamination – Water contamination	– Good housekeeping – 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 – Spills to be reported to the project manager – Fuel spills of greater than 200L to be reported to the authorities – Plant and equipment to be well maintained and serviced regularly (maintenance and service schedules in place), – In the field, use of hydrocarbons under 200L can be used for mobile refuelling or servicing – Bulk fuel will be stored in adequate containment areas (on a non-porous floor, in a bunded area, capable to contain 110% of the volume stored, fenced-in) – Ensure integrity of containment with regularly inspections – Preventative measures will be in place when service and maintenance activities are done (drip trays, non-porous surfaces, funnels, non-damaged containers) – Refuelling and de-fuelling in designated areas (with adequate preventative measures in place) only	Daily	– Employees, contractors – Site manager (or nominated site supervisor

Receptors	Potential impacts	Management / mitigation measures	Monitoring requirements	Responsibility
Small mining activities	– Soil contamination – Water contamination – Dust – Noise	– Good house keeping – Training through toolbox talks and induction – At the plant - all processing activities are containerised and water is recycled – At the tailings dam - install toe paddocks, and if necessary, cut-off trenches. In the worst case, establish a monitoring borehole – Ensure prompt clean-up of processing and tailings spills – In the event of spills and leaks, polluted soils must be collected and disposed of at an approved site – Wastewater discharges will be contained – no disposal of wastewater or processing or tailings effluent – Apply dust suppression where possible (loading, hauling, tipping, crushing, milling) – Restrict excessive noise to areas of activities only – Restrict excessive noise to daytime hours (7 am to 7 pm weekdays and 7 am until 1 pm on Saturday) – No activities between dusk and dawn – Processing in shed will be silent and containerised however the noise will be assessed; surveys will be conducted and coordinated with neigbours	Daily	– Employees, contractors – Site manager (or nominated site supervisor
Generation of waste	– Soil contamination – Water contamination – Nuisance (visual impacts, litter) – Ecological risks	– Good housekeeping – Training and awareness through toolbox talks and induction – Implement a Standard Operational Procedure on waste management, from cradle to grave for all kinds of	– Daily and weekly	– Employees, contractors – Site manager (or nominated site supervisor

Receptors	Potential impacts	Management / mitigation measures	Monitoring requirements	Responsibility
		waste possible onsite (e.g. hydrocarbons, domestic, waste water) – Implement a culture of correct waste collection, waste segregation and waste disposal, complimentary to the waste hierarchy – avoid, re-use, recycle – Avoid hazardous waste onsite		
Wastewater, flow back water storages, surface and stormwater run offs	– Groundwater contamination	– Diversion of surface water and stormwater runoff away from the groundwater drainage system – Maintenance of a running inventory of flowback water recovered, present on site, and removed from the site – Location of return water within secondary containment, away from high traffic areas and as far as is practical from surface waters – Establish protocols for checking/testing stormwater in the containment area prior to discharge – Inspection and preventative maintenance protocols for storage facilities, pumping systems and piping systems, including manned monitoring points during operations, – Inspect groundwater quality through water levels and sampling for early indicatives of any potential heavy metals presence	– Daily and Weekly	– Employees, contractors – Site manager (or nominated site supervisor
Ambient noise and vibrations during small scale mining	– Birdlife disturbance and habitants disruption – High value conservation species that are residing, ground	– Exploration equipment must be suitably positioned to ensure that noisy equipment is away from receptors, – Restrict movements to areas of activities only – Use existing tracks and routes only	–Weekly	– Employees, contractors – Site manager (or nominated site supervisor

Receptors	Potential impacts	Management / mitigation measures	Monitoring requirements	Responsibility
activities and exploration operations	nesting and slow moving can be disturbed as a result of increased in ambient noise from operations and movements of vehicles	– Minimise clearance areas through proper planning of the exploration activities, – Restrict excessive noise to daytime hours – Identify rare, endangered, threatened and protected species in advance (such as the rhinos, and birds (Ludwig's bustard and Kori bustard)) – Route new tracks around protected species and sensitive areas – Training and raise awareness to sensitise employees and notify them on avoiding some areas where protected species reside – No driving off designated access routes / off-road driving – No animals or birds may be collected, caught, consumed or removed from site – Communicate and send out notices to stakeholders when carrying out noisy activities in the area		
Job creation, skills development and business opportunities	Beneficial socio-economic impacts on a local and regional scale	– Maximise local employment and local business opportunities – Enhance the use of local labour and local skills as far as reasonably possible – Ensure that goods and services are sourced from the local and regional economy as far as reasonably possible.	– Monthly	Project manager

3 COMMUNICATIONS AND TRAINING

3.1 INTRODUCTION

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

3.2 COMMUNICATION

During the entire project, the project manager and or site manager (or nominated site supervisor) will communicate site-wide environmental issues to the project team through the following means (as and when required):

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

This EMP will be distributed to the project team, including contractors, to ensure that the environmental requirements are communicated effectively. Key activities and environmentally sensitive operations will also be briefed to workers and contractors. During the entire project regular communications between the management team will include discussing any complaints received and actions to resolve them; any inspections, audits or non-conformance with this EMP and any objectives or target achievements.

3.3 ENVIRONMENTAL EMERGENCY AND RESPONSE

Table 3 contains a list of numbers to be contacted in case of an emergency. All personnel will be made aware of these numbers.

Table 3 - Emergency contact details

Town	Ambulance (Oanob Private Hospital)	Police	Fire brigade
Rehoboth	+264 (62) 521 400	+264 (62) 523 223 or 10111	+264 (61) 250 084

3.4 COMPLAINTS HANDLING AND RECORDING

Any complaints received verbally or in writing by any personnel on the project site will be recorded by the receiver, including the name and contact details of the complainant, date and time of the complaint, and the nature of the complaint. The information will be given to the project manager who is overall responsible for the management of complaints and will provide a written response to the complainant. The project manager will inform employees of issues, concerns or complaints.
The project manager will maintain a complaint register that will detail the name and contact details of the complainant, date and time of the complaint, nature of the complaint, action is taken to resolve issues, and date of complaint handover. The project manager will be responsible for nominating the correct personnel to coordinate and resolve the issue.

The workforce will be informed about the complaints register, its location and the person responsible, in order to refer local residents or the general public who wish to lodge a complaint. The complainant will be informed in writing of the results of the investigation and action to be taken to rectify or address the matter(s). Where no action is taken, the reasons are to be recorded in the register and reported to the complainant. The complaints register will be kept for the duration of the project and will be available for government or public review upon request.

3.5 TRAINING AND AWARENESS

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

3.6 SITE INDUCTION

- All personnel involved in the project, contractors and visitors will be inducted to the site with specific environmental and social awareness training, and health and safety issues. The environment and social awareness training will ensure that everybody onsite is familiar with the principles of this EMP, the environment and social aspects and impacts associated with their activities, the procedures in place to control these impacts and the consequences of departure from these procedures.
- The project manager will ensure a register of completed training is maintained.
- The site induction should include, but is not limited to the following:
- A general site-specific induction that outlines:
- What is meant by “environment” and “social”
- Why the environment needs to be protected and conserved
- How operational activities can impact on the environment, and
- What can be done to mitigate against such impacts.
- The inductee’s role and responsibilities with respect to implementing the EMP

- The site environmental rules
- Details of how to deal with, and who to contact if environmental problems should occur
- Basic vegetation clearing principles and species identification sheets
- Focal themes such as compliance, contentious issues (e.g. stock theft, poaching), reporting of accidents and incidents, good housekeeping and standard procedures for waste management
- The potential consequences of non-compliance with this EMP and relevant statutory requirements, and
- The role of responsible people for the project.

4 REPORTING COMPLIANCE AND ENFORCEMENT

4.1 ENVIRONMENTAL INSPECTIONS AND COMPLIANCE MONITORING

4.1.1 DAILY INSPECTIONS

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

4.1.2 MONTHLY INSPECTIONS

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

4.2 REPORTING

There will be a requirement to ensure that any incident or non-compliance, including any environmental issue, failure of equipment or accident, is reported to the project manager.

4.3 ENVIRONMENTAL PERMITS

- Whilst the Water Resources Management Act, No. 11 of 2013 is not enforced, it is best practice to adhere to its stipulations while ensuring compliance with the Water Act, No. 54 of 1956, which is maintained still. A licence to abstract and use water may be required if boreholes are to be drilled, although this is unlikely. If required, the proponent will apply for relevant permits and will operate in accordance with any conditions of the licence.

Some vegetation will be cleared on the EPL to allow exploration activities to commence. Therefore a permit under the Forest Act, No. 12 of 2001 as amended by the Forest Amendment Act, No. 13 of 2005 and its regulations of 2015 is required.

4.4 CHANCE FIND PROCEDURE

- A heritage site survey was conducted by Dr John Kinahan, an Archaeologist on a selected focus area (as identified by the proponent) on a portion of EPL 7699. Areas identified for

proposed exploration activities are subject to a heritage survey and subsequent assessment. 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 cover the reporting and management of such finds.

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

Table 4 below shows the procedure of reporting so that heritage remains reported to the NHC are correctly identified in the field.

Table 4 - Responsibilities and duties of certain roles within the Project

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

4.4.1 PROCEDURES

Action by person identifying archaeological or heritage material:

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

Action by site manager:

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

Action by proponent and exploration managers:

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

- Determine and mark exclusion boundary
- Site location and details to be added to project GIS for field confirmation by archaeologist

Action by archaeologist:

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

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

4.5 NON-COMPLIANCE

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

- A non-compliance event / situation, for example, is considered if:
- There is evidence of the contravention of this EMP and associated indicators or objectives
- The project manager and or site manager (or nominated supervisor) have failed to comply with corrective or other instructions issued by the project manager or qualified authority, or
- The project manager and /or site manager (or nominated supervisor) fail to respond to complaints from the public.
- Activities causing non-compliance will be stopped in the event of a non-compliance until corrective action(s) has been completed.

4.6 INCIDENT REPORTING

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

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

4.7 DISCIPLINARY ACTION

- This EMP is a legally binding document and non-compliance with it will result in disciplinary action being taken against the perpetrator/s. Such action may take the form of (but is not limited to):
- Fines / penalties
- Legal action
- Monetary penalties imposed by the proponent on the contractor
- Withdrawal of license/s, and
- Suspension of work.
- The disciplinary action will be determined according to the nature and extent of the transgression / non-compliance, and penalties are to be weighed against the severity of the incident.

5 ENVIRONMENTAL AND SOCIAL MANAGEMENT

5.1 OBJECTIVES AND TARGETS

- Environmental objectives for the project are as follows:
- Zero pollution incidents
- Minimal vegetation clearing
- Protect local flora and fauna
- Minimise the generation of waste, and
- Minimal interruption to farm activities

5.2 IMPACTS IDENTIFIED FOR FURTHER ACTIONS

5.2.1 IMPACTS ON GROUNDWATER

Wastewater is produced during operational activities of the mine, for the current small scale mining activities, wastewater is contained in a Stormwater Return Dam (SWRD). The SWRD is unlined but it is equipped with a pump in order to ensure that no freestanding water remains for a long duration within the SWRD, thereby reducing potential seepage to groundwater. The effectiveness of these management and mitigation measures, to reduce the potential impact of groundwater contamination, should be monitored on a monthly basis, by taking groundwater level measurements and water quality sampling. A water sample was taken in June 2009 at the Mertens borehole no. 3 and it showed that the overall classification of the water was in Group B, which is good quality water. In January 2020, a similar control sample was taken, confirming the same quality water. If monitoring is not conducted as stated above then the pond should be lined.

An environmental audit was conducted at the Mertens site in August 2020, to verify the on-site compliance with various pieces of Namibian environmental legislation and international environmental best practice.

As per the environmental audits and recommendations, it is suggested that applied behaviour analysis (ABA) time sampling and analyses be completed for the waste rock dumps (WRD) and tailing storage facilities (TSF) with complementing leach tests to understand and analyse the extent pollution potential of the site. The development of a formal storm water management plan is suggested to manage stormwater run-off and reduce the impacts of soil erosion and the drilling of at least one groundwater monitoring borehole down-gradient of the site. The return water facility should be lined or operational procedures should clearly indicate that no water should be stored in the facility to reduce the risk of seepage losses.

The potential pathways for contamination include some of the following aspects:

- Seepage of heap leach facility and/or tailings water;
- Operational leaks and spills;

- Failure of TSF integrity;
- Seepage or overflow from decant and evaporation ponds;
- Drainage from and erosion of WRD surfaces; and
- Saline final void surface water contaminating surrounding ground water.

It is further suggested that any open water accumulating in the pits be sampled on a monthly basis and analysed for chemical constituents highlighted from the leach tests to track any potential risk of causing harm to animals drinking the water. Some tailings spillage were observed near the fence along the tailings slurry pipeline route, the site should be cleaned and a spillage clean-up procedure be written and implemented by the proponent.

The implementation of the suggested corrective action for each finding will enable the mine to improve the environmental performance and ensure future legal compliance.

5.2.2 IMPACTS ON AVIAN FAUNA AND HIGH VALUE CONSERVATION SPECIES

Protected species such as the rhino are occasionally present in the area, poaching of high value conservation species in Namibia is illegal. The proponent and business partners should avoid the disruption of protected and threatened species (rhinos that occur in the area) and birds such as the Ludwig's Bustards and Kori Bustards. The extensions of exploration and mining operation were found to have potential impacts on biodiversity namely birdlife due to the effects of vibration and ambient noise. These birds are ground nesting and they may be susceptible to ground vibrations and therefore could potentially be directly affected by the project activities.

The mining and hauling process will be restricted to daylight, whilst processing and drilling may continue at night. Mitigation measures identified possible relocation of species at risk (if viable), ongoing monitoring to determine if activities are impacting birds, altering exploration or mine plans to avoid activities that impact on nesting during nesting periods (egg-laying season is from February-May in Namibia).

6 REGISTER OF ENVIRONMENTAL RISKS AND ISSUES

6.1 INTRODUCTION AND KEY RISKS

An environmental review of the proposed Project has been completed to identify all the commitments and agreements made within the environmental scoping report for the amended portions of the Project. From this, a schedule of environmental commitments and risks has been produced, which details deliverables including measures identified for the prevention of pollution or damage to the environment during the construction phase. Monitoring criteria to be adhered are listed under the specific monitoring plan and/or programme.

It has been evaluated that all risks associated with the additional mining claims 68853 and 68854 are low to minor. All mitigation measures have been incorporated into this EMP.

7 IMPLEMENTATION OF THE EMP

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

- Has been prepared pursuant to a contract with the proponent
- Has been prepared on the basis of information provided to ECC up to June 2020
- Is for the sole use of the proponent, for the sole purpose of an EMP
- Must not be used (1) by any person other than the proponent or (2) for a purpose other than an EMP, and
- Must not be copied without the prior written permission of ECC.

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

APPENDIX A – APPLICATION FOR A WASTEWATER DISCHARGE LICENCE

DEPARTMENT OF WATER AFFAIRS & FORESTRY

FAX:	(061) 208 7160	PRIVATE BAG 13184
TEL:	(061) 208 7111	WINDHOEK
REFERENCE NO:		NAMIBIA

APPLICATION FOR A WASTEWATER DISCHARGE LICENCE, IN TERMS OF PART XIV OF THE WATER RESOURCES MANAGEMENT ACT, 2004

(Act No. 24 of 2004 - as published in the Government Gazette of the Republic of Namibia, No. 3357, of 23 December 2004, Government Notice No. 284)

A. GENERAL INSTRUCTIONS

1. Applications must be submitted in duplicate to:

   The Permanent Secretary
   Attn.: Law Administration
   Ministry of Agriculture, Water and Forestry
   Private Bag 13184
   WINDHOEK

2. Application Fee (to accompany this document): N$_____

3. The various sections have to be completed as follows:
   - **Section B & C** - All applicants
   - **Section D** - Complete only the part relevant to technology employed in your works.
   - **Section E** - All applicants (compulsory!)

4. Only the relevant Sections that have been filled in need to be submitted with this application.

5. A separate application needs to be filled in for each different plant/works.

NAME OF TREATMENT PLANT/WORKS: _____

PLACE: _____ **GPS Coordinates:** _____
(e.g. town, settlement)

1

B. GENERAL INFORMATION

1. Name of applicant: _____

2. Address - Contact Person: _____
   - Postal: _____
   - Physical: _____
   - Tel No.: _____
   - Fax No.: _____
   - E-mail: _____

3. Region in which plant is situated: _____

4. Constituency in which plant falls: _____

5. Type of establishment: (e.g. school, town, industry) _____

6. Source of water supply: (e.g. borehole, river, sea) _____

7. Total water consumption: _____ m^3/day ADWF*

   (*ADWF = Average Dry Weather Flow) _____ m^3/day ADWF*
   - Consumption based on the average usage over a 12-month period. _____ m^3/day ADWF*
   - List different sources separately _____ m^3/day ADWF*

8. Application:
   - Prepared by: Name : _____ Position: _____
     (e.g. Consultant) Signature: _____ Date: _____
   - Responsible Executive: Name : _____ Position: _____
     Signature: _____ Date: _____

2

C. TECHNICAL DETAILS - GENERAL

Answers to the following information must be contained in this application either from the questionnaire or as an attachment thereto (see also details in Appendix A):

NAME OF TREATMENT PLANT/WORKS: _____

1. Type of effluent (please also refer to Section D for classifications): _____

2. Site of works:

2.1 Submit a site plan indicating the exact location (or intended location) of the works. This plan should indicate (as a minimum):

2.1.1 General location of the works with regards to settlements, main roads, boreholes, rivers etc.

2.1.2 Layout plan of property showing all existing and proposed water pipes and effluent and drainage lines in distinctive colours.

2.1.3 Topographical plan/area photograph/contour plans showing the property and effluent treatment plant in relation to residential areas, rivers, pans, dams, lakes and boreholes.

2.1.4 Contour plans indicating the exact location of the effluent treatment works and point of discharge of final effluent in relation to watercourses that drain the area.

2.1.5 Give the following information:

2.1.5.1 Distance to nearest inhabitants: _____m

2.1.5.2 Distance to nearest water abstraction point (e.g. river, borehole): _____m

2.1.5.3 Distance to nearest watercourse (e.g. dry river) and specify: _____m

2.1.5.4 Wind direction (main/normal) _____

2.2 Submit overall details of works:

2.2.1 Type of effluent treatment system and a brief description of its method of operation. (If domestic effluents are dealt with by the local authority please enclose a letter from the authority confirming this agreement).

2.2.2 Flow diagram/mass balances to show the present average quantities of incoming water, recycled water, final outflow, seepage and evaporation losses (all in m^3/day).

2.2.3 Layout orientation drawing indicating all major treatment units and fence around works.

2.2.4 Complete flow diagram and key design parameters to include:

2.2.4.1 Dimensions and design capacities of each unit process;

2.2.4.2 Process Flow Diagram(s) and major instrumentation employed, e.g. water meters;

2.2.4.3 Loadings on the system (e.g. hydraulic, COD, BOD, nitrogen, phosphate);

2.2.5 Indicate allowances that have been made for future expansion and increased loads (if any).

2.2.6 Methods of sludge disposal or recirculation.

2.2.7 Disinfection of the final effluent (indicate dosing type, method, retention period and optimum disinfectant level in final effluent).

3. Monitoring boreholes for monitoring groundwater pollution over time must be available within 500 m of the point of final effluent discharge.

4. Please note: Additional information is required for new treatment plants (e.g. an environmental impact assessment) - details can be obtained from the Department of Water Affairs and Forestry.

5. All relevant information must be included with this application. **It is a criminal offence to deliberately withhold vital information relevant to this application.** Where applicants are found to be in contravention with this requirement, they may/will be prosecuted.

3

D. TECHNICAL DETAILS - SPECIFIC

Applicants should only complete sections relevant to their specific effluent (please tick relevant box):

- ☐ D-1: Domestic Effluent - Includes wastewater collected in towns (excluding industrial effluent!), villages, schools, lodges, administration buildings.
- ☐ D-2: Industrial Effluent - Includes wastewater generated by any industry, factory, etc.
- ☐ D-3: Mining Effluent - Includes wastewater accumulated or collected due to mining operations (e.g. Acid mine wastewater)
- ☐ D-4: Combination/mix of various effluents (list major effluent streams on page 11)

Final Effluent Reuse

The pressure on Namibia's existing fresh-water supplies can, to a great extent, be eased by the sensible reuse of effluents for a variety of purposes including dust control, agriculture and industrial processes. Therefore, reuse of effluent after suitable treatment is encouraged.

The allowable reuse of an effluent is dependent upon its quality as well as many local circumstances and hence each application in this category needs careful and individual scrutiny, which should be undertaken by a specialist in this field and must be supported by an environmental impact assessment study.

A separate licence for effluent reuse is required and more details in this regards can be obtained from the Department of Water Affairs and Forestry.

D-2. INDUSTRIAL EFFLUENTS

Plant Name: .....

2.1	Describe industry and major activities resulting in effluent generation		
2.2	Capacity / Flowrates :		
	Design - Average daily flow		m^3/d
	- Peak hourly flow		m^3/h
	Actual (if in operation) - Average daily flow		m^3/d
	- Peak hourly flow		m^3/h
	If ponds are employed, state total surface area		m^2
2.3	List only major contaminants (also attach full analysis of typical effluent sample)		
2.4	Type of treatment employed (give short overview of process):		
2.5	List major treatment chemicals* employed in the unit process(es):		
2.6	Final effluent quality after treatment (put envisaged final quality for a new plant):		
2.7	Sludge generation:		
	- Volume generated		m^3/d
	- Mass		kg/d (dry solid)
	- Method of disposal		
	- Place of disposal		
	- Major constituents		
	- If sludge ponds, state frequency of cleaning		
2.8	Do you employ cleaner production principles (CPP)? Yes/No If "yes", elaborate:		
2.9	Is the following documentation included (give reason if not)? ▪ Water (and waste) management plan: Yes/No ▪ Decommissioning plan: Yes/No		

* For the chemicals employed, proper mass balances should be included that show chemical usage, movement and discharge within the factory/process(es). All safety aspects related to handling, storage and disposal of chemicals on site must be followed at all times.

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D-4. COMBINATION OF VARIOUS EFFLUENTS

Plant Name: .....

4.1	Describe major activities resulting in effluent generation (e.g. type of industry):				
4.2	Capacity / Flowrates of different streams (major only)	1	2	3	
	Type (e.g. domestic, industrial, mining, others)				
	Design - Average daily flow				m^3/d
	- Peak hourly flow				m^3/h
	Actual (if in operation) - Average daily flow				m^3/d
	- Peak hourly flow				m^3/h
4.3	List only major contaminants (also attach full analysis of typical effluent sample)				
4.4	Type of treatment employed (give short overview of process)				
4.5	List major treatment chemicals employed in the unit process(es):				
4.6	Final effluent quality after treatment (put envisaged final quality for a new plant)				
4.7	Sludge generation:				
	- Volume generated				m^3/d
	- Mass				kg/d (dry solid)
	- Method of disposal				
	- Place of disposal				
	- Major constituents				
	- If sludge ponds, state frequency of cleaning				

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D-4. COMBINATION OF VARIOUS EFFLUENTS

Plant Name: .....

4.1	Describe major activities resulting in effluent generation (e.g. type of industry):				
4.2	Capacity / Flowrates of different streams (major only)	1	2	3	
	Type (e.g. domestic, industrial, mining, others)				
	Design - Average daily flow				m^3/d
	- Peak hourly flow				m^3/h
	Actual (if in operation) - Average daily flow				m^3/d
	- Peak hourly flow				m^3/h
4.3	List only major contaminants (also attach full analysis of typical effluent sample)				
4.4	Type of treatment employed (give short overview of process)				
4.5	List major treatment chemicals employed in the unit process(es):				
4.6	Final effluent quality after treatment (put envisaged final quality for a new plant)				
4.7	Sludge generation:				
	- Volume generated				m^3/d
	- Mass				kg/d (dry solid)
	- Method of disposal				
	- Place of disposal				
	- Major constituents				
	- If sludge ponds, state frequency of cleaning				

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E. FINAL EFFLUENT DISPOSAL

1.4.1	Where is the final effluent discharged to? (E.g. French drain, pumped out by Local Authority, dry river course, perennial river, etc.)	
1.4.2	IF soakaway, state: - Type of soil - Suitability/porosity of soil - Size of soakaway area - Include topography and plan of soakaway area	
1.4.3	Is there any post-treatment applied? (e.g. disinfection, filtration)	
1.4.4	Is the final effluent re-used? (Yes/No)	
	If "Yes", complete:	
	- Do you have a reuse licence?	
	- Amount of water that will be re-used:	m^3/d
	- For what application:	
	- Type of irrigation used (if applicable):	
	- What crops are grown:	
	- Area of land that will be irrigated:	ha
1.4.5	Name (if any) downstream users (downstream of discharge point).	
1.4.6	Past records of complaints or objections by people living close to works:	

Reuse:
A reuse licence is required – details can be obtained from the Department of Water Affairs and Forestry.

Irrigation:

The crops allowed to be irrigated are dependent upon effluent quality (details will be supplied on request by the Department of Water Affairs and Forestry).

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APPENDIX B – REPORTING OF MAJOR PETROLEUM PRODUCT SPILL FROM PP/11

FORM PP/11

MINISTRY OF MINES AND ENERGY

PETROLEUM PRODUCTS AND ENERGY ACT, 1990
PETROLEUM PRODUCTS REGULATIONS (2000)

REPORTING OF MAJOR PETROLEUM PRODUCT SPILL

(Regulation 49(1))

(Please note that where form is completed by hand it must be completed in capital letters)

1. Name of licence/certificate-holder/person .....
.....
*(*Delete whichever is not applicable)*

2. Postal address .....
.....

3. Physical address .....
.....

4. Telephone Number (including code) .....

5. Facsimile Number (including code) .....

6. Licence/certificate* number and date of issue, if applicable .....
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*(*Delete whichever is not applicable)*

7. Date of petroleum product spill .....

8. Location of petroleum product spill .....
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9. Reasons for petroleum product spill .....
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10. Type of petroleum product involved in petroleum product spill .....

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11. Quantity of the petroleum product spill .....

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12. Indicate whether the petroleum product has or will have any negative effect on the environment and the safety and health of person or the property of persons .....

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13. Provide full details of all remedial actions taken to minimise risks associated with petroleum product spills and all cleaning-up operations taken in connection therewith .....

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DECLARATION

I, ..., hereby declare that the information submitted by me in this application is true and correct.

....

Signature *Place* *Date*

APPENDIX C – TEMPLATE FOR MONITORING

INSPECTION DATE: _____

INSPECTION COMPLETED BY: _____

SUMMARY OF ACTIVITIES OCCURRING:

_____

_____

_____

Ref No.	Item	Requirements	Responsibility	Compliant	Notes / Action Taken / Corrective Action Required
1	Noise	– Is the facility avoiding noise generating activities at night? – Is scheduling of works to avoid disturbance between the hours of 22pm and 5 am in place? – Are Saturday operational periods from 8 am – 12 noon, when near residential areas? – Are procedures for receiving complaints from nearby land users or residents in place and mitigation measures implemented should operations generate excessive noise?	– SHE Representative	Yes☐ No☐ N/A☐	
2	Operations of mechanical equipment and engines	– Are regular checks of all equipment conducted routinely? – Are equipment services up to date? – Are spill kits and/or drip trays available?	– SHE Representative, and – General Manager	Yes☐ No☐ N/A☐	

Ref No.	Item	Requirements	Responsibility	Compliant	Notes / Action Taken / Corrective Action Required
3	Production and effluent discharge	– Is the domestic and industrial effluent discharged off into approved systems? – If not, are regular water quality samples taken to ensure the treated wastewater complies to the prescribed general standards as set out in the Water Resources Management Act, 2004 (Act No. 24 of 2004)?	– SHE Representative, and – General Manager	Yes☐ No☐ N/A☐	
4	Solid waste generation	– Has the waste management plan and the application of the waste management hierarchy implemented? – Are suitable collection points in place for waste collection at the factory? – Is waste collected regularly and transported correctly? – Is hazardous waste such as waste oil/lubricant stored in a hazardous waste storage area and disposed of by accredited hazardous waste handlers such as Rent A Drum?	– SHE Representative, and – General Manager	Yes☐ No☐ N/A☐	
5	Lighting	– Are energy-efficient light bulbs installed? – Is unnecessary lighting avoided where possible? – Are lights switched off at night?	– SHE Representative, and – General Manager	Yes☐ No☐ N/A☐	
7	Air Emissions	– Are the dust extractors cleaned regularly? – Are vehicles serviced regularly to reduce emissions? – Is there dust monitoring system in place?	– SHE Representative	Yes☐ No☐ N/A☐	
8	PPE	– Are personnel wearing the correct PPE? – Is PPE in good condition? – Are there any complaints on the health of workers	– SHE Representative	Yes☐ No☐ N/A	

APPENDIX D – COMPLAINTS REGISTER TEMPLATE

NAME	CONTACT DETAILS	DATE AND LOCATION OF COMPLIANT	NATURE OF COMPLIANT	ACTION TAKEN TO RESOLVE	NOMINATED PERSON TO RESOLVE ISSUE *(Signature)*	DATE OF RESOLUTION/ CLOSED OUT COMPLAINT

APPENDIX E – MONTHLY INTERNAL COMPLIANCE CERTIFICATE

FOR THE PERIOD …… TO ……

MANAGEMENT REPRESENTATIVE:	SIGN:
SHE Representative:	SIGN:

Date of Submission:

Key activities on site during the month:

NON-CONFORMANCE:

Area of activity:

Reason:

Responsible party:

Results:

Correction action taken:

Intended follow up:

Additional Comments: