



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



ECC-88-270-REP-20-D

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

**EXPLORATION ACTIVITIES ON EPL 7340 FOR BASE AND RARE METALS,  
INDUSTRIAL MINERALS AND PRECIOUS METALS IN THE OTJOZONDJUPA REGION**

PREPARED FOR VOTORANTIM METALS (PTY) LTD



JUNE 2020

## TITLE AND APPROVAL PAGE

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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](mailto:stephan@eccenvironmental.com)  
[www.eccenvironmental.com](http://www.eccenvironmental.com)

#### Jessica Bezuidenhout Mooney

Environmental Consultant & Practitioner  
Tel: +264 81 699 7608  
Email: [jessica@eccenvironmental.com](mailto:jessica@eccenvironmental.com)  
[www.eccenvironmental.com](http://www.eccenvironmental.com)

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## EXECUTIVE SUMMARY

Votorantim Metals Namibia (Pty) Ltd (herein referred to as Votorantim or the proponent), pursue to undertake exploration activities on Exclusive Prospecting Licence (EPL) 7340 for base and rare metals, industrial minerals, and precious metals in the Otjozondjupa Region. The EPL is located approximately is located approximately 40 km east of Otavi town in the Otjozondjupa Region. The B8 and the D2863 roads intersect by the Kombat settlement, which lies 5 km south of the EPL and will be the main access road to the proposed project area.

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

The proposed exploration activities on EPL 7340 planned work, includes soil sampling and analysis, geophysical surveys (audio-magnetotelluric, induced polarization & magnetic ground surveys), geological mapping, installations and development of exploration drill holes in selected target areas. Some limited bush-clearing with exclusions of specially protected plant species will be carried out, for the creation of working areas and access tracks were necessary. However, a vegetation management plan will be included in the EMP in order to minimise damage. Drill-sites will be managed according to stringent environmental requirements that Votorantim upholds at all drilling sites. Access agreements will be entered into with all farmers / holders of private ground.

The explorations activities will commence as soon as an environmental clearance certificate has been granted by the Environmental Commissioner and activities are expected to be conducted over a 3-years period, which is the duration of the mineral licence. However, the period of each phase of the exploration programme may vary and will be refined as geological information becomes available. In the event where exploration is successful, and a commercially viable mineral resource is defined, exploration operations can potentially transcend into mining operations. This phase will be assessed in a separate and detailed environmental impact assessment at the appropriate stage.

EPL 7340 is located within the trees and shrubs savanna biome, with the vegetation type dominated by Acacia trees, shrubs as well as the thornbush woodland (Mendelsohn *et al.*, 2002). The vegetation structure in the proposed area can be broadly classified as woodland types. The area supports a high terrestrial diversity of animal and plant life, with the plant diversity in the area supporting approximately 500 species.

Through the scoping process, the surrounding environmental assessment was completed by undertaking a desktop review. The impacts of exploration activities with respect to airborne dust are expected to be limited to vehicular traffic. There will be some release of exhaust fumes from machinery that will impact the immediate vicinity but will be of short duration. Additionally, there will be associated drilling and machinery noise, which could be a disturbance to immediate neighbours, but this will be of short duration.

Through further investigation, it was determined that the effects from noise are of minor significance, however with additional mitigation, the significance is reduced to low. The additional mitigation measures include:

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

Water is a scarce and vital resource in Namibia and, as such, must always be treated with caution. The majority of the EPL 7340 area is covered by the Kunene south basin and partially by the Omatoko basin. The aquifer is also reliable, as it is frequently recharged and water quality is generally of a high standard (Mendelsohn et al., 2002). The potential for contamination from the proposed activities is regarded as minimal. Protection of water quality is addressed in the EMP.

This study concluded that a potential environmental risk, which may require further investigation, is related to the cumulative impacts as a result of visual disturbance, nuisance of noise and the loss of sense of place. Receptors are farm owners, neighbours, tourists and visitors. Through further investigation, it was determined that the visual disturbance and loss of the sense of place is considered to be of moderate significance, however with additional mitigation, the significance can be reduced to minor. These additional mitigation measures include:

- Position drill equipment in such a way that it is out of sight from human receptors
- Barriers or fences shall be used if drilling occurs in locations that may affect residents or livestock.
- Residents need to be informed at least two weeks in advance that drilling operations are within 1km of their property
- Continuous engagement with residents to identify any concerns or issues, and appropriate mitigation and management measures agreed upon

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

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

**CONTENTS**

<b>1</b>	<b>INTRODUCTION .....</b>	<b>9</b>
1.1	PURPOSE OF THIS REPORT .....	9
1.2	BACKGROUND OF THE PROPOSED PROJECT .....	9
1.3	THE PROPONENT OF THE PROPOSED PROJECT .....	12
1.4	ENVIRONMENTAL CONSULTANCY .....	12
1.5	ENVIRONMENTAL LEGAL REQUIREMENTS .....	13
1.6	REPORT STRUCTURE .....	13
<b>2</b>	<b>APPROACH TO THE IMPACT ASSESSMENT .....</b>	<b>15</b>
2.1	PURPOSE OF THE ENVIRONMENTAL IMPACT ASSESSMENT .....	15
2.2	THE ASSESSMENT PROCESS .....	15
2.3	METHODOLOGY FOR THE IMPACT ASSESSMENTS .....	17
2.4	SCREENING OF THE PROPOSED PROJECT .....	17
2.5	SCOPING OF THE ENVIRONMENTAL ASSESSMENT .....	17
2.6	BASELINE STUDIES .....	17
2.7	IMPACT PREDICTION AND EVALUATION .....	17
2.8	EIA DETERMINATION OF SIGNIFICANCE .....	17
2.9	EIA CONSULTATION .....	22
2.9.1	<i>Non-Technical Summary</i> .....	22
2.9.2	<i>Newspaper Advertisements</i> .....	23
2.9.3	<i>Site Notices</i> .....	23
2.9.4	<i>Consultation Feedback</i> .....	23
<b>3</b>	<b>REGULATORY FRAMEWORK.....</b>	<b>24</b>
3.1	NATIONAL REGULATORY REGIME .....	24
3.2	POLICIES .....	27
3.2.1	<i>Minerals Policy</i> .....	27
3.3	PERMITS AND LICENCES .....	27
3.3.1	<i>Exclusive Prospecting Licence</i> .....	27
<b>4</b>	<b>PROJECT DESCRIPTION.....</b>	<b>29</b>
4.1	NEED FOR THE PROPOSED PROJECT .....	29
4.2	ALTERNATIVES CONSIDERED.....	29
4.2.1	<i>No-go alternative</i> .....	29
4.3	PROPOSED EXPLORATION ACTIVITIES .....	29
4.3.1	<i>Exploration schedule</i> .....	31
4.3.2	<i>Equipment and materials</i> .....	31
4.3.3	<i>Workers and accommodation</i> .....	31
4.3.4	<i>Resource use and waste management</i> .....	32
4.3.5	<i>Site Rehabilitation</i> .....	32
<b>5</b>	<b>ENVIRONMENTAL AND SOCIAL BASELINE .....</b>	<b>33</b>
5.1	INTRODUCTION .....	33
5.2	PROJECT SITE AND LOCATION .....	33
5.3	SITE AND SURROUNDING ENVIRONMENT.....	33
5.4	CLIMATE .....	36
5.5	GEOLOGY.....	38

5.6	TOPOGRAPHY AND SOIL .....	40
5.7	HYDROLOGY .....	43
5.8	VEGETATION .....	45
5.9	FAUNA SPECIES .....	47
5.10	SOCIO-ECONOMIC .....	48
5.10.1	<i>Demographic Profile</i> .....	48
5.10.2	<i>Governance</i> .....	48
5.10.3	<i>HIV/AIDS in Namibia</i> .....	49
5.10.4	<i>Infectious diseases</i> .....	49
5.10.5	<i>Employment</i> .....	50
5.10.6	<i>Economic Activities</i> .....	50
5.10.7	<i>Cultural Heritage</i> .....	50
5.10.8	<i>Noise and Vibrations</i> .....	51
<b>6</b>	<b>ENVIRONMENTAL ASSESSMENT FINDINGS AND MITIGATION .....</b>	<b>52</b>
6.1	SCOPING ASSESSMENT FINDINGS .....	52
6.2	LIMITATIONS AND UNCERTAINTIES .....	52
6.2.1	<i>Further Consideration: Noise impacts and Visual impacts</i> .....	65
<b>7</b>	<b>ENVIRONMENTAL MANAGEMENT PLAN .....</b>	<b>67</b>
<b>8</b>	<b>CONCLUSIONS.....</b>	<b>68</b>
	<b>REFERENCES .....</b>	<b>69</b>
	<b>APPENDIX A- EMP.....</b>	<b>70</b>
	<b>APPENDIX B - NON-TECHNICAL SUMMARY .....</b>	<b>71</b>
	<b>APPENDIX C- EVIDENCE OF PUBLIC CONSULTATION .....</b>	<b>78</b>
	<b>APPENDIX E - ECC CVS.....</b>	<b>86</b>
<b>TABLES</b>		
	<b>TABLE 1 - PROPONENT DETAILS.....</b>	<b>12</b>
	<b>TABLE 2 - SECTIONS OF THE ENVIRONMENTAL SCOPING REPORT AND IMPACT ASSESSMENT .....</b>	<b>13</b>
	<b>TABLE 3 - SENSITIVITY AND VALUE OF RECEPTOR .....</b>	<b>18</b>
	<b>TABLE 4 - NATURE OF IMPACT .....</b>	<b>18</b>
	<b>TABLE 5 - MAGNITUDE OF CHANGE .....</b>	<b>19</b>
	<b>TABLE 6 - LEVEL OF CERTAINTY .....</b>	<b>20</b>
	<b>TABLE 7 - GUIDE TO SIGNIFICANCE RATINGS .....</b>	<b>21</b>
	<b>TABLE 8 - SIGNIFICANCE DESCRIPTION .....</b>	<b>21</b>
	<b>TABLE 9 - LEGAL COMPLIANCE.....</b>	<b>24</b>
	<b>TABLE 10 - NATIONAL POLICIES .....</b>	<b>26</b>
	<b>TABLE 11 - PERMITS AND LICENCES REQUIREMENTS .....</b>	<b>28</b>
	<b>TABLE 12 - LIMITATIONS, UNCERTAINTIES AND ASSUMPTIONS .....</b>	<b>52</b>
	<b>TABLE 13 - SCOPING ASSESSMENT FINDINGS .....</b>	<b>54</b>
	<b>TABLE 14 - SUMMARY OF EFFECTS .....</b>	<b>65</b>
<b>FIGURES</b>		
	<b>FIGURE 1 - THE SATELITTE OF THE LOCALITY MAP OF EPL 7340 .....</b>	<b>11</b>
	<b>FIGURE 2 - ECC SCOPING PROCESS .....</b>	<b>16</b>
	<b>FIGURE 3 - ACCESSIBILITY MAP OF EPL 7340.....</b>	<b>34</b>

<b>FIGURE 4 - LOCATION OF EPL 7340 RELATIVE TO NEIGHBOURING FARMS AND STAKEHOLDERS.....</b>	<b>35</b>
<b>FIGURE 5 - PREVAILING WIND DIRECTION AND WIND SPEED IN THE AREA OF THE PROPOSED PROJECT .....</b>	<b>37</b>
<b>FIGURE 6 - EPL 7340 REGIONAL AND LOCAL GEOLOGY .....</b>	<b>39</b>
<b>FIGURE 7 - EPL 7340 REGIONAL AND LOCAL SOIL MAP .....</b>	<b>41</b>
<b>FIGURE 8 - ELEVATION PROFILE ALONG EPL 7340.....</b>	<b>42</b>
<b>FIGURE 9 - HYDROLOGY MAP OF THE EPL 7340 .....</b>	<b>44</b>
<b>FIGURE 10 - EPL 7340 REGIONAL AND LOCAL VEGETATION MAP .....</b>	<b>46</b>

## DEFINITIONS AND ABBREVIATIONS

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



## 1 INTRODUCTION

### 1.1 PURPOSE OF THIS REPORT

The purpose of this report is to present the findings of the scoping study for the proposed project. The proposed project is to undertake mineral exploration activities on EPL 7340 for base and rare metals, industrial minerals and precious metals, which are described in detail throughout the report. 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).

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

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

### 1.2 BACKGROUND OF THE PROPOSED PROJECT

Votorantim Metals Namibia (Pty) Ltd proposes to undertake mineral exploration activities on EPL 7340 for base and rare metals, industrial minerals and precious metals in the Otjozondjupa Region. EPL 7340 lies in the centre of Otavi and Grootfontein. The proposed project is located approximately 30 km west of Grootfontein town, 40 km east of Otavi town and approximately 4km north of the Kombat settlement (less

than 4 km into the B8 road). The B8 and the D2863 roads intersect by the Kombat settlement and will be the main access road to the proposed project area (refer FIGURE 1).

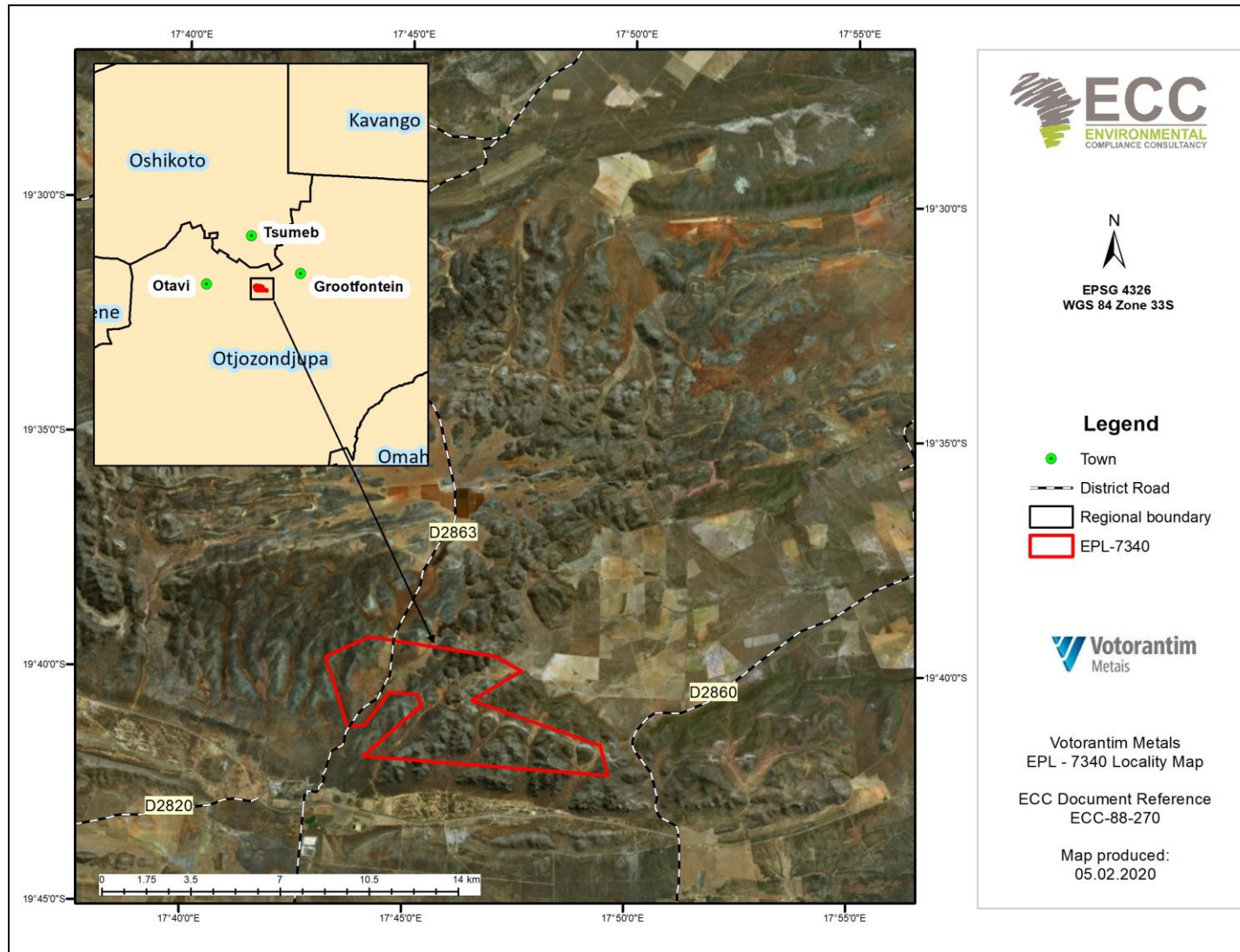


FIGURE 1 - THE SATELLITE OF THE LOCALITY MAP OF EPL 7340

### 1.3 THE PROPONENT OF THE PROPOSED PROJECT

**TABLE 1 - PROPONENT DETAILS**

CONTACT	POSTAL ADDRESS	EMAIL ADDRESS	TELEPHONE
VOTORANTIM METALS NAMIBIA (PTY) LTD Ms Yvonne Natalie Hass (Manager)	P O Box 2184, Windhoek, Namibia	ext.yvonnenh@nexaresources .com	+264 61 221 016

### 1.4 ENVIRONMENTAL CONSULTANCY

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

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

**Environmental Compliance Consultancy**

PO BOX 91193  
Klein Windhoek, Namibia  
Tel: +264 81 669 7608  
Email: [info@eccenvironmental.com](mailto:info@eccenvironmental.com)

## 1.5 ENVIRONMENTAL LEGAL REQUIREMENTS

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

### MINING AND QUARRYING ACTIVITIES

- 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), 1992
  - o The proposed project requires a licence for the construction of temporal exploration campsites, drill sites and access roads
- Other forms of mining or extraction of any natural resources whether regulated by law or not
  - o Minerals will be sampled and explored for within the EPL 7340
- Resource extraction, manipulation, conservation, and related activities
  - o The proposed project will explore for base rare metals, industrial minerals as well as precious metals

### WATER RESOURCE DEVELOPMENT

- The abstraction of ground or surface water for industrial or commercial purposes
  - o Due to the drilling of exploration boreholes, ground and surface water will be abstracted from existing boreholes in the proposed project area

## 1.6 REPORT STRUCTURE

The scoping report plus impact assessment is structured as per the contents set out in Table 2.

**TABLE 2 - SECTIONS OF THE ENVIRONMENTAL SCOPING REPORT AND IMPACT ASSESSMENT**

SECTION	TITLE	CONTENT
-	Executive Summary	Executive summary of the EIA
-	Acronyms	A list of acronyms used during the report
<b>1</b>	Introduction	This section introduces the EIA and provides background information on the proposed project, proponent and purpose of the report
<b>2</b>	Approach to the Impact Assessment	This chapter presents the methodology applied to the EIA
<b>3</b>	Regulatory Framework	This chapter describes the Namibian environmental regulatory framework applicable to the project and how it has been considered in the assessment and the scoping report and EMP.
<b>4</b>	Project Description	Presents a description of the proposed project and how the proposed project will be operated.
<b>5</b>	Environmental and social baseline	This chapter presents the predicted potential environmental and social effects arising from the proposed project, and the mitigation and

		management strategies to be applied to avoid or reduce the effects.
<b>6</b>	Environmental Assessment findings	This chapter predicts the potential environmental and social impacts arising from the project, the assessment of impacts including residual impact This chapter also outlines the proposed management strategies for monitoring commitments to ensure the actual and potential impacts on the environment are minimised to “As Low As Reasonably Practicable” (ALARP) this informs the EMP
<b>7</b>	Environmental Management Plan	This chapter provides a short description of the EMP used to take proactive action by addressing potential problems before they occur and outline mitigation measures for each impact
<b>8</b>	Conclusions	Conclude the findings of the EIA
	References	A list of reference used for this report
<b>Appendices</b>	Appendices A-E	A list of appendices used for this report <ul style="list-style-type: none"> <li>- Appendix A: Environmental Management Plan</li> <li>- Appendix B: Non-Technical Summary</li> <li>- Appendix C: Evidence of Public Consultation,</li> <li>- Appendix D: ECC CV’s</li> </ul>

## 2 APPROACH TO THE IMPACT ASSESSMENT

### 2.1 PURPOSE OF THE ENVIRONMENTAL IMPACT ASSESSMENT

The aim of this assessment is 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.

Subsequently, scoping of the EIA was undertaken by the EIA team. The scope of the assessment was determined through undertaking a preliminary assessment of the proposed project against the receiving environment obtained through a desk-top review, available site specific literature, monitoring data and site reports.

### 2.2 THE ASSESSMENT PROCESS

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

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

Furthermore, the Namibian Draft Procedures and Guidance for EIA and EMP (GRN, 2008) as well as the international and national best practice documents to our disposal and over 25 years of combined EIA experience, were also drawn upon in the assessment process.

An impact assessment is a formal process in which the effects of certain types of development on the biophysical, social and economic environments are identified, assessed and reported so that the effects can be taken into account when considering whether to grant development consent or to provide financial support.

Final mitigation measures and recommendations are based on the cumulative experience of the consulting team and the client, taking into consideration the potential environmental and social impacts. The process followed through the basic assessment is illustrated in Figure 2 and detailed further in the following sections.

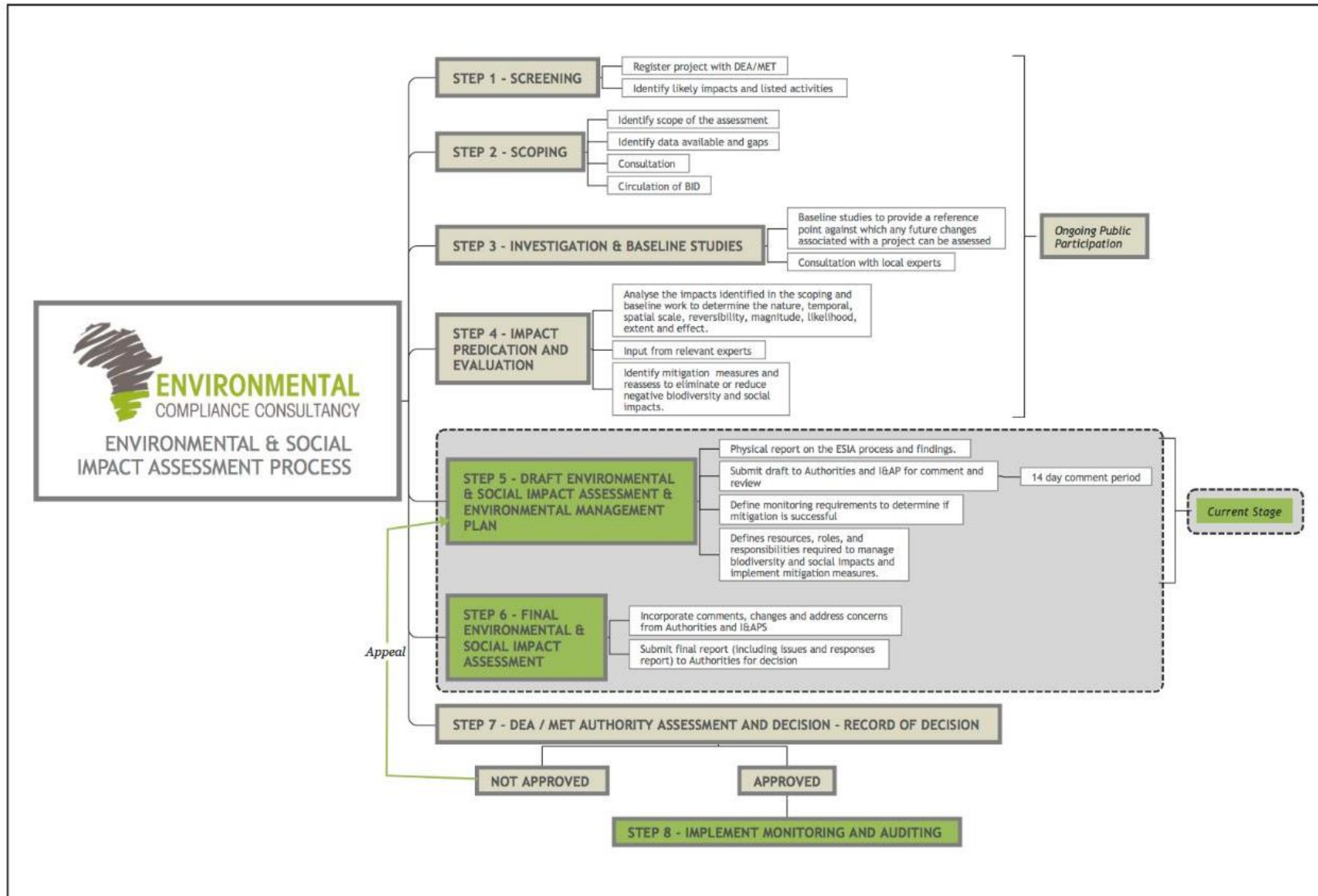


FIGURE 2 - ECC SCOPING PROCESS



## 2.3 METHODOLOGY FOR THE IMPACT ASSESSMENTS

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

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

## 2.4 SCREENING OF THE PROPOSED PROJECT

The first stages of the EIA process are to register the project with the competent authority and undertake a screening exercise. The screening exercise determines whether the proposed project is considered as a Listed Activity in terms of the Environmental Management Act, No. 7 of 2007 and associated regulations, and if significant impacts may arise. During this process, the location, scale and duration of project activities are considered against the receiving environment to determine the approach to the EIA.

## 2.5 SCOPING OF THE ENVIRONMENTAL ASSESSMENT

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

This report presents the findings of the scoping phase and high-level assessment and confirms that no further investigation is required. This conclusion is presented in section 6.

## 2.6 BASELINE STUDIES

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

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

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

## 2.7 IMPACT PREDICTION 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 findings of the assessment are presented in Section 6.

## 2.8 EIA DETERMINATION OF SIGNIFICANCE

The evaluation and prediction of the environmental and social impacts require the assessment of the project characteristics against the baseline characteristics, ensuring all potentially significant impacts are identified and assessed.

The significance of an impact is determined by taking into consideration the combination of the sensitivity and importance/value of environmental and social receptors that may be affected by the proposed project, the nature and characteristics of the impact, and the magnitude of potential change. The magnitude of change (the impact) is the identifiable changes to the existing environment which may be direct or indirect; temporary/short term, long-term or permanent; and either beneficial or adverse. These are described as follows and thresholds are provided in Table 3, 4 and 5.

- The **sensitivity and value of a receptor** is determined by identifying how sensitive and vulnerable a receptor is to change, and the importance of the receptor (internationally, nationally, regionally and locally).
- The **nature and characteristics of the impact** is determined through consideration of the frequency, duration, reversibility and probability of the impact occurring.
- The **magnitude of change** measures the scale or extent of the change from the baseline condition, irrespective of the value. The magnitude of change may alter over time, therefore temporal variation is considered (short- term, medium-term; long-term, reversible, irreversible or permanent).

**TABLE 3 - SENSITIVITY AND VALUE OF RECEPTOR**

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

**TABLE 4 - NATURE OF IMPACT**

NATURE	DESCRIPTION
Positive	An impact that is considered to represent an improvement on the baseline or introduces a positive change.
Negative	An impact that is considered to represent an adverse change from the baseline or introduces a new undesirable factor.
Direct	Impacts causing an impact through direct interaction between a planned project activity and the receiving environment/receptors.
Indirect	Impacts that result from other activities that are encouraged to happen as a result / consequence of the Project. Associated with the project and may occur at a later time or wider area
<b>Extent / Geographic Scale</b>	
On-site	Impacts that are limited to the boundaries of the proposed project site
Local	Impacts that occur in the local area of influence, including around the proposed site and within the wider community
Regional	Impacts that affect a receptor that is regionally important by virtue of scale, designation, quality or rarity.
National	Impacts that affect a receptor that is nationally important by virtue of scale, designation, quality or rarity.

NATURE	DESCRIPTION
International	Impacts that affect a receptor that is internationally important by virtue of scale, designation, quality or rarity.
<b>Duration</b>	
Short-term	Impacts that are likely to last for the duration of the activity causing the impact and are recoverable
Medium-term	Impacts that are likely to continue after the activity causing the impact and are recoverable
Long-term	Impacts that are likely to last far beyond the end of the activity causing the damage but are recoverable over time
<b>Reversibility</b>	
Permanent /Irreversible	Impacts which are not reversible and are permanent
Temporary / Reversible	Impacts are reversible and recoverable in the future
<b>Likelihood</b>	
Certain	The impact is likely to occur
Likely	The impact is likely to occur under most circumstances
Unlikely	The impact is unlikely to occur

**TABLE 5 - MAGNITUDE OF CHANGE**

MAGNITUDE OF CHANGE	DESCRIPTION
<b>Major</b>	Loss of resource, and quality and integrity of resource; severe damage to key characteristics, features or elements; or Large-scale or major improvement of resources quality; extensive restoration or enhancement; major improvement of attribute quality.
<b>Moderate</b>	Loss of resource, but not adversely affecting its integrity; partial loss of/damage to key characteristics, features or elements; or Benefit to, or addition of, key characteristics, features or elements; improvements of attribute quality.
<b>Minor</b>	Some measurable change in attributes, quality or vulnerability; minor loss of, or alteration to, one (or maybe more) key characteristic, feature or element; or Minor benefit to, or addition of, one (or maybe more) key characteristic, feature or element; some beneficial effect on attribute quality or a reduced risk of a negative effect occurring.
<b>Negligible</b>	Very minor loss or detrimental alteration to one (or maybe more) characteristic, feature or element; or Very minor benefit to, or positive addition of, one (or maybe more) characteristic, feature or element.

The level of certainty has also been applied to the assessment to demonstrate how certain the assessment conclusions are and where there is potential for misinterpretation or a requirement to identify further mitigation measures, thereby adopting a precautionary approach. Where there is a low degree of certainty, monitoring and management measures can be implemented to determine if the impacts are worse than predicted and support the identification of additional mitigation measures through the lifetime of the proposed project. Table 6 provides the levels of certainty applied to the assessment, as well as a description.

TABLE 6 - LEVEL OF CERTAINTY

LEVEL OF CERTAINTY	DESCRIPTION
High	<ul style="list-style-type: none"> <li>- Likely changes are well understood</li> <li>- Design/information/data used to determine impacts is very comprehensive</li> <li>- Interactions are well understood and documented</li> <li>- Predictions are modelled, and maps based on interpretations are supported by a large volume of data, and</li> <li>- Design/information/data has very comprehensive spatial coverage or resolution.</li> </ul>
Medium	<ul style="list-style-type: none"> <li>- Likely changes are understood</li> <li>- Design/information/data used to determine impacts include a moderate level of detail</li> <li>- Interactions are understood with some documented evidence</li> <li>- Predictions are modelled but not yet validated and/or calibrated, and</li> <li>- Mapped outputs are supported by a moderate spatial coverage or resolution.</li> </ul>
Low	<ul style="list-style-type: none"> <li>- Interactions are currently poorly understood and not documented.</li> <li>- Predictions are not modelled, and the assessment is based on expert interpretation using little or no quantitative data.</li> <li>- Design is not fully developed, or information has poor spatial coverage or resolution.</li> </ul>

The significance of impacts has been derived using professional judgment and applying the identified thresholds for receptor sensitivity and magnitude of change (as discussed above) and guided by the matrix presented in Table 7. The matrix is applicable for impacts that are either positive or negative. The distinction and description of significance and whether the impact is positive, or negative is provided in Table 8.

TABLE 7 - GUIDE TO SIGNIFICANCE RATINGS

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

Significance is not defined in the Namibian EIA Regulations, however the Draft Procedure and Guidance for EIA and EMP states that the significance of a predicted impact depends upon its context and intensity. Accordingly, definitions for each level of significance have been provided in Table 8. These definitions were used to check the conclusions of the assessment of receptor sensitivity, nature of impact and magnitude of impact was appropriate.

TABLE 8 - SIGNIFICANCE DESCRIPTION

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

SIGNIFICANCE OF IMPACT	DESCRIPTION
	in extent.
<b>Low (negative)</b>	Impacts are considered to be local factors that are unlikely to be critical to decision-making.
<b>Low – Major (Beneficial)</b>	Impacts are considered to be beneficial to the environment and society:

To ensure the beneficial impacts are brought out in the assessment, green has been applied to ensure the different type of impact is clear. The description for each level of significance presented in Table 8 was also followed when determining the level of significance for a beneficial impact.

The significance of impacts has been derived using professional judgment and applying the identified thresholds for receptor sensitivity and magnitude of change, as well as the definition for significance. In most instances, moderate and major adverse impacts are considered as significant, however, there may be some instances where impacts are lower than this but are considered to be significant. The following thresholds were therefore used to double check if the assessment of significance has been applied appropriately; a significant impact would meet at least one of the following criteria:

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

## 2.9 EIA CONSULTATION

Public participation and consultation are a requirement in terms of section 21 of the Environmental Management Act, No. 7 of 2007 and its regulations for a project that requires an environmental clearance certificate. Consultation is a compulsory and critical component in the EIA process, aimed at achieving transparent decision-making, and can provide many benefits.

A key aim of the consultation process is to inform stakeholders and interested and affected parties (I&AP) about the proposed project. The methods undertaken for the proposed project are detailed as follows, which are in line with the requirements of the EIA regulations.

### 2.9.1 NON-TECHNICAL SUMMARY

The Non-Technical Summary (NTS) presents a high-level description of the proposed project; sets out the EIA process, when and how consultation is undertaken. The contact details for further enquiries are made available to all registered I&APS and the NTS can be found in Appendix B.

#### 2.9.2 NEWSPAPER ADVERTISEMENTS

Notices regarding the proposed project and associated activities were circulated in two newspapers namely the 'Namibian' and the 'Informante' on the 03<sup>rd</sup> and 10<sup>th</sup> of March 2020 (refer to Appendix C). Registered mails were posted as well, to identified stakeholders. The purpose of this was to commence the consultation process by informing the public about the project and enabling I&APs to register any comments and interest raised for the project.

#### 2.9.3 SITE NOTICES

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

#### 2.9.4 CONSULTATION FEEDBACK

No issues or concerns were raised by the I&APs during consultation period.

### 3 REGULATORY FRAMEWORK

This chapter outlines the regulatory framework applicable to the proposed project. Table 9 provides a list of applicable legislation and the relevance to the project.

#### 3.1 NATIONAL REGULATORY REGIME

TABLE 9 - LEGAL COMPLIANCE

NATIONAL REGULATORY REGIME	SUMMARY	APPLICABILITY TO THE PROJECT
<p><b>Namibian Constitution Act, No. 34 of 1998</b></p>	<p>The Constitution of the Republic of Namibia, 1990 clearly defines the Country's position in relation to sustainable development and environmental management. The Constitution refers that the State shall actively promote and maintain the welfare of the people by adopting policies aimed at the following:</p> <p><i>"Maintenance of ecosystems, essential ecological processes and biological diversity of Namibia and utilization of living natural resources on a sustainable basis for the benefit of all Namibians, both present, and future; in particular, the Government shall provide measures against the dumping or recycling of foreign nuclear and toxic waste on Namibian territory."</i></p>	<p>The proponent is committed to engage the local community for the proposed project by providing local jobs as well as, exploring ways of finding rich recourses to that could contribute to the Mining Sector in Namibia.</p>
<p><b>Minerals (Prospecting and Mining) Act, No. 33 of 1992</b></p>	<p>Provides for the reconnaissance, prospecting and mining for, and disposal of, and the exercise of control, minerals in Namibia.</p> <p>Section 50 (i) requires <i>"an environmental impact assessment indicating the extent of any pollution of the environment before any prospecting operations or mining operations are being carried out and an estimate of any pollution, if any, likely to be caused by such prospecting operations or mining operations"</i></p> <p>Section 50 sets out that in addition to any term and condition contained in a mineral agreement and any term and condition contained in any mineral licence, it shall be a term and condition of any mineral licence that the holder of such mineral licence shall:</p> <p>Exercise any right granted to him or her in terms of the provisions of this Act reasonably and in such manner that the rights and interests of the owner of any land to which such licence relates are not adversely affected, except to the extent to which such owner is compensated.</p> <p>Section 52 sets out that the holder of a mineral</p>	<p>The proposed activity is prospecting for minerals; hence it requires an EIA to be carried out as it triggers listed activities in the Environmental Management Act and its regulations. This report presents the findings of the EIA.</p> <p>Works shall not commence until all conditions in the Act are met, which includes an agreement with the landowners and conditions of compensation have been agreed.</p> <p>The project shall be compliant with Section 76. With regards to records, maps, plans and financial statements, information, reports, and returns submitted.</p> <p>As the proponent will need to access privately owned land the proponent will ensure sections 50 and 52 are complied with.</p>



NATIONAL REGULATORY REGIME	SUMMARY	APPLICABILITY TO THE PROJECT
	<p>licence shall not exercise any rights conferred upon such holder by this Act or under any terms and conditions of such mineral licence</p> <p>(a) In, on or under any private land until such time as such holder.</p> <p>(i) Has entered into an agreement in writing with the owner of such land containing terms and conditions relating to the payment of compensation, or the owner of such land has in writing waived any right to such compensation and has submitted a copy of such agreement or waiver to the Commissioner.</p>	
<p><b>Environmental Management Act, (No. 7 of 2007) and its regulations, including the Environmental Impact Assessment Regulation, 2007 (No. 30 of 2012)</b></p>	<p>The Act aims to promote sustainable management of the environment and the use of natural resources by establishing principles for decision-making on matters affecting the environment.</p> <p>It sets the principles of environmental management as well as the functions and powers of the Minister. The Act requires certain activities to obtain an environmental clearance certificate prior to project development. The Act states an EIA may be undertaken and submitted as part of the environmental clearance certificate application.</p> <p>The MET is responsible for the protection and management of Namibia's natural environment. The Department of Environmental Affairs under the MET is responsible for the administration of the EIA process.</p>	<p>This environmental scoping report (and EMP) documents the findings of the environmental assessment undertaken for the proposed project, which will form part of the environmental clearance application. The assessment and report have been undertaken in line with the requirements under the Act and associated regulations.</p>
<p><b>Water Act, 1956</b></p>	<p>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".</p> <p>The Ministry of Agriculture Water and Forestry Department of Water Affairs is responsible for the administration of the Water Act.</p> <p>The Minister may issue a Permit in terms of the regulations 5 and 9 of the government notice R1278 of 23 July 1971 as promulgated under section 30 (2) of the Water Act no. 54 of 1956, as amended.</p>	<p>This Act stipulates obligations to prevent pollution of water. The EMP sets out measures to avoid polluting the water environment.</p> <p>Measures to minimise potential groundwater and surface water pollution are contained in the EMP.</p> <p>Should the project require drilling and abstraction of water from surface and or underground sources, an application should be submitted to the Minister of Agriculture Water and Forestry.</p>
<p><b>Soil Conservation, 1969 (Act 76 of 1969) and the Soil</b></p>	<p>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.</p>	<p>This will be taken into consideration during the intention of the works to be undertaken within EPL 7340 sites. Measures in the EMP set out methods to avoid soil erosion.</p>

NATIONAL REGULATORY REGIME	SUMMARY	APPLICABILITY TO THE PROJECT
<b>Conservation Amendment Act (Act 38 of 1971)</b>		
<b>National Heritage Act, No. 27 of 2004.</b>	<p>The Act provides provision of the protection and conservation of places and objects with heritage significance.</p> <p>Section 55 stipulates that exploration companies must report any archaeological findings to the National Heritage Council after which a heritage permit needs to be issued</p>	<p>There might be potential for heritage objects to be found on site, therefore the stipulations in the Act have been taken into consideration and are incorporated into the EMP.</p> <p>Section 55 compels exploration companies to report any archaeological findings to the National Heritage Council after which a permit needs to be issued before the find can be disturbed. In cases where heritage sites are discovered the 'chance find procedure' will be used</p>

TABLE 10 - NATIONAL POLICIES

NATIONAL REGULATORY REGIME	SUMMARY	APPLICABILITY TO THE PROJECT
<b>Vision 2030</b>	<p>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.</p> <p>Vision 2030 states that the overall goal is to improve the quality of life of the Namibian people to a level in line with the developed world.</p>	<p>The planned project shall meet the objectives of Vision 2030 and shall contribute to the overall development of the country through continued employment opportunities.</p>
<b>The Fifth National Development Plan (NDP5)</b>	<p>NDP5 is the fifth in the series of seven five-year national development plans that outline the objectives and aspiration of Namibia's long-term vision as expressed in Vision 2030. NDP5 is structured on the pillars of economic progression, social transformation, environmental sustainability and good governance. Under the social transformation pillar is the goal of improved education.</p>	<p>The planned project supports meeting the objectives of NDP5 by creating opportunities for employment to the nearby community and the Namibian nation.</p>
<b>Labour Act, No. 11 of 2007</b>	<p>The Labour Act, No. 11 of 2007 (Regulations relating to the Occupational Health &amp; Safety provisions of Employees at Work promulgated in terms of Section 101 of the Labour Act, No. 6 of 1992 - GN156, GG</p>	<p>The proposed project will comply to stringent health and safety policies, including the compulsory use of specific PPE in designated areas to</p>

	1617 of 1 August 1997)	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.
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## 3.2 POLICIES

### 3.2.1 MINERALS POLICY

The Minerals Policy was adopted in 2002 and sets guiding principles and direction for the development of the Namibian mining sector while communicating the values of the Namibian people. It sets out to achieve several objectives in line with the sustainable development of Namibia’s natural resources. The policy strives to create an enabling environment for local and foreign investments in the mining sector and seeks to maximise the benefits for the Namibian people from the mining sector while encouraging local participation, amongst others.

The objectives of the Minerals Policy are in line with the objectives of the Fifth National Development Plan (NDP5) that include reduction of poverty, employment creation, and economic empowerment in Namibia. The proposed project conforms to the policy, which has been considered through the EIA process and the production of this report.

## 3.3 PERMITS AND LICENCES

### 3.3.1 EXCLUSIVE PROSPECTING LICENCE

The EPL 7340 was granted on the 31st of October 2019 and expires on the 30<sup>th</sup> of October 2022. In terms of the Minerals (Prospecting and Mining) Act, No. 33 of 1992, an EPL may be renewed, however, it may only be extended twice for two-year periods if demonstrable progress is shown. Renewals beyond seven years require special approvals from the Minister (Ministry of Mines and Energy, 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 (Ministry of Environment and Tourism, Ministry of Mines and Energy, 2018).

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

the full screening process must be followed with a full EIA process, before operations may commence (Ministry of Environment and Tourism, Ministry of Mines and Energy, 2018).

**TABLE 11 - PERMITS AND LICENCES REQUIREMENTS**

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

## 4 PROJECT DESCRIPTION

### 4.1 NEED FOR THE PROPOSED PROJECT

The mining sector in Namibia significantly contributes to the country's Gross Domestic Product (GDP), government tax receipts and export revenues. For this reason, exploration activities are encouraged in Namibia and the vision of the Minerals Policy being to "further attract investment and enable the private sector to take the lead in exploration, mining, mineral beneficiation and marketing" supports the development. The proposed project is in line with this vision and has the potential to create employment in local communities in the Otjozondjupa Region. In the event that exploration activities are successful, and a resource can be defined, with commercially viable mineral concentrations, exploration operations can potentially transcend into mining operations, which can result in socio-economic development in the area.

### 4.2 ALTERNATIVES CONSIDERED

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

Exploration activities range from extremely low impact exploration such as remote sensing from satellites to more invasive methods such as extensive close spaced drilling. The methods used shall be determined, based on the exploration programme, which is further designed once more information and data is obtained. At this stage of the project, the exploration activities are yet to be finalised and therefore a range of options remain.

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

#### 4.2.1 NO-GO ALTERNATIVE

Should exploration activities within EPL 7340 not take place, the anticipated environmental impacts from exploration activities would not occur, however, the social and economic benefits associated with project would also not be materialized.

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

### 4.3 PROPOSED EXPLORATION ACTIVITIES

The exploration activities on EPL 7340 will include some or all the following methods: aerial or remote sensing, geological mapping, geochemical sampling, geophysical surveys and drilling. Details of these methods are described below. Ground-based exploration techniques are inevitable in the

search of base, rare and precious metals. Data obtained by remote-sensing data are also used to select target areas.

Existing tracks will be used as far as rationally practical. In the event that new tracks are required they will be developed by hand or using a bulldozer if the area is heavily bush-encroached or hilly. Vegetation clearance shall be required for drill access tracks, drill pads and for the geophysical survey team and drillers' crew temporary camps. This will also be carried out by hand or bulldozer depending on the bush thickness and the required clearance distances.

- **REMOTE SENSING** technique 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 existing faults and fractures that 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.
- **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 a potential resource. Soil sampling and rock chip sampling are possible extent of mineralisation. 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.
- **GEOPHYSICAL GROUND SURVEYS** will be undertaken to collect data that give an indication of rock properties, particularly at depth. They are also used to map the geological structures. Induced Polarization (IP) surveys will be undertaken involving high voltage electrical currents measured via electrodes in the ground along linear cut-lines up to 3 km long to provide access to electrical cables. Small holes in the ground (0.2m x 0.2m x 0.3m) will be required for IP electrodes every 50m along a survey line. Copper sulphate solution will be used to improve the conduction of electrodes during the IP survey. During Audio – Magneto telluric (AMT) surveys the same lines and small holes in the ground will be used, but without the application of high voltage electrical currents.

- **DIAMOND DRILLING** entails the use of a diamond drill in order to obtain core samples. Bio-degradable drill additives will be used during diamond core drilling. Soil, rock and drill core samples will be stored at the site office. Exploration activities are usually undertaken in phases, with periods of no field activity between them, which allows for awaiting analytical results, and the integration and interpretation of data to decide on the next phase of exploration.

Diamond drilling and possible Rotary Air Blast (RAB) drilling will occur and the number of holes and aerial extent will be determined by the geochemical and geophysical anomalies obtained. AMT, IP and magnetic ground surveys will be undertaken to measure chargeability, conductivity & magnetic susceptibility of the rocks.

The area to be cleared for drill site access and/or temporary campsites, shall not be more than 15 ha, and therefore would not trigger the Forest Act, No. 12 of 2001 (Section 23). In addition, any established or large trees or specially protected plant species shall not be removed, and access roads will be routed to avoid these wherever possible and permits will be obtained as necessary. Impacts and effects of the geochemical surveys and drilling programmes are likely to be low.

#### 4.3.1 EXPLORATION SCHEDULE

The exploration activities are executed and managed from the Votorantim Exploration Office in Otavi. Field exploration activities, using techniques as discussed above, are anticipated to be carried out over the licence validity period. Remote sensing studies and planning phases for the prospecting programme will require 2-6 months. Geochemical sampling will be undertaken concurrently with geological mapping for approximately 2-6 months. Geophysical surveys will then be carried out over a period of about two (2) months after which the project will advance to reverse circulation or core drilling.

The duration of drilling programs is variable, and usually depends on the information that is gained from drilling. Applications for the environmental clearance certificate, along with all required permits will be submitted during this period should a second renewal of the EPL be required.

#### 4.3.2 EQUIPMENT AND MATERIALS

During the exploration phase double and single cab vehicles will be used to transport workers to and from and around the site. A drill-rig (track-mounted) will be brought to site for core drilling, along with a water truck and supporting trucks for use during drilling. Drilling equipment, diesel fuel and consumables shall be brought to the exploration site to support exploration activities as and when needed.

#### 4.3.3 WORKERS AND ACCOMMODATION

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

It is envisaged that for most of the exploration programme workers will reside in Otavi and be transported to and from the site. The proponent will provide transport. However, during the latter part of the prospecting (drilling) workers may be required to stay at the exploration site in campsites or in existing housing rented from the property owner. The proponent shall provide suitable living facilities during this period. Furthermore, the camping equipment shall include tents and a portable kitchen.

#### 4.3.4 RESOURCE USE AND WASTE MANAGEMENT

Water will be required for various uses including human consumption during the planned exploration activities and to support any of the exploration activities such as diamond drilling. The water will most likely be sourced from an existing water source on site, after permission has been obtained from the farm owner, of which they will be compensated for water usage. Alternatively, if a demand for water arises and where many holes are to be drilled in an area, then a borehole may be drilled. In this case the required water borehole permits and abstraction permit shall be obtained from the Ministry of Agriculture Water and Land Reform.

Waste produced on site will include sewerage and solid waste such as packaging. Wastewater (e.g. water with drill additives) used during drilling is recycled, contained and allowed to evaporate after use. The drill-sludge is disposed of at the Otavi municipal waste disposal site. In case of provision of the mobile toilets to be used on site, sewerage generated shall be managed by the toilet contractor. The proponent shall ensure waste transport certificates are provided by the toilet contractor for sewerage waste removed from site. No waste will be discharged on site.

#### 4.3.5 SITE REHABILITATION

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



## 5 ENVIRONMENTAL AND SOCIAL BASELINE

### 5.1 INTRODUCTION

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

### 5.2 PROJECT SITE AND LOCATION

EPL 7340 was granted on the 31st of October 2019 and expires on the 30th of October 2022. The EPL is located approximately 30 km west of Grootfontein town, 40 km east of Otavi town and approximately 4km north of the Kombat settlement (less than 4 km into the B8 road). The B8 and the D2863 roads intersect by the Kombat settlement and will be the main access road to the proposed project area.

### 5.3 SITE AND SURROUNDING ENVIRONMENT

None of the main roads in this area enters the EPL, or any of the farms affected by the location of the EPL. There were no tourist attractions in the vicinity discovered or known and so It is unlikely that prospecting activities will interfere with any tourist activities. The EPL lies in the center of the B8 and D2860 roads as well as D2863 road that passes through the project area. The license area can be accessed using track roads from the south via the D2863 district road Kombat (Figure 3).

EPL 7340 overlaps eight farm boundaries entirely or partially (Figure 4). Most farms have well-kept fences with access tracks on one side which can be used for exploration vehicles, farmers' land use entails extensive livestock farming, commercial and private hunting and minor irrigated cultivation.

Pro-active communication between the proponent and farmers will need to be maintained when planning to access their properties and to keep them updated on exploration activities.

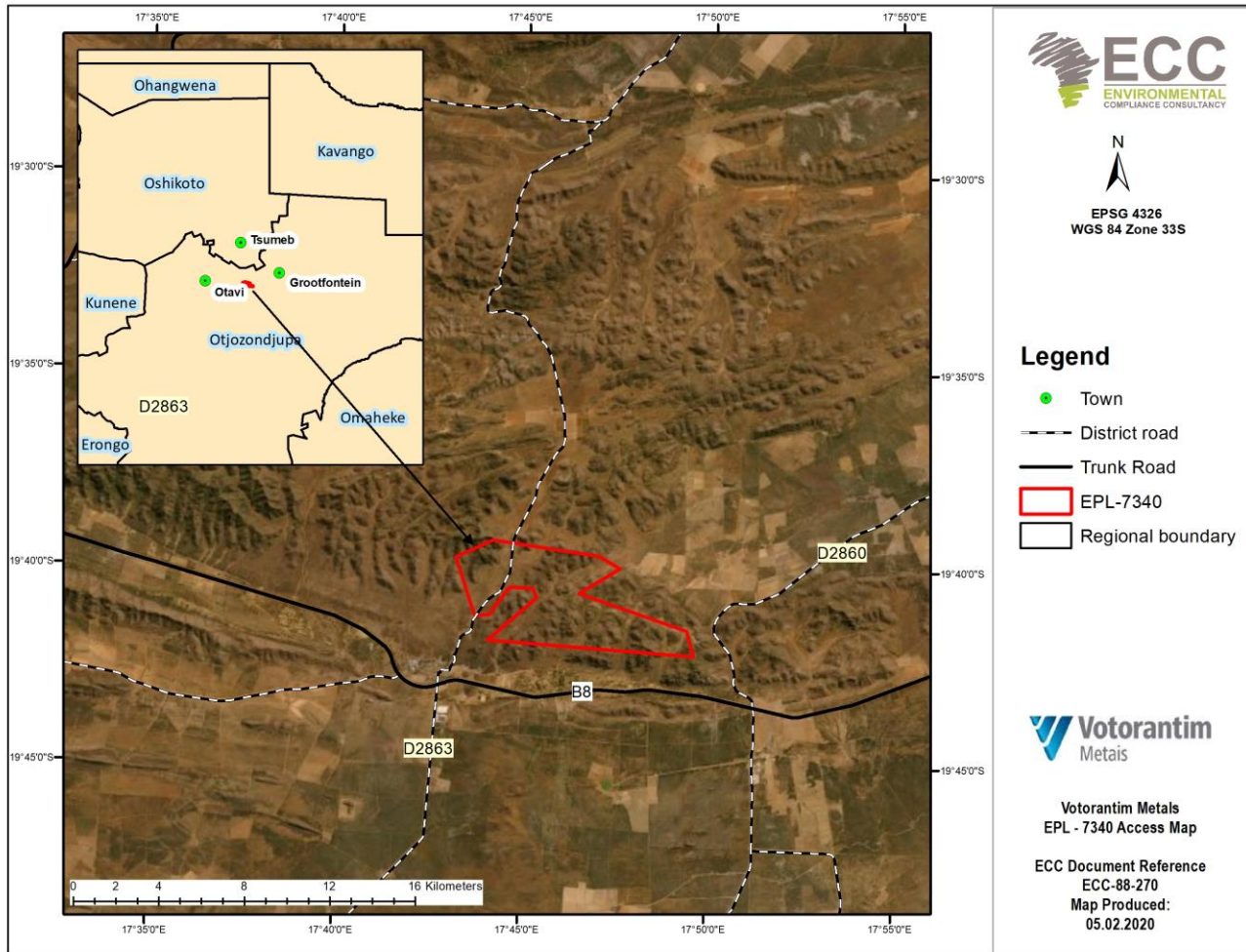


FIGURE 3 - ACCESSIBILITY MAP OF EPL 7340

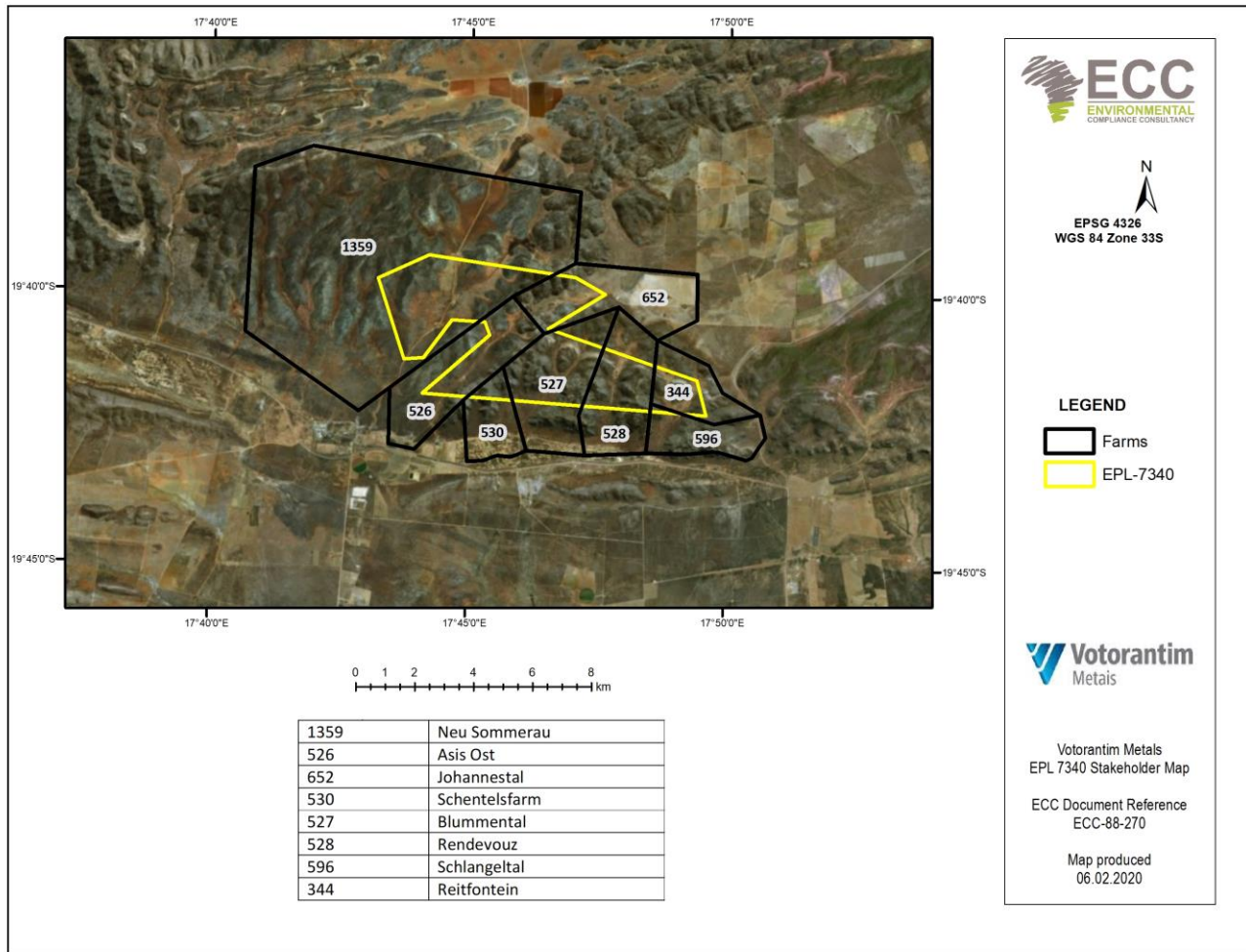


FIGURE 4 - LOCATION OF EPL 7340 RELATIVE TO NEIGHBOURING FARMS AND STAKEHOLDERS

## 5.4 CLIMATE

Namibia spans a zone roughly between 17° and 29° south of the equator, a belt on the globe which is dominated by subtropical high pressure cells of which the result is prevailing dry weather. Except for the narrow zone covered by the Namib Desert along the coast where the climate can be described as arid, and the northeast quarter of the country where the climate can be described as sub-humid, the greatest part of Namibia has a semi-arid climate. During summer the prominence of the high pressure cells weakens, and moist air from the inter-tropical convergence zone is allowed to bring a rainy period which is the longest in the northeast and the shortest in the extreme west and south.

The Otjozondjupa Region where the EPL 7340 is located present an average annual temperature that varies from 8°C - 36°C (Mendelsohn *et al.*, 2002). The hot season lasts for 4 months, from September to January, with an average daily high temperature of approximately 34°C. The hottest month of the year is October, with an average high of 32.9°C and low of 17.8°C (Mendelsohn *et al.*, 2002). The cool season lasts for three months, from May to July, with an average daily high temperature below 26.1°C. The coldest month of the year is July, with an average low of 7.2°C and high of 22.7°C.

The study area has a semi-arid climate and is located within an area of Namibia that receives the most rainfall between 550 – 600 mm per annum with a variation coefficient of <30% (Mendelsohn, *et al.*, 2002). Rainfall events are limited to the summer months, mainly between November and April, in the form of sudden thunderstorms often associated with heavy downpours. Potential evaporation can reach 1,960 mm per year. Relative humidity is low, rarely exceeding 20% in winter but may reach 85% in summer before or after thunderstorm build-up. The number of rainy days per annum (>1mm) is 45 – 50. Predominant wind direction is from the east, with an average wind speed of 4.9 meters per hour, and a calm of 9.3%. (Figure 5) (Iowa State University, 2019).



[FYGF] GROOTFONTEIN  
Windrose Plot [All Year]  
Period of Record: 02 Jul 2011 - 29 Mar 2019

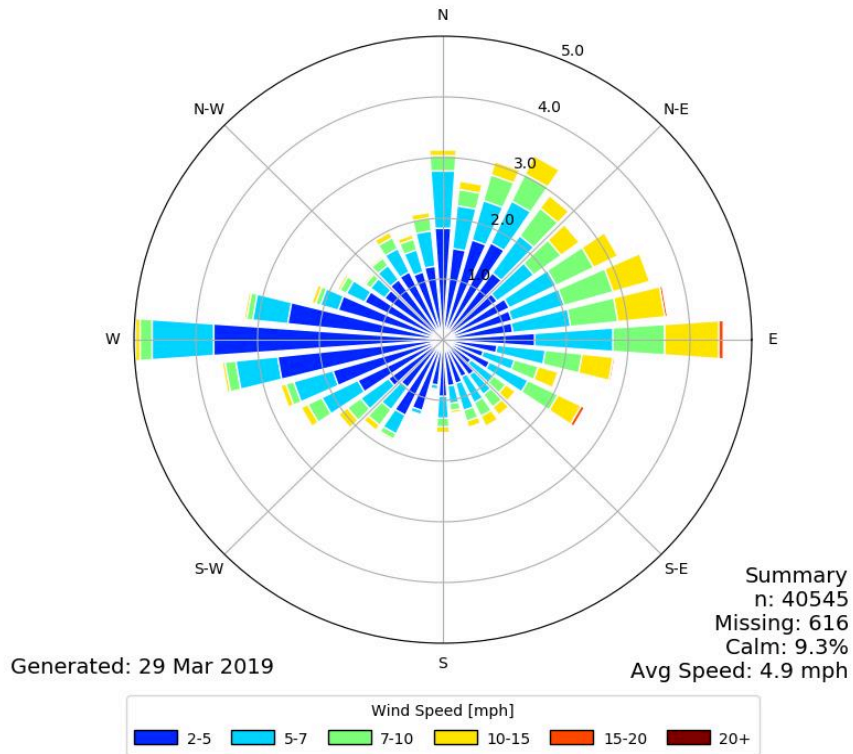


FIGURE 5 - PREVAILING WIND DIRECTION AND WIND SPEED IN THE AREA OF THE PROPOSED PROJECT

## 5.5 GEOLOGY

The local geology of EPL 7303 generally comprises units of the Otavi Group. The Otavi Group forms part of the Carbonate Platform of the Damara Orogen, which comprises a thick sequence of late, Proterozoic to early Phanerozoic carbonates and siliciclastic rocks, deposited on Nosib and basement rocks (Trigon Metals, 2019). Formations of the Otavi Group form part of the Damara Supergroup, which covers the largest part of the northwest quarter of Namibia. These formations are oriented in a predominantly SW-NE direction, are part of the Damara Sequence and are 850 – 600 million years old (Mendelsohn et al, 2002). The entire EPL 7303 is located within the mountainous area of the Otavi Group (Figure 6).

The dolomites of the Otavi Group crop out in a series of east-west striking ridges that constitute the mineral province of the Otavi Mountains. On this part of the Damara Belt, intra-cratonic rifts contain clastic rocks and shallow-water dolostones of the Nosib Group (~747 million years), overlain by platform carbonates of the Otavi Group (~746-550 million years). Subsidence at the start of the Damaran Orogeny led to deposition of fine siliciclastics of the Mulden Group (580-550 million years) above an on-lap unconformity (Boni *et al.*, 2007).

The origin of the Otavi Mountains is associated with the ancient sea between the Congo and Kalahari Cratons. Over millions of years a lime and dolomite rock mass of up to 5,000 m thick was formed, which was pressed upwards and folded intensely as the result of a gigantic collision between the two mainlands approximately 650 million years ago. Later the landscape was subject to a prolonged period of erosion, and only some of its higher parts preserved a mountainous character. The erosion effected the water soluble limestones particularly, creating a karst landscape marked by several synclinal and anticlinal axes, and underlain by carbonate rocks (mainly silicified dolomites). Dissolution is common, creating cavities, caves and sinkholes, but because of the karst no surface run-off into rivers is possible.

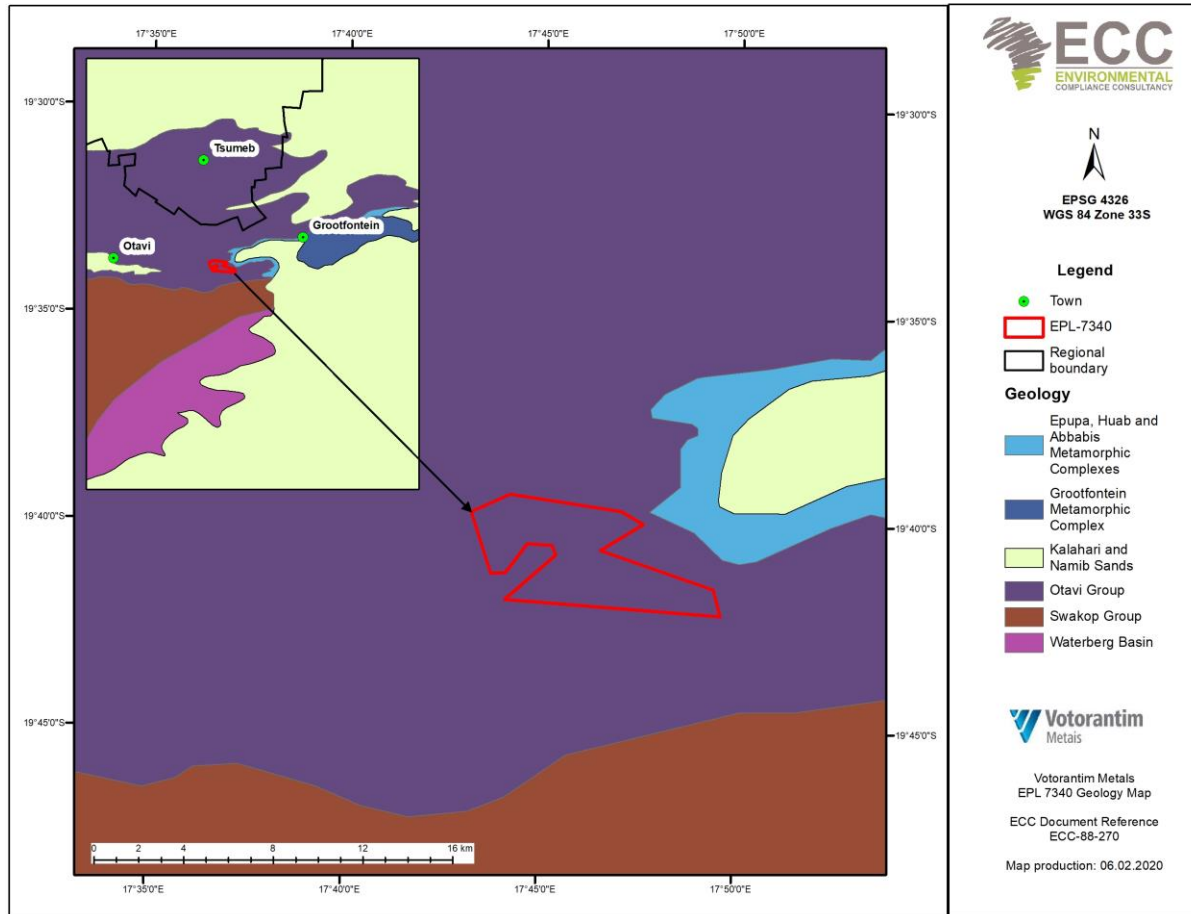


FIGURE 6 - EPL 7340 REGIONAL AND LOCAL GEOLOGY

## 5.6 TOPOGRAPHY AND SOIL

EPL 7340 is located on an elevation varying between 1628m -2138m above mean sea level (Figure 8). The landscape is mountainous and topsoil is largely absent as the surface is covered with rocky outcrops (Figure 7). Mollic leptosols, typically associated with eroding hilly and undulating landscapes, is the dominant soil type. The soil profile is shallow (indicating little influence of soil-forming processes), and contain large amounts of gravel. Leptosols are coarse-textured, underlain by solid rock within 30 cm from the surface. The soil is thus poorly developed and thin, lacks appreciable quantities of accumulated clay and organic material and is susceptible to erosion during the rainy season, especially in the beginning of the rainy season when vegetation cover is sparse. As the topsoil is loose and thin, it is also susceptible to wind erosion, especially when the vegetation cover is sparse.



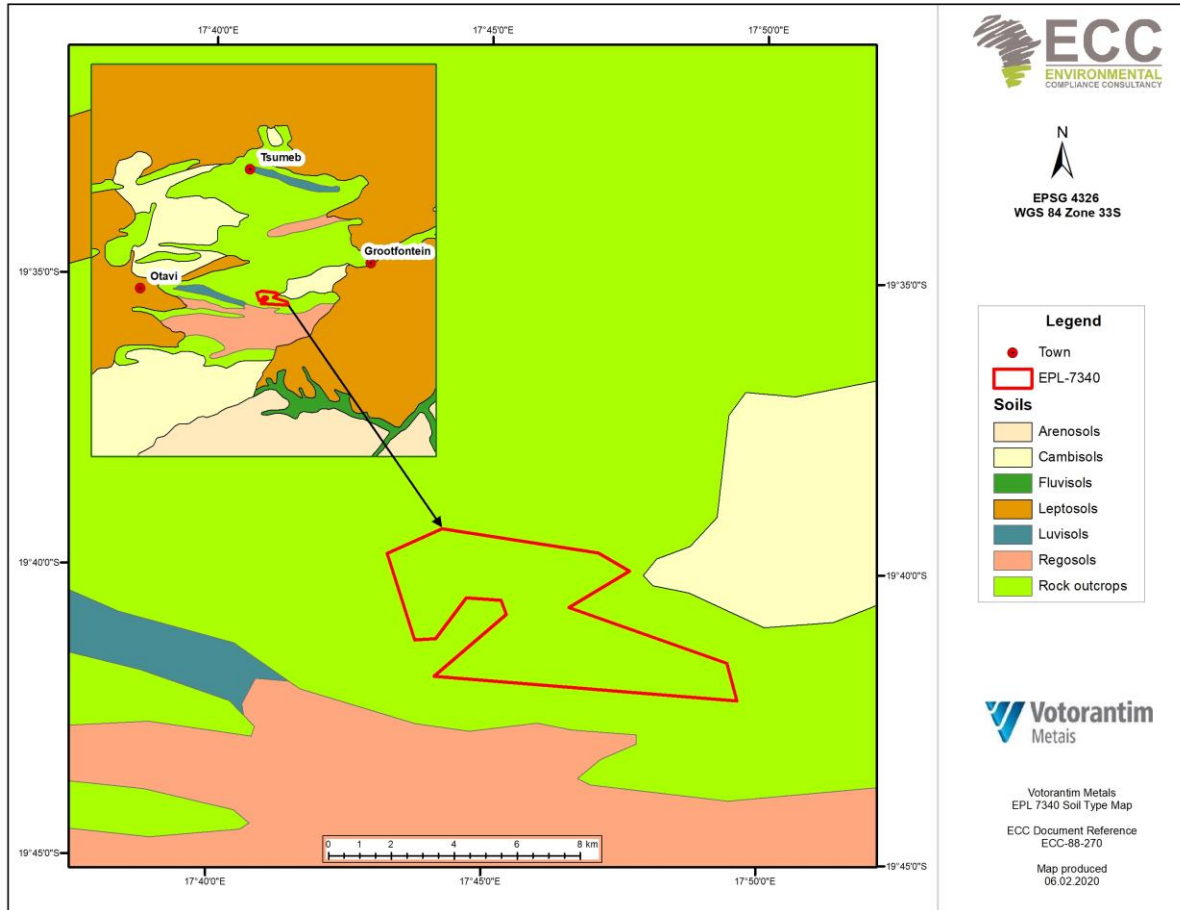


FIGURE 7 - EPL 7340 REGIONAL AND LOCAL SOIL MAP

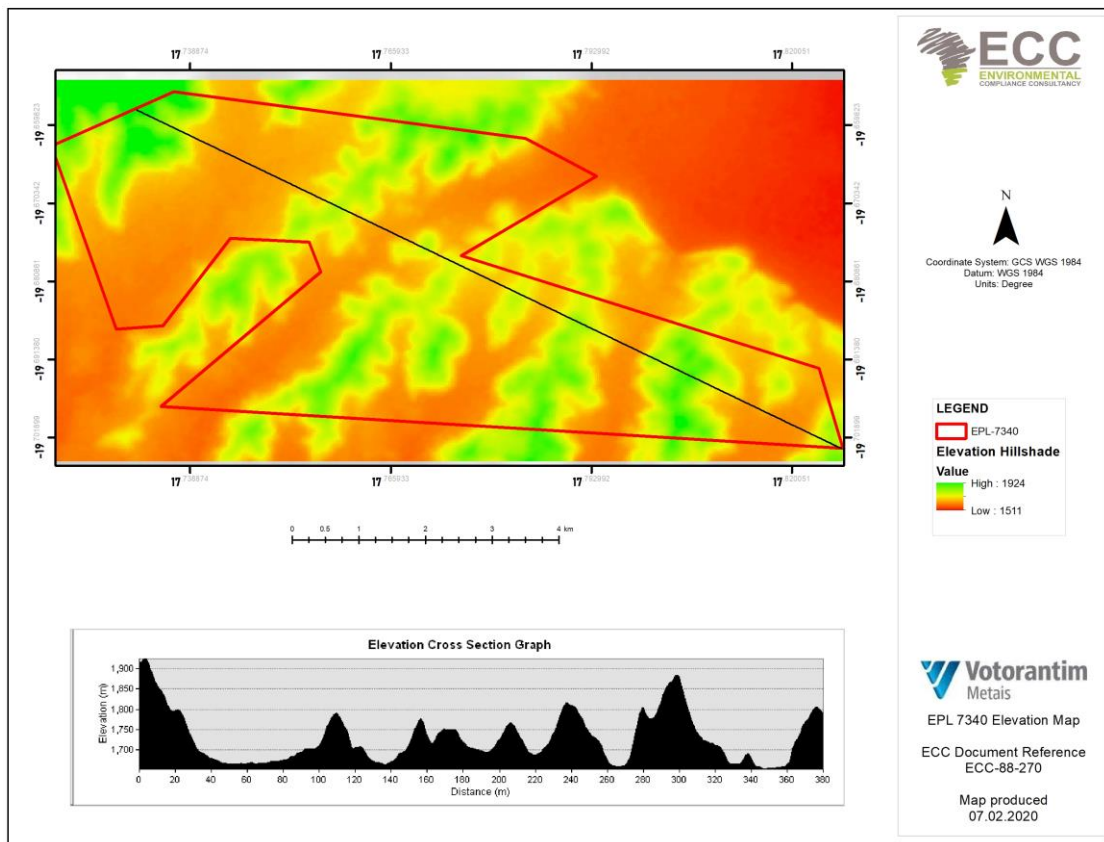


FIGURE 8 - ELEVATION PROFILE ALONG EPL 7340

## 5.7 HYDROLOGY

The Otavi Mountains form part of a karst landscape, which means that well-defined surface drainage systems are absent, or follow only short distances before surface water penetrates the surface. Although a drainage pattern can be identified, the flow of surface water is more defined by topographical valleys than the presence of streambeds. (Figure 9) shows the general drainage direction of surface water in a northwest direction.

EPL 7340 is located partially in the Kunene Groundwater Basin and Omatako Basin. The general direction of the groundwater flow is south, towards the Omatako Basin (Figure 9). The area is underlain by dolomites, which show a high potential of groundwater with an increased potential where fractures and faults occur on a local scale. The aquifer is also reliable, as it is frequently recharged and water quality is generally of a high standard (Mendelsohn *et al.*, 2002).

The farms located within and nearby EPL 7340 obtain water from borehole abstraction. There are two boreholes within the EPL 7340 area. It is assumed that water will be obtained from some of these existing boreholes during the exploration activities. Considering the nature and scale of the proposed exploration, drilling is unlikely to impact groundwater. Should the project require the drilling and abstraction of water from an additional borehole, an application must be submitted to the MAWLR.

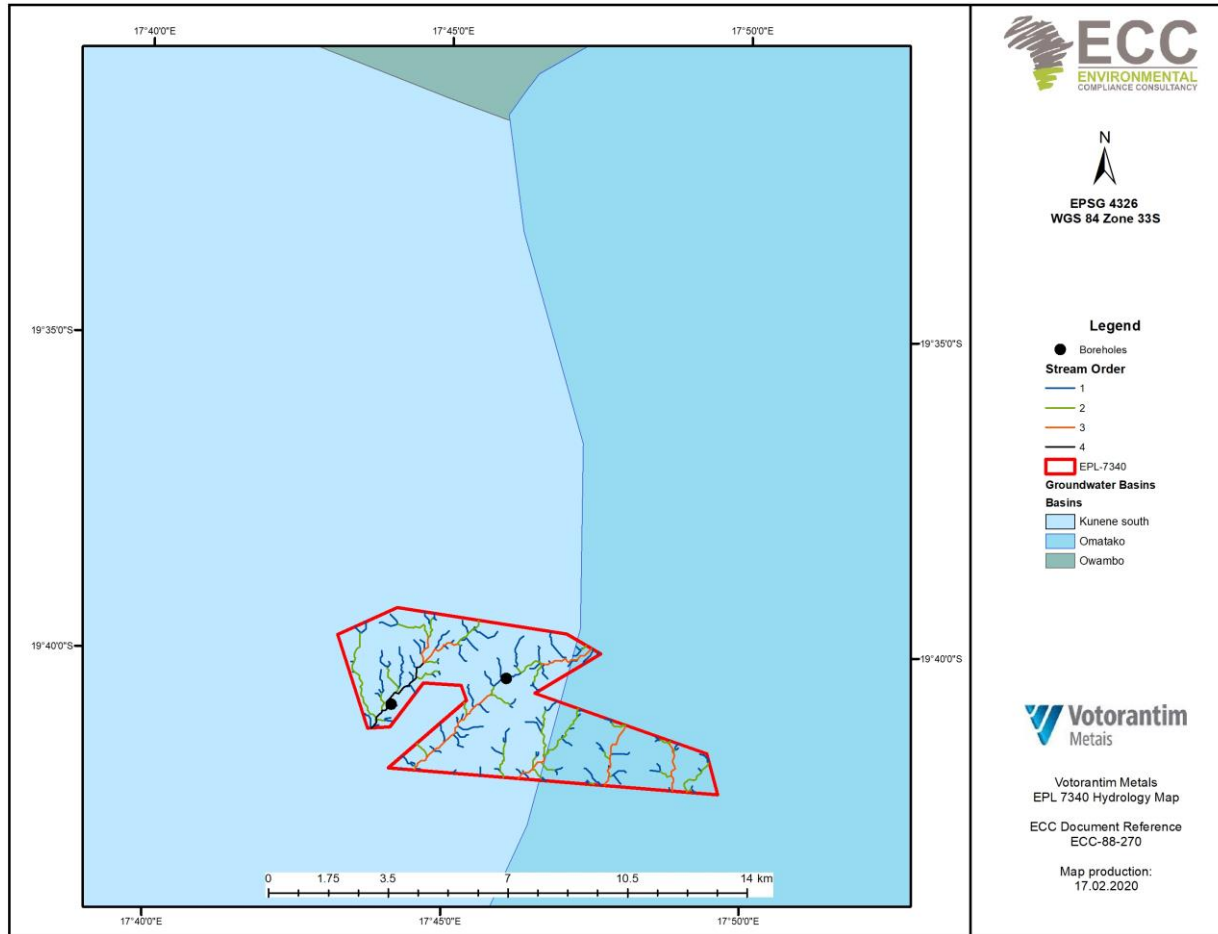


FIGURE 9 - HYDROLOGY MAP OF THE EPL 7340

## 5.8 VEGETATION

The Otavi Mountains are covered by the Karstveld vegetation type of the *Acacia* Tree-and-shrub Savanna Biome (Figure 10). It is broadly classified as a woodland, with vegetation dominated by relatively dense stands of woody shrubs and trees. In some places plant growth become progressively shrubby, especially where the soils are shallower, slopes are steeper and where it is more hilly and rocky (Mendelsohn et al, 2002). Most of the woody vegetation vary between 1 and 3m in height. Thorny *Acacia* species dominate but a number of species are closely associated with the higher elevations only.

The most important environmental variable affecting the vegetation is rain 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 in their abundance. Large parts of the Otjozondjupa Region are marked by bush encroachment, mainly as a result of long continuous periods of selective grazing by livestock. The encroachment has led to a decreased carrying capacity on many farms and the invader bush is managed in several ways as a result, one of which is the production of charcoal for export.

Plant diversity is estimated >500 species (Mendelsohn et al, 2002), although local differentiation as a result of topography and the availability of water is possible. This is the highest occurrence of plant diversity in Namibia, and some local endemics occur. Biophysical baseline information does not accentuate the uniqueness of mountain vegetation and the diversity of plants species may converge on relative small areas in which there are several habitats and niches offered by micro-climate, elevation and sheltered spaces. A detailed vegetation study may identify matters that requires further investigation.

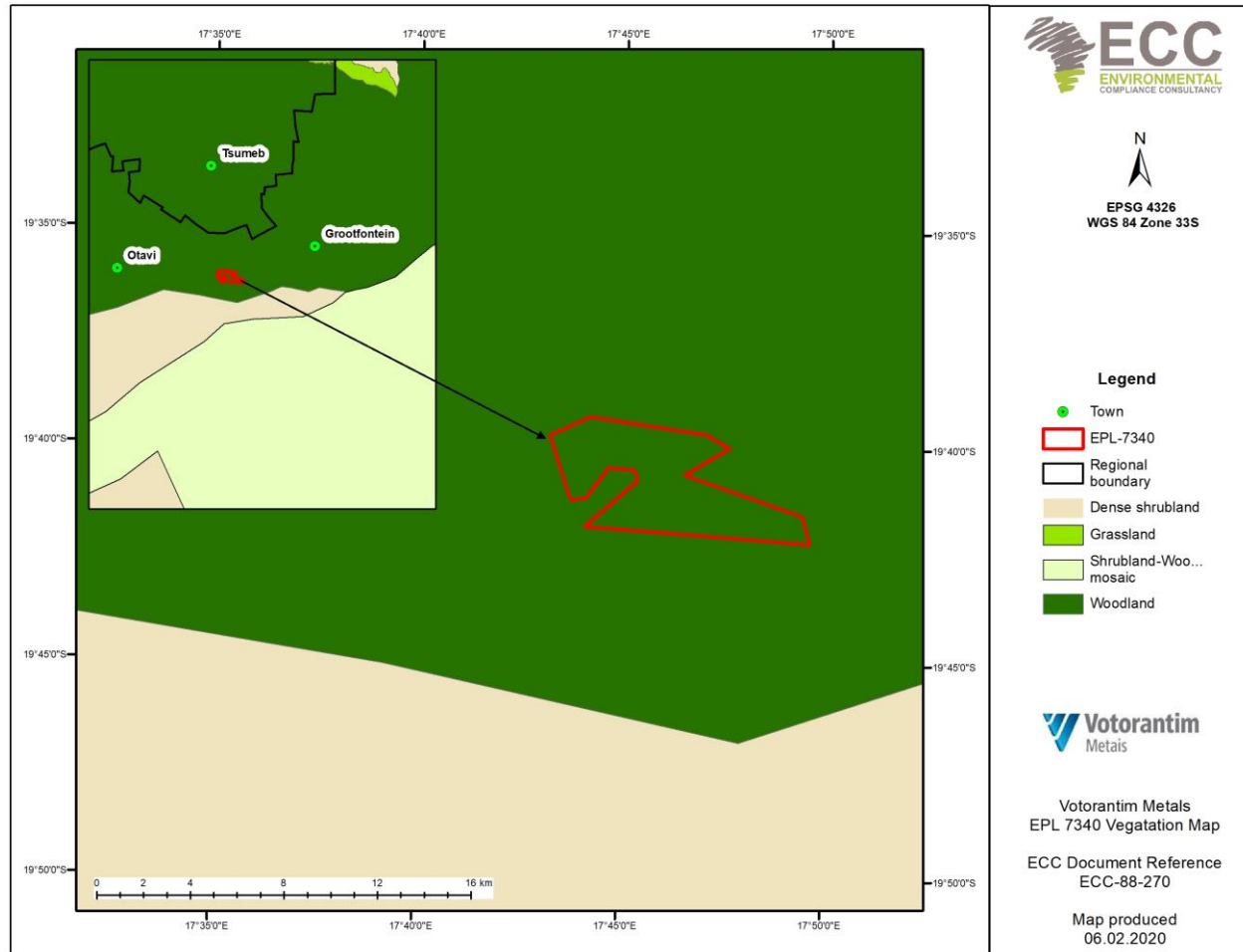


FIGURE 10 - EPL 7340 REGIONAL AND LOCAL VEGETATION MAP

## 5.9 FAUNA SPECIES

Overall terrestrial biodiversity of the Otavi Mountains ranges from medium to high. The number of mammal species ranges between 61 and 75, the number of bird species is between 201 and 230, with 71 – 80 reptile species, 12 – 15 frog species and 10 – 11 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. The micro-climate associated with an increase in elevation plays a prominent role in this regard and is directly related to the increase in terrestrial diversity.

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

## 5.10 SOCIO-ECONOMIC

Otjozondjupa is one of the bigger regions of Namibia and is located in the northern half of the country, bordering the Khomas and Omaheke Regions in the south, the Erongo and Kunene Regions in the west and the Oshikoto, Kavango-West and Kavango-East Regions in the north. In the east the region stretches along the international border with Botswana. The Oshikoto Region includes a large part of the Etosha National Park to its west, and is bordered by the Omusati and Oshana Regions in the west, the Ohangwena to the north and Kavango-West and Otjozondjupa Regions to the east.

The economy of the Otjozondjupa Region is predominantly agriculture-based. Extensive livestock farming forms the livelihood of many people, and is one of the reasons for the low intensity land use over much of the 105,460 km<sup>2</sup> the region covers, the low total population (142,400 in 2011) as well as the low population density (about 1.5 persons per km<sup>2</sup>). Large parts of the region are covered by commercial and communal farms, mainly for cattle farming. Guest farms and hunting farms are also common. On both commercial and communal land, bush encroachment decreased the carrying capacity of the farms markedly over the last four decades. The invader bush is managed in several ways, one of which is the production of charcoal for export.

### 5.10.1 DEMOGRAPHIC PROFILE

Namibia is one of the least densely populated countries in the world (3.2/km<sup>2</sup>), with an estimated population of 2.5 million people in 2020. The population growth rate is estimated at 2%, slightly lower than most African countries. It is estimated that 60% of the population falls in the age group 15 – 64, and 36% of the total population is younger than 15. Since 2005 there is a steady improvement in life expectancy, currently estimated at 65 years. In the 2011 Census, the population of the Otjozondjupa Region was 142,400 (Namibia Statistics Agency, 2011). 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](http://www.worldpopulationreview.com)). The last national census was conducted in 2011 and counted 2.1 million Namibians (Namibian Statistics Agency, 2011).

In 2011 the population of Otjiwarongo was 28,249 and with a growth rate of 3.0% the current estimated population is more than 35,000 residents. Otavi has a smaller recording of only 5,200 residents in 2011 and with an estimated increase of population of 6,500 in 2019 (Namibia Statistics Agency, 2017). Kombat, at its peak, had over 1000 residents. As of 2015 the settlement is almost abandoned. Functional services include a primary school, which operates at a reduced capacity, and a clinic.

### 5.10.2 GOVERNANCE

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

The population density of the Otjozondjupa Region is much lower than the national average and the current total population of the region is projected at 160,100 (retrieved from [www.citypopulation.de](http://www.citypopulation.de)). Otjiwarongo is the capital and also the largest town of the Otjozondjupa Region. Many of the region's



head offices are located in the town. Other towns of the region are Grootfontein, Otavi, Okahandja and Okakarara.

Relevant to EPL 7303 the two closest towns, Tsumeb and Grootfontein, are governed through local authorities in the form of municipalities while Otavi is a village and Kombat is a settlement. Otavi is managed by a village council mandated by the central authority, the Ministry of Urban and Rural Development, whereas Kombat is managed directly by the central authority.

#### 5.10.3 HIV/AIDS IN NAMIBIA

HIV/AIDS is a critical public health issue in Namibia and is one of the leading causes of death. Namibia has a general HIV epidemic, meaning that there is a high HIV prevalence among the whole population. The epidemic is now starting to stabilize, after a rapid increase from the time that the first case of HIV was reported in 1986 peaking in 2002. HIV prevalence in Namibia is not yet measured through a population-based survey, instead, HIV prevalence among pregnant women attending Ante Natal Clinics is used. In 2010, 18.8% of pregnant women were HIV positive compared to 22% in 2002. However, HIV prevalence is unevenly distributed throughout the country, therefore this figure is not representative. The overall trend illustrates that HIV prevalence is stabilizing rather than increasing (UNICEF, 2011).

#### 5.10.4 INFECTIOUS DISEASES

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

HIV/AIDS remains a major reason for low life expectancy and is one of the leading causes of death in Namibia. There is a high HIV prevalence among the whole population, but since the peak in 2002 (15,000 new cases of HIV per year, and 10,000 yearly deaths due to AIDS) the epidemic started to stabilise (UNICEF, 2011). Although new infections as well as fatalities halved during the next decade, life expectancy for females returned to pre-independence levels but for males it did not reach pre-independence levels yet. HIV/AIDS remains the leading cause of death and premature mortality for all ages, killing up to half of all males and females aged 40 - 44 years in 2013 (IHME, 2016).

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

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

#### 5.10.5 EMPLOYMENT

Otjzondjupa's labour force participation rate was more than 76.8%, compared to the average of 71.2% for Namibia. Hereof, more than half of the people were employed in the private sector and about one-quarter by the state. Agriculture is the economic sector with the most employees – about 30%, while 40% of those employed fell in the occupational group of general labourers and other unskilled occupations. Wages and salaries represented the income source of 61.7% of households (Namibian Statistics Agency, 2018). As a whole the region was marked by low education levels, which affected employability and prevented many households to earn a decent income. More than 60% of the population is over 15 years of age and about one-third of the total population can be regarded as part of the labour force.

The unemployment rates in Namibia, particularly among the youth are exceedingly high. According to the Namibia Labour Survey (2018), the unemployment rate of the Oshikoto and Otjzondjupa Regions was 26.6% and 36.1%, respectively while the unemployment rate for people between 15 and 34 years of age was 47.4% in 2018, slightly higher than the national average of 46.1% (Namibian Statistics Agency, 2018).

#### 5.10.6 ECONOMIC ACTIVITIES

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. Also a major employer, about 1.7% of the formal labour force of Namibia is directly employed by the mining sector. Employees in mining received the highest wages by industry in 2018 (Namibian Statistics Agency, 2018). 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).

The primary sectors agriculture, fisheries and forestry employ most Namibians, 23% in total. Based on this figure, and considering agriculture as the most important economic sector in the Otjzondjupa Region, one of every four persons are employed in agriculture (Namibian Statistics Agency, 2018). By far agriculture is the sector with the highest percentage of people informally employed by industry – 87.6% of all agriculture-based employees (Namibian Statistics Agency, 2018).

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.

#### 5.10.7 CULTURAL HERITAGE

In Namibia several mountains are closely coupled to heritage values, and it is possible that this applies to the Otavi Mountains as well. For many years the mineral deposits of the mountains were known, and copper was mined at Tsumeb over a period of nine decades. It is possible that the mountains were inhabited or visited before the times of recorded history, simply based on the significance of its known

mineral deposits. In addition, the Otavi Mountains are known for the occurrence of fossils and an intriguing palaeontology, which makes it possible that more of these sites can be discovered.

A review of the National Heritage Council database was conducted, and no known heritage sites were identified in EPL 7303. In cases where heritage sites are discovered the chance find procedure will be used.

#### 5.10.8 NOISE AND VIBRATIONS

EPL 7340 is entirely located in a rural area, where the predominant land use is extensive livestock farming. No settlement, other than isolated farm homesteads, occur within the area. People live remotely from each other and the population density is low, despite the vicinity of Tsumeb, Otavi, Grootfontein and Kombat. The area is undeveloped, with the only signs of human influence in the form of agricultural infra structure, i.e. water installations, fences, tracks and buildings. Sensitive receptors associated with the EPL area may include farm owners and farm workers, visitors and tourists and neighbours.

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

EPL 7340 lies on eight farms and it is likely that noise will become a nuisance to farms/farmhouses in the area. The proponent will continue to communicate with the farm owners, should this be a pertaining issue, further mitigation measures will be applied.

Additionally, work will be planned in advance and an agreement will be met with the farm owners on the most suitable timing of work and amelioration noise during drilling activities.

## 6 ENVIRONMENTAL ASSESSMENT FINDINGS AND MITIGATION

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

### 6.1 SCOPING ASSESSMENT FINDINGS

When undertaking the scoping exercise, the design of the proposed project and best practice measures were considered to ensure the likely significant effects and any required additional mitigation measures were identified. A summary of the potential impacts and mitigation and/or control measures are discussed below. The following topics were considered during the scoping phase:

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

Table 13 sets out the findings of the scoping assessment phase. Activities that could be the source of an impact have been listed, followed by receptors that could be affected. The pathway between the source and the receptor has been identified where both are present. Where an activity and/or receptor has not been identified, an impact is unlikely, thus no further assessment or justification is provided. Where the activity, receptor and pathway have been identified, a justification has been provided documenting if further assessment is required or not required.

Due to the nature and localised scale of the exploration activities, and the environmental context of the site, the potential environmental and social effects are limited and unlikely to be significant. The only area where uncertainty remained during the scoping phase was the potential effect on human receptors from the increase in noise levels and visual impacts, namely residents in the near farmhouses. Further consideration of the potential effects on humans was therefore undertaken and results are presented in the next section.

### 6.2 LIMITATIONS AND UNCERTAINTIES

Some limitations and uncertainties were acknowledged during the EIA process, which are summarised in Table 12, along with the assumptions made to manage them. In line with EIA best practice, assumptions have been made based on realistic worst-case scenarios, thereby ensuring that the worst-case potential environmental impacts are identified and assessed.

**TABLE 12 - LIMITATIONS, UNCERTAINTIES AND ASSUMPTIONS**

LIMITATION / UNCERTAINTY	ASSUMPTION
Number of access roads and temporary drill campsites.	The number and length of access roads required to reach drill sites is unknown at this point. While every effort will be made to minimize environmental damage, in some cases it will be necessary to create small roads, which may be required for equipment to reach the site and

	for temporary campsites. Once other stages of the prospecting programme are complete this information will be available.
The program of exploration works is not confirmed	It is assumed that exploration work shall take a couple of months with two to three week sampling projects at different times on different sites and with follow-up exploration drilling projects possible. Activities involve drilling; aerial or remote sensing; geophysical surveys; and mineral sampling. Pitting and trenching are unlikely.

**TABLE 13 - SCOPING ASSESSMENT FINDINGS**

DESCRIPTION OF ACTIVITY	RECEPTOR	DESCRIPTION OF IMPACT	EFFECT/DESCRIPTION OF MAGNITUDE	VALUE OF SENSITIVITY	MAGNITUDE OF CHANGE	SIGNIFICANCE OF IMPACT	IMPACT MANAGEMENT/CONTROL MEASURES	RESIDUAL IMPACT AFTER MITIGATION
Site operations such as maintenance activities, loss of containment, accidental fuel / hydraulic fluid leaks and spills, or similar sources.	<b>Groundwater quality</b>	Hydrocarbon leaks and spills could enter the aquifer causing contamination.	Adverse Direct Partly reversible Moderate Short term Regional Possible	Medium	Minor	Minor (4)	<ul style="list-style-type: none"> <li>- Good house keeping</li> <li>- Training through toolbox talks and induction</li> <li>- All stationary vehicles and machinery must have drip trays to collect leakages of lubricants and oil</li> <li>- Spill kits and absorption material available during fuel delivery, storage or use</li> <li>- Accidental spills and leaks (including absorption material) to be cleaned as soon as possible</li> <li>- Major spills to be reported, also to the authorities</li> <li>- Maintenance and service schedules on equipment is in place</li> <li>- Store bulk fuel in adequate containment areas (non-porous surface, bunded)</li> <li>- No damaged containers in use</li> <li>- Preventative measures will be in place when service and maintenance activities are</li> </ul>	Low (2)

DESCRIPTION OF ACTIVITY	RECEPTOR	DESCRIPTION OF IMPACT	EFFECT/DESCRIPTION OF MAGNITUDE	VALUE OF SENSITIVITY	MAGNITUDE OF CHANGE	SIGNIFICANCE OF IMPACT	IMPACT MANAGEMENT/CONTROL MEASURES	RESIDUAL IMPACT AFTER MITIGATION
							<ul style="list-style-type: none"> <li>done (drip trays, non-porous surfaces, funnels, non-damaged containers)</li> <li>- Refuelling will be done in areas with adequate preventative measures in place</li> </ul>	
Potential spillages of drill fluid, lubrication, etc. or drilling that penetrate the groundwater table.	<b>Groundwater quality</b>	Hydrocarbon leaks and spills could enter the aquifer causing contamination.	Adverse Indirect Partly Reversible Minor Short term Local Possible	Low	Minor	Low (2)	<ul style="list-style-type: none"> <li>- Ensure drill pads and spill kits are in place</li> <li>- Consider alternative sites when water table is too high</li> <li>- Drill system should be dug to direct any accidental spills into sumps</li> <li>- Extraction volumes of water shall be minimal during exploration and where possible, water from existing water sources shall be used</li> </ul>	Low (1)
Discharge and infiltration of non-contained wastewater	<b>Water</b>	Wastewater can contaminate surface and groundwater	Adverse Direct Partly Reversible Minor Short term Regional Unlikely	Low	Minor	Low (2)	<ul style="list-style-type: none"> <li>- Wastewater discharges will be contained</li> <li>- Workers will be made aware about the importance of wastewater management</li> <li>- Good housekeeping</li> </ul>	Low (1)
Inadequate management of waste	<b>Water</b>	Waste items and litter can pollute drainage channels	Adverse Cumulative Reversible	Low	Minor	Low (1)	<ul style="list-style-type: none"> <li>- Good housekeeping</li> <li>- Training and awareness through toolbox talks and</li> </ul>	Low (1)

DESCRIPTION OF ACTIVITY	RECEPTOR	DESCRIPTION OF IMPACT	EFFECT/DESCRIPTION OF MAGNITUDE	VALUE OF SENSITIVITY	MAGNITUDE OF CHANGE	SIGNIFICANCE OF IMPACT	IMPACT MANAGEMENT/CONTROL MEASURES	RESIDUAL IMPACT AFTER MITIGATION
			Minor Temporary On-site Unlikely				<ul style="list-style-type: none"> <li>induction</li> <li>- Implement a Standard Operational Procedure on waste management, from cradle to grave for all kinds of waste possible on-site (e.g. domestic, mineral, hydrocarbons, hazardous, etc.)</li> <li>- Raise awareness about the importance of responsible waste management</li> <li>- Implement a culture of correct waste collection, waste segregation and waste disposal</li> <li>- Avoid hazardous waste on site</li> <li>- Wastewater discharges will be contained – no disposal of waste water</li> </ul>	
Inadequate management of hazardous and hydrocarbon waste	<b>Soil</b>	Pollution of soil	Adverse Direct Reversible Minor Short term On-site Possible	Low	Low	Low (2)	<ul style="list-style-type: none"> <li>- Good housekeeping</li> <li>- Training and awareness through toolbox talks and induction</li> <li>- Implement a Standard Operational Procedure (SOP) on waste management, from cradle to grave, for all kinds</li> </ul>	Low (1)



DESCRIPTION OF ACTIVITY	RECEPTOR	DESCRIPTION OF IMPACT	EFFECT/DESCRIPTION OF MAGNITUDE	VALUE OF SENSITIVITY	MAGNITUDE OF CHANGE	SIGNIFICANCE OF IMPACT	IMPACT MANAGEMENT/CONTROL MEASURES	RESIDUAL IMPACT AFTER MITIGATION
							of waste possible on-site (e.g. domestic, mineral, hydrocarbons, hazardous) - Implement a culture of correct waste collection, waste segregation and waste disposal	
Vegetation clearing for access routes, drill pads and temporary contractors camp	<b>Terrestrial ecology and biodiversity</b>	Loss / alteration of terrestrial habitats and loss of species	Adverse Direct Reversible Minor Short term On-site Possible	Low	Minor	Low (2)	- Use existing roads for access to avoid new tracks and cut lines - Minimise clearance areas through proper planning of the exploration activities - Where possible, rescue and relocate plants of significance - Promote revegetation of cleared areas upon completion of exploration activities	Low (1)
Ambient noise as a result of machinery use and movement (also through the use of airborne equipment)	<b>Terrestrial ecology and biodiversity</b>	Residing, nesting and slow moving organisms can be disturbed	Adverse Direct Reversible Minor Short term On-site Likely	Low	Low	Low (2)	- Restrict excessive noise to areas of activities only - Restrict excessive noise to daytime hours (7 am to 5 pm weekdays and 7 am until 1 pm on Saturday) - No activities between dusk and dawn - Drill equipment shall be	Low (1)

DESCRIPTION OF ACTIVITY	RECEPTOR	DESCRIPTION OF IMPACT	EFFECT/DESCRIPTION OF MAGNITUDE	VALUE OF SENSITIVITY	MAGNITUDE OF CHANGE	SIGNIFICANCE OF IMPACT	IMPACT MANAGEMENT/CONTROL MEASURES	RESIDUAL IMPACT AFTER MITIGATION
							<ul style="list-style-type: none"> <li>suitably positioned to ensure that noisy equipment is away from receptors</li> <li>- All equipment to be shut down or throttled back between periods of use,</li> <li>- Respect civic aviation regulations about the use of a drone</li> </ul>	
Increased movement of machinery	<b>Terrestrial ecology and biodiversity</b>	Residing, nesting and slow moving organisms can be disturbed, injured or killed	Adverse Direct Partly reversible Moderate Short term On-site Possible	Low	Moderate	Low (2)	<ul style="list-style-type: none"> <li>- Restrict movements to areas of activities only</li> <li>- Use existing tracks and routes only</li> <li>- Identify rare, endangered, threatened and protected species in advance</li> <li>- Route new tracks around protected species and sensitive areas</li> <li>- Restrict movements to daytime hours</li> <li>- Make workers aware and notify them on avoiding some areas</li> <li>- No driving off designated access routes (into the bush) / off-road driving</li> <li>- No animals or birds may be collected, caught, consumed</li> </ul>	Low (1)

DESCRIPTION OF ACTIVITY	RECEPTOR	DESCRIPTION OF IMPACT	EFFECT/DESCRIPTION OF MAGNITUDE	VALUE OF SENSITIVITY	MAGNITUDE OF CHANGE	SIGNIFICANCE OF IMPACT	IMPACT MANAGEMENT/CONTROL MEASURES	RESIDUAL IMPACT AFTER MITIGATION
							or removed from site	
Increased disturbance of areas with natural vegetation	<b>Terrestrial ecology and biodiversity</b>	Alien species and weeds can be introduced to the area	Adverse Direct Reversible Minor Short term On-site Possible	Low	Low	Low (2)	<ul style="list-style-type: none"> <li>- Eradicate weeds and alien species as soon as they appear</li> <li>- Make workers aware about alien species and weeds</li> </ul>	Low (1)
Vegetation clearing	<b>Soil</b>	Increased exposure due to vegetation clearance can cause soil erosion	Adverse Direct Reversible Moderate Short term On-site Possible	Low	Moderate	Low (2)	<ul style="list-style-type: none"> <li>- Ensure erosion control and prevention measures are in place when vegetation clearance is required</li> <li>- Where possible, plan access routes, drill pads and camps outside of existing drainage lines</li> <li>- Where necessary, install diversions to curb possible erosion</li> <li>- Restore drainage lines when disturbed</li> </ul>	Low (1)
Drilling and the use of drilling equipment	<b>Soil</b>	Loss of soil quality due to mixing of earth matter, trampling and compaction	Adverse Direct Reversible Moderate Short term On-site Possible	Low	Moderate	Low (2)	<ul style="list-style-type: none"> <li>- Limit the possibility of compaction and creating of a hard subsurface</li> <li>- Limit the possibility of trampling</li> <li>- Topsoil should be stockpiled separately, and re-spread</li> </ul>	Low (1)

DESCRIPTION OF ACTIVITY	RECEPTOR	DESCRIPTION OF IMPACT	EFFECT/DESCRIPTION OF MAGNITUDE	VALUE OF SENSITIVITY	MAGNITUDE OF CHANGE	SIGNIFICANCE OF IMPACT	IMPACT MANAGEMENT/CONTROL MEASURES	RESIDUAL IMPACT AFTER MITIGATION
							<ul style="list-style-type: none"> <li>- during rehabilitation</li> <li>- During drilling oil absorbent matting should be placed under and around the rig</li> <li>- Equipment must be in a good condition to ensure that accidental oil spills do not occur and contaminate soil</li> <li>- In the event of spills and leaks, polluted soils must be collected and disposed of at an approved site</li> <li>- Limit the possibility to mix mineral waste with topsoil</li> </ul>	
Drilling activities, movement of machinery and vehicles	<b>Heritage</b>	Potential damage to cultural heritage sites	Adverse Direct Partly Reversible Negligible Permanent On-site Possible	High	Major	Moderate (6)	<ul style="list-style-type: none"> <li>- Implement a Chance Find Procedure</li> <li>- Raise awareness about possible heritage finds</li> <li>- Report all finds that could be of heritage importance</li> <li>- In case archaeological remains to be uncovered, cease activities and the site manager has to assess and demarcate the area</li> <li>- Project manager to visit the site and determine whether work can proceed without damage to findings, mark</li> </ul>	Minor (4)

DESCRIPTION OF ACTIVITY	RECEPTOR	DESCRIPTION OF IMPACT	EFFECT/DESCRIPTION OF MAGNITUDE	VALUE OF SENSITIVITY	MAGNITUDE OF CHANGE	SIGNIFICANCE OF IMPACT	IMPACT MANAGEMENT/CONTROL MEASURES	RESIDUAL IMPACT AFTER MITIGATION
							<ul style="list-style-type: none"> <li>- exclusions boundary and inform ECC with GPS position</li> <li>- If needed, further investigation have to be requested for a professional assessment and the necessary protocols of the Chance Find Procedure have to be followed,</li> <li>- Archaeologist will evaluate the significance of the remains and identify appropriate action, (record and remove; relocate or leave premises, depending on the nature and value of the remains),</li> <li>- Inform the police if the remains are human,</li> <li>- Obtain appropriate clearance or approval from the competent authority, if required, and recover and remove the remains to the National Museum or National Forensic Laboratory as directed.</li> </ul>	
Drilling activities, including dust and	<b>Community</b>	Visual disturbance and loss of Sense of	Adverse Direct	High	Moderate	Moderate (6)	- Position drill equipment in such a way that it is out of	Minor (4)

DESCRIPTION OF ACTIVITY	RECEPTOR	DESCRIPTION OF IMPACT	EFFECT/DESCRIPTION OF MAGNITUDE	VALUE OF SENSITIVITY	MAGNITUDE OF CHANGE	SIGNIFICANCE OF IMPACT	IMPACT MANAGEMENT/CONTROL MEASURES	RESIDUAL IMPACT AFTER MITIGATION
emissions		Place	Reversible Negligible Temporary Local Likely				sight from human receptors – Apply dust suppression where possible – Restrict speed of vehicles (<30km/h) – Specific activities that may generate dust and impact on residents shall be avoided during high wind events – All vehicles and machinery / equipment to be shut down or throttled back between periods of use – Barriers or fences shall be used if drilling occurs in locations that may affect residents or livestock – Residents need to be informed at least two weeks in advance that drilling operations are within 1km of their property – Maintain good housekeeping – Continuous engagement with residents to identify any concerns or issues, and appropriate mitigation and management measures agreed upon	

DESCRIPTION OF ACTIVITY	RECEPTOR	DESCRIPTION OF IMPACT	EFFECT/DESCRIPTION OF MAGNITUDE	VALUE OF SENSITIVITY	MAGNITUDE OF CHANGE	SIGNIFICANCE OF IMPACT	IMPACT MANAGEMENT/CONTROL MEASURES	RESIDUAL IMPACT AFTER MITIGATION
Movement of vehicles, exploration activities	<b>Community</b>	Create conflict with farm owners and neighbours about access, leaving gates open, suspicious movements, loss of farming area, etc.	Adverse Indirect Reversible Minor Short term On-site Likely	Low	Minor	Low (2)	<ul style="list-style-type: none"> <li>- Ensure documented permission to enter farms</li> <li>- Farmers should have access to all farm areas at all times</li> <li>- Residents shall be provided at least two weeks' notice of drilling operations within 1 km of their property</li> <li>- Existing water points and feeding area need to be left unaffected</li> <li>- Use existing roads for access, avoid new tracks / cut lines,</li> <li>- Compliance with all applicable laws and agreements</li> <li>- Continuous engagement with residents to identify any concerns or issues, and mitigation and management measures agreed upon</li> </ul>	Low (1)
Movement of vehicles, exploration activities	<b>Community</b>	Presence of exploration team can be blamed for stock theft and poaching	Adverse Cumulative Reversible Minor Temporary Local Unlikely	Low	Minor	Low (1)	<ul style="list-style-type: none"> <li>- Develop and implement an operations manual or procedures to work on private farms and implement monitoring programmes thereafter</li> <li>- Maintain continuous engagement with residents</li> </ul>	Low (1)

DESCRIPTION OF ACTIVITY	RECEPTOR	DESCRIPTION OF IMPACT	EFFECT/DESCRIPTION OF MAGNITUDE	VALUE OF SENSITIVITY	MAGNITUDE OF CHANGE	SIGNIFICANCE OF IMPACT	IMPACT MANAGEMENT/CONTROL MEASURES	RESIDUAL IMPACT AFTER MITIGATION
							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 project manager and recorded in incident register	
Exploration activities	<b>Community</b>	Triggers job creation, skills development and opportunities for the local economy	Beneficial Direct Reversible Minor Short term Local Possible	Low	Minor	Low (2)	– Maximize local employment – As far as possible promote local procurement – Enhance development of local skills where possible	<b>Low beneficial</b>



### 6.2.1 FURTHER CONSIDERATION: NOISE IMPACTS AND VISUAL IMPACTS

Due to the rural nature of the EPL site, particularly in areas that are underdeveloped which do not usually experience any sort of noisy activities, the average noise levels across the EPL is most likely below the South African National Standards (SANS) 10103 for rural districts (45dBA).

Drilling operations have the potential to increase the noise levels, which could affect sensitive receptors and possibly due to lack of knowledge of project or activities taking place this sort of nuisance could affect the lifestyle and daily tasks of residents and livestock and could also cause health issues, such as sleeping problems if conducted at inappropriate times of day.

Due to the rural lifestyle of the residents in the project area and given that the receptors are used to a quiet environment, the potential impact is therefore considered as moderate sensitivity due to a potential increase in noise levels from drilling operations, however, this impact would be temporary and for a short-term. Through the application of the EIA methodology it was concluded that without additional mitigation the significance of effect is expected to be moderate. With additional mitigation, the effects on human receptors from noise impacts would be reduced to minor/low significance (Table 14). No additional studies are considered necessary to further assess this risk of impact.

**TABLE 14 - SUMMARY OF EFFECTS**

Activity	Receptor	Impact	Nature of impact	Value & Sensitivity	Magnitude of change	Significance of impact
<b>Drilling activities</b>	Community and environment	Nuisance Noise Impact due to the operations of heavy machinery	Adverse Direct Reversible Short term Local Likely	Medium	Minor	Minor Adverse
<b>Presence of equipment such as drill rigs and creation of laydown area</b>	Stakeholders	Visual Impact due to placement of drill rigs equipment and the creation of laydown areas on site	Adverse Direct Reversible Short term Local Likely	Low	Moderate	Minor Adverse

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

- Interested and affected parties will be communicated to prior to the commence of the exploration activities
- Reasonable time frames for duty will be place i.e. no drilling when it is dark
- Site notice of project will be available at the site during the course of the proposed project

- Adequate procedures for drilling activities will be encouraged i.e. no hammering of drill rods with steel hammers
- Drill equipment shall be suitably positioned to ensure that noisy equipment is as far away from human receptors as possible
- Noise suppression measures shall be applied by all drilling staff (e.g. ear-muffs are mandatory) and if drilling occurs in locations that may affect residents
- Residents shall be provided at least two weeks' notice of drilling operations within 1km of their property, and
- The proponent shall undertake continual engagement with residents.

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

## 7 ENVIRONMENTAL MANAGEMENT PLAN

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

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

The objectives of the EMP are:

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

## 8 CONCLUSIONS

ECC's EIA methodology was used to undertake the environmental assessment for the proposed project to identify if there is potential for significant effects to occur as a result of the proposed project. Through the scoping process, the only risk to the environment was the potential for visual impacts and noise levels to increase thereby impacting human receptors in the area. All other social and environmental receptors were scoped out as significant effects were unlikely and therefore no further assessment was deemed necessary. Through further analysis and identification of mitigation and management methods, the assessment concludes that the likely significance of effects on humans from noise impacts is expected to be minor and prior awareness and communication about the project shall be encouraged. Various best practice and mitigation measures have been identified to avoid and reduce effects as far as reasonably practical, as well as ensure the environment is protected and unforeseen effect and environmental disturbances are avoided.

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

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## APPENDIX A- EMP

## APPENDIX B - NON-TECHNICAL SUMMARY



ECC-88-270-NTS-1-B

## NON-TECHNICAL SUMMARY

### EXPLORATION ACTIVITIES ON EPLs 7703, 7340, 7303 & 7172

FOR BASE AND RARE METALS, INDUSTRIAL MINERALS, PRECIOUS METALS, SEMI-PRECIOUS STONES

*PREPARED FOR*

VOTORANTIM METALS NAMIBIA (PTY) LTD



FEBRUARY 2020

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PO BOX 91193 Windhoek Namibia  
Environmental Compliance Consultancy CC  
CC/2013/11404



## NON-TECHNICAL SUMMARY

### PROPOSED EXPLORATION ACTIVITIES ON EPLS 7703, 7340, 7303 & 7172 FOR BASE AND RARE METALS, INDUSTRIAL MINERALS, PRECIOUS METALS, SEMI-PRECIOUS STONES OSHIKOTO AND OTJOZONDJUPA REGION

#### 1 PURPOSE OF THIS DOCUMENT

The purpose of this Non-Technical Summary (NTS) is to provide Interested and Affected Parties (I&APs) a background to the proposed project and to invite I&APs to register as part of the Environmental Impact Assessment (EIA) process. The proposed project involves exploration activities on registering, all I&APs will be kept informed throughout EPLs 7703, 7340, 7303 & 7172 for Base and Rare Metals, Industrial Minerals, Precious Metals and Semi-Precious Stones. Through the EIA process, and a platform for participation will be provided to submit comments/recommendations pertaining to the project.

This NTS includes the following information on:

- The proposed project and location
- The necessity of the project, benefits or adverse impacts anticipated
- The alternatives to the project have been considered and assessed
- How the EIA process works
- The public participation process and how to become involved, and
- Next steps and the way forward.

#### 2 DESCRIPTION OF PROPOSED PROJECT

##### 2.1 BRIEF INTRODUCTION

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

##### 2.2 LOCATION

Votorantim Metals proposes to explore in the area, north of Kombat, which is located in the Oshikoto and Otjozondjupa Regions. Refer to the location map provided in Figure 1.

##### 2.3 WHAT IS PROPOSED

Votorantim Metals provides metal and mineral mining services worldwide, a company such as Nexa Resources is an investor within Votorantim's portfolio. Votorantim Metals undertakes mineral exploration in Namibia and propose to undertake low impact exploration activities on EPLs 7703, 7340, 7303 & 7172 for Base and Rare Metals, Industrial Minerals, Precious Metals, Semi-Precious Stones in the Oshikoto and Otjozondjupa Regions.

##### 2.4 OPERATION PHASE

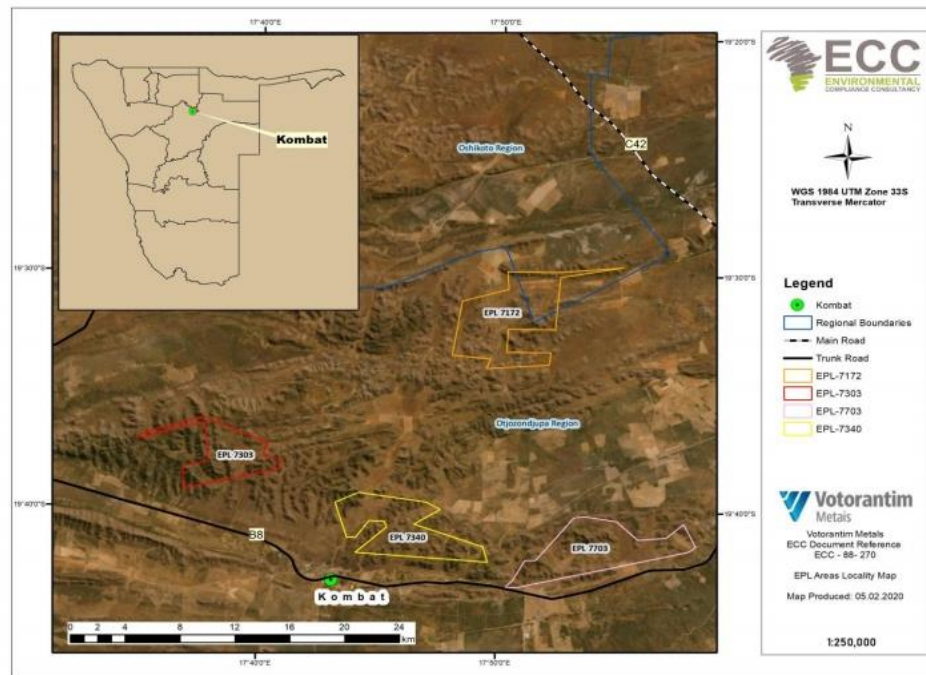
The proposed exploration activities are low-impact and non-intrusive. The following are envisaged during the proposed project:

- Potential creation of access tracks, where existing tracks cannot be utilised
- Limited vegetation clearing for the creation of tracks
- Drilling of exploration boreholes, and
- Exploration methods may include soil and rock sampling, geological mapping, electromagnetic surveys, drilling and drill-core sampling.

##### 2.5 WHY IS THE PROJECT NEEDED

Votorantim Metals intends to pursue exploration opportunities with the aim of identifying new mining prospects. Namibia is rich with natural resources and the minerals sector is a key contributor to the nations GDP in Namibia. Exploration could lead to mining activities, which would contribute to the national and local economy.

FIGURE 1 – LOCATION MAP OF THE PROPOSED PROJECT



## 2.6 POTENTIAL IMPACTS OF THE PROJECT

### 2.6.1 SOCIO-ECONOMIC

The potential social impacts are anticipated to be of low significance, and those that may transpire shall be confined within the EPL site, these potential impacts may include the following:

- Potential to unearth, damage or destroy undiscovered heritage remains
- Minor disruption to the residents of the farms within the EPL, including some increase in noise levels and dust arising from drilling and vehicle use
- Some jobs will be created as a result of the project; and
- There will be economic benefits due to increased investment and investor confidence in the Namibian minerals sector.

### 2.6.2 ENVIRONMENTAL

The potential environmental impacts are anticipated to be of minor significance, and those that may occur shall be contained within the EPL site, these potential impacts may include the following:

- Some potential vegetation loss due to possible tracks creation;
- Potential use of resources, including surface and groundwater; and
- Minor risk of loss of contaminant of hydrocarbon, chemical or drill fluids from exploration activities potentially leading to localised ground contamination.

## 3 CONSIDERATION OF ALTERNATIVES

Best practice environmental assessment methodology calls for consideration and assessment of alternatives to a proposed project.

In a project such as this one, it is difficult to identify alternatives to satisfy the need of the proposed project; the activities shall be specific to the EPL 7703, 7340, 7303 & 7172 which were granted by the MME on the 31<sup>st</sup> of October and 11<sup>th</sup> of November 2019.

During the assessment, alternatives will take the form of a consideration of optimisation and efficiency to reduce potential effects e.g. different types of technology or operations, route access and exploration methods.

## 4 THE ENVIRONMENTAL ASSESSMENT PROCESS

This EIA, conducted by ECC, is undertaken in terms of the Environmental Management Act, 2007 and its regulations.

The process followed in this EIA is set out in the flowchart in

FIGURE 2 below.

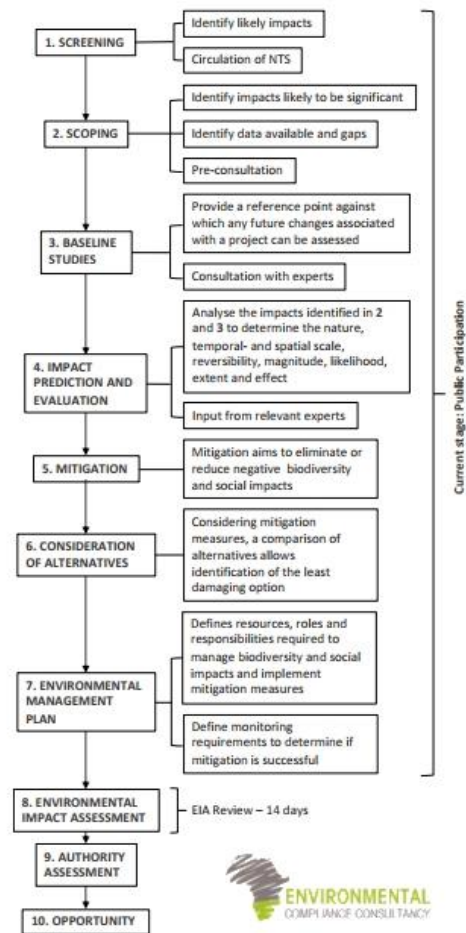


FIGURE 2 - FLOWCHART OF THE ENVIRONMENTAL ASSESSMENT PROCESS

#### 4.1 SCREENING

A review of the proposed project screening findings against the listed activities was conducted; the findings of which are summarised below.

##### MINING AND QUARRYING ACTIVITIES

(3.1) The construction of facilities for any process or activities which requires a licence, right or other form of authorisation, and the renewal of a licence, right or other form of authorisation, in terms of the Minerals (Prospecting and Mining Act), 1992

- The proposed project requires a licence for extraction of metals and industrial minerals

(3.2) Other forms of mining or extraction of any natural resources whether regulated by law or not

- Minerals (soil and sand), metals will be sourced out within the project's footprint/ locally as far as possible

(3.3) Resource extraction, manipulation, conservation and related activities

- The proposed project will extract Base and Rare Metals, Industrial Minerals, Precious Metals, 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, ground and surface water will be abstracted

(8.5) Construction of dams, reservoirs, levees and weirs

- The proposed project is required to drill exploration boreholes within the project footprint

The potential environmental and social effects are anticipated to be of minor significance, and those that may occur shall be contained on the EPLs 7703, 7340, 7303 & 7172 sites.

#### 4.2 SCOPING

Due to the nature of the proposed project, and the implementation of industry best practice mitigation measures during the mineral exploration phase of the project, the effects on the environment and society are expected to be minimal and localised.

#### 4.3 BASELINE STUDIES

For the proposed project, baseline information was obtained through a desk-based study and site verification processes through focusing on the environmental receptors that could be affected by the proposed project. ECC will also engage with stakeholders, I&APs and the proponents to seek input into the assessment.

#### 4.4 IMPACT ASSESSMENT

Impacts will be assessed using the ECC EIA methodology. The EIA will be conducted in terms of the Environmental Management Act, 2007 and its regulations. ECCs methodology for impact assessments was developed using IFC standards in particular Performance Standard 1 'Assessment and management of environmental and social risks and impacts' (International Finance Corporation, 2017), (International Finance Corporation, 2012) and Namibian Draft Procedures and Guidance for EIA and EMP (Republic of Namibia, 2008) including international and national best practice with over 25 years of combined EIA experience.

#### 4.5 ENVIRONMENTAL MANAGEMENT PLAN

An EMP shall be developed for the proposed project setting out auditable management actions for Votorantim Metals Namibia (Pty) Ltd to ensure careful and sustainable management measures are implemented for their activities in respect of the surrounding environment and community.

#### 4.6 PUBLIC PARTICIPATION AND

##### ADVERTISING

Public participation is an important part of the EIA process; it allows the public and other stakeholders to raise concerns or provide valuable local environmental knowledge that can benefit the assessment, in addition it can aid the design process. This project is currently at the scoping phase and public participation phase.

At this phase ECC will perform the following:

- Identify key stakeholders, authorities, municipalities, environmental groups and interested or affected members of the public, hereafter referred to as I&APs

- Distribute the NTS for the proposed project (this document)
- Advertise the environmental application in two national newspapers
- Place notices on-site at or near the boundary
- If required host a public meeting to encourage stakeholder participation and engagement, and provide details of issues identified by the environmental practitioner, stakeholders and I&APs
- Record all comments of I&APs and present such comments, as well as responses provided by ECC, in the comments and responses report, which will be included in the scoping report that shall be submitted with the application, and
- Circulate I&AP comments to the project team for consideration of project design.

Comments must be submitted in writing and can be emailed using the details in the contact us section below.

#### CONTACT US

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

**Environmental Compliance Consultancy (ECC)**

[info@eccenvironmental.com](mailto:info@eccenvironmental.com)

Tel: +264 816 697 608

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

At ECC we make sure all information is easily accessible to the public.

Follow us online to be kept up to date:



APPENDIX C- EVIDENCE OF PUBLIC CONSULTATION

LIST OF REGISTERED ITEMS POSTED

Environmental Compliance Consultancy  
P.O.Box 91193, Klein Windhoek, Namibia

by 081 669 7608

Votorantim 270



Sender's reference no.	Addressee's name and address	Registration no.
1	To: The Petorius Family Trust Farm Harasib and Vitsab P.O.Box 1428, Grootfontein	RR 012168670 NA
2	To: Leon Folscher Petorius Farm Rem of Block P.O.Box 651, Grootfontein	RR 012168666 NA
3	To: Maria Aletha Du Toit Farm Pen 1 (RAMS-Eck) of Farm P.O.Box 93, Kombot	RR 012168652 NA
4	To: GRN Farm Sumas, Sumas West, New Sumas P/Box 13343, Windhoek	RR 012168649 NA
5	To: Bonatavi Farms (Pty) Ltd Farm Gross Otavi P.O.Box 255, Otavi	RR 012168635 NA
6	To: Nain Water Corporation Ltd Farm Ptn 2 of Farm Asis Ost, 2021, 18 P/Box 13389, Windhoek	RR 012168621 NA
7	To: Armin Bernhardus Van Biljon Farm Ptn 2 (Galen of Ptn 4) of Rietfontein P.O.Box 1032, Grootfontein	RR 012168618 NA
8	To: Edward Marthamer Farm Ptn 2, 15, 16, 12 of Rietfontein P.O.Box 69, Kombot	RR 012168604 NA
9	To: Johas Hwoshona Ndilimuke Itadimbi Farm Ptn 3 and Rem of Ptn 10 of Rietfontein P.O.Box 2050, Ordangwa	RR 012168595 NA
10	To: Petrus Johannes Buiser Farm Ptn 17 of Rietfontein P.O.Box 126, Grootfontein	RR 012168581 NA
11	To: Rolf Peter Merne Farm Rem of Ptn of Rietfontein P.O.Box 1015, Grootfontein	RR 012168578 NA
12	To: Tjeripo Zacharias Nyarunguru Farm Ptn 5 and Rem of Ptn 4 of Rietfontein P.O.Box 1116, Windhoek	RR 012168564 NA
13	To: Tsumeb Corporation Limited Farm Ptn 14 of Rietfontein P.O.Box 40, Tsumeb	RR 012168555 NA

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ECC Ref: ECC-88-270-LET-5-A  
25 February 2020

Identified Stakeholder and or Potentially Interested Party for:  
Votorantim Metals Namibia Exploration Activities on EPL 7172, 7303, 7340 & 7703

Dear Sir or Madam:

**RE: NOTIFICATION OF ENVIRONMENTAL ASSESSMENT FOR EXPLORATION ACTIVITIES ON EPL 7172 7303, 7340 & 7703 FOR BASE AND RARE METALS, INDUSTRIAL MINERALS, PRECIOUS METALS IN THE OSHIKOTO AND OTJOZONDJUPA REGION, NAMIBIA.**

Environmental Compliance Consultancy (ECC) has been engaged by Votorantim Metals Namibia (Pty) Ltd (the Proponent) to act on their behalf for the environmental clearance certificate application for the proposed exploration activities for base and rare metals, precious metals, industrial minerals, precious metals on EPL 7172, 7303, 7340 & 7703 in Oshikoto and Otjozondjupa Region, Namibia.

ECC is conducting the Environmental Impact Assessment (EIA) in terms of the Environmental Management Act, 2007.

The proposed project is to conduct mineral exploration activities on EPL 7172, 7303, 7340 & 7703. As part of the proposed low impact, non-intrusive exploration project, 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 or cannot be utilised;
- Limited vegetation clearing for the potential creation of tracks;
- Drilling of exploration boreholes;
- Exploration methods may include soil and rock sampling, electromagnetic surveys, drilling and drill-core sampling; and
- Transport and storage of soil, rock and drill-core (all mineral) samples.

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, the environmental consultants for the project.



You have been identified as either a stakeholder, interested or affected party, therefore ECC wishes to provide you with the details as to how you can become involved in the project.

Public participation is an important part of the EIA process, as it allows 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
- Stakeholders and I&APs who wish to register as an I&APs 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](mailto: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](mailto: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 Non-Technical Summary (NTS) can be obtained from our website (or emailed to you upon request) and provides a brief overview of the proposed project <https://eccenvironmental.com/project/>

Should you require any further clarification, please do not hesitate to contact us.

Yours sincerely,



Stephan Bezuidenhout

**Environmental Compliance Consultancy**

Contact: 081 669 7608

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



Jessica Bezuidenhout (Mooney)

**Environmental Compliance Consultancy**

Contact: 081 669 7608

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

The following was advertised in the Namibian newspaper on the 03<sup>rd</sup> March and 10<sup>th</sup> March 2020,

THE NAMIBIAN

TUESDAY 3 MARCH 2020 **23**

**5610 Notices**  
• Legal •

Take notice that Mr Erastus Nakanyala intends applying to the Council of the Town of Ongwediva for consent to use of the 3305 for self-catering units (BNB). Further take notice that any person objecting to the proposed use of land as set out above may lodge such objections together with the grounds thereof, with the Council and with the applicant in writing within 14 days of the last publication of this notice.

**5610 Notices**  
• Legal •

**Case No: HC-MD-CIV-ACT-CON-2019/01628** In the High Court of Namibia in the matter between: **AGRICULTURAL BANK OF NAMIBIA** Execution Creditor and **ANDREAS JOHANNES HIMARWA** Execution Debtor **NOTICE OF SALE IN EXECUTION OF IMMOVABLE PROPERTY** Pursuant to a Judgment of the above Honourable Court granted on 21 OCTOBER 2019, the following immovable property will be sold without reserve and vestments by the Deputy Sheriff for the District of Windhoek on 12 MARCH 2020 at 15H00 in the morning at Farm Evri No. 244, 170Km South East From Windhoek. Certain farm erven no. 244 Situate Registration Division "K" Khomas Region Measuring 5009,0559 five nil nil nine comma nil five three nine Hectares Consisting Of Residential Facilities 8 Roomed dwelling house; 9 Roomed dwelling house with verandah; 3 Roomed outbuilding (2 store); 2 x 2 Roomed labourers house; 1 x 1 Roomed labourers house; 2 Roomed labourers house; 4 x Store rooms Water Supply 5 x Boreholes; 3 x Engines; 4 Plover Heads; 4 x Windmills; 7 x Reservoirs; 22 x Drinking troughs; 3km Pipeline Fencing Vermin proof and stock proof fence and 36 Grazing camps The "Conditions of Sale-in-Execution" will lie for inspection at the office of the Deputy Sheriff for the district of WINDHOEK and at the Head Office of Plaintiff at WINDHOEK and Plaintiff's Attorneys, Fisher, Quarmby & Pfeifer, at the undermentioned address. Dated at WINDHOEK this 15th day of JANUARY 2020 Fisher, Quarmby & Pfeifer Legal Practitioner For Plaintiff c/o Robert Mugabe & Thore Streets entrance on Burg Street P O Box 37 Windhoek GfMcGmm/238466U

**5610 Notices**  
• Legal •

**Case No: HC-MD-CIV-ACT-CON-2019/00921**Namibia Main Division - Windhoek in the matter between: **BANK WINDHOEK LIMITED** Plaintiff and **MATHEUS FENOMUK-WATHI NAMBAHU** First Defendant **HILMA NAMUPA SHILONGO** Second Defendant **NOTICE OF SALE IN EXECUTION** In execution of a Judgement of the above Honourable Court in the above action, a sale without reserve will be held by the Deputy Sheriff, Windhoek, at Erf 4163 (a Portion of Erf 3148), Schoonen Street, Windhoek West, Windhoek, on 17 March 2020, at 10H30, of the undermentioned property. Certain Erf 4163 (a Portion of Erf 3148), Windhoek West. Situate in the municipality of Windhoek (Registration Division "K") Measuring 1200 Square metres Improvements Four bedroom dwelling with open plan lounge/dining room/kitchen, two bathrooms, carport and one bedroom flat and storeroom Terms 10% of the purchase price and the auctioneers' commission must be paid on the date of the sale. The further terms and conditions of the sale will be read prior to the auction and lie for inspection at the office of the Deputy Sheriff, Windhoek and at the offices of the execution creditor's attorneys. Dated at Windhoek this 22nd day of January

**5610 Notices**  
• Legal •

2020 Dr Weder Kautz & Hovela INC Legal Practitioner for Plaintiff WHK House Jan Jonker Road, Windhoek REF: MAT10913

**5610 Notices**  
• Legal •

**MINISTRY OF TRADE & INDUSTRY LIQUOR ACT 1998 NOTICE OF APPLICATION TO A COMMITTEE IN TERMS OF THE LIQUOR ACT 1998** ( regulations 14, 26 & 33) Notice is given that an application in terms of the Liquor Act, 1998, particulars of which appear below, will be made to the Regional Liquor Licensing Committee, Registration: OMASAT1. Name and postal address of applicant: THOMAS SIEGLA, NDAHEKLEWA. P.O. BOX 1887 ONANJABA 2. Name of business or proposed business to which application relates: ONGHIWO - YEPONGO GROCERY 3. Address / location of premises to which application relates: ONANJABA SETTLEMENT - OKALONGO 4. Nature and details of application: GROCERY LIQUOR LICENCE 5. Clerk of the court with whom application will be lodged: OUTAPI MAGISTRATE COURT 6. Date on which application will be lodged: 16 - 29 February 2020 7. Date of meeting of Committee at which application will be heard: 08 April 2020 Any objection or written submission in terms of section 28 of the Act in relation to the application must be sent or delivered to the Secretary of the Committee to reach the Secretary not less than 21 days before the date of the meeting of the Committee at which the application will be heard.

**6010 Obituaries**  
• Tombstone Unveiling •

**Family and friends you are hereby invited to the tombstone unveiling of our beloved**

**5610 Notices**  
• Legal •

**COMRADE KATRINA "SENDRY" HANSE**  
Memorial Service: Friday, 6 March 2020 Time: 20H00  
Erf 8880 Johannes Tsejama Street, Nama location.  
Saturday, 7 March 2020 - Tombstone Disclosure Service  
08h00, Venue: Pionierspark Cemetery.  
Contact: Mother Mielje 081 211 7406 Sister Enelje 081 389 4186 Shirley Kesser 081 712 9582 2020/1/30

**6020 Obituaries**  
• Death & Funeral Notice •



**6020 Obituaries**  
• Death & Funeral Notice •

**Death and funeral notice.** We hereby announce the passing away of our father, uncle, grandfather and brother

**PETRUS "PETA" TJAMBA ESIKUE**  
\*09-02-1953 - \*21-02-2020  
John 14:27  
Peace I leave with you, my Peace I give to you.  
Memorial Service: Thursday 05 March 2020 Time: 18h30  
Place: Grootfontein Umlungu D-221 Sirendwoll/Eisungu Residence  
Burial Service: 07 March 2020 Time/hour: 08:00 Assemble of God Ojwarongo cemetery  
Enquiries Mrs Hanneke "Susertje" Uses 081 488 8889 Ma Dollan //Gowases 081 706 4572 Max Esingue 081 271 0268 2020/2/17

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**NOTICE OF ENVIRONMENTAL ASSESSMENT & PUBLIC PARTICIPATION PROCESS EXPLORATION ACTIVITIES ON EPLs 7703, 7340, 7303 & 7172 OSHIKOTO AND OTJONZONDJUPA, 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, 2007 will be made as per the following:

**Applicant:** Votorantim Metals Namibia (Pty) Ltd  
**Environmental Assessment Practitioner (EAP):** Environmental Compliance Consultancy Oshikoto and Otjonzondjupa Region, Namibia  
**Location:** Votorantim Metals Namibia (Pty) Ltd Base and Rare Metals, Industrial Minerals, Precious Metals, Semi-Precious Stones in Oshikoto and Otjonzondjupa Region, Namibia.  
**Project:** Exploration activities on EPL 7703, 7340, 7303 & 7172 for Base and Rare Metals, Industrial Minerals, Precious Metals, Semi-Precious Stones in Oshikoto and Otjonzondjupa Region, Namibia.  
**Proposed Activity:** The proponent proposes to carry out low impact, non-intrusive exploration activities for Base and Rare Metals, Industrial Minerals, Precious Metals, Semi-Precious Stones on EPLs 7703, 7340, 7303 & 7172 in the area north of Kombot, Oshikoto and Otjonzondjupa Regions. Exploration methods may include geochemical survey (soil and rock sampling), geophysical survey (electromagnetic surveys), drilling and drill-core sampling.

**Application for Environmental Clearance Certificate:** In terms of the Environmental Management Act, 2007 (No. 7 of 2007), ECC on behalf of Votorantim Metals Namibia (Pty) Ltd is required to apply for environmental clearance to the Competent Authority and the Ministry of Environment and Tourism for the above-mentioned project.

**Purpose of the Review and Comment Period:** The purpose of the review and comment period is to present the proposed project and to afford I&APs an opportunity to comment on the project to ensure that all issues and concerns are captured and considered in the assessment.

**Review Period:** The review and comment period is effective from **03 March 2020 – 23 March 2020**.

**How you can participate:** ECC is undertaking the required environmental assessment and public participation process in terms of the Act. Interested and affected parties (I&APs) and Stakeholders are required to register for the project at: <https://eccenv.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](mailto:info@eccenvironmental.com)  
Website: <http://www.eccenvironmental.com>  
Project ID: ECC-88-270-ADT-2-B

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**NOTICE OF ENVIRONMENTAL ASSESSMENT & PUBLIC PARTICIPATION  
PROCESS EXPLORATION ACTIVITIES ON EPLs 7703, 7340, 7303 & 7172  
OSHIKOTO AND OTJOZONDJUPA, 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, 2007 will be made as per the following:

**Applicant:** Votorantim Metals Namibia (Pty) Ltd  
**Environmental Assessment Practitioner (EAP):** Environmental Compliance Consultancy  
**Location:** Oshikoto and Otjozondjupa Region, Namibia

**Project:** Exploration activities on EPL 7703, 7340, 7303 & 7172 for Base and Rare Metals, Industrial Minerals, Precious Metals, Semi-Precious Stones in Oshikoto and Otjozondjupa Region, Namibia.

**Proposed Activity:** The proponent proposes to carry out low impact, non-intrusive exploration activities for Base and Rare Metals, Industrial Minerals, Precious Metals, Semi-Precious Stones on EPLs 7703, 7340, 7303 & 7172 in the area north of Kombat, Oshikoto and Otjozondjupa Regions. Exploration methods may include geochemical survey (soil and rock sampling), geophysical survey (electromagnetic surveys), drilling and drill-core sampling.

**Application for Environmental Clearance Certificate:** In terms of the Environmental Management Act, 2007 (No. 7 of 2007), ECC on behalf of Votorantim Metals Namibia (Pty) Ltd is required to apply for environmental clearance to the Competent Authority and the Ministry of Environment and Tourism for the above-mentioned project.

**Purpose of the Review and Comment Period:** The purpose of the review and comment period is to present the proposed project and to afford I&APs an opportunity to comment on the project to ensure that all issues and concerns are captured and considered in the assessment.

**Review Period:** The review and comment period is effective from **03 March 2020 – 23 March 2020**.

**How you can participate:** ECC is undertaking the required environmental assessment and public participation process in terms of the Act. Interested and affected parties (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 Beaudenhoust or Mrs J Mooney  
PO Box 91193, Klein Windhoek  
Tel: +264 81 669 7608  
E-mail: [info@eccenvironmental.com](mailto:info@eccenvironmental.com)  
Website: <http://www.eccenvironmental.com>  
Project ID: ECC-88-270-ADT-2-B



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The following was advertised in the Informante on the 02<sup>nd</sup> March and 10<sup>th</sup> March 2020, (online newspaper).



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**NOTICE OF ENVIRONMENTAL ASSESSMENT & PUBLIC PARTICIPATION PROCESS**  
EXPLORATION ACTIVITIES ON EPLs 7703, 7340, 7303 & 7172  
OSHIKOTO AND OTJOZONDJUPA, 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, 2007 will be made as per the following:

**Applicant:** Votorantim Metals Namibia (Pty) Ltd  
**Environmental Assessment Practitioner (EAP):** Environmental Compliance Consultancy  
**Location:** Oshikoto and Otjozondjupa Region, Namibia

**Project:** Exploration activities on EPL 7703, 7340, 7303 & 7172 for Base and Rare Metals, Industrial Minerals, Precious Metals, Semi-Precious Stones in Oshikoto and Otjozondjupa Region, Namibia.

**Proposed Activity:** The proponent proposes to carry out low impact, non-intrusive exploration activities for Base and Rare Metals, Industrial Minerals, Precious Metals, Semi-Precious Stones on EPLs 7703, 7340, 7303 & 7172 in the area north of Kombat, Oshikoto and Otjozondjupa Regions. Exploration methods may include geochemical survey (soil and rock sampling), geophysical survey (electromagnetic surveys), drilling and drill-core sampling.

**Application for Environmental Clearance Certificate:** In terms of the Environmental Management Act, 2007 (No. 7 of 2007), ECC on behalf of Votorantim Metals Namibia (Pty) Ltd is required to apply for environmental clearance to the Competent Authority and the Ministry of Environment and Tourism for the above-mentioned project.

**Purpose of the Review and Comment Period:** The purpose of the review and comment period is to present the proposed project and to afford I&APs an opportunity to comment on the project to ensure that all issues and concerns are captured and considered in the assessment.

**Review Period:** The review and comment period is effective from **03 March 2020 – 23 March 2020**.

**How you can participate:** ECC is undertaking the required environmental assessment and public participation process in terms of the Act. Interested and affected parties (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  
Tel: +264 81 669 7608  
E-mail: [info@eccenvironmental.com](mailto:info@eccenvironmental.com)  
Website: <http://www.eccenvironmental.com>  
Project ID: ECC-88-270-ADT-2-B



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**NOTICE OF ENVIRONMENTAL ASSESSMENT AND  
PUBLIC PARTICIPATION PROCESS  
EXPLORATION ACTIVITIES ON EPL EPLs 7703, 7340, 7303 & 7172  
OSHIKOTO AND OTJOZONDJUPA, NAMIBIA**

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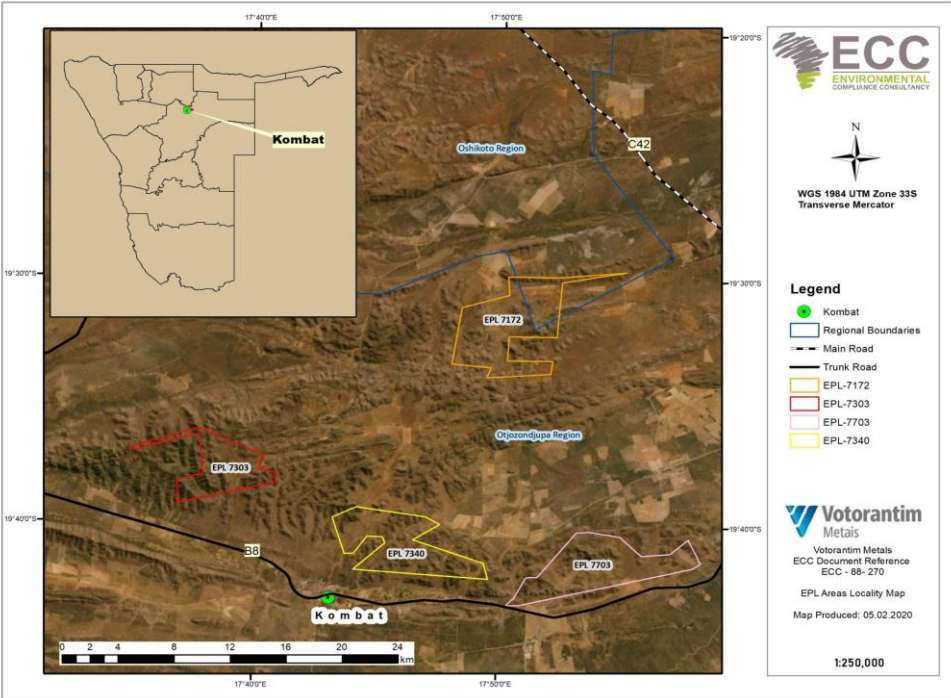
**Environmental Compliance Consultancy cc (ECC) hereby gives notice to the public that an application for an Environmental Clearance Certificate in accordance with the Environmental Management Act, 2007 will be made as per the following:**

**Applicant:** Votorantim Metals Namibia (Pty) Ltd  
**Environmental Assessment Practitioner (EAP):** Environmental Compliance Consultancy

**Project:** Exploration activities on EPLs 7703, 7340, 7303 & 7172 for Base and Rare Metals, Industrial Minerals, Precious Metals, Semi-Precious Stones in Oshikoto and Otjozondjupa Region, Namibia.


**Proposed Activity:** The proponent proposes to carry out low impact, non-intrusive exploration activities for Base and Rare Metals, Industrial Minerals, Precious Metals on EPLs 7703, 7340, 7303 & 7172 located in the area north of Kombat, Oshikoto and Otjozondjupa Region, Namibia. Exploration methods may include geochemical surveys (soil and rock sampling), geophysical surveys (electromagnetic surveys), drilling and drill-core sampling.

**Location:** Oshikoto and Otjozondjupa Region, Namibia.



**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 and Tourism for the above-mentioned project.

**Purpose of the Review and Comment Period:** As part of the public participation process, the purpose of the review and comment period is to present the proposed project and to afford interested and affected parties (I&AP) an opportunity to comment on the project to ensure that all issues and concerns are captured and considered in the assessment.



Contact: Mr JS Bezuidenhout or Mrs J Mooney  
Environmental Compliance Consultancy  
Registration Number CC/2013/11404  
PO Box 91193, Klein Windhoek  
Tel: +264 81 669 7608  
E-mail: [info@eccenvironmental.com](mailto:info@eccenvironmental.com)  
Website: <http://www.eccenvironmental.com>  
Project ID: ECC-88-270

## APPENDIX E - ECC CVS