UPDATED ENVIRONMENTAL MANAGEMENT PLAN FOR THE RENEWAL OF AN ENVIRONMENTAL CLEARANCE CERTIFICATE FOR MINING LICENSE NO. 162, KAMZWAS FARM NO. 253, WINDHOEK DISTRICT, KHOMAS REGION

MEFT PROJECT NO.: 250911006398

VOLUME 3

PREPARED FOR

EVERTURE STRATEGIC CONSULTING NAMIBIA (PTY)

EcoWise Environmental Consulting

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ENVIRONMENTAL AUTHORIZATION INFORMATION

Please note that the environmental clearance certificate should be issued out to the client. All comments and enquiries during the evaluation of this document must be addressed to the Environmental Consultant. Please forward the clearance certificate to the consultant.

ACKNOWLEDGMENT

The old EMP for Mining License No. 162 was developed by Risk-Based Solutions (RBS) CC. Eco-Wise Environmental Consulting cc hereby acknowledge the work done by Risk-Based Solutions (RBS) CC.

EXECUTIVE SUMMARY

Everture Strategic Consulting Namibia (PTY) LTD being the Proponent and mineral rights holder of Mining Licence (ML) No. 162, is proposing to renew the Environmental Clearance Certificate (ECC) for the Mining Licence. The ML No. 162 is situated on Farm Kamzwas No. 253 which is approximately 50 km south of Windhoek on B1 road to Rehoboth, Windhoek District, Khomas Region.

The ML No. 162 was issued in 2011 and it expired in 2021 and it was renewed to 2036. The ML covers base and rare metals, precious metals and semi-precious stones minerals groups, with copper being the main principal commodity. Currently there are no activities happening at the ML, as activities seized in May 2022. Past activities which were done focused on small-scale exploration; test mining and small-scale mining which was undertaken by six (6) workers. The ML No. 162 covers an area of 108 Ha and consists of four (4) inflection points on the boundary.

The Proponent made an application for the Environmental Clearance Certificate (ECC) and it was issued in 2021/08/23 and it expired in 2024/08/23. Hence the need for the renewal of the ECC. Everture Strategic Consulting Namibia (PTY) LTD therefore appointed Eco-Wise Environmental Consulting cc (Consultant) to make an application for the renewal of the ML No. 162. It is essential to note that, a site visit was conducted by the consultant on 19 August 2025. During the site visit, the representative of the Proponent showed the consultant around the site and no activity was on the site. Only disused infrastructure was seen on certain portions of the ML. Around the areas the consultant visited, no disturbance of the environment was observed. The consultant could not however, drive to the end of the ML as the bridge which connects was washed away during the rainy season. Basing on the observations, the consultant observed that there were no significant impacts at the site.

This EMP is an update of the previous EMP (Vol. 2 of 2) which was drafted by Risk-Based Solutions cc. It shall be the responsibility of the Proponent to oversee that this EMP is implemented and the contractors and subcontractors also abide to it. The Proponent must incorporate the EMP in the Environmental Management System (EMS) of the company in line with the Environmental Policy of the company. The EMP covers the following development stages;

(i) Preconstruction;

(ii) Construction;

(iii) Operational;

(iv) Decommissioning, Closure and Aftercare stages.

It is hereby recommended that, the proponent take all the necessary steps to implement all the recommendations of this EMP for the successful execution of the preconstruction, construction, operational, decommissioning, closure and aftercare activities of the mining operations in the ML No. 162.

Table of Contents

DOCUMENT INFORMATION iii
CONSULTANT CONTACT DETAILS iii
ENVIRONMENTAL AUTHORIZATION INFORMATION iv
ACKNOWLEDGMENT iv
AMENDED PAGES/CHANGES TO THE TABLES x
1. BACKGROUND 1
1.1 Introduction 1
1.2 Current and Past activities on site 2
1.3 Project Location 2
1.4 POLICY, LEGAL AND ADMINISTRATIVE FRAMEWORK 4
2. OBJECTIVES OF THE EMP 10
2.1 Summary Objectives 10
3. PRECONSTRUCTION EMP 11
3.1 Introduction 11
3.2 Roles and Responsibilities 11
3.2.1 Employer's Representative (ER) / Project Manager 11
3.2.2 Environmental Control Officer (ECO) 12
3.2.3 Contractors and Subcontractors 13
4. CONSTRUCTION STAGE 23
4.1 Introduction 23
4.2 Roles and Responsibilities 24
4.2.1 Employer's Representative (ER) 24
4.2.2 Environmental Control Officer (ECO) 25
4.2.3 Contractors and Subcontractors 25
4.3 Construction Supporting Teams 26
5. OPERATIONAL STAGE 40
5.1 Introduction 40
5.2 Roles and Responsibilities 40
5.3 Other Supporting Teams 41
6. CLOSURE AND AFTERCARE STAGES 50

6.1 Introduction 50
6.2 Roles and Responsibilities 51
6.2.1 Employer's Representative (ER) 51
6.2.2 Environmental Control Officer (ECO) 52
6.2.3 Contractors and Subcontractors 52
6.3 Closure and Aftercare Stages Supporting Teams 53
7. ENVIRONMENTAL PERFORMANCE MONITORING 57
7.1 Overview 57
8. ENVIRONMENTAL AWARENESS 62
8.1 Company / Proponent Environmental Policy 62
8.2 Environmental Awareness Guidance 63
8.3 Environmental Awareness Training Materials 63
8.3.1 Natural Environmental Management Guidance 63
8.3.2 Vehicle Use and Access Guidance 64
8.3.3 Control of Dust Guidance 64
8.3.4 Health and Safety Guidance 64
8.3.5 Preventing Pollution and Dangerous Working Conditions Guidance 65
8.3.6 Saving Water Guidance 65
8.3.7 Disposal of Waste Guidance 66
8.3.8 Religious, Cultural, Historical and Archaeological Objects Guidance 66
8.3.9 Dealing with Environmental Complaints Guidance 66
8.4 Environmental Personnel Register 66
9. CONCLUSION AND RECOMMENDATIONS 68
9.1 Summary of Conclusions 68
9.2 Recommendations 68
bibliography 70

LIST OF FIGURES

Figure 1.1: Locality Map 3

LIST OF TABLES

Table 1.1: RELEVANT LEGISLATION AND POLICIES RELATED TO THE PROJECT 5
Table 2.1: Preconstruction EMP 14
Table 4.1: Summary of the construction activities covering mine infrastructures and mine workings.....23
Table 4.2: Environmental Management Plan for construction activities covering mine infrastructures and mine workings.....27
Table 5.1: Environmental Management Plan for the Operations Stage.....42
Table 6.1: Environmental Management Plan for the mine ongoing and final closure and aftercare stages.....55
Table 6.2: Mine components to be addressed in the ongoing and final mine Closure Plan.....56
Table 7.1: Monitoring of environmental performance implementation / environmental awareness training.....58
Table 7.2: Monitoring of environmental performance for the temporal and permanent structures.....58
Table 7.3: Environmental data collection.....59
Table 7.4: Health, Safety and Environment (HSE).....59
Table 7.5: Recruitment of labour.....59
Table 7.6: Management of the natural habitat and surficial materials management.....60
Table 7.7: Tracks and off-road driving.....60
Table 7.8: Management of surface and groundwater.....60
Table 7.9: Public relations.....61

AMENDED PAGES/CHANGES TO THE TABLES

No.	Page Number	Section	Implemented Change
		Cover page	**Added new cover page**
1	Page iii	Document information	Added section
2	Page iv	Environmental Authorization Information	Added section
3	Page iv	Acknowledgment	Added section
4	Page v	Executive summary	Edited section
	Page 1	Introduction	
5	Page 2	1.2 Current and Past activities on site	Current and past activities were added
6	Page 4	Locality map	Added a Map
7	Page 4	1.4 POLICY, LEGAL AND ADMINISTRATIVE FRAMEWORK	Added a table of relevant legislation and policies related to the project
8	Page 10	2.1 Summary Objectives	Added information
9	Page 70	Bibliography	Added section
10		Attachments	Appendix A

1. BACKGROUND

1.1 Introduction

Everture Strategic Consulting Namibia (PTY) LTD being the Proponent hold mineral rights under the Mining Licence (ML) No. 162. The main commodity within the ML is copper with copper concentrate as the main final product that will be exported / sold to the smelter. The ML No. 162 covers the following mineral commodity groups: (i) Base and rare metals (Copper); (ii) Precious metals, and; (iii) Semi-precious stones. Ministry of Mines and Energy issued the ML No. 162 in 2011, then it expired in 2021 and it was renewed to 2036. Ministry of Environment Forestry and Tourism (MEFT) granted the Proponent an ECC in 2021/08/23 and expired 2024/08/23, see attached old ECC in **Appendix A**. The Proponent is therefore proposing to renew the Environmental Clearance Certificate (ECC) for ML NO. 162 which is located on Farm Kamzwas No. 253, Windhoek District, Khomas Region.

Everture Strategic Consulting Namibia (PTY) LTD therefore appointed Eco-Wise Environmental Consulting cc as an independent environmental consultancy to undertake the application for the renewal of the ML No. 162. Eco-Wise Environmental Consulting cc conducted a site visit on 19 August 2025. The consultant was mainly guided by the Environmental Management Act (No. 7 of 2007), Environmental Impact Assessment Regulations (2012) and the previous EMP for the ML.

This Environmental Management Plan (EMP) has been developed to manage possible impacts associated with the mining-related activities on the ML. The EMP has been developed in terms of the Environmental Management Act No 7 of 2007, EIA regulations of 2012 and other relevant legislations binding to Namibia. According to the Environmental Management Act of 2007 and its regulations of 2012, mining is an activity which cannot be undertaken without an ECC. The project therefore falls under annexure 3; mining and quarrying activities.

This EMP is a legally binding document as given under the provisions of the Environmental Management Act of 2007. The Proponent and its contractors must therefore adhere to the framework of this document.

1.2 Current and Past activities on site

Currently there are no actives being undertaken at the site. Mining related activities stopped in May 2022 due to lack of funding, see Appendix A; letter written by the Proponent. However, activities which have been conducted in the past at the site include; exploration, test mining, and small-scale mining operations under the MCs Nos. 67323 – 67328 which was undertaken by six workers, feasibility study activities under the ML minerals rights tenement covering exploration, test mining and small-scale mining. It is essential to note that, the actual full-scale mining has not yet been executed.

1.3 Project Location

ML No. 162 is situated in the Windhoek District, Khomas Region, Namibia (Fig. 1.1). The ML No. 162 is 50 km away from Windhoek and its 7 km off the main B1 Road linking Windhoek to Rehoboth. The ML No. 162 is near the previous explored copper deposit linked to the Oamites Old Copper situated immediately to the east of the ML and currently being used as a military base. The deposit lies on the farm Kamzwas No. 253. The license covers an area of 108 hectors. The outcrop is 168 m above floor level, 1600 m in length and 42 m wide. The coordinates of the ML are; 22.98303S; 17.05547E.

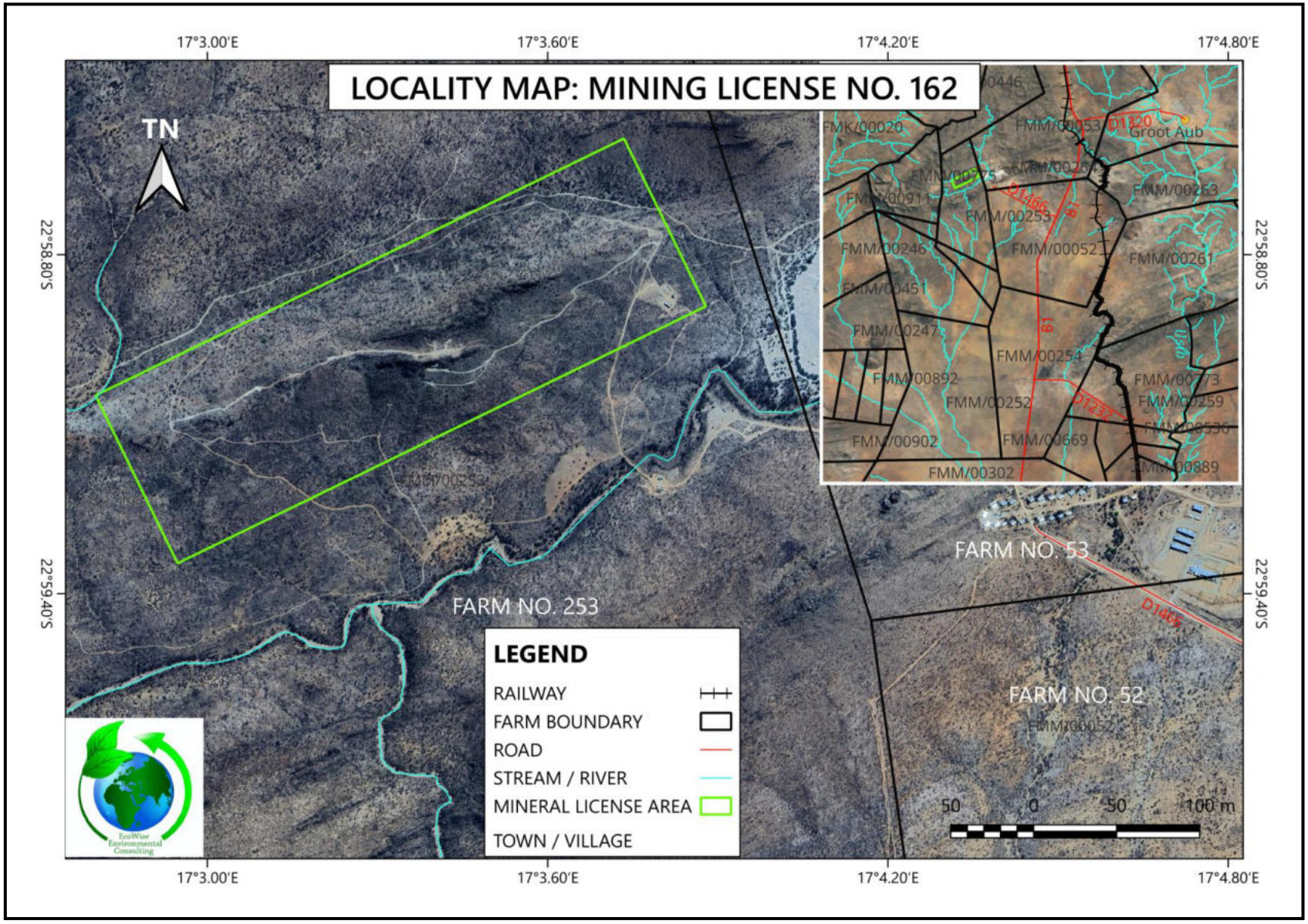

Figure 1.1: Locality Map

1.4 POLICY, LEGAL AND ADMINISTRATIVE FRAMEWORK

The Proponent will be required to abide to legislations relating to the project. All mineral rights, related to mineral mining activities in Namibia, are regulated by the Ministry of Mines and Energy whereas the environmental regulations are regulated by the Ministry of Environment Forestry and Tourism and water related issues by Ministry of Agriculture Water and Land Reform. Table 1.1 below, indicate the relevant legislations related to the project.

Table 1.1: RELEVANT LEGISLATION AND POLICIES RELATED TO THE PROJECT

Aspect	Pertinent Policy / Legislation	Requirements	Implications
General	Constitution of Namibia (1990)	The State is to actively promote and maintain the welfare of the people by adopting policies aimed at maintaining ecosystems, essential ecological processes, the biological diversity of Namibia and the sustainable utilisation of natural resources, for the benefit of all Namibians, both present and future.	Throughout the phases of the project, the Proponent should aspire to meet the aims of the Constitution.
		South African legislation in place at the time of independence is applicable until replaced by new legislation.	Cognisance to be given to relevant South African legislation.
Environment	Environmental Management Act (2007) Environmental Impact Assessment (2012)	States that, projects with significant environmental impacts are subject to an environmental assessment process (Section 27). EIA Regulation list all activities, which cannot be undertaken without an ECC and mining and quarrying activities is included in section 3 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. 3.3 Other forms of mining or extraction of any natural resources whether regulated by law or not. 3.3 Resource extraction, manipulation, conservation and related activities.	The ECC should be renewed every 3 years and biannual monitoring reports should be submitted to MEFT as this will facilitate the renewal of the ECC. When there are any amendments, an application should be made to MEFT
Classification & Management of Hazardous Substances	Hazardous Substances Ordinance (No. 14 of 1974)	Any substance or mixture of substances which, in the course of customary or reasonable handling or use, including ingestion, by reason of its toxic, corrosive, irritant, strongly sensitising or flammable nature or because it generates pressure through decomposition, heat or other means, cause injury, ill health or death	During the operation phase, hazardous substances at the plant are to be identified.

		to human beings, to be a Group I or Group II hazardous substance.	
Protection of Surface and Groundwater Environs	Water Act (No. 54 of 1956)	Act makes provision for Water Control Areas. These are areas where the abstraction of naturally occurring groundwater resources may result in the undue depletion of its underground water resources.	
		No person may use public (borehole) water for industrial purposes without the authority's permission	A permit is required to abstract water from boreholes
		Pollution of public or private water in such a way that it renders less fit for the purposes that it was originally used is an offence.	Measures to be implemented to prevent groundwater pollution. Discharge permit required for sewage effluent
		The Minister may take the necessary action to prevent the pollution of public and private water which results from the seepage or drainage from an area on which mining operations have been undertaken, after the operations have been abandoned. The costs will be recovered from the person responsible.	Rehabilitation is to ensure that future pollution is prevented.
Dewatering	Water Resources Management Act (2004)	The act makes provisions for prohibition to abstract or use water without license 33. (1) A person who wishes to abstract and use water may apply to the Minister for a license to abstract and use water in the prescribed manner and form	To seek consent through applying to the Minister (MAWLR) for a license to abstract and use water
		Review, amendment, suspension and cancellation of license to abstract and use water 41 (2) Subject to subsection (3), the Minister may suspend or cancel a license to abstract and use water, in whole or in part, if the	Adhere to the license terms and conditions to avoid suspension or cancellation of license

		licensee (a) fails to abide by any of the terms or conditions of the license; (b) fails to commence the abstraction of water within the period specified in the terms and conditions of such license; or (c) Having commenced with the abstraction of water, ceases the abstraction for a continuous period of three years.	
		Wastage of groundwater 50. A person may not cause or allow any groundwater to run to waste from any borehole, except a. If such water interferes or threatens to interfere with the execution of any underground mining operations or any other underground works, and no other method of disposing of such water is reasonably practicable.	Provides permission to be disposed of if it threatens to interfere with the execution of any mining operations.
		Aquifers 51. (1) The Minister has power (a) to determine the safe yield of any aquifer for the purpose of guiding determinations concerning the abstraction and use of water from the aquifer; (b) to require that an aquifer be used on a sustainable basis, including restricting abstractions so that they do not, individually or collectively, exceed the safe yield of the aquifer; (c) to impose special requirements and restrictions with respect to artesian wells, for the purpose of preventing wastage or contamination of water, or loss of artesian pressure; and (d) to carry out programmes for the recharge of aquifers.	Restricts unregulated and unsustainable abstraction of water from aquifers.

		(2) For the purposes of this section, "safe yield" means the amount of water which may be abstracted from an aquifer at a rate that will not reduce the supply to such an extent as would render such abstraction harmful to the aquifer, quality of the water or environment.	
Protection of Human Health	Public Health Act (No. 36 of 1919) Public Health and Environmental Act, 2015	No person may allow the existence of a nuisance or other condition liable to be injurious or dangerous to health, on any land owned or occupied by them.	Waste from construction and operations will be removed and disposed on the municipal waste dump
Protection of Air Quality	Atmospheric Pollution Prevention Ordinance (No. 11 of 1976)	No person may carry out a scheduled process, erect and/or alter buildings without a certificate authorizing them. This is issued by the Ministry of Health & Social Services.	The Ministry is to be consulted
Protection of Soils	Soil Conservation Act (No. 76 of 1969)	Measures are to be implemented to prevent erosion, denudation and disturbance of land.	Management measures are to be put in place to protect soils on site and surrounds.
Protection of Fauna & Flora	Nature Conservation Ordinance (No. 4 of 1975)	Lists species of Conservation Importance. You are not permitted to pick or remove any protected plant, unless you are the landowner.	Should any species of conservation importance occur within the operational complex, these are to be identified and protected where practicable.
	Policy for the Conservation of Biotic Diversity and Habitat Protection	It must be recognized that protection of biological diversity, ecosystems and important landscapes is of national and international importance. All developments are to be sustainable and must be evaluated at an appropriate level by means of an EA.	Due cognizance is to be given to the protection of biodiversity and landscapes.
Mining	Minerals (Prospecting and Mining) Act, 1992	Section 2: All rights to minerals vests in the State	MME will also be a relevant authority to the project hence applications related to

	(Act 33 1 of 1992)	Section 48 (3): In order to enable the Minister to consider any application referred to in section 47 the Minister may (b) require the person concerned by notice in writing to (i) carry out or cause to be carried out such environmental impact studies as may be specified in the notice	ECC amendments and renewals will be subsequently submitted also to MME.
Labor	Labour Act (No 11 of 2007)	This act emphasizes and regulates basic terms and conditions of employment, it guarantees prospective health, safety and welfare of employees and protects employees from unfair labour practices.	The proponent will be obliged to create a safe working environment for the employees.

2. OBJECTIVES OF THE EMP

2.1 Summary Objectives

The aim of the EMP is to assist Everture Strategic Consulting Namibia (PTY) LTD, Contractors and Subcontractor to ensure that the day-to-day operations are carried out in an environmentally responsible manner, thereby preventing or minimizing the negative effects and maximizing the positive effects of the project-related activities on the natural environment. The EMP aims to take a pro-active route by addressing potential problems before they occur. The EMP also provides the management actions with roles and responsibilities requirements for the successful implementation of environmental management strategies by the Proponent. It is important to note that an EMP is a living document in that it will be updated and amended as new information (e.g., environmental data), policies, authority guidelines and technologies develop. The objectives of the EMP are therefore;

- To outline mitigation measures in order to manage environmental and socio-economic impacts associated with the mining activities throughout all the phases of the project.
- Provide a framework for implementing the management actions recommended in the EIA
- To ensure that the project will comply with relevant legislations of Namibia and other requirements throughout its activities.

The EMP also identifies management actions that need to be implemented in various phases of the mining project life cycle and the phases include;

(i) Preconstruction;

(ii) Construction;

(iii) Operational;

(iv) Decommissioning, Closure and Aftercare stages.

3. PRECONSTRUCTION EMP

3.1 Introduction

This section contains the Environmental Management Plan (EMP) for the preconstruction activities. The main activities of the preconstruction stage will be bush clearing, upgrading and/or construction, including rehabilitation, of access road(s) to and from the proposed mine development areas as well as other mine supporting infrastructures. Table 3.1 outlines the EMP framework for the preconstruction activities of the proposed development summarised as follows:

(i) General site clearing of the pit area, administration block, waste rock, tailings, supporting infrastructure (water and electricity etc.);

(ii) Access roads clearing;

(iii) Top soil removal and storage;

(iv) Development of the temporary construction camp;

(v) Installation of campsites, offices, workshops, storage facilities.

3.2 Roles and Responsibilities

3.2.1 Employer's Representative (ER) / Project Manager

Everture Strategic Consulting Namibia (PTY) LTD is to appoint an **Employer's Representative (ER)** with the following responsibilities:

- Act as the Employer's (Everture Strategic Consulting Namibia (PTY) LTD) on-site project manager and implementing agent;
- Appoint the Environmental Control Officer (ECO);
- Ensure that the Employer's responsibilities are executed in compliance with the relevant legislation and the EMP for the preconstruction stage);
- Ensure that all the necessary environmental authorizations and permits have been obtained;

- Assist the Contractor in finding environmentally responsible solutions to challenges that may arise (with input from the ECO);

- Should the ER be of the opinion that a serious threat to, or impact on the environment may be caused by the construction operations, he/she may stop work; the Employer must be informed of the reasons for the stoppage as soon as possible;

- The ER has the authority to issue fines for transgressions of basic conduct rules and/or contravention of the EMP;
- Should the Contractor or his/her employees fail to show adequate consideration for the environmental aspects related to the EMP, the ER can have person(s) and/or equipment removed from the site or work suspended until the matter is remedied;

- Report to the Employer on the implementation of this EMP on site (with input from the ECO and/or independent environmental auditor);

- Maintain open and direct lines of communication between the Employer, ECO, Contractor and Interested and Affected Parties (I&APs) with regards to environmental matters; and

- Attend regular site meetings and inspections.

3.2.2 Environmental Control Officer (ECO)

The **Environmental Control Officer (ECO)** has the following responsibilities:

- Assist the ER in ensuring that the necessary environmental authorizations and permits have been obtained;
- Assist the ER and Contractor in finding environmentally responsible solutions to challenges that may arise;
- Conduct environmental monitoring as per EMP requirements;
- Recommend on the issuing of fines for transgressions of basic conduct rules and/or contraventions of the EMP to the ER;
- Advise the ER on the removal of person(s) and/or equipment not complying with the specifications of the EMP;
- Carry out regular site inspections (on average once per week) of all construction areas with regards to compliance with the EMP; report any non-compliance(s) to the ER as soon as possible;
- Organize for an independent internal audit on the implementation of and compliance to the EMP to be carried out half way through the construction period; audit reports to be submitted to the ER;

- Organize for an independent post-construction environmental audit to be carried out;
- Continuously review the EMP and recommend additions and/or changes to the EMP document;
- Monitor the Contractor's environmental awareness training for all new personnel coming onto the site;
- Keep records of all activities related to environmental control and monitoring; the latter to include a photographic record of the preconstruction and environmental control and rehabilitation process, and a register of all major incidents; and
- Attend regular site meetings.

3.2.3 Contractors and Subcontractors

The responsibilities of the **Contractors and Subcontractors** include:

- Comply with the relevant legislation and the EMP for the preconstruction activities;
- Preparation and submission to Everture Strategic Consulting Namibia (PTY) LTD of the following Management Plans:
    - o Environmental Awareness Training and Inductions;
    - o Emergency Preparedness and Response
    - o Waste Management; and;
    - o Health and Safety.
- Ensure adequate environmental awareness training for senior site personnel;
- Environmental awareness presentations (inductions) to be given to all site personnel prior to work commencement; the ECO is to provide the course content and the following topics, at least but not limited to, should be covered:
    - o The importance of complying with the relevant Namibian, International and Best Practice Legislation;
    - o Roles and Responsibilities, including emergency preparedness;
    - o Basic Rules of Conduct (Do's and Don'ts);
    - o EMP: aspects, impacts and mitigation;
    - o Fines for Failure to Adhere to the EMP;
    - o Health and Safety Requirements.
- Record keeping of all environmental awareness training and induction presentations; and
- Attend regular site meetings and environmental inspections.

Table 3.1: Preconstruction EMP

ASPECT	IMPACT	MANAGEMENT ACTIONS	RESPONSIBLE PERSON(S)	TARGET DATE
1) Management and Monitoring	Social and Environmental Performance	• Ensure that all aspects related to the EMP are implemented during the upgrade/construction and rehabilitation of access road(s). • Hold regular site meetings/inspections. Make provision in the minutes of the meetings for reporting on all aspects of the EMP related to the upgrade/construction and rehabilitation of the access road(s); • Adhere to the regulations, rules, procedures, current and future land use of the surrounding area.	ER / ECO / Contractor	• Ongoing
2) Consultation and Disclosure	Social and Environmental Performance	• Maintain open and direct lines of communication between the Employer, ECO, Contractor and I&APs with regards to environmental matters. • Consult with project affected communities in a structured and culturally appropriate manner throughout the project process. • Consultation should be "free" (*of external manipulation, interference or coercion, and intimidation*), "prior" (*timely disclosure of information*) and "informed" (*relevant, understandable and accessible information*). • Adequately incorporate project affected communities' concerns.	• ER • Everture Strategic Consulting Namibia (PTY) LTD / ER	• Ongoing • Ongoing
3) Grievance Mechanism	Social and Environmental Performance	• Implement a grievance mechanism for receiving and resolving any concerns and grievances related to the project's social and environmental performance throughout the project life cycle. • Inform the affected communities about the mechanism in the course of the community engagement process; it must be readily accessible to all segments of the affected communities. • Address concerns promptly and transparently and in a culturally appropriate manner.	• Everture Strategic Consulting Namibia (PTY) LTD / ER	• Ongoing
4) Training including awareness and inductions	Social and Environmental Performance	• Train employees, contractors and Subcontractors in matters related to the project's social and environmental performance, Namibia's regulatory requirements • Ensure adequate environmental awareness training for all senior site personnel. • Give environmental induction presentations to all site personnel prior to work commencement.	• Everture Strategic Consulting Namibia (PTY) LTD • Contractor	• Ongoing • Pre- and during road upgrade/construction and rehabilitation

Table 3.1: *Cont.*

ASPECT	IMPACT	MANAGEMENT ACTIONS	RESPONSIBLE PERSON(S)	TARGET DATE
5) Labour and Working Conditions	Social and Environmental Performance	• Establish, maintain and improve the worker-management relationship. Base the employment relationship on equal opportunity and fair treatment and no discrimination to be allowed • Comply with Namibia's labour and employment laws and prevent unacceptable forms of labour, i.e. harmful child and forced labour. • Promote safe and healthy working conditions and the protection and promotion of worker health. • Prepare a Human Resources Policy and document and communicate the Working Conditions and Terms of Employment. • Respect Collective Agreements and the right of workers to organize and bargain collectively. • Prepare a Retrenchment Plan. • Implement a Grievance Mechanism.	Everture Strategic Consulting Namibia (PTY) LTD	• Ongoing
6) Occupational and Safety Health	Social and Environmental Performance	• Prepare and submit an Emergency Preparedness and Response Plan. • Adhere to all Namibian Health and Safety Regulations under the Labour Act and Mines Safety Regulations. • Occupational Health and Safety Training to be provided to all employees. • Ensure that qualified first aid can be provided at all times. • Provide and ensure the active use of Personal Protective Equipment (PPE).	Contractor	• Pre-road upgrade/construction • Ongoing
7) Community Health and Safety	Social and Environmental Performance	• Prevent communicable disease (e.g sexually transmitted diseases (STDs) such as HIV/AIDS transmission): provide awareness, surveillance and active screening and treatment of employees; prevent illness among employees in local communities (through health awareness and education initiatives); ensure ready access to medical treatment, confidentiality and appropriate care	Everture Strategic Consulting Namibia (PTY) LTD	• Ongoing

Table 3.1: *Cont.*

ASPECT	IMPACT	MANAGEMENT ACTIONS	RESPONSIBLE PERSON(S)	TARGET DATE
8) Construction camp assumed to be a(tented) temporary camp and other supporting infrastructure. Adhere to the regulations, rules, procedures, current and future land use plans of the local area.	Disturbance of fauna and flora and habitat alteration	• The planning and design to ensure minimum impact to the environment. • No trees or natural vegetation may be removed for the making of fires. • No animal may be injured, fed, trapped, hunted or harmed in any way. • No off-road driving will be allowed • Speed limit of not more than 60 km / h. • No trespassing on adjoining properties is allowed and no livestock, game or vegetation are to be interfered with.	ER / ECO / Contractor	• Pre-construction • Ongoing
	Pollution of biophysical environment (air, soil and water)	• No fires will be allowed, unless a specific area has been identified and set aside by the ER for the cooking of food. • Vehicle maintenance/servicing/washing not to be allowed anywhere on site/at the camp. • Portable toilets to be provided and used at the camp. • Sanitary wastewater to be released into a French drain system. • Use bio-degradable detergents on site. • Enforce proper waste (hazardous and non-hazardous) management practices (as per Waste Management Plan) –waste and litter to be disposed of in scavenger and weather proof bins and the refuse to be collected by the contractor and disposed off an approved waste disposal site at least once a week or as may be required.	Contractor	• Ongoing
	Occupational Health and Safety	• No fires will be allowed, unless a specific area has been identified and set aside by the ER for the cooking of food. • Ensure that employees are trained in the use of appropriate firefighting equipment and ensure that such equipment is on hand at all times. • Comply with all electricity safety, generation and supply regulations. • Supply potable water for human consumption and other domestic uses; conduct chemical testing of water samples on a monthly basis (if applicable). • Make suitable arrangements, as far as practicable, for the maintenance of health, the prevention and overcoming of outbreaks of disease and of adequate first aid services. • Ensure that security arrangements are in place at all times.	Contractor	• Ongoing

ASPECT	IMPACT	MANAGEMENT ACTIONS	RESPONSIBLE PERSON(S)	TARGET DATE
9) Clearing of areas for road upgrade /Construction and always adhere to the regulations, rules, procedures, current and future land use plans of the local area.	Disturbance of fauna and flora and habitat alteration	• Restrict activities to previously demarcated areas (borrow pits, haul and access roads (20 m from the centre line of the road), construction camp / supporting infrastructure, etc.); all other areas will be regarded as "no go" zones in order to minimize the impact on the surrounding land. • Minimize the removal of native plant species; no vegetation may be removed/damaged without direct instructions. • No off-road driving will be allowed. • No animal may be injured, fed, trapped, hunted or harmed in any way.	Contractor	• Pre- and during roadupgrade/construction • Ongoing
	Soil erosion	• Sediment mobilization and transport: reduce or prevent so erosion (schedule activities to avoid heavy rainfall / strong winds periods; contour and minimize length and steepness of slopes; mulching to stabilize exposed areas; re-vegetate areas promptly; and design channels and ditches for postconstruction flow). • Road design: limit access road gradients to reduce run-off induced erosion; provide adequate road drainage based on road width, surface material, compaction and maintenance. • Structural (slope) stability: provide effective short-term measures for slope stabilization, sediment and subsidence control until long-term measures (during operations) can be implemented; provide adequate drainage systems to minimize and control infiltration.	• Engineer Contractor	• Pre- and during road upgrade/construction and rehabilitation
	Possible loss of the seed bank in the topsoil	• The upper layer of soil (10-20 cm), where alluvial, to be stripped and stockpiled separately (1-2 m high piles to allow for proper aeration). Install drainage to protect the topsoil pile from (water) erosion and cover it to protect it from (wind) erosion.	• Contractor	• Pre- and during road upgrade/construction
10) Construction material borrow pit siting.	Visual, pollution (traffic, noise and air), and land use	• Consider, in addition to material quality and quantity, the visual impact, potential traffic, noise and air pollution, and the potential loss of arable land when borrow pits are sited. Adhere to the regulations, rules, procedures, current and future regional and local land use plans.	• Engineer / Contractor	• Pre- and during road upgrade/construction

ASPECT	IMPACT	MANAGEMENT ACTIONS	RESPONSIBLE PERSON(S)	TARGET DATE
11) Borrow pit management	Disturbance of fauna and flora and habitat alteration	• Limit the number of borrow pits as far as possible. • The progression of stripping and excavation to allow for rehabilitation once the areas have been fully utilized.	Engineer /Contractor	• Pre- and during road upgrade/construction
	Possible loss of the seed bank in the topsoil	• The upper layer of soil (10-20 cm), where alluvial, to be stripped and stockpiled separately (1-2 m high piles to allow for proper aeration). Install drainage to protect the topsoil pile from (water) erosion and cover it to protect it from (wind) erosion.	Contractor	• Pre- and during road upgrade/construction
	Occupational and Community Safety	• Cut slopes not to be steeper than 30 degrees. • No under-cutting of the sides to be allowed. • Undertake excavations in a safe manner and in compliance with the relevant safety regulations (Labour Act and Mine Safety Regulations).	Contractor	• Pre- and during road upgrade/construction
	Social and Environmental Performance	• Cut slopes not to be steeper than 30 degrees. • Use excess rock spoil to fill borrow pits; material to be neatly shaped and no loose material to be left inside the borrow pits. • No waste is allowed to be dumped in borrow pits. • Evenly spread top soil over the entire area to allow for the re- growth of vegetation. • Replant previously removed native plant species in disturbed areas.	Contractor	• During road upgrade/construction and rehabilitation
12) Increased traffic, presence and movement of machinery, and the establishment of soil stockpiles.	Air quality (dust or Particulate Matter (PM) pollution)	• Minimize the area in which the movement of construction machines will take place to reduce the effects of dust pollution / generation. • Minimize dust from material handling sources (e.g. conveyors and bins) by using covers and/or control equipment (e.g. water suppression). • Minimize dust from open area sources, including storage piles, by using control measures (install enclosures and covers, and increase the moisture content). • Avoid the excavation, handling and transport of erodible materials under high wind conditions or when a visible dust plume is present.	Contractor	• During road upgrade/construction and rehabilitation
13) Increased traffic/vehicle movement.	Air quality (dust or Particulate Matter (PM) pollution)	• Maintain the road surface to preserve surface characteristics (e.g. texture and roughness). • Use dust control/suppression methods, such as applying water or non-toxic chemicals to minimize dust (oil and oil by-products is not a recommended measure to control road dust).	Contractor	• Ongoing

Table 3.1: *Cont.*

ASPECT	IMPACT	MANAGEMENT ACTIONS	RESPONSIBLE PERSON(S)	TARGET DATE
14) Increased traffic, presence and movement of machinery (exhaust from diesel engines).	Air quality & Occupational and Community Health and Safety	• Fleet owners/operators to implement manufacture recommended engine maintenance programs (to control vehicle emissions: Carbon Monoxide (CO), Nitrogen Oxide (NOx), Sulphur Dioxide (SO2), Particulate Matter (PM) and Volatile Organic Compounds (VOCs)).	Contractor	• During road upgrade/construction and rehabilitation
15) Presence of machinery, construction workers, and associated equipment.	Visual and noise	• Avoid critical habitats (for access roads) through using existing access roads where possible.	Engineer / Contractor	• Pre- and during construction • Ongoing
16) Increased traffic, movement of machinery.	Occupational and Community Safety	• Adopt best transport safety practices by implementing the following measures: emphasize safety aspects among drivers; improve driving skills and require licensing of drivers; adopt limits for trip duration; avoid dangerous routes and times of day; and use speed control devices. • Regularly maintain vehicles and use manufacturer approved parts. • Use locally sourced materials (where possible) to minimize transport distances. • Employ safe traffic control measures, including the use of traffic and safety warning signs and flag persons to warn of dangerous conditions.	Contractor	• Pre- and during road upgrade/construction and rehabilitation
17) Use of a Troxler (soil density gauge containing a radioactive source).	Occupational Health and Safety	• Register the Troxler and apply for a permit from the Ministry of Health & Social Services. • Implement controls and monitoring requirements as per those prescribed by the Ministry of Health & Social Services for the safe handling, transportation and storage of the device.	Contractor	• Pre- and during road construction
18) Water Management	Resource use / depletion of natural resources	• Implement a water conservation program, promoting the continuous reduction in water consumption and achieving savings in water pumping, treatment and disposal costs commensurate with the magnitude and cost of water use.	ER / Contractor	• Pre- and during road upgrade/construction and rehabilitation

Table 3.1: *Cont.*

ASPECT	IMPACT	MANAGEMENT ACTIONS	RESPONSIBLE PERSON(S)	TARGET DATE
19) Hazardous materials management.	Social and Environmental Performance	• Establish hazardous materials management priorities (based on hazard analysis of risky operations based on Material Safety Data Sheets (MSDS). • Avoid, or minimize the use of hazardous materials. • Prevent uncontrolled releases of hazardous materials to the environment or uncontrolled reactions that may result in fire or explosion. • Make us of engineering controls (containment, automatic alarms and shut-off systems); implement management controls (procedures, inspections and training, communication and drills) to address residual risks not prevented or controlled through engineering controls.	Contractor	• During road upgrade/construction and rehabilitation
20) Hazardous materials management	Pollution of biophysical environment (soil and water)	• Implement prevention and control measures for the use handling and storage of hazardous materials: ○ Materials transfer: regularly inspect, maintain and repair fittings/pipes/hoses; make use of drip trays/other drip containment measures at connection/possible overflow points; ○ Overfill protection: use trained filling operators; instal gauges on tanks to measure the volume inside; make use of dripless hose connections (vehicle tanks) and fixed connections (storage tanks); use a catch basin/drip tray around the fill pipe to collect spills; ○ Reaction, fire, and explosion prevention: hazardous materials to be stored in marked containers and separate(from non-hazardous materials); incompatible hazardous materials (acids, bases, flammables, oxidizers, reactive chemicals) to be stored in separate areas and with containment facilities separating material storage smoking or working with open flames not to be permitted in the presence of these substances; limit access to hazardous waste storage areas and clearly label and demarcate the area; conduct regular inspections of the areas and document the findings; prepare and implement spill response and emergency plans; train employees in the use of appropriate firefighting equipment and ensure that such equipment is on hand at all times.	Contractor	• During road upgrade/construction and rehabilitation

ASPECT	IMPACT	MANAGEMENT ACTIONS	RESPONSIBLE PERSON(S)	TARGET DATE
Hazardous materials management ***(Cont.)***		o Secondary containment: use bunding (made of impervious, chemically resistant material) that can contain the larger of 110% of the largest tank or 25% of the combined tank volumes for above-ground tanks with a total storage volume equal or greater than 1,000 litres. • Train workers on the correct transfer and handling of fuels and chemicals and the response to spills. • Immediately report and clean up any accidental hydrocarbon spill: Spill-Sorb, Drizzat Pads, Enretech Powder or Peat Moss can be used to clean up small spills; in case of larger spills, the spill together with the polluted soil should be removed and disposed of at e.g. a biological remediation site.	Contractor	During road upgrade /construction and rehabilitation
21) Hazardous materials management	Occupational Health and Safety	• Implement hazard communication and training programs (including information on Material Safety Data Sheets (MSDS)) to make employees aware of workplace chemical hazards and how to respond to these. • Provide and ensure the active use of Personal Protective Equipment (PPE).	Contractor	During road upgrade/ construction and rehabilitation
22) Waste management solid	Air quality	• Avoid the open burning of waste (whether hazardous, or nonhazardous).	Contractor	Pre- and during road upgrade/construction and rehabilitation
23) Waste management: non-hazardous and hazardous.	Pollution of biophysical environment	• Prepare and submit a Waste Management Plan before construction commences. The generation of waste should be avoided or minimized as far as practicable; where it cannot be avoided, but has been minimized, waste should be recovered and reused; where waste cannot be recovered/reused, it should be treated, destroyed and disposed of in an environmentally sound manner. • Institute and maintain good housekeeping and operating practices; littering is not allowed. • Non-hazardous and hazardous waste to be collected and stored separately: • Hazardous waste: recycle petroleum (fuels and lubricants) waste products and collect and recycle batteries and print cartridges. The remainder to be transported to a recognized hazardous waste disposal site, with prior permission from the operator / owner.	Contractor	Pre- road upgrade /construction

Table 3.1: *Cont.*

ASPECT	IMPACT	MANAGEMENT ACTIONS	RESPONSIBLE PERSON(S)	TARGET DATE
24) Waste management: sanitary.	Pollution of biophysical environment	• Portable toilets (1 toilet per 30 employees; preferred 1:15) to be provided and transported along the route; contents to be collected by an approved contractor and disposed of at an approved sewage site. Adhere to the regulations, rules, procedures, current and future regional and local land use plans.	Contractor	• During road upgrade/construction and rehabilitation
25) Waste water management – waste water treatment.	Pollution of biophysical environment	• Ensure that the discharge of process wastewater and/or sanitary wastewater and/or wastewater from utility operations and/or storm water to land conform to the regulatory requirements. Adhere to the regulations, rules, procedures, current and future regional and local land use plans.	Contractor/ER	• Pre- and during road upgrade/construction and rehabilitation
26) Waste water management – storm water management	Soil erosion	• Regular inspection and maintenance of permanent erosion and runoff control features.	Contractor / ER / ECO	• Ongoing
27) Rehabilitation.	Social and Environmental Performance	• Remove all equipment, waste, temporary structures, etc. From the camp and work sites. • Reshape all disturbed areas (including stockpiles, borrow pits, and temporary detours and turnouts) to their original contours. • Cover disturbed areas with previously collected topsoil and spread evenly. • Manually rip disturbed areas, where compaction has taken place, and cover the areas with previously collected topsoil. • Replant any previously removed native plant species in disturbed areas. • Adhere to the regulations, rules, procedures, current and future regional and local use plans.	Contractor	• Rehabilitation

4. CONSTRUCTION STAGE

4.1 Introduction

The construction stage of the mine will cover all the activities associated with the mine infrastructures and mine workings as outlined in Table 4.1. The EMP makes provisions for management of a wider array of activities that will be associated with the construction activities of all the required infrastructures for the mine. Table 4.2 outlines the EMP framework for the construction stage of the development. Always, adhere to the regulations, rules, procedures, current and future regional and local land use plans.

Table 4.1: Summary of the construction activities covering mine infrastructures and mine workings

CONSTRUCTION	MINE SUPPORTING INFRASTRUCTURE	1. Transportation facilities, including access roads to the site and on-site Roads
		2. Production plant and ore handling infrastructure including foundation and the entire structures
		1. Tailing disposal facilities
		2. Waste rock stockpiles
		3. Water supply systems
		4. Power infrastructure, including power distribution systems
		5. Administration blocks and warehouses
		6. Fuel supply and storage
		7. Workshop and equipment maintenance facilities
		8. Explosives storage facility / bunker
		9. Wastewater treatment systems
		10. Solid waste disposal
		11. Storm water management around the plant, waste rock and tailings
		12. Testing the ore handling and processing facilities
	MINE WORKINGS	1. Drilling and blasting to create direct access to the ore body
		2. Blasting to create direct access to the ore body
		3. Actual pit excavation and stripping of the overburden to create direct access to the ore body
		4. Ore production for test mining operations
		5. Test mining

4.2 Roles and Responsibilities

4.2.1 Employer's Representative (ER)

Everture Strategic Consulting Namibia (PTY) LTD is to appoint an **Employer's Representative (ER)** with the following responsibilities:

- Act as the Employer's (Everture Strategic Consulting Namibia (PTY) LTD on-site project manager and implementing agent;
- Appoint the Environmental Control Officer (ECO);
- Ensure that the Employer's responsibilities are executed in compliance with the relevant legislation and the EMP for the construction stage;
- Ensure that all the necessary environmental authorizations and permits have been obtained;
- Assist the Contractor in finding environmentally responsible solutions to challenges that may arise (with input from the ECO);
- Should the ER be of the opinion that a serious threat to, or impact on the environment may be caused by the construction operations, he/she may stop work; the Employer must be informed of the reasons for the stoppage as soon as possible;
- The ER has the authority to issue fines for transgressions of basic conduct rules and/or contravention of the EMP;
- Should the Contractor or his/her employees fail to show adequate consideration for the environmental aspects related to the EMP, the ER can have person(s) and/or equipment removed from the site or work suspended until the matter is remedied;
- Report to the Employer on the implementation of this EMP on site (with input from the ECO and/or independent environmental auditor);
- Maintain open and direct lines of communication between the Employer, ECO, Contractor and I&APs with regards to environmental matters; and
- Attend regular site meetings and inspections.

4.2.2 Environmental Control Officer (ECO)

The **Environmental Control Officer (ECO)** has the following responsibilities:

- Assist the ER in ensuring that the necessary environmental authorizations and permits have been obtained;
- Assist the ER and Contractor in finding environmentally responsible solutions to challenges that may arise;
- Conduct environmental monitoring as per EMP requirements;
- Recommend on the issuing of fines for transgressions of basic conduct rules and/or contraventions of the EMP to the ER;
- Advise the ER on the removal of person(s) and/or equipment not complying with the specifications of the EMP;
- Carry out regular site inspections (on average once per week) of all construction areas with regards to compliance with the EMP; report any non-compliance(s) to the ER as soon as possible;
- Organize for an independent internal audit on the implementation of and compliance to the EMP to be carried out half way through the construction period; audit reports to be submitted to the ER;
- Organize for an independent post-construction environmental audit to be carried out before operations commence;
- Continuously review the EMP and recommend additions and/or changes to the EMP document;
- Monitor the Contractor's environmental awareness training for all new personnel coming onto site;
- Keep records of all activities related to environmental control and monitoring; the latter to include a photographic record of the construction and environmental control and rehabilitation process, and a register of all major incidents; and
- Attend regular site meetings.

4.2.3 Contractors and Subcontractors

The responsibilities of the **Contractors and Subcontractors** include:

- Comply with the relevant legislation and the EMP for the Construction Phase of the proposed mine;
- Preparation and submission to Everture Strategic Consulting Namibia (PTY) LTD of the following Management Plans:

- Environmental Awareness Training and Inductions;
- Emergency Preparedness and Response;
- Waste Management;
- Health and Safety, and;
- Electric and Magnetic Fields (EMF) Safety.

- Ensure adequate environmental awareness training for senior site personnel;
- Environmental awareness presentations (inductions) to be given to all site personnel prior to work commencement; the ECO is to provide the course content and the following topics, at least but not limited to, should be covered:
  - The importance of complying with the relevant Namibian, International and Best Practice Legislation;
  - Roles and Responsibilities, including emergency preparedness;
  - Basic Rules of Conduct (Do's and Don'ts);
  - EMP: aspects, impacts and mitigation;
  - Fines for Failure to Adhere to the EMP, and;
  - Health and Safety Requirements.
- Record keeping of all environmental awareness training and induction presentations; And
- Attend regular site meetings and environmental inspections.

4.3 Construction Supporting Teams

The construction of the mine infrastructures and mine workings with activities as outlined in Table 4.1 will require an array of specialist teams working very closely with their suppliers and core Everture Strategic Consulting Namibia (PTY) LTD onsite operations team. The following is a summary of some of the specialists that will be required during the construction phase as part of the team of contractors and Subcontractors:

- Mining, Structural, Civil and Mechanical Engineers and Crane Contractors, Electrical Contractors and other specialist teams, each with their respective Sub-contractors and suppliers, would report directly to the Employer's Representative (ER), acting as the onsite Project Manager.

Table 4.2: Environmental Management Plan for construction activities covering mine infrastructures and mine workings.

ACTIVITY/PROCESS	ASPECT	IMPACT	MANAGEMENT ACTIONS	RESPONSIBLE PERSON(S)	TARGET DATE
1) All activities	Management and Monitoring	Social and Environmental Performance	• Ensure that all aspects related to the EMP are implemented during the construction phase. • Hold regular site meetings/inspections. Make provision in the minutes of the meetings for reporting on all aspects of the EMP related to the construction activities.	ER / ECO / Contractor	Ongoing throughout the construction Phase
2) All activities	Consultation and Disclosure	Social and Environmental Performance	• Ensure a mechanism for receiving and resolving any concerns and grievances related to the project's social and environmental performance during the construction phase. • Address concerns promptly and transparently and in a culturally appropriate manner.	• ER • Everture Strategic Consulting Namibia (PTY) LTD / ER	
3) All activities	Grievance Mechanism	Social and Environmental Performance	• Implement a grievance mechanism for receiving and resolving any concerns and grievances related to the project's social and environmental performance throughout the project life cycle. • Inform the affected communities about the mechanism in the course of the community engagement process; it must be readily accessible to all segments of the affected communities. • Address concerns promptly and transparently and in a culturally appropriate manner.	• Everture Strategic Consulting Namibia (PTY) LTD / ER	
4) All activities	Training including awareness and inductions	Social and Environmental Performance	• Train employees, contractors and Subcontractors in matters related to the project's social and environmental performance, Namibia's regulatory requirements • Ensure adequate environmental awareness training for all senior site personnel. • Give environmental induction presentations to all site personnel prior to work commencement.	• Everture Strategic Consulting Namibia (PTY) LTD • Contractor	

ACTIVITY/PROCESS	ASPECT	IMPACT	MANAGEMENT ACTIONS	RESPONSIBLE PERSON(S)	TARGET DATE
5) All activities	Labour and Working Conditions	Social and Environmental Performance	• Establish, maintain and improve the worker management relationship. Base the employment relationship on equal opportunity and fair treatment and no discrimination to be allowed. • Comply with Namibia's labour and employment laws and prevent unacceptable forms of labour, i.e. harmful child and forced labour. • Promote safe and healthy working conditions and the protection and promotion of worker health. • Prepare a Human Resources Policy and document and communicate the Working Conditions and Terms of Employment. • Respect Collective Agreements and the right of workers to organize and bargain collectively. • Prepare a Retrenchment Plan. • Implement a Grievance Mechanism.	Everture Strategic Consulting Namibia (PTY) LTD	Ongoing throughout the construction Phase
6) All activities	Employment and procurement opportunities	Socio-economic	• Ensure local recruitment (of registered contractors or qualified and certified personnel, registered and certified with the appropriate statutory authority) and procurement to maximize benefit to region.	Everture Strategic Consulting Namibia (PTY) LTD / ER	
7) All activities	Occupational Health and Safety	Social and Environmental Performance	• Prepare and submit an Emergency Preparedness andResponse Plan. • Adhere to all Namibian Health and Safety Regulations. • Occupational Health and Safety Training to be provided to all employees. • Ensure that qualified first aid can be provided at all times.Provide and ensure the active use of Personal Protective Equipment (PPE).	Contractor	
8) All activities	Community Health and Safety	Social and Environmental Performance	• Prevent communicable disease (e.g sexually transmitted diseases (STDs) such as HIV/AIDS transmission):provide surveillance and active screening and treatment of employees; prevent illness among employees in local communities (through health awareness and education initiatives); ensure ready access to medical treatment, confidentiality and appropriate care, particularly with respect to migrant workers; and promote immunization.	Everture Strategic Consulting Namibia (PTY) LTD Contractor	

ACTIVITY/PROCESS	ASPECT	IMPACT	MANAGEMENT ACTIONS	RESPONSIBLE PERSON(S)	TARGET DATE
9) All activities	Unauthorized public access	Community Safety	• Use gates on the access road(s) and the entire mine site must be fenced off. • Mine site should not be accessible to anyone from the public. • Notice or information boards relating public safety hazards and emergency contact details should be put up at the gate(s) and at the mine site. • Create a viewpoint area, possibly including an information center, for the public/tourists as part of the early stages of the Closure Plan provisions.	Everture Strategic Consulting Namibia (PTY) LTD	Ongoing throughout the construction Phase
10) All activities	Construction	Change in land use from “conservation” to “industrial”.	• Restrict construction activities to demarcated areas; all other areas will be regarded as "no go" zones in order to minimize the impact on the surrounding land; • Adhere to the regulations, rules, procedures, current and future regional and local land use plans.	Contractor	
11) Mine Infrastructure and Mine Workings layout planning	Mine Infrastructures and Mine Workings Layout	Visual	• Structural height and colour must be kept uniform; • Mine infrastructures and mine workings installation must be painted with a non-reflective coating to avoid high reflections; • Avoid using graphics or lettering on the mine infrastructures and mine workings	Everture Strategic Consulting Namibia (PTY) LTD / Engineer	
12)Mine Infrastructure and Mine Workings design specifications	Mine Infrastructures and Mine Workings appearance	Visual	• Prevent communicable disease (e.g sexually transmitted diseases (STDs) such as HIV/AIDS transmission):provide surveillance and active screening and treatment of employees; prevent illness among employees in local communities (through health awareness and education initiatives); ensure ready access to medical treatment, confidentiality and appropriate care, particularly with respect to migrant workers; and promote immunization.	Everture Strategic Consulting Namibia (PTY) LTD Contractor	

ACTIVITY/PROCESS	ASPECT	IMPACT	MANAGEMENT ACTIONS	RESPONSIBLE PERSON(S)	TARGET DATE
13) All activities	Construction Activities	Disturbance of fauna and flora and habitat alteration	• The planning and design to ensure minimum impact to the environment. • No trees or natural vegetation may be removed from the ML area for the making of fires or sale. • No animal may be injured, fed, trapped, hunted or harmed in any way. • No off-road driving will be allowed. • No trespassing on adjoining properties is allowed and no livestock, game or vegetation are to be interfered with.	Everture Strategic Consulting Namibia (PTY) LTD / ER Contractor	Ongoing throughout the construction Phase
		Pollution of biophysical environment (air, soil and water)	• No fires will be allowed, unless a specific area has been identified and set aside by the ER for the cooking of food. • Vehicle maintenance/servicing/washing not to be allowed anywhere on site/at the camp. • Portable toilets to be provided and used at the camp. • Sanitary wastewater to be released into a French drain System. • Use bio-degradable detergents on site. • Enforce proper waste (hazardous and non-hazardous) management practices (as per Waste Management Plan) – waste and litter to be disposed of in scavenger and weatherproof bins and the refuse to be collected by the contractor and disposed of at least once a week.	Contractor	
		Occupational Health and Safety	• No fires will be allowed, unless a specific area has been identified and set aside by the ER for the cooking of food. • Ensure that employees are trained in the use of appropriate firefighting equipment and ensure that such equipment is on hand at all times. • Comply with all safety regulations regarding electricity supply. • Supply potable water for human consumption and other domestic uses; conduct chemical testing of water samples on a monthly basis (if applicable). • Make suitable arrangements, as far as practicable, for the maintenance of health, the prevention and overcoming of outbreaks of disease and of adequate first aid services. • Ensure that security arrangements are in place.	Contractor	

ACTIVITY/PROCESS	ASPECT	IMPACT	MANAGEMENT ACTIONS	RESPONSIBLE PERSON(S)	TARGET DATE
14) Site preparation (Continue from Preconstruction)	Clearing of areas for construction	Disturbance of fauna and flora and habitat alteration	• Restrict construction activities to previously demarcated areas; all other areas will be regarded as "no go" zones in order to minimize the impact on the surrounding land. • Minimize the removal of native plant species; no vegetation may be removed/damaged without direct instruction. • No off-road driving will be allowed. • No animal may be injured, fed, trapped, hunted or harmed in any way.	Contractor	Ongoing throughout the construction Phase
		Soil erosion	• Sediment mobilization and transport: reduce or prevent soil erosion (schedule activities to avoid heavy rainfall periods; contour and minimize length and steepness of slopes; mulching to stabilize exposed areas; re-vegetate areas promptly; and design channels and ditches for post-construction flow). • Structural (slope) stability: provide effective short-term measures for slope stabilization, sediment and subsidence control until long-term measures (during operations) can be implemented; provide adequate drainage systems to minimize and control infiltration.	Engineer / Contractor	
		Possible loss of the seed bank in the topsoil	• The upper layer of soil (10-20 cm), where alluvial, to be stripped and stockpiled separately (1-2 m high piles to allow for proper aeration). Install drainage to protect the topsoil pile from (water) erosion and cover it to protect it from (wind) erosion.	Contractor	
15) Infrastructure construction	Increased traffic, presence and movement of machinery, and the establishment of soil stockpiles	Air quality (dust or Particulate Matter (PM) pollution)	• Minimize the area in which the movement of construction machines will take place to reduce the effects of dust pollution. • Minimize dust from material handling sources (e.g. conveyors and bins) by using covers and/or control equipment (e.g. water suppression). • Minimize dust from open area sources, including storage piles, by using control measures (install enclosures and covers, and increase the moisture content). • Avoid the excavation, handling and transport of erodible materials under high wind conditions or when a visible dust plume is present.		

ACTIVITY/PROCESS	ASPECT	IMPACT	MANAGEMENT ACTIONS	RESPONSIBLE PERSON(S)	TARGET DATE
Infrastructure Construction (*15 cont.)*	Increased traffic/vehicle movement	Air quality (dust or Particulate Matter (PM) pollution)	• Maintain the road surface to preserve surface characteristics (e.g. texture and roughness). • Use dust control/suppression methods, such as applying water or non-toxic chemicals to minimize dust (oil and oil by-products is not a recommended measure to control road dust).	Contractor	Ongoing throughout the construction Phase
	Increased traffic, presence and movement of machinery (exhaust from diesel engines)	Air quality & Occupational and Community Health and Safety	• Fleet owners/operators to implement manufacturer recommended engine maintenance programs (to control vehicle emissions: Carbon Monoxide (CO), Nitrogen Oxide (NO_x), Sulphur Dioxide (SO_2), Particulate Matter (PM) and Volatile Organic Compounds (VOCs)).	Contractor	
	Presence of machinery, construction workers, infrastructure and associated eequipment	Visual and noise	• Avoid critical habitats (for site transmission and distribution rights of way, lines, towers and substations) through using existing utility and transport corridors (transmission and distribution) where possible.	Engineer / Contractor	
	Increased traffic movement of machinery	Occupational and Community Safety	• Adopt best transport safety practices by implementing the following measures: emphasize safety aspects among drivers; improve driving skills and require licensing of drivers; adopt limits for trip duration; avoid dangerous routes and times of day; and use speed control devices. • Regularly maintain vehicles and use manufacturer approved parts. • Use locally sourced materials (where possible) to minimize transport distances. • Employ safe traffic control measures, including the use of traffic and safety warning signs and flag persons to warn of dangerous conditions.	Contractor	
	Mine Infrastructures and Mine Workings foundations	Occupational Safety	• Ensure that all excavations are properly performed and in accordance with Occupational, Health and Safety (OH&S) regulations. • Ensure that the handling of concrete follow health and safety precautions (as per Material Safety Data Sheets (MSDS)).	Contractor	

ACTIVITY/PROCESS	ASPECT	IMPACT	MANAGEMENT ACTIONS	RESPONSIBLE PERSON(S)	TARGET DATE
16) Mine Infrastructure and Mine Workings Components Height installations	Working at heights	Occupational Safety	• Test integrity of structure(s) before work commences. • Implement a fall protection program (including training in climbing techniques and the use of fall protection measures; inspection, maintenance, and replacement off all protection equipment; and rescue of fall-arrested workers). • Establish criteria for use of 100% fall protection (the system should be fitting for the mine infrastructures and mine workings structure and movements (ascent, descent, and moving from point to point)). • Install fixtures on high components to facilitate the use off all protection systems. • Provide an adequate work-positioning device system to workers (with connectors on positioning systems compatible with the mine infrastructures and mine workings components to which they are attached). • Ensure proper rating and maintenance of hoisting equipment and training of hoist operators. • Use safety belts of not less than 15.8 mm two in one nylon or material of equivalent strength; replace rope safety belts before signs of aging or fraying of fibres become evident. • Workers to use a second (backup) safety strap when operating power tools at height. • Remove signs/other obstructions from poles/structures before work commences. • Use approved tool bags for lowering/raising tools/materials to workers on elevated mine infrastructures and mine workings structures. • Avoid conducting mine infrastructures and mine workings installation during poor weather conditions (especially where there is a risk lightning strikes or strong winds).	Contractor	Ongoing throughout the construction Phase

ACTIVITY/PROCESS	ASPECT	IMPACT	MANAGEMENT ACTIONS	RESPONSIBLE PERSON(S)	TARGET DATE
17) Power transmission and distribution	Above Ground And Underground cables to transformer station; transmission lines)	Habitat alteration & Occupational and Community Health	• Restrict excavation activities to previously demarcated areas; all other areas will be regarded as "no go" zones in order to minimize the impact on the surrounding land. • Ensure that all excavations are properly performed and in accordance with Occupational, Health and Safety (OH&S) regulations. • Restrict trench excavation to a pace that matches cable installation and backfill. No more than 300 m of open trench to exist at any time.	Everture Strategic Consulting Namibia (PTY)LTD / Engineer	Ongoing throughout the construction Phase
18) Power transmission and ddistribution	Habitat alteration	Bird and bat collisions and electrocutions	• Align transmission corridors to avoid critical habitats. • Maintain 1.5 m spacing between, or cover energized components and grounded hardware. • Consider the installation of underground transmission and distribution lines (sensitive areas). • Install visibility enhancement object (marker balls, bird deterrents, or diverters).	Everture Strategic Consulting Namibia (PTY)LTD / Engineer	
19) Power transmission and distribution	Electric and Magnetic Fields (EMF)	Occupational and Community Health	• Ensure that average and peak exposure levels remain below the reference levels developed by the Commission of Non-Ionizing Radiation Protection (ICNIRP). • Reduce the EMF (from power lines, substations, or transformers) by applying engineering techniques (if levels are expected or confirmed above the recommended levels): shielding with specific metal alloys; burying transmission lines; increasing the height of the transmission towers; or modifications to size, spacing and configuration of conductors.	Everture Strategic Consulting Namibia (PTY)LTD / Engineer	
20) Power transmission and distribution	Hazardous materials management	Pollution of biophysical environment (soil and water)	• Minimize the use of SF6 (greenhouse gas). • The use of PCBs has largely been discontinued (see IFC EHS Guidelines for Electric Power Transmission and Distribution for the management of PCBs should it be used).	Contractor	

ACTIVITY/PROCESS	ASPECT	IMPACT	MANAGEMENT ACTIONS	RESPONSIBLE PERSON(S)	TARGET DATE
21) Power transmission and distribution	Live power lines	Occupational Health and Safety	• Allow only trained/certified employees to install, maintain, and repair electrical equipment. • Deactivate and properly ground live power distribution lines before work is conducted on, or close to, distribution lines. • Ensure that live-wire work is conducted by qualified workers and in accordance to the specific safety and insulation standards. • Do not approach an exposed energized or conductive part (even if the worker is trained) unless: the person is properly insulated from the energized part (e.g. gloves) and vice versa; the worker is properly isolated and insulated from any other conductive part (live-line work). • Implement a Health and Safety Plan, detailing specific training, safety measures, personal safety devices and other precautions, where maintenance and operation is required within minimum setback distances.	Everture Strategic Consulting Namibia (PTY) LTD / Contractor	Ongoing throughout the construction Phase
22) Power transmission and distribution	Working at heights on poles/structures	Occupational Health and Safety	• See mine infrastructures and mine workings components, working at heights.	Contractor	
23) Power transmission and distribution	Electric and Magnetic Fields (EMF)	Occupational Health and Safety	• Prepare and implement an EMF Safety Program containing information on: potential exposure levels in the workplace and the use of personal monitors; training of workers to identify EMF levels and hazards; the identification and establishment of safety zones (areas acceptable for public exposure vs. those with expected elevated EMF levels and that only properly trained workers may access); action plans dealing with potential or confirmed exposure of levels that exceed those developed by the ICNIRP and Institute of Electrical and Electronics Engineers (IEEE).	Contractor	
24) Power transmission and distribution	Electrocution	Community Health and Safety	• Use signs, barriers, and education to prevent public contact with potentially dangerous equipment. • Ground conducting objects installed near power lines.	Everture Strategic Consulting Namibia (PTY) LTD	

ACTIVITY/PROCESS	ASPECT	IMPACT	MANAGEMENT ACTIONS	RESPONSIBLE PERSON(S)	TARGET DATE
25) All activities	Water Management	Resource use /depletion of natural resources	• Implement a water conservation program, promoting the continuous reduction in water consumption and achieving savings in water pumping, treatment and disposal costs, commensurate with the magnitude and cost of water use.	ER / Contractor	
26) All activities	Hazardous materials management Maybe this can come out; important, but more to do with overall hazardous materials management	Social and Environmental Performance	• Establish hazardous materials management priorities (based on hazard analysis of risky operations). • Avoid, or minimize the use of hazardous materials. • Prevent uncontrolled releases of hazardous materials to the environment or uncontrolled reactions that may result in fire or explosion. • Make us of engineering controls (containment, automatic alarms and shut-off systems); implement management controls (procedures, inspections and training, communication and drills) to address residual risks not prevented or controlled through engineering controls.	Contractor	Ongoing throughout the construction Phase

ACTIVITY/PROCESS	ASPECT	IMPACT	MANAGEMENT ACTIONS	RESPONSIBLE PERSON(S)	TARGET DATE
27) All activities	Hazardous materials management (of mainly fuels and lubricating and hydraulic oils for construction and operating vehicles and equipment; substation transformer insulating oil; other chemicals used during mine construction, including concrete admixture chemicals such as surface active agents, plasticizers and form release oil (mineral); equipment coolants and maintenance chemicals such as solvent cleaners and paints)	Pollution of biophysical Environment (soil and water)	• Implement prevention and control measures for the use, handling and storage of hazardous materials: o Materials transfer: regularly inspect, maintain and repair fittings/pipes/hoses; make use of drip trays/other drip containment measures at connection/possible overflow points; o Overfill protection: use trained filling operators; install gauges on tanks to measure the volume inside; make use of dripless hose connections (vehicle tanks) and fixed connections (storage tanks); use a catch basin/drip tray around the fill pipe to collect spills; o Reaction, fire, and explosion prevention: hazardous materials to be stored in marked containers and separate (from non-hazardous materials); incompatible hazardous materials (acids, bases, flammables, oxidizers, reactive chemicals) to be stored in separate areas and with containment facilities separating material storage; smoking or working with open flames not to be permitted in the presence of these substances; limit access to hazardous waste storage areas and clearly label and demarcate the area; conduct regular inspections of the areas and document the findings; prepare and implement spill response and emergency plans; train employees in the use of appropriate firefighting equipment and ensure that such equipment is on hand at all times. • Train workers on the correct transfer and handling of fuels and chemicals and the response to spills. • Immediately report and clean up any accidental hydrocarbon spill: Spill-Sorb, Drizzat Pads, Enretech Powder or Peat Moss can be used to clean up small spills; in case of larger spills, the spill together with the polluted soil should be removed and disposed of at e.g. a biological remediation site.	Contractor	Ongoing throughout the construction Phase

ACTIVITY/PROCESS	ASPECT	IMPACT	MANAGEMENT ACTIONS	RESPONSIBLE PERSON(S)	TARGET DATE
28) All activities	Hazardous materials management	Occupational Health and Safety	• Implement hazard communication and training programs (including information on Material Safety Data Sheets (MSDS)) to make employees aware of workplace chemical hazards and how to respond to these. • Provide and ensure the active use of Personal Protective Equipment (PPE).	Contractor	
29) All activities	Waste management: Solid	Air quality	• Avoid the open burning of waste (whether hazardous, or non-hazardous).	Contractor	
30) All activities	Waste management: non-hazardous and hazardous	Pollution of biophysical environment	• Prepare and submit a Waste Management Plan before construction commences. The generation of waste should be avoided or minimized as far as practicable; where it cannot be avoided, but has been minimized, waste should be recovered and reused; where waste cannot be recovered/reused, it should be treated, destroyed and disposed of in an environmentally sound manner. • Institute and maintain good housekeeping and operating practices; littering is not allowed. • Non-hazardous and hazardous waste to be collected and stored separately: • Non-hazardous waste to be transported to and disposed at an approved waste disposal site. • Hazardous waste: recycle petroleum (fuels and lubricants) waste products and collect and recycle batteries and print cartridges. The remainder to be transported to a recognized hazardous waste disposal site.	Contractor	Ongoing throughout the construction Phase
31) All activities	Waste management: Sanitary	Pollution of biophysical environment	• Portable toilets (1 toilet per 30 employees; preferred1:15) to be provided on the site; contents to be collectedby an approved contractor and disposed of at anapproved sewage site.	Contractor	

ACTIVITY/PROCESS	ASPECT	IMPACT	MANAGEMENT ACTIONS	RESPONSIBLE PERSON(S)	TARGET DATE
32) All activities	Waste water management - waste water treatment	Pollution of biophysical environment	• Ensure that the discharge of process wastewater and/or sanitary wastewater and/or wastewater from utility operations and/or storm water to land conform to the regulatory requirements. • No discharge to Public Streams.	Contractor / ER	Ongoing throughout the construction Phase
33) All activities	Waste water management - storm water management	Soil Erosion	• Regular inspection and maintenance of permanent erosion and runoff control features.	Contractor / ER / ECO	
34) Rehabilitation	Rehabilitation	Social and Environmental Performance	• Remove all equipment, waste, temporary structures, etc. from the camp and work sites. • Reshape all disturbed areas to their original contours. • Cover disturbed areas with previously collected topsoil and spread evenly. • Manually rip disturbed areas, where compaction has taken place, and cover the areas with previously collected topsoil. • Replant any previously removed native plant species in disturbed areas; • Adhere to the regulations, rules, procedures, current and future regional and local land use plans. disposal site.	Everture Strategic Consulting Namibia (PTY) LTD	Ongoing Rehabilitation throughout the Construction Phase

5. OPERATIONAL STAGE

5.1 Introduction

Once the construction of the mine infrastructures and mine workings and mine testing has been completed, the proposed mine development will move onto the operational phase in order to produce the copper concentrate. A Project / Site / Health Safety and Environmental (HSE) Manager / Engineer shall be appointed by Everture Strategic Consulting Namibia (PTY) LTD to oversee all the site operation as well as management of all the mine operational activities summarised as follows:

(i) Mining operations (actual mining operations including drilling, blasting etc.);
(ii) Transportation of the mined materials from pit to the processing plant (crushers and milling);
(iii) Mineral (copper) processing (crushing and milling);
(iv) Transportation and disposal of waste rock materials;
(v) Transportation and disposal of tailings materials;
(vi) Expansion of the tailing;
(vii) Expansion of the waste rock;
(viii) Management of industrial and domestic waste water;
(ix) Storage and management of hazardous materials;
(x) Storage and management of recovered minerals (copper ore) at the production plant;
(xi) Ongoing exploration support.

Table 5.1 outlines the Environmental Management Plan for the operational stage of the proposed mine. Adherence to the regulations, rules, procedures, current and future regional and local land use plans must be observed at all time by the operational staff.

5.2 Roles and Responsibilities

The following is the summary of the role and responsibilities of Project / Site / Health Safety and Environmental (HSE) Manager / Engineer during the operational stage of the proposed project:

- Act as the Employer's (Everture Strategic Consulting Namibia (PTY) LTD) on-site project and HSE manager;

- Ensure that the Employer's responsibilities are executed in compliance with the relevant legislation (current and future Namibian legislation that may come into force, as well as International Standards) and the EMP for the Operations Stage of the proposed mine;

- Training of operations and maintenance staff to raise environmental awareness so that the day-to-day operations are carried out in an environmentally responsible manner, thereby preventing or minimizing the negative effects and maximizing the positive effects of the proposed operational project-related activities;

- Conduct regular (monthly) internal compliance audits; independent audits to be conducted bi-annually;

- Report to the Employer on the implementation of the EMP on site.

5.3 Other Supporting Teams

Project / Site / Health Safety and Environmental (HSE) Manager / Engineer will require a supporting team responsible for running various mine operational activities on the ground. The following is summary of the supporting teams that may be recruited during the operational stage of the proposed mine:

- Mining and ongoing exploration;
- Engineering;
- Maintenance;
- Electrical and electronic;
- Health Safety and Environmental (HSE), and;
- Others such as external consultants as may be required.

Table 5.1: Environmental Management Plan for the Operations Stage.

ACTIVITY/PROCESS	ASPECT	IMPACT	MANAGEMENT ACTIONS	RESPONSIBLE PERSON(S)	TARGET DATE
1) All activities	Management and Monitoring	Social and Environmental Performance	• Ensure that all aspects related to the EMP are implemented during the operations phase. • Adhere to the regulations, rules, and procedures as well as current and future regional and local and use plans.	Everture Strategic Consulting Namibia (PTY) LTD	Ongoing throughout the Operational Phase
2) All activities	Consultation and Disclosure	Social and Environmental Performance	• Consult with project affected communities in a structured and culturally appropriate manner throughout the operations phase. Consultation should be "free" (of external manipulation, interference or coercion, and intimidation), "prior" (timely disclosure of information) and "informed" (relevant, understandable and accessible information). • Adequately incorporate project affected communities' concerns.		
3) All activities	Grievance Mechanism (EP 6)	Social and Environmental Performance	• Ensure a mechanism for receiving and resolving any concerns and grievances related to the project's social and environmental performance during the operations phase. • Address concerns promptly and transparently and in a culturally appropriate manner.		
4) All activities	Training including awareness and inductions	Social and Environmental Performance	• Train employees and contractors in matters related to the project's social and environmental performance, Namibia's regulatory requirements, and the requirements of the EMP Performance Standards. • Ensure adequate environmental awareness training for all personnel. • Give environmental induction presentations to all new personnel prior to work commencement.		
5) All activities	Labour and Working Conditions	Social andEnvironmental Performance	• Establish, maintain and improve the worker-management relationship. Base the employment relationship on equal opportunity and fair treatment and no discrimination to be allowed. • Comply with Namibia's labour and employment laws and prevent unacceptable forms of labour, i.e. harmful child and forced labour. • Promote safe and healthy working conditions and the protection and promotion of worker health.		

ACTIVITY/PROCESS	ASPECT	IMPACT	MANAGEMENT ACTIONS	RESPONSIBLE PERSON(S)	TARGET DATE
Cont. 5) All activities	Labour and Working Conditions	Social and Environmental Performance	• Document and communicate the Working conditions and Terms of Employment. • Respect Collective Agreements and the right of workers to organize and bargain collectively.	Everture Strategic Consulting Namibia (PTY) LTD	Ongoing throughout the Operational Phase
6) All activities	Employment and procurement opportunities	Socio-economic	• Ensure local recruitment (of registered contractors or qualified andcertified personnel, registered and certified with the appropriatestatutory authorities and procurement to maximize benefit toregion.		
7) All activities	Occupational Health and Safety	Social and Environmental Performance	• Adhere to all Namibian Health and Safety Regulations asprescribed in the Labour Act and Mines Safety Policy / Regulations. • Occupational Health and Safety Training to be provided to allemployees. • Ensure that qualified first aid can be provided at all times. • Provide and ensure the active use of Personal Protective Equipment (PPE).		
8) All activities	Community Health and Safety	Social and Environmental Performance	• Prevent communicable disease (e.g sexually transmitted diseases (STDs) such as HIV/AIDS transmission): provide surveillance and active screening and treatment of employees; prevent illness among employees in local communities (through health awareness and education initiatives); ensure ready access to medical treatment, confidentiality and appropriate care, particularly with respect to migrant workers; and promote immunization.		

ACTIVITY/PROCESS	ASPECT	IMPACT	MANAGEMENT ACTIONS	RESPONSIBLE PERSON(S)	TARGET DATE
9) All activities	Unauthorized public access	Community Safety	• Use gates on the access road(s) and the entire site must be fenced off. • Mine site should not be accessible to anyone from the public. • Notice or information boards relating public safety hazards and emergency contact details should be put up at the gate(s) and at the mine site. • Create a viewpoint area, possibly including an information centre, for the public/tourists as part of the ongoing rehabilitation for mine closure and aftercare land use options as possible tourism product in the general area.	Everture Strategic Consulting Namibia (PTY) LTD	Ongoing throughout the Operational Phase
10) All activities	Increased traffic/vehicle movement	Air quality (dust or Particulate Matter (PM) pollution)	• Maintain the road surface to preserve surface characteristics (e.g. texture and roughness). • Use dust control/suppression methods, such as applying water or non-toxic chemicals to minimize dust (oil and oil by-products is not a recommended measure to control road dust).		
11) All activities	Increased traffic/vehicle movement (exhaust from diesel engines)	Air quality & Occupational and Community Health and Safety	• Fleet owners/operators to implement manufacturer recommended engine maintenance programs (to control vehicle emissions: Carbon Monoxide (CO), Nitrogen Oxide (NO_x), Sulphur Dioxide (SO_2), Particulate Matter (PM) and Volatile Organic Compounds (VOCs)).		
12) All activities	Increased traffic/vehicle movement	Occupational and Community Safety	• Adopt best transport safety practices by implementing the followingmeasures: emphasize safety aspects among drivers; improvedriving skills and require licensing of drivers; adopt limits for tripduration; avoid dangerous routes and times of day; and use speedcontrol devices. • Regularly maintain vehicles and use manufacturer approved parts.Use locally sourced materials (where possible) to minimize transport distances. • Employ safe traffic control measures, including the use of traffic and safety warning signs and flag persons to warn of dangerousconditions.		

ACTIVITY/PROCESS	ASPECT	IMPACT	MANAGEMENT ACTIONS	RESPONSIBLE PERSON(S)	TARGET DATE
13) All activities	Storm water management	Attraction of species (birds and bats) to the area due to open water and subsequent injury, disturbance, or mortality of species	• Implement appropriate storm water management measures so as to avoid the presence of open water in the area. • Storm water around the mine site shall not be discharged into the Oamites Ephemeral River / any public stream	Everture Strategic Consulting Namibia (PTY) LTD	Ongoing throughout the Operational Phase
14)Mine Operations	Mine Operations components	Species injury, disturbance (and potential alteration of behaviour), or mortality	• Implement monitoring programmes to study the potential impact(s)of the mine site operations on birds and bats.		
	Hazardous waste management	Pollution of biophysical Environment (soil and water)	• Mine site to be equipped with oil absorption and collection systems.		
15)General mine operational maintenance	Cleaning and maintenance of mine site	Resource use / depletion of natural resources	• Ensure all wash water is recycled. Ensure there are no leaks from all taps, pipes and fittings.		
	Periodic painting of mine structures	Pollution of biophysical Environment (soil and water)	• Conform to ISO 12944:1998 Paints and varnishes – Corrosion protection of steel structures by protective paint systems- Part 4: Types of surface and surface preparation.		
	Working at heights	Occupational Safety	• Test integrity of structure(s) before work commences. • Implement a fall protection program (including training in climbing techniques and the use of fall protection measures; inspectionmaintenance, and replacement of fall protection equipment; andrescue of fall-arrested workers). • Establish criteria for use of 100% fall protection (the system should be fitting for the tower structure and movements (ascent, descent,and moving from point to point)). • Install fixtures on tower components to facilitate the use of falprotection systems. • Provide an adequate work-positioning device system to workers (with connectors on positioning systems compatible with the towecomponents to which they are attached). • Ensure proper rating and maintenance of hoisting equipment and training of hoist operators. • Use safety belts of not less than 15.8 mm two in one nylon or Material of equivalent strength;		

ACTIVITY/PROCESS	ASPECT	IMPACT	MANAGEMENT ACTIONS	RESPONSIBLE PERSON(S)	TARGET DATE
General mine operational Maintenance *(15 Cont.).*			• Replace rope safety belts before signs of aging or fraying of fibres become evident. • Workers to use a second (backup) safety strap when operating power tools at height. • Remove signs/other obstructions from poles/structures before work commences. • Use approved tool bags for lowering/ raising tools/materials to workers on elevated structures. • Avoid conducting maintenance during poor weather conditions (especially where there is a risk lightning strikes or strong winds).	Everture Strategic Consulting Namibia (PTY) LTD	Ongoing throughout the Operational Phase
16) Power transmission and distribution	Electric and Magnetic Fields (EMF)	Occupational and Community Health	• Ensure that average and peak exposure levels remain below thereference levels developed by the Commission of Non-IonizingRadiation Protection (ICNIRP). • Reduce the EMF (from power lines, substations, or transformers)by applying engineering techniques (if levels are expected orconfirmed above the recommended levels): shielding with specificmetal alloys; burying transmission lines; increasing the height ofthe transmission towers; or modifications to size, spacing andconfiguration of conductors.		
17) Power transmission and distribution	Hazardous materials management (insulating oils /gases (Polychlorinated Biphenyls (PCB) and sulphur hexafluoride (SF_6)) and fuels)	Pollution of biophysical environment (soil and water)	• Minimize the use of Greenhouse gas. • The use of Polychlorinated Biphenyls (PCBs) has largely been discontinued (see International Finance Corporation (IFC) • Environment, Health and Safety (EHS) Guidelines for Electric • Power Transmission and Distribution for the management of PCBs should it be used).		

ACTIVITY/PROCESS	ASPECT	IMPACT	MANAGEMENT ACTIONS	RESPONSIBLE PERSON(S)	TARGET DATE
18) Power transmission and distribution	Live power lines	Occupational Health and Safety	• Allow only trained/certified employees to install, maintain, and repair electrical equipment. • Deactivate and properly ground live power distribution lines before work is conducted on, or close to, distribution lines. • Ensure that live-wire work is conducted by qualified workers and in accordance to the specific safety and insulation standards. • Do not approach an exposed energized or conductive part (even if the worker is trained) unless: the person is properly insulated from the energized part (e.g. gloves) and vice versa; the worker is properly isolated and insulated from any other conductive part (live line work). • Implement a Health and Safety Plan, detailing specific training, safety measures , personal safety devices and other precautions, where maintenance and operation is required within minimum setback distances	Everture Strategic Consulting Namibia (PTY) LTD	Ongoing throughout the Operational Phase
19) Power transmission and distribution	Working at heights on poles/structures	Occupational Health and Safety	• See General mine infrastructures and mine workings maintenance,working at heights.		
20) Power transmission and distribution	EMF	Occupational Health and Safety	• Prepare and implement an EMF Safety Program containing information on: potential exposure levels in the workplace and the use of personal monitors; training of workers to identify EMF levels and hazards; the identification and establishment of safety zones (areas acceptable for public exposure vs. those with expected elevated EMF levels and that only properly trained workers may access); action plans dealing with potential or confirmed exposure of levels that exceed those developed by the ICNIRP and Institute of Electrical and Electronics Engineers (IEEE).		
21) Power transmission and distribution	Electrocution	Community Health and Safety	• Use signs, barriers, and education to prevent public contact withpotentially dangerous equipment. • Ground conducting objects installed near power lines.		

ACTIVITY/PROCESS	ASPECT	IMPACT	MANAGEMENT ACTIONS	RESPONSIBLE PERSON(S)	TARGET DATE
22) All activities	Water Management	Resource use /depletion of natural resources	• Implement a water conservation program, promoting the continuous reduction in water consumption and achieving savings in water pumping, treatment and disposal costs, commensurate with the magnitude and cost of water use.	Everture Strategic Consulting Namibia (PTY) LTD	Ongoing throughout the Operational Phase
23) All activities	Hazardous materials management	Pollution of biophysical Environment (soil and water)	• Implement prevention and control measures for the use, handlingand storage of hazardous materials. • Train workers on the correct transfer and handling of fuels andchemicals and the response to spills. • Immediately report and clean up any accidental hydrocarbon spill:Spill-Sorb, Drizzat Pads, Enretech Powder or Peat Moss can beused to clean up small spills; in case of larger spills, the spilltogether with the polluted soil should be removed and disposed ofat e.g. a biological remediation site.		
		Occupational Health anSafety	• Implement hazard communication and training programs (includinginformation on Material Safety Data Sheets (MSDS)) to makeemployees aware of workplace chemical hazards and how torespond to these. • Provide and ensure the active use of Personal Protective Equipment (PPE).		
24) All activities	Waste management: Solid	Air quality	• Avoid the open burning of waste (whether hazardous, or nonhazardous).		
25) All activities	Waste management: non-hazardous and hazardous	Pollution of biophysical environment	• As per Waste Management Plan. • Institute and maintain good housekeeping and operating practices; littering is not allowed. • Non-hazardous and hazardous waste to be collected and stored separately: • Non-hazardous waste to be transported to and disposed off at an approved waste disposal site. • Hazardous waste: recycle petroleum (fuels and lubricants) waste products and collect and recycle batteries and printer cartridges the remainder to be transported to a recognized hazardous waste disposal site, with prior permission from the site operator owner.		

ACTIVITY/PROCESS	ASPECT	IMPACT	MANAGEMENT ACTIONS	RESPONSIBLE PERSON(S)	TARGET DATE
26) All activities	Waste management: Sanitary	Pollution of biophysical environment	• Toilets and Shower Blocks to be provided on the site as prat of the administration and supporting infrastructure; contents to be collected by an approved contractor and disposed of at an approved sewage site unless there will be a sewage plant?	Everture Strategic Consulting Namibia (PTY) LTD	Ongoing throughout the Operational Phase
27) All activities	Waste water management	Pollution of biophysical environment	• Ensure that the discharge of process wastewater and/or sanitary waste water and/or waste water from utility operations and/or storm water to land conform to the regulatory requirements. • Discharge to any public stream is prohibited		

6. CLOSURE AND AFTERCARE STAGES

6.1 Introduction

The proposed mine closure and aftercare stages of the proposed mine will cover all the activities that aim at restoring the proposed mine site to safe state. The closure and aftercare stages will be an ongoing process during the proposed mine operations stage with the final closure and aftercare stages implemented once the proposed mine has reached its useful lifespan. The closure stage will cover the restoration of the open pits, tailings, waste rock, removal of all structures such as the foundation, steel works and concrete casted to hold all structures that were constructed to support the proposed mine. The aftercare will cover the long-term stability and environmental sustainability maintenance of all the remaining supporting infrastructures such tailings dump, pits and waste rock. The following is summary of the activities that will be undertaken as part of the final closure and aftercare stages of the proposed mine:

(i) Closure of open pits;
(ii) Closure of solid waste piles;
(iii) Backfill waste dump sites;
(iv) Closure of storage sites;
(v) Closure of water and electricity sources;
(vi) Overall land reclamation;
(vii) Restoration of internal roads;
(viii) Revegetation as may be required;
(ix) Closure of open pits;
(x) Closure of solid waste piles;
(xi) Backfill waste dump sites;
(xii) Closure of storage sites.

Table 6.1 outlines the EMP framework for the closure and aftercare stages of the proposed mine. Table 6.2 summarise key mine components to be addressed in the ongoing and final mine Closure Plan.

6.2 Roles and Responsibilities

6.2.1 Employer's Representative (ER)

As part of the mine closure and aftercare stages, Everture Strategic Consulting Namibia (PTY) LTD shall appoint an **Employer's Representative (ER)** with the following responsibilities:

- Act as the Employer's (Everture Strategic Consulting Namibia (PTY) LTD on-site project manager and implementing agent;
- Appoint the Environmental Control Officer (ECO);
- Ensure that the Employer's responsibilities are executed in compliance with the relevant legislation and the EMP for the closure and aftercare stages;
- Ensure that all the necessary environmental authorizations and permits have been obtained for the mine closure and aftercare stages;
- Assist the Contractor in finding environmentally responsible solutions to challenges that may arise (with input from the ECO);
- Should the ER be of the opinion that a serious threat to, or impact on the environment may be caused by the closure and aftercare stages, he/she may stop work; the Employer must be informed of the reasons for the stoppage as soon as possible;
- The ER has the authority to issue fines for transgressions of basic conduct rules and/or contravention of the EMP;
- Should the Contractor or his/her employees fail to show adequate consideration for the environmental aspects related to the EMP, the ER can have person(s) and/or equipment removed from the site or work suspended until the matter is remedied;
- Report to the Employer on the implementation of this EMP on site (with input from the ECO and/or independent environmental auditor);
- Maintain open and direct lines of communication between the Employer, ECO, Contractor and I&APs with regards to environmental matters; and
- Attend regular site meetings and inspections on the progress of the mine closure and aftercare stages process.

6.2.2 Environmental Control Officer (ECO)

The **Environmental Control Officer (ECO)** has the following responsibilities:

- Assist the ER in ensuring that the necessary environmental authorizations and permits have been obtained for the mine closure and aftercare stages;
- Assist the ER and Contractor in finding environmentally responsible solutions to challenges that may arise;
- Conduct environmental monitoring as per EMP requirements;
- Recommend on the issuing of fines for transgressions of basic conduct rules and/or contraventions of the EMP to the ER;
- Advise the ER on the removal of person(s) and/or equipment not complying with the specifications of the EMP;
- Carry out regular site inspections (on average once per week) of all construction areas with regards to compliance with the EMP; report any non-compliance(s) to the ER as soon as possible;
- Organize for an independent internal audit on the implementation of and compliance to the EMP to be carried out half way through the mine closure and aftercare stages; audit reports to be submitted to the ER;
- Organize for an independent post mine closure and aftercare stages environmental audit to be carried out before certificates are issued by the relevant authorities;
- Continuously review the EMP and recommend additions and/or changes to the EMP document;
- Keep records of all activities related to environmental control and monitoring; the latter to include a photographic record of the mine closure and aftercare stages as well as environmental control and rehabilitation process, and a register of all major incidents; and
- Attend regular site meetings as part of the mine closure and aftercare stages.

6.2.3 Contractors and Subcontractors

The responsibilities of the **Contractors and Subcontractors** include:

- Comply with the relevant national legislation and the EMP for the mine closure and aftercare stages;
- Preparation and submission (to Everture Strategic Consulting Namibia (PTY) LTD) of the following

Management Plans:

- Environmental Awareness Training and Inductions;
- Emergency Preparedness and Response;
- Waste Management;
- Health and Safety, and;
- Electric and Magnetic Fields (EMF) Safety.

- Ensure adequate environmental awareness training for senior site personnel;
- Environmental awareness presentations (inductions) to be given to all site personnel prior to the mine closure and aftercare stages work commencement; the ECO is to provide the course content and the following topics, at least but not limited to, should be covered:
  - The importance of complying with the relevant Namibian, International and Best Practice Legislation;
  - Roles and Responsibilities, including emergency preparedness;
  - Basic Rules of Conduct (Do's and Don'ts);
  - EMP: aspects, impacts and mitigation;
  - Fines for Failure to Adhere to the EMP, and;
  - Health and Safety Requirements.
- Record keeping of all environmental awareness training and induction presentations; and
- Attend regular site meetings and environmental inspections.

6.3 Closure and Aftercare Stages Supporting Teams

The closure and closure activities of the proposed mine will require an array of specialist teams working very closely with their suppliers and core Everture Strategic Consulting Namibia (PTY) LTD site operations team. The following is a summary of some of the specialists that will be required during the mine closure and

aftercare stages as part of the team of contractors / subcontractor:

- Care taker, Mechanical and Crane Contractors, Electrical Contractors and Civil/Structural Contractors, each with their respective Sub-contractors and Suppliers, would report directly to the Employer's Representative (ER), acting as the onsite Project Manager.

Table 6.1: Environmental Management Plan for the mine ongoing and final closure and aftercare stages.

ACTIVITY/PROCESS	Aspect	IMPACT	MANAGEMENT ACTIONS	RESPONSIBLE PERSON(S)	TARGET DATE
1) Mine closure and aftercare stages	Ongoing and Final closure and aftercare stages	Social and Environmental Performance & Visual	• Isolate (electrically) the mine site from the substation. • Disassemble the steel works and cut off at the top of the foundation concrete; rehabilitate the hardstand area. • Remove all above-ground substation infrastructure and re-use, recycle or dispose of it. • Conduct a site contamination assessment; remove any contaminated material and dispose of at an appropriate disposal facility. • Break up foundations all the mine site and remove for disposal. • Dig up below-ground substation infrastructure and remove. • Conduct a validation survey to ensure that all contaminated material at the substation has been removed; remove any contaminated material and dispose of at an appropriate disposal facility. • Rehabilitate access tracks not required for ongoing land use activities. • Remove all other equipment, waste, etc. from the area. • Reshape tailings, waste and all disturbed areas to the surrounding contours. • Secure pit and other area with previously collected topsoil and spread evenly. • Manually rip disturbed areas, where compaction has taken place, and cover the areas with previously collected topsoil. • Replant any previously removed native plant species in disturbed areas.	Everture Strategic Consulting Namibia (PTY) LTD / Contractor	During Closure and Aftercare Stages
2. Closure	Loss of jobs and income	Socio-economic	• Implement a skills training programme during the Operations phase.	Everture Strategic Consulting Namibia (PTY) LTD Energy (PTY) LTD	Ongoing throughout the Operational Phase

Table 6.2: Mine components to be addressed in the ongoing and final mine Closure Plan.

Components	Aspects to be Addressed
Open Pit Mines	o Slope and bench stability o Groundwater and rainwater management o Security and unauthorized access o Wildlife entrapment o Effects of drainage into and from the pit
Ore Processing Facilities	o Removal of buildings and foundations o Clean-up of workshops, fuel and reagent o Disposal of scrap and waste materials o Re-profiling and revegetation of site
Waste Rock Piles	o Slope stability o Effects of leaching and seepage on surface and groundwater o Dust generation o Visual impact o Special considerations for some types of mines such as uranium mines
Tailings Management Facilities	o Dam stability o Changes in tailings geochemistry o Effects of seepage past the dam and from the base of the facility o Surface water management and discharge o Dust generation o Access and security o Wildlife entrapment o Special considerations for some types of mines such as uranium mines
Water Management Facilities	o Restoration or removal of dams, reservoirs, settling ponds, culverts, pipelines, spillways or culverts which are no longer needed o Surface drainage of the site and discharge of drainage waters o Maintenance of water management facilities
Landfill / Waste Disposal Facilities	o Disposal or removal from site of hazardous wastes o Disposal and stability of treatment sludge o Removal of sewage treatment plant o Prevention of groundwater contamination o Prevention of illegal dumping o Security and unauthorized access
Infrastructure	o Removal of power and water supply o Removal of haul and access roads o Reuse of transportation and supply depots

7. ENVIRONMENTAL PERFORMANCE MONITORING

7.1 Overview

The monitoring process of the EMP performances for the proposed mine is divided into two parts and these are:

(i) Monitoring activities and effects to be undertaken by the Environmental Control Officer (ECO);

(ii) Preparation of an Environmental Monitoring Report covering all activities related to the Environmental Management Plan throughout the life cycle of the proposed mine to be undertaken by the Environmental Control Officer (ECO).

As part of the provisions of this EMP and the conditions of the Environmental Clearance Certificate that will be issued by the Office of the Environmental Commissioner (OEC) in the Ministry of Environment and Tourism, continuous environmental monitoring and reporting must be undertaken as required. The reporting process will form part of the ongoing environmental monitoring programme. Environmental monitoring programme is part of this EMP performances assessments and will need to be compiled and submitted as determined by the regulator (OEC). The process of undertaking appropriate monitoring as per specific topic and tracking performances against the objectives and documenting all environmental activities is part of internal and external auditing to be coordinated by the Environmental Control Officer (ECO) / External Consultant / Suitable qualified in-house resource person. Tables 7.1 – 7.9 outline the type of information that shall need to be recorded on a regular basis by the Environmental Control Officer (ECO) as part of the monitoring process of the activities and the effects.

The second part of the monitoring of the EMP performance will require a report outlining all the activities related to effectiveness of the EMP at the end of the proposed mine life to be undertaken by the Environmental Control Officer (ECO). The types of the data sets to be used in the preparation of such a report are outlined in Tables 7.1 - 7.9. The objective will be to ensure that corrective actions are reviewed and steps are taken to ensure compliance for future EIA and EMP implementation. The report shall outline the status of the environment and any likely environmental liability after completion of the proposed project. The report shall be submitted to the OEC in the Ministry of Environment and Tourism.

Table 7.1: Monitoring of environmental performance implementation / environmental awareness training.

Mitigation	Compliance	Follow-up Action Required	By Whom	By When	Completed
Is there an Environmental awareness training programme?					
How many people have been given environmental awareness training?					
Is a copy of the EMP on site?					
How effective is the awareness training? Do people understand the contents of the EMP? Where are the weaknesses? Ask 3 people at random various questions about the EMP					

Table 7.2: Monitoring of environmental performance for the temporal and permanent structures.

Mitigation	Compliance	Follow-up Action Required	By Whom	By When	Completed
Are the temporal and permanent structures positioned to avoid sensitive zones, ephemeral river channels and potential sensitive sites?					
Has new infrastructure been created? If so, what, and how well planned / built with respect to environment?					
Have toilets and showers been provided? Where are they situated?					
Do receptacles for waste have scavenging animal proof lids?					
What litter is there – who is littering?					
Are there facilities for the disposal of oils / etc. and how often is it removed to an approved disposal site?					
Is there evidence of oil / diesel spills? Bunding or not?					
What fuel source is being provided for cooking?					
Housekeeping					

Table 7.3: Environmental data collection.

Mitigation	Compliance	Follow-up Action Required	By Whom	By When	Completed
Are records being kept?					
Birds' mortality records as result of collision with the mine associated infrastructure?					
Birds nesting activities around the mine site?					
Noise level?					
Air Quality?					
Have archaeological sites been found / disturbed / described?					
Other key environmental data sets?					

Table 7.4: Health, Safety and Environment (HSE)

Mitigation	Compliance	Follow-up Action Required	By Whom	By When	Completed
Is there First Aid Kit containing anti-histamines etc.?					
Are dangerous areas clearly marked off?					
Do vehicles appear to maintain the recommended speed limits?					
Do vehicles drive with headlights on along the gravel roads at all times?					

Table 7.5: Recruitment of labour

Mitigation	Compliance	Follow-up Action Required	By Whom	By When	Completed
What labor source is used?					
How has the recruitment practice been done?					

Table 7.6: Management of the natural habitat and surficial materials management.

Mitigation	Compliance	Follow-up Action Required	By Whom	By When	Completed
Has there been any development done on or very close sensitive areas?					
Has anyone been caught with plants or animals in their possession?					
Has there been willful or malicious damage to the environment?					
Has topsoil / seed bank layer been removed from demarcated development areas and appropriately stored?					

Table 7.7: Tracks and off-road driving.

Mitigation	Compliance	Follow-up Action Required	By Whom	By When	Completed
Are existing tracks used and maintained?					
What new tracks have been developed and are they planned?					
What evidence is there of off-road driving? Who appears to be responsible?					
Are corners being cut, what type of turning circle are there? Three point turns vs. U turns?					
Have unnecessary tracks been rehabilitated and how well?					
Comments					

Table 7.8: Management of surface and groundwater.

Mitigation	Compliance	Follow-up Action Required	By Whom	By When	Completed
How is potable water supplied and how often? Position of tanks?					
Is water being wasted?					
Is there any leakage from pipes or taps?					
Were water samples taken regularly and measured?					

Table 7.9: Public relations.

Mitigation	Compliance	Follow-up Action Required	By Whom	By When	Completed
Have any complaints been made about the mine construction and or operational activities by the different I&APs? If so, what, and how was the issue resolved?					

8. ENVIRONMENTAL AWARENESS

8.1 Company / Proponent Environmental Policy

Table 8.1 summarises the environmental statement with respect to environmental commitment that the Proponent, Everture Strategic Consulting Namibia (PTY) LTD will implement as part of the company environmental policy.

Table 8.1: Environmental statement.

Everture Strategic Consulting Namibia (PTY) LTD Environmental Statement
Everture Strategic Consulting Namibia (PTY) LTD is Committed to: ▪ Exercising appropriate environmental care in accordance with the provisions of the EMP as presented in Tables 3.1, 4.1, 5.1 and 6.1 from preconstruction to closure and aftercare stages. ▪ Fully comply with all applicable environmental regulations in force in Namibia; ▪ Delivery of significant socioeconomic benefits for through broad-based equity participation in the Project Development and Operation. ▪ The promotion the development of open and constructive partnerships with the all the relevant stakeholders to address environmental concerns and advance necessary protection measures. ▪ The advancement of scientific knowledge to be applied to the identification and effective resolution of real environmental challenges associated with the proposed mine development. ▪ Continuously encouraging Pollution Prevention (P2), Cleaner Production (CP), Waste Minimisation, Reuse and Recycling efforts. ▪ Conducting regular internal and external audits of all our operations to ensure adherence to this policy and compliance to all relevant regulations throughout the life cycle of the proposed mine.

8.2 Environmental Awareness Guidance

(i) The Environmental Rules apply to EVERYBODY. This includes all permanent, contract, or temporary workers as well as any other person who visits the mine site. Any person who visits the mine site will be required to adhere to the company Environmental Code of Conduct;

(ii) The Site Manager will issue warnings and will discipline ANY PERSON who breaks anyone of the Environmental Rules and Procedures. Repeated and continued breaking of the Rules and Procedures will result in a disciplinary hearing and which may result in that person being asked to leave the site permanently;

(iii) The ENVIRONMENT means the whole surroundings around us. The environment is made-up of the soil, water, air, plants and animals; and those characteristics of the soil, water, air, plant and animal life that influence human health and wellbeing;

(iv) If any member of the WORK FORCE does not understand, or does not know how to keep any of Environmental Rule or Procedure, that PERSON must seek advice from the ENVIRONMENTAL CONTROL OFFICER (ECO), SITE MANAGER or CONTRACTOR. The PERSON that does not understand must keep asking until she/he is able to keep to the all the Environmental Rules and Procedures.

8.3 Environmental Awareness Training Materials

8.3.1 Natural Environmental Management Guidance

- Never feed, tease or play with, hunt, kill, destroy or set devices to trap any wild animal (including birds, reptiles and mammals), livestock or pets. Do not bring any wild animal or pet to the mine site;
- Do not pick any plant or take any animal out of the mine site area EVER. You will be prosecuted and asked to leave the project area;
- Never leave rubbish and food scraps or bones where it will attract animals, birds or insects. Rubbish must be thrown into the correct rubbish bins or bags provided;
- Protect the surface material by not driving over it unnecessarily;
- Do not drive over, build upon, or camp on any sensitive habitats for plants and animals;
- Do not cut down any part of living trees / bushes for firewood;

- Do not destroy bird nest, dens, burrow pits, termite hills etc or any other natural objects in the area.

8.3.2 Vehicle Use and Access Guidance

- Never drive any vehicle without a valid licence for that particular vehicle and do not drive any vehicle that appears not to be road-worthy;
- Never drive any vehicle when under the influence of alcohol or drugs;
- DO NOT make any new roads without permission. Stay within demarcated areas;
- Avoid U-Turns and large turning circles. 3-point turns are encouraged. Do not ever drive on rocky slopes or vegetated dune areas;
- Stay on the road, do not make a second set of tracks and do not cut corners;
- DO NOT SPEED - keep to less than 60 km per hour on the tracks and site roads;
- No off-road driving is allowed;
- Vehicles may only drive on demarcated roads;
- Adhere to speed limits and drive with headlights switched on along any gravel road.

8.3.3 Control of Dust Guidance

- Do not make new roads or clear any vegetation unless instructed to do so by your Contractor or the Environmental Control Officer / Site Manager;
- Try to disturb the surface of the natural landscape as little as possible.

8.3.4 Health and Safety Guidance

- Drink lots of water every day, but only from the fresh water supplies;
- Take the necessary precautions to avoid contracting the HIV/AIDS virus;
- Only enter or exit the mine at the demarcated gates / or road;
- Always keep the access area as you found them;
    - Any damage to any existing infrastructure in the area must be report to the Environmental Control Officer / Project Manager who will then inform the owner of any damage with all the repairs done to the satisfaction of the owner or Environmental Control Officer;

- Never enter any area that is out of bounds, or demarcated as dangerous or wander off without informing or permission of team leader;
- Report to your Contractor or the Site Manager if you see a stranger or unauthorised person in the mine site;
- Do not remove any vehicle, machinery, equipment or any other object from the mine site without permission of your Contractor or the Site Manager;
- Wear protective clothing and equipment required and according to instructions from your Contractor or the Site Manager;
- Never enter or work in the mine when under the influence of alcohol or drugs.

8.3.5 Preventing Pollution and Dangerous Working Conditions Guidance

- Never throw any hazardous substance such as fuel, oil, solvents, etc. into streams or onto the ground;
- Never allow any hazardous substance to soak into the soil;
- Immediately tell your Contractor or Environmental Control Officer / Site Manager when you spill, or notice any hazardous substance being spilled anywhere in the mine;
- Report to your Contractor or Environmental Control Officer / Site Manager when you notice any container, which may hold a hazardous substance, overflow, leak or drip;
- Immediately report to your Contractor or Environmental Control Officer / Site Manager when you notice overflowing problems or unhygienic conditions at the ablution facilities;
- Vehicles, equipment and machinery, containers and other surfaces shall be washed at areas designated by the Contractor or Environmental Control Officer/ Site Manager;
- If you are not sure how to transport, use, store or dispose any hazardous substance
    - ASK your Contractor or Environmental Control Officer / Site Manager for advice.

8.3.6 Saving Water Guidance

- Always use as little water as possible. Reduce, reuse and re-cycle water where possible;
- Report any dripping or leaking taps and pipes to your Contractor or Environmental Control Officer or Site Manager;
- Never leave taps running. Close taps after you have finished using them.

8.3.7 Disposal of Waste Guidance

- Learn to know the difference between the two main types of waste, namely:
  - ✓ General Waste; and
  - ✓ Hazardous Waste.
- Learn how to identify the containers, bins, drums or bags for the different types of wastes. Never dispose of hazardous waste in the bins or skips intended for general waste or construction rubble;
- Never burn or bury any waste within mining license area;
- Never overfill any waste container, drum, bin or bag. Inform your Contractor or the Environmental Control Officer / Site Manager if the containers, drums, bins or skips are nearly full;
- Never litter or throwaway any waste on the site, in the field or along any road. No illegal dumping;
- Littering is prohibited.

8.3.8 Religious, Cultural, Historical and Archaeological Objects Guidance

- If you find any suspected religious, cultural, historical or archeologically object or site around the mine, you must immediately notify your Contractor or Environmental Control Officer / Site Manager;
- Never remove, destroy, interfere with or disturb any religious, cultural, historical or archaeological object or site around the mine site.

8.3.9 Dealing with Environmental Complaints Guidance

- If you have any complaint about dangerous working conditions or potential pollution to the environment, immediately report this to your Contractor or the Environmental Control Officer / Site Manager;
- If any person complains to you about noise, lights, littering, pollution, or any other harmful or dangerous condition, immediately report this to your Contractor or the Environmental Control Officer / the Site Manager.

8.4 Environmental Personnel Register

Table 8.2 shows the Environmental Personnel Register to be signed by every person who receives or attends the Environmental Awareness Training or who has the training material explained to him or her or in possession of the training material.

Table 8.2: Environmental personnel register.

Date	Name	Company	Signature

9. CONCLUSION AND RECOMMENDATIONS

9.1 Summary of Conclusions

Mitigation measures for both positive and negative impacts have been proposed and management strategies are provided in this Environmental Management Plan (EMP Vol. 3 of 3) for the following development stages:

(i) Preconstruction;
(ii) Construction;
(iii) Operational;
(iv) Closure and Aftercare Stages.

Based on the extent, duration, intensity and likely negative and positive impacts of the proposed development, this Environmental Management Plan (EMP) Report Vol. 3 of 3 incorporating all the relevant mitigation measures with respect to likely impacts and recommendations to be implemented by the developer / operator. This EMP implementation and monitoring activities covers all the stages of the proposed mine project life cycle and is inclusive of the preconstruction, construction, operation and rehabilitation and closure and aftercare stages.

9.2 Recommendations

It's hereby recommended that the Everture Strategic Consulting Namibia (PTY) LTD takes all the necessary steps to implement all the recommendations of the EMP for the successful implementation and completion of the proposed mine project activities from construction to final closure and aftercare stages. The following are the recommended actions to be implemented by the proponent (Everture Strategic Consulting Namibia (PTY) LTD) as a part of the management of the impacts through implementations of this EMP Vol. 3 of 3 Report:

(i) Contract an Environmental Control Officer / External Consultant / suitable in- house resources person to lead and further develop, implement and promote environmental culture through awareness raising of the workforce, contractors and sub-contractors in the field during the whole duration of the proposed project;

(ii) Provide with other support, human and financial resources, for the implementation of the proposed mitigations and effective environmental management during the planned mine project life cycle;

(iii) Develop a simplified environmental induction and awareness programme for all the workforce,

contractors and sub-contractors;

(iv) Where contracted service providers are likely to cause environmental impacts, these will need to be identified and contract agreements need to be developed with costing provisions for environmental liabilities;

(v) Implement internal and external monitoring of the actions and management strategies developed during the project duration and a final Environmental Monitoring report to be prepared by the Environmental Control Officer / External Consultant / suitable in-house resource person and to be submitted to the regulators and to end the proposed mine project;

(vi) Develop and implement a monitoring programme that will fit into the overall company's Environmental Management Systems (EMS) as well as for any future EIA related to the expansion of the current delineated resources or development of completely new mine site within the ML No. 162.

All the responsibilities to ensure that the recommendations are executed accordingly, rest with the proponent **(Everture Strategic Consulting Namibia (PTY) LTD).** The proponent must provide all appropriate resource requirements for the implementation of this EMP Vol. 3 of 3 as well as an independently managed (not directly controlled by the mining company) funding instrument for mine Closure and Aftercare environmental liabilities. It is the responsibility of the proponent to make sure that all members of the workforce including contractors and subcontractors are aware of this EMP provisions and its objectives. It is hereby recommended that the proponent take all the necessary steps to implement all the recommendations of this EMP for the successful execution of the preconstruction, construction, operational, decommissioning, closure and aftercare activities of the ML No. 162.

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Appendix A

(Letter from Client, Site images, Old EMP)

ESC Mining

Windhoek, the 9th of September 2025

To:

The Environmental Commissioner
Ministry of Environment Forestry and Tourism,
Private Bag 13306, Windhoek
Namibia

Subject: Notification of Inactivity on Mining License No. 162 Kamzwas Farm No. 253, Windhoek District, Khomas Region

Dear Mr Mufeti,

The above captioned refers;

This letter saves to notify your office that there have been no mining activities undertaken on ML 162 which **is located on Kamzwas Farm No. 253, Windhoek District, Khomas Region. Since May 2022 there** have been no mining-related activities undertaken on the mining license.

The reasons for the inactivity are primarily due to the Russian war on Ukraine, as our main shareholder is of Russian decent and cannot get cash injection out of the country to start production. We are in the process of securing local funding but the commercial environment is not favorable. Even Selling the project is on table for future development.

We understand and respect our obligations in terms of environmental management and we assure the Department that the site has remained undisturbed during this period of non-operation.

Yours sincerely,

With kind Regards,

Roland Enke
Director / Chairman

SITE IMAGES

a)

b)

a & b shows general view of the ML

c)

d)

e)

f)

g)

c to g shows disused infrastructure around the site

h)

h shows a bridge which was washed away during the rainy season

i)

j)

i & j shows access road to the site

Everture Strategic Consulting Namibia (PTY) LTD

Vol. 2 of 2 - Final Environmental Management Plan (EMP) Report Prepared in Support of the Application for Environmental Clearance Certificate (ECC) for the Mining License (ML) No. 162 Kamzwas Farm No. 253, **WINDHOEK DISTRICT, KHOMAS REGION**

JUNE 2016

17 Pienaar Street
P. O. Box 50
WINDHOEK, NAMIBIA

Prepared By

Risk-Based Solutions cc

The Consulting Arm of Foresight Group Namibia (PTY) LTD

Our Investments and Consultancy Portfolio / Specialisation:

- **Environmental Assessments (Scoping, SEAs, EIAs and EMPs)**
- **Oil and Gas Exploration and Production Technical Support Services**
- **Minerals Exploration and Mining Technical Support Services**
- **Renewable Energy Technical Support Services**
- **Property Development and Tourism Investments**
- **Waste Management Technical Support Services**
- **Geoenvironmental and Geotechnical Engineering Technical Support Services**
- **Programme and Project Management and Logistics Support Services**
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Foresight Group Namibia (FGN) (PTY) LTD – *Perfecting the Future*
Risk-Based Solutions (RBS) – *Delivering the Solutions*

Summary Profile and Qualification of the Environmental Assessment Practitioner (EAP) – Dr. Sindila Mwiya

Dr. Sindila Mwiya has more than twelve (12) years of direct industry experience in onshore and offshore resources exploration, extraction and utilisation covering general and technical specialist exploration support, Health, Safety and Environment (HSE) permitting for Geophysical Surveys such as 2D and 3D seismic and Gravity surveys, mining and drilling operations support, through to recovery and production. Through his companies Risk-Based Solutions (RBS) and Foresight Group Namibia (FGN) (PTY) LTD, which he founded, he has worked and continue to work for global reputable oil and gas / energy/ resources companies such as InnoSun Holding (PTY) LTD (Namibia / France), LL Namibia Phosphate (Namibia/ Israel), HopSol Power Generation (PTY) LTD (Namibia), Debmarine (Namibia), Namibia Underwater Technologies (NUTAM) (Namibia), Petrobras Oil and Gas (Brazil) / BP (UK), REPSOL (Spain), ACREP (Angola), Preview Energy Resources (UK), HRT Africa (Brazil / USA), Chariot Oil and Gas Exploration (UK), Serica Energy (UK), Eco (Atlantic) Oil and Gas (Canada / USA), ION GeoVentures (USA), PGS UK Exploration (UK), TGS-Nopec (UK), Maurel & Prom (France), GeoPartners (UK), PetroSA Equatorial Guinea (South Africa / Equatorial Guinea), Preview Energy Resources (Namibia / UK), Sintezneftegaz Namibia LTD (Russia) and INA Namibia (INA INDUSTRIJA NAFTE d.d) (Croatia). Dr. Sindila Mwiya is highly qualified with extensive experience in petroleum, mining, renewable energy (Solar, Wind and Biomass), applied environmental management (Scoping, EIA, EMP, HSE etc.), cleaner production, geoenvironmental, geological and geotechnical engineering fields.

He has worked as an Environmental Assessment Practitioner (EAP), Project Manager, Lecturer (University of Namibia), External Examiner/ Moderator (Polytechnic of Namibia), Technical Consultant (RBS / FGN), National Technical Advisor (Directorate of Environmental Affairs, Ministry of Environment and Tourism / DANIDA – Cleaner Production Component) and Chief Geologist for Engineering and Environment Division and Geotechnician (Magnetics, Seismic, Gravity and Electromagnetics Exploration and Survey Methods) for Geophysics Division, Geological Survey of Namibia, Ministry of Mines and Energy. He has supervised and continue to support a number of MSc and PhD research programmes and has been a reviewer on international, national and regional researches, plans, programmes and projects with the objective to ensure substantial local skills development for sustainable natural resources development, utilisation, management and for development policies, plans, programmes and projects financed by governments, private investors and donor organisations. Since 2006, he has provided extensive technical support to the Department of Environmental Affairs (DEA), Ministry of Environment and Tourism (MET) through GIZ and continue to play a significant role in the amendments of the Namibian Environmental Management Act, 2007, (Act No. 7 of 2007), preparation of new Strategic Environmental Assessment (SEA) Regulations, preparation of the updated Environmental Impact Assessment (EIA) Regulations as well as the preparation of the new SEA and EIA Guidelines and Procedures.

Among his academic achievements, Dr Sindila Mwiya is a holder of a PhD (Geoenvironmental Engineering and Artificial Intelligence) – Research Thesis: Development of a Knowledge-Based System Methodology (KBSM) for the Design of Solid Waste Disposal Sites in Arid and Semiarid Environments (Namibia)), MPhil/PG Cert and BEng (Hons) (Engineering Geology and Geotechnics), qualifications from the University of Portsmouth in the United Kingdom. During the 2004 Namibia National Science Awards, organised by the Namibian Ministry of Education, and held in Windhoek, Dr. Sindila Mwiya was awarded the Geologist of the Year for 2004, in the professional category. Furthermore, as part of his professional career recognition, Dr. Sindila Mwiya is a life member of the Geological Society of Namibia, Consulting member of the Hydrogeological Society of Namibia and a Professional Engineer registered with the Engineering Council of Namibia.

WINDHOEK, JUNE 2016

CONTENT LIST

EXECUTIVE SUMMARY VII

1. BACKGROUND ..... - 1 -

1.1 Introduction ..... - 1 -
1.2 Environmental Regulatory Requirements ..... - 1 -
1.3 Proposed Location Project (ML No. 162) ..... - 1 -

2. OBJECTIVES OF THE EMP ..... - 5 -

2.1 Summary Objectives ..... - 5 -
2.2 EMP Management Linkages ..... - 5 -
2.3 The EMP ..... - 5 -
2.4 Summary of Impacts Assessment Methodology ..... - 6 -
2.5 Summary of Impact Assessment Results ..... - 7 -

3. PRECONSTRUCTION EMP ..... - 16 -

3.1 Introduction ..... - 16 -
3.2 Roles and Responsibilities ..... - 16 -
3.2.1 Employer's Representative (ER) / Project Manager ..... - 16 -
3.2.2 Environmental Control Officer (ECO) ..... - 17 -
3.2.3 Contractors and Subcontractors ..... - 18 -

4. CONSTRUCTION STAGE ..... - 28 -

4.1 Introduction ..... - 28 -
4.2 Roles and Responsibilities ..... - 28 -
4.2.1 Employer's Representative (ER ..... - 28 -
4.2.2 Environmental Control Officer (ECO) ..... - 29 -
4.2.3 Contractors and Subcontractors ..... - 30 -
4.3 Construction Supporting Teams ..... - 31 -

5. OPERATIONAL STAGE ..... - 45 -

5.1 Introduction ..... - 45 -
5.2 Roles and Responsibilities ..... - 45 -
5.3 Other Supporting Teams ..... - 46 -

6. CLOSURE AND AFTERCARE STAGES ..... - 55 -

6.1 Introduction ..... - 55 -
6.2 Roles and Responsibilities ..... - 56 -
6.2.1 Employer's Representative (ER ..... - 56 -
6.2.2 Environmental Control Officer (ECO) ..... - 56 -
6.2.3 Contractors and Subcontractors ..... - 57 -
6.3 Closure and Aftercare Stages Supporting Teams ..... - 58 -

7. ENVIRONMENTAL PERFORMANCE MONITORING ..... - 61 -

7.1 Overview ..... - 61 -

8. ENVIRONMENTAL AWARENESS ..... - 66 -

8.1 Company / Proponent Environmental Policy ..... - 66 -
8.2 Environmental Awareness Guidance ..... - 66 -
8.3 Environmental Awareness Training Materials ..... - 67 -
8.3.1 Natural Environmental Management Guidance ..... - 67 -
8.3.2 Vehicle Use and Access Guidance ..... - 67 -
8.3.3 Control of Dust Guidance ..... - 68 -
8.3.4 Health and Safety Guidance ..... - 68 -
8.3.5 Preventing Pollution and Dangerous Working Conditions Guidance ..... - 68 -
8.3.6 Saving Water Guidance ..... - 69 -
8.3.7 Disposal of Waste Guidance ..... - 69 -
8.3.8 Religious, Cultural, Historical and Archaeological Objects Guidance ..... - 70 -
8.3.9 Dealing with Environmental Complaints Guidance ..... - 70 -
8.4 Environmental Personnel Register ..... - 70 -

9. CONCLUSION AND RECOMMENDATIONS ..... - 72 -

9.1 Summary of Conclusions ..... - 72 -
9.2 Recommendations ..... - 72 -

LIST OF FIGURES

Figure 1.1: Regional location of the Mining License (ML) 162 Area ..... - 2 -
Figure 1.2: Detailed regional overview of the ML No. 162 ..... - 3 -
Figure 1.3: Detailed overview of the ML No. 162 and the Old Oamites Copper Mine ..... - 4 -
Figure 2.1: Everture Strategic Consulting Namibia (PTY) LTD organisational structure for the proposed mine project with respect to the implementation of the EMP. ..... - 6 -

LIST OF TABLES

Table 2.1: Outline of proposed project developmental stages and all the associated activities as sources of potential environmental impacts. ..... - 8 -
Table 2.2: Matrix impact assessment results of the proposed mining project. ..... - 9 -
Table 2.3: Significant matrix impact assessment results of the proposed mining project..... - 11 -
Table 2.4: Summary of key potential environmental concerns during site preparation and the construction of mine infrastructures including test mining operations. ..... - 13 -
Table 2.5: Summary of key potential environmental concerns during mine operations, closure aftercare stages. ..... - 15 -
Table 3.1: Preconstruction EMP. ..... - 19 -
Table 4.1: Summary of the construction activities covering mine infrastructures and mine workings. ..... - 28 -
Table 4.2: Environmental Management Plan for construction activities covering mine infrastructures and mine workings. ..... - 32 -
Table 5.1: Environmental Management Plan for the Operations Stage..... - 47 -
Table 6.1: Environmental Management Plan for the mine ongoing and final closure and aftercare stages. ..... - 59 -
Table 6.2: Mine components to be addressed in the ongoing and final mine Closure Plan. ..... - 60 -
Table 7.1: Monitoring of environmental performance implementation / environmental awareness training. ..... - 62 -
Table 7.2: Monitoring of environmental performance for the temporal and permanent structures. ..... - 62 -
Table 7.3: Environmental data collection. ..... - 63 -
Table 7.4: Health, Safety and ENvionment (HSE). ..... - 63 -
Table 7.5: Recruitment of labour. ..... - 63 -
Table 7.6: Management of the natural habitat and surficial materials management ..... - 64 -
Table 7.7: Tracks and off-road driving. ..... - 64 -
Table 7.8: Management of surface and groundwater. ..... - 65 -
Table 7.9: Public relations. ..... - 65 -
Table 8.1: Environmental statement. ..... - 66 -
Table 8.2: Environmental personnel register. ..... - 71 -

EXECUTIVE SUMMARY

1. Introduction

Everture Strategic Consulting Namibia (PTY) LTD (**the Proponent)** hold mineral rights under the Mining Licence (ML) No. 162. The ML No. 162 is situated on Farm Kamzwas No. 172 which 50 km south of Windhoek on a B1 road to Rehoboth, Windhoek District, Khomas Region. The Mining License No. 162 is valid for a period of ten (10) years from the 5th December 2011 to 4th December 2021. The ML covers base and rare metals, precious metals and semi-precious stones minerals groups, with copper being the main principle commodity being mined. Current operations are focused on small-scale exploration, test mining and mining being undertaken by six (6) workers. Deepening on the outcome of the feasibility study, future expansion of the operation will involve 100 people being employed with a possible lifespan of more than forty (40) years. The ML No. 162 covers an area of 108 Ha and consists of four (4) inflection points on the boundary.

2. The EMP Provisions

The Environmental Management Plan (EMP), described in this report, is based on the findings as outlined in the EIA (Vol. 1 of 2). Everture Strategic Consulting Namibia (PTY) LTD must incorporate the EMP in the Environmental Management System (EMS) of the company in line with the Environmental Policy of the company. This EMP Vol. 2 of 2 report incorporates the provisions of the Minerals (Prospecting and Mining) Act (No 33 of 1992), Environmental Impact Assessment Regulations (2012) and the Environmental Management Act, 2007, (Act No. 7 of 2007) as well as all the key applicable legislative provisions as outlined in the EIA Vol. 1 of 2 Report (Chapter 3) and the Environmental Policy of Everture Strategic Consulting Namibia (PTY) LTD.

3. Summary of the EMP

Based on the assessment of both negative and positive impacts undertaken for the ML No. 162, a number of positive and negative impacts have been identified. Mitigation measures for the negative impacts have been proposed and management strategies are provided in this Environmental Management Plan (EMP Vol. 2 of 2) covering the following development stages:

(i) Preconstruction;

(ii) Construction;

(iii) Operational;

(iv) Decommissioning, Closure and Aftercare stages.

4. Proponent and Responsibilities

The following are the recommended actions to be implemented by the proponent (Everture Strategic Consulting Namibia (PTY) LTD) as a part of the management of the impacts through implementations of this EMP Vol. 2 of 2 Report:

(i) Contract an Environmental Control Officer / External Consultant / suitable in-house resources person to lead and further develop, implement and promote environmental culture through awareness raising of the workforce, contractors and sub-contractors in the field during the whole duration of the proposed project;

(ii) Provide with other support, human and financial resources, for the implementation of the proposed mitigations and effective environmental management during the planned mine project life cycle;

(iii) Develop a simplified environmental induction and awareness programme for all the workforce, contractors and sub-contractors;

(iv) Where contracted service providers are likely to cause environmental impacts, these will need to identified and contract agreements need to be developed with costing provisions for environmental liabilities;

(v) Implement internal and external monitoring of the actions and management strategies developed during the project duration and a final Environmental Monitoring report to be prepared by the Environmental Control Officer / External Consultant / suitable in-house resource person and to be submitted to the regulators and to end the proposed mine project;

(vi) Develop and implement a monitoring programme that will fit into the overall company's Environmental Management Systems (EMS) as well as for any future EIA related to the expansion of the current delineated resources or development of completely new mine site within the Ml No. 162.

All the responsibilities to ensure that the recommendations are executed accordingly, rest with the proponent **(Everture Strategic Consulting Namibia (PTY) LTD).** The proponent must provide all appropriate resource requirements for the implementation of this EMP Vol. 2 of 2 as well as an independently managed (not directly controlled by the mining company) funding instrument for mine Closure and Aftercare environmental liabilities. It is the responsibility of the proponent to make sure that all members of the workforce including contractors and subcontractors are aware of this EMP provisions and its objectives. It is hereby recommended that the proponent take all the necessary steps to implement all the recommendations of this EMP for the successful execution of the preconstruction, construction, operational, decommissioning, closure and aftercare activities of the mining operations in the ML No. 162.

1. BACKGROUND

1.1 Introduction

Everture Strategic Consulting Namibia (PTY) LTD (**the Proponent)** hold mineral rights under the Mining Licence (ML) No. 162. The ML No. 162 was granted on 5th December 2012 and will expired on the 4th December 2021 with possible twenty (20) years renewal based on the results of the ongoing exploration and feasibility study. The main commodity being mined is copper with copper concentrate as the main final product that is exported / sold to the smelter. The ML No. 162 covers the following mineral commodity groups:

(i) Base and rare metals (Copper);

(ii) Precious metals, and;

(iii) Semi-precious stones.

Following the completion of the initial exploration, test mining and small-scale mining operations under the MCs Nos. 67323 – 67328, coupled with the current ongoing feasibility study activities under the ML minerals rights tenement covering exploration, test mining and small-scale mining, the company intend to expand its operations with time.

1.2 Environmental Regulatory Requirements

Following the site inspection that was undertaken by the Environmental Commissioner on the 30th March 2015, the proponent was requested to submit to the Environmental Commissioner the Environmental Impact Assessment (EIA) and Environmental Management Plan (EMP) Report by the 30th April 2016 in support of an application for a new Environmental Clearance Certificate (ECC) covering the ML No. 162 activities. However, due to the circumstances beyond the control of the proponent, the deadline could not be met

In fulfilment of the request to submit the EIA and EMP Reports, the provisions of the Environmental Impact Assessment Regulations (2012) and the Environmental Management Act, 2007, (Act No. 7 of 2007), Everture Strategic Consulting Namibia (PTY) LTD appointed Risk-Based Solutions (RBS) CC, as the environmental consultants. The Environmental Assessment has been led by Dr. Sindila Mwiya as the Environmental Assessment Practitioner (EAP). This EMP report has been prepared in order to support the application for the new ECC with respect to the ML No. 162 as requested by the Environmental Commissioner.

1.3 Proposed Location Project (ML No. 162)

The mining project in the ML No. 162 is situated in the Windhoek District, Khomas Region, Central Namibia (Fig. 1.1). The ML No. 162 is 50 km away from the Windhoek and its 7 km off the main B1 Road linking Windhoek to Rehoboth (Figs. 1.2 and 1.3). The ML No. 162 area covers the previous explored copper deposit linked to the Oamites Old Copper situated immediately to the east of the ML and currently being used as a military base. The deposit lies on the farm Kamzwas No. 253. The license covers an area of 108 hectors. The outcrop is 168 m above floor level, 1600 m in length and 42 m wide.

Currently, only small scale mining operations with extensive exploration programme are taking place. Ore are processing is being undertaken at the testing plant temporarily erected close

to the working area, in order to find the best economic extraction method for the existing minerals. Subject to the outcome of the feasibility study, the future plan is to erect the proper extraction plant to mine on a large-scale as the known ore reserves indicates a possible mine life of more than 40 years of production, thus providing employment opportunities to more than 100 people. Among the current existing infrastructure around the ML No. 162 are five houses for workers, three temporary showers, two toilets water flushable with France train, one chemical toilet and a kitchen building. The entire mining area is fenced, to keep domestic animal outside. Further houses well be erected to accommodate workers as the need arises.

Figure 1.1: Regional location of the Mining License (ML) 162 Area (Modified from www.klausdierks.com).

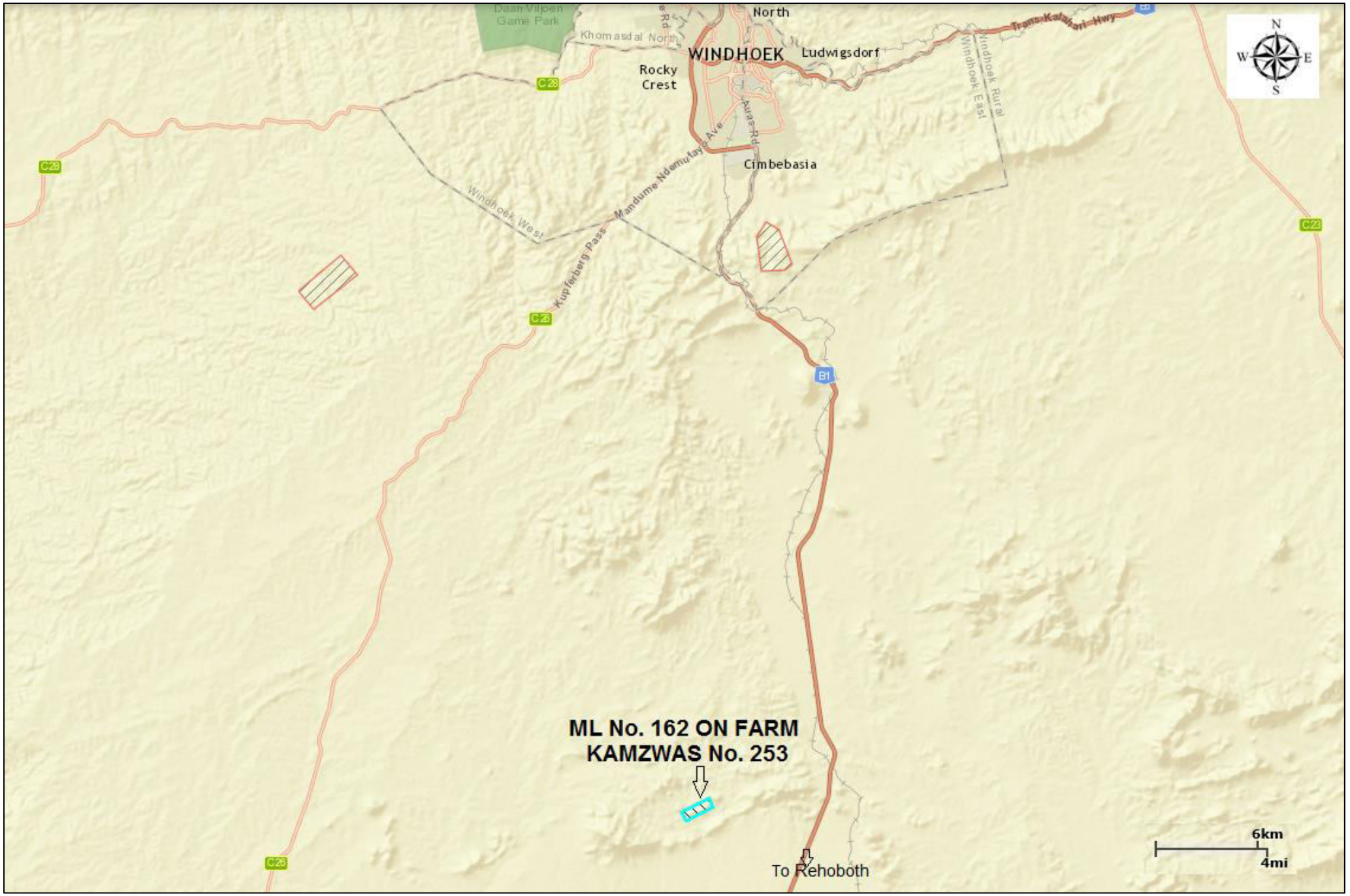

Figure 1.2: Detailed regional overview of the ML No. 162 (Source:http://portals.flexicadastre.com/ Namibia- Acceesed May 2016).

Figure 1.3: Detailed overview of the ML No. 162 and the Old Oamites Copper Mine (Source:http://portals.flexicadastre.com/ Namibia- Acceesed May 2016).

2. OBJECTIVES OF THE EMP

2.1 Summary Objectives

The Environmental Management Plan (EMP) provides a detailed plan of actions required in the implementation of the mitigation measures for minimising and maximising the identified negative and positive impacts respectively. The EMP also provides the management actions with roles and responsibilities requirements for the successful implementation of environmental management strategies by the Everture Strategic Consulting Namibia (PTY) LTD.

2.2 EMP Management Linkages

The Environmental Management Plan, described in this Report, is based on the findings as outlined in the Environmental Impact Assessment Report. The EMP must be continuously updated during the implementation of the proposed project. Within the framework of the existing Environmental Policy of Everture Strategic Consulting Namibia (PTY) LTD, the EMP is to be incorporated in the Environmental Management System (EMS) of the company. This EMP incorporates the Environmental Policy of Everture Strategic Consulting Namibia (PTY) LTD, Namibian Environmental Regulations and Policies as well as international environmental best practices in mining development, operational, rehabilitation, closure and aftercare activities.

2.3 The EMP

An Environmental Management Plan (EMP) is one of the most important outputs of the environmental assessment process and is the synthesis of all the proposed mitigation and monitoring actions, set to a timeline and with specific assigned responsibilities. The aim of the EMP is to assist Everture Strategic Consulting Namibia (PTY) LTD Energy (PTY) LTD (the Proponent), Contractors and Subcontractor to ensure that the day-to-day operations are carried out in an environmentally responsible manner, thereby preventing or minimizing the negative effects and maximizing the positive effects of the project-related activities on the natural environment.

It's highly imperative that there is an effective and response organisational structure of Everture Strategic Consulting Namibia (PTY) LTD that defines the roles, responsibilities and authority to implement the provisions of this EMP. The summary of such a structure is shown in Fig. 2.1. Provision has also been made, on an ongoing basis, for sufficient management support and human and financial resources. Separate EMPs have been prepared for the project: an EMP for the upgrade and/or construction, including rehabilitation, of access road(s) to and from the proposed mine development; and EMPs for the Construction, Operations and Decommissioning/Closure / Aftercare Phases of the proposed mine development.

The EMPs are presented as comprehensive matrices: for each **Activity**/**Process** and related **Aspects** (defined by the International Organization for Standardization ISO 14001:2004 as *element of an organization's activities or products or services that can interact with the environment*; environment is defined as *surroundings in which an organization operates, including air, water, land, natural resources, flora, fauna, humans, and their interrelation*) and **Impacts** (*any change to the environment, whether adverse or beneficial, wholly or partially resulting from an organization's environmental aspects*), **Management Actions** required to address the impacts arising directly and indirectly from the various aspects of the proposed mining project, with **Responsible Persons** and **Timing** for each, are listed.

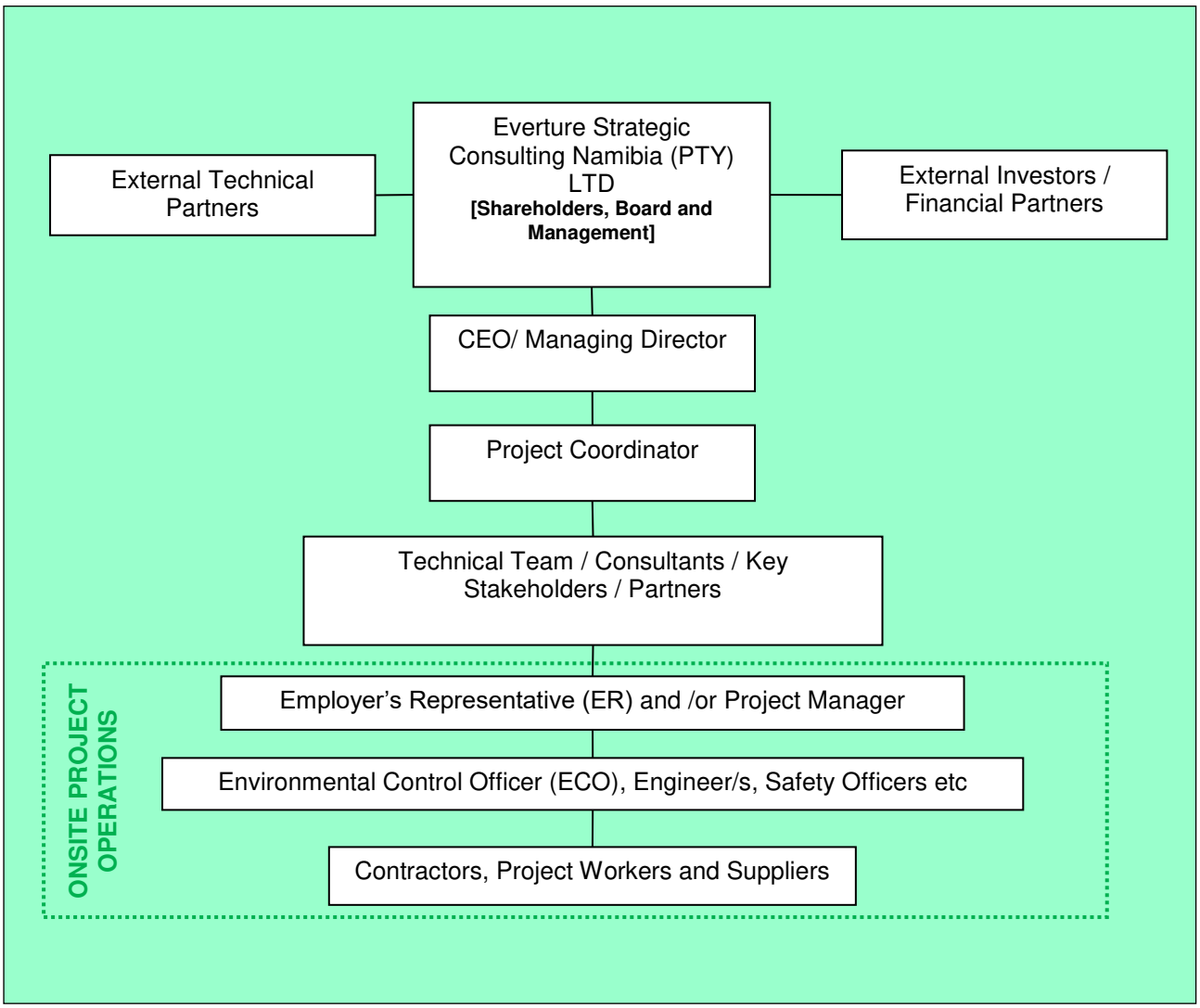

Figure 2.1: Everture Strategic Consulting Namibia (PTY) LTD organisational structure for the proposed mine project with respect to the implementation of the EMP.

2.4 Summary of Impacts Assessment Methodology

The following is the summary of the proposed mine developmental stages that have been assessed in this environmental assessment process covering the EIA and the development of the EMP phases:

- ✓ Preconstruction;
- ✓ Construction;
- ✓ Operation;
- ✓ Closure and Aftercare.

The detailed outline of all the activities associated with each of the above project developmental stages as sources of potential environmental impacts are outlined in Table 2.1. The impact assessment methodology has adopted a two dimensional matrix approach in predicting the

potential impacts of the proposed project on the receiving environment. The two dimensional matrix consisted of the following cross-referencing:

- ✓ The activities linked to the project that are supposed to have an impact on man and the environment;

- ✓ The existing environmental and social conditions that could possibly be affected by the project.

The impact assessment considerations included land disturbance/land use impacts; potential impacts to specially designated areas; impacts to soil, water and air resources; impacts to vegetation, wildlife, wildlife habitat, and sensitive species; visual, cultural, paleontological, socioeconomic and potential impacts from hazardous materials.

2.5 Summary of Impact Assessment Results

In order to determine the likely environmental impacts as well as the overall significant impact of individual sources associated with the proposed mine development (Table 2.1), an impact identification and assessment process was undertaken as part of the EIA. The results of the overall impacts and key issues associated with the proposed activities / sources of potential impacts with respect to the receiving environment that could potentially be affected, resulting in key issues are presented in Table 2.2.

The EIA significant impact identification and assessment processes focused on the environment interaction approach with respect to the proposed project activities, the pathways and the likely targets or receptor. In this process, components of the project activities that are likely to impact the natural environment (physical, biological and social) were broken down into individual development stages and activities. The results of the overall significant impacts assessment associated with the proposed activities / sources of potential impacts with respect to the receiving environment that could potentially be affected, resulting in key issues are presented in Tables 2.3. The summary of key potential environmental concerns expected during site preparation are outlined in Table 2.4 while those associated with the proposed mine operations, closure and aftercare stages are outlined in Table 2.5.

Table 2.1: Outline of proposed project developmental stages and all the associated activities as sources of potential environmental impacts.

PROJECT DEVELOPMENT PHASE	ACTIVITIES	
PRECONSTRUCTION	1. General site clearing of the pit area, administration block, waste rock, tailings, supporting infrastructure (water and electricity etc.)	
	2. Access roads clearing	
	3. Top soil removal and storage	
	4. Development of the temporary construction camp	
	5. Installation of campsites, offices, workshops, storage facilities.	
CONSTRUCTION	MINE SUPPORTING INFRASTRUCTURE	1. Transportation facilities, including access roads to the site and on-site roads
		2. Production plant and ore handling infrastructure including foundation and the entire structures
		3. Tailing disposal facilities
		4. Waste rock stockpiles
		5. Water supply systems
		6. Power infrastructure, including power distribution systems
		7. Administration blocks and warehouses
		8. Fuel supply and storage
		9. Workshop and equipment maintenance facilities
		10. Explosives storage facility / bunker
		11. Wastewater treatment systems
		12. Solid waste disposal
		13. Storm water management around the plant, waste rock and tailings
		14. Testing the ore handling and processing facilities
	MINE WORKINGS	1. Drilling and blasting to create direct access to the ore body
		2. Blasting to create direct access to the ore body
		3. Actual pit excavation and stripping of the overburden to create direct access to the ore body
		4. Ore production for test mining operations
		5. Test mining
OPERATION	1. Mining operations (actual mining operations including drilling, blasting etc.)	
	2. Transportation of the mined materials from pit to the processing plant (crushers and milling)	
	3. Mineral (copper) processing (crushing and milling)	
	4. Transportation and disposal of waste rock materials	
	5. Transportation and disposal of tailings materials	
	6. Expansion of the tailing	
	7. Expansion of the waste rock	
	8. Management of industrial and domestic waste water	
	9. Storage and management of hazardous materials	
	10. Storage and management of recovered minerals (copper ore) at the production plant	
	11. Ongoing exploration support	
CLOSURE AND AFTERCARE	1. Closure of open pits	
	2. Closure of solid waste piles	
	3. Backfill waste dump sites	
	4. Closure of storage sites	
	5. Closure of water and electricity sources	
	6. Overall land reclamation	
	7. Restoration of internal roads	
	8. Revegetation as may be required	

Table 2.2: Matrix impact assessment results of the proposed mining project.

	LIKELY IMPACT		RECEPTORS / TARGETS THAT MAY BE IMPACTED							
	NO IMPACT		PHYSICAL ENVIRONMENT			BIOLOGICAL ENVIRONMENT				
SOURCES OF POTENTIAL IMPACT	PROJECT DEVELOPMENT PHASE	ACTIVITIES	Natural Environment – Air, Noise, Water, Green Space	Built Environment – Houses, Roads, Transport Systems, Buildings, Infrastructure	Socioeconomic and Cultural -Characteristics of the local societies and communities	Flora	Fauna	Habitat	Ecosystem - Services, function, use values and non-use
	PRE-CONSTRUCTION	1. General site clearing of the pit area, administration block, waste rock, tailings, supporting infrastructure (water and electricity)							
		2. Access roads clearing							
		3. Top soil removal and storage							
		4. Development of the temporary construction camp							
		5. Installation of campsites, offices, workshops, storage facilities.							
	CONSTRUCTION	MINE SUPPORTING INFRASTRUCTURE: 1. Transportation facilities, including access roads to the site and on-site roads							
		2. Production plant and ore handling infrastructure including foundation and the entire structures							
		3. Tailing disposal facilities							
		4. Waste rock stockpiles							
		5. Water supply systems							
		6. Power infrastructure, including power distribution systems							
		7. Administration blocks and warehouses							
		8. Fuel supply and storage							
		9. Workshop and equipment maintenance facilities							
		10. Explosives storage facility / bunker							
		11. Wastewater treatment systems							
		12. Solid waste disposal							
		13. Storm water management around the plant, waste rock and tailings							
		14. Testing the ore handling and processing facilities							
		MINE WORKINGS: 1. Drilling and blasting to create direct access to the ore body							
		2. Blasting to create direct access to the ore body							
		3. Actual pit excavation and stripping of the overburden to create direct access to the ore body							
		4. Ore production for test mining operations							
		5. Test mining							

Table 2.2: *Cont.*

	LIKELY IMPACT	RECEPTORS / TARGETS THAT MAY BE IMPACTED						
	NO IMPACT	PHYSICAL ENVIRONMENT			BIOLOGICAL ENVIRONMENT			
SOURCES OF POTENTIAL IMPACT	PROJECT DEVELOPMENT PHASE / ACTIVITIES	Natural Environment – Air, Noise, Water, Green Space	Built Environment – Houses, Roads, Transport Systems, Buildings, Infrastructure	Socioeconomic and Cultural -Characteristics of the local societies and communities	Flora	Fauna	Habitat	Ecosystem - Services, function, use values and non-use
	OPERATION							
	1. Mining operations (actual mining operations including drilling, blasting etc.)							
	2. Transportation of the mined materials from pit to the processing plant (crushers and milling)							
	3. Mineral (copper) processing (crushing and milling)							
	4. Transportation and disposal of waste rock materials							
	5. Transportation and disposal of tailings materials							
	6. Expansion of the tailing							
	7. Expansion of the waste rock							
	8. Management of industrial and domestic waste water							
	9. Storage and management of hazardous materials							
	10. Storage and management of recovered minerals (copper ore) at the production plant							
	11. Ongoing exploration support							
	CLOSURE AND AFTERCARE							
	1. Closure of open pits							
	2. Closure of solid waste piles							
	3. Backfill waste dump sites							
	4. Closure of storage sites							
	5. Closure of water and electricity sources							
	6. Overall land reclamation							
	7. Restoration of internal roads							
	8. Revegetation as may be required							
	9. Closure of open pits							
	10. Closure of solid waste piles							
	11. Backfill waste dump sites							
	12. Closure of storage sites							

Table 2.3: Significant matrix impact assessment results of the proposed mining project.

MAJOR AND LOCALISED	MINOR	RECEPTORS / TARGETS THAT MAY BE IMPACTED						
MODERATE AND LOCALISED	NEGLIGIBLE	PHYSICAL ENVIRONMENT			BIOLOGICAL ENVIRONMENT			

SOURCES OF POTENTIAL IMPACT	PROJECT DEVELOPMENT PHASE	ACTIVITIES		Natural Environment – Air, Noise, Water, Green Space	Built Environment – Houses, Roads, Transport Systems, Buildings, Infrastructure	Socioeconomic and Cultural -Characteristics of the local societies and communities	Flora	Fauna	Habitat	Ecosystem - Services, function, use values and non-use
	PRE-CONSTRUCTION	1. General site clearing of the pit area, administration block, waste rock, tailings, supporting infrastructure (water and electricity)								
		2. Access roads clearing								
		3. Top soil removal and storage								
		4. Development of the temporary construction camp								
		5. Installation of campsites, offices, workshops, storage facilities.								
	CONSTRUCTION	MINE SUPPORTING INFRASTRUCTURE	1. Transportation facilities, including access roads to the site and on-site roads							
			2. Production plant and ore handling infrastructure including foundation and the entire structures							
			3. Tailing disposal facilities							
			4. Waste rock stockpiles							
			5. Water supply systems							
			6. Power infrastructure, including power distribution systems							
			7. Administration blocks and warehouses							
			8. Fuel supply and storage							
			9. Workshop and equipment maintenance facilities							
			10. Explosives storage facility / bunker							
			11. Wastewater treatment systems							
			12. Solid waste disposal							
			13. Storm water management around the plant, waste rock and tailings							
			14. Testing the ore handling and processing facilities							
		MINE WORKINGS	1. Drilling and blasting to create direct access to the ore body							
			2. Blasting to create direct access to the ore body							
			3. Actual pit excavation and stripping of the overburden to create direct access to the ore body							
			4. Ore production for test mining operations							
			5. Test mining							

Table 2.3: *Cont.*

	MAJOR AND LOCALISED		MINOR	RECEPTORS / TARGETS THAT MAY BE IMPACTED						
	MODERATE AND LOCALISED		NEGLIGIBLE	PHYSICAL ENVIRONMENT			BIOLOGICAL ENVIRONMENT			
SOURCES OF POTENTIAL IMPACT	PROJECT DEVELOPMENT PHASE	ACTIVITIES		Natural Environment – Air, Noise, Water, Green Space	Built Environment – Houses, Roads, Transport Systems, Buildings, Infrastructure	Socioeconomic and Cultural -Characteristics of the local societies and communities	Flora	Fauna	Habitat	Ecosystem - Services, function, use values and non-use
	OPERATION	1.	Mining operations (actual mining operations including drilling, blasting etc.)							
		2.	Transportation of the mined materials from pit to the processing plant (crushers and milling)							
		3.	Mineral (copper) processing (crushing and milling)							
		4.	Transportation and disposal of waste rock materials							
		5.	Transportation and disposal of tailings materials							
		6.	Expansion of the tailing							
		7.	Expansion of the waste rock							
		8.	Management of industrial and domestic waste water							
		9.	Storage and management of hazardous materials							
		10.	Storage and management of recovered minerals (copper ore) at the production plant							
		11.	Ongoing exploration support							
	CLOSURE AND AFTERCARE	1.	Closure of open pits							
		2.	Closure of solid waste piles							
		3.	Backfill waste dump sites							
		4.	Closure of storage sites							
		5.	Closure of water and electricity sources							
		6.	Overall land reclamation							
		7.	Restoration of internal roads							
		8.	Revegetation as may be required							
		9.	Closure of open pits							
		10.	Closure of solid waste piles							
		11.	Backfill waste dump sites							
		12.	Closure of storage sites							

Table 2.4: Summary of key potential environmental concerns during site preparation and the construction of mine infrastructures including test mining operations.

POTENTIAL SOURCES OF CONCERN	NATURE OF POTENTIAL CONCERN	ASSESSMENT	SIGNIFICANCE
Air Quality			
1. Operation and maintenance of vehicles and any on-site power generation facilities	• Potential releases of particulate matter, carbon monoxide, oxides of nitrogen, sulphur dioxide, and volatile organic compound	Negative Impacts	Localised Low Impacts
2. Fuel and chemical transportation, handling and storage	• Potential releases of volatile organic compounds and other harmful substances		
3. Site preparation and construction activities	• Potential releases of particulate matter		
Surface (Oamites Ephemeral River) and Ground Water Vulnerability			
1. Operation and maintenance of vehicles and any on-site power generation facilities	• Potential releases of substances such as suspended solids, trace metals, oil, degreasers, and detergents and other harmful substances that could affect water quality and aquatic ecosystems	Negative Impacts	Localised Low Impacts
2. Fuel and chemical transportation, handling and storage	• In the event of spills, potential releases of petroleum products or chemicals that could affect surface waters or groundwater as well as aquatic ecosystems		
3. Site preparation and construction activities	• Potential release of sediments, increasing concentrations of total suspended solids in receiving waters		
4. Sewage and wastewater disposal	• Potential releases of nutrients and other contaminants		
5. Construction of site access roads and power lines	• Potential release of sediments along the routes, increasing total suspended solids in receiving waters • Potential for acidic drainage if sulphide-bearing minerals are exposed during construction • Ephemeral Rivers crossings for access roads may affect aquatic ecosystems • Increased road access in remote areas may lead to increased illegal wood harvesting / poaching		

Table 2.4: *Cont.*

POTENTIAL SOURCES OF CONCERN	NATURE OF POTENTIAL CONCERN	ASSESSMENT	SIGNIFICANCE
Soil Quality and Terrestrial Ecosystems			
1. Fuel and chemical transportation, handling and storage	• In the event of spills, potential releases of petroleum products or chemicals that could affect soils, vegetation and wildlife	Negative Impacts	Localised Low Impacts
2. Operation of vehicles	• Vehicle operations may result in collisions with wildlife • Low altitude aircraft operations could disrupt wildlife		
3. Site preparation and construction activities	• Clearing of vegetation on site may have impacts on biodiversity, particularly if any rare, threatened or keystone species are present • Activities on site may disrupt and dislocate local wildlife and any migratory wildlife in the area • Some animals may be drawn to the site as a result of improper waste disposal or kitchen odours, which could lead to potential hazards for both workers and the animals		
4. Construction of site access roads and power lines	• Construction activities may disrupt and dislocate wildlife and any migratory wildlife in the area • Increased road access in remote areas may lead to increased hunting, stressing wildlife populations • Vehicle operations may result in collisions with wildlife		
Noise			
1. Noise from construction activities, including vehicle operations, drilling, and blasting	• Noise may affect local wildlife populations, and well as people living in communities near the exploration activity	Negative Impacts	Localised Low Impacts

Table 2.5: Summary of key potential environmental concerns during mine operations, closure aftercare stages.

POTENTIAL SOURCES OF CONCERN	NATURE OF POTENTIAL CONCERN	ASSESSMENT	SIGNIFICANCE
All others Impacts			
Land Disturbance	Relatively large area	Negative Impacts	Localised Low Impacts
Waste Rock Disposal	Can require large area; involves trucking, runoff and leachate management, dusting and aesthetic considerations		
Tailings	Tailings volumes generally larger due to large volume of ore processed		
Acid Drainage	May be associated with both mine and waste rock areas		
Reclamation	Both mine and waste rock area can represent major concerns due to the extent of the waste rock and pit		
Slope Instability / Rock falls	Pit, tailings and rock waste slope stability and potential failures are major challenges		
Truck Noise	Truck traffic between pit and waste rock dumps and mill can be a serious noise problem		
Vent Fan Noise	Not a concern		
Blasting Effects	Noise and vibration can be a concern requiring careful management		
Dust	Can be a concern due to pit operations, haulage roads and waste rock piles		
Mine Water	Mine water volume influenced by precipitation, surface and groundwater ingress. Elevated ammonium levels from blasting can be a concern. High sediment loadings are common. Mine water may contain metals and may have a low pH.		

3. PRECONSTRUCTION EMP

3.1 Introduction

This section contains the Environmental Management Plan (EMP) for the preconstruction activities. The main activities of the preconstruction stage will be the bush clearing, upgrading and/or construction, including rehabilitation, of access road(s) to and from the proposed mine development areas as well as other mine supporting infrastructures. Table 3.1 outlines the EMP framework for the preconstruction activities of the proposed development summarised as follows:

(i) General site clearing of the pit area, administration block, waste rock, tailings, supporting infrastructure (water and electricity etc.);

(ii) Access roads clearing;

(iii) Top soil removal and storage;

(iv) Development of the temporary construction camp;

(v) Installation of campsites, offices, workshops, storage facilities.

3.2 Roles and Responsibilities

3.2.1 Employer's Representative (ER) / Project Manager

Everture Strategic Consulting Namibia (PTY) LTD is to appoint an **Employer's Representative (ER)** with the following responsibilities:

- Act as the Employer's (Everture Strategic Consulting Namibia (PTY) LTD) on-site project manager and implementing agent;
- Appoint the Environmental Control Officer (ECO);
- Ensure that the Employer's responsibilities are executed in compliance with the relevant legislation and the EMP for the preconstruction stage);
- Ensure that all the necessary environmental authorizations and permits have been obtained;
- Assist the Contractor in finding environmentally responsible solutions to challenges that may arise (with input from the ECO);
- Should the ER be of the opinion that a serious threat to, or impact on the environment may be caused by the construction operations, he/she may stop work; the Employer must be informed of the reasons for the stoppage as soon as possible;
- The ER has the authority to issue fines for transgressions of basic conduct rules and/or contravention of the EMP;

- Should the Contractor or his/her employees fail to show adequate consideration for the environmental aspects related to the EMP, the ER can have person(s) and/or equipment removed from the site or work suspended until the matter is remedied;

- Report to the Employer on the implementation of this EMP on site (with input from the ECO and/or independent environmental auditor);

- Maintain open and direct lines of communication between the Employer, ECO, Contractor and Interested and Affected Parties (I&APs) with regards to environmental matters; and

- Attend regular site meetings and inspections.

3.2.2 Environmental Control Officer (ECO)

The **Environmental Control Officer (ECO)** has the following responsibilities:

- Assist the ER in ensuring that the necessary environmental authorizations and permits have been obtained;

- Assist the ER and Contractor in finding environmentally responsible solutions to challenges that may arise;

- Conduct environmental monitoring as per EMP requirements;

- Recommend on the issuing of fines for transgressions of basic conduct rules and/or contraventions of the EMP to the ER;

- Advise the ER on the removal of person(s) and/or equipment not complying with the specifications of the EMP;

- Carry out regular site inspections (on average once per week) of all construction areas with regards to compliance with the EMP; report any non-compliance(s) to the ER as soon as possible;

- Organize for an independent internal audit on the implementation of and compliance to the EMP to be carried out half way through the construction period; audit reports to be submitted to the ER;

- Organize for an independent post-construction environmental audit to be carried out;

- Continuously review the EMP and recommend additions and/or changes to the EMP document;

- Monitor the Contractor's environmental awareness training for all new personnel coming onto site;

- Keep records of all activities related to environmental control and monitoring; the latter to include a photographic record of the preconstruction and environmental control and rehabilitation process, and a register of all major incidents; and

- Attend regular site meetings.

3.2.3 Contractors and Subcontractors

The responsibilities of the **Contractors and Subcontractors** include:

- Comply with the relevant legislation and the EMP for the preconstruction activities;
- Preparation and submission to Everture Strategic Consulting Namibia (PTY) LTD of the following Management Plans:
    - Environmental Awareness Training and Inductions;
    - Emergency Preparedness and Response
    - Waste Management; and;
    - Health and Safety.
- Ensure adequate environmental awareness training for senior site personnel;
- Environmental awareness presentations (inductions) to be given to all site personnel prior to work commencement; the ECO is to provide the course content and the following topics, at least but not limited to, should be covered:
    - The importance of complying with the relevant Namibian, International and Best Practice Legislation;
    - Roles and Responsibilities, including emergency preparedness;
    - Basic Rules of Conduct (Do's and Don'ts);
    - EMP: aspects, impacts and mitigation;
    - Fines for Failure to Adhere to the EMP;
    - Health and Safety Requirements.
- Record keeping of all environmental awareness training and induction presentations; and
- Attend regular site meetings and environmental inspections.

Table 3.1: Preconstruction EMP.

ASPECT	IMPACT	MANAGEMENT ACTIONS	RESPONSIBLE PERSON(S)	TARGET DATE
1) Management and Monitoring	• Social and Environmental Performance	• Ensure that all aspects related to the EMP are implemented during the upgrade/construction and rehabilitation of access road(s). • Hold regular site meetings/inspections. Make provision in the minutes of the meetings for reporting on all aspects of the EMP related to the upgrade/construction and rehabilitation of the access road(s); • Adhere to the regulations, rules, procedures, current and future land use of the surrounding area.	• ER / ECO / Contractor	• Ongoing
2) Consultation and Disclosure	• Social and Environmental Performance	• Maintain open and direct lines of communication between the Employer, ECO, Contractor and I&APs with regards to environmental matters. • Consult with project affected communities in a structured and culturally appropriate manner throughout the project process. Consultation should be "free" (*of external manipulation, interference or coercion, and intimidation*), "prior" (*timely disclosure of information*) and "informed" (*relevant, understandable and accessible information*). • Adequately incorporate project affected communities' concerns.	• ER • Everture Strategic Consulting Namibia (PTY) LTD / ER	• Ongoing • Ongoing
3) Grievance Mechanism	• Social and Environmental Performance	• Implement a grievance mechanism for receiving and resolving any concerns and grievances related to the project's social and environmental performance throughout the project life cycle. • Inform the affected communities about the mechanism in the course of the community engagement process; it must be readily accessible to all segments of the affected communities. • Address concerns promptly and transparently and in a culturally appropriate manner.	• Everture Strategic Consulting Namibia (PTY) LTD / ER	• Ongoing
4) Training including awareness and inductions	• Social and Environmental Performance	• Train employees, contractors and Subcontractors in matters related to the project's social and environmental performance, Namibia's regulatory requirements • Ensure adequate environmental awareness training for all senior site personnel. • Give environmental induction presentations to all site personnel prior to work commencement.	• Everture Strategic Consulting Namibia (PTY) LTD • Contractor	• Ongoing • Pre- and during road upgrade/construction and rehabilitation

Table 3.1: *Cont.*

ASPECT	IMPACT	MANAGEMENT ACTIONS	RESPONSIBLE PERSON(S)	TARGET DATE
5) Labour and Working Conditions	• Social and Environmental Performance	• Establish, maintain and improve the worker-management relationship. Base the employment relationship on equal opportunity and fair treatment and no discrimination to be allowed. • Comply with Namibia's labour and employment laws and prevent unacceptable forms of labour, i.e. harmful child and forced labour. • Promote safe and healthy working conditions and the protection and promotion of worker health. • Prepare a Human Resources Policy and document and communicate the Working Conditions and Terms of Employment. • Respect Collective Agreements and the right of workers to organize and bargain collectively. • Prepare a Retrenchment Plan. • Implement a Grievance Mechanism.	• Everture Strategic Consulting Namibia (PTY) LTD	• Ongoing
6) Occupational Health and Safety	• Social and Environmental Performance	• Prepare and submit an Emergency Preparedness and Response Plan. • Adhere to all Namibian Health and Safety Regulations under the Labour Act and Mines Safety Regulations. • Occupational Health and Safety Training to be provided to all employees. • Ensure that qualified first aid can be provided at all times. • Provide and ensure the active use of Personal Protective Equipment (PPE).	• Contractor	• Pre- road upgrade/construction • Ongoing
7) Community Health and Safety	• Social and Environmental Performance	• Prevent communicable disease (e.g sexually transmitted diseases (STDs) such as HIV/AIDS transmission): provide awareness, surveillance and active screening and treatment of employees; prevent illness among employees in local communities (through health awareness and education initiatives); ensure ready access to medical treatment, confidentiality and appropriate care, particularly with respect to migrant workers; and promote immunization.	• Everture Strategic Consulting Namibia (PTY) LTD / Contractor	• Ongoing

Table 3.1: *Cont.*

ASPECT	IMPACT	MANAGEMENT ACTIONS	RESPONSIBLE PERSON(S)	TARGET DATE
8) Construction camp assumed to be a (tented) temporary camp and other supporting infrastructure. Adhere to the regulations, rules, procedures, current and future land use plans of the local area.	• Disturbance of fauna and flora and habitat alteration	• The planning and design to ensure minimum impact to the environment. • No trees or natural vegetation may be removed for the making of fires. • No animal may be injured, fed, trapped, hunted or harmed in any way. • No off-road driving will be allowed • Speed limit of not more than 60 km / h. • No trespassing on adjoining properties is allowed and no livestock, game or vegetation are to be interfered with.	• Everture Strategic Consulting Namibia (PTY) LTD / ER • Contractor	• Pre-construction • Ongoing
	• Pollution of biophysical environment (air, soil and water)	• No fires will be allowed, unless a specific area has been identified and set aside by the ER for the cooking of food. • Vehicle maintenance/servicing/washing not to be allowed anywhere on site/at the camp. • Portable toilets to be provided and used at the camp. • Sanitary wastewater to be released into a French drain system. • Use bio-degradable detergents on site. • Enforce proper waste (hazardous and non-hazardous) management practices (as per Waste Management Plan) – waste and litter to be disposed of in scavenger and weatherproof bins and the refuse to be collected by the contractor and disposed off an approved waste disposal site at least once a week or as may be required.	• Contractor	• Ongoing
	• Occupational Health and Safety	• No fires will be allowed, unless a specific area has been identified and set aside by the ER for the cooking of food. • Ensure that employees are trained in the use of appropriate firefighting equipment and ensure that such equipment is on hand at all times. • Comply with all electricity safety, generation and supply regulations. • Supply potable water for human consumption and other domestic uses; conduct chemical testing of water samples on a monthly basis (if applicable). • Make suitable arrangements, as far as practicable, for the maintenance of health, the prevention and overcoming of outbreaks of disease and of adequate first aid services. • Ensure that security arrangements are in place at all times.	• Contractor	• Ongoing

Table 3.1: *Cont.*

ASPECT	IMPACT	MANAGEMENT ACTIONS	RESPONSIBLE PERSON(S)	TARGET DATE
9) Clearing of areas for road upgrade /construction and always adhere to the regulations, rules, procedures, current and future land use plans of the local area.	• Disturbance of fauna and flora and habitat alteration	• Restrict activities to previously demarcated areas (borrow pits, haul and access roads (20 m from the centre line of the road), construction camp / supporting infrastructure, etc.); all other areas will be regarded as "no go" zones in order to minimize the impact on the surrounding land. • Minimize the removal of native plant species; no vegetation may be removed/damaged without direct instructions. • No off-road driving will be allowed. • No animal may be injured, fed, trapped, hunted or harmed in any way.	• Contractor	• Pre- and during road upgrade/construction • Ongoing
	• Soil erosion	• Sediment mobilization and transport: reduce or prevent soil erosion (schedule activities to avoid heavy rainfall / strong winds periods; contour and minimize length and steepness of slopes; mulching to stabilize exposed areas; re-vegetate areas promptly; and design channels and ditches for post-construction flow). • Road design: limit access road gradients to reduce run-off induced erosion; provide adequate road drainage based on road width, surface material, compaction and maintenance. • Structural (slope) stability: provide effective short-term measures for slope stabilization, sediment and subsidence control until long-term measures (during operations) can be implemented; provide adequate drainage systems to minimize and control infiltration.	• Engineer / Contractor	• Pre- and during road upgrade/construction and rehabilitation
	• Possible loss of the seed bank in the topsoil	• The upper layer of soil (10-20 cm), where alluvial, to be stripped and stockpiled separately (1-2 m high piles to allow for proper aeration). Install drainage to protect the topsoil pile from (water) erosion and cover it to protect it from (wind) erosion.	• Contractor	• Pre- and during road upgrade/construction
10) Construction material borrow pit siting.	• Visual, pollution (traffic, noise and air), and land use	• Consider, in addition to material quality and quantity, the visual impact, potential traffic, noise and air pollution, and the potential loss of arable land when borrow pits are sited. Adhere to the regulations, rules, procedures, current and future regional and local land use plans.	• Engineer / Contractor	• Pre- and during road upgrade/construction

Table 3.1: *Cont.*

ASPECT	IMPACT	MANAGEMENT ACTIONS	RESPONSIBLE PERSON(S)	TARGET DATE
11) Borrow pit management	• Disturbance of fauna and flora and habitat alteration	• Limit the number of borrow pits as far as possible. • The progression of stripping and excavation to allow for rehabilitation once the areas have been fully utilized.	• Engineer / Contractor	• Pre- and during road upgrade/construction
	• Possible loss of the seed bank in the topsoil	• The upper layer of soil (10-20 cm), where alluvial, to be stripped and stockpiled separately (1-2 m high piles to allow for proper aeration). Install drainage to protect the topsoil pile from (water) erosion and cover it to protect it from (wind) erosion.	• Contractor	• Pre- and during road upgrade/construction
	• Occupational and Community Safety	• Cut slopes not to be steeper than 30 degrees. • No under-cutting of the sides to be allowed. • Undertake excavations in a safe manner and in compliance with the relevant safety regulations (Labour Act and Mine Safety Regulations).	• Contractor	• Pre- and during road upgrade/construction
	• Social and Environmental Performance	• Cut slopes not to be steeper than 30 degrees. • Use excess rock spoil to fill borrow pits; material to be neatly shaped and no loose material to be left inside the borrow pits. • No waste are allowed to be dumped in borrow pits. • Evenly spread top soil over the entire area to allow for the re-growth of vegetation. • Replant previously removed native plant species in disturbed areas.	• Contractor	• During road upgrade/construction and rehabilitation
12) Increased traffic, presence and movement of machinery, and the establishment of soil stockpiles.	• Air quality (dust or Particulate Matter (PM) pollution)	• Minimize the area in which the movement of construction machines will take place to reduce the effects of dust pollution / generation. • Minimize dust from material handling sources (e.g. conveyors and bins) by using covers and/or control equipment (e.g. water suppression). • Minimize dust from open area sources, including storage piles, by using control measures (install enclosures and covers, and increase the moisture content). • Avoid the excavation, handling and transport of erodible materials under high wind conditions or when a visible dust plume is present.	• Contractor	• During road upgrade/construction and rehabilitation
13) Increased traffic/vehicle movement.	• Air quality (dust or Particulate Matter (PM) pollution)	• Maintain the road surface to preserve surface characteristics (e.g. texture and roughness). • Use dust control/suppression methods, such as applying water or non-toxic chemicals to minimize dust (oil and oil by-products is not a recommended measure to control road dust).	• Contractor	• Ongoing

Table 3.1: *Cont.*

ASPECT	IMPACT	MANAGEMENT ACTIONS	RESPONSIBLE PERSON(S)	TARGET DATE
14) Increased traffic, presence and movement of machinery (exhaust from diesel engines).	• Air quality & Occupational and Community Health and Safety	• Fleet owners/operators to implement manufacturer recommended engine maintenance programs (to control vehicle emissions: Carbon Monoxide (CO), Nitrogen Oxide (NO_x), Sulphur Dioxide (SO_2), Particulate Matter (PM) and Volatile Organic Compounds (VOCs)).	• Contractor	• During road upgrade/construction and rehabilitation
15) Presence of machinery, construction workers, and associated equipment.	• Visual and noise	• Avoid critical habitats (for access roads) through using existing access roads where possible.	• Engineer / Contractor	• Pre- and during construction
16) Increased traffic, movement of machinery.	• Occupational and Community Safety	• Adopt best transport safety practices by implementing the following measures: emphasize safety aspects among drivers; improve driving skills and require licensing of drivers; adopt limits for trip duration; avoid dangerous routes and times of day; and use speed control devices. • Regularly maintain vehicles and use manufacturer approved parts. • Use locally sourced materials (where possible) to minimize transport distances. • Employ safe traffic control measures, including the use of traffic and safety warning signs and flag persons to warn of dangerous conditions.	• Contractor	• Pre- and during road upgrade/construction and rehabilitation
17) Use of a Troxler (soil density gauge containing a radioactive source).	• Occupational Health and Safety	• Register the Troxler and apply for a permit from the Ministry of Health & Social Services. • Implement controls and monitoring requirements as per those prescribed by the Ministry of Health & Social Services for the safe handling, transportation and storage of the device.	• Contractor	• Pre- and during road construction
18) Water Management	• Resource use / depletion of natural resources	• Implement a water conservation program, promoting the continuous reduction in water consumption and achieving savings in water pumping, treatment and disposal costs, commensurate with the magnitude and cost of water use.	• ER / Contractor	• Pre- and during road upgrade/construction and rehabilitation

Table 3.1: *Cont.*

ASPECT	IMPACT	MANAGEMENT ACTIONS	RESPONSIBLE PERSON(S)	TARGET DATE
19) Hazardous materials management.	• Social and Environmental Performance	• Establish hazardous materials management priorities (based on hazard analysis of risky operations based on Material Safety Data Sheets (MSDS). • Avoid, or minimize the use of hazardous materials. • Prevent uncontrolled releases of hazardous materials to the environment or uncontrolled reactions that may result in fire or explosion. • Make us of engineering controls (containment, automatic alarms and shut-off systems); implement management controls (procedures, inspections and training, communication and drills) to address residual risks not prevented or controlled through engineering controls.	• Contractor	• During road upgrade/construction and rehabilitation
20) Hazardous materials management	• Pollution of biophysical environment (soil and water)	• Implement prevention and control measures for the use, handling and storage of hazardous materials: o Materials transfer: regularly inspect, maintain and repair fittings/pipes/hoses; make use of drip trays/other drip containment measures at connection/possible overflow points; o Overfill protection: use trained filling operators; install gauges on tanks to measure the volume inside; make use of dripless hose connections (vehicle tanks) and fixed connections (storage tanks); use a catch basin/drip tray around the fill pipe to collect spills; o Reaction, fire, and explosion prevention: hazardous materials to be stored in marked containers and separate (from non-hazardous materials); incompatible hazardous materials (acids, bases, flammables, oxidizers, reactive chemicals) to be stored in separate areas and with containment facilities separating material storage; smoking or working with open flames not to be permitted in the presence of these substances; limit access to hazardous waste storage areas and clearly label and demarcate the area; conduct regular inspections of the areas and document the findings; prepare and implement spill response and emergency plans; train employees in the use of appropriate firefighting equipment and ensure that such equipment is on hand at all times.	• Contractor	• During road upgrade/construction and rehabilitation

Table 3.1: *Cont.*

ASPECT	IMPACT	MANAGEMENT ACTIONS	RESPONSIBLE PERSON(S)	TARGET DATE
Hazardous materials management **(*Cont.*)**	•	○ Secondary containment: use bunding (made of impervious, chemically resistant material) that can contain the larger of 110% of the largest tank or 25% of the combined tank volumes for above-ground tanks with a total storage volume equal or greater than 1,000 liters. • Train workers on the correct transfer and handling of fuels and chemicals and the response to spills. • Immediately report and clean up any accidental hydrocarbon spill: Spill-Sorb, Drizzat Pads, Enretech Powder or Peat Moss can be used to clean up small spills; in case of larger spills, the spill together with the polluted soil should be removed and disposed of at e.g. a biological remediation site.	• Contractor	• During road upgrade/construction and rehabilitation
21) Hazardous materials management.	• Occupational Health and Safety	• Implement hazard communication and training programs (including information on Material Safety Data Sheets (MSDS)) to make employees aware of workplace chemical hazards and how to respond to these. • Provide and ensure the active use of Personal Protective Equipment (PPE).	• Contractor	• During road upgrade/construction and rehabilitation
22) Waste management: solid.	• Air quality	• Avoid the open burning of waste (whether hazardous, or non-hazardous).	• Contractor	• Pre- and during road upgrade/construction and rehabilitation
23) Waste management: non-hazardous and hazardous.	• Pollution of biophysical environment	• Prepare and submit a Waste Management Plan before construction commences. The generation of waste should be avoided or minimized as far as practicable; where it cannot be avoided, but has been minimized, waste should be recovered and reused; where waste cannot be recovered/reused, it should be treated, destroyed and disposed of in an environmentally sound manner. • Institute and maintain good housekeeping and operating practices; littering is not allowed. • Non-hazardous and hazardous waste to be collected and stored separately: • Hazardous waste: recycle petroleum (fuels and lubricants) waste products and collect and recycle batteries and print cartridges. The remainder to be transported to a recognized hazardous waste disposal site, with prior permission from the operator / owner.	• Contractor	• Pre- road upgrade/construction

Table 3.1: *Cont.*

ASPECT	IMPACT	MANAGEMENT ACTIONS	RESPONSIBLE PERSON(S)	TARGET DATE
24) Waste management: sanitary.	• Pollution of biophysical environment	• Portable toilets (1 toilet per 30 employees; preferred 1:15) to be provided and transported along the route; contents to be collected by an approved contractor and disposed of at an approved sewage site. Adhere to the regulations, rules, procedures, current and future regional and local land use plans.	• Contractor	• During road upgrade/construction and rehabilitation
25) Waste water management - waste water treatment.	• Pollution of biophysical environment	• Ensure that the discharge of process wastewater and/or sanitary wastewater and/or wastewater from utility operations and/or storm water to land conform to the regulatory requirements. Adhere to the regulations, rules, procedures, current and future regional and local land use plans.	• Contractor / ER	• Pre- and during road upgrade/construction and rehabilitation
26) Waste water management - storm water management	• Soil erosion	• Regular inspection and maintenance of permanent erosion and runoff control features.	• Contractor / ER / ECO	• Ongoing
27) Rehabilitation.	• Social and Environmental Performance	• Remove all equipment, waste, temporary structures, etc. from the camp and work sites. • Reshape all disturbed areas (including stockpiles, borrow pits, and temporary detours and turnouts) to their original contours. • Cover disturbed areas with previously collected topsoil and spread evenly. • Manually rip disturbed areas, where compaction has taken place, and cover the areas with previously collected topsoil. • Replant any previously removed native plant species in disturbed areas. • Adhere to the regulations, rules, procedures, current and future regional and local use plans.	• Contractor	• Rehabilitation

4. CONSTRUCTION STAGE

4.1 Introduction

The construction stage of the proposed mine will cover all the activities associated with the mine infrastructures and mine workings as outlined in Table 4.1. The EMP makes provisions for management of a wider array of activities that will be associated with the construction activities of all the required infrastructures for the proposed mine. Table 4.2 outlines the EMP framework for the construction stage of the proposed development. Always, adhere to the regulations, rules, procedures, current and future regional and local land use plans.

Table 4.1: Summary of the construction activities covering mine infrastructures and mine workings.

CONSTRUCTION	MINE SUPPORTING INFRASTRUCTURE	1. Transportation facilities, including access roads to the site and on-site roads
		2. Production plant and ore handling infrastructure including foundation and the entire structures
		1. Tailing disposal facilities
		2. Waste rock stockpiles
		3. Water supply systems
		4. Power infrastructure, including power distribution systems
		5. Administration blocks and warehouses
		6. Fuel supply and storage
		7. Workshop and equipment maintenance facilities
		8. Explosives storage facility / bunker
		9. Wastewater treatment systems
		10. Solid waste disposal
		11. Storm water management around the plant, waste rock and tailings
		12. Testing the ore handling and processing facilities
	MINE WORKINGS	1. Drilling and blasting to create direct access to the ore body
		2. Blasting to create direct access to the ore body
		3. Actual pit excavation and stripping of the overburden to create direct access to the ore body
		4. Ore production for test mining operations
		5. Test mining

4.2 Roles and Responsibilities

4.2.1 Employer's Representative (ER

Everture Strategic Consulting Namibia (PTY) LTD is to appoint an **Employer's Representative (ER)** with the following responsibilities:

- Act as the Employer's (Everture Strategic Consulting Namibia (PTY) LTD on-site project manager and implementing agent;
- Appoint the Environmental Control Officer (ECO);
- Ensure that the Employer's responsibilities are executed in compliance with the relevant legislation and the EMP for the construction stage;

- Ensure that all the necessary environmental authorizations and permits have been obtained;

- Assist the Contractor in finding environmentally responsible solutions to challenges that may arise (with input from the ECO);

- Should the ER be of the opinion that a serious threat to, or impact on the environment may be caused by the construction operations, he/she may stop work; the Employer must be informed of the reasons for the stoppage as soon as possible;

- The ER has the authority to issue fines for transgressions of basic conduct rules and/or contravention of the EMP;

- Should the Contractor or his/her employees fail to show adequate consideration for the environmental aspects related to the EMP, the ER can have person(s) and/or equipment removed from the site or work suspended until the matter is remedied;

- Report to the Employer on the implementation of this EMP on site (with input from the ECO and/or independent environmental auditor);

- Maintain open and direct lines of communication between the Employer, ECO, Contractor and I&APs with regards to environmental matters; and

- Attend regular site meetings and inspections.

4.2.2 Environmental Control Officer (ECO)

The **Environmental Control Officer (ECO)** has the following responsibilities:

- Assist the ER in ensuring that the necessary environmental authorizations and permits have been obtained;

- Assist the ER and Contractor in finding environmentally responsible solutions to challenges that may arise;

- Conduct environmental monitoring as per EMP requirements;

- Recommend on the issuing of fines for transgressions of basic conduct rules and/or contraventions of the EMP to the ER;

- Advise the ER on the removal of person(s) and/or equipment not complying with the specifications of the EMP;

- Carry out regular site inspections (on average once per week) of all construction areas with regards to compliance with the EMP; report any non-compliance(s) to the ER as soon as possible;

- Organize for an independent internal audit on the implementation of and compliance to the EMP to be carried out half way through the construction period; audit reports to be submitted to the ER;

- Organize for an independent post-construction environmental audit to be carried out before operations commence;

- Continuously review the EMP and recommend additions and/or changes to the EMP document;
- Monitor the Contractor's environmental awareness training for all new personnel coming onto site;
- Keep records of all activities related to environmental control and monitoring; the latter to include a photographic record of the construction and environmental control and rehabilitation process, and a register of all major incidents; and
- Attend regular site meetings.

4.2.3 Contractors and Subcontractors

The responsibilities of the **Contractors and Subcontractors** include:

- Comply with the relevant legislation and the EMP for the Construction Phase of the proposed mine;
- Preparation and submission to Everture Strategic Consulting Namibia (PTY) LTD of the following Management Plans:
    - Environmental Awareness Training and Inductions;
    - Emergency Preparedness and Response;
    - Waste Management;
    - Health and Safety, and;
    - Electric and Magnetic Fields (EMF) Safety.
- Ensure adequate environmental awareness training for senior site personnel;
- Environmental awareness presentations (inductions) to be given to all site personnel prior to work commencement; the ECO is to provide the course content and the following topics, at least but not limited to, should be covered:
    - The importance of complying with the relevant Namibian, International and Best Practice Legislation;
    - Roles and Responsibilities, including emergency preparedness;
    - Basic Rules of Conduct (Do's and Don'ts);
    - EMP: aspects, impacts and mitigation;
    - Fines for Failure to Adhere to the EMP, and;
    - Health and Safety Requirements.
- Record keeping of all environmental awareness training and induction presentations; and

- Attend regular site meetings and environmental inspections.

4.3 Construction Supporting Teams

The construction of the mine infrastructures and mine workings with activities as outlined in Table 4.1 will require an array of specialist teams working very closely with their suppliers and core Everture Strategic Consulting Namibia (PTY) LTD onsite operations team. The following is a summary of some of the specialists that will be required during the construction phase as part of the team of contractors and Subcontractors:

- Mining, Structural, Civil and Mechanical Engineers and Crane Contractors, Electrical Contractors and other specialist teams, each with their respective Sub-contractors and suppliers, would report directly to the Employer's Representative (ER), acting as the onsite Project Manager.

Table 4.2: Environmental Management Plan for construction activities covering mine infrastructures and mine workings.

ACTIVITY/PROCESS	ASPECT	IMPACT	MANAGEMENT ACTIONS	RESPONSIBLE PERSON(S)	TARGET DATE
1) All activities	• Management and Monitoring	• Social and Environmental Performance	• Ensure that all aspects related to the EMP are implemented during the construction phase. • Hold regular site meetings/inspections. Make provision in the minutes of the meetings for reporting on all aspects of the EMP related to the construction activities.	• ER / ECO / Contractor	Ongoing throughout the Construction Phase
2) All activities	• Consultation and Disclosure	• Social and Environmental Performance	• Maintain open and direct lines of communication between the Employer (Everture Strategic Consulting Namibia (PTY) LTD, ECO, Contractor and I&APs with regards to environmental matters. • Consult with project affected communities in a structured and culturally appropriate manner. Consultation should be "free" (*of external manipulation, interference or coercion, and intimidation*), "prior" (*timely disclosure of information*) and "informed" (*relevant, understandable and accessible information*). • Adequately incorporate project affected communities' concerns.	• ER • Everture Strategic Consulting Namibia (PTY) LTD / ER	
3) All activities	• Grievance Mechanism	• Social and Environmental Performance	• Ensure a mechanism for receiving and resolving any concerns and grievances related to the project's social and environmental performance during the construction phase. • Address concerns promptly and transparently and in a culturally appropriate manner.	• Everture Strategic Consulting Namibia (PTY) LTD / ER	
4) All activities	• Training including awareness and inductions	• Social and Environmental Performance	• Train employees and contractors in matters related to the project's social and environmental performance, Namibia's regulatory requirements. • Ensure adequate environmental awareness training for all senior site personnel. • Give environmental induction presentations to all site personnel prior to work commencement.	• Everture Strategic Consulting Namibia (PTY) LTD • Contractor	

Table 4.2: *Cont.*

ACTIVITY/PROCESS	ASPECT	IMPACT	MANAGEMENT ACTIONS	RESPONSIBLE PERSON(S)	TARGET DATE
5) All activities	• Labour and Working Conditions	• Social and Environmental Performance	• Establish, maintain and improve the worker-management relationship. Base the employment relationship on equal opportunity and fair treatment and no discrimination to be allowed. • Comply with Namibia's labour and employment laws and prevent unacceptable forms of labour, i.e. harmful child and forced labour. • Promote safe and healthy working conditions and the protection and promotion of worker health. • Prepare a Human Resources Policy and document and communicate the Working Conditions and Terms of Employment. • Respect Collective Agreements and the right of workers to organize and bargain collectively. • Prepare a Retrenchment Plan. • Implement a Grievance Mechanism.	• Everture Strategic Consulting Namibia (PTY) LTD	Ongoing throughout the Construction Phase
6) All activities	• Employment and procurement opportunities	• Socio-economic	• Ensure local recruitment (of registered contractors or qualified and certified personnel, registered and certified with the appropriate statutory authority) and procurement to maximize benefit to region.	• Everture Strategic Consulting Namibia (PTY) LTD	
7) All activities	• Occupational Health and Safety	• Social and Environmental Performance	• Prepare and submit an Emergency Preparedness and Response Plan. • Adhere to all Namibian Health and Safety Regulations. • Occupational Health and Safety Training to be provided to all employees. • Ensure that qualified first aid can be provided at all times. • Provide and ensure the active use of Personal Protective Equipment (PPE).	• Contractor	
8) All activities	• Community Health and Safety	• Social and Environmental Performance	• Prevent communicable disease (e.g sexually transmitted diseases (STDs) such as HIV/AIDS transmission): provide surveillance and active screening and treatment of employees; prevent illness among employees in local communities (through health awareness and education initiatives); ensure ready access to medical treatment, confidentiality and appropriate care, particularly with respect to migrant workers; and promote immunization.	• Everture Strategic Consulting Namibia (PTY) LTD / Contractor	

Table 4.2: *Cont.*

ACTIVITY/PROCESS	ASPECT	IMPACT	MANAGEMENT ACTIONS	RESPONSIBLE PERSON(S)	TARGET DATE
9) All activities	• Unauthorized public access	• Community Safety	• Use gates on the access road(s) and the entire mine site must be fenced off. • Mine site should not be accessible to anyone from the public. • Notice or information boards relating public safety hazards and emergency contact details should be put up at the gate(s) and at the mine site. • Create a viewpoint area, possibly including an information centre, for the public/tourists as part of the early stages of the Closure Plan provisions.	• Everture Strategic Consulting Namibia (PTY) LTD	Ongoing throughout the Construction Phase
10) All activities	• Construction	• Change in land use from “conservation” to “industrial”.	• Restrict construction activities to demarcated areas; all other areas will be regarded as "no go" zones in order to minimize the impact on the surrounding land; • Adhere to the regulations, rules, procedures, current and future regional and local land use plans.	• Contractor	
11) Mine Infrastructures and Mine Workings layout planning	• Mine Infrastructures and Mine Workings Layout	• Visual	• Minimize the presence of secondary structures: minimize number of access roads, and bury intra-project power lines. • Adhere to the regulations, rules, procedures, current and future regional and local land use plans for the area.	• Everture Strategic Consulting Namibia (PTY) LTD / Engineer	
12) Mine Infrastructures and Mine Workings design specifications	• Mine Infrastructures and Mine Workings appearance	• Visual	• Structural height and colour must be kept uniform; • Mine infrastructures and mine workings installation must be painted with a non-reflective coating to avoid high reflections; • Avoid using graphics or lettering on the mine infrastructures and mine workings	• Everture Strategic Consulting Namibia (PTY) LTD / Engineer	
13) All activities	• Construction Activities	• Disturbance of fauna and flora and habitat alteration	• The planning and design to ensure minimum impact to the environment. • No trees or natural vegetation may be removed from the ML area for the making of fires or sale. • No animal may be injured, fed, trapped, hunted or harmed in any way. • No off-road driving will be allowed. • No trespassing on adjoining properties is allowed and no livestock, game or vegetation are to be interfered with.	• Everture Strategic Consulting Namibia (PTY) LTD / ER • Contractor	

Table 4.2: *Cont.*

ACTIVITY/PROCESS	ASPECT	IMPACT	MANAGEMENT ACTIONS	RESPONSIBLE PERSON(S)	TARGET DATE
All activities (13) *Cont.*		• Pollution of biophysical environment (air, soil and water)	• No fires will be allowed, unless a specific area has been identified and set aside by the ER for the cooking of food. • Vehicle maintenance/servicing/washing not to be allowed anywhere on site/at the camp. • Portable toilets to be provided and used at the camp. • Sanitary wastewater to be released into a French drain System. • Use bio-degradable detergents on site. • Enforce proper waste (hazardous and non-hazardous) management practices (as per Waste Management Plan) – waste and litter to be disposed of in scavenger and weatherproof bins and the refuse to be collected by the contractor and disposed of at least once a week.	• Contractor	Ongoing throughout the Construction Phase
		• Occupational Health and Safety	• No fires will be allowed, unless a specific area has been identified and set aside by the ER for the cooking of food. • Ensure that employees are trained in the use of appropriate firefighting equipment and ensure that such equipment is on hand at all times. • Comply with all safety regulations regarding electricity supply. • Supply potable water for human consumption and other domestic uses; conduct chemical testing of water samples on a monthly basis (if applicable). • Make suitable arrangements, as far as practicable, for the maintenance of health, the prevention and overcoming of outbreaks of disease and of adequate first aid services. • Ensure that security arrangements are in place.	• Contractor	

Table 4.2: *Cont.*

ACTIVITY/PROCESS	ASPECT	IMPACT	MANAGEMENT ACTIONS	RESPONSIBLE PERSON(S)	TARGET DATE
14) Site preparation (Continue from Preconstruction)	• Clearing of areas for construction	• Disturbance of fauna and flora and habitat alteration	• Restrict construction activities to previously demarcated areas; all other areas will be regarded as "no go" zones in order to minimize the impact on the surrounding land. • Minimize the removal of native plant species; no vegetation may be removed/damaged without direct instruction. • No off-road driving will be allowed. • No animal may be injured, fed, trapped, hunted or harmed in any way.	• Contractor	Ongoing throughout the Construction Phase
		• Soil erosion	• Sediment mobilization and transport: reduce or prevent soil erosion (schedule activities to avoid heavy rainfall periods; contour and minimize length and steepness of slopes; mulching to stabilize exposed areas; re-vegetate areas promptly; and design channels and ditches for post-construction flow). • Structural (slope) stability: provide effective short-term measures for slope stabilization, sediment and subsidence control until long-term measures (during operations) can be implemented; provide adequate drainage systems to minimize and control infiltration.	• Engineer / Contractor • Engineer / Contractor	
		• Possible loss of the seed bank in the topsoil	• The upper layer of soil (10-20 cm), where alluvial, to be stripped and stockpiled separately (1-2 m high piles to allow for proper aeration). Install drainage to protect the topsoil pile from (water) erosion and cover it to protect it from (wind) erosion.	• Contractor	
15) Infrastructure construction	• Increased traffic, presence and movement of machinery, and the establishment of soil stockpiles	• Air quality (dust or Particulate Matter (PM) pollution)	• Minimize the area in which the movement of construction machines will take place to reduce the effects of dust pollution. • Minimize dust from material handling sources (e.g. conveyors and bins) by using covers and/or control equipment (e.g. water suppression). • Minimize dust from open area sources, including storage piles, by using control measures (install enclosures and covers, and increase the moisture content). • Avoid the excavation, handling and transport of erodible materials under high wind conditions or when a visible dust plume is present.	• Contractor	

Table 4.2: *Cont.*

ACTIVITY/PROCESS	ASPECT	IMPACT	MANAGEMENT ACTIONS	RESPONSIBLE PERSON(S)	TARGET DATE
Infrastructure construction (15) *cont.*	• Increased traffic/vehicle movement	• Air quality (dust or Particulate Matter (PM) pollution)	• Maintain the road surface to preserve surface characteristics (e.g. texture and roughness). • Use dust control/suppression methods, such as applying water or non-toxic chemicals to minimize dust (oil and oil by-products is not a recommended measure to control road dust).	• Contractor	Ongoing throughout the construction Phase
	• Increased traffic, presence and movement of machinery (exhaust from diesel engines)	• Air quality & Occupational and Community Health and Safety	• Fleet owners/operators to implement manufacturer recommended engine maintenance programs (to control vehicle emissions: Carbon Monoxide (CO), Nitrogen Oxide (NO_x), Sulphur Dioxide (SO_2), Particulate Matter (PM) and Volatile Organic Compounds (VOCs)).	• Contractor	
	• Presence of machinery, construction workers, infrastructure and associated equipment	• Visual and noise	• Avoid critical habitats (for site transmission and distribution rights of way, lines, towers and substations) through using existing utility and transport corridors (transmission and distribution) where possible.	• Engineer / • Contractor	
	• Increased traffic, movement of machinery	• Occupational and Community Safety	• Adopt best transport safety practices by implementing the following measures: emphasize safety aspects among drivers; improve driving skills and require licensing of drivers; adopt limits for trip duration; avoid dangerous routes and times of day; and use speed control devices. • Regularly maintain vehicles and use manufacturer approved parts. • Use locally sourced materials (where possible) to minimize transport distances. • Employ safe traffic control measures, including the use of traffic and safety warning signs and flag persons to warn of dangerous conditions.	• Contractor	
	• Mine Infrastructures and Mine Workings foundations	• Occupational Safety	• Ensure that all excavations are properly performed and in accordance with Occupational, Health and Safety (OH&S) regulations. • Ensure that the handling of concrete follow health and safety precautions (as per Material Safety Data Sheets (MSDS)).	• Contractor	

Table 4.2: *Cont.*

ACTIVITY/PROCESS	ASPECT	IMPACT	MANAGEMENT ACTIONS	RESPONSIBLE PERSON(S)	TARGET DATE
16) Mine Infrastructures and Mine Workings Components Height installations	• Working at heights	• Occupational Safety	• Test integrity of structure(s) before work commences. • Implement a fall protection program (including training in climbing techniques and the use of fall protection measures; inspection, maintenance, and replacement of fall protection equipment; and rescue of fall-arrested workers). • Establish criteria for use of 100% fall protection (the system should be fitting for the mine infrastructures and mine workings structure and movements (ascent, descent, and moving from point to point)). • Install fixtures on high components to facilitate the use of fall protection systems. • Provide an adequate work-positioning device system to workers (with connectors on positioning systems compatible with the mine infrastructures and mine workings components to which they are attached). • Ensure proper rating and maintenance of hoisting equipment and training of hoist operators. • Use safety belts of not less than 15.8 mm two in one nylon or material of equivalent strength; replace rope safety belts before signs of aging or fraying of fibres become evident. • Workers to use a second (backup) safety strap when operating power tools at height. • Remove signs/other obstructions from poles/structures before work commences. • Use approved tool bags for lowering/raising tools/materials to workers on elevated mine infrastructures and mine workings structures. • Avoid conducting mine infrastructures and mine workings installation during poor weather conditions (especially where there is a risk lightning strikes or strong winds).	• Contractor	Ongoing throughout the construction Phase

Table 4.2: *Cont.*

ACTIVITY/PROCESS	ASPECT	IMPACT	MANAGEMENT ACTIONS	RESPONSIBLE PERSON(S)	TARGET DATE
17) Power transmission and distribution	• Above Ground and Underground cables to transformer station; transmission lines)	• Habitat alteration & Occupational and Community Health	• Restrict excavation activities to previously demarcated areas; all other areas will be regarded as "no go" zones in order to minimize the impact on the surrounding land. • Ensure that all excavations are properly performed and in accordance with Occupational, Health and Safety (OH&S) regulations. • Restrict trench excavation to a pace that matches cable installation and backfill. No more than 300 m of open trench to exist at any time.	• Everture Strategic Consulting Namibia (PTY) LTD / Engineer	Ongoing throughout the construction Phase
18) Power transmission and distribution	• Habitat alteration	• Bird and bat collisions and electrocutions	• Align transmission corridors to avoid critical habitats. • Maintain 1.5 m spacing between, or cover energized components and grounded hardware. • Consider the installation of underground transmission and distribution lines (sensitive areas). • Install visibility enhancement object (marker balls, bird deterrents, or diverters).	• Everture Strategic Consulting Namibia (PTY) LTD / Engineer	
19) Power transmission and distribution	• Electric and Magnetic Fields (EMF)	• Occupational and Community Health	• Ensure that average and peak exposure levels remain below the reference levels developed by the Commission of Non-Ionizing Radiation Protection (ICNIRP). • Reduce the EMF (from power lines, substations, or transformers) by applying engineering techniques (if levels are expected or confirmed above the recommended levels): shielding with specific metal alloys; burying transmission lines; increasing the height of the transmission towers; or modifications to size, spacing and configuration of conductors.	• Everture Strategic Consulting Namibia (PTY) LTD / Engineer	
20) Power transmission and distribution	• Hazardous materials management	• Pollution of biophysical environment (soil and water)	• Minimize the use of SF6 (greenhouse gas). • The use of PCBs has largely been discontinued (see *IFC EHS Guidelines for Electric Power Transmission and Distribution* for the management of PCBs should it be used). • All activities, Hazardous materials management. • Wood preservatives? Needed?	• Contractor	

Table 4.2: *Cont.*

ACTIVITY/PROCESS	ASPECT	IMPACT	MANAGEMENT ACTIONS	RESPONSIBLE PERSON(S)	TARGET DATE
21) Power transmission and distribution	• Live power lines	• Occupational Health and Safety	• Allow only trained/certified employees to install, maintain, and repair electrical equipment. • Deactivate and properly ground live power distribution lines before work is conducted on, or close to, distribution lines. • Ensure that live-wire work is conducted by qualified workers and in accordance to the specific safety and insulation standards. • Do not approach an exposed energized or conductive part (even if the worker is trained) unless: the person is properly insulated from the energized part (e.g. gloves) and *vice versa*; the worker is properly isolated and insulated from any other conductive part (live-line work). • Implement a Health and Safety Plan, detailing specific training, safety measures, personal safety devices and other precautions, where maintenance and operation is required within minimum setback distances.	• Everture Strategic Consulting Namibia (PTY) LTD / Contractor	Ongoing throughout the construction Phase
22) Power transmission and distribution	• Working at heights on poles/structures	• Occupational Health and Safety	• See mine infrastructures and mine workings components, working at heights.	• Contractor	
23) Power transmission and distribution	• EMF	• Occupational Health and Safety	• Prepare and implement an EMF Safety Program containing information on: potential exposure levels in the workplace and the use of personal monitors; training of workers to identify EMF levels and hazards; the identification and establishment of safety zones (areas acceptable for public exposure vs. those with expected elevated EMF levels and that only properly trained workers may access); action plans dealing with potential or confirmed exposure of levels that exceed those developed by the ICNIRP and Institute of Electrical and Electronics Engineers (IEEE).	• Contractor	

Table 4.2: *Cont.*

ACTIVITY/PROCESS	ASPECT	IMPACT	MANAGEMENT ACTIONS	RESPONSIBLE PERSON(S)	TARGET DATE
24) Power transmission and distribution	• Electrocution	• Community Health and Safety	• Use signs, barriers, and education to prevent public contact with potentially dangerous equipment. • Ground conducting objects installed near power lines.	• Everture Strategic Consulting Namibia (PTY) LTD	Ongoing throughout the construction Phase
25) All activities	• Water Management	• Resource use / depletion of natural resources	• Implement a water conservation program, promoting the continuous reduction in water consumption and achieving savings in water pumping, treatment and disposal costs, commensurate with the magnitude and cost of water use.	• ER / Contractor	
26) All activities	• Hazardous materials management • Maybe this can come out; important, but more to do with overall hazardous materials management	• Social and Environmental Performance	• Establish hazardous materials management priorities (based on hazard analysis of risky operations). • Avoid, or minimize the use of hazardous materials. • Prevent uncontrolled releases of hazardous materials to the environment or uncontrolled reactions that may result in fire or explosion. • Make us of engineering controls (containment, automatic alarms and shut-off systems); implement management controls (procedures, inspections and training, communication and drills) to address residual risks not prevented or controlled through engineering controls.	• Contractor	

Table 4.2: *Cont.*

ACTIVITY/PROCESS	ASPECT	IMPACT	MANAGEMENT ACTIONS	RESPONSIBLE PERSON(S)	TARGET DATE
27) All activities	• Hazardous materials management (of mainly fuels and lubricating and hydraulic oils for construction and operating vehicles and equipment; substation transformer insulating oil; other chemicals used during mine construction, including concrete admixture chemicals such as surface active agents, plasticizers and form release oil (mineral); equipment coolants and maintenance chemicals such as solvent cleaners and paints)	• Pollution of biophysical environment (soil and water)	• Implement prevention and control measures for the use, handling and storage of hazardous materials: o Materials transfer: regularly inspect, maintain and repair fittings/pipes/hoses; make use of drip trays/other drip containment measures at connection/possible overflow points; o Overfill protection: use trained filling operators; install gauges on tanks to measure the volume inside; make use of dripless hose connections (vehicle tanks) and fixed connections (storage tanks); use a catch basin/drip tray around the fill pipe to collect spills; o Reaction, fire, and explosion prevention: hazardous materials to be stored in marked containers and separate (from non-hazardous materials); incompatible hazardous materials (acids, bases, flammables, oxidizers, reactive chemicals) to be stored in separate areas and with containment facilities separating material storage; smoking or working with open flames not to be permitted in the presence of these substances; limit access to hazardous waste storage areas and clearly label and demarcate the area; conduct regular inspections of the areas and document the findings; prepare and implement spill response and emergency plans; train employees in the use of appropriate firefighting equipment and ensure that such equipment is on hand at all times. • Train workers on the correct transfer and handling of fuels and chemicals and the response to spills. • Immediately report and clean up any accidental hydrocarbon spill: Spill-Sorb, Drizzat Pads, Enretech Powder or Peat Moss can be used to clean up small spills; in case of larger spills, the spill together with the polluted soil should be removed and disposed of at e.g. a biological remediation site.	• Contractor	Ongoing throughout the construction Phase

Table 4.2: *Cont.*

ACTIVITY/PROCESS	ASPECT	IMPACT	MANAGEMENT ACTIONS	RESPONSIBLE PERSON(S)	TARGET DATE
28) All activities	• Hazardous materials management	• Occupational Health and Safety	• Implement hazard communication and training programs (including information on Material Safety Data Sheets (MSDS)) to make employees aware of workplace chemical hazards and how to respond to these. • Provide and ensure the active use of Personal Protective Equipment (PPE).	• Contractor	Ongoing throughout the construction Phase
29) All activities	• Waste management: solid	• Air quality	• Avoid the open burning of waste (whether hazardous, or non-hazardous).	• Contractor	
30) All activities	• Waste management: non-hazardous and hazardous	• Pollution of biophysical environment	• Prepare and submit a Waste Management Plan before construction commences. The generation of waste should be avoided or minimized as far as practicable; where it cannot be avoided, but has been minimized, waste should be recovered and reused; where waste cannot be recovered/reused, it should be treated, destroyed and disposed of in an environmentally sound manner. • Institute and maintain good housekeeping and operating practices; littering is not allowed. • Non-hazardous and hazardous waste to be collected and stored separately: • Non-hazardous waste to be transported to and disposed at an approved waste disposal site. • Hazardous waste: recycle petroleum (fuels and lubricants) waste products and collect and recycle batteries and print cartridges. The remainder to be transported to a recognized hazardous waste disposal site.	• Contractor	
31) All activities	• Waste management: sanitary	• Pollution of biophysical environment	• Portable toilets (1 toilet per 30 employees; preferred 1:15) to be provided on the site; contents to be collected by an approved contractor and disposed of at an approved sewage site.	• Contractor	

Table 4.2: *Cont.*

ACTIVITY/PROCESS	ASPECT	IMPACT	MANAGEMENT ACTIONS	RESPONSIBLE PERSON(S)	TARGET DATE
32) All activities	• Waste water management - waste water treatment	• Pollution of biophysical environment	• Ensure that the discharge of process wastewater and/or sanitary wastewater and/or wastewater from utility operations and/or storm water to land conform to the regulatory requirements. • No discharge to Public Streams.	• Contractor / ER	Ongoing throughout the construction Phase
33) All activities	• Waste water management - storm water management	• Soil erosion	• Regular inspection and maintenance of permanent erosion and runoff control features.	• Contractor / ER / ECO	
34) Rehabilitation	• Rehabilitation	• Social and Environmental Performance	• Remove all equipment, waste, temporary structures, etc. from the camp and work sites. • Reshape all disturbed areas to their original contours. • Cover disturbed areas with previously collected topsoil and spread evenly. • Manually rip disturbed areas, where compaction has taken place, and cover the areas with previously collected topsoil. • Replant any previously removed native plant species in disturbed areas; • Adhere to the regulations, rules, procedures, current and future regional and local land use plans.	• Everture Strategic Consulting Namibia (PTY) LTD	Ongoing Rehabilitation throughout the Construction Phase

5. OPERATIONAL STAGE

5.1 Introduction

Once the construction of the mine infrastructures and mine workings and mine testing has been completed, the proposed mine development will move into the operational phase in order to produce the copper concentrate. Everture Strategic Consulting Namibia (PTY) LTD will be responsible for fulfilling the requirements in the Environmental Impact Assessment (EIA) and Environmental Management Plan (EMP) for the operational stage of the proposed mine. A Project / Site / Health Safety and Environmental (HSE) Manager / Engineer shall be appointed by Everture Strategic Consulting Namibia (PTY) LTD to oversee all the site operation as well as management of all the mine operational activities summarised as follows:

(i) Mining operations (actual mining operations including drilling, blasting etc.);

(ii) Transportation of the mined materials from pit to the processing plant (crushers and milling);

(iii) Mineral (copper) processing (crushing and milling);

(iv) Transportation and disposal of waste rock materials;

(v) Transportation and disposal of tailings materials;

(vi) Expansion of the tailing;

(vii) Expansion of the waste rock;

(viii) Management of industrial and domestic waste water;

(ix) Storage and management of hazardous materials;

(x) Storage and management of recovered minerals (copper ore) at the production plant;

(xi) Ongoing exploration support.

Table 5.1 outlines the Environmental Management Plan for the operational stage of the proposed mine. Adherence to the regulations, rules, procedures, current and future regional and local land use plans must be observed at all time by the operational staff.

5.2 Roles and Responsibilities

The following is the summary of the role and responsibilities of Project / Site / Health Safety and Environmental (HSE) Manager / Engineer during the operational stage of the proposed project:

- ✓ Act as the Employer's (Everture Strategic Consulting Namibia (PTY) LTD) on-site project and HSE manager;
- ✓ Ensure that the Employer's responsibilities are executed in compliance with the relevant legislation (current and future Namibian legislation that may come into force,

as well as International Standards) and the EMP for the Operations Stage of the proposed mine;

- ✓ Training of operations and maintenance staff to raise environmental awareness so that the day-to-day operations are carried out in an environmentally responsible manner, thereby preventing or minimizing the negative effects and maximizing the positive effects of the proposed operational project-related activities;

- ✓ Conduct regular (monthly) internal compliance audits; independent audits to be conducted bi-annually;

- ✓ Report to the Employer on the implementation of the EMP on site.

5.3 Other Supporting Teams

Project / Site / Health Safety and Environmental (HSE) Manager / Engineer will require a supporting team responsible for running various mine operational activities on the ground. The following is summary of the supporting teams that may be recruited during the operational stage of the proposed mine:

- ✓ Mining and ongoing exploration;

- ✓ Engineering;

- ✓ Maintenance;

- ✓ Electrical and electronic;

- ✓ Health Safety and Environmental (HSE), and;

- ✓ Others such as external consultants as may be required.

Table 5.1: Environmental Management Plan for the Operations Stage.

ACTIVITY/PROCESS	ASPECT	IMPACT	MANAGEMENT ACTIONS	RESPONSIBLE PERSON(S)	TARGET DATE
1) All activities	• Management and Monitoring	• Social and Environmental Performance	• Ensure that all aspects related to the EMP are implemented during the operations phase. • Adhere to the regulations, rules, and procedures as well as current and future regional and local and use plans.	Everture Strategic Consulting Namibia (PTY) LTD	Ongoing throughout the Operational Phase
2) All activities	• Consultation and Disclosure	• Social and Environmental Performance	• Consult with project affected communities in a structured and culturally appropriate manner throughout the operations phase. Consultation should be "free" (*of external manipulation, interference or coercion, and intimidation*), "prior" (*timely disclosure of information*) and "informed" (*relevant, understandable and accessible information*). • Adequately incorporate project affected communities' concerns.		
3) All activities	• Grievance Mechanism (EP 6)	• Social and Environmental Performance	• Ensure a mechanism for receiving and resolving any concerns and grievances related to the project's social and environmental performance during the operations phase. • Address concerns promptly and transparently and in a culturally appropriate manner.		
4) All activities	• Training including awareness and inductions	• Social and Environmental Performance	• Train employees and contractors in matters related to the project's social and environmental performance, Namibia's regulatory requirements, and the requirements of the EMP Performance Standards. • Ensure adequate environmental awareness training for all personnel. • Give environmental induction presentations to all new personnel prior to work commencement.		
5) All activities	• Labour and Working Conditions	• Social and Environmental Performance	• Establish, maintain and improve the worker-management relationship. Base the employment relationship on equal opportunity and fair treatment and no discrimination to be allowed. • Comply with Namibia's labour and employment laws and prevent unacceptable forms of labour, i.e. harmful child and forced labour. • Promote safe and healthy working conditions and the protection and promotion of worker health. • Document and communicate the Working Conditions and Terms of Employment. • Respect Collective Agreements and the right of workers to organize and bargain collectively.		

Table 5.1: *Cont.*

ACTIVITY/PROCESS	ASPECT	IMPACT	MANAGEMENT ACTIONS	RESPONSIBLE PERSON(S)	TARGET DATE
6) All activities	• Employment and procurement opportunities	• Socio-economic	• Ensure local recruitment (of registered contractors or qualified and certified personnel, registered and certified with the appropriate statutory authorities and procurement to maximize benefit to region.	Everture Strategic Consulting Namibia (PTY) LTD	Ongoing throughout the Operational Phase
7) All activities	• Occupational Health and Safety	• Social and Environmental Performance	• Adhere to all Namibian Health and Safety Regulations as prescribed in the Labour Act and Mines Safety Policy / Regulations. • Occupational Health and Safety Training to be provided to all employees. • Ensure that qualified first aid can be provided at all times. • Provide and ensure the active use of Personal Protective Equipment (PPE).		
8) All activities	• Community Health and Safety	• Social and Environmental Performance	• Prevent communicable disease (e.g sexually transmitted diseases (STDs) such as HIV/AIDS transmission): provide surveillance and active screening and treatment of employees; prevent illness among employees in local communities (through health awareness and education initiatives); ensure ready access to medical treatment, confidentiality and appropriate care, particularly with respect to migrant workers; and promote immunization.		
9) All activities	• Unauthorized public access	• Community Safety	• Use gates on the access road(s) and the entire site must be fenced off. • Mine site should not be accessible to anyone from the public. • Notice or information boards relating public safety hazards and emergency contact details should be put up at the gate(s) and at the mine site. • Create a viewpoint area, possibly including an information centre, for the public/tourists as part of the ongoing rehabilitation for mine closure and aftercare land use options as possible tourism product in the general area.		
10) All activities	• Increased traffic/vehicle movement	• Air quality (dust or Particulate Matter (PM) pollution)	• Maintain the road surface to preserve surface characteristics (e.g. texture and roughness). • Use dust control/suppression methods, such as applying water or non-toxic chemicals to minimize dust (oil and oil by-products is not a recommended measure to control road dust).		

Table 5.1: *Cont.*

ACTIVITY/PROCESS	ASPECT	IMPACT	MANAGEMENT ACTIONS	RESPONSIBLE PERSON(S)	TARGET DATE
11) All activities	• Increased traffic/vehicle movement (exhaust from diesel engines)	• Air quality & Occupational and Community Health and Safety	• Fleet owners/operators to implement manufacturer recommended engine maintenance programs (to control vehicle emissions: Carbon Monoxide (CO), Nitrogen Oxide (NO_x), Sulphur Dioxide (SO_2), Particulate Matter (PM) and Volatile Organic Compounds (VOCs)).	Everture Strategic Consulting Namibia (PTY) LTD	Ongoing throughout the Operational Phase
12) All activities	• Increased traffic/vehicle movement	• Occupational and Community Safety	• Adopt best transport safety practices by implementing the following measures: emphasize safety aspects among drivers; improve driving skills and require licensing of drivers; adopt limits for trip duration; avoid dangerous routes and times of day; and use speed control devices. • Regularly maintain vehicles and use manufacturer approved parts. • Use locally sourced materials (where possible) to minimize transport distances. • Employ safe traffic control measures, including the use of traffic and safety warning signs and flag persons to warn of dangerous conditions.		
13) All activities	• Storm water management	• Attraction of species (birds and bats) to the area due to open water and subsequent injury, disturbance, or mortality of species	• Implement appropriate storm water management measures so as to avoid the presence of open water in the area. • Storm water around the mine site shall not be discharged into the Oamites Ephemeral River / any public stream		

Table 5.1: *Cont.*

ACTIVITY/PROCESS	ASPECT	IMPACT	MANAGEMENT ACTIONS	RESPONSIBLE PERSON(S)	TARGET DATE
14) Mine Operations	• Mine Operations components	• Species injury, disturbance (and potential alteration of behaviour), or mortality	• Implement monitoring programmes to study the potential impact(s) of the mine site operations on birds and bats.	Everture Strategic Consulting Namibia (PTY) LTD	Ongoing throughout the Operational Phase
	• Hazardous waste management	• Pollution of biophysical environment (soil and water)	• Mine site to be equipped with oil absorption and collection systems.		
15) General mine operational maintenance	• Cleaning and maintenance of mine site	• Resource use / depletion of natural resources	• Ensure all wash water is recycled. Ensure there are no leaks from all taps, pipes and fittings.		
	• Periodic painting of mine structures	• Pollution of biophysical environment (soil and water)	• Conform to ISO 12944:1998 Paints and varnishes - Corrosion protection of steel structures by protective paint systems- Part 4: Types of surface and surface preparation.		
	• Working at heights	• Occupational Safety	• Test integrity of structure(s) before work commences. • Implement a fall protection program (including training in climbing techniques and the use of fall protection measures; inspection, maintenance, and replacement of fall protection equipment; and rescue of fall-arrested workers). • Establish criteria for use of 100% fall protection (the system should be fitting for the tower structure and movements (ascent, descent, and moving from point to point)). • Install fixtures on tower components to facilitate the use of fall protection systems. • Provide an adequate work-positioning device system to workers (with connectors on positioning systems compatible with the tower components to which they are attached). • Ensure proper rating and maintenance of hoisting equipment and training of hoist operators. • Use safety belts of not less than 15.8 mm two in one nylon or		

Table 5.1: *Cont.*

ACTIVITY/PROCESS	ASPECT	IMPACT	MANAGEMENT ACTIONS	RESPONSIBLE PERSON(S)	TARGET DATE
General mine operational maintenance (15) *Cont.*			• Material of equivalent strength; replace rope safety belts before signs of aging or fraying of fibres become evident. • Workers to use a second (backup) safety strap when operating power tools at height. • Remove signs/other obstructions from poles/structures before work commences. • Use approved tool bags for lowering/ raising tools/materials to workers on elevated structures. • Avoid conducting maintenance during poor weather conditions (especially where there is a risk lightning strikes or strong winds).	Everture Strategic Consulting Namibia (PTY) LTD	Ongoing throughout the Operational Phase
16) Power transmission and distribution	• Electric and Magnetic Fields (EMF)	• Occupational and Community Health	• Ensure that average and peak exposure levels remain below the reference levels developed by the Commission of Non-Ionizing Radiation Protection (ICNIRP). • Reduce the EMF (from power lines, substations, or transformers) by applying engineering techniques (if levels are expected or confirmed above the recommended levels): shielding with specific metal alloys; burying transmission lines; increasing the height of the transmission towers; or modifications to size, spacing and configuration of conductors.		
17) Power transmission and distribution	• Hazardous materials management (insulating oils / gases (Polychlorinated Biphenyls (PCB) and sulphur hexafluoride (SF6)) and fuels)	• Pollution of biophysical environment (soil and water)	• Minimize the use of Greenhouse gas. • The use of Polychlorinated Biphenyls (PCBs) has largely been discontinued (see International Finance Corporation (*IFC) Environment, Health and Safety (EHS) Guidelines for Electric Power Transmission and Distribution* for the management of PCBs should it be used). • All activities, Hazardous materials management. • Wood preservatives? Needed?		

Table 5.1: *Cont.*

ACTIVITY/PROCESS	ASPECT	IMPACT	MANAGEMENT ACTIONS	RESPONSIBLE PERSON(S)	TARGET DATE
18) Power transmission and distribution	• Live power lines	• Occupational Health and Safety	• Allow only trained/certified employees to install, maintain, and repair electrical equipment. • Deactivate and properly ground live power distribution lines before work is conducted on, or close to, distribution lines. • Ensure that live-wire work is conducted by qualified workers and in accordance to the specific safety and insulation standards. • Do not approach an exposed energized or conductive part (even if the worker is trained) unless: the person is properly insulated from the energized part (e.g. gloves) and *vice versa*; the worker is properly isolated and insulated from any other conductive part (live-line work). • Implement a Health and Safety Plan, detailing specific training, safety measures , personal safety devices and other precautions, where maintenance and operation is required within minimum setback distances	Everture Strategic Consulting Namibia (PTY) LTD	Ongoing throughout the Operational Phase
19) Power transmission and distribution	• Working at heights on poles/structures	• Occupational Health and Safety	• See General mine infrastructures and mine workings maintenance, working at heights.		
20) Power transmission and distribution	• EMF	• Occupational Health and Safety	• Prepare and implement an EMF Safety Program containing information on: potential exposure levels in the workplace and the use of personal monitors; training of workers to identify EMF levels and hazards; the identification and establishment of safety zones (areas acceptable for public exposure vs. those with expected elevated EMF levels and that only properly trained workers may access); action plans dealing with potential or confirmed exposure of levels that exceed those developed by the ICNIRP and Institute of Electrical and Electronics Engineers (IEEE).		
21) Power transmission and distribution	• Electrocution	• Community Health and Safety	• Use signs, barriers, and education to prevent public contact with potentially dangerous equipment. • Ground conducting objects installed near power lines.		

Table 5.1: *Cont.*

ACTIVITY/PROCESS	ASPECT	IMPACT	MANAGEMENT ACTIONS	RESPONSIBLE PERSON(S)	TARGET DATE
22) All activities	• Water Management	• Resource use / depletion of natural resources	• Implement a water conservation program, promoting the continuous reduction in water consumption and achieving savings in water pumping, treatment and disposal costs, commensurate with the magnitude and cost of water use.	Everture Strategic Consulting Namibia (PTY) LTD	Ongoing throughout the Operational Phase
23) All activities	• Hazardous materials management	• Pollution of biophysical environment (soil and water)	• Implement prevention and control measures for the use, handling and storage of hazardous materials. • Train workers on the correct transfer and handling of fuels and chemicals and the response to spills. • Immediately report and clean up any accidental hydrocarbon spill: Spill-Sorb, Drizzat Pads, Enretech Powder or Peat Moss can be used to clean up small spills; in case of larger spills, the spill together with the polluted soil should be removed and disposed of at e.g. a biological remediation site.		
		• Occupational Health and Safety	• Implement hazard communication and training programs (including information on Material Safety Data Sheets (MSDS)) to make employees aware of workplace chemical hazards and how to respond to these. • Provide and ensure the active use of Personal Protective Equipment (PPE).		
24) All activities	• Waste management: solid	• Air quality	• Avoid the open burning of waste (whether hazardous, or non-hazardous).		

Table 5.1: *Cont.*

ACTIVITY/PROCESS	ASPECT	IMPACT	MANAGEMENT ACTIONS	RESPONSIBLE PERSON(S)	TARGET DATE
25) All activities	• Waste management: non-hazardous and hazardous	• Pollution of biophysical environment	• As per Waste Management Plan. • Institute and maintain good housekeeping and operating practices; littering is not allowed. • Non-hazardous and hazardous waste to be collected and stored separately: • Non-hazardous waste to be transported to and disposed off at an approved waste disposal site. • Hazardous waste: recycle petroleum (fuels and lubricants) waste products and collect and recycle batteries and print cartridges. The remainder to be transported to a recognized hazardous waste disposal site, with prior permission from the site operator / owner.	Everture Strategic Consulting Namibia (PTY) LTD	Ongoing throughout the Operational Phase
26) All activities	• Waste management: sanitary	• Pollution of biophysical environment	• Toilets and Shower Blocks to be provided on the site as prat of the administration and supporting infrastructure; contents to be collected by an approved contractor and disposed of at an approved sewage site. Unless there will be a sewage plant?		
27) All activities	• Waste water management	• Pollution of biophysical environment	• Ensure that the discharge of process wastewater and/or sanitary wastewater and/or wastewater from utility operations and/or storm water to land conform to the regulatory requirements. • Discharge to any public stream is prohibited		

6. CLOSURE AND AFTERCARE STAGES

6.1 Introduction

The proposed mine closure and aftercare stages of the proposed mine will cover all the activities that are aim at restoring the proposed mine site to safe state. The closure and aftercare stages will be an ongoing process during the proposed mine operations stage with the final closure and aftercare stages implemented once the proposed mine has reached its useful lifespan. The closure stage will cover the restoration of the open pits, tailings, waste rock, removal of all structures such as the foundation, steel works and concrete casted to hold all structures that were constructed to support the proposed mine. The aftercare will cover the long-term stability and environmental sustainability maintenance of all the remaining supporting infrastructures such tailings dump, pits and waste rock. The following is summary of the activities that will be undertaken as part of the final closure and aftercare stages of the proposed mine:

(i) Closure of open pits;

(ii) Closure of solid waste piles;

(iii) Backfill waste dump sites;

(iv) Closure of storage sites;

(v) Closure of water and electricity sources;

(vi) Overall land reclamation;

(vii) Restoration of internal roads;

(viii) Revegetation as may be required;

(ix) Closure of open pits;

(x) Closure of solid waste piles;

(xi) Backfill waste dump sites;

(xii) Closure of storage sites.

This EMP Vol. 2 of 2 Report makes provisions for management of a wider array of activities that will be associated with the proposed mine closure and aftercare stages. Table 6.1 outlines the EMP framework for the closure and aftercare stages of the proposed mine. Table 6.2 summarise key mine components to be addressed in the ongoing and final mine Closure Plan.

6.2 Roles and Responsibilities

6.2.1 Employer's Representative (ER

As part of the mine closure and aftercare stages, Everture Strategic Consulting Namibia (PTY) LTD is to appoint an **Employer's Representative (ER)** with the following responsibilities:

- Act as the Employer's (Everture Strategic Consulting Namibia (PTY) LTD on-site project manager and implementing agent;
- Appoint the Environmental Control Officer (ECO);
- Ensure that the Employer's responsibilities are executed in compliance with the relevant legislation and the EMP for the closure and aftercare stages;
- Ensure that all the necessary environmental authorizations and permits have been obtained for the mine closure and aftercare stages;
- Assist the Contractor in finding environmentally responsible solutions to challenges that may arise (with input from the ECO);
- Should the ER be of the opinion that a serious threat to, or impact on the environment may be caused by the closure and aftercare stages, he/she may stop work; the Employer must be informed of the reasons for the stoppage as soon as possible;
- The ER has the authority to issue fines for transgressions of basic conduct rules and/or contravention of the EMP;
- Should the Contractor or his/her employees fail to show adequate consideration for the environmental aspects related to the EMP, the ER can have person(s) and/or equipment removed from the site or work suspended until the matter is remedied;
- Report to the Employer on the implementation of this EMP on site (with input from the ECO and/or independent environmental auditor);
- Maintain open and direct lines of communication between the Employer, ECO, Contractor and I&APs with regards to environmental matters; and
- Attend regular site meetings and inspections on the progress of the mine closure and aftercare stages process.

6.2.2 Environmental Control Officer (ECO)

The **Environmental Control Officer (ECO)** has the following responsibilities:

- Assist the ER in ensuring that the necessary environmental authorizations and permits have been obtained for the mine closure and aftercare stages;
- Assist the ER and Contractor in finding environmentally responsible solutions to challenges that may arise;
- Conduct environmental monitoring as per EMP requirements;

- Recommend on the issuing of fines for transgressions of basic conduct rules and/or contraventions of the EMP to the ER;

- Advise the ER on the removal of person(s) and/or equipment not complying with the specifications of the EMP;

- Carry out regular site inspections (on average once per week) of all construction areas with regards to compliance with the EMP; report any non-compliance(s) to the ER as soon as possible;

- Organize for an independent internal audit on the implementation of and compliance to the EMP to be carried out half way through the mine closure and aftercare stages; audit reports to be submitted to the ER;

- Organize for an independent post mine closure and aftercare stages environmental audit to be carried out before certificates are issued by the relevant authorities;

- Continuously review the EMP and recommend additions and/or changes to the EMP document;

- Monitor the Contractor's environmental awareness training for all new personnel coming onto site;

- Keep records of all activities related to environmental control and monitoring; the latter to include a photographic record of the mine closure and aftercare stages as well as environmental control and rehabilitation process, and a register of all major incidents; and

- Attend regular site meetings as part of the mine closure and aftercare stages.

6.2.3 Contractors and Subcontractors

The responsibilities of the **Contractors and Subcontractors** include:

- Comply with the relevant national legislation and the EMP for the mine closure and aftercare stages;

- Preparation and submission (to Everture Strategic Consulting Namibia (PTY) LTD) of the following Management Plans:

    - Environmental Awareness Training and Inductions;

    - Emergency Preparedness and Response;

    - Waste Management;

    - Health and Safety, and;

    - Electric and Magnetic Fields (EMF) Safety.

- Ensure adequate environmental awareness training for senior site personnel;

- Environmental awareness presentations (inductions) to be given to all site personnel prior to the mine closure and aftercare stages work commencement; the ECO is to provide the course content and the following topics, at least but not limited to, should be covered:
    - The importance of complying with the relevant Namibian, International and Best Practice Legislation;
    - Roles and Responsibilities, including emergency preparedness;
    - Basic Rules of Conduct (Do's and Don'ts);
    - EMP: aspects, impacts and mitigation;
    - Fines for Failure to Adhere to the EMP, and;
    - Health and Safety Requirements.
- Record keeping of all environmental awareness training and induction presentations; and
- Attend regular site meetings and environmental inspections.

6.3 Closure and Aftercare Stages Supporting Teams

The closure and closure activities of the proposed mine will require an array of specialist teams working very closely with their suppliers and core Everture Strategic Consulting Namibia (PTY) LTD site operations team. The following is a summary of some of the specialists that will be required during the mine closure and aftercare stages as part of the team of contractors / subcontractor:

- Care taker, Mechanical and Crane Contractors, Electrical Contractors and Civil/Structural Contractors, each with their respective Sub-contractors and Suppliers, would report directly to the Employer's Representative (ER), acting as the onsite Project Manager.

Table 6.1: Environmental Management Plan for the mine ongoing and final closure and aftercare stages.

ACTIVITY/PROCESS	ASPECT	IMPACT	MANAGEMENT ACTIONS	RESPONSIBLE PERSON(S)	TARGET DATE
1) Mine closure and aftercare stages	• Ongoing and Final closure and aftercare stages	• Social and Environmental Performance & Visual	• Isolate (electrically) the mine site from the substation. • Disassemble the steel works and cut off at the top of the foundation concrete; rehabilitate the hardstand area. • Remove all above-ground substation infrastructure and re-use, recycle or dispose of it. • Conduct a site contamination assessment; remove any contaminated material and dispose of at an appropriate disposal facility. • Break up foundations all the mine site and remove for disposal. • Dig up below-ground substation infrastructure and remove. • Conduct a validation survey to ensure that all contaminated material at the substation has been removed; remove any contaminated material and dispose of at an appropriate disposal facility. • Rehabilitate access tracks not required for ongoing land use activities. • Remove all other equipment, waste, etc. from the area. • Reshape tailings, waste and all disturbed areas to the surrounding contours. • Secure pit and other area with previously collected topsoil and spread evenly. • Manually rip disturbed areas, where compaction has taken place, and cover the areas with previously collected topsoil. • Replant any previously removed native plant species in disturbed areas.	• Everture Strategic Consulting Namibia (PTY) LTD / Contractor	• During Closure and Aftercare Stages
2) Closure	• Loss of jobs and income	• Socio-economic	• Implement a skills training programme during the operations phase.	• Everture Strategic Consulting Namibia (PTY) LTD Energy (PTY) LTD	• Ongoing throughout the Operational Phase

Table 6.2: Mine components to be addressed in the ongoing and final mine Closure Plan.

Components	Aspects to be Addressed
Open Pit Mines	○ Slope and bench stability ○ Groundwater and rainwater management ○ Security and unauthorized access ○ Wildlife entrapment ○ Effects of drainage into and from the pit
Ore Processing Facilities	○ Removal of buildings and foundations ○ Clean-up of workshops, fuel and reagent ○ Disposal of scrap and waste materials ○ Re-profiling and revegetation of site
Waste Rock Piles	○ Slope stability ○ Effects of leaching and seepage on surface and groundwater ○ Dust generation ○ Visual impact ○ Special considerations for some types of mines such as uranium mines
Tailings Management Facilities	○ Dam stability ○ Changes in tailings geochemistry ○ Effects of seepage past the dam and from the base of the facility ○ Surface water management and discharge ○ Dust generation ○ Access and security ○ Wildlife entrapment ○ Special considerations for some types of mines such as uranium mines
Water Management Facilities	○ Restoration or removal of dams, reservoirs, settling ponds, culverts, pipelines, spillways or culverts which are no longer needed ○ Surface drainage of the site and discharge of drainage waters ○ Maintenance of water management facilities
Landfill / Waste Disposal Facilities	○ Disposal or removal from site of hazardous wastes ○ Disposal and stability of treatment sludge ○ Removal of sewage treatment plant ○ Prevention of groundwater contamination ○ Prevention of illegal dumping ○ Security and unauthorized access
Infrastructure	○ Removal of power and water supply ○ Removal of haul and access roads ○ Reuse of transportation and supply depots

7. ENVIRONMENTAL PERFORMANCE MONITORING

7.1 Overview

The monitoring process of the EMP performances for the proposed mine is divided into two parts and these are:

(i) Monitoring activities and effects to be undertaken by the Environmental Control Officer (ECO);

(ii) Preparation of an Environmental Monitoring Report covering all activities related to the Environmental Management Plan throughout the life cycle of the proposed mine to be undertaken by the Environmental Control Officer (ECO).

As part of the provisions of this EMP and the conditions of the Environmental Clearance Certificate that will be issued by the Office of the Environmental Commissioner (OEC) in the Ministry of Environment and Tourism, continuous environmental monitoring and reporting must be undertaken as required. The reporting process will form part of the ongoing environmental monitoring programme. Environmental monitoring programme is part of this EMP performances assessments and will need to be compiled and submitted as determined by the regulator (OEC). The process of undertaking appropriate monitoring as per specific topic and tracking performances against the objectives and documenting all environmental activities is part of internal and external auditing to be coordinated by the Environmental Control Officer (ECO) / External Consultant / Suitable qualified in-house resource person. Tables 7.1 – 7.9 outline the type of information that shall need to be recorded on a regular by the Environmental Control Officer (ECO) as part of the monitoring process of the activities and the effects.

The second part of the monitoring of the EMP performance will require a report outlining all the activities related to effectiveness of the EMP at the end of the proposed mine life to be undertaken by the Environmental Control Officer (ECO). The types of the data sets to be used in the preparation of such a report are outlined in Tables 7.1 - 7.9. The objective will be to ensure that corrective actions are reviewed and steps are taken to ensure compliance for future EIA and EMP implementation. The report shall outline the status of the environment and any likely environmental liability after completion of the proposed project. The report shall be submitted to the OEC in the Ministry of Environment and Tourism.

Table 7.1: Monitoring of environmental performance implementation / environmental awareness training.

Mitigation	Compliance	Follow-up Action Required	By Whom	By When	Completed
Is there an Environmental awareness training programme?					
How many people have been given environmental awareness training?					
Is a copy of the EMP on site?					
How effective is the awareness training? Do people understand the contents of the EMP? Where are the weaknesses? Ask 3 people at random various questions about the EMP.					

Table 7.2: Monitoring of environmental performance for the temporal and permanent structures.

Mitigation	Compliance	Follow-up Action Required	By Whom	By When	Completed
Are the temporal and permanent structures positioned to avoid sensitive zones, ephemeral river channels and potential sensitive sites?					
Has new infrastructure been created? If so, what, and how well planned / built with respect to environment?					
Have toilets and showers been provided? Where are they situated?					
Do receptacles for waste have scavenging animal proof lids?					
What litter is there – who is littering?					
Are there facilities for the disposal of oils / etc and how often is it removed to an approved disposal site?					
Is there evidence of oil / diesel spills? Bunding or not?					
What fuel source is being provided for cooking?					
Housekeeping					

Table 7.3: Environmental data collection.

Mitigation	Compliance	Follow-up Action Required	By Whom	By When	Completed
Are records being kept?					
Birds' mortality records as result of collision with the mine associated infrastructure?					
Birds nesting activities around the mine site?					
Noise level?					
Air Quality?					
Have archaeological sites been found / disturbed / described?					
Other key environmental data sets?					

Table 7.4: Health, Safety and ENvionment (HSE).

Mitigation	Compliance	Follow-up Action Required	By Whom	By When	Completed
Is there First Aid Kit containing anti-histamines etc?					
Are dangerous areas clearly marked off?					
Do vehicles appear to maintain the recommended speed limits?					
Do vehicles drive with headlights on along the gravel roads at all times?					

Table 7.5: Recruitment of labour.

Mitigation	Compliance	Follow-up Action Required	By Whom	By When	Completed
What labour source is used?					
How has the recruitment practice been done?					

Table 7.6: Management of the natural habitat and surficial materials management.

Mitigation	Compliance	Follow-up Action Required	By Whom	By When	Completed
Has there been any development done on or very close sensitive areas?					
Has anyone been caught with plants or animals in their possession?					
Has there been wilful or malicious damage to the environment?					
Has topsoil / seed bank layer been removed from demarcated development areas and appropriately stored?					

Table 7.7: Tracks and off-road driving.

Mitigation	Compliance	Follow-up Action Required	By Whom	By When	Completed
Are existing tracks used and maintained?					
What new tracks have been developed and are they planned?					
What evidence is there of off-road driving? Who appears to be responsible?					
Are corners being cut, what type of turning circle are there? Three point turns vs. U turns?					
Have unnecessary tracks been rehabilitated and how well?					
Comments					

Table 7.8: Management of surface and groundwater.

Mitigation	Compliance	Follow-up Action Required	By Whom	By When	Completed
How is potable water supplied and how often? Position of tanks?					
Is water being wasted?					
Is there any leakage from pipes or taps?					
Were water samples taken regularly and measured?					

Table 7.9: Public relations.

Mitigation	Compliance	Follow-up Action Required	By Whom	By When	Completed
Have any complaints been made about the mine construction and or operational activities by the different I&APs? If so, what, and how was the issue resolved?					

8. ENVIRONMENTAL AWARENESS

8.1 Company / Proponent Environmental Policy

Table 8.2 summarises the environmental statement with respect to environmental commitment that the Proponent, Everture Strategic Consulting Namibia (PTY) LTD will implement as part of the company environmental policy.

Table 8.1: Environmental statement.

Everture Strategic Consulting Namibia (PTY) LTD Environmental Statement
Everture Strategic Consulting Namibia (PTY) LTD is Committed to: • Exercising appropriate environmental care in accordance with the provisions of the EMP as presented in Tables 3.1, 4.1, 5.1 and 6.1 from preconstruction to closure and aftercare stages. • Fully comply with all applicable environmental regulations in force in Namibia; • Delivery of significant socioeconomic benefits for through broad based equity participation in the Project Development and Operation. • The promotion the development of open and constructive partnerships with the all the relevant stakeholders to address environmental concerns and advance necessary protection measures. • The advancement of scientific knowledge to be applied to the identification and effective resolution of real environmental challenges associated with the proposed mine development. • Continuously encouraging Pollution Prevention (P2), Cleaner Production (CP), Waste Minimisation, Reuse and Recycling efforts. • Conducting regular internal and external audits of all our operations to ensure adherence to this policy and compliance to all relevant regulations throughout the life cycle of the proposed mine.

8.2 Environmental Awareness Guidance

(i) The Environmental Rules apply to EVERYBODY. This includes all permanent, contract, or temporary workers as well as any other person who visits the mine site. Any person who visits the mine site will be required to adhere to the company Environmental Code of Conduct;

(ii) The Site Manager will issue warnings and will discipline ANY PERSON who breaks anyone of the Environmental Rules and Procedures. Repeated and continued breaking of the Rules and Procedures will result in a disciplinary

hearing and which may result in that person being asked to leave the site permanently;

(iii) The ENVIRONMENT means the whole surroundings around us. The environment is made-up of the soil, water, air, plants and animals; and those characteristics of the soil, water, air, plant and animal life that influence human health and wellbeing;

(iv) If any member of the WORK FORCE does not understand, or does not know how to keep any of Environmental Rule or Procedure, that PERSON must seek advice from the ENVIRONMENTAL CONTROL OFFICER (ECO), SITE MANAGER or CONTRACTOR. The PERSON that does not understand must keep asking until she/he is able to keep to the all the Environmental Rules and Procedures.

8.3 Environmental Awareness Training Materials

8.3.1 Natural Environmental Management Guidance

- Never feed, tease or play with, hunt, kill, destroy or set devices to trap any wild animal (including birds, reptiles and mammals), livestock or pets. Do not bring any wild animal or pet to the mine site;
- Do not pick any plant or take any animal out of the mine site area EVER. You will be prosecuted and asked to leave the project area;
- Never leave rubbish and food scraps or bones where it will attract animals, birds or insects. Rubbish must be thrown into the correct rubbish bins or bags provided;
- Protect the surface material by not driving over it unnecessarily;
- Do not drive over, build upon, or camp on any sensitive habitats for plants and animals;
- Do not cut down any part of living trees / bushes for firewood;
- Do not destroy bird nest, dens, burrow pits, termite hills etc or any other natural objects in the area.

8.3.2 Vehicle Use and Access Guidance

- Never drive any vehicle without a valid licence for that particular vehicle and do not drive any vehicle that appears not to be road-worthy;
- Never drive any vehicle when under the influence of alcohol or drugs;
- DO NOT make any new roads without permission. Stay within demarcated areas;
- Avoid U-Turns and large turning circles. 3-point turns are encouraged. Do not ever drive on rocky slopes or vegetated dune areas;

- Stay on the road, do not make a second set of tracks and do not cut corners;
- DO NOT SPEED - keep to less than 60 km per hour on the tracks and site roads;
- No off-road driving is allowed;
- Vehicles may only drive on demarcated roads;
- Adhere to speed limits and drive with headlights switched on along any gravel road.

8.3.3 Control of Dust Guidance

- Do not make new roads or clear any vegetation unless instructed to do so by your Contractor or the Environmental Control Officer / Site Manager;
- Try to disturb the surface of the natural landscape as little as possible.

8.3.4 Health and Safety Guidance

- Drink lots of water every day, but only from the fresh water supplies;
- Take the necessary precautions to avoid contracting the HIV/AIDS virus;
- Only enter or exit the mine at the demarcated gates / or road;
- Always keep the access area as you found them;
- Any damage to any existing infrastructure in the area must be report to the Environmental Control Officer / Project Manager who will then inform the owner of any damage with all the repairs done to the satisfaction of the owner or Environmental Control Officer;
- Never enter any area that is out of bounds, or demarcated as dangerous or wander off without informing or permission of team leader;
- Report to your Contractor or the Site Manager if you see a stranger or unauthorised person in the mine site;
- Do not remove any vehicle, machinery, equipment or any other object from the mine site without permission of your Contractor or the Site Manager;
- Wear protective clothing and equipment required and according to instructions from your Contractor or the Site Manager;
- Never enter or work in the mine when under the influence of alcohol or drugs.

8.3.5 Preventing Pollution and Dangerous Working Conditions Guidance

- Never throw any hazardous substance such as fuel, oil, solvents, etc. into streams or onto the ground;

- Never allow any hazardous substance to soak into the soil;
- Immediately tell your Contractor or Environmental Control Officer / Site Manager when you spill, or notice any hazardous substance being spilled anywhere in the mine;
- Report to your Contractor or Environmental Control Officer / Site Manager when you notice any container, which may hold a hazardous substance, overflow, leak or drip;
- Immediately report to your Contractor or Environmental Control Officer / Site Manager when you notice overflowing problems or unhygienic conditions at the ablution facilities;
- Vehicles, equipment and machinery, containers and other surfaces shall be washed at areas designated by the Contractor or Environmental Control Officer/ Site Manager;
- If you are not sure how to transport, use, store or dispose any hazardous substance - ASK your Contractor or Environmental Control Officer / Site Manager for advice.

8.3.6 Saving Water Guidance

- Always use as little water as possible. Reduce, reuse and re-cycle water where possible;
- Report any dripping or leaking taps and pipes to your Contractor or Environmental Control Officer or Site Manager;
- Never leave taps running. Close taps after you have finished using them.

8.3.7 Disposal of Waste Guidance

- Learn to know the difference between the two main types of waste, namely:
    - ✓ General Waste; and
    - ✓ Hazardous Waste.
- Learn how to identify the containers, bins, drums or bags for the different types of wastes. Never dispose of hazardous waste in the bins or skips intended for general waste or construction rubble;
- Never burn or bury any waste within mining license area;
- Never overfill any waste container, drum, bin or bag. Inform your Contractor or the Environmental Control Officer / Site Manager if the containers, drums, bins or skips are nearly full;
- Never litter or throwaway any waste on the site, in the field or along any road. No illegal dumping;
- Littering is prohibited.

8.3.8 Religious, Cultural, Historical and Archaeological Objects Guidance

- If you find any suspected religious, cultural, historical or archeologically object or site around the mine, you must immediately notify your Contractor or Environmental Control Officer **/** Site Manager;

- Never remove, destroy, interfere with or disturb any religious, cultural, historical or archaeological object or site around the mine site.

8.3.9 Dealing with Environmental Complaints Guidance

- If you have any complaint about dangerous working conditions or potential pollution to the environment, immediately report this to your Contractor or the Environmental Control Officer / Site Manager;

- If any person complains to you about noise, lights, littering, pollution, or any other harmful or dangerous condition, immediately report this to your Contractor or the Environmental Control Officer / the Site Manager.

8.4 Environmental Personnel Register

Table 8.2 shows the Environmental Personnel Register to be signed by every person who receives or attends the Environmental Awareness Training or who has the training material explained to him or her or in possession of the training material.

Table 8.2: Environmental personnel register.

Date	Name	Company	Signature

9. CONCLUSION AND RECOMMENDATIONS

9.1 Summary of Conclusions

Mitigation measures for both positive and negative impacts have been proposed and management strategies are provided in this Environmental Management Plan (EMP Vol. 2 of 2) for the following development stages:

(i) Preconstruction;

(ii) Construction;

(iii) Operational;

(iv) Closure and Aftercare Stages.

Based on the extent, duration, intensity and likely negative and positive impacts of the proposed development, this Environmental Management Plan (EMP) Report Vol. 2 of 2 incorporating all the relevant mitigation measures with respect to likely impacts and recommendations to be implemented by the developer / operator. This EMP implementation and monitoring activities covers all the stages of the proposed mine project life cycle and is inclusive of the preconstruction, construction, operation and ongoing rehabilitation and closure, final rehabilitation and aftercare stages.

9.2 Recommendations

It's hereby recommended that the Everture Strategic Consulting Namibia (PTY) LTD takes all the necessary steps to implement all the recommendations of the EMP for the successful implementation and completion of the proposed mine project activities from construction to final closure and aftercare stages. The following are the recommended actions to be implemented by the proponent (Everture Strategic Consulting Namibia (PTY) LTD) as a part of the management of the impacts through implementations of this EMP Vol. 2 of 2 Report:

(i) Contract an Environmental Control Officer / External Consultant / suitable in-house resources person to lead and further develop, implement and promote environmental culture through awareness raising of the workforce, contractors and sub-contractors in the field during the whole duration of the proposed project;

(ii) Provide with other support, human and financial resources, for the implementation of the proposed mitigations and effective environmental management during the planned mine project life cycle;

(iii) Develop a simplified environmental induction and awareness programme for all the workforce, contractors and sub-contractors;

(iv) Where contracted service providers are likely to cause environmental impacts, these will need to identified and contract agreements need to be developed with costing provisions for environmental liabilities;

(v) Implement internal and external monitoring of the actions and management strategies developed during the project duration and a final Environmental Monitoring report to be prepared by the Environmental Control Officer / External

Consultant / suitable in-house resource person and to be submitted to the regulators and to end the proposed mine project;

(vi) Develop and implement a monitoring programme that will fit into the overall company's Environmental Management Systems (EMS) as well as for any future EIA related to the expansion of the current delineated resources or development of completely new mine site within the ML No. 162.

All the responsibilities to ensure that the recommendations are executed accordingly, rest with the proponent **(Everture Strategic Consulting Namibia (PTY) LTD).** The proponent must provide all appropriate resource requirements for the implementation of this EMP Vol. 2 of 2 as well as an independently managed (not directly controlled by the mining company) funding instrument for mine Closure and Aftercare environmental liabilities. It is the responsibility of the proponent to make sure that all members of the workforce including contractors and subcontractors are aware of this EMP provisions and its objectives. It is hereby recommended that the proponent take all the necessary steps to implement all the recommendations of this EMP for the successful execution of the preconstruction, construction, operational, decommissioning, closure and aftercare activities of the proposed reopening of the old Lorelei copper mine in the ML No. 162.

END OF THE EMP