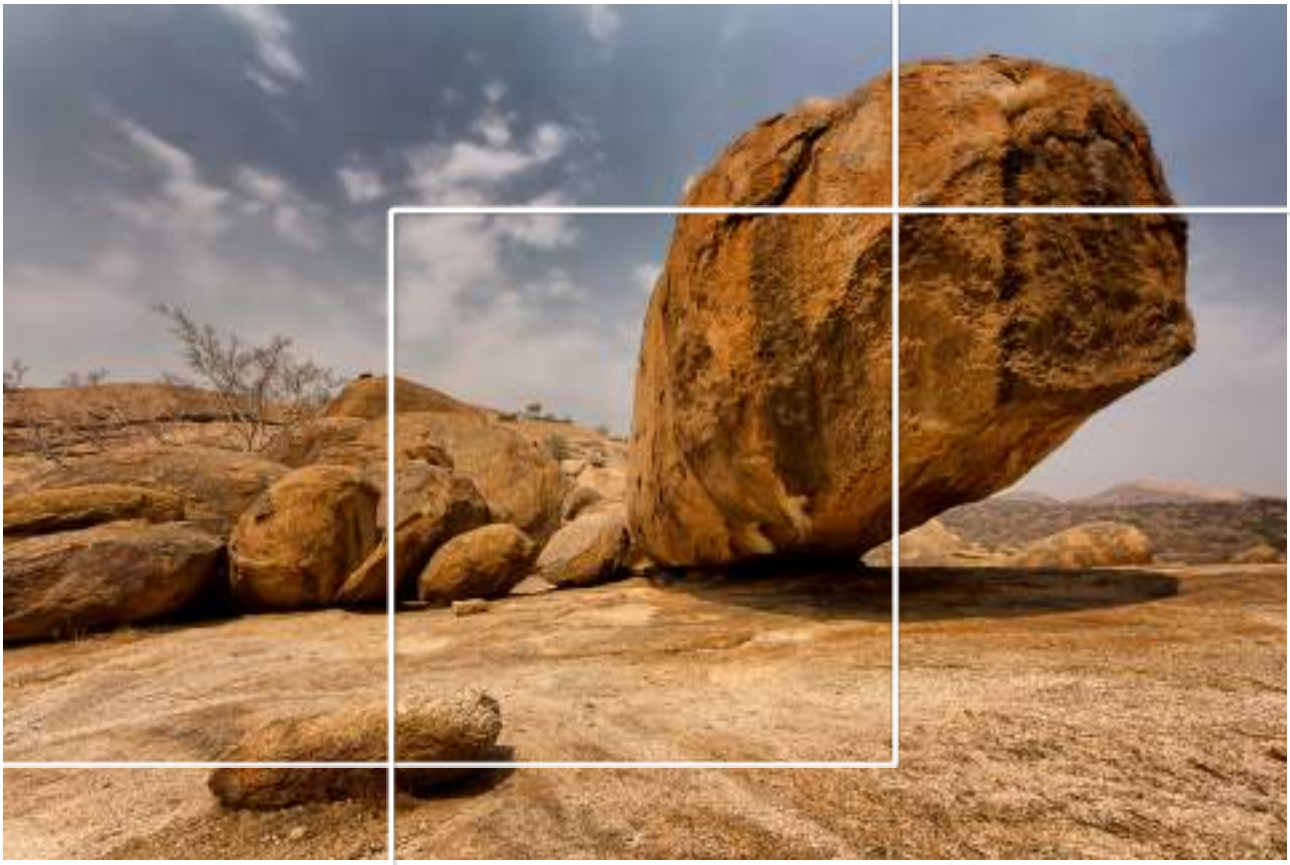

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REPORT:

KOKOSEB GOLD MINE PROJECT – PRELIMINARY ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN

PROJECT NUMBER: ECC-143-471-REP-07-A

REPORT VERSION: 01

DATE: 26 FEBRUARY 2026

TITLE AND APPROVAL PAGE

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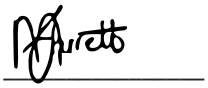

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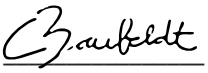

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DISCLAIMER

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ABBREVIATIONS

Abbreviations	Description
AIDS	acquired immunodeficiency syndrome
CE	control efficiency
CTMP	construction traffic management plan
dB	decibels
Damaran Exploration	Damaran Exploration Namibia (Pty) Ltd
DEAF	Department of Environmental Affairs and Forestry
DWA	Department of Water Affairs
EAP	environmental assessment practitioner
ECC	Environmental Compliance Consultancy (Pty) Ltd
EMA	Environmental Management Act No. 7 of 2007
EMP	environmental management plan
Epangelo	Epangelo Mining Company (Pty) Ltd
ESMP	Environmental and social management plan
FPIC	free prior informed consent
GN	governance notice
GPS	global positioning system
H&S	health and safety
HIV	human immunodeficiency viruses
HODs	head of departments
HR	human resources
HSE	health, safety and environment
IEC	International Electrotechnical Commission
IFC	International Finance Corporation
ISO	International Standards Organisation
IUCN	International Union for Conservation of Nature
JV	joint venture
km/h	kilometre per hour
LoM	life of mine
Ltd	limited
m	metre
MAFWLR	Ministry of Agriculture, Fisheries, Water and Land Reform
MEFT	Ministry of Environment, Forestry and Tourism
MIME	Ministry of Industries, Mines and Energy
ML	mining licence

Abbreviations	Description
MLIREC	Ministry of Labour, Industrial Relation and Employment Creation
mm/s	millimetres per second
MoHSS	Ministry of Health and Social Services
MRE	mineral resource estimate
MSDS	material safety data sheet
NHC	National Heritage Council
NSRs	noise sensitive receptors
OEMP	operational environmental management plan
PEGA	Public Enterprises Governance Act 2019
PM_{10}	inhalable particulate matter with a diameter of 10 micrometres or less
$PM_{2.5}$	inhalable particulate matter with a diameter of 2.5 micrometres or less
PPE	personal protective equipment
Pty	proprietary
SE	southeast
SLM	sound level meter
SOPs	standard operating procedures
SSD	stopping sight distance
ToR	term of reference
TSF	tailings storage facility
TSP	total suspended particulate
USBM	The United States Bureau of Mines
Wia Gold	WIA Gold Limited (Ltd)
WRD	waste rock dumps

1 INTRODUCTION

1.1 PROJECT BACKGROUND

Environmental Compliance Consultancy (Pty) Ltd (ECC) (herein referred to as the environmental assessment practitioner (EAP)) has been engaged by Damaran Exploration (Pty) Ltd to undertake an environmental and social impact assessment (ESIA) and compile an environmental and social management plan (ESMP) in terms of the Environmental Management Act No. 7 2007 (EMA) and its 2012 Regulations for the proposed Kokoseb Gold Project (Project).

Mandarin Investments (Pty) Ltd (the Proponent), is a joint venture (JV) between Damaran Exploration Namibia (Pty) Ltd (Damaran Exploration), and Epangelo Mining Company (Pty) Ltd (Epangelo), and is the holder exclusive prospecting licence (EPL) 4818 and has submitted an application for mining licence (ML) 274 with the Ministry of Industries, Mines and Energy (MIME). WIA Gold Limited (Ltd) (Wia Gold), is the parent company of Damaran Exploration Namibia (Pty) Ltd. Epangelo is the exclusive shareholder of the company on behalf of the Government of the Republic of Namibia as it was officially designated as a State-owned Enterprise under the PEGA (Act No. 2 of 2006) in 2013. The relationship between the parent company, its subsidiary, and the JV between Damaran Exploration and Epangelo is displayed in Figure 1.

Figure 1 - The relationship between the parent company and its subsidiaries

ECC is conducting an ESIA for the proposed mining of precious metals on ML 274, located near the towns of Uis and Okombahe, Erongo Region, Namibia (Figure 2).

The Kokoseb Gold Project emerged as a significant deposit with the announcement of a maiden inferred mineral resource estimate (MRE) and subsequent exploration results confirming the potential for growth in the Kokoseb MRE. The proposed Project will be a conventional open pit mine with a gold extraction process as described in chapter 4 of the draft ESIA report.

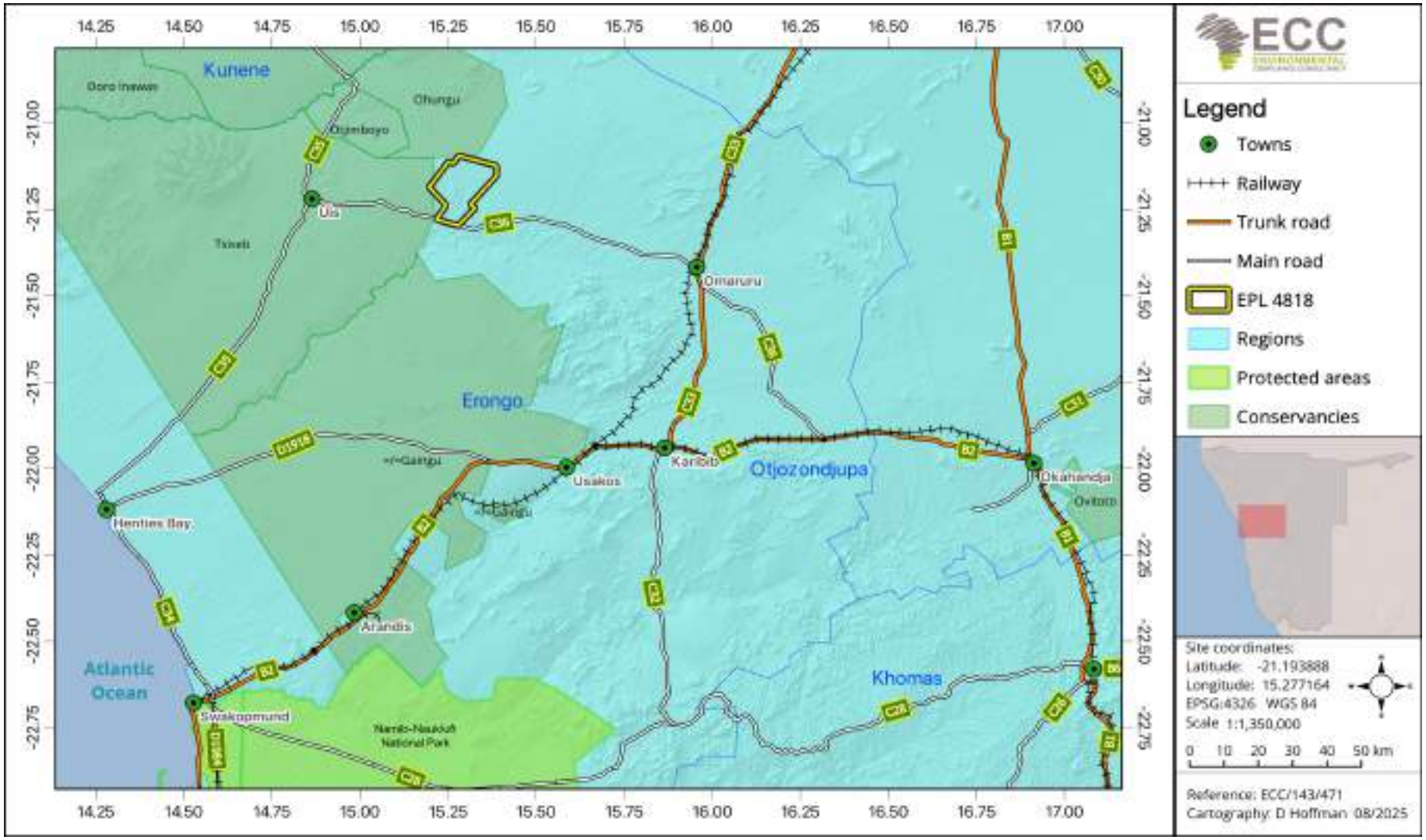

Figure 2 - Locality map showing the location of the Project

1.2 PURPOSE OF THE PRELIMINARY ESMP

The preliminary ESMP provides a logical framework, mitigation measures and management strategies for the mining activities associated with the proposed Project, ensuring potential environmental and social impacts are managed and minimised as far as practically possible and that statutory and other legal obligations are adhered to. Outlined in the preliminary ESMP are the protocols, procedures and roles and responsibilities of the Proponent to ensure the management arrangements are effectively and appropriately implemented.

The preliminary ESMP forms an appendix to the draft ESIA and is based on the findings of the assessments and recommendations from specialist studies carried out to date. The draft ESIA report should be referred to for further information on the proposed Project, baseline information of the Project area, assessment methodology, specialist studies conducted, applicable legislation and assessment findings.

This preliminary ESMP is a live document and shall be reviewed at predetermined intervals and updated when the scope of work alters, or when further data or information becomes available. All personnel working on the Project will be legally required to comply with the requirements set out in the preliminary ESMP approved by the Government.

1.3 ENVIRONMENTAL REGULATORY REQUIREMENTS

The EMA and its 2012 Regulations stipulate that an environmental clearance certificate is required before undertaking any of the listed activities that are identified in the Act and its Regulations. The Project triggers several listed activities as outlined in chapter 1 of the draft ESIA.

1.4 SCOPE OF THIS REPORT

The Project's draft environmental and social impact assessment (ESIA) report as well as the experience and knowledge of the authors and technical specialists have been used to compile this ESMP. This preliminary ESMP aims to avoid repeating information, procedures or guidance that are available in other site and company reports and has been written in line with the Namibian Government guidance document titled "Draft Procedures and Guidelines for Environmental Impact Assessment (EIA) and Environmental Management Plan (EMP), 2008".

The scope of this preliminary ESMP includes all activities and infrastructure associated with the construction, operations and decommissioning of the Project.

1.5 MANAGEMENT OF THE APPROVED ESMP

The Proponent is required to hold a valid environmental clearance certificate for the Project and is responsible for implementing and managing the approved ESMP. Before mining

activities commence, the preliminary ESMP must be reviewed and updated into an operational environmental management plan (OEMP), which needs to then be reapproved every three (3) years.

Implementation of the ESMP/OEMP must be supported through regular compliance monitoring. Different environmental aspects are checked and inspected on daily, weekly, monthly and annual frequencies. The Proponent is also required to submit environmental compliance reports to the Department of Environmental Affairs and Forestry (DEAF) bi-annually. When applying for renewal of the environmental clearance certificate, an additional compliance report needs to be compiled.

Once finalised and approved, the preliminary ESMP will be shared with all Project employees, contractors and subcontractors to ensure they understand their roles and responsibilities.

1.6 STRUCTURE OF THIS PRELIMINARY ESMP

The layout of this preliminary ESMP has been set up to provide site-specific and relevant information in the main sections of the report, site specific management plans per each phase of the Project and provides supporting or supplementary information in the appendices, thereby providing the end user with an operational document for ease of use.
The targeted users of this preliminary ESMP are area specific managers and supervisors, the site environmental team and authorities or stakeholders with a vested interest in how the Project manages its environment and social responsibilities. The preliminary ESMP structure is summarised in Table 1.

Table 1 – Structure of the preliminary ESMP report

Chapter	What this chapter addresses
Chapter 1	Broad overview of the site and the purpose of the ESMP.
Chapter 2	Sets out the company integrated management system and how this preliminary ESMP is managed and enforced.
Chapter 3	Communication and training.
Chapter 4	Incident reporting.
Chapter 5	Compliance and enforcement.
Chapter 6	Environmental and social management, including the management plans and mitigation measures
Chapter 7	Implementation of this ESMP.
Appendices	Chance find procedure Weed and seed inspection procedure and form (Appendix B

1.7 LIMITATIONS, UNCERTAINTIES AND ASSUMPTIONS OF THIS ESMP

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

Where there is any conflict between the provisions of this preliminary ESMP and any contractor's obligations under their respective contracts, including statutory requirements (such as licences, Project approval conditions, permits, standards, guideline, and relevant laws), the contract and statutory requirements are to take precedence provided they are not in conflict with any environmental law or will in any way damage the environment beyond the limits set in the final approved ESMP.

The information contained in this preliminary ESMP is based on the Project description as provided in the draft ESIA and its associated specialist studies. Where the design, construction or operational methodologies change, this preliminary ESMP shall be updated to reflect the scope of work to ensure that appropriate mitigation and management measures are in place for implementation.

2 ENVIRONMENTAL AND SOCIAL FRAMEWORK

This preliminary ESMP provides measures, guidelines and procedures for managing and mitigating potential environmental impacts. The preliminary ESMP also indicates monitoring and reporting guidelines and sets responsibilities for those carrying out management and mitigation measures.

2.1 OBJECTIVES AND TARGETS

Environmental and social objectives and targets have been developed so that Project activities can minimise potential impacts on the biophysical and social environment, as far as reasonably practicable. Environmental and social objectives for the Project are as follows:

- Prevent contamination and erosion;
- Maintain water quality within legal limits;
- Ensure full containment and compliant disposal of wastewater;
- Minimal vegetation clearing and earthworks;
- Protect local flora and fauna;
- Keep dust emissions below standards (acceptable thresholds);
- Comply with noise limits and minimise vibration impacts;
- Reduce landfill disposal and prevent any hazardous substance releases;
- Use natural resources effectively and efficiently;
- Reduce greenhouse gas emissions
- Enforce a chance finds procedure and avoid impacts on known heritage sites;
- Maintain ongoing engagement and operate a grievance mechanism with timely response;
- Ensure safe working conditions, provide H&S training and comply with labour laws
- Main a social licence to operate in line with International Finance Corporation performance standards and environmental, health and safety guidelines; and
- Maintain zero non-compliances by conducting regular audits and reporting.

2.2 ORGANISATIONAL STRUCTURE, ROLES AND RESPONSIBILITIES

The Proponent shall provide a Project team to oversee and undertake construction and operational activities, comprising the Proponent's personnel and contractors. A nominated role shall be identified to ensure the management and implementation of this preliminary ESMP is carried out throughout the Project's life of mine (LOM). The Proponent shall be responsible for:

- Ensuring all members of the Project team, including contractors and subcontractors comply with the procedures set out in this ESMP;
- Ensuring that all persons are provided with sufficient training, supervision and instruction to fulfil this requirement;
- Ensuring that any persons allocated specific environmental responsibilities are notified of their appointment and confirm that their responsibilities are clearly understood; and

- Ensuring that contractors and subcontractors are compliant with this preliminary ESMP and meet the responsibilities listed above.

The key personnel and environmental responsibilities of each role throughout the Project life are presented in TABLE 2.

Table 2 – Roles and responsibilities

Role	Responsibilities and duties
Proponent	- Responsible for the management and implementation of the ESMP. - Ensure environmental policies are communicated to all personnel throughout the proposed Project and that employees understand the guidelines of the ESMP. - Responsible for providing the resources required to complete the Project tasks. - Appoint area managers and site supervisors. - Ensure all workers are inducted on safety measures.
Project manager	- Develop and implement the overall mine construction and decommissioning/closure plan - Oversee engineering design and technical coordination - Manage contractors, procurement, and contract performance - Monitor construction progress and manage the critical path schedule - Ensure compliance with permits and licences - Oversee implementation of preliminary ESMP and environmental mitigation measures - Ensure health, safety, and risk management systems are enforced - Manage stakeholder engagement, including regulators and local communities - Oversee commissioning/decommissioning, testing, and handover to operations
Mine management	- Oversee operational activities. - Monitor daily operations of respective department and ensure personnel adhere to the ESMP. - Maintain the community issues and concerns register and keep records of complaints. - Maintain an up-to-date register of employees who have completed site induction.
Line management	- Ensure that all employees, contract workers, sub-contractors and visitors to the site under area of responsibility are aware of the requirements of this ESMP, relevant to their roles and always adhere to this ESMP. - Report any non-compliance or accidents to management. - Receive, record and respond to complaints.

Role	Responsibilities and duties
	- Ensure adequate resources are available for the implementation of the ESMP. - Ensure safe and environmentally sound operations. - Responsible for the management, maintenance and revisions of this ESMP.
Environmental manager	- Oversee, manage and maintain the Project's environmental management system, ensuring legal requirements are adhered too and the implementation of monitoring programmes. - Draft and update construction and operational specific environmental procedures. - Ensure site induction training is relevant and address issues from this OEMP. - Conduct environmental audits and inspections and report findings to relevant personnel. - Check the implementation of corrective action for incidents and complaints. - Ensure all environmental monitoring and reporting is done. - Responsible for the management, maintenance and revisions of this ESMP.
Environmental control officer(s)	- Ensure full compliance with the environmental clearance certificate, the approved ESMP, method statements and permit/licence conditions. - Monitor construction activities (earthworks, blasting, road construction, camp establishment) for compliance with environmental requirements. - Verify that contractors and sub-contractors implement approved environmental controls. - Conduct regular site inspections to identify non-conformances. - Track environmental performance against approved monitoring programmes and thresholds. - Support regulatory inspections and audits. - Issue corrective action notices and follow up on close-out. - Maintain environmental incident registers and reporting systems. - Maintain inspection records and photographic evidence. - Conduct environmental induction training with all site personnel. - Raise awareness of site-specific environmental sensitivities. - Prepare and submit construction and operational phase environmental monitoring reports to the mine and regulators. - Support engagement with affected communities, particularly where environmental issues arise.

Role	Responsibilities and duties
	- Address grievances related to dust, noise, water or land impacts in coordination with the Project's social team.
Employees	- Adhere to measures set out in the ESMP. - Ensure they have undertaken a site induction. - Report any operations or conditions that deviate from the preliminary ESMP as well as any non-compliant issues or accidents to the Environmental manager.

2.3 CONTRACTORS AND SUBCONTRACTORS

Any contractors (including their subcontractors) hired during the construction, operational and decommissioning activities for the Project duration shall be compliant with this preliminary ESMP and shall be responsible for the following:

- Undertaking activities in accordance with the requirement stipulated in this preliminary ESMP as well as relevant policies, procedures, management plans, statutory requirements and contract requirements.
- Implementing appropriate environmental and safety management measures.
- Reporting of environmental impacts, including actual or potential environmental incidents and hazards to the line manager or mine management.
- Ensuring appropriate corrective or remedial action is taken to address all environmental aspects, impacts and incidents reported by employees and subcontractors.

2.4 EMPLOYMENT

The Proponent and all contractors shall comply with the requirements of the Republic of Namibia Regulations relating to the Health and Safety of Employees at Work (GN 156 of 1997), and any amendments to these Regulations. The following shall be complied with:

- In liaison with local government and community authorities, the Proponent shall ensure that local people have access to information about job opportunities and are considered first for construction/maintenance contract employment positions.
- The number of job opportunities shall be made known together with the associated skills and qualifications.
- The maximum length of time the job is likely to last for shall be indicated.
- Foreign workers with no proof of permanent legal residence and work permits shall not be hired.
- Every effort shall be made to recruit from the group of unemployed workers living in the surrounding area.

2.5 ENVIRONMENTAL AND SOCIAL MANAGEMENT PLANS

A review of all the potential environmental and social impacts for the proposed Project has been completed. Subsequently a list of mitigation and management measures have been produced, which detail monitoring requirements, to prevent of pollution or damage to the biophysical and social environment during the life of the Project. This is further discussed in section 6.

3 COMMUNICATION AND AWARENESS

To ensure potential aspects and impacts are minimised, personnel must be appropriately informed and trained on how to properly implement the ESMP. It is also important that regular communications are maintained with stakeholders (if applicable) and made aware of potential impacts and how to minimise or avoid them. This section sets out the framework for communication and training concerning the ESMP.

3.1 COMMUNICATION

During construction and operations, the Project manager or line management shall communicate site-wide environmental issues to the Project team through the following means (as and when required):

- Ensure all personnel are allowed to attend an environmental site induction that sets out their requirements concerning this ESMP.
- Ensuring audits and inspections are undertaken regularly on a risk-based schedule.
- Hold regular toolbox talks, including instruction on incident response procedures.
- Deliver Project- and task-specific environmental briefings where required.
- Ensure all personnel have access to the ESMP.
- Ensure operators of key activities and environmentally sensitive operations are briefed and understand their requirements.

This preliminary ESMP shall be distributed to the operational team including any contractors and personnel working on the Project site to ensure that the environmental requirements are adequately communicated. Key activities and environmentally sensitive operations shall be briefed to workers and contractors.

During construction, operations and decommissioning activities, communication between the management team shall include discussing any complaints received and actions to resolve them, any inspections, audits, non-conformance with this preliminary ESMP and any objectives or target achievements.

3.2 ENVIRONMENTAL EMERGENCY AND RESPONSE

Table 3 provides contact details of emergency service providers.

Table 3 – Emergency contact details

Town	Ambulance	Police	Fire brigade
Uis	+264 (67) 50-4006	+264 (67) 1-0111	N/A
Omaruru	+264 64 570037	+264 64 570010	+264 64 570028

All employees need to be made aware of emergency procedures and what to do in the event of an emergency. This must be discussed in the training sessions held with employees. Regular documented drills also need to be carried out to ensure the competence of all employees during different emergencies events. An effective early warning method must be developed and installed to timeously warn personnel, both in the pit and on the surface, in the event of an emergency.

3.3 COMPLAINTS HANDLING AND RECORDING

Any complaints received verbally (from the public) by any personnel on the Project site shall be recorded by the receiver including:

- The name of the complainant;
- The contact details of the complainant;
- Date and time of the complaint; and
- The nature of the complaint.

The information shall be given to the mine manager who is overall responsible for the management of complaints. The mine manager shall do the following:

- Inform the line manager of issues, concerns, or complaints.
- The mine management must maintain a complaints register that requires details of the complaint.
- The mine manager will provide a written response to the complainant of the results of the investigation and action to be taken to rectify or address the matter(s). Where no action is taken, the reasons why are to be recorded in the register.

The workforce shall be informed about the complaints register, its location and the person responsible, to refer residents or the public who wish to lodge a complaint. The complaints register shall be kept for the duration of the Project and will be available for government or public review upon request.

3.4 SITE INDUCTION

All personnel involved in the Project shall be inducted to the site with a specific environment social awareness training, and health and safety issues. The environment and social awareness induction shall ensure that personnel are familiar with the principles of this ESMP,

the environmental and social aspects and impacts associated with their activities, the procedures in place to control these impacts and the consequences of departure from these procedures. The Project manager or line manager shall ensure a register of completed training is maintained.

The site induction should include, but is not limited to the following:

- A general site-specific induction that outlines:
  - What is meant by "environment" and the ESMP?
  - Why the environment needs to be protected and conserved?
  - How mining activities can impact the environment?
  - What can be done to mitigate against impacts?
- The inductee's role and responsibilities concerning implementing the ESMP.
- The site's environmental rules.
- Details of how to deal with, and who to contact should any environmental problems occur.
- Basic vegetation clearing principles and species identification sheets.
- The potential consequences of non-compliance with this preliminary ESMP and relevant statutory requirements.
- The role of responsible people in the Project.

3.5 TRAINING AND AWARENESS

All personnel involved in the Project shall be trained about the specific environmental, social, health and safety issues. The workforce must be briefed on the observations recorded during the site inspection and risk assessment findings during toolbox talks. The workforce must demonstrate an understanding of the principles outlined in this preliminary ESMP and the potential environmental and social impacts associated with their activities. All Project personnel must also demonstrate a clear understanding of the procedures required to control these impacts and the consequences of departure from these procedures. These are as follows:

- Demonstrate an understanding of the site's general and environmental rules;
- Understand the necessary steps to address any environmental issues and identify the appropriate contacts for resolving such problems; and
- Understand the potential consequences of non-compliance with this preliminary preliminary ESMP and violation of relevant statutory licences and permits conditions (where applicable).

4 INCIDENT REPORTING

The Proponent must have an accident and incident reporting system that covers all applicable statutory requirements. The section below sets out the minimum requirements for incident reporting and should be used as a basis for incident reporting if no incident reporting system exists.

4.1 MINOR INCIDENT OR "NEAR MISS"

Any incident or "near miss" involving the Proponent, a nominated representative, any contractor, its subcontractors or any third party's personnel, property, plant or equipment, must be:

1) Orally reported to the Project manager or the line manager's nominated representative:
    a. immediately and without delay,
    b. regardless of whether or not injury to personnel has occurred,
    c. and include any property or equipment that has been damaged.
2) Written up and handed to the Project manager or the line manager's nominated representative by the end of the shift. The written report should:
    a. state all known facts and conditions at the time of the incident,
    b. and include a preliminary assessment of the most likely potential consequences of the incident under the current circumstances

4.2 SERIOUS INCIDENT

For any serious incident involving a fatality, or permanent disability, the incident scene must be left untouched until witnessed by a representative of the police. This requirement does not preclude immediate first aid being administered and the location being made safe.

4.3 INCIDENT REPORT AND CLOSEOUT

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

5 COMPLIANCE AND ENFORCEMENT

5.1 ENVIRONMENTAL INSPECTIONS AND COMPLIANCE MONITORING

Inspections and audits of the Project will be managed and undertaken by the line manager to ensure that the standards and procedures set out in this preliminary ESMP are being complied with and that pollution control measures are in place and working correctly. All equipment will be inspected to ensure they are operating as per specification and that no damage has been caused, and no leaks or spills have occurred. Any non-conformance shall be recorded, including the following details: a brief description of non-conformance, the reason for the non-conformance, the responsible party, the result (consequence), the corrective action(s) taken and any necessary follow-up measures required.

5.2 REPORTING

Bi-annual environmental reports shall be submitted to the Environmental Commissioner at the Ministry of Environment, Forestry and Tourism (MEFT) every six (6) months of every year. These reports should include records of the monitoring and other deliverables of every aspect or programme described in the preliminary ESMP. The application documentation for renewal of the environmental clearance certificate must include an audit compliance report and copies of the six (6) bi-annual environmental reports for the three (3) years that the clearance certificate is valid for.

For large-scale spills (i.e., > 200 litres) and other significant environmental incidents, the fire service should be notified as required and the MEFT office should be informed of the incidents (telephone +264 61 284 2111). If the spillage is of a fuel source (i.e. petrol/diesel), the Ministry of Industries, Mines and Energy (MIME) must be notified by completing form PP/11 (telephone: +264 61 284 8111).

If significant environmental spills (hydrocarbons) occur close to or in a water source, the Department of Water Affairs (DWA) is to be notified. All correspondence with the relevant ministries should be by the mine management or environmental manager. Notification should occur no later than forty-eight (48) hours after the incident has occurred.

For the clean-up of smaller spills, the relevant material safety data sheet (MSDS) should be consulted to determine the appropriate clean-up procedure. Basic spill response training will be provided as part of the site environmental induction. Spill response equipment, including relevant MSDS copies, will be provided in areas where potentially environmentally hazardous chemicals are used.

Occupational incidents and accidents incurred on site should be reported to the authorities (i.e. Occupational Safety & Health Department) at the Ministry of Labour, by using form F.5.

In case archaeological objects or heritage artefacts are discovered on-site, the chance find procedure (Appendix A) must be followed and the National Heritage Council (NHC) must be informed by the Project or mine manager.

In the case of an aviation accident require immediate reporting to the Directorate of Aircraft Accident and Incident Investigation (DAAII) and the nearest police station. Investigations follow ICAO Annex 13 standards, focusing on finding the root cause to prevent future occurrences rather than apportioning blame, with preliminary reports usually released within 30 day.

All correspondence and communication with local and regulatory authorities should be undertaken by the mine management or environmental control officer.

5.3 NON- COMPLIANCE

Where it has been identified that activities are not compliant with this ESMP, the area specific line manager shall employ corrective actions so that the works return to being compliant as soon as possible. In instances where the requirements of the preliminary ESMP are not upheld, a non-conformance and corrective action notice shall be produced. The notice shall be generated during the inspections, and the line manager shall be responsible for ensuring a corrective action plan is established and implemented to address the identified shortcomings. A non-compliance event/situation is considered if, for example:

- There is evidence of a contravention of this preliminary ESMP and associated indicators or objectives;
- The line manager and or contractor have failed to comply with corrective or other instructions issued by the Environmental manager or qualified authority; or
- The line manager and or contractor fail to respond to complaints from the public.

Activities shall be stopped in the event of non-compliance until corrective action(s) has been completed.

5.4 DISCIPLINARY ACTION

This preliminary ESMP is a legally binding document and non-compliance with it shall result in disciplinary action(s) being taken against the perpetrator/s. Such action may take the form of (but will not be limited to):

- Fines/penalties;
- Legal action;
- Monetary penalties imposed by the Proponent on the contractor;
- Withdrawal of licence; or
- Suspension of work.

The disciplinary action shall be determined according to the nature and extent of the transgression / non-compliance and penalties are to be weighed against the severity of the incident.

6 ENVIRONMENTAL AND SOCIAL MANAGEMENT

6.1 ENVIRONMENTAL PERFORMANCE MANAGEMENT

Table 4, Table 5 and Table 6 provide detailed environmental and social management plans for the Project, addressing potential impacts across the construction, operational and decommissioning phases. Each plan specifies mitigation and monitoring measures, performance indicators and the roles and responsibilities for implementation.

This preliminary ESMP has been developed to guide the Project personnel, contractors and subcontractors through the different phases. This includes the following:

- **Construction phase:** The Project manager will apply the construction management plan to conduct systematic inspections and audits on a daily, weekly and monthly basis, ensuring adherence to environmental and social compliance requirements.
- **Operational phase:** The Mine management will implement the operational management plan, integrating ESMP compliance checks into routine mining operations, maintenance activities and any unscheduled operational intervention.
- **Decommissioning phase:** The mine closure plan will guide the Project manager in executing environmental rehabilitation, social restoration measures and post-closure monitoring to ensure long-term sustainability and regulatory compliance.

6.2 CONSTRUCTION PHASE

The construction phase of the Project encompasses activities such as site clearance, bulk earthworks, excavation of borrow pits, construction of service roads and haul roads, diversion of the D3714 road, establishment of processing and support infrastructure, establishment of the accommodation village and installation of tailings and water management facilities. These activities have the potential to cause a range of environmental and social impacts, including loss of vegetation, soil erosion, sedimentation of watercourses, dust and noise emissions, increased traffic on local access roads and temporary disruptions to local communities. Regular inspections, compliance audits and adaptive management ensures that all construction activities are conducted in accordance with Namibian environmental legislation, international best practices and the Project's sustainability objectives.

Table 4 - Environmental and social aspects, potential impacts, mitigation and monitoring measures for the construction phase

Aspect	Potential impacts	Management and mitigation measures	Monitoring requirement	Responsibility
Flora	- Poaching and harvesting of flora for subsistence use or for participation in illegal trade. - Removal of protected plant species. - Soil disturbance from machinery and infrastructure development may create favourable conditions for the spread of invasive alien plant species. Additionally, vehicles and equipment entering the site could introduce invasive species through	- Pre-construction surveys to identify and buffer nesting/roosting sites; - Schedule land clearing outside peak breeding seasons; - Ensure internal land clearing permits are applied for before land clearing activities. Through this process, the environmental team has the opportunity to recover or rescue plants of significance or plants that can be used for progressive rehabilitation. Land clearing permits are to be obtained from the Department of Environmental Affairs and Forestry and permits should be renewed in advance. - Ensure the weed and seed inspection form (Appendix B) is utilised and signed off before equipment may enter and operate on the Project site. - Limit the development to actual sites and avoid affecting adjacent areas, especially mountainous areas, ecological sensitive areas and ephemeral drainage lines.	- Monitor & implement erosion control measures after each rainy season. - Monitor & implement invasive alien plant control measures annually. - Weed and seed inspection form to be completed upon entry of vehicles (see Appendix B)	- Project manager

Aspect	Potential impacts	Management and mitigation measures	Monitoring requirement	Responsibility
	contaminated soil or seeds, further increasing the risk of establishment.	- Minimise areas cleared by ensuring that an early works construction plan or a construction management plan is in place and conveyed to contractors. - Ensure that vehicles accessing the route are free of vegetation, especially if contractors are used who also use their vehicles in urban areas. This should be done through a weed and seed inspection. - Avoid all areas not directly targeted for the various mining infrastructures. - Avoid granite domes & rocky outcrops/ridges as these support localised populations of various unique species. - Avoid trees with raptor nests. - All workers on-site are to be notified to avoid the no-go zone areas and protected species. - Identify rare, endemic, endangered, threatened and protected species and demarcate them and avoid cutting them down, trampling them or removing them, where possible. - Remove unique, sensitive flora and protected plant species – e.g., *Aloe spp*., *Commiphora spp*., *Lithops spp*., etc. before commencing with the development activities and relocating them to less		

Aspect	Potential impacts	Management and mitigation measures	Monitoring requirement	Responsibility
		sensitive/disturbed sites in the immediate area, if disturbance cannot be avoided. - Prevent and discourage the collecting of firewood as dead wood has an important ecological role – especially during the development phase(s). Such collecting of firewood, especially for economic reasons, often leads to abuses – e.g. chopping down of live and or protected tree species. - Attempt to avoid the removal of bigger trees during the development phase(s) – especially with the development of access routes as these serve as habitats for a myriad of fauna. - Avoid mechanical activities adjacent/through the various larger ephemeral drainage lines. - Avoid the destruction of larger trees associated with the ephemeral drainage lines (riparian zones). - Avoid trees with raptor nests (especially white-backed vulture) as these bird numbers are declining throughout their range and are classified as critically endangered by the IUCN (2020). - Prevent and discourage fires, especially during the development phase(s) as this could easily cause runaway veld fires affecting both the local fauna and flora (e.g. loss of grazing and domestic stock mortalities, etc.) for the neighbouring farmers.		

Aspect	Potential impacts	Management and mitigation measures	Monitoring requirement	Responsibility
		- Avoid the planting of potentially invasive alien plant species (e.g., *Prosopis spp*., etc.) for ornamental purposes as part of the landscaping – e.g., office buildings, plant site, access gate, etc. Alien species often "escape" and become invasive causing further ecological damage. - Eradicate and destroy all invasive alien plants encountered on site. This would ensure that the spread is limited and show environmental commitment. - Eradicate and destroy all invasive alien plants encountered on site – e.g., *Prosopis spp*. (mesquite), etc. This would ensure that the spread is limited and show environmental commitment. - Incorporate indigenous vegetation – especially the protected species e.g., *Aloe spp*., *Commiphora spp*., *Hoodia spp*., etc. into the overall landscaping. Indigenous species require less water and overall maintenance. - Include large/old tree specimens as part of the landscaping at the plant site. - Initiate a suitable waste removal system (e.g. remove to Uis and not store on site) as this often attracts wildlife, which may result in human-wildlife conflict issues.		

Aspect	Potential impacts	Management and mitigation measures	Monitoring requirement	Responsibility
		- Educate/inform contractors and staff on protected species to avoid and the consequences of illegal collection of such species. - Investigate the idea of employing an environmental officer during the construction phase(s) to ensure compliance and minimise the overall impact on the flora and the environment. - Rehabilitation of the disturbed areas – i.e., initial development access route "scars" and associated tracks as well as associated mining infrastructures. Preferably, workers should be transported in/out to the construction sites daily to avoid excess damage to the local environment (e.g., fires, wood collection, poaching, etc.). Such rehabilitation would not only demonstrate the company's environmental responsibility but also show meaningful commitment to the environment.		
Fauna	- Soil disturbance, drainage changes due to construction activities may impact amphibian breeding sites, reduce available habitats and	- Ecological walkdowns prior to clearing to identify and relocate fauna. - Phased vegetation clearance to allow fauna to evacuate the area. - Limit the development to actual sites to be mined and avoid affecting adjacent areas, especially granite domes, rocky outcrops/ridges, well	- Fauna incident or mortality register - Weekly ECO inspections - Monthly reporting	- Project manager

Aspect	Potential impacts	Management and mitigation measures	Monitoring requirement	Responsibility
	increase mortality risks for sensitive species. - Construction activities (i.e., land clearing and earthworks) may disturb or displace avifauna, leading to the loss of nesting or roosting sites and disrupting breeding patterns. - Construction activities (i.e., land clearing and earthworks) may disturb or displace mammals, causing habitat loss and potential injury or mortality, particularly for protected species.	vegetated ephemeral drainage lines (riparian zones) and raptor nesting sites throughout the entire area. - Avoid development and associated infrastructure in sensitive areas (e.g., granite domes, rocky outcrops/ridges, well vegetated ephemeral drainage lines). This would minimise the negative effect on the local environment especially unique features serving as habitat to various vertebrate fauna species. - Wildlife-friendly fence designs (smooth wire, raised lower strands, poles at regular intervals, no use of shiny/reflective fence material and game fencing) - Avoid trees with raptor nests. - All workers on-site are to be notified to avoid any no-go areas or protected species. - Identify rare, endemic, endangered, threatened and protected species and demarcate them and avoid trampling them or removing them, where possible. - Remove (e.g. capture) unique fauna and sensitive fauna as well as slow-moving species such as tortoises, chameleon before commencing with the development activities, as well as during the operational phase, and or species serendipitously located during this period and relocate to a less sensitive/ disturbed sites in the immediate area.		

Aspect	Potential impacts	Management and mitigation measures	Monitoring requirement	Responsibility
	- Construction activities may disrupt or fragment reptile habitats, with slow-moving species especially vulnerable to displacement, injury or mortality. - Vertebrate fauna may be injured or killed if they become trapped or entangled in the proposed boundary fence. - Poaching and harvesting of fauna for subsistence use or for illegal trade. - Construction of helipad resulting in injury to animals.	- Prevent and discourage the setting of snares (poaching), illegal collecting of veld foods (e.g. tortoises, etc.), indiscriminate killing of perceived dangerous species (e.g. snakes, etc.) and collecting of wood as this would diminish and negatively affect the local fauna, especially during the development phase(s). - Prevent domestic pets – e.g., cats and dogs accompanying the workers during the construction phase as cats decimate the local fauna. - Prevent water from accumulating in ponds, etc. (would attract amphibians, various birds; carnivores and ungulates) - Use focused lighting (lights expected to not attract nocturnal species such as bats, owls, certain carnivores, etc.) - Initiate a suitable waste removal system (i.e., remove to Omaruru/Okombahe/Uis and not store on site) as this often attracts wildlife – e.g., black-backed jackal, crows, etc., which may result in human-wildlife conflict issues. - Educate/inform contractors and staff on protected species to avoid illegal collection of such species.		

Aspect	Potential impacts	Management and mitigation measures	Monitoring requirement	Responsibility
		- Employ an environmental officer during the construction phase(s) to ensure compliance and minimise the overall impact on the fauna and the environment - The helipad will be properly authorised through the Civil Aviation Directorate. - A Helipad operations manual will be developed and will include details of: o The helipad facility and of the flightpaths o Normal operating procedures. o Security; o Emergency procedures; o Staff training programs; and o Maintenance practices. - A safety plan will be developed to ensure safety of people and animals at take-off and landings.		
Tracks	- Clearing for roads and tracks may result in direct loss of vegetation and fauna habitats. - Sensitive habitats such as ephemeral drainage lines and	- Avoid planning access routes (roads and tracks) through sensitive areas – e.g. over hills and along drainage lines within ephemeral (intermittent) streams and rivers. This would minimise the effect on localised potentially sensitive flora and habitats in the area. - Route new tracks around established and protected trees and clumps of vegetation, where possible.	- Verification that constructed roads/tracks match approved layouts - Confirmation that no tracks	- Project manager - Environmental manager

Aspect	Potential impacts	Management and mitigation measures	Monitoring requirement	Responsibility
	riparian zones may be disproportionately affected. - Creation of multiple or informal tracks can fragment habitats, reducing connectivity for small mammals, reptiles and invertebrates. - Vehicle traffic can lead to faunal roadkill, especially reptiles, small mammals and nocturnal species. - Open trenches and excavations may trap or injure fauna.	- Avoid driving randomly through the area, instead stick to permanently placed roads/tracks – especially during the construction phase. (i.e. "track discipline"). This would minimise the effect on localised potentially sensitive flora and habitats in the area. - Avoid having to create new tracks for ongoing maintenance and inspections. - Stick to speed limits (30 km/h) that are established to result in fewer faunal road mortalities as well as less dust pollution. Speed humps could also be used to ensure the speed limit. - Implement erosion control. Avoid constructing tracks up steep gradients (where runoff can deeply incise the slope and erode the road). Incorporate erosion furrows (runoff sites) and humps along tracks to channel water off the tracks to minimise erosion problems, cross drainage lines at right angles. The area(s) towards and adjacent the drainage line(s) are easily eroded, and further development may exacerbate this problem. Avoid construction within 100 m of the main drainage line(s) (ephemeral streams) to minimise erosion problems as well as preserve the riparian-associated flora and fauna.	cross ephemeral streams unless approved and engineered - Evidence that 100 m buffers to main drainage lines are respected - ECO weekly site inspections	

Aspect	Potential impacts	Management and mitigation measures	Monitoring requirement	Responsibility
Traffic	- Construction vehicle fleets may alter traffic flow and cause major wear on existing road networks. - Safety risks at the proposed mine access off the C36 gravel road, where insufficient shoulder sight distance (SSD) for single-unit trucks at the existing 100 km/h speed limit could result in collisions or near misses. - Potential impact of increased Project traffic on local traffic flow and safety on major district roads	- Designs of the C36 intersection layouts of the mine access road must address design standards and elements such as alignment, sign distances, cross-sections and provisions for other road users including pedestrians and must be legally compliant. - The diversion of the D3714 district road will be required. Thus, a permanent new route of the D3714 will be require the following: o The radii of the western horizontal curve be increased to 350 metres; and o Should a secondary access be implemented on the eastern side, where the realignment and the existing D3714 meet, it must be ensured that sufficient SSD is provided from the secondary access. - During the construction of the proposed access, it is also recommended that the trees and vegetation be removed to ensure that the required SSD is achieved. - Move mine access road intersection to comply with SSD requirements. - Provide intersection ahead warning (W107/W108) in advance of the proposed access.	- Verify road and intersection designs meet standards (SSD, alignment, signage, cross-sections) through engineer approval and audits. - Inspect D3714 realignment and western curve radii, to ensure construction matches approved plans. - Confirm vegetation removal and intersection relocation	- Project manager - Contractors

Aspect	Potential impacts	Management and mitigation measures	Monitoring requirement	Responsibility
	during peak hours (am hours – 07:15 to 08:15, pm hours 15:00 – 16:00).	- Provide large visible road signage, indicating the presence of heavy vehicle traffic at least 500 m before, on either side of the mine site access road intersection along the C36 road. - Reduce the speed limit along the C36, at least 1km on either side of the proposed mine access to 80 km/h. - Bus embayments with sufficient circulating radii (minimum 15 metres) and shelter be provided in the internal road access. - Road safety issues must be included as part of the overall on-site safety training and at induction. - Apply regular dust suppression to the site access turn off. - Prohibit overtaking in the access zone. - Implement a construction traffic management plan (CTMP) that defines designated haul routes, speed limits, overtaking restrictions, driver training requirements, communication protocols (e.g., VHF channels) and contractor compliance measures such as GPS tracking of fleet vehicles. - Maintain consultation with UTM in the event of abnormal loads during construction.	achieve required SSD. - Check installation and maintenance of warning and heavy vehicle signage, and speed limit signs.	

Aspect	Potential impacts	Management and mitigation measures	Monitoring requirement	Responsibility
		- Implement a coordinated road maintenance agreement between the Proponent and the Roads Authority (RA) to ensure regular grading, compaction, shoulder repair and pothole patching on gravel and district roads experiencing accelerated cumulative wear. - Enforce strict vehicle-loading and speed controls to limit heavy-axle stress on gravel surfaces, require contractor compliance through GPS tracking, calibrated loading equipment and penalties for overloaded trucks. - Maintain ongoing communication with local communities regarding deteriorating sections, planned maintenance activities, temporary diversions and safe-driving guidance during periods of intensified mining-related traffic.		
Soil	- Extensive clearing of vegetation for pits, WRDs, TSF, haul roads, access roads, accommodation village and processing plant and other mining	- Minimise disturbance footprint by refining infrastructure layout, clustering facilities, marking no-go zones and limiting vegetation clearing strictly to surveyed boundaries. - Implement controlled topsoil salvage, stripping the full thin A-horizon in a single pass (300 mm), storing topsoil in low (≤2 m) vegetated stockpiles and preventing contamination or mixing with subsoil.	- Monitor vegetation on soil stockpiles to prevent erosion and loss of topsoil. - Conduct soil quality and erosion	- Project manager - Environmental manager - Environmental control officer

Aspect	Potential impacts	Management and mitigation measures	Monitoring requirement	Responsibility
	infrastructure may lead to physical disturbance and destruction of soil structure. - Excavation for open pits, foundations, pipelines, powerlines and stormwater structures will remove topsoil and subsoil, altering natural profiles - Compaction from the use of heavy machinery during construction will reduce infiltration capacity of soil and increase runoff - Stripping and stockpiling of topsoil during	- Soils to be stored for longer than three (3) years should preferably not be stockpiled in piles greater than 1.5 m in height. - Re-use topsoil as soon as possible to maintain fertility and microbial viability. - Slopes of the stockpiles should be constructed to minimise the chances of erosion of the soils. - Limit excavation to necessary areas - Avoid operating machinery on wet soil to prevent compaction and structural damage. - Topsoil stockpiles should be vegetated as soon as possible to prevent loss of the resource by wind and water erosion and to retain its micro-biological functions. - Implement sediment traps, diversion berms or mulching to reduce soil loss and stabilise exposed subsoil. - Fertilize and vegetate soil stockpiles where required. - Equipment must be in good condition to ensure that lubricant/fuel spills do not contaminate the site. - Ensure soils are replaced in layers in which they were removed.	monitoring and adjust management practices as needed to ensure successful rehabilitation.	

Aspect	Potential impacts	Management and mitigation measures	Monitoring requirement	Responsibility
	construction may result in nutrient depletion, reduced microbial activity and organic matter loss, particularly relevant given already low fertility Regosols - Spills or leaks from hazardous chemicals or hydrocarbons such as fuel storage facilities, refuelling stations, workshops, generator stations and vehicle wash bays during construction may contaminate soils	- Prevent compaction and unnecessary disturbance by restricting machinery to designated access routes, using temporary geotextiles or granular layers on haul roads, enforcing speed limits and avoiding vehicle movement during wet conditions - Disturbed or excavated areas should be backfilled with the soil material that was removed from it, shaped to free draining slopes and planted with sustainable grass/shrub/tree species. - Ensure topsoil stockpiles are not positioned down the gradient of potential contamination zones. - Apply robust erosion and stormwater control, including contour-aligned drains, berms, silt fences, sediment traps, rip-rap outlets, and stabilisation of exposed slopes using mulch, erosion-control blankets or temporary vegetation cover. - Bunding fuel/lube areas using impermeable pads for maintenance zones prevents soil contamination, providing spill kits and enforcing immediate clean-up and remediation of contaminated soils - Educate site personnel on proper soil handling, erosion control and rehabilitation practices to ensure ESMP compliance.		

Aspect	Potential impacts	Management and mitigation measures	Monitoring requirement	Responsibility
Surface and groundwater	- Lag/reduction in flow to downstream areas and an altered drainage regime. - Reduction in surface water availability for water dependent ecosystems (aquatic and terrestrial) due to diversion or containment. - Contamination of run-off or surface water bodies causing a deterioration in water quality. - Deterioration in surface water quality due to contamination impacting water	- Visual monitoring and photographic record of any surface and or groundwater intersected by any site activity or material. - Visual monitoring during rainfall events for runoff of polluted water. - Vehicles and machinery are to be regularly serviced to minimise oil and fuel leaks. - Good housekeeping shall be maintained, and chemicals and fuel must be stored securely to prevent any accidental spills on the construction site. - Portable chemical toilet facilities will be hired for onsite use, and the supplier/contractor will manage any sewerage generated. - Long-term sewage management will need to be adequate, as well as pre-approval and related permits based on the design and structure (capacity) are required. - Hazardous waste disposal facilities need to be approved by the MEFT before construction and/or meet industry standards to prevent pollution events from occurring. - All plant and surface infrastructure (including the TSF and WRDs) to be designed and constructed	- Daily and weekly observations for any leakages. - Maintain a record of all abstracted volumes and report to DWA / MAFWLR as per permit conditions. - Install water flow meters if required. - Maintain a monthly water balance. - Submit quarterly water quality tests for water and monitoring boreholes,	- Project manager - Environmental manager

Aspect	Potential impacts	Management and mitigation measures	Monitoring requirement	Responsibility
	dependent ecosystems (aquatic and terrestrial). - Reduction in groundwater recharge volume and quality. - Erosion of soil causing sedimentation in water courses. - Erosion of soils due to uncontrolled surface flow. - Flooding. - Reduction or depletion of groundwater availability. - Loss or reduction of groundwater available for ecosystem services and other users.	according to national standards and applicable legislative requirements, to effectively prevent surface water and groundwater contamination. - Ensure erosion control and prevention measures are in place during construction. - Ensure any new laydown areas that will be used for the construction of the mine are located outside of stormwater catchment areas. - Installation of diversion structures to divert non-contact surface water away and around the mining operations. - Refuelling shall be undertaken in a designated area designed/constructed to standards. - All stationary vehicles and machinery must have drip trays to collect leakages of lubricants and oil during any field repairs or emergency maintenance. - In the event of pollution, polluted soils must be collected and disposed of at an approved site. - Altered flow paths should be modified to allow upstream areas to route back into the natural downstream area and ideally. - Pre-existing or baseline hydrology should be replicated where practicably possible.	effluent discharge points and any surface water bodies.	

Aspect	Potential impacts	Management and mitigation measures	Monitoring requirement	Responsibility
	- Groundwater contamination.	- Discharge excess water of acceptable quality back into the surface water environment. - Implementing stormwater controls. - Ensuring sufficient containment of dirty areas. - Limiting on-site storage of potential contaminants - Ensure spill kits are always available and having designated refuelling/maintenance areas will aid in reducing potential extent of contamination. - If cement is mixed at the helipad site, this will not be done directly on the ground, but instead on impermeable material such as tarpaulins. All runoff water will be contained and disposed of with the sewage effluent. - Implement continuous groundwater investigations, including test pumping to confirm sustainable yield. - Adhere to abstraction limits and monitoring requirements specified in the groundwater abstraction licence issued by the regulator.		
Waste management	- Spills or leaks of fuel, oil, lubricants, and chemicals during handling, maintenance, or storage.	- Hydrocarbon and chemical-contaminated solids must be stored correctly and disposed of by registered companies. - Safe disposal certificates must be kept and provided to the Project manager on request.	- Daily, weekly and monthly inspections	- Project manager - Environmental manager

Aspect	Potential impacts	Management and mitigation measures	Monitoring requirement	Responsibility
	- Leaching of hydrocarbons, chemicals or other hazardous substances into surface water or groundwater. - Improper storage, decomposition of waste or uncontrolled burning of waste materials. - Chemical burns, inhalation of fumes, or skin contact with petrochemicals and oils during handling or maintenance. - Littering, uncontrolled dumping or burning of waste	- All litter on and around the site must be picked up and placed in the waste bins provided. - The site should always be kept tidy and free of litter. - All domestic and general waste produced daily should be cleaned and contained daily. - No solid waste landfill will be established at the site. - No waste shall be burned or buried anywhere, unless permitted to do so. - Waste shall be collected and shall be removed regularly to avoid bad odours. - Hazardous and non-hazardous waste shall be always stored separately.		

Aspect	Potential impacts	Management and mitigation measures	Monitoring requirement	Responsibility
	affecting local ecosystems and aesthetic values. - Failure to manage hazardous and non-hazardous waste according to legal standards and environmental permits.			
Hydrocarbon and hazardous substances spillages	- Risk of hydrocarbons, fuels, oils, and chemicals seeping into the soil from spills, leaks or improper storage. - Hazardous chemicals entering surface water or groundwater through runoff or leaks. - Release of volatile hydrocarbons or	- Hazardous chemicals are to be stored in bunded areas. - Hazardous chemicals (such as fuels) are to be handled over areas provided with impervious surfaces. - Spills of hazardous chemicals are to be contained and cleaned up to ensure protection of the environment. - All the necessary PPE required for the safe handling and use of petrochemicals and oils shall be provided to, and used or worn by, the onsite staff. - Major servicing of equipment shall be undertaken off site or in appropriately equipped workshops.	- Daily observations when fuels/chemicals are delivered and handled. - Supervision during refuelling. - Weekly observations monitor containment and storage.	- Project manager - Environmental manager

Aspect	Potential impacts	Management and mitigation measures	Monitoring requirement	Responsibility
	chemicals during handling or maintenance.	- For small repairs and required maintenance activities, all reasonable precautions must be in place to avoid oil and fuel spills (e.g. spill trays, impervious sheets). - Vehicles and machinery are to be regularly serviced to minimise oil and fuel leaks. - All the necessary PPE required for maintenance activities must be issued to staff whose duty it is to manage and maintain the machinery and equipment. - Dust suppression at the helipad site during construction to achieve 50 % control efficiency.	- Monitor the level of hydrocarbons in contaminated soils after a year of rehabilitation. Monitor each year until the soils are ready for re-use in revegetation projects.	
Air quality	- Construction activities may potentially generate elevated concentrations of depositional dust, airborne particulate matter (PM_{10}, $PM_{2.5}$) and gaseous pollutants that could result in	- Dust suppression measures must be implemented to reduce dust. - Vehicles must adhere to speed limits to avoid producing excessive dust. - Vehicles and machinery are to be regularly serviced according to the manufacturers' specifications and kept in good working order to minimise exhaust emissions. - Air quality impacts during construction would be reduced through basic control measures such as limiting the speed of delivery trucks.	- Daily observations - Monthly air quality monitoring	- Project manager - Environmental manager

Aspect	Potential impacts	Management and mitigation measures	Monitoring requirement	Responsibility
	altered ambient air quality, visual nuisance and complaints from the AQSRs. - Construction activities may potentially generate airborne particulate matter, windblown dust and combustion emissions from earthmoving equipment and machinery that could affect site operations. - Occupational health and safety issues arising from deteriorated air quality throughout the construction phase.	- limiting unnecessary travelling of vehicles on untreated roads and applying dust suppressants on regularly travelled unpaved sections. - All diesel-powered equipment and plant vehicles should be kept at a high level of maintenance. This should particularly include the regular inspection and, if necessary, replacement of intake and exhaust silencers. Any change in the air emission characteristics of equipment should serve as a trigger for withdrawing it for maintenance. - Avoid unnecessary equipment idling.		

Aspect	Potential impacts	Management and mitigation measures	Monitoring requirement	Responsibility
Noise	- Construction activities may potentially generate excessive noise that could displace local fauna from their habitats and established home ranges in the immediate project area. - Potential for mine construction activities to generate excessive noise leading to discomfort, nuisance and complaints from host and adjacent communities. - Occupational health and safety impacts related to noise exposure	- Equipment can be reviewed to ensure the quietest available technology is used. Where equipment with lower sound power levels is selected, vendors/contractors should be required to guarantee optimised equipment design noise levels. - Provide prior notice to the affected communities in the form of notice boards that indicate the commencement of construction activities. - Avoid unnecessary idling of equipment and machinery. - Nighttime construction works are strictly prohibited. In exceptional circumstances where night work is deemed necessary, prior written authorisation must be obtained from the Proponent. - All diesel-powered equipment and construction fleet must be kept at a high level of maintenance. - Construction materials such as beams should be lowered and not dropped. - Construction personnel must be trained on appropriate noise mitigation practices, including proper equipment and machinery use and adherence to working hours.	- Noise complaints register	- Project manager - Environmental manager

Aspect	Potential impacts	Management and mitigation measures	Monitoring requirement	Responsibility
	during the construction phase.	- A noise complaints register must be kept. Noise complaints received must be promptly addressed following the complaints resolution mechanisms. - In the event that noise related complaints are received, short-term ambient noise measurements should be conducted as part of investigating the complaints. The results of the measurements should be used to inform any follow up interventions. - Keep all roads well maintained and avoid steep inclines or declines to reduce acceleration/brake noise. - Minimising individual vehicle engine, transmission, and body noise/vibration. This is achieved through the implementation of an equipment maintenance program. - Minimise the need for trucks/equipment to reverse. This will reduce the frequency at which disturbing, but necessary reverse warnings occur. Alternatives to the traditional reverse 'beeper' alarm, such as a 'self-adjusting' or 'smart' alarm, could be considered. When reversing, vehicles should travel in a direction away from NSR's if possible. - Where possible, other non-routine noisy activities such as construction, decommissioning, start-up,		

Aspect	Potential impacts	Management and mitigation measures	Monitoring requirement	Responsibility
		and maintenance, should be limited to daytime hours. - A noise complaints register must be kept. - As far as is practically possible, sources of significant noise should be enclosed. The extent of an enclosure will depend on the nature of the machine and its ventilation requirements. Pumps are examples of such equipment. - It should be noted that the effectiveness of partial enclosures and screens can be reduced if used incorrectly, e.g. noise should be directed into a partial enclosure and not out of it, and there should not be any reflecting surfaces such as parked vehicles opposite the open end of a noise enclosure. - Equipment should be sited as far away from NSRs as possible. - Machines used intermittently should be shut down between work periods or throttled down to a minimum and not left running unnecessarily. This will reduce noise and conserve energy. - Acoustic covers of engines should be kept closed when in use or idling. - Doors to pump houses should always be kept closed.		

Aspect	Potential impacts	Management and mitigation measures	Monitoring requirement	Responsibility
		- Construction materials such as beams should be lowered and not dropped. - Regular and effective maintenance of equipment and plants is essential to noise control. Increases in equipment noise are often indicative of eminent mechanical failure. Also, sound-reducing equipment/materials can lose effectiveness before failure and can be identified by visual inspection. - Noise generated by vibrating machinery and equipment with vibrating parts can be reduced using vibration isolation mountings or proper balancing. - Noise generated by friction in conveyor rollers, trolleys etc. can be reduced by sufficient lubrication. - Naturally, if noise activities can be minimised or avoided, the amount of noise reaching NSRs will be reduced. Alternatively, the distance between source and the receiver must be increased, or noise reduction screens, barriers, or berms must be installed. - If noise control at the source and the use of distance between the source and receiver is not possible, screening methods may be considered. The effectiveness of a noise barrier is dependent on		

Aspect	Potential impacts	Management and mitigation measures	Monitoring requirement	Responsibility
		its length, effective height, and position relative to the source and receiver as well as the material of construction. To optimize the effect of screening, screens should be located close to either the source of the noise, or the receiver. - The careful placement of barriers such as screens or berms can significantly reduce noise impacts but may result in additional visual impacts. Although vegetation such as shrubs or trees may improve the visual impact of construction sites, it will not significantly reduce noise impacts and should not be considered as a control measure. - Earth berms can be built to provide screening for large-scale earth-moving operations and can be landscaped to become permanent features once construction is completed. Care should be taken when constructing earth berms since it may become a significant source of dust		
Heritage	- Potential for project activities to cause structural damage to historic water pools located in proximity to mine infrastructure	- Implement the archaeological chance find procedure (Appendix A). - Adhere to requirements stipulated in the approves heritage consent for the Project, which includes the following;	- Monitoring and evaluation inspections will be carried out, and bi-annual reports are to	- Project manager - Environmental manager

Aspect	Potential impacts	Management and mitigation measures	Monitoring requirement	Responsibility
	and planned mine operational areas - Potential for project activities to encroach upon: (i) a cemetery, (ii) a Christian burial site and (iii) a historic grave site, located in proximity to the planned mine operational areas - The potential for project activities to cause structural instability and collapse of the abandoned ruin building at Aniswept - Potential for project activities to encroach upon and disturb cultural and heritage	o A 200 m buffer zone should be created and maintained around the historic water pools and historic well. o Sites 01 and 02 should be treated as No-Go zones for mining. - A 100 m buffer zone should be created and maintained around the ruins. Ensure that all personnel, including subcontractors, are informed about the location, cultural and heritage significance of the water pools. - Ensure full compliance with all conditions outlined in the heritage consent, including the provision for periodic reports (every six (6) months) to NHC and renewal of the heritage consent (annual renewal). - The gravesites reported here should be fenced, and the area within cleared of all encroaching bush, while their localities and that of other heritage features should be indicated on the Project GIS and all relevant field mapping should be made known to all contractors whose activities might encroach on the sites. - In the event the Project activities will unavoidably encroach on the gravesites, the Proponent is legally obliged to take all necessary steps either to protect the sites or engage an archaeologist consultant to	be submitted to NHC. - Weekly, monthly inspections	

Aspect	Potential impacts	Management and mitigation measures	Monitoring requirement	Responsibility
	features situated outside EPL 4818: (i) prehistoric rock art paintings (ii) the mine shaft, (iii) abandoned historic settlement and (iv) two (2) Christian graves. - Potential to discover or unearth new heritage objects, artefacts and archaeological remans in the designated development areas and immediate project site.	consider further research in an effort to exhume, relocate and rebury in accordance with official directives from the National Heritage Council of Namibia and the Ministry of Urban and Rural Development under which the Burial Places Ordinance (27 of 1966) in terms of the Local Authorities Act (No. 23 of 1992) would fall under while following the Cemetery Regulations (No. 4291, Government Gazette, 13 July 2009). - The Proponent is implored to incorporate the GIS data of the SE heritage resources in their sensitivity mapping of the Project layout so that all flagged sites can be demarcated or avoided as a management measure to prevent any possible encroachment and disturbance. Heritage data should be sensitised to the operators and fieldwork personnel to exercise due caution when working in close proximity to where the heritage features are found.		
Visual	- Loss of sense of place due to accelerated landscape transformation.	- Limit clearing to essential areas and in phases. - Retaining vegetation near sensitive boundaries. - Appropriate engagement with the communities prior to any major landscape changes or construction activities. - Appropriate colour selection of buildings.	- Daily and weekly inspections	- Site manager - Environmental control officer

Aspect	Potential impacts	Management and mitigation measures	Monitoring requirement	Responsibility
	- Visual disturbance from construction machinery, stockpiles, temporary infrastructure, increase in road traffic and lighting.	- Screening and integration of the plant into the surrounding topography. - Avoiding unnecessary linear developments (where feasible). - Dust suppression.		
Community health, socio-economic, occupational health and safety and human rights	- Creation of temporary jobs during the construction phase. - Indirect employment: downstream jobs for third (3rd) parties. - Land acquisition, physical displacement and resettlement of indigenous and customary landholding	- Engage with affected communities and community representatives at the earliest Project planning phase. - Respect traditional decision-making processes and customary governance structures. - Use visual aids and written materials to enhance understanding. - Maintain records of community feedback, concerns and signed agreements. - Establish accessible, transparent and independent grievance mechanisms to address community complaints and disputes. - Adapt engagement strategies if community concerns evolve or new impacts emerges.	- Daily inspections - Injury and incident register - Complaints and grievances register - HR policy	- Proponent - Project manager - HR department

Aspect	Potential impacts	Management and mitigation measures	Monitoring requirement	Responsibility
	communities (PS5 / PS7). - Reputational damage to the Project arising from the quality and effectiveness of engagement with the affected communities. - Influx of jobseekers and their families into the immediate Project area. This may alter the demographic and dynamics of the host community and may place additional strain on existing services. - Construction personnel sustain on-site injuries, partial disabilities,	- Compliance with the safety and health requirements as outlined in the Labour Act No. 6 of 1992 and ISO 45001 standards. - Develop and enforce standard operating procedures (SOPs) related to workplace safety. - Ensure all employees receive on-site safety inductions, specifically related to mobile equipment and on-site traffic. - Ensure availability and proper use of PPE (e.g. safety boots, high-visibility clothing, ear plugs, fall-arrest systems, gloves and hard hat). - Document injury statistics, corrective actions initiated and lessons learned to improve safety practices on-site. - Deploy trained first aid teams and ensure that emergency response plans are in place, including access to medical facilities and clear reporting procedures. - Encourage workers to report hazards or unsafe conditions promptly and ensure clear communication of safety updates and protocols. - Recruitment of personnel will be conducted exclusively through the Human resources (HR)		

Aspect	Potential impacts	Management and mitigation measures	Monitoring requirement	Responsibility
	life threatening scenarios or death. - Opportunity for the construction workforce to gain skills and practical work experiences that advance their careers.	department (off-site). No recruitment activities will be conducted on-site. - Strict access control will be enforced at all entry and exit points of the mine. - Establish regular engagement with local community leaders (representatives) to inform them of upcoming employment opportunities and skill requirements. - Set minimum targets for the inclusion of women and youth in both skilled and semi-skilled roles		

6.3 OPERATIONAL PHASE

The operational phase of the Project comprises active mining and processing activities, including ore extraction, haulage, crushing and processing, tailings deposition, waste rock management, water abstraction and reuse and ongoing operation of supporting infrastructure and services. During this phase, potential environmental and social impacts may arise from land disturbance, water use and quality changes, air emissions (dust and gaseous emissions), noise and vibration, hazardous material handling and workforce and community interaction. Table 5 provides a comprehensive framework for managing these impacts through the implementation of operational controls, monitoring programmes, and performance indicators, with clearly defined roles and responsibilities. Continuous monitoring, routine inspections and adaptive management during operations ensure compliance with Namibian regulatory requirements, international mining best practice and the Project's environmental and social performance objectives throughout the life of mine.

Table 5 - Environmental and social aspects, potential impacts, mitigation and monitoring measures for the operational phase

Aspect	Potential impact	Management and mitigation measures	Monitoring requirement	Responsibility
Flora	- Operational activities may hinder vegetation regrowth, alter soil conditions and cause long-term habitat loss. - Operational activities may lead to soil erosion which could indirectly affect local flora and fauna, especially near sensitive habitats and drainage lines. - Disturbed areas may facilitate the spread of invasive alien plant species, which can also be repeatedly introduced via seeds carried by vehicles or equipment entering the site.	- Remove and destroy all invasive alien plants encountered throughout the area; - Ensure that vehicles accessing the Project area are free of vegetation, especially if contractors are used who also use their vehicles in urban areas using the weed and seed inspection sheet (Appendix B). - Terrace the WRDs and cover them with soil to facilitate stabilisation and rehabilitation. - Terrace the tailings storage facility and cover with soil to facilitate stabilisation and rehabilitation. - Prevent and discourage the collecting of firewood as dead wood has an important ecological role. Collecting of firewood, especially for economic reasons, often leads to abuses – e.g., chopping down of live and/or protected tree species such as *Acacia erioloba*, etc. which are good quality wood. - Prevent the planting of potentially invasive alien plant species (e.g., P*rosopis spp*., etc.) for ornamental purposes as	- Daily visual inspection during construction of new access tracks/widening, and land clearing areas. - Daily visual inspection of dams, and river diversion for fauna that may have become entrapped. - Clearing fire breaks regularly, especially before the windier months. - Regular checking of rehabilitation areas to ensure that the vegetation is flourishing and not dying. - Biodiversity monitoring should be undertaken annually. This program will	- Mine manager - Environmental manager

Aspect	Potential impact	Management and mitigation measures	Monitoring requirement	Responsibility
		part of the landscaping – e.g., office buildings, plant site, access gate, etc. Alien species often "escape" and become invasive causing further ecological damage. - Eradicate and destroy all invasive alien plants encountered on site (e.g., *Prosopis spp*. (mesquite), etc. This would ensure that the spread is limited and show environmental commitment. - Educate/inform contractors and staff on protected species) to avoid and the consequences of illegal collection of such species. - Avoid mechanical activities adjacent/through the various larger ephemeral drainage lines. - Ensure that vehicles accessing the Project site are free of vegetation and seeds especially if contractors are used who also use their vehicles in urban areas.	include but is not limited to, monitoring of the condition of habitats, ecosystems, topsoil stockpiles, species inventory and alien vegetation control. - Vegetation clearing permits are valid and on file.	
Fauna	- Noise and vibration may displace mammals and increase the risk of injury,	- Remove slow-moving species such as tortoises, chameleons, etc. when serendipitously encountered onsite.		- Mine manager - Environmental manager

Aspect	Potential impact	Management and mitigation measures	Monitoring requirement	Responsibility
	mortality or entanglement. - Mammals may face injury or mortality on-site if attracted to the TSF and other artificial water sources, mistaking them for natural water. - Vertebrate fauna may be injured or killed if they become trapped or entangled in the proposed boundary fence. - Vertebrate fauna may be at risk of injury or mortality from collisions with vehicles and heavy machinery. - Traffic and disturbed landscapes may restrict reptile movement and	- Maintain track discipline and limit/prevent nocturnal & offroad driving. - Ensure adequate waste control – i.e., remove waste to municipal landfill sites (e.g., Omaruru/Okombahe/Uis). - Prevent water from accumulating in ponds, etc. (would attract amphibians, various birds; carnivores & ungulates). - Use focused lighting (lights not expected to attract nocturnal species such as bats, owls, certain carnivores, etc.). - Routine inspections and maintenance to quickly release or assist trapped animals. - Installation of deterrents or exclusion measures around the TSF and artificial water bodies to prevent fauna access (e.g. fencing). - Avoidance of reflective building materials or ponds and the use of lighting designed to minimise insect attraction (e.g. downward-facing, yellow lighting. - Limit blasting and other high-noise activities during peak breeding periods. - No blasting at night, early morning or early evenings.		

Aspect	Potential impact	Management and mitigation measures	Monitoring requirement	Responsibility
	increase mortality near pits and dumps. - Altered water regimes and disturbance may threaten amphibian breeding and survival. - Mine infrastructure, vehicles and lighting may increase the potential for avifauna collisions. - Avifauna disturbance and displacement from noise and vibration. - Avifauna risks of attraction and mortality from artificial water sources including the TSF. - Avifauna disturbance and loss due to operation of the helipad.	- Apply engineering, administrative or technological controls to reduce sound and vibration at source (where possible). - Prevent domestic pets (e.g., cats and dogs) from accompanying the workers as cats decimate the local fauna and should be avoided at all costs. - Educate/inform contractors and staff on protected species to avoid and the consequences of illegal collection of such species. - Avoid driving randomly through the area (i.e., "track discipline") but rather stick to permanently placed roads/tracks. This would minimise the effect on localised potentially sensitive habitats in the area. - Stick to speed limits of maximum 30 km/h as this would result in fewer faunal road mortalities. - Speed humps could also be used to ensure the speed limit. Lower speeds would also minimise dust pollution. - The following measures will be implemented to prevent or reduce bird strikes:		

Aspect	Potential impact	Management and mitigation measures	Monitoring requirement	Responsibility
		o If birds are observed on the aerodrome prior to take-off, these must be dispersed before taking-off. o Ground personnel will try to scare away the birds using frightening devices, for example sounds, lights, pyrotechnics, radio-controlled airplanes, decoy animals, lasers, dogs etc. o Landing lights will be used by all helicopters during take-off, climb, descent, approach and landing. Although there is no conclusive evidence that birds see and avoid aircraft lights, their use will make the aircraft more visible. o All bird strikes will be reported.		
Traffic	- Heavy trucks transporting diesel, reagents and supplies will travel between the port of Walvis bay and the mine, utilising the B2, C33, C36 roads and	- Inspect mine vehicles and contractors' vehicles weekly for clean and operational taillights, indicators, reflective signage and reverse horns/beepers to ensure visibility of vehicles, especially at night. - The needs of pedestrians should be taken into consideration in the planning and	- Inspect all mine and contractor vehicles weekly for lights, indicators, reflectors, and beepers; ensure gravel-road safety compliance.	- Mine manager - Environmental manager

Aspect	Potential impact	Management and mitigation measures	Monitoring requirement	Responsibility
	occasionally the C35/C34 routes, resulting in increased degradation of these roads. - Potential impact of increased project traffic on local traffic flow and safety on major district roads during peak hours (am hours – 07:15 to 08:15, pm hours 15:00 – 16:00). - Combined operational traffic from the Project and the UTM will create long-term cumulative traffic loads on the regional road network that exceeds what the mines would generate in isolation.	design of the access to the proposed site, as well as the design of the road infrastructure. - All employees and contractors must adhere to the speed limits and other road safety procedures, both on the mine site and on public roads. Include speed limits in the induction and enforce the speed limits. - Road safety issues must be included as part of the overall on-site safety training and at induction. - Restrict convoy driving. - Schedule abnormal loads during off-peak daylight hours. - Ensure all Project vehicles meet gravel-road safety standards and undergo regular inspections. - Apply regular dust suppression to the site access turn off. - Long-term road maintenance and surface management through collaborative agreements with the Roads Authority to undertake routine grading, shoulder repair, drainage clearing, and dust	- Monitor adherence to speed limits, convoy restrictions and abnormal load scheduling. Include road safety in inductions and training. - Ensure pedestrian safety is incorporated in road design and maintained on-site. - Track dust suppression, road maintenance (with Roads Authority), and communicate traffic impacts to local communities.	

Aspect	Potential impact	Management and mitigation measures	Monitoring requirement	Responsibility
		suppression on gravel corridors exposed to continuous mining traffic. - Maintain community-oriented road-safety communication to inform local road users of high-traffic periods, slow-moving convoys, detours, or road maintenance activities related to cumulative mine traffic.		
Soil	- Long-term stockpiling (100 ha) under dry and windy conditions may cause biological degradation or mixing with subsoil. - Water erosion along disturbed ephemeral drainage channels and unprotected slopes, particularly during storm events, during the operational phase, could accelerate gully formation and sedimentation.	- Avoid mechanical activities adjacent/through the various larger ephemeral drainage lines. - Where new tracks must be made off the main routes, the routes should be selected causing minimal damage to the environment (e.g., use the same tracks; cross drainage lines at right angles, avoid placing tracks within drainage lines, avoid collateral damage (i.e. select routes that do not require the unnecessary removal of trees/shrubs, especially protected species). - Rehabilitate all new tracks created. - Apply robust erosion and stormwater control, including contour-aligned drains, berms, silt fences, sediment traps, rip-rap	- Monitor & implement erosion control measures after each rainy season. - Conduct soil quality adjusting management practices as needed to ensure successful rehabilitation. - Monitoring and adaptive management using vegetation cover targets. - Erosion inspections. - Bulk density/infiltration measurements and	- Mine manager - Environmental manager

Aspect	Potential impact	Management and mitigation measures	Monitoring requirement	Responsibility
	- Spills or leaks from hazardous chemicals or hydrocarbons such as fuel storage facilities, refuelling stations, workshops, generator stations and vehicle wash bays during operations may contaminate soils. - Improper functioning of the sewage treatment plants, drains, septic tanks and/ or French drains (accommodation village and operational area) during operations may lead to nutrient-rich effluent infiltrating and contaminating soils. - Incorrect management of hazardous, hydrocarbons,	outlets, and stabilisation of exposed slopes using mulch, erosion-control blankets or temporary vegetation cover. - Progressive rehabilitation of completed work areas through ripping or scarifying compacted surfaces, reshaping slopes re-spreading topsoil, applying organic amendments, mulching and establishing native vegetation using locally sourced seeds or seedlings. - WRD and TSF management through staged construction, stable benching, run-on/run-off control, perimeter drains covering or stabilising exposed fine material to reduce erosion and dust generation. - Bunding fuel/lube areas, using impermeable pads for maintenance zones prevents soil contamination, providing spill kits and enforcing immediate clean-up and remediation of contaminated soils. - Rehabilitation success criteria and maintenance include maintaining stormwater structures, controlling weeds,	sediment load checks, with predefined corrective actions where recovery indicators are not met.	

Aspect	Potential impact	Management and mitigation measures	Monitoring requirement	Responsibility
	laboratory and medical/sanitary waste during temporary storage may result in seepage into soils and contaminating them.	protecting establishing vegetation and ensuring rehabilitated areas remain stable after storm events. - Educate site personnel on proper soil handling, erosion control and rehabilitation practices to ensure ESMP compliance. - Use topsoil promptly in reclamation to minimise loss of organic matter and nutrients. - Stabilise exposed slopes using mulch, or rapid-growing cover crops. - Train staff and contractors on soil handling best practices, erosion control, and rehabilitation techniques. - Ensure awareness of the sensitivity of local soils and the importance of minimising disturbance. - No soils to be collected from the rivers.		
Surface water and groundwater	- Lag or reduction in flow to downstream areas and alteration of the drainage regime. - Reduction in surface water availability for	- Visual monitoring and photographic record of any surface and or groundwater intersected by any site activity or material. - Visual monitoring during rainfall events for runoff of polluted water.	- Daily and weekly observations for any leakages. - Maintain a record of all abstracted volumes and report to DWA /	- Mine manager - Environmental manager

Aspect	Potential impact	Management and mitigation measures	Monitoring requirement	Responsibility
	water-dependent ecosystems due to diversion or containment. - Reduction in groundwater recharge volume and quality - Erosion of soil causing sedimentation in watercourses. - Erosion of soils due to uncontrolled surface flow. - Flooding. - Reduction or depletion of groundwater availability. - Loss or reduction of groundwater available for ecosystem services and other users. - Groundwater contamination. - Changes to aquifer characteristics.	- Vehicles and machinery are to be regularly serviced to minimise oil and fuel leaks. - Good housekeeping shall be maintained, and chemicals and fuel must be stored securely to prevent any accidental spills on the mining site. - Long-term sewage management during the operational phase will need to be adequate, as well as pre-approval and related licences based on the design and structure (capacity) are required. - Ensure compliance with all conditions of the relevant water use licences. - Ensure any new laydown areas that will be used for are located outside of stormwater catchment areas. - Installation of diversion structures to divert non-contact surface water away and around the mining operations. - Refuelling shall be undertaken in a designated area. - All stationary vehicles and machinery must have drip trays to collect leakages of	MAFWLR as per licence conditions. - Install water flow meters if required. - Maintain a monthly water balance. - Submit quarterly water quality tests for water and monitoring boreholes, effluent discharge points and any surface water bodies.	

Aspect	Potential impact	Management and mitigation measures	Monitoring requirement	Responsibility
		lubricants and oil during any field repairs or emergency maintenance. - In the event of pollution, polluted soils must be collected and disposed of at an approved site. - Dewatering of the pit may be necessary; if suitable, this water can either be used in the processing plant or pumped into drainage lines of the catchment downstream of the infrastructure, with all valid permits. - The impact of opencast mining and any dewatering of the pit on the surrounding aquifers will be monitored and reported on. Should there be a reduction of the cone as a direct result of dewatering from the pit, then an alternative source of water may need to be identified for the affected users. - Tailings, chemical and hydrocarbon spillages from trucks, conveyors and pipelines will be cleaned up timeously to prevent contamination. - Water in the pollution control dams will be used for road watering dust		

Aspect	Potential impact	Management and mitigation measures	Monitoring requirement	Responsibility
		suppression, make-up water where possible, industrial water or construction, as permitted. - The contractors' laydown areas are to be surfaced and will drain to a sump with silt traps and hydrocarbon collectors. - All chemicals, bulk fuels, oils grease and any other hazardous substance, will be stored and handled as per all applicable legislation and national standards. - Treated water will either need to be contained in pollution control dams and will be recycled or if treated water is of high enough standard, it can be flushed into the catchment's water courses. - The pollution control facilities (pollution control dams, silt traps and return water dams) will be placed on planned maintenance, routine inspections will be implemented, and they will be de-silted periodically to ensure effective performance. - maximise the reuse of water to minimise the use of groundwater and clean water (no matter the source).		

Aspect	Potential impact	Management and mitigation measures	Monitoring requirement	Responsibility
		- Extraction volumes of water shall be minimal during mining and where possible, water from existing water sources shall be used. - Use water effectively and efficiently by following the reduce-recycle-reuse approach. - Record volumes of abstraction and supply. - A site-wide water balance will be kept and updated regularly. - Maintain connectivity of diverted clean water to downstream drainage lines. - Discharge excess clean water where appropriate. - Minimise the spatial extent of contained dirty water areas. - Adhere to abstraction limits and monitoring requirements specified in the groundwater abstraction licences issued by the regulator. - The helipad must be kept dry and runoff allowed to drain off the site.		
Domestic effluent	- Groundwater contamination	- Only approved ablution facilities to be utilised.	- Ensure STPs operate at peak efficiency,	- Mine manager

Aspect	Potential impact	Management and mitigation measures	Monitoring requirement	Responsibility
water management	- Surface water contamination - Heavy metal accumulation resulting in soil contamination	- If additional ablution facilities are required, the DWA is to be informed. - Ablution facilities must be easily accessible for employees, onsite security and contractors to use in remote working areas. - No employee or contractor on-site may relieve themselves in the surrounding environment and work area. - Ablution facilities to be cleaned and maintained on a regular basis. - Effluent water to be contained and spills to be cleaned up within twenty-four (24) hours of the incident occurring. - Sewage facilities to be permitted with DWA. - Septic tanks to be operated in a manner that no hazardous, nuisances or pollution of surface or groundwater occurs. - Septic tanks to be pumped out regularly to avoid overflows. - No intractable or toxic waste should be allowed into the sceptic tanks. - No boreholes shall be allowed within 500 m of the nearest septic tank.	treating wastewater to meet Namibia's water discharge general standards (Annexure 11). - Conduct quarterly monitoring of effluent parameters to ensure compliance with discharge limits. - Regularly inspect and maintain sewer pipelines, storage tanks and treatment units to prevent leaks and overflows. - Conduct monthly groundwater monitoring at strategic boreholes to detect potential nitrate, ammonia, and pathogen contamination.	- Environmental control officer - Employees

Aspect	Potential impact	Management and mitigation measures	Monitoring requirement	Responsibility
		- If the use of the septic tank is discontinued the tank is to be filled up with soil or other suitable material or as the site engineer directs or permits. - No wastewater may be discharged into a river or water course. - Grey water to be separated from effluent water and be reused. - Maximise wastewater reuse for dust suppression and for reuse in the process plant. - Prohibit discharge into dry riverbeds or ephemeral streams to prevent contamination during flash floods.		
Waste	- Spills or leaks of fuel, oil, lubricants, and chemicals during handling, maintenance or storage. - Leaching of hydrocarbons, chemicals or other hazardous substances into surface water or groundwater.	- Segregate waste into hazardous (explosive residues, damaged explosives) and non-hazardous waste. - Any old or damaged explosives and explosives recovered in the workings from misfired holes or broken rock shall be kept in containers provided for the purpose by the mine manager at suitable places as per Section 10.13 (1) and (2), Part X explosives and blasting the Explosives Act No. 26 of 1956.	- Daily and weekly inspections	- Mine manager - Environmental manager - Environmental control officer - Employees

Aspect	Potential impact	Management and mitigation measures	Monitoring requirement	Responsibility
	- Improper storage, decomposition of waste, or uncontrolled burning of waste materials. - Chemical burns, inhalation of fumes, or skin contact with petrochemicals and oils during handling or maintenance. - Littering, uncontrolled dumping, or burning of waste affecting local ecosystems and aesthetic values. - Failure to manage hazardous and non-hazardous waste according to legal standards and environmental permits.	- Engage licenced hazardous waste contractors for the safe disposal of expired explosives. - Implement a policy of minimising waste generation through improved inventory management to prevent overstocking - Litter generated during the shift must be collected and/or stored directly in the waste receptacles provided. - Waste must be separated at source as per the waste management procedure in the correct colour-coded bins and/or skips. - Waste receptacles can be supplied on request to the DEAF. - Bins and skips must have lids that can seal and are scavenger/baboon-proof. - No waste may be burnt or buried on site, except for explosives packaging and waste, where there will be a dedicated burn pit located within the mining area. - No fires will be allowed on site, unless in approved designated areas allowed by the environmental - .		

Aspect	Potential impact	Management and mitigation measures	Monitoring requirement	Responsibility
		- Domestic waste is disposed of weekly at the non-mineralised waste site/waste handling facility. - Scrap metal is to be collected in dedicated bunded areas and shall be removed by a contractor. - Hazardous waste created including empty containers, hydraulic pipes, oil filters (etc.) should be removed from the site and disposed of at a suitable registered hazardous waste facility. - A copy of the safe disposal certificate of these wastes is to be maintained as a record on file and provided to the DEAF on request. - The pit area and surrounds to be kept clean and maintained in a clean, orderly and presentable condition always. - The pit to be inspected monthly by the relevant supervisor line manager and/or manager. - Cyanide waste is burnt at the cyanide burning area in the processing plant under the Ministry of Health and Social Services (MoHSS) exemption permit.		

Aspect	Potential impact	Management and mitigation measures	Monitoring requirement	Responsibility
		- Used oil to be stored either in a bunded area or in drip trays with sufficient capacity to contain a leak (110%) of volume. - If 1-ton bags are used for reagent storage, consider storing bags under a roof or cover to prevent sun damage and rainfall infiltration, which in turn can result in cross-contamination or spills.		
Spills	- Risk of hydrocarbons, fuels, oils, and chemicals seeping into the soil from spills, leaks, or improper storage. - Hazardous chemicals entering surface water or groundwater through runoff or leaks. - Release of volatile hydrocarbons or chemicals during handling or maintenance.	- Training employees and holding regular toolbox talks. - Good housekeeping across the site. - Fuel and chemicals are handled with care. - Spill kits to be at designated areas across the site or available for use during refuelling, fuel/chemical delivery or use. - Absorption material should be available and at hand. Where sawdust is used, it should be cleaned up immediately and not left for long periods as this poses a fire hazard. - Any major spill is reported to the regulator once containment has been achieved.	- Daily observations when fuels/chemicals are delivered and handled. - Supervision during refuelling. - Weekly observations monitor containment and storage. - Monitor the level of hydrocarbons in contaminated soils after a year of rehabilitation. Monitor each year until the soils are ready for re-	- Mine manager - Environmental control officer - Employees

Aspect	Potential impact	Management and mitigation measures	Monitoring requirement	Responsibility
		- Plant and equipment to be well maintained and serviced regularly. - In the field, the use of hydrocarbons tanks under 200 litres can be used for mobile refuelling or servicing. - All tanks to be stored on a non-porous floor and within a bunded area. - Bund to be capable of storing at least 110% of the volume of the largest tank. - All containers to be suitable for use and not damaged. - Tanks should always be locked. - Spill kits are available at storage locations and around the site at suitable locations. - Drip tray to be used during refuelling of vehicles and on an impermeable flat surface where possible. - A funnel should be available and used to avoid spillage during decanting. - Contaminated soils should be removed and deposited on lined storage areas for rehabilitation purposes. Rehabilitation can take place naturally by adding water, air, and fertiliser. The process can be accelerated by using special additives that	use in revegetation projects.	

Aspect	Potential impact	Management and mitigation measures	Monitoring requirement	Responsibility
		will break down the hydrocarbons. Once rehabilitated, the soils can be used for revegetating WRD slopes. - For large-scale spills and other significant environmental incidents, the fire services should be contacted as required and the office of the Ministry of Environment, Forestry and Tourism (MEFT) should be informed of the incident (telephone +264 61 284 2111). All correspondence with MEFT should be undertaken by the manager. - For the clean-up of smaller spills, the relevant MSDS should be consulted to determine the appropriate clean-up procedure. Basic spill response training will be provided as part of the site environmental induction. Spill response equipment, including relevant MSDS copies, will be provided in areas where potentially environmentally hazardous chemicals may be used. - All major petroleum product spills should be reported to the Ministry of Industries, Mines and Energy (MIME) on Form PP/11		

Aspect	Potential impact	Management and mitigation measures	Monitoring requirement	Responsibility
		titled "Reporting of major petroleum product spill", issued by the ministry. - All soils that are contaminated with chemicals and or hydrocarbons should be taken to the rehabilitation area. A procedural manual for rehabilitating contaminated soils on site should be developed.		
Air quality	- Mine operational activities to generate windblown dust, combustion-related gaseous emissions and airborne particulate matters that could disperse beyond the project footprint and affect offsite receptors, resulting in visual nuisance and complaints. - Occupational health and safety impacts related to mine employees exposed to	- Dust can be minimised between transfer points by wetting material (excluding dried concrete). - Residents with the ML and ~2km from the Project site to be relocated. - In minimising windblown dust from stockpile areas, water sprays should be used to keep surface material moist. - Mitigation of materials transfer points should be done using water sprays at the tip points. This should result in a 50% control efficiency. Regular clean-up at loading points is recommended. - Dust masks to be issued for dusty areas - In-pit operations including haul roads, FEL, Bulldozers and Graders: water sprays assuming 50% CE;	- The current dust fall monitoring network comprising of eight (8) single dust fall units, should be maintained and the monthly dust fall results used as indicators to track the effectiveness of the applied mitigation measures. - Dust fall collection should follow the ASTM method. - Dust fall monitoring network to be supplemented by	- Mine manager - Environmental manager - Environmental control officer

Aspect	Potential impact	Management and mitigation measures	Monitoring requirement	Responsibility
	airborne dust and combustion-related emissions throughout the operational phase - Occupational health and safety impacts as a result of the operational workforce exposed to emissions from the controlled open burning of explosive material waste - Community health and safety impacts resulting from exposure to airborne pollutants released from onsite controlled open burning of explosive material waste	- Surface haul roads: water sprays in resulting in 75% CE; - Materials handling (loading and unloading ROM and waste rock): water sprays at tip points resulting in 50% CE; and - Crushing and screening of ROM (primary; secondary and tertiary): resulting in 50% CE from water sprays to keep ore wet - Maintain complaints register.	continuous ambient PM_{10} and $PM_{2.5}$ monitoring to determine whether the air quality objectives are being met. - The monitoring station should be located towards the northeast of the site where higher PM concentrations are expected due to south-westerly winds.	
Noise	- The potential for project-induced (operational noise) to	- Provision of general notices to the community in the form of notice boards indicating blast times and dates.	- Bi-annual noise monitoring	- Mine manager - Environmental manager

Aspect	Potential impact	Management and mitigation measures	Monitoring requirement	Responsibility
	trigger deterioration behaviours and cause displacement of wildlife populations from the immediate project area. - Potential for mine operational activities to generate excessive noise, leading to discomfort, nuisance and complaints from host and adjacent communities. - Occupational health and safety issues related to mine employees exposed to excessive noise levels throughout the LoM. - Noise pollution from helicopter traffic.	- Plants or equipment from which noise generated is known to be particularly directional, should be orientated so that the noise is directed away from NSRs. - Noise generated by vibrating machinery and equipment with vibrating parts can be reduced using vibration isolation mountings or proper balancing. - Noise generated by friction in conveyor rollers, trolleys etc. can be reduced by sufficient lubrication. - Naturally, if noise activities can be minimised or avoided, the amount of noise reaching NSRs will be reduced. Alternatively, the distance between source and the receiver must be increased, or noise reduction screens, barriers, or berms must be installed. - Regular and effective maintenance of equipment and plants is essential to noise control. Increases in equipment noise are often indicative of eminent mechanical failure. Also, sound-reducing equipment/materials can lose	- The following procedure should be adopted for all noise surveys: o Any surveys should be designed and conducted by a trained specialist. o Sampling should be carried out using a Type 1 Sound Level Meter (SLM) that meets all appropriate International Electrotechnical Commission (IEC) standards and is subject to annual calibration by	- Environmental control officer

Aspect	Potential impact	Management and mitigation measures	Monitoring requirement	Responsibility
		effectiveness before failure and can be identified by visual inspection. - Avoid unnecessary idling of equipment and machinery. - If noise-related complaints are received, short term ambient noise measurements should be conducted as part of investigating the complaints. The results of the measurements should be used to inform any follow up interventions. The investigation of complaints should include an investigation into equipment or machinery that likely result or resulted in noise levels annoying to the community. This could be achieved with source noise measurements. - Keep all roads well maintained and avoid steep inclines or declines to reduce acceleration/brake noise. - Minimising the need for trucks/equipment to reverse. This will reduce the frequency at which disturbing but necessary reverse warnings will occur. Alternatives to the traditional reverse 'beeper' alarm such as a 'self-adjusting' or	an accredited laboratory. o The acoustic sensitivity of the SLM should be tested with a portable acoustic calibrator before and after each sampling session. o Samples sufficient for statistical analysis should be taken with the use of portable SLM's capable of logging data continuously over the time period.	

Aspect	Potential impact	Management and mitigation measures	Monitoring requirement	Responsibility
		'smart' alarm could be considered. These alarms include a mechanism to detect the local noise level and automatically adjust the output of the alarm so that it is 5 to 10 dB above the noise level near the moving equipment. - As far as is practically possible, sources of significant noise should be enclosed. The extent of enclosure will depend on the nature of the machine and their ventilation requirements. Pumps are examples of such equipment. It should be noted that the effectiveness of partial enclosures and screens can be reduced if used incorrectly, e.g. noise should be directed into a partial enclosure and not out of it and there should not be any reflecting surfaces, such as parked vehicles, opposite the open end of a noise enclosure. - Machines used intermittently should be shut down between work periods or throttled down to a minimum and not left running unnecessarily. This will reduce noise and conserve energy	Samples representative of the day- and night-time acoustic environment should be taken. o The following acoustic indices should be recoded and reported: LAeq (T), statistical noise level LA90, LAF_{min} and LAF_{max}, octave band or 3rd octave band frequency spectra. o The SLM should be located approximately	

Aspect	Potential impact	Management and mitigation measures	Monitoring requirement	Responsibility
		- Acoustic covers of engines should be kept closed when in use or idling - Doors to pump houses should be kept closed at all times - The distance between source and receiver must be increased, or noise reduction screens, barriers, or berms must be installed - Increasing the distance between NSRs R1, R2 and R3 and the Project will be the only way to bring the noise levels within IFC noise guidelines for residential areas at these receptors. - Residents on the ML and within ~2km of the Project will be relocated - The effectiveness of a noise barrier is dependent on its length, effective height, and position relative to the source and receiver as well as material of construction. To optimize the effect of screening, screens should be located close to either the source of the noise, or the receiver. - Earth berms can be built to provide screening for large scale earth moving	1.5 m above the ground and no closer than 3 m to any reflecting surface. o Efforts should be made to ensure that measurements are not affected by the residual noise and extraneous influences, e.g., wind, electrical interference and any other non-acoustic interference, and that the instrument is operated under the conditions specified by the	

Aspect	Potential impact	Management and mitigation measures	Monitoring requirement	Responsibility
		operations and can be landscaped to become permanent features once construction is completed. Care should be taken when constructing earth berms since it may become a significant source of dust. - Helipad activities and traffic should be primarily limited to the daylight hours between sunrise and sunset.	manufacturer. It is good practice to avoid conducting measurements when the wind speed is more than 5 m/s, while it is raining or when the ground is wet. o A detailed log and record should be kept. Records should include site details, weather conditions during sampling and observations made	

Aspect	Potential impact	Management and mitigation measures	Monitoring requirement	Responsibility
			regarding the acoustic environment of each site. - Noise complaint register.	
Odour	- Offensive odours from stacks, chimneys, or fume exhausts could reduce comfort, affect morale or generate complaints. - Offensive odours from stacks, chimneys, or fume exhausts could reduce comfort, affect morale, or generate complaints. - Persistent odours can affect local amenity values and perceived air quality in surrounding areas.	- All discharge stacks, exhaust chimneys, and fume hood exhaust stacks need to be fitted and installed with manufacturer approved/supplied environmental and health protective systems (scrubbers, filters, etc.). - Emissions control and related protective systems require regular inspection, as per manufacturer specifications. - Emissions control and related protective systems require regular testing, as per manufacturer specifications. - Emissions control and related protective systems require regular maintenance, as per manufacturer specifications. - Emissions controls and related protective systems monitoring are required by competent persons.	- Daily and weekly inspections - Complaint and grievances register	- Mine manager - Environmental control officer

Aspect	Potential impact	Management and mitigation measures	Monitoring requirement	Responsibility
	- Frequent odour events may lead to complaints or disputes.	- Regular reporting of the performance of the inspection, testing, maintenance, and monitoring systems for the mine Manager is required monthly. The report shall include the performance of the management system as well as the performance of the emission system.		
Blast and vibration	- Ground vibration, air blasts and fly rock exceeding limits and possible damage to local village houses during operations, No. 23 (Katora) and No. 55 – 60. - Ground vibration, air blasts and fly rock exceeding limits and possible damage to the built environment during operations, No. 52 – 54. - Ground vibration, air blasts and fly rock exceeding limits and	- Maintain air blast levels below 120 dB(L) at receptors to avoid complaints. - Never exceed air blast levels 134 dB(L) USBM structural damage threshold. - A detailed inspection of the area and accurate identification of structures will also need to be done to ensure the levels of ground vibration allowable and limit to be applied will be sufficient. - Ground vibration to be maintained within the required identified limits (6 mm/s, 12.5 mm/s, and 25 mm/s). - Blast designs must consider the distance between point of concern and blast, specifically for blasts closer than 519 m (blast zone) to nearest point of concern - Shorter blast holes. - Smaller diameter blast hole.	- Operational ground vibration monitoring to be undertaken to confirm levels of ground vibration to ensure that the restriction on ground vibration levels is not exceeded.	- Mine manager - Blast engineers

Aspect	Potential impact	Management and mitigation measures	Monitoring requirement	Responsibility
	possible damage to remainder of local village houses during operations, including future mine village/accommodation camp (No. 39 - 42). - Ground vibration, air blasts and fly rock exceeding limits and possible damage to the built environment during operations, this entails tarred and gravel roads, including the D3714 road. Structures for operational purposes are included here (explosives magazine(s), mine buildings and processing plant) - Ground vibration, air blasts and fly rock	- Using electronic initiation to ensure single hole firing. - Use of specialist to assist with drilling and blasting mitigation. - Relocation of houses within 519 m (blast zone) from pit boundary and those identified in the medium risk zone (500 – 1 500 m radius). - Relocation of houses within 519 m (blast zone) from pit boundary and those identified in the medium risk zone and thus relocation of livestock to other grazing points. - Relocation (if required) of fauna residing on main hill/ridge habitat 4 before construction activities commence. - Specific blast designs to be done. - Use of specific stemming materials to manage air blast. - Increased stemming lengths to reduce air blast effect. - Multiple blast initiated simultaneously must be avoided. - Time delay between blasts must be facilitated.		

Aspect	Potential impact	Management and mitigation measures	Monitoring requirement	Responsibility
	exceeding limits and possible damage to local wildlife grazing points during operations on No. 32 - wildlife animal activity (main hill/ridge habitat 4) - Ground vibration, air blasts and fly rock exceeding limits and possible damage to local wildlife grazing points during operations of all other identified wildlife activity points (other ridge habitats, other wildlife activities, granite domes) - Ground vibration, air blasts and fly rock exceeding limits and possible damage to heritage sites during	- The Blasting Chief Inspector from MIME to conduct an initial inspection and from thereon annually, to ensure compliance with the Explosives Act, Act 26 of 1956, for the correct storage, handling and management of explosives. - Explosives to be stored at a safe predetermined distance from any emulsion. - Personnel handling explosives will be competent and trained to do so and know what to do in the case of accidental spillage. - Monthly inspections with a 100% compliance rate on containment integrity. - Maintain appropriate ventilation to prevent the build-up of explosive gases. - Maintain an inventory logbook recording all movements of explosives in and out of the magazine. - Ensure transport routes are pre-approved and avoid sensitive areas (e.g., water sources). - Implement no-smoking and fire-free zones during handling operations.		

Aspect	Potential impact	Management and mitigation measures	Monitoring requirement	Responsibility
	operations on all twelve (12) identified heritage sites, which includes historic water pools, graves, built ruin, historic well, rock art and mine shaft - Ground vibration exceeding limits and possible damage to local water sources/boreholes during operations - Noxious fumes generated during i) operational drill and blasting activities, ii) storage and handling of explosives at the explosives magazine(s) and iii) potential fires at the explosives magazine(s) impacting employees	- Ensure that adequate safety signage has been placed inside and outside the building. - Train personnel in proper handling techniques and emergency procedures. - Train employees on spill response, fire safety, and first aid specific to explosive incidents. - Maintain training records and conduct refresher courses annually. - Encourage employee reporting of unsafe practices and environmental hazards through an anonymous system. - Restrict access to authorised, trained personnel only and escort visitors at all times, following a site-specific area induction. - The preparation of charges shall be carried out by or under the personal supervision of a blaster. - No person shall be authorized to carry out blasting operations without a valid blasting certificate.		

Aspect	Potential impact	Management and mitigation measures	Monitoring requirement	Responsibility
	occupational health and safety - Noxious fumes generated during i) operational drill and blasting activities, ii) storage and handling of explosives at the explosives magazine(s) and iii) potential fires at the explosives magazine(s) impacting the air quality of the local communities and employees staying at the accommodation village. - Cumulative noise and vibration impacts from multiple blasts conducted at the same time on the local communities during operations	- A blaster shall only use tools or appliances provided by the mine manager. - Conduct regular soil and groundwater quality monitoring near the magazine site. - Keep spill kits readily available with absorbent materials suitable for explosive chemicals (e.g., ammonium nitrate). - Use non-sparking tools and equipment in the magazine area - Implement a 'No Hot Work' policy near the magazine (e.g., no welding or grinding). - Conduct routine inspections for any signs of deterioration or hazards within and around the magazine. - Develop and maintain a fire suppression system (e.g., dry powder extinguishers) suitable for explosives. - No cell phones or electronic devices to be used around explosives unless authorized by a competent blaster		

Aspect	Potential impact	Management and mitigation measures	Monitoring requirement	Responsibility
		- Develop and regularly update an Emergency Response Plan specific to the explosives magazine. - Conduct emergency drills (e.g., fire, explosion, evacuation) with all personnel at least annually. - Equip emergency response teams with protective gear and communication tools. - Coordinate emergency response plans with local emergency services and neighbouring communities.		
Heritage	- Potential for project activities to cause structural damage to historic water pools located in proximity to mine infrastructure and planned mine operational areas. - Potential for project activities to encroach upon: (i) a cemetery, (ii) a Christian burial site and (iii) a historic grave site, located in	- Chance find procedure (Appendix A): o **Scope:** The ”chance finds” procedure covers the actions to be taken from the discovery of a heritage site or item to its investigation and assessment by a trained archaeologist or other appropriately qualified person. o **Compliance:** The “chance finds” procedure is intended to ensure compliance with relevant provisions of the National Heritage Act, No. 27 of 2004, especially Section 55 (4) which	- Monthly and quarterly inspections	- Mine manager - Environmental control officer

Aspect	Potential impact	Management and mitigation measures	Monitoring requirement	Responsibility
	proximity to the planned mine operational areas. - The potential for project activities to cause structural instability and collapse of the abandoned ruin building at Aniswept. - Potential for project activities to encroach upon and disturb cultural and heritage features situated outside EPL 4818: (i) prehistoric rock art paintings (ii) the mine shaft, (iii) abandoned historic settlement and (iv) two (2) Christian graves. - Potential to discover or unearth new heritage objects, artefacts and archaeological remans	states that: "a person who discovers any archaeological object must as soon practicable possible report the discovery to the Council". The procedure of reporting set out below must be observed so that heritage remains reported to the National Heritage Council (NHC) is correctly identified in the field. - Ensure that all TSF personnel, including subcontractors, are informed about the location, cultural and heritage significance of the water pool. - Restrict TSF operations strictly to the designated and approved footprint, as far as reasonably practicable to avoid encroachment of the site. - The Proponent must obtain heritage consent from the National Heritage Council (NHC) prior to undertaking activities at the TSF. - Ensure full compliance with all conditions outlined in the heritage consent, including the provision for periodic reports (every		

Aspect	Potential impact	Management and mitigation measures	Monitoring requirement	Responsibility
	in the designated development areas and immediate project site.	six months) to NHC and renewal of the heritage consent (annual renewal. - The gravesites reported here should be fenced, and the area within cleared of all encroaching bush, while their localities and that of other heritage features should be indicated on the Project GIS and all relevant field mapping should be made known to all contractors whose activities might encroach on the sites. - In the event the proposed Project activities will unavoidably encroach on the gravesites, the Proponent is legally obliged to take all necessary steps either to protect the sites or engage an archaeologist consultant to consider further research in an effort to exhume, relocate and rebury in accordance with official directives from the National Heritage Council of Namibia and the Ministry of Urban and Rural Development under which the Burial Places Ordinance (27 of 1966) in terms of the Local Authorities Act (No. 23 of 1992) would fall under while following the Cemetery		

Aspect	Potential impact	Management and mitigation measures	Monitoring requirement	Responsibility
		Regulations (No. 4291, Government Gazette, 13 July 2009). - The Proponent is implored to incorporate the GIS data of the SE heritage resources in their sensitivity mapping of the Project layout so that all flagged sites can be demarcated or avoided as a management measure to prevent any possible encroachment and disturbance. Heritage data should be sensitised to the operators and fieldwork personnel to exercise due caution when working in close proximity to where the heritage features are found.		
Community health, socio-economic, occupational health and safety and human rights management	- Opportunity for the operational workforce to gain skills and work experience - Potential risk for the operational workforce to sustain on-site injuries, partial disabilities, life threatening scenarios or death	- Engage with affected communities and community representatives at the earliest Project planning phase. - Maintain continuous dialogue throughout the Project lifecycle to address evolving concerns. - Respect traditional decision-making processes and customary governance structures. - Provide communities with clear, accurate and timely information about the scope	- Daily, weekly and monthly inspections - Stakeholder engagement records - Complaints and grievance registers - Labour policies - Induction registers - Injury and accident registers	- Proponent - Mine manager - Environmental manager - Employees

Aspect	Potential impact	Management and mitigation measures	Monitoring requirement	Responsibility
	- Support and upliftment of the social status quo of the host communities and local economy - Influx of jobseekers and their families into the immediate Project area, altering the demographic and social dynamics of the host community and may lead to increased strain on existing services - Potential exclusion of vulnerable (women and unskilled youth), marginalised groups (previously disadvantaged groups) and indigenous people from employment opportunities and	of the Project, potential impacts and alternatives. - Use visual aids and written materials to enhance understanding. - Maintain records of community feedback, concerns and signed agreements. - Establish accessible, transparent and independent grievance mechanisms to address community complaints and disputes. - Adapt engagement strategies if community concerns evolve or new impacts emerges. - A policy regarding labour recruitment and employment will be compiled for use during the construction phase and early life of the mine. The policy is to be reviewed and amended regularly. - Recruitment of personnel will be conducted exclusively through the Human resources (HR) department (off-site). No recruitment activities will be conducted on-site.		

Aspect	Potential impact	Management and mitigation measures	Monitoring requirement	Responsibility
	other Project-related benefits - Potential spread of communicable diseases (HIV, TB and STDs) among (i) mine personnel and between (ii) mine personnel and local community	- Maximise local employment and local business opportunities to promote and improve the local economy. - Enhance the use of local labour and local skills as far as reasonably possible. Where the required skills do not occur locally, and where appropriate and applicable, ensure that relevant local individuals are trained. - Ensure that goods and services are sourced from the local and regional economy as far as reasonably possible. - Recruitment may not take place at the gate to the mine, it will take place at designated offices, to be communicated to job seekers and the community. - Create a database of employable community members. This database will include identification documents, certificates of highest qualifications and proof of residence confirmed by the leader of the community. - Provide contractors with the policy regarding labour recruitment and employment for their implementation.		

Aspect	Potential impact	Management and mitigation measures	Monitoring requirement	Responsibility
		- Ensure that this policy is communicated to all employees and the communities. - Fair and equitable recruitment opportunities will be afforded to all with equivalent qualifications. - Recruitment practices must be transparent and auditable. - Stipulate the preferential use of local labour in all contracts, from communities within 50 km of the mine site, and then those areas from further afield, but without disregarding a person's constitutional rights. - Any job vacancy that is advertised must clearly indicate the required and appropriate skills for that position. - Make use of locally available raw materials, goods, and services as far as possible, and where appropriate, during construction and operation. - A zero-tolerance policy will be adopted and fully enforced concerning drugs and alcohol on site. - A specific alcohol and drugs policy will be developed for the accommodation village.		

Aspect	Potential impact	Management and mitigation measures	Monitoring requirement	Responsibility
		- Compliance with the safety and health requirements as outlined in the Labour Act No. 6 of 1992 and ISO 45001 standards. - Develop and enforce standard operating procedures (SOPs) related to workplace safety. - Ensure all employees receive on-site safety inductions, specifically related to mobile equipment and on-site traffic. - The HSE must conduct routine inspections of all operational work areas and conduct regular on-site safety trainings. Ensure that semi-skilled workers receive comprehensive training and clear instructions on safe handling of tools and equipment. - Ensure availability and proper use of PPE (e.g. safety boots, high-visibility clothing, ear plugs, fall-arrest systems, gloves and hard hat). - Document injury statistics, corrective actions initiated and lessons learned to improve safety practices on-site.		

Aspect	Potential impact	Management and mitigation measures	Monitoring requirement	Responsibility
		- Deploy trained first aid teams and ensure that emergency response plans are in place, including access to medical facilities and clear reporting procedures. - Implement adequate work-rest cycles, monitor shift lengths, and limit overtime to reduce fatigue-related accidents. - Encourage workers to report hazards or unsafe conditions promptly and ensure clear communication of safety updates and protocols. - Strict access control will be enforced at all entry and exit points of the mine. - Transportation of all staff to and from the mine accommodation village will be provided by bus. - Family-style accommodation will not be permitted on-site or in the immediate Project area. All operational staff will be accommodated at the mine accommodation village. - Establish regular engagement with local community leaders (representatives) to inform them of upcoming employment opportunities and skill requirements.		

Aspect	Potential impact	Management and mitigation measures	Monitoring requirement	Responsibility
		- Set minimum targets for the inclusion of women and youth in both skilled and semi-skilled roles. - Offer mentorship and on-the-job training for women in traditionally male-dominated roles. - Provide support roles and pathways that enable women to access technical positions over time. - Partner with local vocational centres to prepare youth for future employment opportunities. - Track participation of women, youth, and indigenous peoples in employment and skills programmes. - Provide regular awareness and education sessions for all employees and contractors on HIV prevention, testing, stigma reduction and treatment adherence. - Implement a workplace HIV and health policy, aligned with national HIV/AIDS strategies.		

Aspect	Potential impact	Management and mitigation measures	Monitoring requirement	Responsibility
		- Ensure regular awareness and education sessions on prevention of communicable diseases. - Provide access to voluntary counselling and testing. - TB screening should be integrated into pre-employment and routine occupational health assessments. - Strong referral pathways to local health facilities must be maintained for treatment and adherence support. - Contractors are required to meet the same standards and collaborate with local health authorities. - Distribution of free male and female condoms in the bathrooms of the accommodation village.		
Visual	- Light pollution and skyglow. - Alteration of the landscapes sense of place and constituting a noticeable visual intrusion.	- Dust suppression. - Progressive rehabilitation. - Appropriate engagement with the communities prior to any major landscape changes. - Effective shaping of landforms.	- Daily and weekly inspections	- Mine manager - Environmental control officer

Aspect	Potential impact	Management and mitigation measures	Monitoring requirement	Responsibility
	- Degraded visual quality of the site caused by open pits or quarries. - Visual intrusion associated with the waste rock dumps, TSF, processing plant and other mine related infrastructure and activities. - Potential decrease in tourism in the area due to a diminished sense of place and landscape character			
Climate change	- Operational activities over the life of mine estimated to increase Scope 1 and 2 greenhouse gas emissions.	- Promote proper vehicle housekeeping (tyre pressure management, removing excess load) to reduce fuel use. - Improve energy efficiency in motors, air conditioners and processing equipment. - Apply strict idling reduction policies and advanced fleet management. - Improve water efficiency to reduce pumping and treatment energy needs.	- Daily and weekly inspections.	- Mine manager - Environmental control officer - Employees

Aspect	Potential impact	Management and mitigation measures	Monitoring requirement	Responsibility
		- Develop a site specific greenhouse gas inventory for operational activities with short, medium and long term objectives that the Proponent would like to meet to reduce Scope 1 emissions. - Reduce grid electricity use by implementing high-efficiency pumps, motors and cooling systems (VSDs, natural ventilation and reflective roofing). - Promote a switch-off policy for lights, air conditioning, computers and non-essential equipment during non-operational periods. - Require employees to reduce wastage in wash bays, camp facilities and processing areas. - Promote proper use of recycled process water and adherence to water-saving protocols. - Create a system where employees can report fuel wastage, energy inefficiencies or leaks anonymously. - Reward teams that consistently meet fuel efficiency, energy reduction, or emissions targets.		

Aspect	Potential impact	Management and mitigation measures	Monitoring requirement	Responsibility
		- Apply treated/recycled water and dust-binding agents during drought periods, maintain road conditions through grading, compacting and adding stabilisers to reduce dust lift-off and improve traction. - Improve visibility with high-intensity LED lighting, dust-resistant windscreen wipers, automated camera-cleaning systems, and enforce reduced speed limits during low-visibility events. - Implement a dust hazard protocol with visibility-triggered response levels, use one-way traffic routes, enhance radio communication, and stagger haulage schedules during peak dust and wind periods. - Train workers in low visibility driving, dust hazards, and emergency response. - Maintain a dust emergency response plan, including criteria to halt operations during extreme dust events and conduct regular dust-related collision and equipment-failure drills.		

6.4 DECOMMISSIONING PHASE

The decommissioning phase of the Project encompasses the planned cessation of mining and processing activities, dismantling and removal of plant and infrastructure, decontamination of facilities, recontouring of disturbed areas and implementation of rehabilitation and closure measures. This phase may give rise to environmental and social impacts related to residual contamination, land stability, erosion, dust generation, waste disposal and changes in land use and employment. The decommissioning management plan provides a structured framework to manage these impacts through defined mitigation measures and post-closure monitoring requirements, with clearly assigned roles and responsibilities. Implementation of the ESMP, guided by the mine closure plan (still to be developed) ensures that closure activities are undertaken in accordance with Namibian legislative requirements, approved mine closure plans and international best practice, with the objective of achieving long-term environmental stability, public safety and sustainable post-mining land use.

Table 6 - Environmental and social aspects, potential impacts, mitigation and monitoring measures for the decommissioning phase

Aspect	Potential impacts	Management and mitigation measures	Monitoring requirement	Responsibility
Flora	- Vegetation loss or disturbance, affecting protected or endemic species, due to poor rehabilitation and impacts from decommissioning. - Rehabilitation activities and infrastructure removal during decommissioning may trigger soil erosion, indirectly affecting local flora, especially within sensitive habitats and drainage lines. - Invasive alien plant species may	- Rehabilitation of the disturbed areas (i.e. initial development access route "scars" and associated tracks, as well as associated mining/prospecting infrastructures) should be rehabilitated as soon as their use is complete, otherwise access needs to be restricted. Preferably workers should be transported in/out of the sites daily to avoid excess damage to the local environment (e.g. fires, wood collection, poaching, etc.). - Natural drainage patterns should be restored where possible. - Rehabilitate disturbed areas with native vegetation.	- Daily or weekly inspections	- Project manager - Environmental control officer - Rehabilitation team

Aspect	Potential impacts	Management and mitigation measures	Monitoring requirement	Responsibility
	establish in disturbed areas and can be repeatedly introduced through seeds carried on vehicles and equipment accessing the site.			
Soil	- Water erosion along disturbed ephemeral drainage channels and unprotected slopes, particularly during storm events, during the operational phase, could accelerate gully formation and sedimentation.	- Bunding fuel/lube areas, using impermeable pads for maintenance zones prevents soil contamination, providing spill kits and enforcing immediate clean-up and remediation of contaminated soils. - Rehabilitation success criteria and maintenance include maintaining stormwater structures, controlling weeds, protecting establishing vegetation and ensuring rehabilitated areas remain stable after storm events. - Educate site personnel on proper soil handling, erosion control and rehabilitation practices to ensure ESMP compliance. - Progressive rehabilitation of completed work areas through ripping or scarifying compacted surfaces, reshaping slopes, re-spreading topsoil, applying	- Daily or weekly inspections	- Project manager Environmental control officer

Aspect	Potential impacts	Management and mitigation measures	Monitoring requirement	Responsibility
	- Spills or leaks from hazardous chemicals or hydrocarbons such as fuel storage facilities, refuelling stations, workshops, generator stations and vehicle wash bays during operations may contaminate soils. - Improper functioning of the sewage treatment plants, drains, septic tanks and/ or French drains (accommodation village and operational area) during operations	organic amendments, mulching and establishing native vegetation using locally sourced seeds or seedlings - Contaminated soils should be removed and deposited on lined storage areas for rehabilitation purposes. Rehabilitation can take place naturally by adding water, air and fertiliser. The process can be accelerated by using special additives that will break down the hydrocarbons. Once rehabilitated, the soils can be used for revegetating WRD slopes.		

Aspect	Potential impacts	Management and mitigation measures	Monitoring requirement	Responsibility
	may lead to nutrient-rich effluent infiltrating and contaminating soils. - Incorrect management of hazardous, hydrocarbons, laboratory and medical/sanitary waste during temporary storage may result in seepage into soils and contaminating them.			
Surface water and groundwater	- Contamination of run-off or surface water bodies causing a deterioration in water quality.	- Visual monitoring during rainfall events for runoff of polluted water. - Vehicles and machinery are to be regularly serviced to minimise oil and fuel leaks.	- Quarterly surface and groundwater monitoring	- Environmental control officer

Aspect	Potential impacts	Management and mitigation measures	Monitoring requirement	Responsibility
	- Deterioration in surface water quality due to contamination impacting water dependent ecosystems (aquatic and terrestrial). - Erosion of soils due to uncontrolled surface flow. - Groundwater contamination.	- Good housekeeping shall be maintained, and chemicals and fuel must be stored securely to prevent any accidental spills on the construction site. - Portable chemical toilet facilities will be hired for onsite use, and the supplier/contractor will manage any sewerage generated. - Hazardous waste disposal facilities need to be approved by the MEFT to ensure they meet industry standards to prevent pollution events from occurring. - Refuelling shall be undertaken in a designated area designed/constructed to standards. - All stationary vehicles and machinery must have drip trays to collect leakages of lubricants and oil during any field repairs or emergency maintenance. - In the event of pollution, polluted soils must be collected and disposed of at an approved site. - Pre-existing or baseline hydrology should be replicated where practicably possible. - Discharge excess water of acceptable quality back into the surface water environment. - Implementing stormwater controls. - Ensuring sufficient containment of dirty areas.		

Aspect	Potential impacts	Management and mitigation measures	Monitoring requirement	Responsibility
		- Limiting on-site storage of potential contaminants, of spill kits and designated refuelling/maintenance.		
Waste	- Spills or leaks of fuel, oil, lubricants and chemicals during handling, maintenance, or storage. - Leaching of hydrocarbons, chemicals, or other hazardous substances into surface water or groundwater. - Improper storage, decomposition of waste, or uncontrolled burning of waste materials. - Chemical burns, inhalation of fumes, or skin	- Hydrocarbon and chemical-contaminated solids must be stored correctly and disposed of by registered companies. - Safe disposal certificates must be kept and provided to the Project manager on request - All litter on and around the site must be picked up and placed in the bins provided. - The site should always be kept tidy and free of litter. - All domestic and general waste produced daily should be cleaned and contained daily. - No solid waste landfill will be established at the site. - No waste shall be burned or buried anywhere unless permitted to do so. - Waste shall be collected and shall be removed regularly to avoid bad odours. - Hazardous and non-hazardous waste shall be always stored separately.	- Daily and weekly inspections	- Project manager - Environmental control officer

Aspect	Potential impacts	Management and mitigation measures	Monitoring requirement	Responsibility
	contact with petrochemicals and oils during handling or maintenance. - Littering, uncontrolled dumping, or burning of waste affecting local ecosystems and aesthetic values. - Failure to manage hazardous and non-hazardous waste according to legal standards and environmental permits.			
Spills	- Risk of hydrocarbons, fuels, oils, and chemicals seeping into the	- Hazardous chemicals are to be stored in bunded areas. - Hazardous chemicals (such as fuels) are to be handled over areas provided with impervious surfaces.	- Daily observations when fuels/chemicals	- Project manager - Environmental control officer

Aspect	Potential impacts	Management and mitigation measures	Monitoring requirement	Responsibility
	soil from spills, leaks, or improper storage - Hazardous chemicals entering surface water or groundwater through runoff or leaks. - Release of volatile hydrocarbons or chemicals during handling or maintenance.	- Spills of hazardous chemicals are to be contained and cleaned up to ensure protection of the environment. - All the necessary PPE required for the safe handling and use of petrochemicals and oils shall be provided to, and used or worn by, the onsite staff - Major servicing of equipment shall be undertaken off site or in appropriately equipped workshops. - For small repairs and required maintenance activities, all reasonable precautions to avoid oil and fuel spills must be taken (e.g. spill trays, impervious sheets). - Vehicles and machinery are to be regularly serviced to minimise oil and fuel leaks. - All the necessary PPE required for maintenance activities must be issued to staff whose duty it is to manage and maintain the machinery and equipment. - Training employees and holding regular toolbox talks. - Good housekeeping across the site. - Fuel and chemicals are handled with care. - Spill kits to be at designated areas across the site or available for use during refuelling, fuel/chemical	are delivered and handled. - Supervision during refuelling. - Weekly observations monitor containment and storage. - Monitor the level of hydrocarbons in contaminated soils after a year of rehabilitation. Monitor each year until the soils are ready for re-use in revegetation projects.	

Aspect	Potential impacts	Management and mitigation measures	Monitoring requirement	Responsibility
		delivery, or use. Absorption material should be available and at hand. Where sawdust is used, it should be cleaned up immediately and not left for long periods as this poses a fire hazard. - Any major spill is reported once containment has been achieved. - Plant and equipment to be well maintained and serviced regularly. - In the field, the use of hydrocarbons tanks under 200 litres can be used for mobile refuelling or servicing. - All tanks to be stored on a non-porous floor and within a bunded area. - Bund to be capable of storing at least 110% of the volume of the largest tank. - All containers to be suitable for use and not damaged - Tanks are always locked. - Spill kits are available at storage locations and around the site at suitable locations. - Drip tray to be used during refuelling of vehicles and on an impermeable flat surface where possible. - A funnel should be available and used to avoid spillage during decanting		

Aspect	Potential impacts	Management and mitigation measures	Monitoring requirement	Responsibility
		- Contaminated soils should be removed and deposited on lined storage areas for rehabilitation purposes. Rehabilitation can take place naturally by adding water, air, and fertiliser. The process can be accelerated by using special additives that will break down the hydrocarbons. Once rehabilitated, the soils can be used for revegetating WRD slopes.		
Air quality	- Occupational health and safety issues associated with employees exposed to airborne dust and combustion related emissions during the decommissioning phase. - Potential for air quality impacts from decommissioning activities to cause nuisance and complaints from	- Dust suppression measures must be implemented to reduce dust. - Vehicles must adhere to speed limits to avoid producing excessive dust. - Vehicles and machinery are to be regularly serviced according to the manufacturers' specifications and kept in good working order to minimise exhaust emissions. - Limiting unnecessary travelling of vehicles on untreated roads and applying dust suppressants on regularly travelled unpaved sections.	- Monthly dust fallout monitoring	- Project manager - Environmental control officer

Aspect	Potential impacts	Management and mitigation measures	Monitoring requirement	Responsibility
	adjacent communities.			
Noise	- Occupational health and safety issues associated with employees exposed to excessive noise levels during the decommissioning phase. - Potential for noise from decommissioning activities to cause discomfort, nuisance and complaints from adjacent communities.	- Minimising individual vehicle engine, transmission, and body noise/vibration. This is achieved through the implementation of an equipment maintenance program to maintain road surfaces regularly to repair potholes, etc. - Keep all roads well maintained and avoid steep inclines or declines to reduce acceleration/brake noise. - Avoid unnecessary equipment idling. - Where possible, other non-routine noisy decommissioning activities should be limited to daytime hours. - Regular and effective maintenance of equipment and plants is essential to noise control. Increases in equipment noise are often indicative of eminent mechanical failure. Also, sound-reducing equipment/materials can lose effectiveness before failure and can be identified by visual inspection. - Noise generated by vibrating machinery and equipment with vibrating parts can be reduced using vibration isolation mountings or proper balancing.	- Noise complaint register	- Project manager - Environmental control officer

Aspect	Potential impacts	Management and mitigation measures	Monitoring requirement	Responsibility
		- Noise generated by friction in conveyor rollers, trolleys etc. can be reduced by sufficient lubrication. - If noise control at the source and the use of distance between the source and receiver is not possible, screening methods may be considered. The effectiveness of a noise barrier is dependent on its length, effective height, and position relative to the source and receiver as well as the material of construction. To optimize the effect of screening, screens should be located close to either the source of the noise, or the receiver. - The careful placement of barriers such as screens or berms can significantly reduce noise impacts but may result in additional visual impacts.		
Heritage	- Potential for activities to cause structural damage to historic water pools located in proximity to mine infrastructure and planned mine operational areas	Chance find procedure (Appendix A): **Scope:** The ”chance finds” procedure covers the actions to be taken from the discovery of a heritage site or item to its investigation and assessment by a trained archaeologist or other appropriately qualified person. **Compliance:** The “chance finds” procedure is intended to ensure compliance with relevant provisions of the National Heritage Act, No. 27 of 2004, especially Section 55 (4) which states that: ”a person who discovers any	- Daily visual inspections	- Project manager

Aspect	Potential impacts	Management and mitigation measures	Monitoring requirement	Responsibility
	- The potential for activities to cause structural instability and collapse of the abandoned ruin building at Aniswept. - Potential to discover or unearth new heritage objects, artefacts and archaeological remans in the designated development areas and immediate project site	archaeological object must as soon practicable possible report the discovery to the Council". The procedure of reporting set out below must be observed so that heritage remains reported to the National Heritage Council (NHC) is correctly identified in the field.		
Visual	- Removal of plant infrastructure, exposing previously hidden disturbed areas.	- Implementation of progressive and final rehabilitation, in line with the Namibia Mine Closure Framework. - Dust suppression.	- Daily and weekly inspections	- Proponent - Project manager - Environmental control officer

Aspect	Potential impacts	Management and mitigation measures	Monitoring requirement	Responsibility
	- Potential short-term increase in visual disruption from dismantling activities and vehicle movement - Long-term visual legacy of disturbed landforms (e.g. residual dumps, tailings, pits and borrow areas) if not properly rehabilitated.	- Liaison with land owners and adjacent communities is required to reach agreed upon closure objectives. - Phased dismantling to minimise visible disruption.		
Community health, socio-economic , occupational health and safety and human rights management	- Retrenchment due to mine closure. - Potential risk for the operational workforce to sustain on-site injuries, partial disabilities, life	- Maintain continuous dialogue throughout the Project lifecycle to address evolving concerns. - Respect traditional decision-making processes and customary governance structures. - Provide communities with clear, accurate and timely information about the scope of the Project, potential impacts and alternatives. - Use visual aids and written materials to enhance understanding.	- Daily, weekly and monthly inspections - Stakeholder engagement records - Complaints and grievance registers	- Proponent

Aspect	Potential impacts	Management and mitigation measures	Monitoring requirement	Responsibility
	threatening scenarios or death.	- Maintain records of community feedback, concerns and signed agreements. - Establish accessible, transparent and independent grievance mechanisms to address community complaints and disputes. - Adapt engagement strategies if community concerns evolve or new impacts emerges. - Recruitment of personnel will be conducted exclusively through the human resources (HR) department (off-site). No recruitment activities will be conducted on-site. - Maximise local employment and local business opportunities to promote and improve the local economy. - Enhance the use of local labour and local skills as far as reasonably possible. Where the required skills do not occur locally, and where appropriate and applicable, ensure that relevant local individuals are trained. - Ensure that goods and services are sourced from the local and regional economy as far as reasonably possible. - Create a database of employable community members. This database will include identification	- Labour policies - Induction registers - Injury and accident registers	

Aspect	Potential impacts	Management and mitigation measures	Monitoring requirement	Responsibility
		documents, certificates of highest qualifications and proof of residence confirmed by the leader of the community. - Provide contractors with the policy regarding labour recruitment and employment for their implementation. - Ensure that this policy is communicated to all employees and the communities. - Fair and equitable recruitment opportunities will be afforded to all with equivalent qualifications. - Recruitment practices must be transparent and auditable. - Stipulate the preferential use of local labour in all contracts, from communities within 50 km of the mine site, and then those areas from further afield, but without disregarding a person's constitutional rights. - Any job vacancy that is advertised must clearly indicate the required and appropriate skills for that position. - Make use of locally available raw materials, goods, and services as far as possible, and where appropriate.		

Aspect	Potential impacts	Management and mitigation measures	Monitoring requirement	Responsibility
		- A zero-tolerance policy will be adopted and fully enforced concerning drugs and alcohol on site. - Compliance with the safety and health requirements as outlined in the Labour Act No. 6 of 1992 and ISO 45001 standards. - Develop and enforce standard operating procedures (SOPs) related to workplace safety. - Ensure all employees receive on-site safety inductions, specifically related to mobile equipment and on-site traffic. - The HSE must conduct routine inspections of all operational work areas and conduct regular on-site safety trainings. Ensure that semi-skilled workers receive comprehensive training and clear instructions on safe handling of tools and equipment. - Ensure availability and proper use of PPE (e.g. safety boots, high-visibility clothing, ear plugs, fall-arrest systems, gloves and hard hat). - Document injury statistics, corrective actions initiated and lessons learned to improve safety practices on-site. - Deploy trained first aid teams and ensure that emergency response plans are in place, including		

Aspect	Potential impacts	Management and mitigation measures	Monitoring requirement	Responsibility
		access to medical facilities and clear reporting procedures. - Implement adequate work-rest cycles, monitor shift lengths, and limit overtime to reduce fatigue-related accidents. - Encourage workers to report hazards or unsafe conditions promptly and ensure clear communication of safety updates and protocols. - Strict access control will be enforced at all entry and exit points of the mine.		

7 IMPLEMENTATION OF THIS ESMP

This environmental and social management plan:

A. Has been prepared according to a contract with the Proponent.
B. Has been prepared based on information provided to ECC up to February 2026.
C. Is for the sole use of the Proponent, for the sole purpose of an ESMP.
D. Must not be used (1) by any person other than the Proponent or (2) for a purpose other than an ESMP.
E. Must not be copied without the prior written permission of ECC.

APPENDIX A – CHANCE FIND PROCEDURE

This section covers the procedures, reporting and management of sites or items of heritage significance should they be discovered, encountered or unearthed within the site operational areas.

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

Compliance: The ”chance finds” procedure is intended to ensure compliance with relevant provisions of the National Heritage Act, No. 27 of 2004, especially Section 55 (4) which states that: ”a person who discovers any archaeological object must as soon practicable possible report the discovery to the Council”. The procedure of reporting set out below must be observed so that heritage remains reported to the National Heritage Council (NHC) is correctly identified in the field.

Responsibilities
Contractors/employees/residents – to exercise due caution if archaeological remains are discovered.
Project manager (construction phase) and Site manager (operational phase) – to secure the site and advise management timeously and determine safe working boundaries and request for inspection.
Archaeologist – to inspect, identify, advise management and recover remains.

Table 7 provides the environmental aspects and impacts, mitigation and monitoring measures for archaeological and heritage aspects.

TABLE 7 - ARCHAEOLOGICAL AND HERITAGE ASPECTS

Responsibility:	- The Project manager, Site manager, residents, staff, contractors and subcontractors
Potential issues or impacts:	- Impact on heritage features.
Management /mitigation measures	
Potential to unearth heritage objects or resources	- All Project personnel and contractors should be aware of the protected archaeological site and the legal obligation to report any new findings to the National Heritage Council (NHC) immediately. Should a heritage site or archaeological site be uncovered or discovered, particularly during the construction or operational

	phase, a chance find procedure should be applied in the order they appear below: - If operating machinery or equipment, stop work; - Demarcate the site with danger tape; - Determine GPS position if possible; - Report findings, site location and action taken to the Project or Site manager; - Cease any works in the immediate vicinity; - Visit the site and consult any potentially affected community to determine whether work can proceed without damage to the findings; - Determine and demarcate the exclusion boundary; - Site location and details to be added to the Project's geographic information system (GIS) for field confirmation by an archaeologist; - Inspect the site and confirm addition to the Project GIS; - Advise the NHC and request written permission to remove findings from the work area; and - Recover, package and label findings for transfer to the National Museum.
	Should human remains be found, the following actions must be followed: - Apply the chance find procedure as described above; - Schedule a field inspection with an archaeologist to confirm that the remains are human; - Advise and liaise with the NHC and Police; and - Remains will be recovered and removed to either the National Museum or the National Forensic Laboratory.

APPENDIX B – WEED AND SEED INSPECTION FORM