



**Andrada
Mining**

Submitted to: Grace Simba Investments (Pty) Ltd

Attention: Tim Marais

Unit 6, Gold Street Business Park,

Gold Street, Prosperita

Windhoek

Namibia

DRAFT REPORT:

MINING LICENCE 133 EXPLORATION AND MINING ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN

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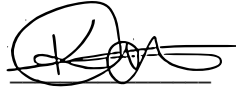
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ENVIRONMENTAL COMPLIANCE CONSULTANCY CONTACT DETAILS:

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

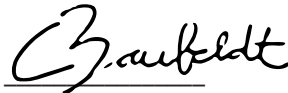


Environmental Compliance Consultancy (Pty) Ltd
PO Box 91193, Klein Windhoek, Namibia
Tel: +264 81 669 7608
Email: info@eccenvironmental.com

Quality Assurance**Authors:**

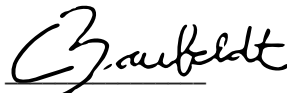
Kelly Ochs

Environmental Compliance Consultancy

Checked By:

Carlene Baufeldt

Environmental Compliance Consultancy

Approved by**Authorised****Representative:**

Carlene Baufeldt

Environmental Compliance Consultancy

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ABBREVIATIONS

Abbreviation	Description
%	percent
DWA	Department of Water Affairs
EC	Electrical Conductivity
ECC	Environmental Compliance Consultancy (Pty) Ltd
ECO	environmental control officer
EIA	environmental impact assessment
EMA	Environmental Management Act No. 7 of 2007
EMS	environmental management system
ESIA	environmental and social impact assessment
ESMP	Environmental and social management plan
GIS	geographical information system
GPS	global positioning system
HR	Human Resource
HSE	health, safety and environment
ISO	International Organisation for Standardisation
km/h	kilometre per hour
L	Litre
Ltd	limited
m	meter
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
MSDS	material safety data sheet
NHC	National Heritage Council
OHSE	occupational health, safety, and environment
PPE	personal protective equipment
Pty	propriety
SOP	standard operating procedure
TA	traditional authority
TDS	Total Dissolved Solids
ToR	terms of reference

1 INTRODUCTION

1.1 PROJECT BACKGROUND

Environmental Compliance Consultancy (Pty) Ltd (ECC) has been engaged by Andrada Mining (Pty) Ltd, to update the environmental and social management plan (ESMP) for exploration and mining activities for base and rare metals, industrial minerals and precious metals on mining licence (ML) 133, Erongo Region on behalf of Grace Simba Investments (Pty) Ltd, a subsidiary of Andrada Mining and herein referred to as the Proponent.

The Project is located within ML 133, which covers an area of ~3,288 ha and is located along the banks of the ephemeral Omaruru River, ~35 km south of the Uis town, in the Nai-Nais community within the Dâures Constituency, Erongo Region (Figure 1).

The Ministry of Environment, Forestry and Tourism (MEFT) approved the existing environmental clearance certificate (ECC) for ML 133. This updated ESMP addresses the potential environmental and social impacts by ensuring that improved standards and best international practises are integrated into all operational activities on ML 133. It covers the listed activities already authorised under the existing environmental clearance certificate and carried out under the Proponent's routine environmental compliance monitoring and reporting, namely open pit mining, drilling and blasting, loading and hauling of ore and waste rock, crushing, screening and processing, stockpiling of ore, waste rock and residue, and the construction and maintenance of haul and access roads and support infrastructure, together with the expanded short to medium term exploration programme that is the subject of the ESIA amendment. The mining activities remain part of the Project; as the mining feasibility work progresses, the mining phase impacts will be further scoped and this ESMP updated in line with best practice.

For the purposes of this ESMP, the Project means all exploration and mining activities undertaken by the Proponent on ML 133 as described in Chapter 4 of the ESIA: the exploration programme (geological mapping, geophysical surveys, geochemical sampling including grab, channel, trench and bulk sampling, RAB, RC and diamond drilling, and the associated camps, access tracks, drill pads, water and power supply and waste management) and the mining activities authorised on the licence (open pit mining, drilling and blasting, loading and hauling, crushing and screening, stockpiling of ore, waste rock and residue, haul and access roads and support infrastructure), with ore transported to the existing processing plant at Uis. The operational phase means any period during which exploration or mining activities are undertaken on ML 133; the rehabilitation phase means the progressive and final rehabilitation and closure of disturbed areas.

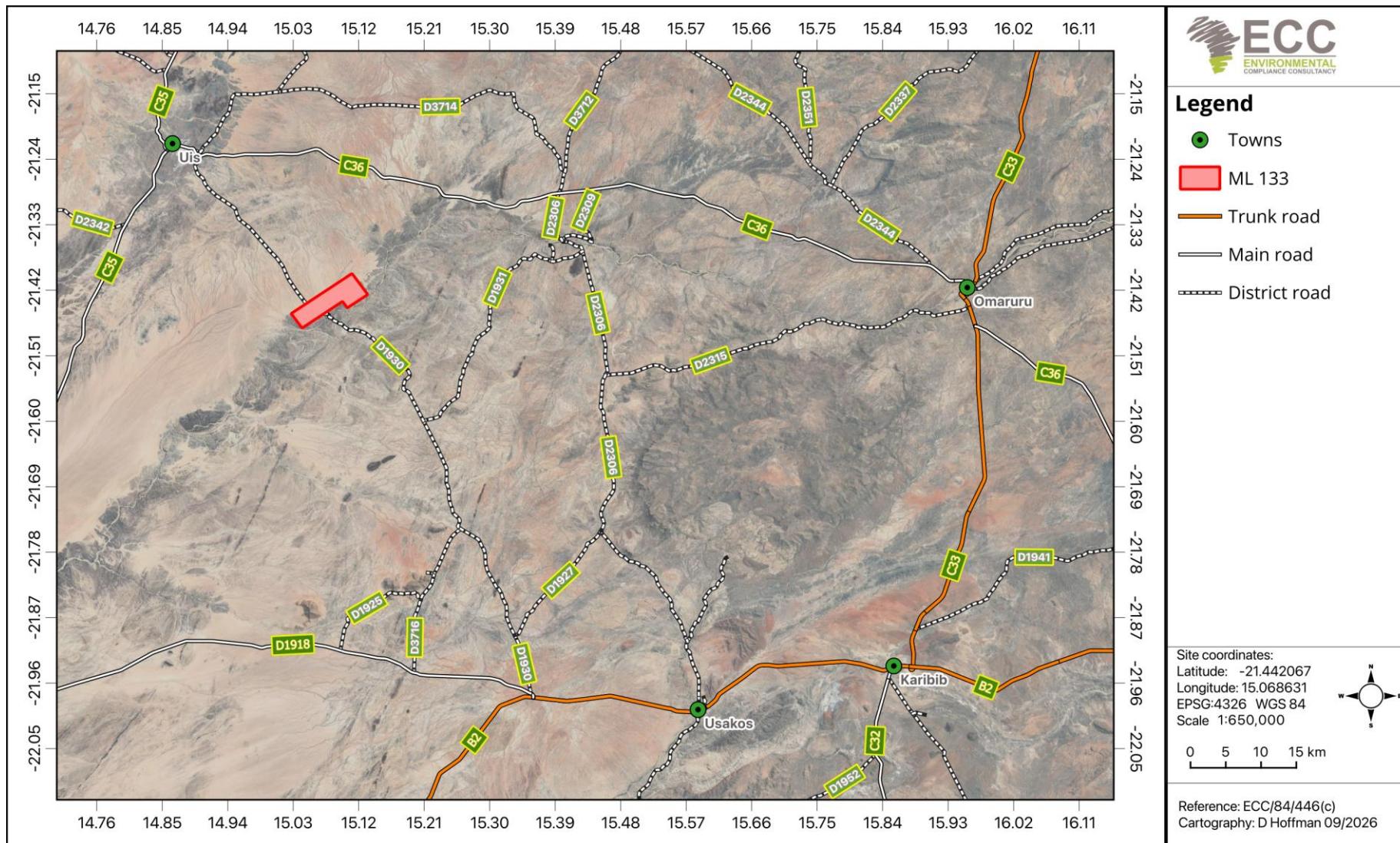


Figure 1 – ML 133 locality map

1.2 ENVIRONMENTAL REGULATORY REQUIREMENTS

The proposed Lithium Ridge (ML 133) Project is a listed activity as stipulated in the Environmental Management Act, No. 7 of 2007 and its Regulations, promulgated in 2012. An environmental and social impact assessment and this environmental and social management plan (ESMP) are required to demonstrate regulatory compliance and meeting legal obligations. Additionally, the ESMP on site serves to provide specific measures to avoid, minimise, or manage environmental and social impacts resulting from exploration and mining activities on ML 133. The Proponent holds a valid environmental clearance certificate for ML 133, which is being renewed and amended through the ESIA to which this ESMP is appended.

1.3 PURPOSE AND SCOPE OF THIS REPORT

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

The ESMP forms an appendix to the ESIA and is based on the findings of the impact assessments carried out to date. The ESIA should be referred to for further information on the proposed Project, description of the receiving environment, impact assessment methodology, terms of reference (ToR), applicable legislation, and impact assessment findings.

This ESMP is a live document and shall be reviewed at predetermined intervals, and / or updated during the ESIA process when or if the scope of work alters, or when further data or information is added. In particular, it will be updated with the results of the mining phase specialist studies identified in Chapter 7 of the ESIA (noise, air quality, traffic, hydrology and geochemistry) before mining commences. All personnel working on the Project will be legally required to comply with the requirements set out in the ESMP that is approved by the competent authorities and Ministry of Environment, Forestry and Tourism (MEFT).

1.4 MANAGEMENT OF THIS ESMP

The Proponent holds the environmental clearance certificate (ECC) for the proposed Project and will be responsible for the implementation and management of this ESMP. The implementation and management of this ESMP including the compliance monitoring / auditing, will be undertaken through daily duties and activities, as well as monthly inspections.

1.5 LIMITATIONS, UNCERTAINTIES AND ASSUMPTIONS RELATED TO THE ESMP

This ESMP incorporates occupational health and safety measures identified through the environmental and social assessment. However, it does not constitute, or replace, the Proponent's occupational health and safety management system. Compliance with the statutory occupational health and safety requirements under the Labour Act and the Minerals Act, including for blasting and mining operations, is provided for in the safety management plan developed and maintained by the Proponent.

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

The information contained in this ESMP is based on the project description as provided in the ESIA. The project description covers both the exploration programme and the mining activities authorised on ML 133. Where the detailed design of the mining and processing infrastructure changes materially, or where the mining phase specialist studies produce new results, this ESMP will be updated and resubmitted to MEFT as an amendment. The measures in this ESMP apply to the planning, operational (exploration and mining), rehabilitation and closure phases.

1.6 ENVIRONMENTAL ASSESSMENT PRACTITIONER

Environmental Compliance Consultancy (ECC) (Reg. No. CRN 2022/0593) has prepared this ESMP on behalf of the proponent.

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

All compliance and regulatory concerns regarding this ESMP should be forwarded by email or posted to the following address:

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

2 ENVIRONMENTAL MANAGEMENT FRAMEWORK

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

2.1 OBJECTIVES AND TARGETS

Environmental objectives and targets have been developed so that the exploration and mining activities can minimise potential impacts on the environment, as far as possible.

Environmental objectives for the Project are as follows:

- Aim for zero pollution incidents.
- Minimise vegetation clearing and earthworks.
- Minimise impact on local and regional groundwater users
- Protect local flora and fauna, and
- Use natural resources effectively and efficiently.

2.2 ORGANISATIONAL STRUCTURE, ROLES, AND RESPONSIBILITIES

The proponent shall provide a Project team to oversee and undertake the exploration and mining activities on ML 133. This team will be composed of the proponent's personnel and contractors. A nominated role shall be identified to ensure the management and implementation of this ESMP is carried out throughout the Project Life. The Proponent shall be responsible for:

- Ensuring all members of the project team, including contractors, 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.
- Contractors shall be responsible for ensuring and demonstrating that all personnel employed by them are compliant with this ESMP, and meet the responsibilities listed above.

Table 1 lists the roles and responsibilities allocated to different management levels in the company and specific personnel.

Table 1 - Roles and responsibilities

Role	Responsibilities and duties
Proponent	- Responsible for the overall management and implementation of the ESMP.

Role	Responsibilities and duties
	– Ensure environmental policies are drafted/updated and communicated to all personnel throughout the company. – Responsible for providing the resources required to effectively run operations and comply with the ESMP. – Appoint all managers needed to ensure effective running of operations, and – Ensure systems for proper induction and training of personnel and contractors are in place.
Exploration and mine management (exploration manager and, during mining, the mine manager)	– Manage all activities on the exploration project. – Monitor daily operations and ensure systems are in place for implementation of the ESMP. – Maintain a 'community' issues and concerns register and keep records of complaints. – Ensure corrective action is taken and communicated to complainants, and – Maintain up to date records of employees who have completed training and induction. – Responsible for the management, maintenance and revisions of this ESMP, in consultation with the HSE appointed person or environmental manager.
Site manager	– Ensure that all contract workers, sub-contractors, and visitors to the site are aware of the requirements of this ESMP, relevance to their roles and always adhere to this ESMP. – Report any non-compliance or accidents. – Receive, record and respond to complaints. – Ensure adequate resources (equipment and personnel) are available for the implementation of the ESMP. – Ensure safe and environmentally sound operations.
HSE (health, safety, and environment) appointed person/ environmental manager	– Devise, implement and maintain the Project's environmental management system (EMS). – Draft and update specific environmental procedures for operational exploration activities. – Ensure on-site induction training is relevant and address issues from this ESMP. – Conduct all internal environmental audits and inspections and report findings to relevant personnel. – Check the implementation of corrective action for incidents and record complaints. – Ensure all environmental monitoring and reporting is done.

Role	Responsibilities and duties
	– Compile the bi-annual environmental report in readiness for submission to the Environmental Commissioner.
Employees	– Adhere to measures set out in the ESMP. – Ensure they have undertaken a site induction. – Report any operations or conditions which deviate from the ESMP as well as any non-compliant issues or accidents to the environmental manager.

2.3 CONTACTORS

Any contractors hired for exploration or mining activities on ML 133, for the duration of the Project, shall be compliant with this ESMP and shall be responsible for the following:

- Undertaking activities in accordance with this ESMP as well as relevant policies, procedures, management plans, statutory requirements, and contract requirements.
- Implementing appropriate environmental and safety management measures.
- Reporting of environmental issues, including actual or potential environmental incidents and hazards, to the site manager.
- Ensuring appropriate corrective or remedial action is taken to address all environmental hazards 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's regulations for Labour, Health and Safety, 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 for exploration, mining and rehabilitation 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 work permits shall not be hired.
- Every effort shall be made to recruit from the group of unemployed workers living in the surrounding area.

3 COMMUNICATION AND AWARENESS

To ensure that potential risks and impacts are minimised it is vital that personnel are appropriately informed and trained on how to properly implement the ESMP. It is also important that regular communications are maintained with stakeholders and regulatory authorities (i.e. surrounding community, NHC, MIME, MEFT, Dâures Daman Traditional Authority) and made aware of potential impacts and how to minimise or avoid them. This section outlines the framework for communication related to the implementation of the commitments that are specified in this ESMP.

3.1 INTERNAL COMMUNICATIONS

During exploration and mining activities, the exploration manager or mine manager and the site manager shall communicate site-wide environmental issues to the project team through the following means (as and when required):

- Site induction;
- Site notices;
- Method statements and risk assessment briefings;
- Daily, weekly and monthly audits and site inspections;
- Toolbox talks, including instructions on incident response procedures; and
- Briefing on key Project-specific social and environmental issues.

This ESMP shall be distributed to the Project team, including any contractors and personnel working on ML 133, to ensure that the environmental requirements are adequately communicated. Key activities and environmentally sensitive operations shall be briefed to workers and contractors.

During all listed activities on ML 133, communications between the management team shall include discussing any complaints received and actions to resolve them, - any inspections, audits, or non-conformance with this ESMP, and any objectives or target achievements.

3.1.1 SITE INSPECTION AND TOOLBOX TALKS

All personnel involved in the Project shall be inducted to the site regarding any 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 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.

All Project personnel must demonstrate an understanding of the following:

- Demonstrate an understanding of the site's environmental rules and the broader regulations established by MIME, MEFT, Dâures Daman Traditional Authority and the NHC;
- Understand the necessary steps to address any environmental issues and identify the appropriate contacts for resolving such problems;
- Understand the potential consequences of non-compliance with this ESMP and violation of relevant statutory licences and permits conditions; and
- The roles of responsible people working on the Project.

3.1.2 TRAINING AND ENVIRONMENTAL AWARENESS

All personnel working on the Project must be competent to perform tasks that have the potential to cause an environmental impact. Competence is defined in terms of appropriate education, training and work experience. When it has been determined that certain skills are lacking, training and refresher courses must be offered to the workforce. The exploration manager or mine manager and the site supervisor(s) must ensure records of these training sessions are always kept onsite and filed.

3.2 ENVIRONMENTAL EMERGENCY AND RESPONSE

An emergency is any abnormal event, which demands immediate attention. It is any unplanned event, which results in the temporary loss of management control at site, but where functional resources can manage the response. An emergency response plan document will be put in place that manages the response in relation to emergencies including environmental emergencies. Table 2 presents emergency contact details in emergency situations.

Table 2 - Emergency contact details

Town	Ambulance	Police	Fire Brigade
Site (EMed, stationed at the Uis Tin Mine)	+264 83 924 9111	+264 (67) 1-0111	-
Omaruru	264 64 570037	+264 64 570028	+264 64 570028

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) informed of the incident (telephone +264 61 284 2111). All correspondence with MEFT should be undertaken by the Project Manager/Proponent. If hydrocarbon and petroleum spills of >200 L occur, the Ministry of Industrialisation, Mines and Energy (MIME) must be informed using Form PP/11 titled "Reporting of major petroleum product spill", issued by the ministry.

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 may be used.

3.3 COMPLAINTS HANDLING AND RECORDING

Any complaints received verbally 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
- The nature of the complaint

The information shall be given to the exploration manager or mine manager, who is overall responsible for the management of complaints and must address the complaints by following these measures:

- Record the complaint in the complaint register; and
- 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, or the members of the public who wish to lodge a complaint. The complaints register shall be kept for the duration of the Project and must be available for government or public review upon request.

4 REPORTING, COMPLIANCE AND ENFORCEMENT

4.1 ENVIRONMENTAL PERFORMANCE MANAGEMENT

This section outlines the overall monitoring commitments required for implementation during exploration and mining activities on ML 133. It builds on the environmental compliance monitoring and reporting already undertaken by the Proponent under the existing environmental clearance certificate, which continues. It details procedures to ensure routine inspections and audits are conducted to ensure that Project's activities are aligned and remain compliant with this ESMP.

4.2 OPERATIONAL PHASE (EXPLORATION AND MINING): ENVIRONMENTAL INSPECTIONS AND COMPLIANCE

4.2.1 DAILY AND WEEKLY COMPLIANCE MONITORING

A copy of this ESMP will be on-site throughout the operational phase and will be available upon request. Contractors and subcontractors must be issued with a copy of this ESMP. It is the responsibility of the Exploration manager or Mine manager and the Site manager to ensure this ESMP is complied with through their daily roles. Daily and weekly inspections will be undertaken by the Site manager or appointed HSE personnel. Any environmental concerns or impacts identified will be reported to the Exploration manager and actioned as soon as is reasonably practicable.

4.2.2 MONTHLY COMPLIANCE MONITORING

Monthly inspections will be undertaken by the Exploration manager or Mine manager and the Site manager, or by appointed third party consultants, to assess whether the standards and procedures set out in this ESMP are being complied with and that environmental control measures are in place and working correctly and effectively. Any non-conformance will be recorded, including the following details: a brief description of non-conformance; the reason for the non-conformance; the responsible party; the result (consequence); and the corrective action(s) taken and any necessary follow up measures required.

4.3 REPORTING

All incident or non-compliance, including any environmental issue, failure of equipment or accident, is reported to the Exploration manager or Mine manager throughout the operational phase. The MEFT reserves the right to require the Proponent to submit bi-annual reports evaluating the Project's compliance with the commitments that are outlined in this ESMP.

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

Industrialisation, Mines and Energy (MIME) must be notified by completing form PP/11 (telephone: +264 61 284 8111).

If significant environmental spills (hydrocarbons) occur close 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 Exploration manager, with the assistance of the Site manager. Notification should occur no later than 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 may be used.

Occupational incidents and accidents incurred on site should, where applicable under the Labour Act and its regulations, be reported to the authorities (i.e. Occupational Safety & Health Department) at the Ministry of Labour, Industrial Relation and Employment Creation (MLIREC), by using form F.5.

In case of archaeological objects or heritage artefacts discovered on-site, the chance find procedure must be followed and the NHC must be informed by the Exploration manager.

The Site manager must ensure that the final effluent complies with general standards (Annexure 11) of the Water Resources Management Regulations and that all water quality analysis and reporting requirements specified in the licenses for the proposed activities are fully met, should this be required by DWA.

All correspondence and communication with local and regulatory authorities should be undertaken by the Exploration manager or Mine manager, or by personnel appointed by them.

4.3.1 NON-COMPLIANCE

Where it has been identified that activities are not compliant with this ESMP, the Exploration manager must ensure that corrective actions are implemented to the extent that the activities return to being compliant as soon as possible. In instances where the requirements of the ESMP are not upheld, a non-conformance and corrective action notice will be produced. The notice will be generated during the inspections, and the Exploration manager will conduct follow ups to determine whether the corrective actions are implemented as planned and instructed.

A non-compliance event / situation is considered if:

- There is evidence of contravention of this ESMP and associated indicators or objectives;
- The contractors or subcontractors have failed to comply with corrective actions or other instructions issued to them or qualified authority; or

- There is evidence of negligence in recording, investigating and responding to community complaints through the established reporting channels and grievance resolution mechanisms.

Work will be stopped in the event of a non-compliance, until corrective action(s) has been completed. The non-compliance will be closed out once the Exploration manager has inspected the corrective action and confirmed that the issue has been satisfactorily resolved.

4.3.2 DISCIPLINARY ACTION

This ESMP is a legally binding document and non-compliance with its provisions may result in disciplinary action being taken against the perpetrator/s. These actions may include, but not limited to the following:

- Legal actions in accordance with other applicable environmental and labour laws;
- Imposition of monetary fines or penalties on contractors or subcontractors;
- Termination of contractual agreements with contractors, subcontractors or suppliers;
- Requirement for immediate corrective or remedial actions at violator's expense;
- Complete or partial suspension of Project activities until compliance is restored; or
- Disqualification from participating in future Project activities.

Non-compliance may also expose the Proponent to enforcement action by the authorities, including the suspension or withdrawal of the Project's licences and permits, which is a consequence for the Project as a whole rather than a disciplinary measure against an individual or contractor.

5 ENVIRONMENTAL AND SOCIAL MANAGEMENT

5.1 ENVIRONMENTAL PERFORMANCE MANAGEMENT

Table 3 and Table 4 provides the overall management plan of potential impacts of the Project during the operational phase (exploration and mining) and the rehabilitation phase. These plans provide mitigation and monitoring commitments, as well as the roles responsible for execution. The Exploration manager and Site supervisor(s) will use the operational management plan (Table 3) to undertake daily, weekly and monthly inspections to ensure the Project remains compliant with this ESMP during exploration and mining. The rehabilitation management plan will be used by the Proponent to undertake inspections during the rehabilitation phase.

This ESMP has been developed to provide guidance to the Project staff, contractors and subcontractors through the operational (exploration and mining) and rehabilitation phases.

5.2 OPERATIONAL PHASE: EXPLORATION AND MINING

Exploration activities will focus on confirming the presence and extent of tin, tantalum and lithium mineralisation within the ML 133 area. Work will be undertaken in phases and may include geological mapping, geophysical surveys, geochemical sampling (grab, channel, trench and bulk sampling), RAB, RC and diamond drilling to obtain subsurface information, and the establishment of temporary camps, access tracks and drill pads.

The mining activities authorised on ML 133 comprise open pit mining, drilling and blasting, loading and hauling of ore and waste rock, crushing and screening, stockpiling of ore, waste rock and residue, and the construction and maintenance of haul and access roads and support infrastructure, with ore transported to the existing processing plant at Uis. Table 3 applies to both the exploration programme and the mining activities; the measures marked as mining phase measures apply once mining operations are under way.

The Proponent must ensure that any contractors and their subcontractors are fully informed of the ESMP requirements and that these are strictly enforced throughout operations. The Health, Safety and Environment (HSE) manager, or appointed personnel or consultants, is responsible for conducting site inspections at least once a month to ensure that all the mitigation and management measures are being properly implemented and adhered to. Bi-annual compliance audits should be carried out, compiled and submitted to MEFT for review.

The specific environmental management measures and monitoring required for implementation during the operational phase (exploration and mining) are discussed in Table 3.

Table 3 – Environmental and social aspects, impacts, mitigation and monitoring measures for the operational phase (exploration and mining)

Aspect	Potential impacts	Management and mitigation measures	Monitoring requirement	Responsibility
Operational phase (exploration and mining)				
Access and site preparation	– Conflict with residents, traditional authorities and landowners	– Ensure documented permission to enter the area is obtained from relevant traditional leaders/ landowners; – Use existing roads for access to avoid new tracks and create cut lines with due regard to existing land use activities in the area; – Ensure appropriate supervision of all activities; – Develop and implement an operation manual or procedures to work on the exploration area and implement monitoring programs thereafter; – Maintain continuous engagement with residents, traditional authorities and landowners to identify any concerns or issues, and appropriate mitigation and management measures agreed upon; – Staff shall be provided with the necessary access permissions in accordance with site security requirements; – Accidents and incidents need to be reported to the exploration manager and recorded in an incident register; and – The possession, use, or discharge of firearms by staff and contractors on site is strictly prohibited.	– Daily – OHSE Audits/ monthly inspections	– Exploration Manager – Site manager/supervisor

Aspect	Potential impacts	Management and mitigation measures	Monitoring requirement	Responsibility
Operational phase (exploration and mining)				
Socio-economic	– Job creation for locals	– Maximise local employment and local business opportunities; – Enhance the use of local labour and local skills as far as reasonably possible; and – Ensure that goods and services are sourced from the local and regional economy as far as reasonably possible.	– HR recruitment policies and procedures.	– HR Manager
Occupational health and safety	– Potential for injuries or fatalities to be sustained on-site.	– The Proponent shall ensure that occupational health and safety requirements are incorporated into the bidding and tendering processes to guarantee that all contractors and subcontractors comply with these standards; – Contractors and subcontractors should comply with all safety requirements outlined in the contracts signed with the Proponent; – Ensure workers are informed about potential hazards (e.g., drilling operations, noise, dust, and handling of samples) – The consumption of alcoholic beverages and drugs is strictly prohibited within the Proponent's operational areas and camps. Anyone found to be under the influence of alcohol/drugs must be disciplined; – Require the use of appropriate PPE such as safety boots, helmets, gloves, eye protection, reflective vests, and hearing protection; – Enforce consistent PPE inspections and replacement when damaged;	– Daily – Weekly – Monthly	– Exploration manager – Site manager/supervisor – Contractors – Subcontractors

Aspect	Potential impacts	Management and mitigation measures	Monitoring requirement	Responsibility
Operational phase (exploration and mining)				
		– Conduct regular toolbox talks on occupational health and safety with all personnel involved in exploration activities; – An emergency response plan covering fire, injury, and chemical spill scenarios shall be developed; – Fire extinguishers and first aid kits shall be accessible; – Maintain clear evacuation routes and signage; and – Maintain records of all injury statistics, track corrective actions and record lessons learnt to improve safety practices on-site.		
Noise	– Noise and vibration impact	– Avoid noise generating activities at night, by ensuring noisy activities are avoided especially at night; – Work activities shall be planned and scheduled to prevent disturbance during nighttime hours (19:00–05:00); – Procedures for receiving complaints from nearby land users or residents to be in place and mitigation measures to be implemented should exploration generate excessive noise and vibration; – A complaint register must be kept. Complaints received should be addressed as per complaint handling procedures; – Drill equipment shall be suitably positioned to ensure that noisy equipment is away from receptors; – Avoid unnecessary equipment idling at all times;	– Daily – Weekly – Monthly	– Exploration manager – Site manager/supervisor – Contractors – Subcontractors

Aspect	Potential impacts	Management and mitigation measures	Monitoring requirement	Responsibility
Operational phase (exploration and mining)				
		– The maximum speed on internal roads must be maintained at 40 km/h; – Nearby residents and landowners shall be notified of drilling schedules and operations prior to initiation; and – All equipment to be shut down or throttled back between periods of use.		
Visual	– Visual disturbances	– Minimise the footprint of cleared areas and concentrate activities within designated zones; – Position drill equipment in such a way that it is out of sight from human receptors (e.g. informal settlement); – Residents need to be informed in advance that drilling operations are within the vicinity of their property; – Minimize nighttime lighting and direct lights downward to prevent glare; – Use energy-efficient and shielded lighting to reduce light pollution; – Maintain good housekeeping; – Avoid littering and ensure regular collection and proper disposal of waste; – Apply dust suppression where possible; – Restrict speed of Project vehicles to 40 km/h on operational roads under the Proponent's control (the speed limit on the public D1930 through the licence is set by the Roads Authority);	– Daily observations	– Exploration Manager – Site Manager/supervisor

Aspect	Potential impacts	Management and mitigation measures	Monitoring requirement	Responsibility
Operational phase (exploration and mining)				
		- Specific activities that may generate dust and impact on residents shall be avoided during high wind events; and - Remove temporary structures and waste materials immediately after completion of exploration.		
Air quality	Dust generation	- Ensure that all land preparation and clearing activities are limited to the defined Project footprint to avoid unnecessary environmental disturbances; - Cover stockpiles, soil heaps, or loose materials with tarpaulins when not in use; - Regularly wet unpaved roads, drill pads, and cleared areas with water (especially during dry or windy conditions); - Maintain all vehicles, generators, and drilling equipment in good working condition to prevent excessive exhaust emissions; - Avoid unnecessary idling of vehicles and machinery; - Clearly mark speed limit signs and monitor compliance; - Project vehicles must be confined to existing roadways. No off-road driving; and - Vehicles must adhere to speed limits (40 km/h on operational roads) to avoid producing excessive dust.	Daily	- Site manager - Contractors - Subcontractors
Historical, archaeological	Loss or damage to cultural heritage sites or archaeological objects	- Apply for - and obtain heritage consent from the National Heritage Council (NHC); - Apply 100 m buffer zone to the following findings as stipulated in the Heritage specialist study:	Heritage consent to be renewed annually	- Site manager - Exploration manager / Mine manager

Aspect	Potential impacts	Management and mitigation measures	Monitoring requirement	Responsibility
Operational phase (exploration and mining)				
and cultural heritage		○ Grave site (-21.439435 15.05501) ○ Old precolonial presumably Damara Settlement (-21.4423889 15.0711389) ○ Old mine settlement (-21.449225 15.067663) ○ Suspected children's grave (-21.45262 15.06573) - Follow the chance finds procedure (Appendix A) should any objects or findings of cultural heritage significance be uncovered.	- Daily observations	- Contractors - Subcontractors
Waste management	- Solid waste pollution (litter and nuisance)	- Provide clearly labelled bins for different waste streams (general refuse, recyclables, scrap metal, food waste) at drill sites, camps and work areas. - Use covered, animal-proof bins and skips to prevent windblown litter, scavenger access and visual pollution, especially in temporary camps. - Implement routine waste collection schedules to prevent accumulation, with daily clean-ups at active exploration and camp areas. - Dispose of all general waste at licensed municipal landfills or approved waste facilities and prohibit informal dumping or burial on site. - Separate recyclable materials such as plastics, paper and scrap metal and direct them to local recycling facilities where available.	- OHSE Audits and inspections; - Waste management inspections, - Safe disposal certificates	- HSE appointed person/Environmental Manager

Aspect	Potential impacts	Management and mitigation measures	Monitoring requirement	Responsibility
Operational phase (exploration and mining)				
		– Manage food waste carefully through sealed containers and frequent removal to minimise odours and attraction of wildlife or scavengers. – Inspect exploration sites and camps after demobilisation and remove all waste, followed by light surface clean-up to restore areas to pre-exploration condition. – Brief exploration crews and contractors on waste management requirements and assign responsibility for housekeeping and waste control.		
	– Effluent discharge pollution of water sources	– Ensure a wastewater treatment and discharge licence is obtained from the DWA prior to exploration activities (if required); – Procure all necessary wastewater system components to facilitate effective treatment processes and reliable operations; – All mobile sanitation facilities must be flush-type toilets and must be maintained and repaired as required; – No employee or contractor on-site may relieve himself or herself in the surrounding environment or work area; and – Portable toilet facilities must be cleaned regularly to maintain hygiene and prevent health risks.		
Groundwater	– Contamination of groundwater due to leaching from impacted soils.	– Obtain the appropriate water abstraction licence from MAFWLR:DWA, this includes initiating a detailed groundwater assessment and targeted drilling with	– OHSE Audits and inspections;	– HSE appointed person/Environmental Manager

Aspect	Potential impacts	Management and mitigation measures	Monitoring requirement	Responsibility
Operational phase (exploration and mining)				
		sustainable yield tests to accompany the technical components of the application; – Borehole water levels to be recorded prior and after abstraction; – Borehole levels and abstraction volumes to be reported to DWA in accordance with the conditions of the water abstraction licence; – Monitor key parameters (pH, electrical conductivity (EC), total dissolved solids (TDS), nitrates, sulphates, hydrocarbons, heavy metals) to identify contamination trends; – Establish buffer zones around community boreholes and surface water features; – Where practically possible, clean storm water is to be diverted from all areas that may be contaminated; and – Water from potentially contaminated areas to be contained in pollution control facilities.	– Monthly borehole monitoring	
	– Deterioration of groundwater quality due to hydrocarbon and oil spill during drilling, resulting in groundwater contamination	– Good housekeeping; – Training through toolbox talks and induction; – Ensure spill kits are in place; – All stationary vehicles and machinery must have drip trays to collect leakages of lubricants and oil; – Consider alternative drilling sites when the water table is too high;	– OHSE audits and inspections – Daily	– Site manager – Exploration manager – HSE appointed person/ Environmental manager

Aspect	Potential impacts	Management and mitigation measures	Monitoring requirement	Responsibility
Operational phase (exploration and mining)				
		– Drill system will be fitted with sumps to direct any accidental spills into containment areas; – Accidental spills and leaks (including absorption material) to be cleaned as soon as possible; – Store bulk fuel in adequate containment areas (non-porous surface and bunded); – No damaged containers in use; – Major spills to be reported, also to the authorities; – If hydrocarbon and petroleum spills of >200 L occur, the Ministry of Industrialisation, Mines and Energy (MIME) must be informed using Form PP/11 titled “Reporting of major petroleum product spill; – Where possible, water from existing water sources shall be used; – Refuelling will be done in areas with adequate preventative measures in place; – Implement a groundwater monitoring programme		
	Abstraction of water for DD and RC drilling fluids. Risk of slurry spills contaminating drainage lines.	– Obtain water abstraction permits where required and monitor water use. – Use closed-loop drilling fluid systems or lined sumps to prevent seepage. – Position drill pads away from drainage lines and sensitive habitats. – Line and manage sumps to prevent overflow during rainfall events.	– OHSE audits and inspections – Daily	– Site manager – Exploration manager – HSE appointed person/ Environmental manager

Aspect	Potential impacts	Management and mitigation measures	Monitoring requirement	Responsibility
Operational phase (exploration and mining)				
		- Remove core and RC samples from the drill pad to the core shed on the licence, and remove all equipment from the pad, when the pad is rehabilitated. - Backfill sumps and drill holes, reprofile pads, and rehabilitate areas progressively. - Implement spill response procedures and keep spill kits on site at all times.		
Water	Wastewater from RC drilling and DD sumps can contaminate surface and groundwater	- Any use of water for whatever purpose must be in accordance with the water abstraction licence issued by DWA and, where communal land users share the source, in consultation with the Tsiseb Conservancy and the Dâures Traditional Authority; - If required, effluent/wastewater treatment, discharge and reuse licence shall be obtained from the Ministry of Agriculture, Fisheries, Water and Land Reform (MAFWLR): Department of Water Affairs (DWA) and report as required in line with licence conditions; - Wastewater discharges will be contained; - Workers will be made aware about the importance of wastewater management; - Good housekeeping; and - Ensure prompt clean-up of spills.	- OHSE audits and inspections - Daily	- Site manager - Exploration manager - HSE appointed person /Environmental manager
Surface water	surface water contamination/pollution	Develop a stormwater management plan aimed at separating clean and dirty water and preventing contaminated discharge from leaving the site;	OHSE Audits and inspections;	HSE appointed person/environmental manager

Aspect	Potential impacts	Management and mitigation measures	Monitoring requirement	Responsibility
Operational phase (exploration and mining)				
	from wastewater or oil spills	– Pollution sources are to be addressed as a matter of urgency; – Regularly inspect nearby surface water bodies for visible signs of contamination (e.g., oily sheen, sediment plumes, litter, chemical residues); – Maintain the 100 m riparian buffer between drilling sites and delineated watercourses required under the Water Resources Management Act, unless authorised otherwise by DWA; – Prohibit waste storage, fuel sites, and equipment maintenance within these buffer zones; – Store fuel, oils, and chemicals in bunded areas on impermeable surfaces; – Use drip trays and secondary containment during refuelling or equipment servicing; and – Keep spill kits at all operational sites and train staff in spill response procedure.		
Roads/parking management	Negative relations with residents in the conservancy, farmers and neighbours as well as poor maintenance which could lead to vehicle incidents	– Vehicle movement must be restricted to existing fence lines, roads, tracks, and dry riverbeds where possible; and – Should the need arise to create new roads or tracks, they shall be planned so as to cause no unnecessary environmental damage and only established with the prior agreement of the Tsiseb Conservancy and the	– Environmental audits and inspections – Physical and signed agreement (records)	– Site manager – Exploration manager

Aspect	Potential impacts	Management and mitigation measures	Monitoring requirement	Responsibility
Operational phase (exploration and mining)				
		Dâures Traditional Authority as the communal land custodians.	with the conservancy and traditional authority	
	Poor and unsafe vehicle movement and parking	– Identify and demarcate a central parking area on previously disturbed land or areas with minimal ecological sensitivity; – Position the parking area away from drill pads, fuel storage sites, and high-risk work zones; – Avoid placing the parking area on steep slopes, drainage lines, or erosion-prone areas; – Install visible signage indicating the designated parking area for staff vehicles; – Mark entry and exit routes clearly to control traffic flow and reduce unnecessary vehicle movement across the Project area; – Limit the parking footprint to the minimum area required; – Prevent parking on or near fuel storage bunds or hazardous material zones; and – Restrict parking within the Proponent's operational area to authorised personnel and contractors only.	– Daily	– Site manager

Aspect	Potential impacts	Management and mitigation measures	Monitoring requirement	Responsibility
Operational phase (exploration and mining)				
Terrestrial environment and ecology	– Loss of biodiversity and habitat	– Use existing roads for access to avoid new tracks and create cut lines; with due regard for the existing ecosystem functions in the area; – Minimise clearance areas through proper planning of the exploration activities; – Route new tracks around established and protected trees, and clumps of vegetation; – Identify rare, endangered, threatened, and protected species; – During toolbox talks and induction, highlight to workers so that the removal of significant plants is avoided; – Where possible rescue and relocate plants of significance with the appropriate permits in place beforehand; and – Promote revegetation of cleared areas upon completion of the exploration activities.	– OHSE Audits and inspections. – Daily	– Site Manager – Exploration Manager – HSE appointed person/environmental manager
	– Increase in invasive species in cleared areas.	– Ensure the potential introduction and spread of alien plants is prevented, and; – Control alien invasive vegetation where observed within the Project footprint and, where practicable, in adjoining areas, and prevent its establishment and spread from areas disturbed by the Project; – Remove weeds and alien species from areas disturbed by the Project as soon as they appear; and – Make workers aware about alien species and weeds.		

Aspect	Potential impacts	Management and mitigation measures	Monitoring requirement	Responsibility
Operational phase (exploration and mining)				
	Residing, nesting and slow-moving organisms can be disturbed, injured, or killed by movement of vehicles and equipment.	- Restrict movements to areas of activities only; - Where possible, use of existing tracks and routes only; - Identify rare, endangered, threatened, and protected species in advance; - Route new tracks around protected species and sensitive areas; - Restrict movements to daytime hours; - Training and raise awareness to sensitize employees and notify them on avoiding some areas; - No driving off designated access routes (into the bush) / off-road driving; and - No animals or birds may be collected, caught, consumed or removed from site.		
	Accidental and uncontrolled fire	- Equipment to be well maintained and serviced regularly and documented proof kept; - Restrict movements of people to areas of activities only; - Train people and raise awareness about veld fires and firefighting and documented proof kept; - No open fire outside designated areas; - Ensure proper cooking facilities at fly camps; - No cigarette butts are discarded but contained and disposed of at an appropriate facility; - Proper fire hazard identification signage to be placed in areas that store flammable material (i.e. hydrocarbons and gas bottles);	- OHSE audits and inspections. - Daily - Pre-start checklists on all machines. - Incident records management	- Site manager - HSE appointed person or Environmental manager

Aspect	Potential impacts	Management and mitigation measures	Monitoring requirement	Responsibility
Operational phase (exploration and mining)				
		- Control and reduce the potential risk of fire by segregating and safe storage of materials; - Avoid potential sources of ignition by prohibiting smoking in and around facilities; and - Firefighting equipment and fire breaks should always be at designated areas and should be maintained regularly.		
	Risk of spillage of hydrocarbons, chemicals or other dangerous goods/material	- Chemical and hydrocarbon spillages from drilling equipment, support fleet and vehicles will be cleaned up timeously in order to prevent contamination; - Should diesel fuel of more than 600 L or petrol more than 200 L be stored on site, a consumer installation certificate shall be obtained from MIME, the Petroleum Affairs Division; - 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; - Drip trays and/or HDPE liner should be used during drilling activities and placed under the rig and support equipment to avoid unwanted spills;	- Daily visual inspections - Pre-start checklists on all machines - Incident records management	- Exploration manager - Site manager

Aspect	Potential impacts	Management and mitigation measures	Monitoring requirement	Responsibility
Operational phase (exploration and mining)				
		– All hydrocarbons and hazardous materials/chemicals used during drilling must be marked, stored in drip trays and MSDS accompany the products onsite; – Spill preventative equipment and materials to be made available at drill sites; and – Maintenance of equipment should be conducted off site or in designated maintenance and laydown areas, and – Equipment to be well maintained and serviced regularly and documented proof kept.		
	– Waste generation and litter	– Implement the waste management hierarchy across site: Avoid, reuse, recycle, then disposal at a licensed facility. No burning or burial of waste on site; – Waste shall be collected and shall be removed on a regular basis to avoid pests and bad odours; – Hazardous and hydrocarbon waste shall be managed in a safe and responsible manner so as to prevent contamination of soils, pollution of water and/or harm to people or animals as a result of the use of these materials; – Drilling water sumps should be barricaded at all times to limit the attraction of wildlife and immediately be closed when the water has dried up and sump is no longer required; – Hazardous and non-hazardous waste shall always stored separately and be appropriately sealed;	– OHSE audits and inspections – Waste management inspections – Safe disposal certificates	– HSE appointed person/Environmental manager

Aspect	Potential impacts	Management and mitigation measures	Monitoring requirement	Responsibility
Operational phase (exploration and mining)				
		– Disposal of hazardous or hydrocarbon waste through a licensed waste contractor at the nearest permitted facility (for example the Walvis Bay hazardous waste site, or the contractor arrangement in place at the Uis Tin Mine); – Any medical or sanitary waste to be incinerated at the closest registered medical incinerator; and – Waste manifests and disposal records from the contractor or facility to be kept on file		
Soil quality	– Soil contamination due to mixing of earth matter, trampling, compaction and pollution due to RAB and RC drilling	– Equipment must be in a good condition to ensure that accidental hazardous or hydrocarbon spills do not occur and contaminate soil; – During drilling oil absorbent matting should be placed under and around the rig; – Limit the possibility of compaction and creating of a hard subsurface; – Limit the possibility of trampling; and – In the event of spills and leaks, polluted soils must be collected and disposed of at an approved site, – Limit the possibility to mix mineral waste with topsoil.	– Pre-start checklists on all machines	– Exploration manager – Site manager – Environmental manager/officer
	– Soil erosion from DD drilling	– Where necessary, install diversions to curb possible erosion; – Restore drainage lines when disturbed; and – Topsoil should be stockpiled separately, and re-spread during rehabilitation.	– OHSE audits and inspections	– Environmental manager/officer

Aspect	Potential impacts	Management and mitigation measures	Monitoring requirement	Responsibility
Operational phase (exploration and mining)				
	- Greater surface disturbance due to larger drill pads and sumps (if used) from DD, RC and RAB	- Design drill pads to minimise footprint and avoid sensitive habitats. - Construct chip containment areas to prevent dispersion by wind or runoff. - Implement regular dust suppression, especially during dry and windy conditions. - Store fuels in bunded areas and refuel away from drainage lines. - Collect and dispose of waste in accordance with approved waste management procedures. - Seal or cap drill holes after completion to prevent contamination pathways.	- OHSE audits and inspections	- Environmental manager/officer
Mining operations and blasting (mining phase)	- Injury and fatality risk, air blast, vibration, fly rock and noise affecting employees and the Nai-Nais dwellings; pit wall and dump instability	- Operate under the Proponent's safety management system meeting the Minerals Act and Labour Act regulations, with a documented blast management plan; - Define and enforce blast exclusion zones, warning signals and clearance procedures that extend to the dwellings within and adjacent to the licence, and notify nearby residents of blast times in advance; - Limit blast vibration and air blast at the nearest dwellings and heritage sites to the limits set by the blast design and the mining phase noise assessment; - Geotechnical design and routine monitoring of pit walls and waste rock dumps;	- Blast records and vibration monitoring at the nearest dwellings - Pit and dump geotechnical inspections - Monthly	- Mine manager - Site manager - HSE appointed person/Environmental manager

Aspect	Potential impacts	Management and mitigation measures	Monitoring requirement	Responsibility
Operational phase (exploration and mining)				
		- Traffic management for heavy mobile equipment and separation of light vehicles and pedestrians from haul routes; and - Emergency response plan and medical capability sized for the mining workforce.		
Waste rock and ore stockpiles (mining phase)	Dust, seepage and sediment runoff from dumps and stockpiles; permanent landform change; loss of soil	- Geochemically characterise waste rock and ore before dump construction and design dumps accordingly; - Strip and stockpile topsoil ahead of disturbance and protect stockpiles from erosion; - Design and place dumps for stability, to screen views from the D1930 and the Nai-Nais dwellings, and outside the 100 m riparian buffer and modelled flood extents; - Separate clean and dirty water with a stormwater management plan and sediment traps below dumps; - Dust suppression on stockpiles, haul roads and at the crusher, and minimise drop heights; and - Progressive rehabilitation and final landform shaping in line with the closure plan.	- Dust fallout monitoring, including a station at R6 - Stormwater and sediment trap inspections after rainfall - Monthly and after rainfall	- Mine manager - HSE appointed person/Environmental manager
Ore haulage and mine traffic (mining phase)	Heavy vehicle traffic, road safety risk, road wear and dust on the D1930 and C35 shared with residents, conservancy users and tourists	- Undertake a mining phase transport assessment and agree the haul route and any road maintenance contribution with the Roads Authority before haulage commences; - Redesign Site Access 2 to meet geometric design standards and install warning signage at both accesses;	- Haulage trip records - Road condition inspections - Monthly	- Mine manager - Site manager

Aspect	Potential impacts	Management and mitigation measures	Monitoring requirement	Responsibility
Operational phase (exploration and mining)				
		– Haulage scheduling, load covering, speed limits and driver management on the public roads; – Dust suppression on the unpaved sections used for haulage; and – Maintain the grievance mechanism for road related complaints.		
Groundwater during mining (mining phase)	– Lowering of groundwater levels around the pit and community boreholes from sustained abstraction and any pit dewatering; contamination from dumps, workshops and effluent	– Comply with the water abstraction licence and report abstraction and water levels to DWA as required by the licence conditions; – Establish a groundwater monitoring network around the pit, dumps and community boreholes, with baseline sampling before mining commences, and monitor levels and quality (pH, EC, TDS, nitrates, sulphates, hydrocarbons, metals); – Obtain the required DWA authorisation before any pit dewatering and reuse dewatering water for dust suppression; – Bunded, impermeable fuel, workshop and wastewater facilities; and – Where monitoring shows an effect on a community borehole, provide an alternative supply in consultation with the affected households.	– Quarterly groundwater level and quality monitoring – Abstraction records	– Mine manager – HSE appointed person/Environmental manager
Community, land use and	– Loss of communal grazing land; disturbance of	– Confirm the location of all dwellings, grazing areas and water points against the mine layout before mining	– Grievance register	– Mine manager – Proponent (community liaison)

Aspect	Potential impacts	Management and mitigation measures	Monitoring requirement	Responsibility
Operational phase (exploration and mining)				
resettlement (mining phase)	households from blasting and continuous activity; potential physical or economic displacement of Nai-Nais dwellings within the mining footprint or exclusion zones	commences and design the pit, dumps and exclusion zones to avoid them wherever possible; - Where avoidance is not possible, prepare a resettlement action plan or livelihood restoration plan in consultation with the affected households, the Dâures Traditional Authority and the Tsiseb Conservancy that meets IFC Performance Standard 5; - Local employment and procurement commitments, with recruitment through the traditional authority and conservancy; - Regular engagement with the Nai-Nais community and the grievance mechanism; and - Closure and social transition planning that addresses the loss of employment and procurement at the end of the life of mine.	- Engagement records - Quarterly	
Cultural heritage during mining (mining phase)	- Damage to the graveyard, the suspected children's graves, the precolonial settlement and the old Tin Tan Mine settlement from open pit mining, blasting and waste rock placement;	- Design the mine layout around the heritage sites with buffers agreed with the heritage specialist and the National Heritage Council; - Limit blast vibration and fly rock at the heritage sites; - Maintain community access to the graveyard; - Where a grave or site cannot be avoided, relocate only under a National Heritage Council permit and with the consent of the families and the Dâures Traditional Authority; and	- Heritage specialist inspection before ground disturbance near the sites - Annual	- Mine manager - HSE appointed person/Environmental manager

Aspect	Potential impacts	Management and mitigation measures	Monitoring requirement	Responsibility
Operational phase (exploration and mining)				
	loss of access to the graveyard	– Apply the chance find procedure (Appendix A) to all ground disturbance.		
Mine closure planning (mining phase)	– Unrehabilitated pit, dumps and infrastructure at the end of the life of mine; unfunded closure	– Prepare a mine closure plan under the Minerals Act before mining commences, covering final landforms, the open pit, dumps, infrastructure removal, water management and post closure monitoring; – Make financial provision for closure and rehabilitation; – Rehabilitate progressively so that the closure liability does not accumulate; and – Update the closure plan with the ESMP at each review.	– Closure plan and financial provision reviewed annually	– Proponent – Mine manager

5.3 REHABILITATION PHASE

The rehabilitation phase will focus on restoring areas disturbed by the Project to a condition as close as reasonably practicable to their original state. For exploration this will include backfilling drill sumps and the trenches created by the Project where practicable, or otherwise demarcating them with safety signage (historical trenches from previous operations that the Proponent has not disturbed are excluded), removing waste and temporary infrastructure, levelling disturbed ground, and stabilising soils to prevent erosion. Where necessary, cleared areas shall be re-vegetated using locally appropriate species to promote natural recovery. Rehabilitation will be carried out progressively throughout the project and monitored to ensure that the landscape, biodiversity, and water resources are protected and that no long-term environmental impacts remain.

For the mining phase, rehabilitation and closure of the open pit, waste rock dumps, stockpile areas, haul roads and infrastructure will be undertaken progressively and at closure in accordance with the mine closure plan prepared under the Minerals Act, with financial provision made for closure. Existing mine dumps, pits and other disturbances associated with previous operations that are not utilised, disturbed or otherwise affected by the proposed Project are excluded from the Proponent's rehabilitation and closure obligations. Final landforms will be shaped to be safe and stable, to blend with the surrounding terrain and to manage stormwater, and post closure monitoring of groundwater, dump stability and vegetation recovery will continue for the period set in the closure plan.

Table 4 shows the specific environmental management measures and monitoring required for implementation during the rehabilitation phase.

Table 4 - Environmental and social aspects, impacts, mitigation and monitoring measures for rehabilitation

Aspect	Potential impacts	Management and mitigation measures	Monitoring requirement	Responsibility
Rehabilitation phase				
Access and site activities (drilling)	- Misinformation to nearby communities - Disturbance to the natural environment	- Remove all signage at the end of the exploration programme unless requested by landowners or authorities to remain in place for safety; - Only designated access routes are to be used and speed limits should be adhered to; - The drilling contractor is to ensure final rehabilitation of all drill sites once drilling has stopped at each hole or at the end of the drilling programme, as per contractual agreements; - All materials and equipment are to be removed before rehabilitation is completed; and - The drill pad must represent the natural environment as best as possible to what it was before the disturbance commenced.	- Once exploration has ceased	- Site Manager/supervisor
Occupational health and safety	- Potential open drillholes, trenches and uneven landscape could pose a risk to employees	- Seal/cap all drillholes with appropriate materials; - Remove hazardous objects (pipes, wiring, scrap metal); - Ensure stable ground conditions and smooth surface after backfilling; - Require the use of appropriate PPE such as safety boots, helmets, gloves, eye protection, reflective vests, and hearing protection; - Fire extinguishers and first aid kits shall be accessible;	- Daily - Weekly	- Exploration manager - Site manager/supervisor - Contractors - Subcontractors

Aspect	Potential impacts	Management and mitigation measures	Monitoring requirement	Responsibility
Rehabilitation phase				
		– Maintain clear evacuation routes and safety signage for as long as rehabilitation work is under way, and remove them on completion; and – Maintain records of all injury statistics, track corrective actions and record lessons learnt to improve safety practices on-site.		
Visual	– Visual scars and disturbed landscape	– Maintain good housekeeping; – Restrict speed of Project vehicles to 40 km/h on operational roads under the Proponent's control; – Remove temporary structures and waste materials immediately after completion of exploration; – Re-shape the landscape to naturally blend with the surrounding terrain; and – Encourage natural vegetation cover to recover visual uniformity.	– Daily observations	– Exploration Manager – Site Manager/supervisor
Waste management	– Solid waste pollution due to abandoned material	– Implement a site clean-up checklist after exploration; – Remove all waste and transport it to approved disposal sites; – Waste manifests and disposal records from the licensed waste contractor or receiving facility should be kept on file.	– OHSE Audits and inspections; – Safe disposal certificates	– HSE appointed person/environmental manager
Surface water	– Runoff from disturbed soils causing	– Install erosion-control measures during and after rehabilitation; – Ensure no hydrocarbons or chemical residues remain on site; and	– OHSE Audits and inspections;	– HSE appointed person/environmental manager

Aspect	Potential impacts	Management and mitigation measures	Monitoring requirement	Responsibility
Rehabilitation phase				
	sedimentation in nearby water bodies	– Monitor runoff areas during rainy seasons.		
Terrestrial environment and ecology	– Delayed natural regeneration and/or invasion by alien species	– Re-seed or plant indigenous species where natural regeneration is insufficient; – Maintain vegetation buffers around rehabilitated areas; and – Conduct periodic monitoring and remove invasive species promptly.	– OHSE Audits and inspections. – Daily	– Site Manager – Exploration Manager – HSE appointed person/environmental manager
	– Habitat not fully restored, affecting species movement or recovery.	– Restore microhabitats where possible; – Limit vehicle access to rehabilitated areas; and – Inspect rehabilitated areas after each of the first two rainy seasons following rehabilitation, recording vegetation recovery, erosion and alien species with fixed point photographs, and report the results in the bi-annual report to MEFT; for mining phase rehabilitation, monitor for the period set in the closure plan.		
Soil	– Loose or exposed soils prone to erosion by wind and water	– Backfill all pits and trenches and compact soil appropriately; – Re-establish land profile to match natural contours; – Apply erosion control measures (e.g., brush packing, contour berms); and – Conduct post rehabilitation inspections after heavy rainfall.	– Daily – Weekly – Monthly	– Contractors – Subcontractors
Mine closure (mining phase)	– Unsafe or unstable pit and dumps; erosion and sediment runoff; contaminated soils	– Implement the mine closure plan: make the pit safe (bundling, fencing or backfilling as the plan provides), shape and cover dumps for stability and erosion control, remove infrastructure and remediate contaminated soils;	– Closure plan inspections – Post closure	– Proponent – Mine manager – HSE appointed person/environmental manager

Aspect	Potential impacts	Management and mitigation measures	Monitoring requirement	Responsibility
Rehabilitation phase				
	and groundwater; visual scarring; unrehabilitated infrastructure	– Re-establish drainage and stormwater controls on the final landform; – Re-seed or plant indigenous species where natural regeneration is insufficient; and – Continue groundwater, dump stability and vegetation monitoring for the post closure period set in the closure plan.	monitoring programme	

6 IMPLEMENTATION OF THE ESMP

This environmental 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 August 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 any purpose other than an ESMP.
- E. Must not be copied without the prior written permission of ECC.

APPENDIX A - ARCHAEOLOGICAL AND HERITAGE CHANCE FINDS PROCEDURE

Responsibility

Operator - must exercise due caution if archaeological remains are found

Site supervisor - must secure site and advise management timeously

Site manager - must determine safe working boundary and request inspection

Archaeologist - must inspect, identify, advise management, and recover remains

Procedure

Action by person identifying archaeological or heritage material

- a) If operating machinery or equipment, - stop work
- b) Demarcate the site with flag tape
- c) Determine GPS position if possible
- d) Report findings to the site supervisor

Action by the site supervisor

- a) Report findings, site location and actions taken to the site manager
- b) Cease any works in immediate vicinity

Action by the site manager

- a) Visit site and determine whether work can proceed without damage to findings
- b) Determine and mark exclusion boundary
- c) Site location and details to be added to project GIS for field confirmation by archaeologist

Action by archaeologist

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

In the event of discovering human remains

- a) Actions as above
- b) Field inspection by archaeologist to confirm that remains are human
- c) Advise and liaise with NHC and Police
- d) Recovery of remains and removal to National Museum or National Forensic Laboratory, as directed.