

2023

**Environmental Management Plan (EMP) for
Mining Exploration activities for EPL 8413-
FINAL DRAFT**

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1 ENVIRONMENTAL MANAGEMENT PLAN

1.1 Overview

An Environmental Management Plan (EMP) is a guidance document to measure and achieve compliance with the environmental protection and mitigation requirements of a project, which are typically requirements for project permits/approvals (Keystone Environmental, 2022).

The environmental management plan (EMP) is a tool that can ensure sustainable mineral exploration because it contains measures aimed at protecting, rehabilitating, and restoring the environment to its productive state before, during, and after exploration. It is a risk strategy that includes a logical framework, monitoring programmes, mitigation measures, and management control. The goal of an Environmental Management Plan (EMP) is to create procedures for implementing project mitigation measures and monitoring requirements. It is regarded as a risk strategy that includes a logical framework and management control strategies to reduce potential environmental impacts to a significant level. The EMP assures the community that the project's environmental management is adequate. As well as defining the roles and responsibilities of those involved in the project.

Unicar and Parts Trading (Pty) Ltd is committed to the principle of sustainable development and recognises the benefits of integrating economic, social, and environmental considerations in its business planning and practice. Unicar and Parts Trading (Pty) Ltd believes that exploration activities can be completed in a manner that is compatible with existing land uses, can be rehabilitated and will facilitate information for decision-making on the future development of mineral potential.

All personnel employed by Unicar and Parts Trading (Pty) Ltd either directly or as agents, consultants or contractors are required to comply with Unicar and Parts' policies and procedures to support its reputation as a trusted and responsible corporate citizen. Unicar and Parts Trading (Pty) Ltd Environmental Management Plan (EMP) (this document) underpins an Environmental Policy mandated by the Directors of Unicar and Parts Trading (Pty) Ltd. The Policy requires that Unicar and Parts Trading (Pty) Ltd :

- Comply with all applicable environmental laws, regulations standards and company policies as a minimum, and strive for the highest standard of environmental performance.
- Use risk management processes to identify and control environmental risks.
- Continually improve environmental performance through the implementation of effective systems and use of technology.
- Ensure that employees are accountable for their role in environmental performance.
- Provide appropriate training and resources to achieve environmental performance goals.
- Ensure that controls are in place to meet all environmental standards.
- Regularly monitor and audit environmental performance; and

- Implement programs to conserve natural resources, prevent pollution and minimise waste.

This EMP is the primary environmental management document for all planned ground disturbance activities.

Unicar and Parts Trading (Pty) Ltd exploration programmes may involve geological mapping, geophysical surveys, geochemical sampling, auger drilling, exploration drilling and well drilling. These activities require safe access and working areas –potentially clearing vegetation for access tracks and constructing drill pads and sumps. Unicar and Parts Trading (Pty) Ltd accepts the rehabilitation of these disturbance areas as part of its everyday activities, endeavouring to minimise its long-term footprint on the environment.

To assist in the management of exploration activities by Unicar and Parts Trading (Pty) Ltd personnel, the environmental management actions described in this EMP are organised by the particular activity to which they apply. The environmental management actions have been prepared to be generally applicable and to be used as and when required, but also keeping in mind that not all actions identified will necessarily apply to all sites.

Where a particular environmental factor is highly significant, an environmental risk assessment will be completed and, if required, further controls identified. Unicar and Parts Trading (Pty) Ltd has a procedure in place for the identification, management, and reporting of environmental incidents. All incidents will be managed according to this procedure.

An Annual Environmental Report (AER) will be prepared and submitted to the MEFT, Department of Environmental Affairs (DEA) for all Unicar and Parts Trading (Pty) Ltd to document all ground disturbance and rehabilitation. Unicar and Parts Trading (Pty) Ltd will also prepare and submit a Rehabilitation Report upon the completion of projects.

1.2 Impacts on the bio-physical environment

Table 1. Possible effects on the bio-physical environment, mitigation measures, and their monitoring methods.

Impacts	Mitigation Measures	Monitoring Methods
Impacts on Archaeological Sites	<ul style="list-style-type: none"> • All archaeological sites are to be identified and protected before any exploration commences. • Buffer zones will be created around the sites. • Adhere to the practical guidelines provided by an archaeologist to reduce the archaeological impact of mineral exploration activities. • Notice boards will be placed on sites. • Employees will be given training regarding the protection of all archaeological sites. 	Register of all archaeological sites identified.
Fauna	<ul style="list-style-type: none"> • A fauna survey will be conducted to determine the effect of fragmented habitat on game species should the need arise. • Some habitat areas such as trees and outcrops will be avoided wherever possible. • No animals shall be killed, captured, or harmed in any way. • No foodstuff shall be left lying around as these will attract animals which might result in human-animal conflict. • No animal shall be fed. This allows animals to lose their natural fear of humans, which may result in dangerous encounters. • Care will be taken to ensure that no litter is lying around as these may end up being ingested by wild animals. • Shallow surveying holes shall be backfilled on completion. • All holes shall be constructed and/or sealed to prevent the collapse of the surrounding surface. • Drill holes shall be sealed, surveyed, and marked. 	Regular monitoring of any unusual signs of animal habitat.

Vegetation	<ul style="list-style-type: none"> • Environmental considerations will always be adhered to before clearing roads, trenching, and excavating. • Paths and roads will be aligned to avoid root zones. • Permeable materials will be used wherever possible. • The movement of vehicles will be restricted to certain tracks only. • Areas with species of concern will be avoided. • The Ministry of Environment, Forestry and Tourism will be informed of any protected species which will be relocated in consultation with MEFT. • Ensure that, unless otherwise specified, all areas disturbed as a result of exploration activities are revegetated and rehabilitated, ultimately providing a stable landform similar to surrounding undisturbed areas that supports suitable local native flora and vegetation species. 	Regular monitoring of any unusual signs of animal habitat.
Socio-Economic	<ul style="list-style-type: none"> • The perception of risks will be mitigated by putting up safety signs wherever possible and ensuring that all employees and visitors to the site undergo a safety induction course. • Population change can be mitigated by employing people from the local community and encouraging the contractors to employ local people. 	Public meetings will be held by the proponent whenever required.
Visual Impacts	Environmental considerations will be always adhered to before clearing roads, trenching, and excavating.	Employees will be trained on the importance of minimizing visual impacts.
Generation of Solid Waste	Commit to the management of the solid waste life cycle by all the employees and contractors on the site.	Transportation of solid waste to a registered site for disposal.
Noise and dust emissions	<ul style="list-style-type: none"> • Disturbance to fauna that roam the area will be minimized by training employees on ways to minimize noise. • Where applicable all drill rigs to be used on-site shall be fitted with appropriate dust and noise suppression equipment (e.g., water sprays and mufflers). Equipment shall be maintained in good working order. 	Restriction duration of noise pollution.

	<ul style="list-style-type: none"> • Pre-start inspections of equipment shall include inspections of noise and dust controls to ensure they are operational. • Drill-hole sites shall be located far enough from any residence to be within noise emission limits. • All staff must be made aware of the health risks and obliged to wear dust masks. • All staff on site should be equipped with dosimeters that measure exposure level to radiation. 	
<p>Hydrocarbon contamination of soil or water</p>	<ul style="list-style-type: none"> • Chemicals, hydrocarbons, and containers shall be stored where they or their contents cannot enter or contaminate surface water or groundwater systems, interfere with native flora or fauna, or come into contact with livestock. • All chemicals, fuels and oils shall be appropriately stored with self-bunded, and double-skinned containers used where practicable. • Any drilling additives used shall be non-toxic and biodegradable. • Spill kits shall be available for hydrocarbon and chemical spillages. They shall be regularly checked and maintained. • All vehicles, earthmoving and drilling equipment shall be inspected to check that they do not leak oil, fuel, or other fluids, before entering the site. • Contaminated material shall be disposed of at an approved waste disposal site. • A supply of appropriate spill and dust prevention and oil-absorbent materials shall be maintained at all drill sites. • All spills of dry or wet chemicals or hydrocarbons shall be cleaned up. • On completion of exploration activities, all chemicals, and hydrocarbons (including their containers) must be removed from the site for disposal at an approved waste disposal facility. 	<p>Environmental incidents shall be reported using the Unicar and Parts Incident Reporting form.</p>

Table 2. Shows the summary of the Environmental Management Plan during the phases of the project.

CONSTRUCTION PHASE			
Environmental Impacts	Environmental Management Actions	Responsibility	Monitoring Plan
Solid Waste	<ul style="list-style-type: none"> ➤ If trenches are dug, waste should be reused or backfilled. ➤ The site should have waste containers with bulk storage facilities at convenient points to prevent littering during the exploration. ➤ A waste collector company should collect any remains 	Management	Presence of well-maintained containers And central collection point.
Oil leaks and spill	<ul style="list-style-type: none"> ➤ Vehicles and equipment should be well maintained to prevent oil leaks. ➤ The contractor should have a designated area where maintenance is going to be carried out and that is protected from rainwater. 	Proponent	Absence of oil spills and leaks onsite
Visual	<ul style="list-style-type: none"> ➤ Environmental considerations will be always adhered to before clearing roads, trenching, and excavating 	Management	Employees are to be trained on how to minimize visual impacts.
Archaeological Sites	<ul style="list-style-type: none"> ➤ All archaeological sites are to be identified and protected before further exploration commences. ➤ Adhere to practical guidelines provided by an archaeologist to reduce the archaeological impact of mineral exploration activities. 	Management	Register of all archaeological sites identified.
Air Pollution	<ul style="list-style-type: none"> ➤ Maintenance of vehicles and equipment. ➤ Prohibit the idling of vehicles. ➤ Control speed and operation of construction vehicles. ➤ Workers should be provided with dust masks if working in sensitive areas/ or dusty areas. 	Site Manager	Control the amount of dust produced.
Noise Pollution	<ul style="list-style-type: none"> ➤ Fieldwork should only be carried out during the daytime at a specific time. 	Proponent & Management	Control the amount of noise produced

	<ul style="list-style-type: none"> ➤ Workers should wear earmuffs if working in noisy sections. ➤ Management to ensure that noise is kept within reasonable levels. 		
Soil Pollution	<ul style="list-style-type: none"> ➤ Clearly mark/demarcate vehicle routes. ➤ No workers should ever drive off-road but stick to the demarcated vehicle routes. 	Project Coordinator, Management and Park Warden	Proper planning and management
Flora	<ul style="list-style-type: none"> ➤ Care should be taken to avoid/minimize destruction of endemic and Red Data Species. ➤ A geologist should be consulted for the viability of moving the trench to avoid the destruction of fragile species. ➤ 	Management and Proponent	Warning signs should be on site and restored vegetation
Fauna	<ul style="list-style-type: none"> ➤ A fauna survey will be conducted to determine the effect of fragmented habitat on game species should the need arise. ➤ Some habitat areas such as trees of the riverbeds and tunnels outcrops will be avoided wherever possible. ➤ No animals shall be killed, captured, or harmed in any way. ➤ No food will be left lying around as these will attract animals which will result in human-animal conflict. 	Management	Regular monitoring of any unusual signs of animal habitat
Occupational Health and Safety	<ul style="list-style-type: none"> ➤ Provide Personal Protective Equipment (PPE) to train workers on personal safety and how to handle equipment and machines. ➤ A well-stocked first aid kit shall be maintained by qualified personnel. ➤ Provide sufficient and suitable sanitary conveniences which should be kept clean. 	Proponent	<ul style="list-style-type: none"> ➤ Workers using protective equipment. ➤ Presence of well well-stocked first aid kit. ➤ Clean sanitary facilities.

OPERATION PHASE

Oil leak and spills	<ul style="list-style-type: none"> ➤ Impervious PVC sheets should be deployed as flooring and covered with sand to absorb spillages. ➤ Should spillages occur, contaminated sand needs to be removed and stored in a drum, to be later removed to an approved disposal site. 	Proponent	No oil spills or leaks on the site.
Solid Waste	<ul style="list-style-type: none"> ➤ Under no condition should any waste be buried or burned on site. ➤ Minimize solid waste generated on-site. ➤ Waste to be deposited at a demarcated waste site in the park or if it needs to be removed to designated sites outside the park 	Proponent & Management	The presence of well-maintained containers and a central collection point
Visual Pollution	<ul style="list-style-type: none"> ➤ Environmental considerations will be always adhered to before clearing roads, trenching, and excavating. ➤ Sitting of roads should avoid the navigating of tops of ridges and always use existing roads rather than creating new ones. ➤ Erected infrastructure should be sited in depressions not on hilltops or rises and should not be visible from any major tourist road lookout points. 	Management	Employees will be trained on the importance of minimizing visual impacts
Archaeological Sites	<ul style="list-style-type: none"> ➤ Adhere to practical guidelines provided by an archaeologist to reduce the archaeological impact of mineral exploration activities. ➤ Should any item of interest be located, all activities need to cease immediately at the location and notify the National Archaeological Council. 	Management	Update Register of all archaeological sites identified

Noise Pollution	<ul style="list-style-type: none"> ➤ Workers are to wear earmuffs whenever working in a noisy area/section. ➤ Management to ensure that noise is kept within reasonable levels. 	Management & Proponent	Control the amount of noise
Soil Pollution	<ul style="list-style-type: none"> ➤ The topsoil needs to be removed and stockpiled. ➤ Stockpiled soil must be covered to prevent it from being windblown away within three (3) months. ➤ All hydro-carbon products need to be stored in a banded area, to avoid any accidental spillages. 	Management, Project Coordinator	Proper Planning and Management
Flora	<ul style="list-style-type: none"> ➤ Care should be taken to minimize/avoid destruction of endemic and Red Data Species. ➤ A geologist should be consulted concerning the viability of moving the trench to avoid destruction of fragile species. 	Management and Contractor	Warning signs on site and restored vegetation
Fauna	<ul style="list-style-type: none"> ➤ Strict employee code of conduct including prohibition of hunting trapping or interfering in any manner with any wild animals. ➤ No feeding of wild animals should be allowed. ➤ Litter should be prevented and adequately disposed of to prevent attracting scavenging wild animals. 	Management	Provide sanitary facilities
Environmental Health and Safety	<ul style="list-style-type: none"> ➤ Train workers on personal safety and disaster preparedness. ➤ A well-stocked first aid kit shall be maintained by qualified personnel. ➤ Report any accidents/incidences and treat and compensate affected workers. ➤ Conduct Annual Health and Safety Audits. 	Management	Provide sanitary facilities.

	<ul style="list-style-type: none"> ➤ Provide sufficient and suitable sanitary conveniences which should be kept clean. 		
Fire Preparedness	<ul style="list-style-type: none"> ➤ Ensure all firefighting equipment is regularly maintained, serviced, and inspected. ➤ Firefighting emergency response plan. ➤ Fire hazard signs and directions to emergency exits, route to follow, and assembly point in case of any fire incidence. 	Management	<ul style="list-style-type: none"> ➤ Proof of inspection on firefighting equipment. ➤ Fire Signs are put up in strategic places. ➤ Availability of firefighting equipment.

DECOMMISSIONING PHASE

Environmental/Social Impact Disturbed Physical environment, Solid waste, Safety, and health	<ul style="list-style-type: none"> ➤ Undertake a complete environmental restoration program and introduce appropriate vegetation. ➤ The site should be rehabilitated to as close as possible to its original condition. ➤ Remove all sample bags, plastic waste, survey pegs, etc. from the site after the drill schedule. ➤ Make sure there is no contaminated soil on the drill site before rehabilitation. ➤ Where drilling was done on a slope, some earthworks might be necessary to stabilize the area. ➤ Make sure all drill holes are properly plugged. ➤ Spread stockpiled topsoil back over the entire drill site. ➤ The compacted ground on a drill site should be loosened to facilitate the regrowth of topsoil vegetation. 	Proponent & Management	<p>Amount of waste on-site. Absence of contaminated soils. Absence of unplugged holes</p>
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2 MONITORING, CORRECTION ACTIONS, AUDITING AND REPORTING

2.1 Monitoring

Monitoring checklists will be developed for the pre-exploration, operational and post-exploration phases of a project. These checklists may have to be amended to include project-specific controls after Unicar and Parts completes the planning and stakeholder engagement phase of any proposed project. These checklists are also designed to support on-site compliance with this EMP and to act as an auditable record of performance for the proposed project.

The requirements for the completion of the monitoring checklists are as follows:

- ❖ Pre-exploration checklist to be completed by the Field Supervisor and the Exploration Manager before the commencement of exploration activities.
- ❖ Operational control checklists to be completed by the Field Supervisor during the operation at each drill site, and by the Exploration Manager; and
- ❖ Post-exploration decommissioning and remediation to be completed by the Exploration Manager, following the completion of drilling and rehabilitation activities.

- **Internal compliance monitoring will be implemented in the following manner:**

- A. All contractors will be subjected to project kick-off and close-out audits. This applies to all phases of the process, including drilling contract work:
 - Before a contractor begins work, the applicable phase site manager will perform an audit to confirm that the EMP commitments are reflected in the contractor's standard operating procedures (SOPs) and method statements.
 - After a contractor's work is completed, the applicable phase site manager will conduct a final close-out audit of the contractor's performance against the EMP commitments.
- B. During the construction/initial and decommissioning phases, monthly internal EMP performance audits will be conducted.

2.2 Collective Actions

Corrective actions will be determined by the specifics of the noncompliance or issue that needs to be addressed. Unicar and Parts' incident reporting and investigation processes will be used to aid in the identification and management of corrective actions where appropriate.

Table 3 typically describes general exploration incidents and their corresponding corrective actions.

Where the issue relates to legal compliance, suitable processes will be followed to inform the responsible regulatory authority and determine any relevant corrective actions. Where the item requiring corrective action is relevant to a farmer landowner or other affected parties, they will be consulted about the corrective actions before implementation.

The Unicar and Parts incident reporting process is managed to ensure that corrective actions are identified and implemented as part of the company's continuous improvement process.

The responsibility for corrective actions will rest with the Field Supervisor and the Exploration Manager.

Table 3. General Exploration Incident Types and Corrective Actions

Incident	Corrective actions
Fire	Review ignition sources and amend procedures or equipment
Creation of erosion risk	Rehabilitate the area to minimise the risk of further erosion
Direct impact on surface water and/or groundwater	Assess source and amend procedures; and Assess impacts and monitor
Direct impact on fauna	Report and review procedures
Vegetation clearing	Review data and procedures; and Rehabilitate
Hydrocarbon contamination of soil or water	Assess source and amend procedures; and Assess impacts and monitor, or remove contaminated materials to appropriately licenced landfill
Noise & dust emissions	Review equipment and procedures
Impacts on amenity	Review context and procedures; and Rehabilitate or make acceptable
Management process	Review and amend the system

2.3 Reporting and Review

Incidents and complaints relating to the exploration program will be managed by Unicar and Parts standards for Environmental Incident Reporting.

An annual Environmental Report (AER) will be compiled by the Environmental Officer yearly. The AER will document all ground disturbances and rehabilitation on the project and provide a summary of any incidents or non-compliances for the site and reporting period. The AER will be submitted to the Ministry of Environment, Forestry and Tourism (MEFT), Environmental Affairs Department.

The objectives of the AER are to:

- ❖ Concisely document the major mining activities for the reporting year.
- ❖ Concisely document environmental management and rehabilitation activities for the reporting year and proposed activities and developments in the following year.

- ❖ Conduct an environmental analysis of the project.
- ❖ Assist Unicars and Parts in monitoring and reporting on environmental compliance and performance.
- ❖ Prepare for future mine closure by reviewing the status of rehabilitation and mine closure planning on an annual basis; and
- ❖ Provide basic information to DEA about the extent of mining operations in the State and the standard of environmental management and mine closure planning being achieved.

Discussions with regulatory bodies or other key stakeholders during the planning phase of a project may lead to additional reporting requirements. Unicars and Parts will adhere to any requirements agreed to during these discussions.

2.4 Inspecting and Audits

Performance against the EMP commitments will need to be reviewed throughout the project's life cycle, with corrective action implemented as needed, to guarantee both the internal EMP and any Enviro-legal obligations. This will include conducting both the internal inspections/audits and external audits, documentation, reporting, establishing an environmental management system, adhering to the drafted environment policy, maintaining the impact aspect register, drafting procedures and method statements by the relevant responsible mineral exploration staff and contractors, determining the relevant roles and responsibilities and others.

2.5 Roles and responsibilities for environmental management

2.5.1 Communication between Parties

Emphasis will be put towards open communication between all parties, to reach a proactive approach towards potential environmental issues deriving from the project. This approach should guarantee that environmental impacts are anticipated and prevented, or minimized, rather than adopting a negative "policing" approach to offer negative impacts have already occurred. The importance of a proactive approach cannot be overemphasized, particularly in relation to preventing unnecessary tracks, and damage to vegetation (i.e. protected and endemic species as these impacts cannot easily be remedied).

2.5.2 The Operating Company

The company is ultimately responsible for all stages of the project and the impacts resulting from those activities. The responsible persons will be the company's Environmental Control Officer (ECO) and Managing Director to ensure that:

- ❖ The EMP and its environmental specifications are included in contractual documents and it is required that contractors, and subcontractors, consultants meet the EMP requirements.

- ❖ The company and all its subcontractors, consultants etc. comply with all Namibian legislation and policies and any relevant International Conventions;
- ❖ Compliance with the environmental specifications is enforced on a day-to-day basis;
- ❖ Environmental audits are conducted periodically by a suitably qualified ECO to confirm that the environmental requirements are properly understood and effectively implemented.
- ❖ Sufficient budget is provided to implement those measures that have cost implications;
- ❖ The site manager must commission tree surveys well in advance of planned road construction or drill pad preparation so that the necessary site visits by forestry personnel and forestry permits are acquired.
- ❖ Open effective communication between all parties concerning environmental management on the project.

2.5.3 Site Managers

Day-to-day responsibility for environmental management will be assigned to the ECO and Manager Field Operations site manager for the duration of all operational activities to:

- ❖ Be familiar with the contents of the EMP and applicable sections of the EIA and the measures recommended therein;
- ❖ Monitor compliance with the environmental specifications daily and enforce the environmental compliance on-site by communicating the CO's directions to all personnel involved;
- ❖ In the event of any infringements leading to environmental damage, personnel need to consult with the ECO and seek advice on any remedial measures to limit or rectify the damage;
- ❖ Maintain a record (photographic and written) of "before-and-after" conditions on site;
- ❖ Facilitate communication between all role players in the interest of effective environmental management.

2.5.4 Environmental Control Officer (ECO)

Unicars and Parts must appoint a suitably qualified ECO who is responsible to:

- ❖ Undertake environmental audits of overall compliance with the environmental specifications. This should be done at least bi-annually for the warehouse.
- ❖ Submit a site inspection report to the Managing Director and MFO;
- ❖ Advise the MFO on the interpretation and implementation of the environmental specifications as required; and,
- ❖ Make recommendations for remedial action in cases of non-compliance with the environmental specifications.

2.6 Environmental Management System Framework

The proponent and its contractors will create and implement an Environmental Management System (EMS) to apply Environmental Management Practices. The structure for compiling a

project EMS is established in this section. All environmental management paperwork will be kept in a paper and/or electronic system by the applicable exploration manager. These will be classified into the following groups:

2.6.1 Policy and Performance Standards

The EMP includes a draft environmental policy as well as accompanying objectives, targets, and pledges. These can be adjusted by the mineral explorer as needed.

2.6.2 Enviro-Legal Documentation

The proponent will always have a copy of the approved environmental assessment and EMP documents. The exploration team will also save copies of the Environment Clearance Certificate and all other related authorizations and licenses. In addition, a record of the project's applicable laws and regulations will be maintained and updated as needed.

2.6.3 Impact Aspect Register

The Aspect-Impact Register with the Project Activity is based on this Draft EMP, which specifies the foreseeable project features and related possible effects of the proposed project.

It should be noted, however, that more project aspects and related effects may occur during the project's life cycle and will need to be recorded in the Aspect-Impact Register. The impact identification principles outlined in the scoping study can be utilized to update the Register in this regard. During the project's life cycle, the applicable exploration manager can make changes to this approach as needed.

2.6.4 Procedures and Method Statements

Procedures and method statements will be drafted by the relevant accountable mineral exploration employees and Contractors to influence the promises included within the EMP. These may include, but are not limited to:

- Standard operating procedures for the implementation of the environmental action plan and management program.
- Procedures for dealing with incidents and emergencies.
- Procedures for auditing, monitoring, and reporting, as well as
- EMP compliance method statements for ad hoc actions not explicitly covered in the EMP action plans.

2.6.5 Register of Roles and Responsibilities

Relevant roles and duties will be identified during project planning and risk assessments. All environmental commitment duties and obligations must be documented in a register. The register must include pertinent contact information and be updated as needed.

2.6.6 Site Map

It is essential to keep an up-to-date map of the exploration site that shows all project activities.

The following detail, in addition to the project layout, must be depicted:

- Material handling and storage
- Waste management (collection, storage, and transfer, among other things);
- Areas with a high level of sensitivity;
- The location of the incident and emergency equipment; and the location of the accountable parties.

2.6.7 Environmental Management Schedule

The applicable phase site managers and/or relevant Contractors must keep a schedule of environmental control actions. The exploration manager is responsible for keeping a master schedule of all such activities up to date. Environmental risk assessments, environmental management meetings, and other scheduled environmental actions include, but are not limited to:

- Handling, managing, and rehabilitating soils
- Waste removal
- Inspection and repair of the incident and emergency response equipment
- Environmental Education
- Participation of stakeholders; environmental inspections; and
- Auditing, monitoring, and reporting are all part of the auditing, monitoring, and reporting process.

2.6.8 Change Management

The EMS must have a change management procedure in place. In this regard, environmental documentation, procedures and method statements, action plans, and other related documents will be updated and revised as needed to account for the following scenarios:

Changes in standard operating procedures (SOPs), scope changes, ad hoc activities, project phase changes, and duties or roles changes

2.7 Closure Plan

The proposed project's closing plan is to develop a secure, stable, and non-polluting post-prospecting landscape that may support integrated, self-sustaining, and value-generating activities, leaving a positive legacy in the process. The closure plan's goals are to:

Prioritizing the creation of a functional post-prospecting environment that allows for self-sustaining agricultural operations whenever possible.

To promote the restoration of terrestrial and aquatic wetland biodiversity, when appropriate.

2.7.1 Alternatives Considered

Because this is an exploration project, the proposed project is not complicated, and the hazards associated with prospecting are well understood and may be mitigated once the project is

completed. There are few alternatives for closure. There are just two activity possibilities for the closure plan that have been considered:

- ***First alternative:***

Closure or backfill of boreholes with overburden removed during drilling (best option).

- ***Second alternative:***

Leaving boreholes open to allow for groundwater recharge from surface run-off.

- ***Preferred Alternative: Rehabilitation/ Backfill of boreholes***

The restoration of a disturbed environment that has deteriorated as a result of operations such as mining, road construction, or waste disposal to a land use similar to that which existed before the activity began is known as rehabilitation. This involves aesthetic concerns so that a disturbed region does not stand out from the surrounding surroundings. Backfilling boreholes with overburden removed during development and covering them with growth medium to produce vegetation is the preferred technique for preserving physical, chemical, and biological ecosystem functions in degraded environments. This option provides many benefits, which are listed below:

Benefits:

- ❖ The site will be pleasing to the eye
- ❖ The location will blend in with the surroundings
- ❖ The site will be a suitable habitat for fauna and flora again
- ❖ The site will be safe and pollution-free

Option 1, which is to leave boreholes unbacked filled, carries the risk of these boreholes filling with water, which could attract wildlife and communities, resulting in drowning and the possibility of getting trapped in the declines. Backfilling is required to reduce these dangers.

2.7.2 Closure Assumptions

This closure plan was created using the minimal information available, including environmental data. During the operational phase, some of the already accessible data may need to be enhanced. To construct the suggested closure actions, numerous assumptions were made about general conditions, as well as the closure and rehabilitation of the site's facilities.

These assumptions will be examined and amended as more information becomes available during operations.

The following are some of the assumptions that were utilized to create this plan:

- ❖ Once the last intended weight of minerals has been removed from the site for laboratory testing, the closing period will begin.
- ❖ The recommended prospecting sites will be followed to the letter to minimize potential consequences.

- ❖ Vegetation will be established in accordance with the native vegetation of the project area.
- ❖ Water management infrastructure constructed during the operational period will be kept for closure/end of project life if needed.
- ❖ There are few chances to build infrastructure on site, and any infrastructure that is created will be of minimal utility to the community. As a result, all structures will be demolished.
- ❖ All hazardous and household garbage will be carried offsite to licensed landfills for disposal.
- ❖ Existing roads will be utilized to the greatest extent practicable. Where access tracks have been built in the absence of roads, they will be restored and closed as part of the standard closure process.

2.7.3 Closure and Rehabilitation Activities

The remediation procedures that will be conducted when the projected prospecting activities reach the end of their life cycle are explained below:

- ***Infrastructure***

All infrastructure will be decommissioned, and the footprints will be repaired so that vegetation can grow. To minimize any surplus materials at closure, material inventories will be maintained at the end of prospecting activities. Equipment and materials of value that aren't needed for post-closure operations will be sold or removed from the site as much as possible. Scrap and salvageable equipment will be removed from the site and sold to recyclers

Following the completion of demolition activities, a soil contamination investigation will be carried out. The goal is to identify potentially contaminated locations and then create and implement appropriate remediation methods to ensure that soil contaminants are removed. The following actions will be taken to bring the situation to a close:

- Prior to undertaking any decommissioning work, all power and water services will be disconnected and certified as safe
- All remaining inert equipment and decommissioning waste will be disposed of at the nearest licensed general waste disposal facility
- Salvageable equipment will be removed and transported offsite prior to and during decommissioning
- All tanks, pipes, and sumps containing hydrocarbons will be flushed or emptied before removal to ensure no hydrocarbon/c is present

- ***Boreholes***

Boreholes will be backfilled with overburden stripped before prospecting activities begin. All overburden should be dumped into the vacuum, and the finished surface should be moulded to

match the surrounding terrain while remaining free draining. After backfilling, a growth medium cover will be installed, and vegetation will begin to grow.

- **Roads**

-Existing roads will be utilized to the greatest extent practicable. All signage, fences, and shade structures, as well as traffic barriers, will be removed as part of the road and parking area closure.

-All potentially contaminated soils must be identified and delineated for further treatment

All haul routes treated with saline dust suppression water must be treated, with the upper surface pulled off and disposed of in authorized contaminated disposal places.

- **Remediation of Contaminated Areas**

-All hydrocarbon-containing tanks, pipes, and sumps will be flushed or emptied, and removed soils will be treated according to the nature and amount of the pollution.

-The liquid storage tanks will be drained, the structure will be removed/demolished, and the sub-surface holes will be plugged; and

-All equipment used to store or transport chemicals will be cleaned and disposed of at a proper disposal facility.

- **Vegetation**

- ❖ Using non-invasive plants that meet the habitat's criteria, successful re-vegetation will help control erosion of soil resources, maintain soil productivity, and reduce sediment loading in streams (e.g. soils, water availability, slope, and other appropriate environmental factors).

- ❖ Invasive species will be avoided, and the area will be managed to keep them from spreading.

- ❖ On slopes, naturally occurring grassland species will be planted to combat the effects of erosion. These plants will increase soil holding capacity while also lowering runoff velocity.

- ❖ The flat areas will be re-vegetated to establish a long-term ecology. Before vegetation is removed, the presence of protected plant species must be identified, and the necessary licenses for destruction or relocation must be secured.

- **Waste Management**

-Hazardous waste will be controlled, sorted, and disposed of, while non-hazardous garbage will be disposed of in a nearby permitted landfill site. Scrap and waste steel will be sold to recyclers.

-Wastes to be contained in animal-proof drums with a solid lid, and drums be in an enclosed fence, to prevent windblown debris from escaping and scavenging animals from rummaging through the waste

3 CORPORATE SOCIAL AND ENVIRONMENT RESPONSIBILITY

As per Unicar and Parts Trading (Pty) dated November 2023, the fund allocation for Corporate Environment Responsibility (CSER) is subject to capital investment. The cost of the proposed project is N\$30000 shall be spent on CER activities.

Table 4. Costs for Corporate Social and Environmental Responsibility

Area	CER–Proposed Planned Activities	Yearly Budgetary Provision	Time Frame
1. Solar	Provision of off-grid solar panels to Noordoewer residents or community facilities	N\$ 15000	Year 1 (January to January)
2. Health/ Education	Sanitation facilities in Noordoewer Or Capacity building and skills transfer programmes.	N\$ 15000	Year 2 (January to January)

4 CONCLUSION

The study brings out the following points:

- ❖ Ambient air quality, groundwater quality and noise levels shall remain within acceptable limits after the proposed manufacturing activities due to effective design and implementation of environmental management plans.
- ❖ Risk to flora/fauna and soil is negligible due to effective management and handling of hazardous wastes and wastewater.
- ❖ Socio-economic benefits due to the creation of direct/indirect employment. Corporate social and environmental responsibilities (CSER) activity shall be carried out in the surrounding areas.

Thus, it can be concluded on a positive note that after the implementation of the mitigation measures and Environmental Management Plan, the regular operations of Unicar and Parts Trading (Pty) will have a negligible impact on the environment and will benefit the local people.

5 BIBLIOGRAPHY

- Amir Jafarpour, Siamak Khatami, "Analysis of Environmental Costs' Effect in Green Mining Strategy Using a System Dynamics Approach: A Case Study", *Mathematical Problems in Engineering*, vol. 2021, Article ID 4893776, 18 pages, 2021. <https://doi.org/10.1155/2021/4893776>
- Bubenzer, O. (2002). Project E1 - Atlas of Namibia. [online] Available at: http://www.unikoeln.de/sfb389/e/e1/download/atlas_namibia/e1_download_physical_geography_e.htm.
- [https://keystoneenvironmental.ca/services/biology/environmental-management-planemp/#:~:text=Environmental%20Management%20Plan%20\(EMP\)%20is,requirements%20for%20project%20permits%2Fapprovals](https://keystoneenvironmental.ca/services/biology/environmental-management-planemp/#:~:text=Environmental%20Management%20Plan%20(EMP)%20is,requirements%20for%20project%20permits%2Fapprovals).
- Institute for Health Metrics and Evaluation (IHME) 2016. Namibia- State of the nation's health: Findings from the global burden of disease. Seattle: IHME.
- IUCN (2022). The IUCN Red List of Threatened Species. [online] IUCN Red List of Threatened Species. Available at: <https://www.iucnredlist.org/>.
- Mannheimer, C., & Curtis, B. (eds) (2009). Le Roux and Müller's field guide to the trees & shrubs of Namibia. Windhoek: Macmillan Education Namibia.
- Mendelsohn, J., Jarvis, A., Roberts, C., & Robertson, T. (2002). Atlas of Namibia. A portrait of the land and its people. Cape Town: David Philip Publishers.
- Mendelson, J., Jarvin, A., Robertson, T. and Roberts, C. (2002). Atlas of Namibia: A Portrait of the Land and Its People. Cape Town: David Philip Publishers.
- Nambinga, V., & Mubita, L. (2021). The Impact of the Mining sector on the Namibia economy.
- UNDP and UN Environment (2018). Managing mining for sustainable development: A sourcebook. Bangkok: United Nations Development Programme.