

**ENVIRONMENTAL MANAGEMENT PLAN
FOR THE ESTABLISHMENT OF EXPLORATION ACTIVITIES OF BASE AND RARE
METALS, DIMENSION STONE, INDUSTRIAL MINERALS AND PRECIOUS
METALS ON THE EXCLUSIVE PROSPECTING LICENCE (EPL) 8565
KARIBIB DISTRICT, ERONGO REGION.**



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ABBREVIATION

DEA	Department of Environmental Affairs
EA	Environmental Assessment
EAP	Environmental Assessment Practitioner
ECC	Environmental Clearance Certificate
ECO	Environmental Compliance Officer
ECS	EnvironClim Consulting Services
EIA	Environmental Impact Assessment
EMA	Environmental Management Act (No. 7 of 2007)
EMP	Environmental Management Plan
MAWLF	Ministry of Agriculture, Water and Land Reforms
MEFT	Ministry of Environment, Forestry and Tourism

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1. INTRODUCTION

Ruungandu Mining CC, hereafter referred to as the proponent is of the intention to carry out exploration activities for base and rare metals, dimension stone, industrial minerals and precious metals on the Exclusive Prospecting Licence (EPL) 8565. The company had lodged an application for the Exclusive Prospecting Licence 8565 on the 09 September 2021 with the Ministry of Mine and Energy (MME), and the application current status is pending ECC. The proponent has secured both financial and technical partners to carry out the proposed exploration activities. The proposed activity is a listed activity as per Environmental Management Act 2007 (Act No. 7 of 2007) (EMA) and an Environmental Clearance Certificate (ECC) is therefore required to commission the intended project. EnvironClim Consulting Services (ECS) was therefore appointed by Ruungandu Mining CC to conduct an Environmental Impact Assessment (EIA) and formulate an Environmental Management Plan for the intended development.

2. PROJECT LOCATION

EPL 8565 is situated approximately 13 Km south of Karibib within the Karibib District, Erongo Region, (see **Figure 1 & 2** below for the proposed site). The EPL covers an area of 2 562.5275 Ha and its bordering the mining licence 190 of Bohale Investment CC on the east and mining licence 204 belonging to Lepidico Chemicals Namibia (Pty) Ltd on the south. The area is accessible via the D1953 which branch out of the C32 road from Karibib to Otjimbingwe. The EPL 8565 is also accessible via the D1992 which branch out of the D1953 and further stretches and pass Lepidico Chemicals Namibia (Pty) Ltd project.



Figure 1: Location of EPL 8565, Karibib District, Erongo Region (red pinned) (GPS coordinates - 22.036389 S, 15.920278 E).

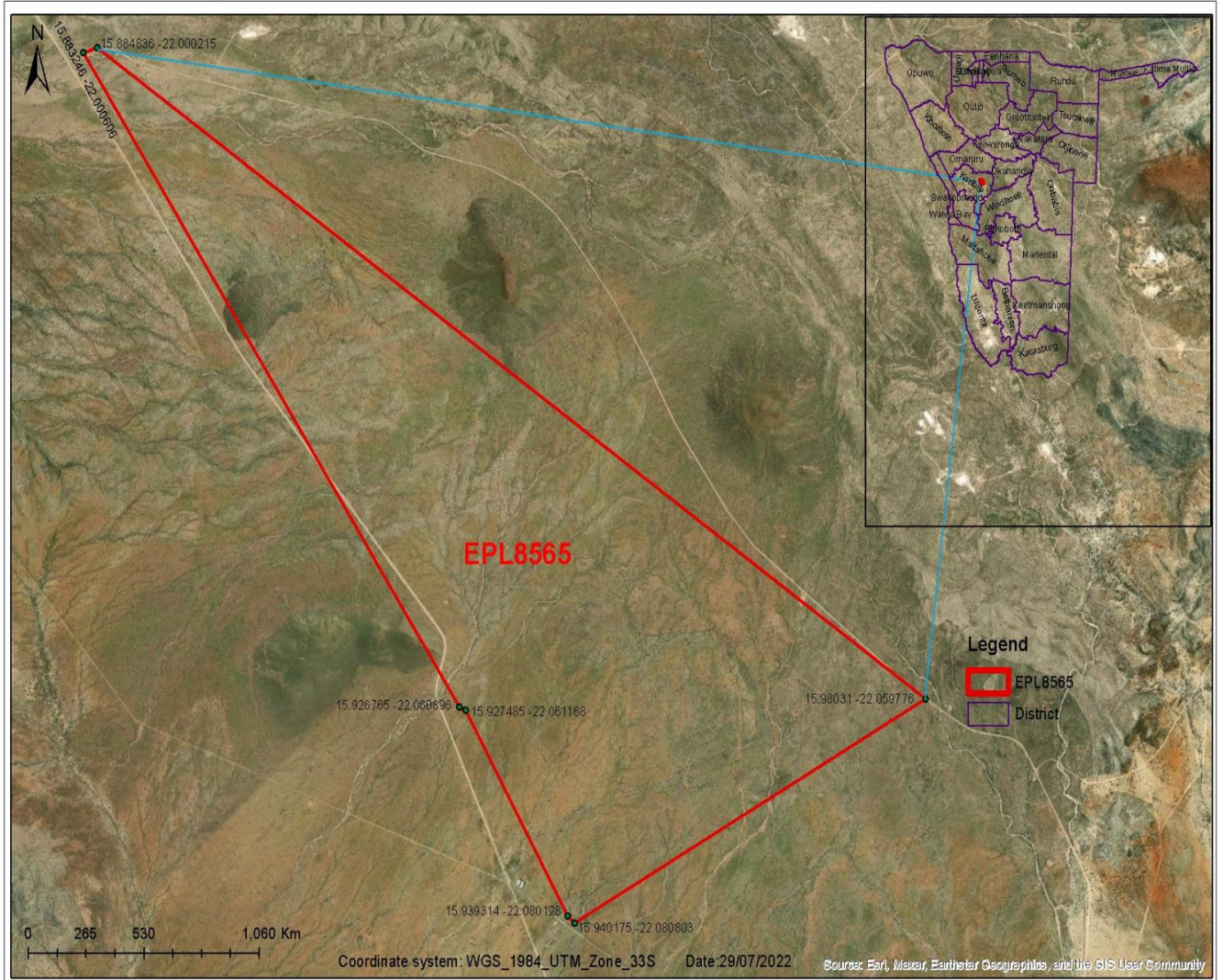


Figure 2: Satellite image depicting the orientation of EPL 8565 delineated in red.

3. PURPOSE OF THE EMP

This Environmental Management Plan (EMP) is a risk strategy that outline logical and empirical framework, monitoring programs, mitigation measures, and management control strategies to minimize potential environmental impacts to a marginal level. Furthermore, it outlines the roles and responsibility of persons involved in the proposed exploration project. This EMP include formulated mitigation measures for the proposed exploration activities for base and rare metals, dimension stone, industrial minerals and precious metals on the Exclusive Prospecting Licence (EPL) 8565.

4. COMPLIANCE TO THE EMP

This EMP is a legally binding document as given under the provisions of the Environmental Management Act, 2007 (Act No. 7 of 2007). The project proponent and its contractors must therefore adhere to the framework of this document. It should be noted further that the EMP is a living document and is subjected to amendments depending on the changing environments and new information that may be available in the future, hence it must be revised accordingly with the provision of the EMA.

5. LEGAL AND POLICY FRAMEWORK

The proposed project shall be established and operated under the provision of the relevant statutory framework of Namibian and international laws of which Namibia is signatory.

Table 1. Legal Requirements for the proposed project

Legislation	Summary	Applicability
The Namibian Constitution	The Namibian constitution is the supreme law of the country which is committed to sustainable development. Article 95(1) of the Constitution of Namibia states that: - “The State shall actively promote and maintain the welfare of the people by adopting policies aimed at ... The maintenance of ecosystems, essential ecological processes and biological diversity of Namibia and utilization of living natural resources on a sustainable basis for the benefit of all Namibians, both present and future”.	To undertake the EIA in order to maintain the ecological process and diversity of ecosystem
The Environmental Management Act	The Environmental Management Act No 7 of 2007 aims to promote the sustainable management of the environment and the use of natural resources and to provides for a process of assessment and control of activities which may have significant effects on the environment; and to provide for incidental matters. The acts provide a list of activities that may not be undertake without an environmental clearance certificate.	Legal requirement to undertake an EIA

Legislation	Summary	Applicability
	<p>Further, the Act ensures that;</p> <p>Further, the Act ensures that;</p> <ul style="list-style-type: none"> (a) Potential threats are considered timeously (b) A comprehensive stakeholder’s consultation is conducted, and all Interested and affected parties are given an opportunity to comment on the project (c) Decision are robust by considering the above-mentioned activities. 	
Atmospheric Pollution Prevention Ordinance Act (No.11 of 1976)	<p>This Ordinance serves to control air pollution from point sources, but it does not consider ambient air quality. This ordinance is being repealed by the proposed Pollution Control and Waste Management Bill. Any person carrying out a ‘scheduled process’ which are processes resulting in noxious or offensive gases typically pertaining to point source emissions have to obtain a registration certificate from the Department of Health.</p>	<p>Generation of greenhouse gases by the vehicles and exploration equipment.</p>
Draft Pollution Control and Waste Management Bill	<p>This Bill serves to regulate and prevent the discharge of pollutants to air and water as well as providing for general waste management. The Bill will repeal the Atmospheric Pollution Prevention Ordinance (11 of 1976) when it comes into force. The Bill also provides for noise, dust or odour control that may be considered a nuisance. Further, the Bill advocates for duty of care with respect to waste management affecting humans and the environment and calls for a</p>	<p>Possible fuel spill and leakages may pollute ground and surface water.</p>

Legislation	Summary	Applicability
	waste management licence for any activity relating to waste or hazardous waste management.	
Environmental Policy framework (1995)	This policy subjects all developments and project to environmental assessment and provides guideline for the Environmental Assessment. Its provision mandate that Environmental Assessment take due consideration of all possible impacts and incorporate them in the development or planning stages.	Provision of the EIA and guidelines
The Occupational Safety and Health Act No. 11 of 2007;	<p>Safety: A safety risk is a statistical concept representing the potential of an accident occurring, owing to unsafe operation and/or environment. In the working context “SAFETY” is regarded as “free from danger” to the health injury and to properties.</p> <p>Health: Occupational Health is aimed at the promotion and maintenance of the highest degree of physical, mental and social wellbeing of workers in all occupations. This is done by ensuring that all work-related hazards are prevented and where they occur, managed.</p>	<p>Operating exploration equipment has the potential risk of injuries.</p> <p>Provision of clean ablution facility, routine health check-ups for employees, HIV/AIDS awareness etc.</p>
Public Health Act No. 36 of 1919	The Act serves to protect the public from nuisance and states that no person shall cause a nuisance or shall suffer to exist on any land or premises owned	Ensure public safety from noise, dusts and air pollution.

Legislation	Summary	Applicability
	<p>or occupied by him or of which he is in charge any nuisance or other condition liable to be injurious or dangerous to health.</p>	
<p>Water Resources Management Act (2004)</p>	<p>This Act provides a framework for managing water resources based on the principles of integrated water resources management. It provides for the management, development, protection, conservation, and use of water resources. Furthermore, any watercourse on/or in close proximity to the site and associated ecosystems should be protected in alignment with the listed principles.</p>	<p>Ensure well-constructed storm water systems, ensure pollution control mechanism to avoid water pollution</p>
<p>Water Act No, 54 of 1956</p>	<p>This act states that, all water resources belong to the State. It prevents pollution and promotes the sustainable utilization of the resource. To protect these resources, this act requires that permits are obtained when activities involve the following;</p> <ul style="list-style-type: none"> (a) Discharge of contaminants into water sources such as pipe, sewer, canal, sea outfall and (b) Disposal of water in a manner that may cause detrimental impact on the water resources 	<p>Contaminated water, such as sewage sludge must not be dumped into water bodies</p>

Legislation	Summary	Applicability
Petroleum Product and Energy Act No, 13 of 1990	This Act provides a framework for handling and distribution of petroleum products which may include purchase, sale, supply, acquisition, possession, disposal, storage or transportation thereof.	Safe handling of the petroleum products such as fuel and lubricants.
Labour Act No. 11 of 2007	This Act aims to regulate labour in general and includes the protection of the health, safety and welfare of employees. The 1997 Regulations relating to the Health and Safety of employees at work sets out the duties of the employer, welfare and facilities at the workplace, safety of machinery, hazardous substances, physical hazards, medical provisions, construction safety and electrical safety.	Follow legal labour requirements such as safety, remuneration etc.
Regional Council Act, 1992 (Act No. 22 of 1992)	The Regional Councils Act legislates the establishment of Regional Councils that are responsible for the planning and coordination of regional policies and development. The main objective of this Act is to initiate, supervise, manage and evaluate development at regional level.	Observe the regional by laws
Soil Conservation Act No. 76 of 1969	This act promotes the conservation of soil, prevention of soil erosion.	Coordinate movement of exploration equipment to prevent soil erosion. Ensure conservation of topsoil.
Hazardous Substances Ordinance No. 14 of 1974	This ordinance gives provision to control the handling of hazardous substance in all circumstances, such as manufacturing, imports and exporting of these to ensure human and environmental safety.	Handling of fuel, fire and explosion risks

Legislation	Summary	Applicability
<p>National Heritage Act No. 27 of 2004</p>	<p>The Act makes provision for the protection and conservation of places and objects of heritage significance and the registration of such places and objects. Part V Section 46 of the Act prohibits removal, damage, alteration or excavation of heritage sites or remains, while Section 48 sets out the procedure for application and granting of permits such as</p>	<p>Exploration activities such as core-drilling may unearth archaeological material.</p>
<p>Word's Best Practises</p>	<p><i>Precautionary Approach Principle</i></p> <p>This principle is worldwide accepted when there is a lack of sufficient knowledge and information about the possible threats to the environment. Hence if the anticipated impacts are greater, then precautionary approach is applied. In this project, there are no eminent uncertainty however in cases when they arise, this approach should be applied.</p> <p><i>Polluter Pays Principle</i></p> <p>This principle ensures that proponents takes responsibility of their actions. Hence in cases of pollution, the proponent bears the full responsibility to clean up the environment.</p>	<p>Mineral exploration particularly in the area with biodiversity and underground water can be detrimental to the ecosystem and underground water resource. Therefore, precaution must be taken when doing core-drilling during exploration.</p> <p>In the event of any damage of biodiversity and pollution of underground water, the proponent must be responsible to compensate for the damages.</p>

6. ROLES & RESPONSIBILITIES

6.1. Environmental Compliance Officer (ECO)

The Ministry of Environment, Forestry and Tourism is the custodian of environmental protection. The Environmental Compliance Officer shall be an appointed Environmental Officer from the Directorate of Environmental Affairs and Forestry delegated to impose compliance as per the provision of the EMA. The ECO may carry out inspection at any given time to enforce compliance. Depending on his/her work schedule, the ECO shall visit the site at any time for environmental inspection and monitoring.

6.2. The Proponent

Ruungandu Mining cc shall resume the overall responsibility of environmental management through acceptable implementation of the environmental management plan. Furthermore, it shall be a full responsibility of **Ruungandu Mining cc** to implement the following activities.

- Appoint a site Manager;
- Ensures that all workers and contractors are conversant with the Environmental Management Plan (EMP) and are inducted on safety measures regarding exploration of precious stones;
- Ensure a safe and healthy working environment;
- Provide workers with appropriate Personal Protective Clothing (PPE);
- Monitor the employees works with regard to safety;
- Ensure good environment performance and compliance;
- Appoint an environmental officer or Environmental Practitioner to carry out environmental audits.

6.3. Site Manager

The Site Manager shall represent **Ruungandu Mining cc**. He/she will be responsible for monitoring daily operations and ensure acceptable adherence of workers and contractors to the EMP. The Site Manager must ensure that a copy of the EMP is available on site at all times and every worker is acquainted with the EMP.

6.4. Employees and Contractors

All stakeholders, especially employees and contractors must;

- Adhere to the EMP;
- Ensure to wear personal protective clothing at all time when working;
- Report worn out PPE and request for replacement;
- Adhere to the company rules and policies.

7. DISCIPLINARY ACTION

The EMP is a legally binding document. Non-compliance to the EMP must result in punishable legal action against the proponent such as;

- Suspension of work;
- Financial penalties.

The disciplinary action shall be determined as per the provision of EMA and relevant statutory framework. Under Section 27 (4), *Any person who contravenes subsection (3) commits an offence and is on conviction liable to a fine not exceeding N\$500 000 or to imprisonment for a period not exceeding 25 years or to both such fine and such imprisonment”.*

8. THE ENVIRONMENTAL MANAGEMENT PLAN

The scope of this EMP is with reference to the EIA of the exploration activities for base and rare metals, dimension stone, industrial minerals and precious metals on the Exclusive Prospecting Licence (EPL) 8565 and decommissioning phase of the planned project. This EMP is structured by considering Social, Environmental, Safety and Occupational Health aspects associated with this project as summarised in **Table 2** below.

Table 2 : Environmental Management Plan (EMP)

Activity	Objectives
A – Staff Induction	Induction
	Communication
B – Health and Safety	General safety at workplace
	Ablution facilities
	Dust and Noise Exposure
C – Pollution and Waste Management	Material waste, domestic waste
	Exploration equipment and vehicle emissions, dust and noise
	Fuel spillage and leakages
	Oil and lubricant leakages
D – Environment	Soil
	Water
	Biodiversity
	Rehabilitation
E – Cultural Heritage	Archaeological and Heritage
F – Socio- Economic	Employment
	Alcohol and drug abuse
	Working hours
	Capacity building
	HIV / AIDS

SECTION A: STAFF INDUCTION

Table 3. Staff Induction Mitigation Measures

Environmental or Social Aspects	Objective	Proposed Mitigation Measures	Monitoring Indicators	Responsibility
Staff Induction	To ensure that all staff / employees are familiar with the requirements of the EMP	<ul style="list-style-type: none"> All employees and contractors must go through an intensive induction course on all the provisions of the EMP. There must be an annual induction course for all the workers. New employees must not start work without going through the induction course. 	<p>Induction minutes and attendance register signed by each staff member.</p> <p>Induction report</p>	Management or Site Manager
	Disciplinary	<ul style="list-style-type: none"> Company must adopt a disciplinary system to discipline staff for non-compliance, such as not using ablution facilities and disposing off waste uncontrollably etc. 	Disciplinary meetings and actions	Management or Site Manager

Environmental or Social Aspects	Objective	Proposed Mitigation Measures	Monitoring Indicators	Responsibility
		<ul style="list-style-type: none"> • Strict measure must be put in place, any employee found contravening provisions of the EMP, must be granted a warning letter. 	Disciplinary letters / Warnings	
	Availability of the EMP on site for ease of reference	<ul style="list-style-type: none"> • Ensure that a copy of the EMP is kept on site and accessible 	Physical view of the EMP	Management or Site Manager
Communication	To ensure effective communication	<ul style="list-style-type: none"> • The project must develop a communication strategy • Correspondences must be in writing • The contact numbers for the Site Manager must be available displayed onsite in case of emergencies. • There must be an alarm bell for emergency communication 	Communication Strategy Letters, e-mail, notices, minutes Display of site manager and emergency numbers on site	Management or Site Manager

SECTION B: HEALTH AND SAFETY

Table 4. Health and Safety Measures to be implemented

Environmental / Social Aspects	Objective	EXPLORATION PHASE Mitigation Measures	Monitoring Indicators	Monitoring Indicators	Responsibility
Safety	Adhere to the Health and Safety Regulations, Government Notice 156/1997 (GG 1617).	<ul style="list-style-type: none"> The proponent must develop a health and safety plan; A compulsory safety induction course must be given to all employees. Each employee must be provided with personal protective equipment (PPE) and must be worn at all time during working and when on site. Ensure all workers are inducted on the dangers of risks of explosions, 	<p>Health and safety included and reflected in the induction minutes</p> <p>Visual Inspection</p> <p>Visual Signs available</p>	<p>Certification of completion by approved personnel</p> <p>Visual Inspection</p>	Management or Site Manager

Environmental / Social Aspects	Objective	EXPLORATION PHASE Mitigation Measures	Monitoring Indicators	Monitoring Indicators	Responsibility
		<p>chemicals and the emergency response;</p> <ul style="list-style-type: none"> • There must be clear health and safety signs at designated sites such as, ASSEMBLY AREA, NO SMOKING “DANGER”, “ENTRANCE PROHIBITED” etc. • Employees must NOT be exposed to noise levels above the required -85dB (A) limit over a period of 8 hours. Should the noise level be higher than 85dB (A), the employer must implement a hearing 	<p>Record of hearing loss</p>	<p>Availability of fire extinguishers and evidence on training (e.g. minutes, training pictures etc.).</p> <p>Visible signs</p> <p>Report of health check ups</p>	

Environmental / Social Aspects	Objective	EXPLORATION PHASE Mitigation Measures	Monitoring Indicators	Monitoring Indicators	Responsibility
Health		<p>conservation program such as noise monitoring;</p> <ul style="list-style-type: none"> • Worker must be provided with appropriate PPE such as industrial earmuffs; • Supply safe drinking water. • Ensure adequate, hygienic and user-friendly ablution facilities for all staff; • Separate male and female toilets with a ration of 1:30 and 1:15 for male and females respectively. • Appoint a cleaner or rotate cleaning 	Clean tap water	Laboratory analysis report	

Environmental / Social Aspects	Objective	EXPLORATION PHASE Mitigation Measures	Monitoring Indicators	Monitoring Indicators	Responsibility
		responsibilities among workers. <ul style="list-style-type: none"> Inspect ablution facilities regularly. Supervisors must undergo an occupational health and first aid course. 	Clean toilets at all time Proof of Certification	Clean toilets at all time	
Noise	To reduce noise in the surrounding environment	<ul style="list-style-type: none"> All exploration vehicle and machinery engines must be off when not in use; Adhere to minimum speed limit of 40km Purchase/hire exploration equipment with low noise emission; 	Record of public complaints	Record of public complaints	Management / Site Manager

Environmental / Social Aspects	Objective	EXPLORATION PHASE Mitigation Measures	Monitoring Indicators	Monitoring Indicators	Responsibility
		<ul style="list-style-type: none"> • Where possible, fit silencers on vehicle exhaust; • Operation must be limited to daytime only (08h00-17h00); 			
Dust / Air Pollution	The reduce fugitive dust from project operation	<ul style="list-style-type: none"> • Movement of heavy exploration vehicles must strictly be restricted within the exploration site; • Only use a one-way lane to access the site; • Adhere to the minimum speed limit of 30 or 40km/hour; • Do not excavate or make drilling holes during heavy winds; 		Record of public complain	Management / Site Manager

Environmental / Social Aspects	Objective	EXPLORATION PHASE Mitigation Measures	Monitoring Indicators	Monitoring Indicators	Responsibility
		<ul style="list-style-type: none"> • Sand and/or gravel heaps must be covered or regularly water sprayed; • On site where soil is loosened by vehicle movement, apply dust suppression method such as water spraying; • Workers must not be exposed to excess dust and should be provided with appropriate PPE such as dust mask and earmuffs; • Adhere to the Labour act, non-toxic human dust exposure levels may not exceed 5mg/m³ for 			

Environmental / Social Aspects	Objective	EXPLORATION PHASE Mitigation Measures	Monitoring Indicators	Monitoring Indicators	Responsibility
		respiratory dust and 15mg/m ³ for total dust;			

SECTION C: POLLUTION CONTROL AND WASTE MANAGEMENT

Table 5. Waste Management Mitigation Measures

Environmental / Social Aspect	Objectives	EXPLORATION PHASE Mitigation Measures	Monitoring Indicator	Monitoring Indicator	Responsibility
Vehicle Emissions	Reduce greenhouse gas (GHG) emissions from vehicles / machinery	<ul style="list-style-type: none"> All vehicles and equipment must be kept in good working condition and serviced frequently to prevent leakage and emission of noxious smoke etc. 	Vehicle servicing records books Reports of smoke emissions from machinery		Management / Site Manager

Environmental / Social Aspect	Objectives	EXPLORATION PHASE Mitigation Measures	Monitoring Indicator	Monitoring Indicator	Responsibility
		<ul style="list-style-type: none"> Switch off engines when vehicle is not operations 	Visible signs		
Waste Generation	To prevent littering	<ul style="list-style-type: none"> The exploration site must have sufficient wheelie bins and skip containers for onsite waste disposal; The waste must be segregated and be disposed of at an approved disposal site in Karibib; No waste should be buried on site or anywhere in the surrounding; Provide temporarily toilets to workers in a ration a 1:15 and 1:30 for male and female respectively. 	Waste bins and skip containers	Waste bins and skip containers	Management / Site Manager

Environmental / Social Aspect	Objectives	EXPLORATION PHASE Mitigation Measures	Monitoring Indicator	Monitoring Indicator	Responsibility
		<ul style="list-style-type: none"> • Effluent from these toilets must be disposed of at the nearest and approved waste treatment plant of oxidation ponds at Karibib. • Acts of secretion in the open must never be allowed. 	<p>Visible temporarily ablution facility</p> <p>Record of effluent disposal</p>		
Surface and ground water contamination / pollution	To prevent soil and water pollution	<ul style="list-style-type: none"> • Vehicle and machinery to be used must be in good condition and well service to avoid leakages of oils and lubricants; • All stationary vehicles and machinery must have drip trays to collect leakages of oils and lubricant; 	<p>Service records</p> <p>Visible drip trays</p>		Management / Site Manager

Environmental / Social Aspect	Objectives	EXPLORATION PHASE Mitigation Measures	Monitoring Indicator	Monitoring Indicator	Responsibility
		<ul style="list-style-type: none"> Oils, lubricants and hydrocarbons must be stored in a proper storage facility with concrete bunds. Or impermeable lined materials Although not expected to be significant, i.e oil drops of less than 500ml, if it occurs, contaminated soils must be collected and be treated with bioremediation waste 	<p>Proper storage with concrete bund surface</p> <p>Bioremediation chamber</p>		
Oil Spillages	To prevent oil spill from tanks and during re-fuelling	<ul style="list-style-type: none"> Refuel vehicles at designated areas that has protected surface covering /geomembrane lining and use drip trays for 	Place warning signs	Site inspection and record keeping	Management / Site Manager

Environmental / Social Aspect	Objectives	EXPLORATION PHASE Mitigation Measures	Monitoring Indicator	Monitoring Indicator	Responsibility
		stationary equipment and vehicle. <ul style="list-style-type: none"> Engage the suppliers of consumable such as grease and lubricants upon used to collect and dispose of such waste in an environmentally friendly manner. 			
Oil leakage	To prevent fuel leakages	<ul style="list-style-type: none"> All stationary vehicles and machinery must have drip trays to collect leakages of oils and lubricant; 		Visible monitoring	Management and Site Manager

SECTION D: ENVIRONMENT

Table 6. Environmental Mitigation Measures to be implemented

Aspect	Objective	EXPLORATION PHASE Mitigation Measure	Monitoring Indicator	Responsibility
Biodiversity	To protect the flora and fauna	<ul style="list-style-type: none"> • The targeted exploration site must be cordoned off to avoid safety risk to animals. • Prevent the destruction of protected species. • Prevent the employees from collecting firewood. • No workers should be permitted to collect plant materials, hunt or snare to capture wild animals. • Provide electricity or gas to staff for cooking and heating in order to discourage fire wood harvesting. • No killing of animals including crawling animals unless it poses danger to human life. • No domestic animals are allowed at the site. 		Management / Site Manager
Soil Erosion	To prevent soil erosion	<ul style="list-style-type: none"> • Exploration should be limited to targeted sites only. • It is highly recommended that exploration must not take place during heavy winds; 		Management / Site Manager

Aspect	Objective	EXPLORATION PHASE Mitigation Measure	Monitoring Indicator	Responsibility
		<ul style="list-style-type: none"> • Excavated topsoil from exploration trenches must be well compacted to avoid wind erosion; • Movement of all vehicles must strictly be within the project site; • Sand and gravel heaps from the drilling holes should be placed in designated areas. • Rehabilitate all sites upon completion of the project. 		
Soil Compaction	To prevent flooding at the surrounding areas.	<ul style="list-style-type: none"> • Vehicle and mobile exploration equipment should be confined to existing roads and tracks. • Implement a road and track management. 		Management / Site Manager
Water Resource	Conservation of water resource	<ul style="list-style-type: none"> • A valid water abstraction permit should be obtained from the MAWLR. • No pollution or contaminant should be allowed to enter the water ecosystem. • Recycle water and foster the re-use of water that can be used. 	Valid water abstraction permit.	Management / Site Manager

Aspect	Objective	EXPLORATION PHASE Mitigation Measure	Monitoring Indicator	Responsibility
		<ul style="list-style-type: none"> • Monitor and control water usage and minimise if possible. 		
Visual and Sense of Place	Maintain aesthetic value	<ul style="list-style-type: none"> • Drilling holes and excavated area should be levelled upon completion of the exploration. • Care must be taken to ensure that rehabilitated area blend in with the natural environment. • Overburdens must be placed in trenches and excavated areas as part of rehabilitation. • Keep site visual clean. 		
Alien Invasive	Maintain natural ecosystem	<ul style="list-style-type: none"> • All alien invasive occurring in the area should be cleared. • Place measures in place to eradicate any alien infestation in the project area. • Adopt an alien clearing policy and awareness campaign. 		

SECTION E: HERITAGE AND ARCHEOLOGICAL SITES

Table 7. Archaeology and Heritage Mitigation Measures

Environment / Social Aspect	Objectives	EXPLORATION PHASE Mitigation Measure	Monitoring Indicator	Responsibility
Heritage Resources / Artefacts	Preserve Heritage and Archaeological materials	<ul style="list-style-type: none"> • The management should be made aware of the provision of the National Heritage Act regarding prompt reporting of any archaeological findings. • Workers must be trained on the possible find of archaeological material in the area; • Implement a chance find and steps to be taken when archaeological material finding (Heritage e.g. rock painting and drawings), human remains or artefacts) are unearthed • Stopping the activity immediately • Informing the site manager or supervisor • Cordoned of the area with a danger tape and the manager shall take appropriate pictures. 	Sighting report/s of heritage resources / artefacts	Management / Site Manager

Environment / Social Aspect	Objectives	EXPLORATION PHASE Mitigation Measure	Monitoring Indicator	Responsibility
		<ul style="list-style-type: none"> Site manager must report the finding to the nearest Namibian police or alternatively the National Forensic Laboratory (+264 61 240461). 		

SECTION F: SOCIO ECONOMIC

Table 8. Social Economic Mitigation Measures

Environmental / Social Aspects	Objectives	EXPLORATION PHASE Mitigation Measures	Monitoring Indicator	Responsibility
Employment	Promote benefits to the local resident	<ul style="list-style-type: none"> • Adopt a local first policy to ensure that all general work is reserved for local people unless in circumstances where specialized skills are required. • Employ local contractors • Fair compensation and labour practise as per Namibian Labour Laws must be followed. 	Employee structure and proportion of local employment	Management or Site Manager
HIV/AIDS	To prevent the spread of HIV/AIDS	<ul style="list-style-type: none"> • Provide HIV / AIDS awareness at induction. • Avail condoms at site. 		
Alcohol and Drug use	Prevent alcohol and drug use	<ul style="list-style-type: none"> • Ban the use of alcohol and drugs at workplace • Teach employees about dangers alcohol and substance abuse 	Drunk / Misbehaving employees Breathalyser report	Management or Site Manager

Environmental / Social Aspects	Objectives	EXPLORATION PHASE Mitigation Measures	Monitoring Indicator	Responsibility
		<ul style="list-style-type: none"> All employees must be screen with the breathalyser to avoid intoxicated personnel on site 	Monitor presence of alcohol at the construction site	
Working hours	Adhere to the Labour Act No. 11 of 2007	<ul style="list-style-type: none"> Operate within the prescribed working days and hours as per the Namibian Labour laws and regulations 	Labour unrest / Demonstration	Management or Site Manager

9. DECOMMISSIONING PHASE

Decommissioning of the project is not considered at this stage. However, in the event where the project has to be decommissioned, all the necessary application required from the relevant authority will be applied for. A qualified personnel must be appointed to study and develop a decommissioning plan. Therefore, the project owners must implement the following mitigation measures;

- The proponent must submit a decommissioning plan to the office of the Environmental Commissioner for approval;
- Install signs to inform the public about the decommissioning of the project;
- Access to the areas must be controlled;
- A qualified project geologist must be hired to oversee the project decommissioning
- Hire environmental specialist to monitor possible contamination during decommissioning;
- Ensure that all drilling holes and excavated areas are rehabilitated;
- Ensure that all topsoil is levelled;
- Provide workers with all necessary PPE;
- Generated waste must be disposed of at approved sites;
- When contamination is detected, the soil in the holes must be dug out and be treated before disposing it off to an approved site;
- The site must be rehabilitated and flattened to its natural state;

10. CONCLUSION AND RECOMMENDATIONS

A project of this nature may result in localised impacts to the bio-physical environment. The proposed exploration project had different components that were assessed for possible environmental impacts. Exploration of base and rare metals, dimension stone, industrial minerals and precious metals is a listed activity according to EMA, may not be undertaken without a valid ECC. Most of the potential negative impact can be reduced to insignificance levels if the mitigation measure outlined in this EMP are properly applied.

All the likely impacts were identified, and mitigation measures suggested were given with high confidence.

The information provided and environmental set up of the proposed project are adequate, it is recommended that the Environmental Clearance Certificate shall be issued to necessitate the commencement of the intended exploration project and with continuous changing of the environment, regular monitoring must be put in place. The proponent must appoint an Environmental Practitioner of his choice to uninterruptedly carry out environmental audits for submission to the office of Environmental Commissioner.