

# **ENVIRONMENTAL MANAGEMENT PLAN (EMP)**

Environmental Scoping Assessment for the Proposed Exploration Activities on Exclusive Prospecting License (EPL) No. 8747 located northeast of Otjiwarongo in Otjozondjupa Region.

**ECC Application Reference No:** 0680

**Document Version:** Draft

Author: Mr. Stefanus Johannes

Reviewer: Ms. Rose Mtuleni

Company: Excel Dynamic Solutions (Pty) Ltd

Telephone: +264 (0) 61 259 530

Email: public@edsnamibia.com

**Proponent: Okakwa Investments CC** 

**Contact person: Dr. Peter Schreck** 

Telephone: +264 81 304 3685/+264 81 321 0927

Postal Address: P O BOX. 99284, Windhoek

Email: <a href="mailto:schreckpc@hotmail.com">schreckpc@hotmail.com</a>

### **TABLE OF CONTENTS**

LIS	T OF F	IGURES AND TABLES	. 1
1	INTRO	DDUCTION	2
	1.1	Project Background	2
	1.2	Aim of the Draft Environmental Management (EMP)	4
	1.3	Appointed Environmental Assessment Practitioner	5
	1.4	Environmental Assessment Legal Requirements	5
	1.5	Draft EMP Limitations	8
2	EMP F	ROLES AND RESPONSIBILITIES1	0
	2.1 (DEAF	Competent Monitoring Authority: Department of Environmental Affairs and Forestry =, MEFT))1	
	2.2	The Proponent or Proponent's Representative (PR)	0
	2.3	Exploration Manager (as appropriate)1	0
	2.4	Environmental Control Officer (ECO)	1
3	ENVIF	RONMENTAL MANAGEMENT & MITIGATION MEASURES1	13
	3.1	Management of Key Potential Adverse Environmental Impacts	١3
	3.2	Aim of the Environmental Management Action Plan1	13
	3.3	Exploration Activities Mitigation Plan1	4
	3.4	Monitoring Action Plans (Monitoring Plan)4	12
	3.5	Decommissioning and Rehabilitation4	16
4	ENVIF	RONMENTAL MONITORING AND REPORTING Error! Bookmark not defined	d.
LIS	T OF	FIGURES AND TABLES	
_		ocation of EPL 8747and use (affected and neighboring farms) of EPL 8747	
Tab	le 2: M	pplicable legal requirements and permits to the activities of the EPL 8747 anagement and mitigation action plans for the planning and exploration phases1 anagement action plans for Monitoring4	L4

Draft EMP: EPL 8747

# 1 INTRODUCTION

### 1.1 Project Background

Okakwa Investment CC (The Proponent) has applied to the Ministry of Mines and Energy (MME) for Exclusive Prospecting License (EPL) No. 8747 on 24 January 2022. The approval and granting of the EPL require an Environmental Clearance Certificate.

Draft EMP: EPL 8747

The 39341.2688-hectare EPL is located about 70 km northeast of Otjiwarongo in the Otjozondjupa Region (**Figure 1**). The target commodities of the proposed project are Base and Rare Metals, Dimension stones, Industrial Minerals and Precious Metals. The EPL covers Farms Wittenberg No. 90, Klein Okaputa No. 381, Vuura No. 89, Nassau No. 91, Vlakpan No. 85, Heilbronn No. 84, Boshoek No. 81, Luckenwalde No. 83, Maxwell No. 82, Stark No. 565, Fisher No. 564, Lardner No. 563, Hester No. 562, Embla No. 561, and Tiro No. 560 (**Figure 2**).

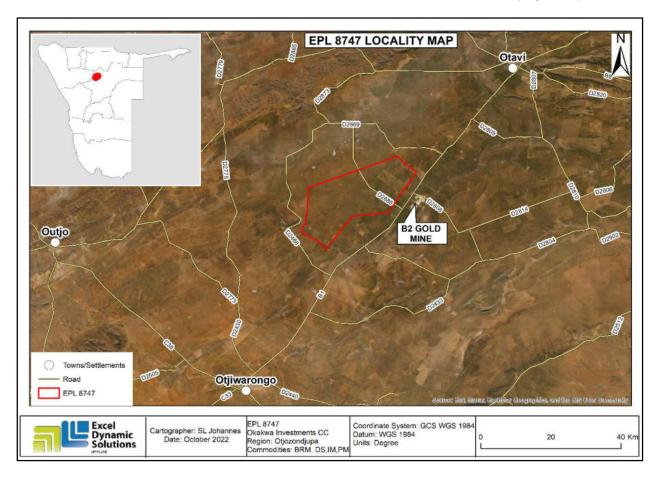


Figure 1: Location of EPL 8747

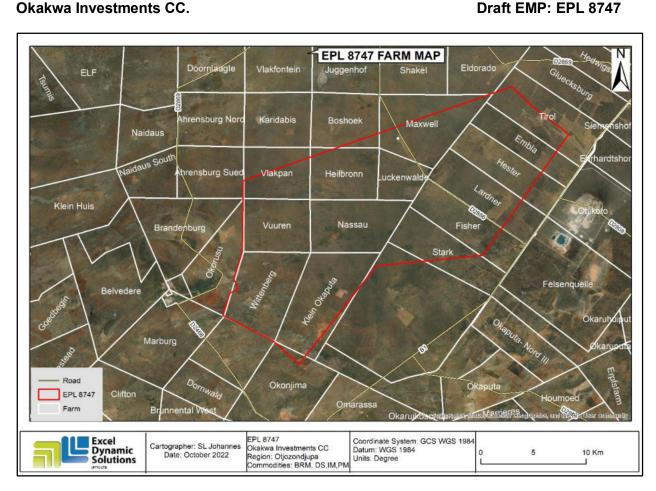


Figure 2: Land use (affected and neighboring farms) of EPL 8747.

According to Section 27 (1) of the Environmental Management Act (EMA), No. 7 of 2007, and in line with Sections 32-37 of the EMA as gazetted in 2012, prospecting and exploration activities are part of the listed activities that may not be conducted without an ECC. The relevant listed activities, as per EIA regulations, are:

- 3.1 The construction of facilities for any process or activities that requires a license, rights, or other forms of authorization, and the renewal of a license, right or other form of authorization, in terms of the Minerals (Prospecting and Mining Act, 1992).
- 3.2 other forms of mining or extraction of any natural resources whether regulated by law or not.
- 3.3 Resource extraction, manipulation, conservation, and related activities.

This statutory document has been prepared as per requirement in accordance with Section 8 of the EMA (No. 7 of 2007). The compilation of this EMP is one of the requirements (scope of work)

**EPL 8747** 3

presented to Excel Dynamic Solutions (Pty) Ltd by The Proponent. It is required of the environmental consultant to comply with the EMA and provide for the following:

Draft EMP: EPL 8747

- Prepare an explicit Environmental Management Plan to be used as a guideline to monitor compliance with the recommendations stipulated in the EIA and to assist in managing and monitoring activities throughout the exploration and maintenance of the proposed exploration activities and sites on the EPL.
- The Environmental Consultant must elucidate in the EMP the roles and responsibilities of the Proponent, the contractors, and any other identified stakeholders.

### 1.2 Aim of the Draft Environmental Management (EMP)

Regulation 8(j) of the EIA Regulations (2012) requires that a draft Environmental Management Plan (EMP) shall be included as part of the Environmental Assessment (EA). A **management plan**' is defined as:

"...a plan that describes how activities that may have significant environmental effects on the environment are to be mitigated, controlled and monitored."

An EMP is one of the most important outputs of the EA process. It synthesizes all the proposed management & mitigation and monitoring actions, set to a timeline and with specific assigned responsibilities. It provides a link between the impacts identified in the EA process and the required mitigation measures to be implemented during exploration. It is important to note that an EMP is a statutory document and a person who contravenes the provisions of this EMP may face imprisonment and/or a fine. This EMP is a living document that can be modified to address project changes, environmental conditions, and compliance monitoring feedback.

The purpose of this document is, therefore, to guide environmental management throughout the different phases of the proposed exploration activities, namely: planning, prospecting and exploration, and decommissioning and rehabilitation:

Planning phase - This is the stage of the proposed project, during which, the Proponent
prepares all the administrative and technical requirements needed for the actual work on
the ground. Planning also includes obtaining the necessary permits and authorizations
from relevant national and local stakeholders (such as affected parties), and facilitating
the recruitment and procurement processes, etc., in preparation for the exploration
activities (and site maintenance).

Prospecting and Exploration phase - This is the phase where the Proponent will do
prospecting and exploration activities for the target commodities on site. It is also the
phase during which maintenance of the area, equipment and machinery is done by the
Proponent.

Draft EMP: EPL 8747

 Decommissioning and Rehabilitation – This is the phase during which the exploration activities on the EPL cease. The decommissioning of the EPL exploration activities may be considered because of poor exploration results or declines in commodity market price.
 Before the decommissioning phase, the Proponent will need to put site rehabilitation measures in place.

**Environmental Monitoring Requirements:** To support and ensure that the proposed mitigation measures are achieving the desired results, a monitoring plan is implemented alongside the mitigation plan.

This draft EMP will be used by the Proponent, employees and/or contractors to provide management measures to be undertaken during mining activities, to address the environmental impacts identified in the scoping report and ensure that the impacts on the environment are avoided or limited if they cannot be avoided completely.

### 1.3 Appointed Environmental Assessment Practitioner

To fulfil the EMA's and the 2012 EIA Regulations' requirements, the proponent hired Excel Dynamic Solutions (Pty) Ltd (EDS), an independent consultant, to conduct the required EA process on their (the proponent's) behalf. This EMP is submitted as part of an application for the proposed exploration method on the EPL to the Environmental Commissioner at the Department of Environmental Affairs and Forestry (DEAF), at the Ministry of Environment, Forestry and Tourism (MEFT).

# 1.4 Environmental Assessment Legal Requirements

The content of the EMP must meet the requirements of Section 8 (j) of the EIA Regulations. The EMP must address the potential environmental impacts of the prospecting and exploration activities on the environment throughout the project life cycle. It must also include a system for assessing the effectiveness of monitoring and management arrangements after project implementation.

The Proponent, therefore, has the responsibility to ensure that the exploration activities, as well as the EA process conform to the principles of the EMA, and must ensure that employees act in accordance with such principles. **Table 1** below outlines the requirements of an EMP as stipulated by Section 8(e) of the EIA regulations, focusing on specific approvals and permits that may be required for the activities required of the EPL.

Draft EMP: EPL 8747

Table 1: Applicable legal requirements and permits to the activities of the EPL 8747

Legislation/Policy/ Guideline	Relevant Provisions	Implications for this project
Environmental Management Act EMA (No 7 of 2007)	- Section 27 requires that projects with significant environmental impacts be subject to an environmental assessment process.  Details the principles that are to guide all EIAs.	The EMA and its regulations should inform and guide this EA process.     Should the ECC be issued to the Proponent, it should be renewed every 3 years, counting from the date of issue.  Office of the Environmental Commissioner
Environmental Impact Assessment (EIA) Regulations GN 28-30 (GG 4878)	<ul> <li>Details requirements for public consultation within a given environmental assessment process (GN 30 S21).</li> <li>Details the requirements for what should be included in a Scoping Report (GN 30 S8) and an Assessment Report (GN 30 S15).</li> </ul>	Tel: +264 61 284 2701

Legislation/Policy/ Guideline	Relevant Provisions	Implications for this project
Minerals (Prospecting and Mining) Act (No. 33 of 1992)	- Section 48 (3): To enable the Minister to consider any application referred to in section 47 the Minister may (b) require the person concerned by notice in writing to (i) carry out or cause to be carried out such environmental impact studies as may be specified in the notice Section 54(2): details provisions pertaining to the decommissioning or abandonment of a mine.  - Under this Act (Section 51 (1a)), holder of a mineral license cannot exercise any rights on a private land until the holder has entered into an agreement with the owner regarding payment of	The Proponent should ensure that all necessary permits/authorization for these EPL are obtained from the Ministry of Mines and Energy (MME).  Mining Commissioner  Tel: +264 61 284 8086  The Proponent should timely enter into and sign access and land use agreement (consent) with the respective affected farm owners.
Petroleum Products and Energy Act (No. 13 of 1990) Regulations (2001)	- Regulation 3(2)(b) states that "No person shall possess or store any fuel except under authority of a license or a certificate, excluding a person who possesses or stores such fuel in a quantity of 600 litres or less in any container	-The Proponent should obtain the necessary authorisation form the MME for the storage of fuel on-site.  Ministry of Mines and Energy: Director – Petroleum Affairs  Tel: +264 61 284 8291

Draft EMP: EPL 8747

Legislation/Policy/ Guideline	Relevant Provisions	Implications for this project
	kept at a place outside a	
	local authority area"	
Forestry Act 12 of	- Prohibits the removal of	- Should there be protected plant
2001, Amended Act 13 of 2005	any vegetation within 100 m from a watercourse (Forestry Act S22 (1)). The Act prohibits the removal of and transport of various protected plant species.	species, that are known to occur within the project site, these are required to be removed and a permit should be obtained from the nearest forestry office (Ministry of Environment, Forestry and Tourism (MEFT)) prior to removing them.
		Director of Forestry Division  Tel: +264 61 208 7320
National Heritage Act No. 76 of	Call for the protection and	Should any archaeological material, such as
1969	conservation of heritage resources and artefacts.	bones, old weapons and equipment etc. be found on the EPL site, work should stop immediately, and the National Heritage Council of Namibia must be informed as soon as possible. The Heritage Council will then decide whether to clear the area or conserve the site or material.  Contact Details at National Heritage
		Council of Namibia.  Regional Heritage Officer – National Heritage Council of Namibia  Tel: (06) 301 903

Draft EMP: EPL 8747

### 1.5 Draft EMP Limitations

This EMP has been drafted with the acknowledgment of the following limitations:

 This EMP has been drafted based on the Environmental Assessment (EA) conducted for targeted prospecting and exploration activities of Base and Rare Metals, Dimension stones, Industrial Minerals and Precious Metals on EPL 8747.

 The mitigation measures recommended in this EMP document are based on the risks and impacts identified in the ESA report, site investigation, and public input. Should the scope of the proposed project change, the risks/impacts will have to be reassessed and mitigation measures provided accordingly.

Draft EMP: EPL 8747

#### 2 EMP ROLES AND RESPONSIBILITIES

The Proponent is ultimately responsible for the implementation of the EMP. However, the Proponent may delegate this responsibility at any time, as they deem necessary during the project phases. The roles and responsibilities of all delegates and parties involved in the effective implementation of this EMP are set out below:

Draft EMP: EPL 8747

# 2.1 Competent Monitoring Authority: Department of Environmental Affairs and Forestry (DEAF, MEFT))

The DEAF is responsible for enforcing compliance with the EMA, its regulations, and the full implementation of this EMP. The competent authority also reviews biannual reports and grants ECC renewal after 3 years.

### 2.2 The Proponent or Proponent's Representative (PR)

If the Proponent does not personally manage all aspects and phases' activities referred to in this EMP, they should assign this responsibility to a suitably qualified individual referred to in this plan as the Proponent's Representative (PR). The PR may be appointed to manage all phases of the project or to manage only the EMP aspects of the project. The PR's responsibilities may include:

- Managing the implementation of this EMP and updating and maintaining it when necessary.
- Management and monitoring of individuals and/or equipment on-site in terms of compliance with this EMP.
- Issuing fines for contravening EMP provisions.

### 2.3 Exploration Manager (as appropriate)

This individual will be responsible for ensure that the exploration activities of the project are completed on time. The manager's duties and responsibilities will include:

- Ensure that relevant commitments contained in the EMP Action Plans are adhered to.
- Ensure that relevant staff is trained in the procedures associated with their responsibilities.
- Maintain records of all relevant environmental documentation for the project.
- Reviewing the EMP annually and amending the document when necessary.

 Issuing fines to individuals who may be in breach of the EMP provision and if necessary, removing such individuals from the site.

Draft EMP: EPL 8747

- Cooperate with all relevant interested and affected parties/stakeholders.
- Development and management of schedules for daily activities.

### 2.4 Environmental Control Officer (ECO)

The Proponent may assign the responsibility of ensuring EMP compliance throughout the project life cycle to a designated member of staff or external qualified and experienced person, referred to in this EMP as the Environmental Control Officer (ECO). The ECO will have the following responsibilities:

- Management and facilitation of communication between the Proponent, PR and Interested and Affected Parties (I&APs) regarding this EMP.
- Conducting site inspections (recommended frequency is monthly or weekly as recommended – please refer to Table 3) of all areas with respect to the implementation of this EMP (monitor and audit the implementation of the EMP).
- Advising the PR on the removal of person(s) and/or equipment not complying with the provisions of this EMP.
- Making recommendations to the PR with respect to the issuing of fines for contraventions of the EMP.
- Undertaking an annual review of the EMP and recommending additions and/or changes to this document.
- Ensuring that the exploration activities on site are conducted in accordance with the International System Organization (ISO) standard 14001: 2015.

#### Archaeology: Chance Finds Procedure (CFP) Implementation Roles

The following personnel have been assigned responsibilities as per the Chance Finds procedure (Appendix 1):

- Operator: To exercise due caution if archaeology remains are found.
- **Foreman**: To secure the site and advise management promptly.
- Superintendent: To determine safe working boundary and request inspection.
- Archaeologist: To inspect, identify, advise management, and recover remains.

The Proponent should thoroughly evaluate these commitments and acknowledge their obligation to the specific management actions outlined in the tables under the following sections.

Draft EMP: EPL 8747

### 3 ENVIRONMENTAL MANAGEMENT & MITIGATION MEASURES

### 3.1 Management of Key Potential Adverse Environmental Impacts

From the assessment conducted, the following key potential negative impacts have been identified and are summarized below.

Draft EMP: EPL 8747

- Potential disturbance of grazing land areas,
- Physical land / soil disturbance
- Impact on local biodiversity (fauna and flora), habitat disturbance and potential illegal wildlife hunting (poaching) in the area.
- Potential impact on water resources and soils, particularly due to pollution.
- Air quality: potential dust generated from the project.
- Potential occupational health and safety risks.
- Vehicular traffic safety and impact on service infrastructure such as local roads.
- Vibrations and noise associated with drilling activities may be a nuisance to locals
- Environmental pollution (solid waste and wastewater)
- Archaeological and heritage resources impact.
- Potential social nuisances and conflicts (theft, damage to properties, etc.).

# 3.2 Aim of the Environmental Management Action Plan

The aim of the management actions of the EMP is to avoid the potential negative impacts, where possible. Where impacts cannot be avoided, measures are provided to reduce their significance.

Management actions recommended for the potential impacts rated in the ESA carried out for the prospecting and exploration activities were based on the following project stages (phases):

- Phases of planning, prospecting and exploration (as well as site maintenance) (Table
   2)
- Monitoring (**Table 3**)
- Decommissioning and Rehabilitation (section 3.5).

The responsible person(s) should assess these actions in detail and acknowledge their commitment to the specific management actions detailed in the phases given under the following subsections.

# 3.3 Exploration Activities Mitigation Plan

The management action plan recommended for these exploration phases are presented in **Table 2** below.

Table 2: Management and mitigation action plans for the planning and exploration phases

Aspect	Impact	Management and Mitigation Measure(s)	Key Performance Indicator (KPI)	Implementation Responsibility	Resources	Timeline
		Pl	LANNING PHASE			
EMP implementation and training	- Lack of EMP awareness and implications thereof	-A comprehensive health and safety plan for the project activities should be compiled. This will include all the necessary health, safety, and environmental considerations applicable to the respective works on site.  - An EMP non-compliance penalty system should be implemented on site.  - The Proponent may appoint an ECO to be responsible for managing the EMP implementation and monitoring.	-All required Plans and systems are compiled and in place. and Environmental Control Officer (ECO) is appointed	Proponent	EMP implementation plans and systems	Pre-exploration works
Authorizations	- Lack of Agreements, Permits/ Licenses	-All the required agreements and licences or permits should be applied for and signed, respectively before the commencement of work on the EPL, or as required.  -The permits and agreements referred to herein include:	-Applicable permits and licences to obtained from relevant authorities and kept on site for records keeping and future inspections.  -Agreements/permits signed and obtained from on time, min. 2	Proponent	- Proponent  - Respective authorities and services provider(s)	Prior to exploration works

Draft EMP: EPL 8747

Aspect	Impact	Management and Mitigation Measure(s)	Key Performance Indicator (KPI)	Implementation Responsibility	Resources	Timeline
		Land access by the farm owners (landowners).      Waste management disposal permits from the relevant facility operator/owner      Water supply agreements.  MME on-site fuel storage permit for any petroleum stored on-site	Months prior to plan commencement date of works.			
Communication between the Proponent and other neighbouring land users and custodians	Lack of communication (proper liaison) between other land users and Proponent with regards to land use	-The Proponent should appoint a Public Relation Officer (PRO) to liaise with the land users.  -A clear communication procedure/plan which should include a grievance mechanism.	A PRO is appointed  -Ongoing Farmers' Engagement & Consultation throughout the project cycles, when and as required. PRO contact details to be provided to the affected landowners	Proponent	PRO Complaint's logbook	PRO appointment (Prior to project activities) and their responsibilities throughout the project activities
Employment	Creation of employment opportunities.	-Non-skilled labour should be sourced from the locally affected area (people from the local communities), in accordance with	-Number of locals employed for exploration activities.	Proponent in collaboration with the Exploration	Record of employees	Pre-project activities and when necessary, throughout

Draft EMP: EPL 8747

Aspect	Impact	Management and Mitigation Measure(s)	Key Performance Indicator (KPI)	Implementation Responsibility	Resources	Timeline
		procedures approved by the relevant authorities.  -Preference of local people for employment injobs should be implemented, i.e., permanent residents from the farms surrounding areas should be employed for unskilled labour preferentially to out-of-area people (outsiders) where possible. Out-of-area employment should be justified, for example, by the unavailability of local skills.  -Equal opportunity should be provided for both men and women, when and where possible.		Manager (if necessary)		
Specialised procurement of services	Contractors and services	-All services related to exploration activities such as trenching/pitting and drilling that the Proponent may need, preference should be given to local providers of such services. If not available locally, the service search should be extended to a regional level (Omaheke Region), nationally and finally, internationally.	Number of hired contractors.	Proponent  Exploration  Manager	Record of hired or contracted companies or services providers	Pre-project activities and when necessary, throughout
		PROSPECTING	AND EXPLORATION P	HASE		

Draft EMP: EPL 8747

Aspect	Impact	Management and Mitigation Measure(s)	Key Performance Indicator (KPI)	Implementation Responsibility	Resources	Timeline
EMP implementation and training	Lack of EMP awareness and implications thereof.	- All new workers on site should receive EMP training.  -All site personnel should be aware of necessary health, safety, and environmental considerations applicable to their respective work.  -The implementation of this EMP should be monitored.  The site should be inspected, and a compliance audit should be done throughout the project's activities, monthly.  An EMP non-compliance penalty system should be implemented on site.	Compliance monitoring conducted bi-annually and should be recorded.	ECO	-Bi-annual reports  -Records of EMP training conducted.	Throughout the exploration phase and as required
Communication between the Proponent and other neighbouring land users and custodians	Lack of communication (proper liaison) between farmers and Proponent with regards to land use	- Prior to beginning activities, the PRO should be introduced to the farm owners and his or her contact information provided to them for easy communication during exploration activities.  The Proponent should compile a clear communication procedure or plan that should include a grievance and response mechanism.	- PRO is part of the project personnel.  - Ongoing farmers' engagement & consultation throughout the project cycles, when and as required	PRO	Complaint's logbook PRO contact details to be provided to the affected land users.  Records of farmers' consultation  Land access agreement conditions	Throughout the exploration activities

Draft EMP: EPL 8747

Aspect	Impact	Management and Mitigation Measure(s)	Key Performance Indicator (KPI)	Implementation Responsibility	Resources	Timeline
			-Community/farmers' grievances addressed to their satisfaction			
Grazing land	Loss of grazing areas	-Any unnecessary removal or destruction of grazing land, due to exploration activities should be avoided.	-Limited cleared sites -Less access tracks	Proponent / Exploration Manager	Grievance logbook	Throughout the phases
		-Vegetation found on the site, but not in the targeted exploration areas should not be removed but left to preserve biodiversity and grazing land.	-No complaints from farmers regarding significant land/vegetation clearing	ECO		
		-Workers should avoid driving off road and creating unnecessary tracks, which could lead to loss of grazing land.				
		-Environmental awareness on the importance of the preservation of grazing land for local livestock should be provided to the workers.				
Water Resources	Over- abstraction (water demand and availability)	-Given the high rainfall in the area, drilling near rivers, streams and river beds (within 50m) should be avoided during heavy rainy days. This is to prevent potential pollutants from being washed off the drilling site surface into these surface water bodies via runoff and, eventually, groundwater.	Water supply agreements  Proof/ recording/ quantification of water saving efforts.	Proponent	Water supplier  Water supplying agreements	Once off supply agreement

Draft EMP: EPL 8747

Aspect	Impact	Management and Mitigation Measure(s)	Key Performance Indicator (KPI)	Implementation Responsibility	Resources	Timeline
		-Fuel and other hazardous substances should be stored and contained in properly sealed containers placed on or installed over a plastic liner or any impervious layer on the surface to prevent accidental spills and leakage from reaching the soils and water resources.  -The drilling mud and associated additives should not be mixed with non-biodegradables or chemicals that may be harmful to groundwater resources.  -Wastewater and used hydrocarbons (fuels, oil and grease) must be properly secured and disposed of at the nearest approved wastewater treatment and hazardous waste management facility, respectively.  -Hydrocarbon spill management and emergency procedures must be implemented onsite and personnel must trained on how to effectively clean up spills.  -Fuel and oil spill kits should be made available onsite and training thereof.  -The project personnel and visitors alike should be provided with		Exploration Manager	Proponent  Water storage tanks on site	Throughout the exploration phase

Draft EMP: EPL 8747

Aspect	Impact	Management and Mitigation Measure(s)	Key Performance Indicator (KPI)	Implementation Responsibility	Resources	Timeline
		portable toilets to ensure that no one practices open defecation onsite leading to the migration of human waste into surface water and eventually groundwater.  - If the proponent intends to discharge effluent or wastewater into the environment, a discharge permit should be applied for and obtained from the Water Environment and Law Administration Division of the Ministry of Agriculture, Water, and Land Reform (MAWLR).  -Water resources protection against pollution must be incorporated into personnel's induction and awareness must be made to endure accountability among project personnel while onsite.  -A groundwater abstraction & use permit should be applied for and obtained from the Water Law Administration Division of the Ministry of Agriculture, Water and Land Reform (MAWLR).	Indicator (KPI)	Responsibility		
		-In case of the drilling of new boreholes for the project, a drilling				

Draft EMP: EPL 8747

Aspect	Impact	Management and Mitigation Measure(s)	Key Performance Indicator (KPI)	Implementation Responsibility	Resources	Timeline
		permit should be obtained from MAWLR' Geohydrology Division.  -The recycling and reusing of water should be encouraged and practiced onsite, where possible.  -Groundwater use, management and conservation should be encouraged onsite to ensure accountability.				
Soils	Physical soil/land disturbance and loss of topsoil	-Overburden soils and rocks should be handled more efficiently during operations to avoid erosion when subjected to erosional processes.  -Stockpiled topsoil and drilling materials should be used to backfill the excavated and disturbed site areas and spots.  -Soils that are not within the intended and targeted footprints of the site should be left undisturbed and soil conservation should be implemented as far as possible.  -Project vehicles and machinery should stick to the access roads provided and /or meant for the project operations but not unnecessarily create further tracks	No proliferation of informal vehicle tracks.  No new erosion gullies.	ECO	Proponent  All personnel  Complaint's logbook	Throughout the exploration phase

Draft EMP: EPL 8747

Aspect	Impact	Management and Mitigation Measure(s)	Key Performance Indicator (KPI)	Implementation Responsibility	Resources	Timeline
		on site by driving everywhere resulting in soil compaction.  -The disturbance of the soil surface in the vicinity of the work sites must be minimised to prevent wind erosion. The footprint of the EPL site area must be kept as small as possible and existing access roads are to always utilise to avoid off road tracks.  -The project footprint area should not be cleared entirely, and the exploration vehicles and equipment must be placed in such a way that soil disturbance is minimised, and the site should be rehabilitated after each onsite work.				
Soils and water resources	Soils and water resources pollution	-Oil and wastewater spill control preventive measures should be in place on site to manage soil contamination, thus preventing and minimizing the contamination from reaching water resource bodies. Some of the soil control preventive measures that can be implemented include:  -Spill control preventive measures should be in place on site to manage soil contamination, thus preventing or minimizing the	No complaints of pollutants on the soils and eventually in the water due to exploration activities  No visible oil spills on the ground or pollution spots.	ECO	Complaint's logbook  Waste containers  Non-permeable material to cover the ground surface at areas where hydrocarbons and potential pollutants are utilized.	Throughout exploration phase

Draft EMP: EPL 8747

Aspect	Impact	Management and Mitigation Measure(s)	Key Performance Indicator (KPI)	Implementation Responsibility	Resources	Timeline
		contamination from reaching water bodies.				
		-All project employees should be sensitized about the impacts of soil pollution and advised to follow appropriate fuel delivery and handling procedures.				
		-The Proponent should develop and prepare countermeasures to contain, clean up, and mitigate the effects of an oil spill. This includes keeping spill response procedures and a well-stocked cache of supplies easily accessible.				
		-Ensure employees receive basic Spill Prevention, Control, and Countermeasure (SPCC). Plan training and mentor new workers as they get hired.				
		-Project machines and equipment should be equipped with drip trays to contain possible oil spills when operated on site.				
		-Polluted soil should be removed immediately and put in a designated waste container for later disposal.				
		-Drip trays must be readily available on this trailer and monitored to ensure that				

Draft EMP: EPL 8747

Aspect	Impact	Management and Mitigation Measure(s)	Key Performance Indicator (KPI)	Implementation Responsibility	Resources	Timeline
		accidental fuel spills along the tank trailer path or route around the exploration sites are cleaned promptly (soon after the spill has happened).  -Polluted soil must be collected and transported away from the site to an approved and appropriately				
		classified hazardous waste treatment facility.				
		-Washing of equipment contaminated hydrocarbons, as well as the washing and servicing of vehicles should take place at a dedicated area, where contaminants are prevented from contaminating soil or water resources.				
		-Toilet water should be treated using the long drop toilet system and periodically emptied out before reaching capacity and transported to a wastewater treatment facility.				
Biodiversity	Loss of Fauna and Flora	Fauna:  -The poaching (illegal hunting) of wildlife on the farms and surrounding areas is strictly prohibited.	No disturbance to unmarked areas.  No complaints from locals regarding unauthorised	ECO	Barricading tape (to indicate working areas)  Complaint logbook	Throughout the exploration phase

Draft EMP: EPL 8747

Aspect Impact	Management and Mitigation Measure(s)	Key Performance Indicator (KPI)	Implementation Responsibility	Resources	Timeline
	-The project workers should refrain from killing or snaring the farm livestock that may be found on and around the site.  -Workers should refrain from disturbing and poaching animal species found within the EPL and surrounding areas.  -Access roads (even existing ones) should be utilized appropriately in a manner that disturbs as little land areas as possible, thus minimizing faunal habitat destruction.  -Breeding sites for faunal species that are found within the site and nearby should not be disturbed.  -Environmental awareness on the importance of faunal preservation should be provided to the workers and contractors.  Flora:  -The Proponent should avoid unnecessary removal of vegetation, thus promoting a balance between biodiversity and their exploration works.  -Vegetation found on the site, but not in the targeted exploration	No intentional disturbance and destruction of site vegetation and faunal species  Visible preservation of onsite vegetation			

Draft EMP: EPL 8747

Aspect	Impact	Management and Mitigation Measure(s)	Key Performance Indicator (KPI)	Implementation Responsibility	Resources	Timeline
		areas should not be removed but left to preserve site's biodiversity.				
		-Movement of vehicles and machinery should be restricted to existing roads and tracks to prevent unnecessary damage to the vegetation.				
		-Design access roads appropriately in a manner that disturbs as little land as possible.				
		-Make use of the existing road network as much as possible and avoid off-road driving, thus minimizing onsite floral destruction.				
		-Vegetation clearing to be kept to a minimum. The vegetation of the site is largely low and open and therefore, whole-sale vegetation clearing should only be applied where necessary and within the EPL footprint.				
		-Vegetation found on the site, but not in the targeted areas should not be removed but left to preserve biodiversity on the site.				
		-Environmental awareness on the importance of floral biodiversity preservation should be provided to the workers and contractors.				

Draft EMP: EPL 8747

Aspect	Impact	Management and Mitigation Measure(s)	Key Performance Indicator (KPI)	Implementation Responsibility	Resources	Timeline
Illegal hunting	Illegal hunting of wildlife	-No wildlife hunting is permitted.  -Site personnel should refrain from killing, poaching or intentionally disturbing wildlife, or any faunal species found on site and around the EPL site.	Incident reports of illegal hunting of wildlife by the crew.	ECO	Complaint's logbook  Anti-poaching Police Unit	During site set up, and throughout exploration phase
Land Use	Conflict between land uses and exploration activities	-Exploration activities should not in any way hinder the existing land uses within the EPL but rather promote co-existence throughout the project's operations while respecting other land users.  -The project workers and vehicles should be restricted to the actual EPL active sites and wander or drive around other land uses sites, respectively.  -The Proponent should ensure that their activities comply with the conditions set by the competent, regulatory, and affected authorities such that the proposed exploration activities do not severely impact the different existing activities around the EPL.	Land access and use permits/authorizations.  Compliance with conditions set within operational permits by relevant and affected authorities.  Little to no complaints of significant interference from the neighbouring land users	PRO Proponent ECO	Proponent  Relevant authorities (MEFT, MME, etc.)	Throughout the exploration phase
Road use and safety	Increase in vehicular traffic flow	-Vehicles should be driven only on existing access roads and necessary temporary access roads only leading to EPL-	No complaints from members of the public regarding vehicular	Proponent ECO	Number of project vehicles on site	Throughout exploration phase

Draft EMP: EPL 8747

Aspect	Impact	Management and Mitigation Measure(s)	Key Performance Indicator (KPI)	Implementation Responsibility	Resources	Timeline
		mapped sites; no new roads should be constructed where possible.  -The transportation of project materials, equipment and	traffic issues related to the project activities.  All personnel operating the project vehicles and machinery are		Names of drivers  Frequency of water carting	Site access permit (s) to be applied for and obtained prior to commencement of exploration
		machinery should be limited to once or twice a week only, not every day.	appropriately licensed and possession of valid driving licenses.			works
		-The heavy truck loads should comply with the maximum allowed limit while transporting materials and equipment/machinery on the public and access roads.	Demarcated areas for parking, offloading, and loading zones are on sites.			
		-The carted water into the area from outside the project area should be done once or twice a week in container that can supply and store water for most of the week, thus reducing the number of trucks on the road.	If required, site access road permits obtained, and requirements fulfilled.			
		-Drivers of all project phases' vehicles should be in possession of valid and appropriate driving licenses.	No creation of unnecessary tracks on site.			
		Vehicle drivers should adhere to the road safety rules.				

Draft EMP: EPL 8747

Aspect	Impact	Management and Mitigation Measure(s)	Key Performance Indicator (KPI)	Implementation Responsibility	Resources	Timeline
		-Drivers should drive slowly (40km/hour or less), and on the lookout for wildlife and people.  - To avoid accidents caused by mechanical faults in vehicles, project vehicles should be in roadworthy condition and serviced on a regular basis.				
Local roads	Overuse and maintenance	-The heavy trucks transporting materials and services to the site should be scheduled to travel at least twice or three times a week to avoid daily travelling to site, except for cases of emergencies.  -The Proponent should consider frequent maintenance of local roads on the farms to ensure that the roads are in good condition for other road users such as farmers, and travellers from and outside the	-Visible efforts of maintaining access and community roads by the Proponent	Proponent	Road clearing machinery (bull dozers)	Throughout the exploration phase, when necessary
Occupational Health and safety	General health and safety associated with project activities in both phases	area.  -The Proponent should commit to and make provisions for biannual full medical check-up for all the workers at the site to monitor the impact of project related activities on them.  As part of their induction, project workers should receive training on the hazards of mishandling	Comprehensive health and safety plan for all exploration activities compiled.	Proponent  Exploration Manager  ECO	Occupational Health and Safety Personnel Health and Safety Trainings  First aid kits	Throughout the exploration phase and trainings offered as and when required

Draft EMP: EPL 8747

Aspect	Impact	Management and Mitigation Measure(s)	Key Performance Indicator (KPI)	Implementation Responsibility	Resources	Timeline
		equipment and materials on the job site, as well as the health and safety risks associated with their specific jobs.			Trained worker to administer first aid	
		-When working on site, employees should be properly equipped with adequate personal protective equipment (PPE) such as coveralls, gloves, safety boots, earplugs, dust masks, safety glasses, etc.				
		-Heavy vehicles, equipment and fuel storage sites should be properly secured, and appropriate warning signage should be placed where visible.				
		-Drilled boreholes that are no longer in use or will be used later should be properly marked for visibility and capped or closed off.				
		-Drilled boreholes that are no longer in use or will be used later should be properly marked for visibility and capped or closed off				
		Ensure that exploration holes are capped and closed off after completion, and that trenches are backfilled and leveled.				

Draft EMP: EPL 8747

Aspect	Impact	Management and Mitigation Measure(s)	Key Performance Indicator (KPI)	Implementation Responsibility	Resources	Timeline
		-An emergency preparedness plan must be compiled, and all personnel must be appropriately trained.				
		-Workers should not be allowed to drink alcohol prior to and during working hours nor should they be allowed on site when under the influence of alcohol as this may lead to the mishandling of equipment's, which results in injuries and other health and safety risks.  -The site areas that are considered temporary risks should be equipped with cautionary signs.				
	Accidental fire outbreak	-Portable fire extinguishers must be provided on siteNo open fires are to be created by project personnel on farmsPotential flammable areas and structures such as fuel storage tanks should be marked as such with clearly visible signage.	No wildfires recorded (due to presence of workers)	Proponent	Fire extinguishers (1 per vehicle) and 1 per working site	Throughout exploration phase
Archaeology and heritage	Accidental disturbance and destruction of archaeological	-If any archaeological material or human graves/remains are uncovered during the course of the exploration activities, work in the	Preservation of all artefacts and objects that are discovered on and around project site	Proponent	Salvage equipment  Archaeologist	As and when required, i.e., prior to site set up, and during exploration.

Draft EMP: EPL 8747

Aspect	Impact	Management and Mitigation Measure(s)	Key Performance Indicator (KPI)	Implementation Responsibility	Resources	Timeline
	or heritage	immediate area must halt, and the	No-Go Areas avoided			
	objects and	finds would need to be reported to				
	sites	heritage authorities for inspection				
		by an archaeologist.				
		-Buffer zones should be kept as far				
		away from known significant				
		archaeological, historical, or				
		cultural heritage sites as possible.		ECO		
		-Graves and areas with cultural				
		significance are excluded from				
		any development.		Operator		
		-A "No-Go-Zone" should be put in				
		Where there is evidence of				
		subsurface archaeological				
		materials, archaeological sites,				
		historical, rock paintings, cave or		Foreman		
		rock shelters, or past human			Flag tapes	
		dwellings, a "No-Go-Zone" should		Superintended		
		be established. It can be a fence			GPS (site marking)	
		or completely avoiding the site by		Archaeologist		
		not working close to the known				
		site.				
		-On-site personnel and contractor				
		crews must be sensitized to				
		exercise and recognize "chance				
		finds heritage" in the course of				
		their work.				

Draft EMP: EPL 8747

Aspect	Impact	Management and Mitigation Measure(s)	Key Performance Indicator (KPI)	Implementation Responsibility	Resources	Timeline
		-During the prospecting and				
		exploration works, it is important to				
		take note and recognize any				
		significant material being				
		unearthed, and make the correct				
		judgement on which actions				
		should be taken (refer to the CFP				
		attached).				
		-If there is a possibility of				
		encountering or unearthing				
		archaeological materials, then it is				
		better to change the layout design				
		so as to avoid the destruction that				
		can occur.				
		-Direct damage to archaeological				
		or heritage sites should be				
		avoided as far as possible and,				
		where some damage to significant				
		sites is unavoidable, scientific or				
		historical data should be rescued.				
		-All ground works should be				
		monitored and where any				
		stratigraphic profiles in context				
		with archaeological material are				
		exposed, these should be				
		recorded, photographed and				
		coordinates taken.				

Draft EMP: EPL 8747

Aspect	Impact	Management and Mitigation Measure(s)	Key Performance Indicator (KPI)	Implementation Responsibility	Resources	Timeline
		-The footprint impact of the				
		proposed prospecting and				
		exploration activities should be				
		kept to a minimum to limit the				
		possibility of encountering chance				
		finds within the EPL boundaries.				
		-A landscape approach to site				
		management must consider				
		culture and heritage features in the				
		overall planning of exploration				
		infrastructures within and beyond				
		the license boundaries;				
		-				
		When topsoil and subsoil are				
		removed from a site for exploration				
		purposes, a qualified				
		archaeologist or site manager				
		should monitor the site for				
		subsurface archaeological				
		materials.				
		-Show overall commitment and				
		compliance by adapting a				
		"minimalistic or zero damage				
		approach throughout the				
		exploration activities.				

Draft EMP: EPL 8747

Aspect	Impact	Management and Mitigation Measure(s)	Key Performance Indicator (KPI)	Implementation Responsibility	Resources	Timeline
		-There must be controlled				
		movement of the people i.e. a				
		contractor, exploration crews,				
		equipment's, setting up of camps				
		and everyone else involved in the				
		prospecting and exploration				
		activities. This is recommended to				
		limit the creation of informal				
		pathways, gully erosion and				
		disturbance to surface and sub-				
		surface artifacts such as stones,				
		tools and other buried materials,				
		etc.				
		-There must be controlled				
		movement of heavy loads such as				
		abnormal vehicles and kinds of				
		heavy duty machineries within the				
		EPL. This means avoiding				
		chances of crossing paths that				
		may lead to the destruction of on				
		and sub-surface archaeological				
		materials				
		- Should any previously				
		undetected heritage or				
		archaeological resources be				
		exposed or uncovered during the				
		exploration phases of the				

Draft EMP: EPL 8747

Aspect	Impact	Management and Mitigation Measure(s)	Key Performance Indicator (KPI)	Implementation Responsibility	Resources	Timeline
		proposed project, these should be				
		immediately reported to the				
		heritage specialist or heritage				
		authority (National Heritage				
		Council of Namibia).				
		-The Proponent and contractors				
		should adhere to the provisions of				
		Section 55 of the National				
		Heritage Act in event significant				
		heritage and cultural features are				
		discovered in the course of				
		exploration works.				
		- Anyone in charge of mitigation				
		and monitoring measures must				
		have the authority to halt any				
		exploration or construction				
		activities that violate the National				
		Heritage Act of 2004, National				
		Heritage Guidelines, or the overall				
		project EMP.				
Littering and waste management	Environmental Pollution	-At the end of each day's work, the proponent should ensure that no waste is left on the sites.	No visible litter around the project area	ECO	Waste storage containers	Throughout exploration phase

Draft EMP: EPL 8747

Aspect	Impact	Management and Mitigation Measure(s)	Key Performance Indicator (KPI)	Implementation Responsibility	Resources	Timeline
(general waste and sanitation)		<ul> <li>-All domestic and general project waste produced daily should be contained until such that time it will be transported to designated waste sites.</li> <li>-No waste may be buried or burned on site or anywhere else.</li> </ul>	Provision of sufficient waste storage containers  Waste management awareness		Waste disposal permits to municipalities  Environmental, Health and Safety	
		-The exploration site should be equipped with separate waste bins for hazardous and general/domestic waste.			Statements and Policy	
		-Sewage waste should be stored as per the available sewage system (long drop toilets) supplied on site and regularly disposed of at the nearest treatment facility				
		-Oil spills should be taken care of by removing and treating soils affected by the spill.				
		-A penalty system for irresponsible disposal of waste on site and anywhere in the area should be implemented.				
		-Careful storage and handling of hydrocarbons on site is essential, therefore should be enforced.				
		-Potential contaminants such as hydrocarbons and wastewater should be contained on site and disposed of in accordance with				

Draft EMP: EPL 8747

Aspect	Impact	Management and Mitigation Measure(s)	Key Performance Indicator (KPI)	Implementation Responsibility	Resources	Timeline
		municipal wastewater discharge standards so that they do not contaminate surrounding soils and eventually groundwater.  -An emergency plan must be available for major/minor spills at the site during exploration (with consideration of air, groundwater, soil, and surface water) and during the transportation of the product(s) to the sites.				
	Wastewater generated by exploration workers living on-site.	-Provision of toilet facilities for workers (mobile or portable chemical toilets if possible)Emptying of chemical toilets according to the manufacturer's specifications.	Adequate toilet and basic ablution facilities on site.	Proponent	Chemical toilets  Sewage removal operator  waste treatment agents/chemicals	Throughout exploration phase
Air Quality	Dust generation	-Exploration vehicles should not drive at a speed more than 40 km/h to avoid dust generation around the area.  -When and if the project reaches the advanced stages of exploration, a reasonable amount of water may be used on gravel roads and near exploration sites, to suppress the dust that may be	No complaints from the public about vehicle emissions and dust generation.  Visible efforts to curb dust	ECO	Complaint's logbook  Dust suppressant (Water)	Throughout exploration phase

Draft EMP: EPL 8747

Aspect	Impact	Management and Mitigation Measure(s)	Key Performance Indicator (KPI)	Implementation Responsibility	Resources	Timeline
		emanating from certain exploration areas on the EPL.  -Dust masks, eye protective glasses and other respiratory personal protective equipment (PPE) such as face masks should be provided to the workers in the drilling areas, where they are exposed to dust.  -Excavating equipment should be regularly maintained to ensure drilling and excavation efficiency and so to reduce dust generation and harmful gaseous emissions.				
Noise	Nuisance	-Noise from project vehicles and equipment on the working sites of the EPL must be at acceptable levels.  -The exploration times must be set such that, no such activities are carried out during the night or very early in the mornings.  -Exploration hours should be restricted to between 08h00 and 17h00, or at hours agreed upon by Proponent and land owners, to avoid noise and vibrations generated by exploration equipment and the movement of vehicles before or after hours.	Complaints from farmers and neighbouring land users about excessive noise.	ECO	Complaint's logbook  Noise protective equipment for workers	Throughout exploration phase

Draft EMP: EPL 8747

Aspect	Impact	Management and Mitigation Measure(s)	Key Performance Indicator (KPI)	Implementation Responsibility	Resources	Timeline
		-When operating the drilling machinery onsite, workers must be equipped with personal protective equipment (PPE) such as earplugs to reduce exposure to noise.				
Social nuisance	Local properties disturbance and values	-The project workers must refrain from intruding on or vandalising private property or snaring and killing livestock and wildlife.	No complaints from farmers about property theft, disturbance, or intrusion			
		-Any workers or site employees found guilty of intruding on a private property must be dealt with as per their employer' (Proponent's) code of employment conduct.		ECO	Grievance logbook  Land access agreement conditions	Throughout the exploration phase
		-The project workers should be advised to respect the community and local's private properties, values, and norms.				
		-No worker should be allowed to wander into people's private yards or across fences without permission.				
		-The project workers are not allowed to kill or in any way disturb local livestock and wildlife on farms.				
		-Cutting down or damaging of vegetation belonging to land				

Draft EMP: EPL 8747

Aspect	Impact	Management and Mitigation Measure(s)	Key Performance Indicator (KPI)	Implementation Responsibility	Resources	Timeline
		owners the affected farmers or neighbouring farms is strictly prohibited.  -Out-of-area workers that may be employed (due to their unique work skills) on site should be sensitized on the importance of respecting the local values and norms.				
		PROGRESSIVE REHABILI	TATION AND DECOMMIS	SSIONING PHASE		
Rehabilitation	Disturbance and damaging of land	-All drilled boreholes and excavated pits related to the project activities must be capped and backfilled, respectively. During exploration activities, all waste generated and stored on site must be disposed of at the nearest solid waste management site.  -The stockpiled topsoil must be levelled as soon as the work at the site is completed.  -Any temporary setup on site must be dismantled, and the areas rehabilitated as far as practicable, to their original state.  -Explored areas on worksites must be progressively rehabilitated by stockpiling and backfilling.	Capped boreholes and backfilled pits  No sign of waste or littering seen on site and around site areas.  Carrying away of waste, and removal of vehicles and equipment from site  No stockpiled topsoil (topsoil is levelled after completion of each work)	Proponent	Excavators and other backfilling/demolishing machinery  Record of pits excavated, and boreholes drilled (if any)  Waste containers on sites  Photo records of backfilled sites  Records of finances set aside for	Progressive rehabilitation done throughout the exploration phase and complete decommission and rehabilitation done after completion of exploration works.

Draft EMP: EPL 8747

Aspect	Impact	Management and Mitigation Measure(s)	Key Performance Indicator (KPI)	Implementation Responsibility	Resources	Timeline
		-Provision of financial and	Campsite dismantled		decommissioning	
		technical resources for	and materials taken		activities	
		progressive rehabilitation must be	away from site.			
		made by the proponent.				
			Visible signs of stockpiled topsoil			

Draft EMP: EPL 8747

# 3.4 Monitoring Action Plans (Monitoring Plan)

To support and ensure that the proposed mitigation measures are achieving the desired results, a monitoring plan must be implemented. The monitoring action plans recommended for planned exploration works are presented in **Table 3** below.

Table 3: Management action plans for Monitoring

Environmental Feature	Impact	Monitoring Actions	Implementation responsibility	Frequent	Threshold	Action if threshold is exceeded
Archaeology	Rock	No exploration activities at any outcrops	ECO	Weekly	Observed	Remedy the
and Heritage	paintings,	with rock art paintings	Archaeologist		damage to the	consequences by
	Rock engraving, stone tools and graves	Implementing the CFP (Appendix 1)			paintings	halting the activities
Soils	Loss of topsoil	All measures must be considered to present the loss of topsoil	ECO and Exploration Manager	weekly	Proliferation of new vehicle tracks	Rehabilitation of affected areas

Environmental Feature	Impact	Monitoring Actions	Implementation responsibility	Frequent	Threshold	Action if threshold is exceeded
Monitoring	EMP non-compliance	The ECO or the Proponent/Contractor should monitor the implementation of this EMP to ensure compliance.  The ECO(s) should inspect the site throughout the exploration period and after completion.	ECO	Daily	Increase in health, safety and environmental damage incidence	Daily safety talks, Remedy the consequences
Biodiversity	Loss of biodiversity	Adhere to the marked no-go areas and avoid areas that are sensitive to any type of disturbance.  Clear only footprint areas to maintain as much of the remaining natural vegetation on site and to prevent loss of habitat (if so, advised by MEFT).	ECO Workers involved in this phase	Weekly	Vegetation clearance outside of marked areas.	Rehabilitation of affected areas to the satisfaction of the ECO
Health and Safety	Health and safety of the workers	-Workers should be trained on how to handle material and equipment on site to avoid injuries.  -Exploration equipment and materials transported to site must be securely fastened to the vehicles, to ensure that the materials and equipment do not fall off the vehicles and cause injuries to anyone while transporting them.  - All personnel must be provided with appropriate personal protective equipment (PPE), such as gloves,	Workers Involved in this phase	Daily/Weekly	Health and safety incident	Remedy the consequences

Draft EMP: EPL 8747

Environmental Feature	Impact	Monitoring Actions	Implementation responsibility	Frequent	Threshold	Action if threshold is exceeded
		masks, safety boots, safety glasses and hard hats always during exploration hours on site to prevent serious injuries or loss of life.  -Workers must be not allowed to consume any intoxicants prior to and during working hours as this may lead to mishandling of equipment, which results in injuries and other health and safety risks.				
Noise	Noise nuisance	Exploration works schedule must be limited to between 08h00 and 17h00, or for hours agreed upon by the proponent and land owners. This is to ensure noise levels do not become nuisance.	ECO Exploration Manager	Weekly	A logged complaint about excessive noise	Revision of site activities
Waste	Environmental Pollution	-The site must always be kept tidy.  All domestic and general construction waste produced daily should be cleaned and contained daily to prevent environmental pollution.  -Separate waste containers (bins) for hazardous and domestic / general waste must be provided on site to avoid mixing of waste.	All workers involved in this phase.	Daily	Visible litter around project site  A logged complaint	Clean-up of the affected areas and ensuring exploration workers utilise waste containers provided.

Draft EMP: EPL 8747

Environmental Feature	Impact	Monitoring Actions	Implementation responsibility	Frequent	Threshold	Action if threshold is exceeded
Transport	Transportation	-Project workers will be transported in	ECO	Daily	A logged	
	of workers to	suitable passenger vehicle to and from			complaint about	
	and from site	site to ensure workers safety.			bad form of	
					transport affecting	
		-No off-road driving			occupational	
					safety and health	
					of workers	
Vehicular traffic	Increase in	-All drivers of the project vehicles must	ECO	Weekly	A logged	Find alternative
safety	local traffic	be in possession of valid and			complaint about	access roads for the
	flow.	appropriate driving licenses to operate			traffic increase or	team. Rehabilitation of
		such vehicles.			damage to roads	affected roads
		-Project vehicles must be in a road				
		worthy condition and serviced regularly				
		to avoid accidents because of				
		mechanical faults of vehicles.				
		-Vehicle drivers are not allowed to				
		operate vehicles while under the				
		influence.				
		-No heavy trucks or project related				
		vehicles should be parked on				
		biologically sensitive areas.				

Draft EMP: EPL 8747

#### 3.5 Decommissioning and Rehabilitation

Successful rehabilitation requires careful consideration of the local ecological context in combination with rehabilitation goals. The most important steps in undertaking a successful rehabilitation program are planning and environmental awareness (environmental education) on the importance of progressive rehabilitation (or post-activity rehabilitation), and its importance to the environment. Furthermore, the rehabilitation program, the characteristics of the site, the nature of the disturbance, the rehabilitation methods, and the availability of resources will all play a role in the successful implementation of the planned rehabilitation.

Draft EMP: EPL 8747

#### Site Specific Rehabilitation Plan

To ensure that they do their best to rehabilitate the disturbed areas, the Proponent must:

- Utilize stockpiled subsoil and topsoil to back fill the excavated pits or trenches.
- Make financial provisions that will be used for post-exploration rehabilitation program.
- Ensure backfilling of all pits and trenches with loose materials is done.
- Level topsoil that was stockpiled for exploration purposes.
- Remove project vehicles and equipment from the site to designated parking facilities off site.
- Ensure that all project support structures such as ablution facilities, and storage containers
  or tanks are demolished, and the waste is taken to designated sites.
- Ensure that all waste accumulated on site, up until the cessation of exploration activities is removed from site and transported to designated waste management facilities.

**APPENDIX 1: CHANCE FINDS PROCEDURE (AFTER KINAHAN, 2020)** 

Areas of proposed development activity are subject to a heritage survey and assessment at the

Draft EMP: EPL 8747

planning stage. These surveys are based on surface indications alone, and it is therefore possible

that sites or items of heritage significance will be found during development work. The procedure

set out here covers the reporting and management of such finds.

Scope: The "chance finds" procedure covers the actions to be taken from the discovery of a

heritage site or item to its investigation and assessment by a trained archaeologist or other

appropriately qualified person.

Compliance: The "chance finds" procedure is intended to ensure compliance with relevant

provisions of the National Heritage Act (27 of 2004), especially Section 55 (4): "a person who

discovers any archaeological Object must as soon as practicable report the discovery to the

Council". The procedure of reporting set out below must be observed so that heritage remains

reported to the NHC are correctly identified in the field.

Manager/Supervisor must report the finding to the following competent authorities:

National Heritage Council of Namibia (061 244 375)

National Museum (061 276800),

National Forensic Laboratory (061 240461).

Archaeological material must NOT be touched. Tempering with the materials is an offence under

the heritage act and punishable upon conviction by the law.

Responsibility:

**Operator:** To exercise due caution if archaeological remains are found

**Foreman:** To secure site and advise management timeously

**Superintendent:** To determine safe working boundary and request inspection

**Archaeologist:** To 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) Identify the site with flag tape
- c) Determine GPS position if possible
- d) Report findings to foreman

#### Action by foreman

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

#### Action by superintendent

- 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

Draft EMP: EPL 8747

#### 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 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.