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CC/2020/0010007

Draft Environmental Management Plan (EMP)

The Proposed Exploration Activities on Exclusive Prospecting License (EPL) No. 8345 near Otjiwarongo in the Otjozondjupa Region - An Application for Environmental Clearance Certificate (ECC): Prospecting and Exploration only

MEFT Application No.: **APP-005469**

Document Version: **Draft as prescribed by Regulation 8(j) of the EIA Regulations (2012) – this is a living document that can be updated throughout the project cycle as deemed necessary.**

Proponent: **Gecko Gold Mining (Pty) Ltd**

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DOCUMENT INFORMATION

Title: Draft Environmental Management Plan (EMP) for the Proposed Exploration Activities on Exclusive Prospecting License (EPL) No. 8345 near Otjiwarongo in the Otjozondjupa Region – An Application for Environmental Clearance Certificate (ECC): Prospecting and Exploration only

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Date:	30 May 2025

SERJA'S STATEMENT OF INDEPENDENCE

As the Appointed Environmental Consultant to undertake the EIA Study and Preparation of this Draft Environmental Management Plan (EMP) for Proposed Exploration Activities on Exclusive Prospecting License (EPL) No. 8345 near Otjiwarongo in the Otjozondjupa Region, Serja Hydrogeo-Environmental Consultants cc declares that we:

- do not have, to our knowledge, any information or relationship with the Proponent (Gecko Gold Mining (Pty) Ltd), the Ministry of Environment, Forestry and Tourism (MEFT)'s Department of Environmental Affairs and Forestry (DEAF) that may reasonably have the potential of influencing the outcome of this Environmental Assessment and the subsequent Environmental Clearance Certificate applied for.
- have knowledge of and experience in conducting environmental assessments, the Environmental Management Act (EMA) No. 7 of 2007, and its 2012 Environmental Impact Assessment (EIA) Regulation, as well as other relevant national and international legislation, guidelines, policies, and standards that govern the proposed project as presented herein.
- have performed work related to the ECC application in an objective manner, even if the results in views and findings, or some of these may not be favorable to the Proponent.
- have complied with the EMA and other relevant regulations, guidelines, and other applicable laws as listed in this document.
- declare that we do not have and will not have any involvement or financial interest in the undertaking/implementation of the proposed project, other than remuneration (professional fees) for work performed to conduct the ESA and apply for the ECC in terms of the EIA Regulations' requirement as an Environmental Assessment Practitioner (EAP).

Disclaimer: Serja Hydrogeo-Environmental Consultants will not be held responsible for any omissions and inconsistencies that may result from information that was not available at the time this document was prepared and submitted for evaluation.

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Signature:

Fredrika N. Shagama: Principal Environmental Assessment Practitioner & Hydrogeologist

Date: May 2025

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

LIST OF APPENDICES

LIST OF ABBREVIATIONS

DEAF: Department of Environmental Affairs and Forestry

DWA: Department of Water Affairs

ECC: Environmental Clearance Certificate

ECO: Environmental Control Officer

EIA: Environmental Impact Assessment

EMA: Environmental Management Act

EMP: Environmental Management Plan

EPL: Exclusive Prospecting License

ESA: Environmental Scoping Assessment

GG: Government Gazette

GN: Government Notice

I&APs: Interested and Affected Parties

IFC: International Finance Corporation

MAFWLR: Ministry of Agriculture, Forestry, Water and Land Reform

MEFT: Ministry of Environment, Forestry and Tourism

MIME: Ministry of Industries, Mines and Energy

PPE: Personal Protective Equipment

pXRF Portable X-ray fluorescence analysis is a non-destructive technique used for in-situ elemental analysis of various materials, including soils, rocks, and archaeological artifacts.

SHE Officer**:** Safety, Health & Environment Officer

1 INTRODUCTION

1.1 Project Background and Location

Gecko Gold Mining (Pty) Ltd (hereinafter referred to as Gecko Gold Mining or the Proponent) has applied to the Ministry of Industries, Mines and Energy (MIME) on 01 September 2020 for the rights to prospect and explore on the Exclusive Prospecting Licence (EPL) No. 8345. The approval of the EPL is subject to an Environmental Clearance Certificate (ECC) as per the status of the EPL application on the Namibia Mines and Energy Cadastre Map Portal https://portals.landfolio.com/namibia/ ''pending ECC'' - Figure 1-1.

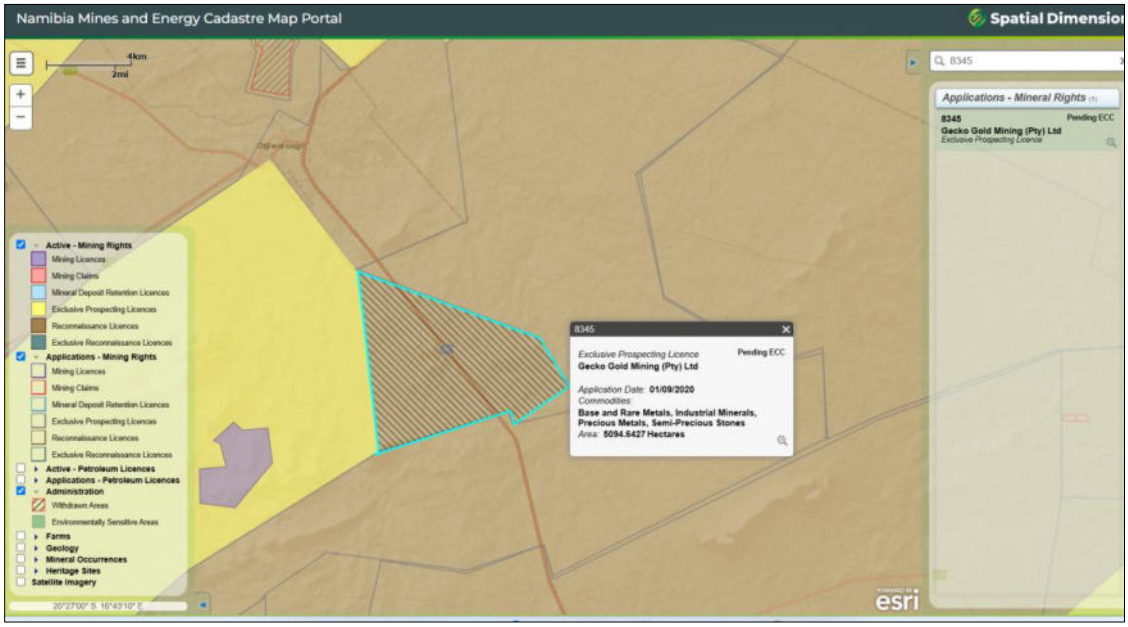

Figure 1-1: The status of EPL-8345 on the Namibia Mines and Energy Cadastre Map Portal (https://portals.landfolio.com/namibia/)

Should the EPL be granted by MIME, the Proponent intends to prospect and explore for Base & Rare Metals (e.g., copper, zinc), Industrial Minerals (gypsum, graphite, etc), Precious Metals (gold), and Semi-Precious Stones (e.g., amethyst) that are potentially occurring within EPL-8345. It is important to note that the proposed activities will be done at a very small-scale level on targeted sites of the EPL towards exploration (to enable the Proponent to get sufficient and reliable exploration data only) and not mining. Thus, this environmental assessment is for exploration activities only, but not for mining activities.

The 5,094.6427 hectare (Ha)-EPL is located about 10km south of Otjiwarongo Town (Figure 1-2), covering mainly two commercial farms, i.e., Farm Pinnacles No. 310 and Farm Roland No. 419, and a very small and negligible part of the EPL touching Farm Graslaagte No. 313 (Figure 1-3) in the Otjozondjupa Region.

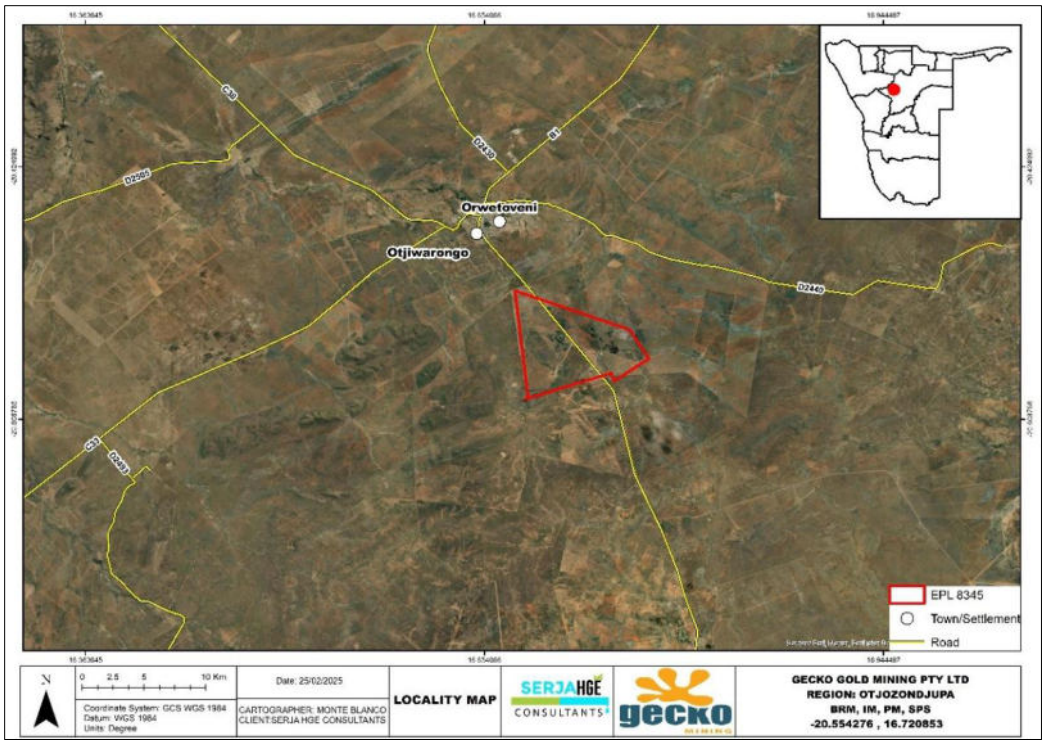

Figure 1-2: Locality Map of EPL-8345 near Otjiwarongo, Otjozondjupa Region

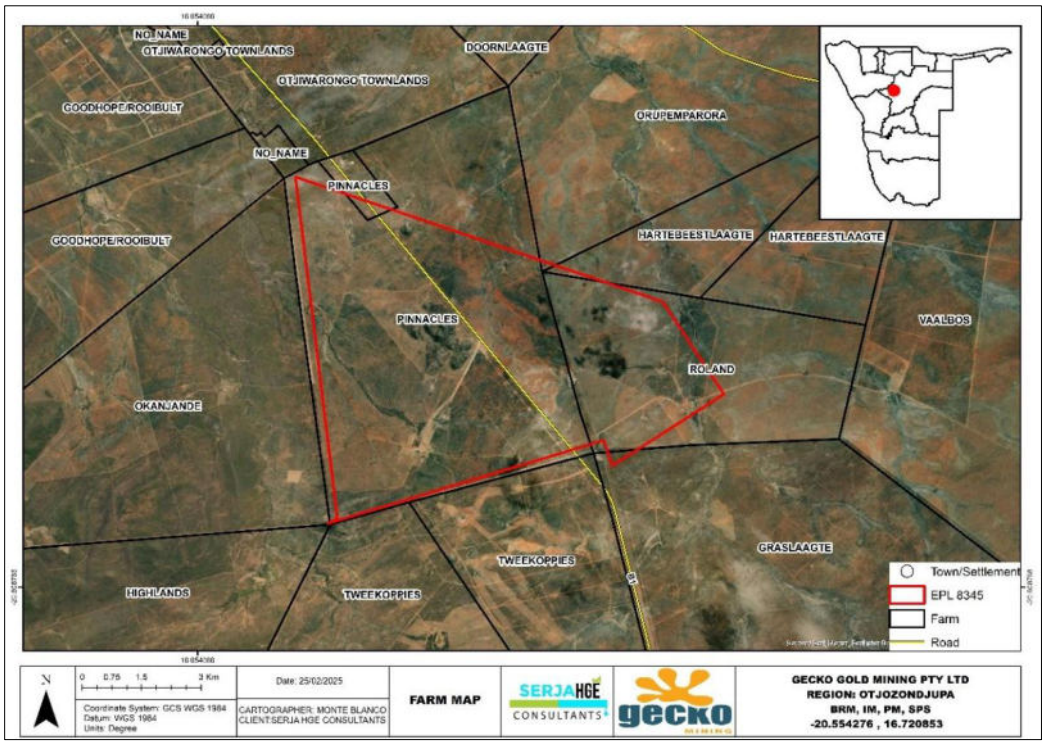

Figure 1-3: Land use (farm) map of EPL-8345

The GPS coordinates of the EPL corners are presented in Table 1-1.

Table 1-1: The GPS coordinates of EPL-8345 corners

EPL Boundary Point	GPS Coordinates
1	-20.593889, 16.750833
2	-20.575000, 16.746389
3	-20.580278, 16.748611
4	-20.565278, 16.768611
5	-20.543611, 16.759722
6	-20.515833, 16.676389
7	-20.593056, 16.697222

1.2 Purpose of the Draft Environmental Management Plan (EMP)

The Draft EMP is developed per Regulation 8(j) of the EIA Regulations (2012), and it should be included as part of the Environmental Assessment (EA) scoping report. 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 as 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 and can be amended to adapt to address project changes and/or environmental conditions and feedback from compliance monitoring.

The EMP is therefore aimed at guiding environmental management throughout the different phases of the proposed exploration activities, namely: planning, prospecting & exploration, and decommissioning & rehabilitation phase.

- Planning phase – Preparation of all the administrative and technical requirements needed for the actual works on the ground. The planning would entail obtaining the necessary permitting and authorization from relevant national and local stakeholders (such as affected farm owners/landowners), facilitating the recruitment and procurement processes, etc.
- Exploration phase – The stage during which actual groundwork/exploration (activities) and associated activities are conducted within the EPL.
- Decommissioning and Rehabilitation – The stage during which the Proponent is rehabilitating the disturbed sites, regardless of the results of exploration activities.

2 BRIEF DESCRIPTION OF THE PROPOSED PROJECT ACTIVITIES

2.1 Pre-Exploration (Proponent Mandatory) Responsibility

Should the ECC and EPL certificate (rights) be issued by MEFT and MIME, respectively, and before mobilizing to the site and undertaking any groundwork for the proposed activities at the site (on the EPL), the Proponent will engage with the local landowners (Pinnacles farms, and Farm Roland) as provided for by Section 52 (1) (a) of the Minerals (Prospecting and Mining) Act No. 33 of 1992 to obtain access to their properties. This is aimed at one-on-one Proponent meetings with individual affected farmers/landowners to set up agreements in terms of conditions of land access and use agreements before any work can be carried out on the EPL.

Exploration activities will not be conducted within a 1.5km radius of farm houses, tourism facilities, and other facilities on farms. A buffer zone of 100m radius from archaeologically sensitive areas/sites on the farms will be established and maintained during exploration. Therefore, no exploration activities will be undertaken within these buffer zones.

2.2 Duration of Prospecting and Exploration Works

The duration for prospecting and exploration is anticipated as follows:

- Geophysical surveys (drone-borne and ground geophysical surveys) and soil sampling programs, for instance, may last from one week to a month at a time over specific areas, until the exploration targets are delineated
- Drilling programs may initially range from two weeks to a month at a time, depending on the planned program or based on the results of the program. The Proponent undertakes to work with all relevant stakeholders to keep them informed of exploration progress to facilitate site visits and access to ongoing field exploration programs.

In general terms, the minerals exploration activities can take up to a maximum of seven years, with different projects at various stages of the exploration phase (Resilient Environmental Solutions, 2019).

The Proponent intends to adopt a systematic and standard prospecting and exploration approach for the minerals potentially occurring on the EPL.

2.3 Planned Exploration Methods

The proposed activities will be done using both non-invasive and invasive techniques as summarized below and detailed in the Scoping Report (Chapter 2):

- Drone-borne/heli-borne and ground geophysical surveys – to delineate exploration targets and define drilling targets.
- Soil and rock sampling (invasive): a collection of soils and rock samples.

- Detailed exploration (invasive): Trenching, and drilling (Reverse Circulation (RC) and diamond drilling).

2.4 Exploration Techniques

Initial exploration activities on the licence will comprise of drone survey over the entire EPL to delineate exploration targets. Ground truthing will be confirmed by geological mapping, ground geophysical surveys, and regional soil sampling programs on selected areas in the EPL. Geophysical data will be processed and interpreted by specialists to define drilling targets. All soil samples collected will initially undergo pXRF analysis for multi-elements; thereafter, a selected number of soil samples will be sent to accredited laboratories for analysis. The above activities will then be followed up with exploration drilling (either reverse Circulation (RC) or diamond drilling-core drilling) and possibly trenching in areas to get detailed data or confirmation at depths.

2.5 Decommissioning and Rehabilitation of Disturbed Sites

Once the exploration activities on the EPL come to an end, the Proponent will need to put site rehabilitation measures in place. Decommissioning and rehabilitation are primarily reinforced through a decommissioning and rehabilitation plan, which consists of safety, health, environmental, and contingency aspects. The economic situation or unconvincing exploration results might force the Proponent to cease the exploration program before the predicted end of the exploration timeline.

As part of site rehabilitation, ensure the project activities are ceased in an environmentally friendly manner and the site is rehabilitated through carrying out the following:

- Dismantling and removal of exploration temporary support structures (such as camps, where applicable) and associated infrastructures from the project site and area,
- Carrying away all exploration equipment and vehicles, and
- Clean up of site working areas and transporting the recently generated waste to the nearby approved waste management facility (as per agreement with the facility operator/owner),

Further decommissioning and rehabilitation practices on site will include:

- Backfilling of pits and trenches used for sampling,
- Closing and capping of exploration holes to ensure that they do not pose a risk to both people and animals in the area, and
- Levelling of stockpiled topsoil: This will be done to ensure that the disturbed land sites are left as close to their original state as possible.

3 LEGAL FRAMEWORK: PERMITTING AND LICENSES

The Proponent 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 per such principles. Table 3-1 presents requirements of an EMP as stipulated by Section 8 (e) of the EIA Regulations, primarily on specific approvals and permits that may be required for the activities required of the EPL.

Table 3-1: List of legal requirements and permits for the EPL activities

Legislation/Policy/ Guideline	Relevant Provisions	Implications for this project
Environmental Management Act EMA (No 7 of 2007)	Requires that projects with significant environmental impacts are subject to an environmental assessment process (Section 27). Details of the principles that are to guide all EAs.	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. Contact details at the Department of Environmental Affairs and Forestry (DEAF), Ministry of Environment, Forestry and Tourism (MEFT), Office of the Environmental Commissioner Mr. Timoteus Mufeti Tel: +264 61 284 2701
Environmental Impact Assessment (EIA) Regulations GN 28-30 (GG 4878)	Details requirements for public consultation within a given environmental assessment process (GN 30 S21). Details the requirements for what should be included in a Scoping Report (GN 30 S8) and an Assessment Report (GN 30 S15).	
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.	The Proponent should ensure that all necessary permits/authorizations for the EPL are obtained from the MIME. Contact person and details at the MIME (Mining Commissioner) Mrs. Isabella Chirchir Tel: +264 61 284 8251.
	Section 52 (1) (a) requires mineral license holders to enter into a written agreement with affected landowners before exercising rights conferred upon the license holder.	After the ECC and EPL certificates are issued, the Proponent should timely engage individual farmers to enter into land access agreements (consent) before undertaking any activities on the EPL (including before mobilization of machinery and equipment). **The contact details of the farmers are provided in the stakeholders list**.

Legislation/Policy/ Guideline	Relevant Provisions	Implications for this project
Water Resources Management Act (No. 11 of 2013)	Ensure that the water resources of Namibia are managed, developed, used, conserved, and protected in a manner. For any project wastewater planned for discharge into the environment, a discharge permit should be applied for and obtained.	The Water Permit should be applied for from the Ministry of Agriculture, Fisheries, Water and Land Reform (MAFWLR) Department of Water Affairs (DWA) Contact: Mr. Franciskus Witbooi Division: Water Policy and Water Law Administration Division Tel: +264 61 208 7158 MAFWLR, DWA's Water Environment Division Contact: Ms. Elise Mbandeka Tel: +264 61 208 7167
Forestry Act (Act No. 12 of 2001	The Proponent will apply for the relevant permit under this Act if it becomes necessary to remove protected trees such as camelthorn and leadwood.	Otjiwarongo Directorate of Forestry Office Tel: +264 67 303 307 OR Mr. Johnson Ndokosho (Forestry Director) Tel: +264 61 208 7666
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 the authority of a license or a certificate, excluding a person who possesses or stores such fuel in a quantity of 600 liters or less in any container kept at a place outside a local authority area"	The Proponent should obtain the necessary authorization from the MIME for the storage of fuel on-site (Consumer Installation Permit). Mr. Carlo McLeod (MIME: Acting Director – Petroleum Affairs) Tel: +264 61 284 8291
National Heritage Act No. 76 of 1969	Call for the protection and conservation of heritage resources and artefacts.	Should any archaeological material, such as bones, unknown graves, old weapons/equipment, etc., be found on the EPL site, work should stop immediately, and the National Heritage Council (NHC) of Namibia must be informed as soon as possible. The Heritage Council will then decide to clear the area or decide to conserve the site or material. Contact Details at the NHC of Namibia Mrs. Erica Ndalikokule – NHC Director Tel: +264 61 301 903

4 EMP IMPLEMENTATION RESPONSIBILITIES

Gecko Gold Mining (the Proponent) is ultimately responsible for the implementation of the EMP. However, the Proponent may delegate this responsibility or part of it to someone else at any time, as they deem necessary. The roles and responsibilities of all delegates/parties involved in the effective implementation of this EMP are provided in Table 4-1.

Table 4-1: The EMP implementation responsibilities for prospecting and exploration

Role	Responsibilities
Gecko Gold Mining (Proponent)	-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 and issuing fines for contravening EMP provisions.
Exploration Manager	This individual will be responsible for ensuring 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 are adhered to. -Ensure relevant staff are trained in procedures entailed in their duties. -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. -Cooperate with all relevant interested and affected parties/stakeholders. -Development and management of schedules for daily activities
Environmental Control Officer (ECO) / Safety, Health & Environment (SHE) Officer	The Proponent may assign the responsibility of ensuring EMP compliance throughout the project life cycle to a designated member of staff or an externally qualified and experienced person, referred to in this EMP as the Environmental Control Officer (ECO) / SHE Officer. 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 of all areas for the implementation of this EMP (monitor and audit the implementation of the EMP). -Advising the Proponent or Exploration Manager on the removal of person(s) and/or equipment not complying with the provisions of this EMP. -Making recommendations to the PR concerning the issuing of fines for contraventions of the EMP.

Role	Responsibilities
	-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 following the International Organization (ISO) standard 14001: 2015.
Public Relations Officer (PRO)	The PRO will be responsible for the following tasks: -Liaising between the stakeholders, farmers (property owners), the public, and the Proponent. -Ensure effective communication with stakeholders (farm owners), media (if necessary), and the public. -Organising and overseeing public relations activities and managing public relations issues. -Preparing and submitting public relations reports, if required. -Collaborating with personnel and maintaining project-related open communication among personnel.

5 ENVIRONMENTAL MANAGEMENT AND MITIGATION MEASURES

5.1 Key Identified Potential Negative Impacts

The key potential positive and negative impacts identified, described, and assessed in the Environmental Scoping Assessment Report and for which the management measures (action plans) have been provided, are listed below:

Positive impacts:

- Local socio-economic development through temporary employment creation for locals
- Payment of land access fees to landowners, and if necessary, the payment of rental fees for setting up structures such as the exploration campsite (or accommodation rental to property owners/farmers), and temporary storage of exploration samples in the area
- Procurement of local goods and services for exploration by small and medium businesses to generate income, thus promoting local entrepreneurship, empowerment, and local economic development

Negative (adverse) impacts:

- Physical soil disturbance resulting in compaction and erosion

- Impact on local biodiversity (fauna and flora) and habitat disturbance
- The potential impact of illegal hunting/poaching of wildlife in the area, being close to protected areas
- Potential impact on water resources and soils (over-abstraction and pollution)
- Impact on air quality owing to dust generation (compromises the surrounding air quality)
- Visual impacts due to unrehabilitated disturbed site areas as a result of trenching and drilling activities
- Potential occupational health and safety risks, and to the locals (open and unattended trenches and drilled holes may pose a risk to people), and to animals (wildlife)
- Potential conflicts over land use between locals' current activities and exploration activities
- Noise associated with exploration drilling and the movement of heavy trucks to the site
- Vehicular traffic safety & impact on local roads
- Environmental pollution (littering) through improper handling, storage, and disposal of waste
- Impact on archaeological and cultural heritage resources.

5.2 The Environmental Management Measures and Rehabilitation of Sites

The management actions are aimed at avoiding the above-listed potential negative impacts, where possible, and where it is impossible to avoid these impacts, measures are provided to reduce the impacts' significance.

The Management action plans (mitigation measures) recommended for the potential impacts rated in the ESA Study were based on the following project stages (phases):

- Planning, Prospecting, and Exploration phases (Table 5-1),
- Site Rehabilitation and Decommissioning (Table 5-2), and
- Biophysical and Social Environmental Monitoring (Table 5-3).

Table 5-1: The Environmental management and mitigation measures for Planning, as well as Prospecting and Exploration activities

Aspect	Impact	Management and Mitigation Measure(s)	Key Performance Indicator (KPI)	Implementation Responsibility	Timeline
Planning 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. -An EMP non-compliance penalty system should be implemented on-site. -The Proponent should appoint an Environmental Control Officer (ECO) or SHE Officer to be responsible for managing the EMP implementation and monitoring.	-All required EMP Implementation Plans and Systems are compiled and in place. -ECO is appointed	-Proponent	Pre-exploration
Authorizations	Lack of Agreements, Permits/ Licenses	-All the required agreements and licenses, or permits should be applied for and signed, respectively, before commencement of work on the EPL, or as required. -The permits and agreements referred to herein include: (a) Land access by the farm owners (landowners). (b) Waste management disposal permits from the relevant facility operator/owner (Otjiwarongo Municipality) (c) Water supply agreements for domestic use or surface water abstraction & use permit (to supply activities such as drilling) (d) Storage permit from MIME for any fuel stored on-site	-Applicable permits and licenses to be obtained from relevant authorities. -Agreements/permits signed and obtained on time, min. 2 months (or as per agreements with the farm owners) before the planned commencement date of works.	-Proponent	Pre-exploration
Communication between the Proponent and landowners	Lack of communication (proper liaison) between landowners and the Proponent about land use	-The Proponent should appoint a Public Relations Officer (PRO) to liaise with the land users. -A clear communication procedure/plan, which should include a grievance mechanism, should be developed. -The farmers (landowners) should be kept posted on any changes, progress, or delays in the project activities communicated or agreed upon. -The issues or complaints raised by the landowners should be effectively attended to timely manner and resolved amicably.	-A PRO is appointed -Ongoing Consultation with farmers throughout the project, when and as required. -PRO contact details provided to landowners -Complaint's logbook	-Proponent	PRO appointment (Before project activities) and their responsibilities throughout the project activities

Aspect	Impact	Management and Mitigation Measure(s)	Key Performance Indicator (KPI)	Implementation Responsibility	Timeline
Employment	Creation of employment opportunities	-Unskilled and semi-skilled labor should be sourced from the local communities. -Preference of out-of-area people for employment for jobs should be implemented, i.e., Otjiwarongo residents (but not locals on the farms, as farmers have expressed concerns about poaching by locals). Therefore, the majority of semi and unskilled employees should be out-of-area people (outsiders) where possible. -Equal opportunity should be provided for both men and women, when and where possible.	-The majority of semi-skilled and unskilled labourers are from outside the farm areas	Proponent in collaboration with the Drilling contractors	Pre-exploration and when necessary, throughout
Land use fees and associated fees for socio-economic development	Local socio-economic development	-Commit to the conditions listed in the land access agreements signed with farmers (landowners). -The payments of land use and access fees should be made as agreed. -Exploration samples, vehicles, equipment, and machinery should not be left scattered in unauthorized areas in or outside the EPL. A designated area for vehicles, equipment, and machinery is agreed upon during the planning stage. -Exploration samples should be stored in a designated area that the landowner has consented to (to be included in the land use agreements). A timeline for storing and transporting samples from the storage to the laboratories should be set and adhered to.	-Proof of funds paid to the respective farmers' bank account and related records -The exploration samples are stored in a designated area, and the timeline of storage is in place -Exploration vehicles, machinery, and equipment are properly parked and stored in designated areas	-Proponent -Exploration Manager	Pre-exploration and when necessary, throughout the project cycle
Specialized procurement of services and goods	Empowerment of local businesses	-All services related to exploration activities, such as trenching, site establishment, and drilling that the Proponent may need, preference and available, locally and regionally, priority should be given to local and regional businesses for services and goods.	-Number of hired contractors. -Record of hired or contracted companies or service providers	-Proponent -Exploration Manager	Pre-exploration
Prospecting and Exploration Phase					

Aspect	Impact	Management and Mitigation Measure(s)	Key Performance Indicator (KPI)	Implementation Responsibility	Timeline
EMP implementation and training	Lack of EMP awareness and implications thereof	-EMP training should be provided to all workers on-site. -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 done throughout the project activities, monthly and bi-annually for overall EMP implementation. An EMP non-compliance penalty system should be implemented.	-Records of EMP compliance/monitoring conducted biannually -The ECC is renewed every 3 years -Records of EMP training conducted.	-Exploration Manager -ECO	Throughout the exploration phase
Communication between the Proponent and landowners on land use/access	Lack of communication (proper liaison) between landowners and the Proponent	-The PRO should be introduced to the farm owners, and his or her contact details provided to them before undertaking activities for easy communication. -The Proponent should compile a clear communication procedure/plan, which should include a grievance and response mechanism.	-PRO is part of the project personnel. -Records of farmers' consultation -Community/farmers' grievances addressed to their satisfaction -Complaint's logbook -Land access agreement conditions	-PRO	Throughout exploration
Water Resources Use	Over-abstraction (water demand and availability)	-Agreements for water supply should be made between the willing water supplier and the Proponent. -No drilling of water boreholes or abstraction of water on the farms. -Freshwater should be used efficiently, and recycling and reusing of water on certain site activities should be encouraged. -Adhere to allocated water volumes, and if possible, use less water (limit water usage) to minimize water for exploration works.	-Water supply agreements -Proof/recording/quantification of water-saving efforts. -Water supplying agreements -Water storage tanks on site	-Proponent -Exploration Manager	-Once-off supply agreement -Throughout the exploration phase

Aspect	Impact	Management and Mitigation Measure(s)	Key Performance Indicator (KPI)	Implementation Responsibility	Timeline
		-Water reuse/recycling methods should be implemented as far as practicable, such that the water used to cool off exploration equipment should be captured and used for the cleaning of project equipment, if possible. -Water storage tanks should be inspected daily to ensure that there is no leakage, resulting in wasted water on site. -Water conservation awareness and saving measures training should be provided to all the project workers in both phases so that they understand the importance of conserving water and become accountable. -No exploration should be done at natural water			
Soils	Physical soil/land disturbance and loss of topsoil	-Stockpiled topsoil and drill materials should be used to backfill the excavated and disturbed site areas/spots. -The topsoil that was stripped from certain site areas to enable project works and can be returned to its initial position, should be returned. This is to avoid unnecessary stockpiling of site soils, which would leave them prone to erosion. -Soils that are not within the intended footprints of the site areas should be left undisturbed, and soil conservation implemented as far as possible. -Project vehicles/machinery should stick to access roads provided and not unnecessarily create further tracks on and around the site by driving everywhere, resulting in soil compaction. -Effectively stabilize altered landforms to minimize soil erosion.	-No proliferation of informal vehicle tracks. -No new erosion gullies.	-ECO	Throughout exploration
Soils and water resources	Soils and water resources pollution	-Farm borehole water should be tested for water quality (analysed) before exploration works start (to establish a pre-exploration water quality status) and after exploration.	-Borehole water on farms is tested/analysed for water quality before and after completion of exploration, and results are put on record.	-Exploration Manager -ECO	Throughout the exploration phase

Aspect	Impact	Management and Mitigation Measure(s)	Key Performance Indicator (KPI)	Implementation Responsibility	Timeline
		-Spill control preventive measures should be in place on-site to manage soil contamination, thus preventing and or minimizing the contamination from reaching water resources bodies. -All project employees should be sensitized about the impacts of soil pollution and advised to follow appropriate fuel handling procedures. -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. -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-type container for later disposal at a hazardous waste treatment facility in Windhoek. -Drip trays must be readily available on this trailer and monitored to ensure that accidental fuel spills along the tank trailer path/route around the exploration sites are cleaned on time (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 with 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 chemical portable toilets and periodically emptied before reaching capacity and transported to a wastewater treatment facility.	-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. -Complaint's logbook -Availability of sufficient waste containers -Non-permeable material to cover the ground surface at areas where hydrocarbons and potential pollutants are utilized.		

Aspect	Impact	Management and Mitigation Measure(s)	Key Performance Indicator (KPI)	Implementation Responsibility	Timeline
Biodiversity	Loss of Fauna and Flora	**Fauna (animals)** -Refrain from disturbing, snaring, killing, or stealing livestock on and around the EPL. -Avoid the killing of small soil and rock outcrops species found on site. -Exploration trenches and holes should be secured (temporary fencing) backfilled and capped after sampling is completed to prevent injuries to people and animals. -Incorporate Environmental awareness and biodiversity preservation into the employment contracts of all workers. -Breeding sites for faunal species that are found within the site and nearby should not be disturbed. **Flora (vegetation):** -Avoid unnecessary removal of onsite vegetation, thus, promoting a balance between biodiversity and the project. -Drilling mud and any other fluid used on site should not be disposed of on top of the vegetation (grass or shrubs) onsite. The fluids should be properly stored in designated containers onsite and disposed of at the nearest appropriate waste facility. -Workers should refrain from driving off the road. -Vegetation found on the site, but not in the targeted exploration site areas or access route should be left undisturbed/avoided. -Vehicle movement should be restricted to existing roads and tracks to prevent unnecessary damage to the surrounding vegetation. -No onsite vegetation should be cut without valid reason and permission.	-No disturbance to unmarked areas. -No complaints from locals regarding unauthorized vegetation removal -No complaints of wildlife hunted by project workers. -No intentional disturbance and destruction of site vegetation and faunal species -Barricading tape (to indicate working areas) -Visible preservation of onsite vegetation	-Exploration Manager -ECO	Throughout the exploration phase

Aspect	Impact	Management and Mitigation Measure(s)	Key Performance Indicator (KPI)	Implementation Responsibility	Timeline
		-Any additional access roads that may be created, should be created in a manner that disturbs minimal vegetation. -Environmental awareness on faunal and floral biodiversity preservation should be provided to the workers and contractors. This should be incorporated into the workers' contracts.			
Illegal hunting	Illegal hunting of wildlife	-Poaching (illegal hunting) or disturbance/harming of wildlife in the area is strictly prohibited. -A No Tolerance to Poaching Policy should be developed and applied to all site personnel (workers) and visitors. -Incorporate a No-tolerance rule for poaching in every employment contract and ensure that the workers understand the seriousness of this. In other words, there is no tolerance for poaching or wildlife crime.	-There are no incident reports of illegal hunting of wildlife by the crew. -Contact details of the Anti-poaching Police Unit are provided and visible on-site	-Exploration Manager -ECO	During site setup, and throughout the exploration
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 operations while respecting other land users such as eco-tourism and farming. Adhere to buffer zones. -No exploration activities should be done inside a 1.5km radius of farm houses, active building facilities on farms. -The project workers and vehicles should be limited to the actual EPL active sites only, but not unnecessarily wander and drive around farms, respectively. -The Proponent should ensure that their activities comply with the conditions set by the competent, regulatory, and affected landowners, such that the proposed exploration activities do not severely impact the different existing activities around the EPL.	-Land access and consent with clear conditions -No exploration works within buffer zones or areas marked as NO-GO -Compliance with conditions set within operational permits by relevant and affected landowners. -Little to no complaints of significant interference from land users/owners	-Exploration Manager -PRO	Throughout the exploration phase
Visual (aesthetic): impact on tourism	The scarring of the landscape and the presence of	-Exploration activities should be done away from the roads and explored sites rehabilitated as far as possible. -Minimize the land scarring by targeting specific areas only.	-No complaints of visual nuisance from the travelers or farmers.	-Exploration Manager	Throughout the exploration phase

Aspect	Impact	Management and Mitigation Measure(s)	Key Performance Indicator (KPI)	Implementation Responsibility	Timeline
	exploration vehicles and machinery may impact the scenic view of the area.	-No exploration activities should be done inside the no-go areas.	-No disturbed site areas are left without rehabilitation -Exploration works are limited to areas far from the roads.		
Road use and safety	Increase in vehicular traffic flow.	-Project-related goods and services should be delivered to the site once to twice a week to reduce the daily movement of trucks and put too much pressure on local roads. -If additional access roads (tracks) are required, the respective farmer/landowner should be consulted before creating new tracks to give consent and or guidance. -Drivers of all project phases' vehicles should have valid and appropriate driving licenses and adhere to the road safety rules. -Drivers should drive slowly (40km/hour or less) and be on the lookout for livestock and wildlife. -Ensure that the site access roads are well-equipped with temporary road signs. -Project vehicles should be in a road-worthy condition and serviced regularly to avoid accidents owing to mechanical faults. -Vehicle drivers should only make use of the designated site access roads provided and as agreed. -Vehicle drivers should not be allowed to operate vehicles while under the influence of alcohol. -Project vehicles should be parked within the boundary or demarcated areas for such purpose. -Deliveries from and to the site should be done optimally during weekdays and between the hours of 8 am and 5 pm. -The site access road(s) should be maintained to an acceptable standard for the vehicles.	-No complaints from the public or farmers regarding vehicular traffic issues related to the project activities. -All personnel operating the project vehicles and machinery are appropriately licensed and possess valid driving licenses. -Demarcated areas for parking, offloading, and loading zones are on site. -No creation of unnecessary tracks on site.	-Exploration Manager -ECO	Throughout the exploration phase

Aspect	Impact	Management and Mitigation Measure(s)	Key Performance Indicator (KPI)	Implementation Responsibility	Timeline
Local roads	Overuse and maintenance	-Heavy trucks transporting materials and services to the site should be scheduled to travel twice a week to avoid daily traveling to the site, unless in cases of emergencies. -Consider frequent maintenance of local roads to ensure that the roads are in good condition for other road users, such as farmers, and travelers from and outside the area.	-Visible efforts of maintaining access and community roads by the Proponent	-Proponent -Exploration Manager	Throughout exploration, when necessary
Occupational and Community Health and Safety	General health and safety associated with project activities in both phases	-During inductions, provide project workers with awareness training on the risks of mishandling equipment and materials on-site and health & safety risks associated with their respective jobs. -Project workers should be properly equipped with adequate and appropriate 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 placed where visible. -Drilled exploration holes that will no longer be in use or to be used later after being drilled should be properly marked for visibility and capped/closed off. -Trenches should be temporarily fenced off during sampling, and once completed, they should be backfilled thereafter -Drill cuttings and excavated materials should be put back into the holes, filled and leveled, and trenches backfilled respectively. -An emergency preparedness plan should be compiled, and all personnel appropriately trained. -No worker should be allowed to enter the working sites, if under the influence of alcohol. This may lead to mishandling of equipment, resulting in injuries and other health and safety risks.	-Comprehensive health and safety plan for all exploration activities compiled. -Quarterly refresher training on health & safety -Occupational Health and Safety Personnel Health and Safety Training -Availability of fully-furnished first aid kits -Trained worker to administer first aid	Proponent Exploration Manager ECO	Throughout exploration and training offered as and when required

Aspect	Impact	Management and Mitigation Measure(s)	Key Performance Indicator (KPI)	Implementation Responsibility	Timeline
		-Ensure that goods and projected loads are securely fastened to vehicles to avoid falling and injuring people. -Warning signage should be erected at hazardous site areas such as open trenches. -The site areas that are considered temporary risks should be equipped with "danger" or "cautionary" signs written in the local languages, i.e., Afrikaans and English.			
	Potential increase in prevalence of HIV and AIDS, as well as other sexually transmitted diseases (STDs), prevalence	-Engage workers in sexual health talks and training about the dangers of engaging in unprotected sexual relations, which result in contracting HIV/AIDS and other sexually transmitted infections. -Provision of condoms and sex education through the distribution of pamphlets and health training. These pamphlets can be obtained from the nearest local health facility in Otjiwarongo.	-No new infections recorded linked to project workers -Occupational health and safety personnel -Sex and Health Education/Awareness -Provision of condoms at the accommodation site	-Exploration Manager -ECO	Throughout exploration
	Accidental fire outbreak	-Portable and serviced fire extinguishers should be provided at exploration sites. -No open fires on and around the site. -Keep working site areas clean and safely put away flammable materials such as papers, dry vegetation, and plastics in designated containers and areas. -Make provision for smoking areas on-site for crew members who smoke. This is to ensure that the cigarette fire is completely put out and disposed of in allocated bins in the smoking area. -Potential flammable areas and structures, such as fuel storage tanks, should be marked as such with visible signage. -Raise awareness among workers on the impact of careless handling of fires and flammable substances in the workplace.	-No wildfires recorded (due to the presence of workers) -Fire extinguishers (1 per vehicle) and 1 per working site	-Proponent -ECO	Throughout exploration

Aspect	Impact	Management and Mitigation Measure(s)	Key Performance Indicator (KPI)	Implementation Responsibility	Timeline
Archaeology and heritage	Accidental disturbance of archaeological or heritage objects	-If any archaeological materials or human burials or skeletal remains are uncovered during mining activities, then the work in the immediate area should be halted, the finds would need to be reported to the Heritage Authority and may require inspection by an Archaeologist. The ECO should have the area fenced off and contact NHC (Tel: +264 61 244 375), National Forensic Laboratory (+264 61 240 461) immediately. -Under no circumstances shall any artefacts be removed, destroyed or interfered with by anyone on the site; and Contractors and workers shall be advised of the penalties associated with the unlawful removal of cultural, historical, archaeological or palaeontological artefacts, as set out in the National Heritage Act (Act No. 27 of 2004), Section 52 (2). -Any pile of stones or mound of earth looking even remotely like a grave should be avoided at all costs. -A “No-Go-Area” should be put in place where there is evidence of sub-surface archaeological materials, archaeological sites, gravesites, historical, rock paintings, cave/rock shelters or past human dwellings. It can be a demarcation by fencing off or avoiding the site completely by not working closely or near the known site. The ‘No-Go Option’ might have a NEUTRAL impact significance, a buffer zone of 100-200m is recommended on the identified grave at Farm Roland No. 419. -Cognizance must be taken of the larger cultural & heritage landscape of the area to avoid the destruction of previously undetected heritage sites. Should any previously undetected heritage or archaeological resources be exposed or uncovered during the development phases of the proposed project, these should immediately be 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 the event significant	-Preservation of all artefacts and objects that are discovered on and around the project site -Salvage equipment -Archaeologist to recommend further actions -Flag tapes -GPS (site marking)	-Exploration Manager -ECO -Operator (Driller or Excavating personnel)	As and when required, i.e., before site set up, and during exploration.

Aspect	Impact	Management and Mitigation Measure(s)	Key Performance Indicator (KPI)	Implementation Responsibility	Timeline
		heritage and cultural features are discovered in the course of developmental works. -It should be noted that the subterranean presence of archaeological and/or historical sites, features, or artefacts is always a distinct possibility. Care should therefore be taken when development commences that if any of these are discovered, work on site ceases immediately and a qualified archaeologist is called in to investigate the occurrence. -Bi-annual auditing is highly recommended (TARO, 2025).			
Littering and waste management (general waste and sanitation)	Environmental Pollution	-Workers should be sensitized to dispose of waste responsibly and not to litter. -Responsibly dispose of waste and do not litter. -After each daily work, ensure that there are no wastes left on exploration sites or scattered around the accommodation site. -All domestic and general operational waste produced daily should be contained onsite until such time that it will be transported to designated waste sites. -No waste may be buried or burned on site or anywhere else. -The exploration site should be equipped with separate waste bins for hazardous and general/domestic waste. -Oil spills should be taken care of by removing and treating the soil affected by the spill. -A penalty system for the irresponsible disposal of waste on-site and anywhere in the area should be implemented. -Ensure careful storage and handling of hydrocarbons on site is essential. -An emergency plan should be available for major/minor spills at the site during operational activities.	-No visible litter around the project area -Provision of sufficient waste storage containers -Waste management awareness -Waste disposal permits for municipalities -Environmental, Health, and Safety Statements and Policy	-ECO -Exploration Manager	Throughout the exploration phase

Aspect	Impact	Management and Mitigation Measure(s)	Key Performance Indicator (KPI)	Implementation Responsibility	Timeline
	Wastewater is generated by exploration workers living on-site.	-Potential contaminants such as hydrocarbons and wastewater should be contained on site and disposed of per municipal wastewater discharge standards so that they do not contaminate surrounding soils and eventually groundwater. -No open defecation is allowed on-site or the general environment. -Sewage waste should be stored as per the portable chemical toilets supplied on site and regularly disposed of at the nearest treatment facility -Provide sufficient toilet facilities for workers (portable toilets). -Portable toilets must be emptied according to the manufacturer's specifications.	-Adequate toilet and basic ablution facilities on site -Chemical toilets Sewage removal operator -Waste treatment agents/chemicals.	-Exploration Manager -ECO	Throughout the exploration phase
Air Quality	Dust generation	-Exploration vehicles within the area should not be driven at a speed of more than 40 km/h to avoid dust generation. -When and if the project reaches the advanced stages of exploration (drilling), a reasonable amount of water should be used on gravel roads, using regular water sprays on gravel routes and near exploration sites to suppress the dust that may be 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 site drilling areas, where they are exposed to dust. -Excavating equipment should be regularly maintained to ensure drilling and excavation efficiency and to reduce dust generation and harmful gaseous emissions.	-No complaints from the public about vehicle emissions and dust generation. -Visible efforts to curb dust -Complaint's logbook -Dust suppressant (Water)	-Exploration Manager -ECO	Throughout the exploration phase
Noise	Nuisance	-Noise from operational vehicles and equipment on the sites should be at acceptable levels.	-No complaints of excessive noise from farmers -Complaint's logbook	Exploration Manager -ECO	Throughout exploration

Aspect	Impact	Management and Mitigation Measure(s)	Key Performance Indicator (KPI)	Implementation Responsibility	Timeline
		-Exploration hours should be restricted to between 8 am and 5 pm to avoid noise and vibrations generated by exploration equipment and the movement of vehicles before or after hours. -No noise-making exploration activities, such as drilling, should take place within 1.5km of the farmhouses. -When operating the drilling machinery onsite, workers should be equipped with personal protective equipment (PPE) such as earplugs to reduce exposure to excessive noise.	Noise protective equipment for workers		
Social nuisance	Local property disturbance and values	-The project workers and contractors should be informed of the importance of respecting the farmers' properties by not trespassing or damaging their properties. -Any worker or contractor found guilty of trespassing should be called in for a disciplinary hearing and/or dealt with as per their employer' (Proponent) code of employment conduct. -The workers/contractors should be advised to respect the locals' private properties, values, and norms. -No worker should be allowed to wander in people's private yards or fences (no-go areas) without permission. -The cutting down or damaging of vegetation belonging to the affected farmers or neighboring farms, without the landowners' permission, is strictly prohibited.	-No complaints from farmers about property theft, disturbance, or intrusion -Grievance/complaint logbook -Land access agreement conditions	-Exploration Manager -ECO	Throughout the exploration phase

Table 5-2: The Mitigation measures for site rehabilitation

Aspect	Impact	Management and Mitigation Measure(s)	Key Performance Indicator (KPI)	Implementation Responsibility	Timeline
Progressive Rehabilitation and Decommissioning Phase					
Rehabilitation	Disturbance and damage to land site	-All drilled holes and excavated pits related to the project activities should be capped and backfilled, respectively. -All waste generated and stored on-site during exploration activities should be disposed of at the respective nearest solid waste management sites. -The stockpiled topsoil should be leveled soon after the completion of works at the sites. -Any temporary setup on site should be dismantled, and the area rehabilitated as far as practicable, to its original state. -Explored areas on worksites should be progressively rehabilitated by stockpiling and backfilling. -Provision of both financial and technical resources for progressive rehabilitation. -Respective farmers should be consulted to approve and sign off on Site Rehabilitation Completion to their satisfaction	-Capped exploration holes and backfilled pits -Excavators and other backfilling/demolishing machinery -No sign of waste or littering is seen on-site and around site areas. -Carrying away waste, and removing vehicles and equipment from the site -No stockpiled topsoil (topsoil is leveled after completion of each work) -Dismantled temporarily erected project structures, site leveled, and materials taken away from the site. -Visible signs of stockpiled topsoil -Record of backfilled trenches and holes -Waste containers on sites -Photo records of backfilled sites -Records of finances set aside for decommissioning activities	-Proponent -Exploration Manager	Progressive rehabilitation is done throughout the exploration phase and complete decommission and rehabilitation is done after completion of exploration works. Rehabilitation of disturbed areas should be signed off by farmers according to their satisfaction post-exploration at specific EPL sites.

5.3 The Environmental Monitoring Actions

To ensure that the implementation of recommended environmental management measures is working and produces the desired results (minimizing the "medium" and upholding the "low" significance ratings of impacts), certain key impacts will need to be monitored and reported on. The environmental aspects to be monitored are shown in Table 5-3. The ‘’*Observation, Compliance Status, and ‘’Recommended Action*’’ columns will be completed for every monitoring done on site.

Monitoring reports are to be compiled by the project ECO, audited by an Independent Environmental Consultant, and submitted to the DEAF for archiving on a bi-annual basis (every 6 months throughout the project operations) or as required by the Environmental Commissioner (as per the ECC conditions). The environmental components or features provided in the Table will be updated accordingly once the project commences.

Table 5-3: Monitoring of Biophysical and Social Aspects referred to in the assessment (modified after Resilient Environmental Solutions, 2019)

Impact	Parameter to be Monitored	Monitoring Objective	Key Performance Indicator (KPI)	Methods of Monitoring	Frequency	Responsible Party	Reporting structure	Threshold	Action if the threshold is exceeded
Water and soil pollution									
Soil pollution by hydrocarbons (fuel and lubricant spills)	Complaints from farmers within the project sites	To prevent contamination of site soils	No complaints from landowners or the public about visible oil spills	Inspection of complaints logbooks	Weekly	ECO	ECO-> Exploration Manager	A logged complaint	Further consultations with the landowners and or communities
Wastewater is generated by exploration workers living on-site.	Open defecation and urination.	To prevent environmental pollution	Adequate toilet facilities on site. Complaints from the farmers about open defecation.	Visual observation. Inspection of complaints logbook.	Weekly	ECO	ECO-> Exploration Manager	A logged complaint	Clean-up of affected areas.
Soils									
Loss of topsoil	Increased loss of soil	To prevent loss of topsoil	No proliferation of informal vehicle tracks. No new erosion gullies	Visual observation	Weekly	ECO	ECO-> Exploration Manager	Proliferation of new vehicle tracks Formation of new gullies in work areas	Rehabilitation of affected explored areas
Air quality (Dust)									
Increase in dust	Complaints from the	To reduce public	No complaints	Inspection of	Weekly	ECO	ECO-> Exploration Manager	A logged complaint	Dust suppression

Impact	Parameter to be Monitored	Monitoring Objective	Key Performance Indicator (KPI)	Methods of Monitoring	Frequency	Responsible Party	Reporting structure	Threshold	Action if the threshold is exceeded
generation, which might negatively affect occupational and residential respiratory health.	public about increased dust generation.	complaints and prevent negative changes in air quality due to exploration activities	from the public about increased dust generation.	complaints logbook.					around working areas to reduce fugitive dust
Hydrocarbon emissions from vehicles	Complaints from the public about increased vehicle fumes	Same as above.	No complaints from the public about increased vehicle emissions	Inspection of complaints logbook.	Weekly	ECO	ECO-> Exploration Manager	A logged complaint	Servicing of vehicles and machinery by a certified service provider
Poaching (Illegal hunting)									
Illegal hunting of wildlife	Reported poaching incidents by the project team	To prevent illegal hunting of wildlife	Incident reports of illegal hunting of wildlife by exploration workers.	Consultation with the local Police Service for reported incidents of poaching.	Weekly	ECO	ECO-> Exploration Manager > local Police Service (Anti-poaching Unit)	An incident report logged with the local Police Service	Appropriate action will be decided by the local Police Service
Habitat loss (Biodiversity)									
Localised loss of habitat and vegetation	Loss of habitat	To prevent loss of habitat outside areas of interest	No disturbance to unmarked areas within the project area	Visual observation	Weekly	ECO	ECO -> Exploration Manager	Vegetation clearance outside of marked areas.	Rehabilitation of affected areas to the satisfaction of the ECO

Impact	Parameter to be Monitored	Monitoring Objective	Key Performance Indicator (KPI)	Methods of Monitoring	Frequency	Responsible Party	Reporting structure	Threshold	Action if the threshold is exceeded
Occupational and Public Health and Safety									
No health and safety plan for exploration activities.	Compiled health and safety plan for exploration activities.	To prevent health and safety impacts	No significant health and safety incidents (i.e., serious injuries or loss of life)	Visual observation Inspection of complaints logbooks	Daily/ weekly	ECO and Exploration Manager	ECO-> Exploration Manager	Health and safety incident	Remedy the consequences
Potential increase in outbreak of wildfires due to project activities	Occurrence of wildfires	To prevent environmental damage caused by wildfires	No wildfires were recorded (due to the presence of exploration workers)	Visual observation	Daily	ECO	ECO -> Exploration Manager -> Local Police Service	Outbreak of wildfires due to the exploration workers	Rehabilitation of affected areas
Archaeology and cultural heritage									
Potential disturbance of archaeological and cultural heritage resources	Presence or unearthing of archaeological or cultural heritage resources	To prevent the destruction of artefacts and sites	Preservation of all artefacts and sites that are discovered within the site boundary or around the project site area	Inspection of records of findings	Daily	ECO Operator / Contractor	Operator->Foreman-> Superintended->ECO->Project Archaeologist -> National Heritage Council (NHC)	Unearthing archaeological or cultural heritage resources	Cease all activities on site and wait for NHC to inspect the site and give further instructions/actions
Employment creation and Corporate Social Responsibility (CSR)									
Creation of employment, procurement	Employment opportunities	To ensure that locals benefit	Employment, community support, and	Inspection: employed, procuremen	Monthly	Exploration Manager	Exploration Manager or Proponent	Number of CSR projects	Open communication and

Impact	Parameter to be Monitored	Monitoring Objective	Key Performance Indicator (KPI)	Methods of Monitoring	Frequency	Responsible Party	Reporting structure	Threshold	Action if the threshold is exceeded
of goods and services	-Community projects support - Local/regional procurement	from the Project	local and regional procurement	t & community project records					reasonable requests/proposals
Noise									
Potential increase in noise	Above ambient noise levels.	To ensure that generated noise does not disturb residents.	Complaints from residents about noise generated.	Inspection of complaints logbook	Weekly	ECO	ECO -> Exploration Manager	A logged complaint about above-normal noise levels	Revision of site activities
Vehicular Traffic									
Increase in traffic density on declared Roads Authority (RA) roads or damage to these.	Complaints from the public about the increase in traffic on the roads. Complaints about damage to RA roads caused by the movement of project vehicles and machinery.	To ensure continued ease of access to local roads by residents/communities.	No complaints from the public about the increase in traffic due to exploration activities	Inspection of logbooks	Weekly	ECO	ECO -> Exploration Manager -> Roads Authority	A logged complaint about traffic increase or damage to RA roads	Find alternative access roads for the workforce. Rehabilitation of affected roads

Impact	Parameter to be Monitored	Monitoring Objective	Key Performance Indicator (KPI)	Methods of Monitoring	Frequency	Responsible Party	Reporting structure	Threshold	Action if the threshold is exceeded
HIV and AIDS									
Potential increase in HIV and AIDS prevalence.	New HIV or sexually transmitted infections (STIs)	To prevent new infections in the area	No new HIV or STI infections recorded	Liaison with local health facilities	Monthly	ECO	ECO -> Exploration Manager -> Ministry of Health and Social Services	Recorded new HIV or STIs linked to exploration workers	Continued sex education and provision of condoms
Environmental Pollution (Littering)									
Environmental pollution from solid waste during exploration activities.	Scattered litter	To prevent littering in the general project area	No visible litter around the project area	Visual observation	Daily	ECO	ECO -> Exploration Manager	Visible littering around the project site	Clean-up of the affected areas and ensuring workers utilize waste containers provided.
Visual									
Visual impact owing to the project's exploration activities	Contrasting landscape (eyesore to travelers on the local roads	To prevent and or reduce the appearance of contrasting land scars	Reduction of and minor contrasting landscape in the project site areas	Visual observation	Weekly	ECO	ECO -> Exploration Manager	Major and very visible contrasting land scars on the site areas	Effective implementation of provided measures and continual improvements.
Site Rehabilitation									
Soil and land disturbance because of exploration activities.	Stockpiled topsoil and very disturbed site areas	To prevent major soil/land damage by project activities	No major soil and land disturbance	Visual observation	Daily	ECO	ECO -> Exploration Manager	Visible soil and land disturbance	Effective progressive leveling of topsoil and backfilling of pits/holes

Appendix 1: Chance Finds Procedure (CFP) After Kinahan, 2020

Areas of proposed activities are subject to heritage survey and assessment at the 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 findings.

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 (NHC) of Namibia: +264 61 244 375**
- **NHC of Namibia (Technical Office): +264 61 301 903**
- **National Museum: +264 61 276 800**
- **National Forensic Laboratory: +264 61 240 461.**

Archaeological material must NOT be touched. Tempering with the materials is an offense under the Heritage Act and is punishable upon conviction by the law.

Responsibility:

Operator: To exercise due caution if archaeological remains are found

Foreman: To secure the 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 stops work

b) Identify the site with flag tape

c) Determine GPS position if possible

d) Report findings to the foreman

Action by foreman

a) Report findings, site location, and actions taken to the superintendent

b) Cease any works in the immediate vicinity

Action by superintendent

a) Visit the site and determine whether work can proceed without damage to the findings

b) Determine and mark exclusion boundary

c) Site location and details to be added to project GIS for field confirmation by archaeologist

Action by Archaeologist

a) Inspect the site and confirm the addition to project GIS

b) Advise NHC and request written permission to remove findings from the work area

c) Recovery, packaging, and labeling of findings for transfer to the National Museum

In the event of discovering human remains

a) Actions as above

b) Field inspection by archaeologist to confirm that remains are human

c) Advise and liaise with NHC and Police

d) Recovery of remains and removal to the National Museum or National Forensic Laboratory, as directed.