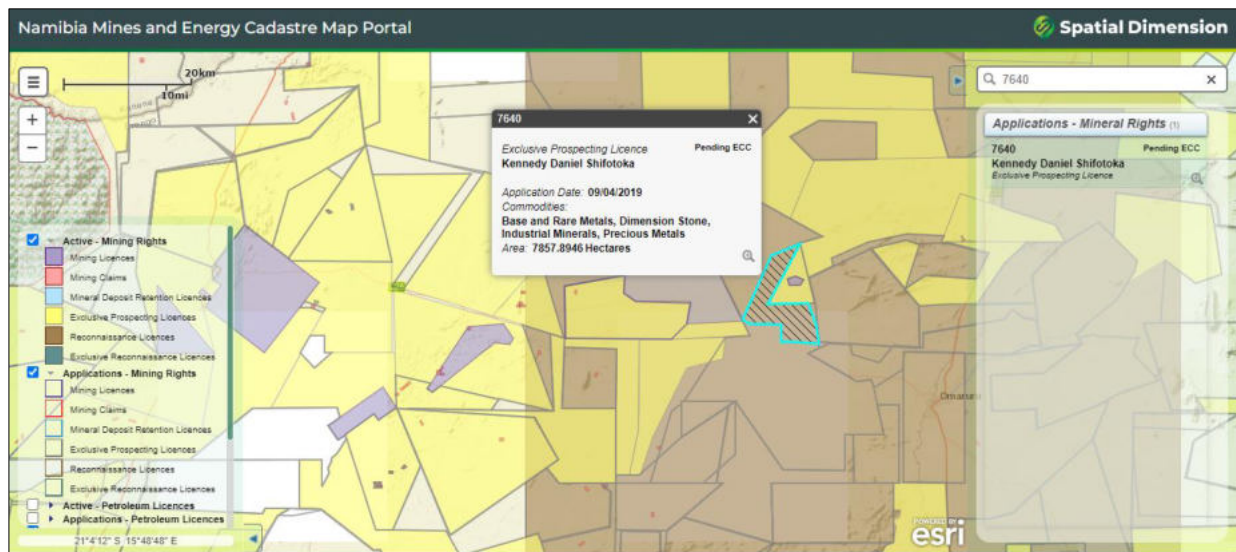


DRAFT ENVIRONMENTAL MANAGEMENT PLAN (EMP)

THE PROPOSED PROSPECTING AND EXPLORATION ACTIVITIES ON EXCLUSIVE PROSPECTING LICENSE (EPL) NO. 7640 LOCATED NORTHWEST OF OMARURU AND NORTHEAST OF OKOMBAHE IN THE ERONGO REGION, NAMIBIA



MEFT Application No.:

APP-00762

Proponent:


**Kennedy Daniel Shifotoka
P. O. Box 3860 Oshakati
Namibia**

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DOCUMENT INFORMATION

Title: Draft Environmental Management Plan (EMP) for the Proposed Prospecting and Exploration Activities on Exclusive Prospecting License (EPL) No. 7640 located Northwest of Omaruru and Northeast of Okombahe in the Erongo Region, Namibia

Prepared by:

Author:	Fredrika N. Shagama (Hydrogeologist & Environmental Consultant / EAP*)
Qualifications:	<p>PhD. Student: Civil Engineering (Geotechnics & Hydrogeology), VSB - Technical University of Ostrava, Czech Republic</p> <p>MSc. Geological Engineering (<i>cum laude</i>) with primary focus in Hydrogeology, VSB - Technical University of Ostrava, Czech Republic</p> <p>BSc. Geological Engineering, VSB - Technical University of Ostrava, Czech Republic</p>
Professional Affiliations:	<p>International Association of Hydrogeologists (IAH) - Full (online) Member, Membership No.139790</p> <p>Namibian Hydrogeological Association (NHA) – Member</p> <p>Environmental Assessment Professionals of Namibia (EAPAN) - Ordinary Member Practitioner (Membership No. 183)</p>
Contact Details:	<p>Mobile: +264 81 749 9223</p> <p>Email: eias.public@serjaconsultants.com</p> <p>Postal Address: P. O. Box 27318 Windhoek, Namibia</p>
Signature:	
Date:	November 2023

EAP* - Environmental Assessment Practitioner

SERJA' STATEMENT OF INDEPENDENCE

As the Appointed Environmental Consultant to undertake the Environmental Scoping Assessment (ESA) Study and prepare this Draft Environmental Management Plan (EMP) for the Proposed Prospecting and Exploration Activities on EPL-7640 located Northwest of Omaruru and Northeast of Okombahe in the Erongo Region, Serja Hydrogeo-Environmental Consultants cc declare that we:

- do not have, to our knowledge, any information or relationship with any member from the EPL Applicant (Proponent) and or their partners, the Ministry of Environment, Forestry and Tourism (MEFT)'s Department of Environmental Affairs and Forestry (DEAF) or the Competent Authority (Ministry of Mines and Energy (MME) that may reasonably have 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.



.....

Signature:

Fredrika N. Shagama: Managing Member & Principal Environmental Assessment Practitioner

Date: November 2023

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LIST OF ABBREVIATIONS

DEAF:	Department of Environmental Affairs and Forestry
DWA:	Department of Water Affairs
ECC:	Environmental Clearance Certificate
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
MAWLR:	Ministry of Agriculture, Water and Land Reform
MEFT:	Ministry of Environment, Forestry and Tourism
MME:	Ministry of Mines and Energy
PPE:	Personal Protective Equipment

1 INTRODUCTION

1.1 Project Background and Location

Kennedy Daniel Shifotoka (hereinafter referred to as the Proponent) applied to be granted the rights to Exclusive Prospecting Licence (EPL) No. 7640 by the Ministry of Mines and Energy (MME) on the 09th of April 2019. The EPL has only been provisionally granted pending an environmental assessment study and an Environmental Clearance Certificate (ECC) to make a final decision on the EPL. The status of this application is shown on the Namibia Mining Cadastre Map Portal (["pending ECC"](https://portals.landfolio.com/namibia/)) <https://portals.landfolio.com/namibia/>. The 7,857.8946-hectare EPL is located about 20km northwest of Omaruru Town and 30km northeast of Okombahe Settlement in the Erongo Region as shown in Figure 1-1.

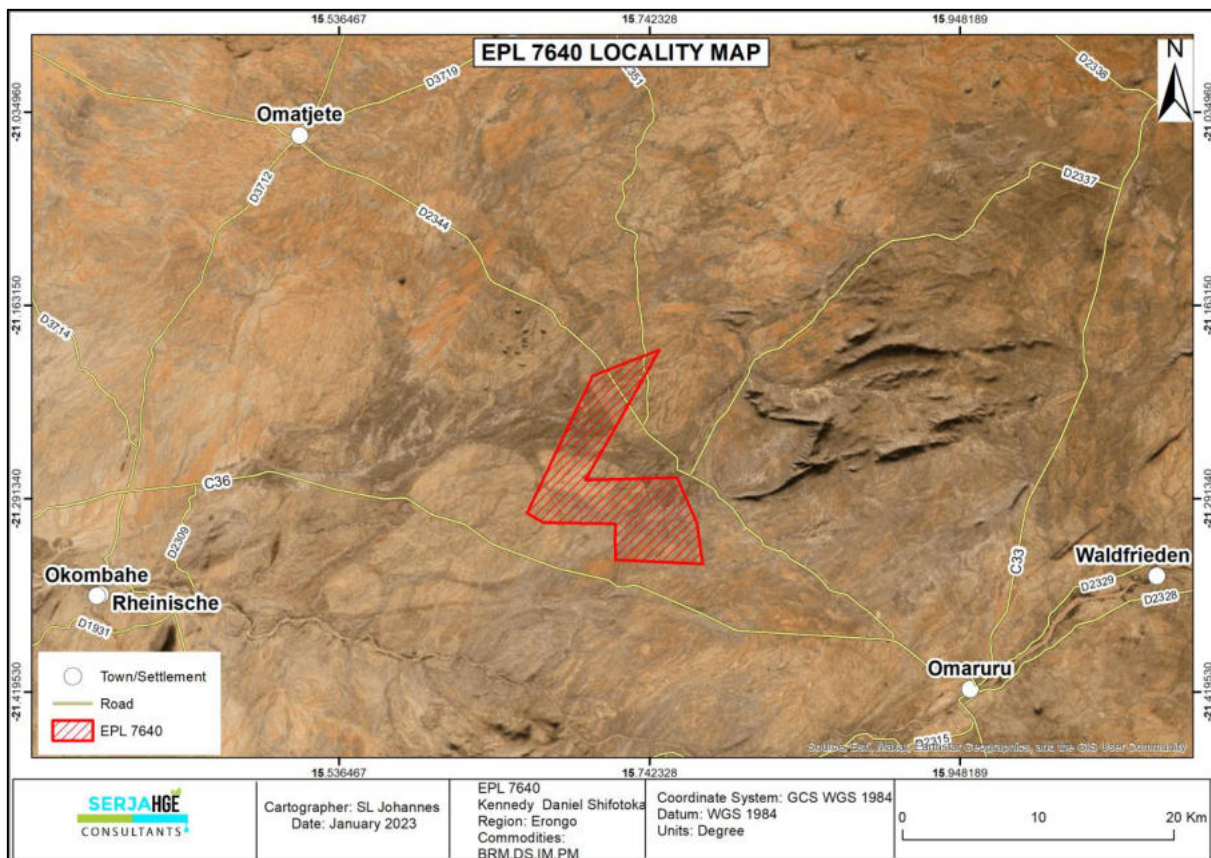


Figure 1-1: Locality Map of EPL 7640 in Erongo Region

The EPL covers farms such as Farm Gross Okandjou No. 183, Ehuro No. 120, Ohere East No. 216 and Etendero No. 103. The map of the farms covered or overlain by the EPL area is shown in Figure 1-2.

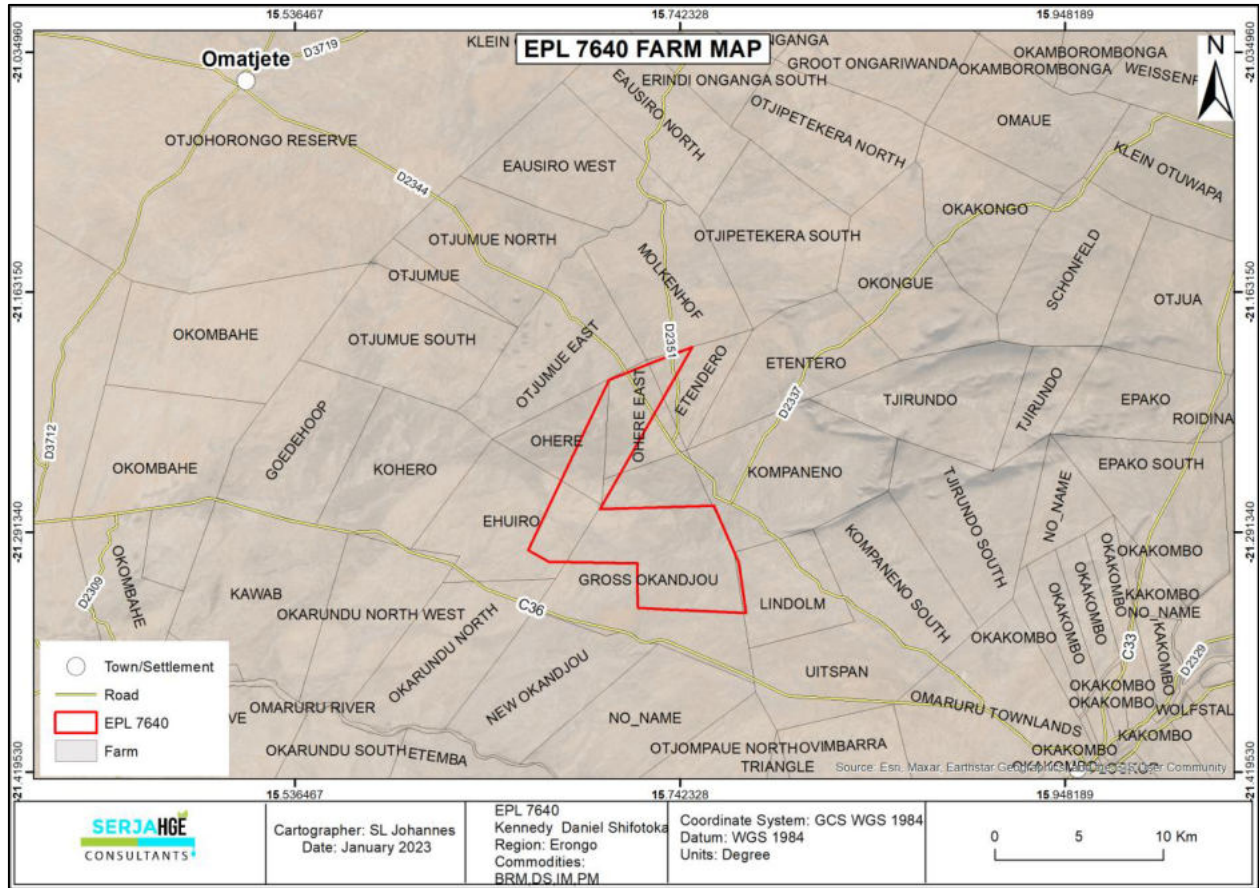


Figure 1-2: Locality Map with the farms covered by EPL-7640

The approximate coordinates of the EPL are presented in Table 1-1 below

Table 1-1: The GPS coordinates of EPL-7640

EPL Boundary Point	GPS Coordinates
Point A	21°17'58" S 15°39'37" E
Point B	21°12'36" S 15°42'13" E
Point C	21°11'31" S 15°44'58" E
Point D	21°16'42" S 15°41'55" E
Point E	21°16'37" S 15°45'35" E
Point F	21°18'21" S 15°46'22" E
Point G	21°20'02" S 15°46'37" E
Point H	21°19'58" S 15°43'09" E
Point I	21°18'26" S 15°43'09" E
Point J	21°18'26" S 15°40'19" E

1.2 Purpose of the Draft Environmental Management Plan (EMP)

The Draft EMP is developed in accordance with Regulation 8(j) of the EIA Regulations (2012) that 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 environments 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), facilitating the recruitment and procurement processes, etc.
- Exploration phase – The stage during which actual groundwork (exploration activities) for the targeted commodities 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

Prior to mobilizing to site and undertaking any groundwork for the proposed activities at the site (EPL 7640), the Proponent will be required to sign land access and use agreements with the affected landowners (farmers) according to Section 52 (1a) of the Minerals (Prospecting and Mining) Act No. 33 of 1992.

2.1 Proposed Prospecting and Exploration Activities

The project will be carried out using two groups of techniques and these are as follows:

- Non-invasive technique (Desktop Study for both commodities). During the prospecting and exploration phase, the vital components include reviewing existing reports and composite stratigraphic, lithological-geochemical maps of the targeted areas to identify prospective lithostratigraphic packages. In addition to the literature review, fieldwork (lithological (soil/rock) mapping and sampling) will be conducted to verify desktop work. These works do not require physical disturbance.
- Invasive techniques (Detailed exploration for Base & Rare Metals, Industrial Minerals, and Precious Metals): This will entail the verification of information collected during the desktop study and survey and obtain more/detailed information about the EPL. The invasive techniques include soil sampling, trenching, and drilling.
- Invasive techniques (Detailed exploration, i.e., drilling and test quarrying for Dimension Stone): Where exploration drilling yields positive results, test quarrying by means of butterfly cutting will be conducted. The exploration test quarrying will only be carried out on select targeted areas of the EPL and shall be performed on as small areas as possible to minimize environmental impacts that are associated with test quarrying.

2.2 Duration of Mineral Exploration

The exploration programmes are based on an iterative, results-driven and phased nature. Therefore, it is not possible at an early stage of exploration to give exact areas for future drilling or an exact duration of the exploration activities (Resilient Environmental Solutions, 2019). Soil sampling programmes for instance may last from between one week to a month at a time over specific areas, until the explored area is fully sampled as desired. Drilling programmes may initially range from two weeks to a month at a time, depending on the planned programme or based on the results of the programme. 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 programmes.

The anticipated duration of the proposed prospecting and exploration activities is between anticipated to last between (6) and twenty-four (24) months. However, should the anticipated timeframe turn out to be insufficient or depending on the exploration findings by the end of 24 months, this may be stretched longer to some more months and communicated with the relevant stakeholders and affected landowners.

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

2.3 Project Resources and Services Infrastructure

The following services and infrastructure as provided below will be required for the project activities.

2.3.1 Human resources

The exploration crew will consist of a minimum of 7 people, comprising 1 skilled, 2 semi-skilled, 4 casual workers. However, this number may vary depending on the actual workload and requirement onsite. However, this number may vary depending on the actual workload and requirement onsite.

The workforce requirement will entail the need for geologist(s), drilling personnel, sampling team, supervisor / exploration manager, casual workers to clear the sites and perform other required jobs onsite, cleaner(s), machine operator, truck & light vehicle drivers, etc.

2.3.2 Project Crew Accommodation

Exploration workers will be housed in prefabricated accommodation units (tented camps) during the exploration stage (within the EPL boundaries). However, prior to setting up the accommodation units, an agreement and a consent will need to be reached and signed between the Proponent and the respective landowners/farmers.

The onsite accommodation is selected to ensure that the exploration crew commences with site work on time (early) and to prevent putting pressure on the local roads to transport workers to and from site daily (commuting).

2.3.3 Project Equipment, Material, Machinery and Vehicles

The following equipment and machinery will be required for the exploration stage:

- A minimum of two (4X4) pickup trucks (vehicles), and heavy truck,
- Air compressor,
- Drill rigs, and drilling machines
- Down-The-Hole (DTH) drilling rig (for Dimension Stone),
- Two-way radios (for communication),
- Water supply tanks with dispersion pipelines, and fuel bowser,
- Power generators (minimum two),
- Dozer (to clear vegetation along planned drilling site access paths), and
- Biodegradable drilling fluids stored in manufacturers approved containers.

Equipment and vehicles will be stored at a designated area near the accommodation site (campsite), or a storage site established within the EPL site area.

2.3.4 Water supply

During exploration onsite water will be required for cooling down and washing of equipment, exploration related activities such as drilling, test quarrying, domestic (drinking, cooking, and ablution).

For exploration related activities such as cooking, drinking and personal use, about 300 litres of water will be required per week (1,200 litres per month). Exploration drilling, specifically diamond requires a lot of water, and it would require approximately 10,000 to 25,000 litres (10 to 25 m³) per day, in instances where for example fractured formations are encountered) per hole during drilling.

To ensure that the already low potential local groundwater resources are not stressed or significantly impacted by the project activities such as drilling, the Proponent will be carting water from outside the area (where water supply is not an issue). The water will then be stored in relevant industry standard water storage tanks onsite that will be refilled as and when necessary.

It is anticipated that water for domestic use will be supplied through carting from the nearest water supply area (Omaruru) or upon reaching an agreement with the respective farm owner to supply wholly or part of the required domestic water.

2.3.5 Fuel supply (For Cooking)

The Proponent will provide a 10kg liquid gas cylinder to be used for food preparation by the site workers. Therefore, No firewood will be collected on the farms/neighbouring land, or without the owners' permission.

2.3.6 Fuel Supply (machinery and equipment)

Diesel will be used for machinery and equipment and fuel generator. A trailer mounted and banded 10,000-litre fuel tank will be onsite to ensure an interrupted fuel supply to the project activities.

2.3.7 Accessibility (roads)

The EPL is accessible from the C36 via the D2344 that passes through EPL from the northwest direction. The site-specific areas (EPL) are then accessed via local roads. The site-specific areas (EPL) are then accessed via local farm (gravel) roads. Where necessary, new access tracks will be some access paths will be created in some areas of the EPL to access the target sites for exploration and enable the movement of the two pick up (4x4) trucks, heavy truck and, drill rig.

2.3.8 Waste management

The onsite waste types will be managed as follows:

- Sewage: Portable ablution facilities with septic tanks will be provided on site and emptied according to manufacturers' instructions.
- General and domestic waste: Sufficient waste bins (containers) will be availed at both exploration sites and campsites for waste storage. The waste containers will be emptied into the main onsite container for disposal at the nearest approved landfill site, upon reaching a waste disposal agreement with the relevant nearest local authority such as Omaruru.

- Hazardous waste: All vehicles, machinery and fuel consuming equipment will be provided with drip trays to capture potential fuel spills and waste oils. The waste fuel/oils will be carefully stored in a standardized container until such a time that it can be disposed of at the nearest approved hazardous waste management facility.

2.3.9 Health and Safety

The following measures will be implemented onsite to ensure safety and security:

- Adequate and appropriate Personal Protective Equipment (PPE) will be provided to every project personnel while on and working at site, including site visitors. A minimum of two first aid kits will be readily available at exploration sites
- First aid: A minimum of two first aid kits will be readily available at exploration and camp sites to attend to potential minor injuries, while major injuries will need to be attended to further by transporting the injured to the nearest health centre for treatment. At least 2 personnel will be trained on administer first aid.
- Potential Accidental Fire Outbreaks: As a control measure for accidental fire outbreaks, a basic firefighting equipment, i.e., a fire extinguisher will be readily available in vehicles, at the working sites and campsite (accommodation units). The site personnel will be trained on and provided with firefighting skills.
- Open exploration trenches and boreholes: The trenches dug for sampling will be temporary fenced off to prevent potential injuries of both people and livestock and wildlife on the farms. Once sampling is completed, the trenches will be progressively backfilled and levelled and fencing removed for storage or donation to the respective landowner(s). Similarly, for exploration boreholes that are no longer required after rock samples, they will be backfilled and closed off.
Warning signage at hazardous site areas such as open trenches will be erected.

2.4 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. To ensure the project activities are ceased in an environmentally friendly manner and site is rehabilitated by carrying out the following:

- Dismantling and removal of campsites 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 practice onsite will include:

- Backfilling of pits and trenches used for sampling,
- Closing and capping of exploration boreholes 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 close to their original state as much 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 in accordance with such principles. Table 3-1 below lists the 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 to the activities of the EPL

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 principles which 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),
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).	Ministry of Environment, Forestry and Tourism (MEFT), Office of the Environmental Commissioner Mr. Timoteus Mufeti 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.	The Proponent should ensure that all necessary permits/authorization for these EPL are obtained from the Ministry of Mines and Energy (MME). Contact person and details at the MME (Mining Commissioner) Ms. Isabella Chirchir Tel: +264 61 284 8167
	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.	The Proponent should consult and enter into agreements with the respective farmers as per the contact list provided to them by the Environmental Consultant. Ensure compliance to farmers' condition of land use. The Proponent should timely enter into and sign access and land use agreement (consent) with the respective affected farm owners.
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. Therefore, a Groundwater Abstraction & Use Permit should be applied for. This is for drilling water abstracted from a borehole or dam.	The Proponent is not planning to drill a borehole onsite due to low groundwater potential. Exploration will be carted from outside the EPL area in tanks.
	For any project wastewater planned for discharge into the environment, a discharge permit should be applied for and obtained.	MAWLR, Department of Water Affairs (DWA) Water Policy and Water Law Administration Division Contact: Mr. Franciskus Witbooi Division: Tel: +264 61 208 7158
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	The Proponent should obtain the necessary authorisation form the MME for the storage of fuel on-site.

Legislation/Policy/ Guideline	Relevant Provisions	Implications for this project
	a licence or a certificate, excluding a person who possesses or stores such fuel in a quantity of 600 litres or less in any container kept at a place outside a local authority area”	<p>Mr. Carlo Mcleod (Ministry of Mines and Energy: Acting Director – Petroleum Affairs)</p> <p>Tel: +264 61 284 8291</p>
National Heritage Act No. 76 of 1969	Call for the protection and conservation of heritage resources and artefacts.	<p>Should any archaeological material, such as rock paintings/arts, bones, unknown graves, old weapons/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 to clear the area or decide to conserve the site or material.</p> <p>Contact Details at National Heritage Council (NHC) of Namibia</p> <p>Mrs. Erica Ndalikokule – NHC Director</p> <p>Tel: +264 61 301 903</p>

4 EMP IMPLEMENTATION RESPONSIBILITIES

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 set in Table 4-1.

Table 4-1: The EMP implementation responsibilities onsite

Role	Responsibilities
Kennedy Shifotoka (Proponent) and his exploration partners or their Representative	<ul style="list-style-type: none"> -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 / Site Manager (as appropriate)	<p>This individual will be responsible to ensure that the exploration activities of the project are completed on time. The Manager's duties and responsibilities will include:</p> <ul style="list-style-type: none"> -Ensure that relevant commitments contained in the EMP Action Plans are adhered to. -Ensure relevant staff is 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

Role	Responsibilities
Environmental Control Officer (ECO) or Safety, Health & Environment (SHE) Officer	<p>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:</p> <ul style="list-style-type: none"> -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 with respect to the implementation of this EMP (monitor and audit the implementation of the EMP). -Advising the Proponent or Exploration/Site Manager 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. -Ensuring the biannual reports and ECC renewal after 3 years. -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.
Public Relations Officer (PRO)	<p>The PRO will be responsible for the following tasks:</p> <ul style="list-style-type: none"> -Liaising between the affected farmers (property owners) and the Proponent. -Ensure effective communication with stakeholders (affected farmers), media (if necessary) and the public. -Organising and overseeing public relations activities, 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 MEASURES

5.1 Key identified Potential negative Impacts

The key potential 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:

- Physical land / soil disturbance and impact on grazing areas
- Impact on local biodiversity (fauna and flora); potential illegal harvesting of protected vegetation and wildlife hunting (poaching) and habitat disturbance in the area□ impact on tourism
- Potential impact on water resources (over-abstraction and pollution) and soil pollution
- Air quality (compromise the surrounding air quality)
- Visual impacts due to land scars owing to Dimension Stone exploration activities, resulting in the impact on tourism
- Potential occupational and community health and safety risks
- Vibrations and noise associated with exploration trenching and drilling
- Vehicular traffic safety & impact on services infrastructure (e.g., local roads)
- Environmental pollution (due to poor waste management)
- Archaeological and cultural heritage impact
- Potential social nuisance and conflicts due to land use (theft, property damage, etc.).

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 (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),
- Decommissioning and Site Rehabilitation (Table 5-2) and
- Environmental Monitoring (Table 5-3).

Table 5-1: The Environmental and mitigation action plans for the planning and exploration phases

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	<p>-A Comprehensive Health and Safety Plan for the project activities should be compiled.</p> <p>-An EMP non-compliance penalty system should be implemented on site.</p> <p>-The Proponent should appoint an Environmental Control Officer (ECO) or SHE Officer to be responsible for managing the EMP implementation and monitoring.</p>	<p>-All required EMP implementation Plans, and Systems are compiled and in place.</p> <p>-ECO is appointed</p>	-Proponent	Pre-exploration
Authorizations	Lack of Agreements, Permits/ Licenses	<p>-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.</p> <p>-The permits, agreements referred to herein include:</p> <p>(a) Land access by the farm owners (landowners).</p> <p>(b) Waste management disposal permits from the relevant facility operator/owner</p> <p>(c) Water supply agreements for domestic use or groundwater abstraction & use permit (if abstracting drilling water directly from a borehole, however, this is unlikely given the low groundwater potential of the area to supply activities such as drilling)</p> <p>(d) Storage permit from MME for any fuel stored onsite</p>	<p>-Applicable permits and licenses to obtained from relevant authorities.</p> <p>-Agreements/permits signed and obtained from on time, <u>min. 3 months (or as per agreements with the farm owners) prior to the planned commencement date of works.</u></p>	-Proponent	Pre-exploration

Aspect	Impact	Management and Mitigation Measure(s)	Key Performance Indicator (KPI)	Implementation Responsibility	Timeline
Communication between the Proponent and landowners	Lack of communication (proper liaison) between landowners and Proponent with regards to land use/access	<ul style="list-style-type: none"> -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 should be developed. -The farmers (landowners) should be kept posted on any changes, progress or delays on the project activities communicated or agreed upon. -The issues or complaints raised by the landowners should be effectively attended to timely, and resolved amicably. 	<ul style="list-style-type: none"> -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 (Prior to project activities) and their responsibilities throughout the project activities
Employment	Creation of employment opportunities	<ul style="list-style-type: none"> -Un and semi-skilled labour should be sourced from the local communities. -Preference of local people for employment for jobs should be implemented, i.e., permanent residents from the farms should be employed for the 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. 	-Number of locals employed for exploration activities	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	<ul style="list-style-type: none"> -Commit to the conditions listed in the land access agreements signed with farmers (landowners). -The payments of land access fees should be made as agreed. -Plan for exploration holes in which groundwater will be encountered, and inform the farm owner to decide if they would like to keep the borehole(s) for their own use after exploration. The Proponent should equip the borehole(s) for the farmer(s). 	-Proof of funds paid to the respective farmers' bank account and related records.	-Proponent	Pre-exploration and when necessary, throughout
Specialised 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	-Number of hired contractors.	-Proponent	Pre-exploration

Aspect	Impact	Management and Mitigation Measure(s)	Key Performance Indicator (KPI)	Implementation Responsibility	Timeline
		be given to local and regional businesses for such services and goods.	-Record of hired or contracted companies or services providers	-Exploration Manager	
Prospecting and Exploration Phase					
EMP implementation and training	Lack of EMP awareness and implications thereof	<p>-EMP trainings should be provided to all workers on site.</p> <p>-All site personnel should be aware of necessary health, safety, and environmental considerations applicable to their respective work.</p> <p>-The implementation of this EMP should be monitored.</p> <p>The site should be inspected, and a compliance audit done throughout the project activities, monthly and bi-annually for overall EMP implementation.</p> <p>An EMP non-compliance penalty system should be implemented.</p>	<p>-Records of EMP compliance/monitoring conducted bi-annually</p> <p>-The ECC is renewed every 3 years</p> <p>-Records of EMP training conducted.</p>	<p>-Exploration Manager</p> <p>-ECO</p>	Throughout the exploration phase
Communication between the Proponent and landowners	Lack of communication (proper liaison) between landowners and Proponent with regards to land use/access	<p>-The PRO should be introduced to the farm owners and his or her contact details provided to them prior to undertaking activities for easy communication.</p> <p>-The Proponent should compile a clear communication procedure / plan which should include a grievance and response mechanism.</p>	<p>-PRO is part of the project personnel.</p> <p>-Records of farmers' consultation</p> <p>-Community/farmers' grievances addressed to their satisfaction</p> <p>-Complaint's logbook</p> <p>-Land access agreement conditions</p>	-PRO	Throughout exploration
Grazing land	Loss of grazing areas	<p>-Any unnecessary removal or destruction of grazing land, due to exploration activities should be avoided.</p> <p>-Vegetation found on the site, but not in the targeted exploration areas should not be removed but left to preserve biodiversity and grazing land.</p>	<p>-Limited cleared sites</p> <p>-Less access tracks</p> <p>-No complaints from farmers regarding significant land/vegetation clearing</p>	<p>-Exploration Manager</p> <p>-ECO</p>	Throughout exploration

Aspect	Impact	Management and Mitigation Measure(s)	Key Performance Indicator (KPI)	Implementation Responsibility	Timeline
		<p>-Drilling mud and any other fluid used onsite 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.</p> <p>-Workers should refrain from driving off road and creating unnecessary tracks that may contribute to loss of grazing land.</p> <p>-Environmental awareness on the importance of the preservation of grazing land for local livestock should be provided to the workers.</p>			
Water Resources Use	Over-abstraction (water demand and availability)	<p>-Fresh water abstracted from boreholes or supplied by carting should be used efficiently, and recycling and re-using of water on certain site activities should be encouraged.</p> <p>-The Proponent should cart water for drilling from elsewhere outside the site area to relieve pressure of the available resources. Agreements for water supply should be made between the willing water supplier and the Proponent.</p> <p>-If the carted water is directly abstracted from a certain borehole or boreholes offsite, the Proponent should apply for a Groundwater Abstraction & Use Permit from the Department of Water Affairs of MAWLR.</p> <p>-If water is supplied by the Municipality (of Omaruru), a water supply agreement should be signed prior to obtaining the water.</p> <p>-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.</p> <p>-Water storage tanks should be inspected daily to ensure that there is no leakage, resulting in wasted water on site.</p> <p>-Water conservation awareness and saving measures training should be provided to all the project workers in both phases so</p>	<p>-Water supply agreements</p> <p>-Proof/ recording/ quantification of water saving efforts.</p> <p>-Water supplier</p> <p>-Water supplying agreements</p> <p>-Water storage tanks on site</p>	<p>-Proponent</p> <p>-Exploration Manager</p>	<p>-Once off supply agreement</p> <p>-Throughout the exploration phase</p>

Aspect	Impact	Management and Mitigation Measure(s)	Key Performance Indicator (KPI)	Implementation Responsibility	Timeline
		that they understand the importance of conserving water and become accountable.			
Soils	Physical soil/land disturbance and loss of topsoil	<ul style="list-style-type: none"> -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 provide and not to unnecessarily create further tracks on and around the site by driving everywhere resulting in soil compaction. -Effectively stabilise altered landforms to minimise soil erosion. 	<ul style="list-style-type: none"> -No proliferation of informal vehicle tracks. -No new erosion gullies. 	-ECO	Throughout exploration
Soils and water resources	Soils and water resources pollution	<ul style="list-style-type: none"> -Spill control preventive measures should be in place on site to management 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. 	<ul style="list-style-type: none"> -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 	-Exploration Manager -ECO	Throughout exploration phase

Aspect	Impact	Management and Mitigation Measure(s)	Key Performance Indicator (KPI)	Implementation Responsibility	Timeline
		<p>-Project machines and equipment should be equipped with drip trays to contain possible oil spills when operated on site.</p> <p>-Polluted soil should be removed immediately and put in a designate waste type container for later disposal.</p> <p>-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).</p> <p>-Polluted soil must be collected and transported away from the site to an approved and appropriately classified hazardous waste treatment facility.</p> <p>-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.</p> <p>-Toilet water should be treated using chemical portable toilets and periodically emptied out before reaching capacity and transported to a wastewater treatment facility.</p>	<p>and potential pollutants are utilized.</p>		
Biodiversity	Loss of Fauna and Flora	<p><u>Fauna (animals)</u></p> <p>-The Okarumuti side of the EPL should be excluded from exploration activities due to the presence and conservation of the mountain zebra on the Farm. There is currently no activities on the Farm to avoid disturbing the wildlife.</p> <p>-Refrain from disturbing, snaring, killing or stealing livestock on and around farms.</p> <p>-Avoid the killing of small soil and rock outcrops' species found on site.</p> <p>-Exploration trenches and boreholes should be secured (temporary fencing) and backfilled and capped after sampling is completed to prevent injuries to animals after falling in.</p>	<p>-No disturbance to unmarked areas.</p> <p>-No complaints from locals regarding unauthorised vegetation removal or cutting down of trees.</p> <p>-No complaints of wildlife hunted by the project workers.</p> <p>-No intentional disturbance and destruction of site</p>	-ECO	Throughout the exploration phase

Aspect	Impact	Management and Mitigation Measure(s)	Key Performance Indicator (KPI)	Implementation Responsibility	Timeline
		<p>-Incorporate Environmental awareness and biodiversity preservation into the employment contracts of all workers.</p> <p>-Breeding sites for faunal species that are found within the site and nearby should not be disturbed.</p> <p>Flora (vegetation):</p> <p>-Avoid unnecessary removal of onsite vegetation, thus, promoting a balance between biodiversity and the project.</p> <p>-Vegetation found on the site, but not in the targeted exploration site areas or access route should be left undisturbed/avoided.</p> <p>-Vehicle movement should be restricted to existing roads and tracks to prevent unnecessary damage to the surrounding vegetation.</p> <p>-No onsite vegetation should be cut or used for firewood.</p> <p>-Access roads should be created in a manner that disturbs minimal vegetation.</p> <p>-Environmental awareness on faunal and floral biodiversity preservation should be provided to the workers and contractors. This should be incorporated into the workers' contracts.</p>	<p>vegetation and faunal species</p> <p>-Barricading tape (to indicate working areas)</p> <p>-Visible preservation of onsite vegetation</p>		
Illegal hunting	Illegal hunting of wildlife	<p>-The Poaching (illegal hunting) or disturbance/harming of wildlife on the farms and surrounding areas is strictly prohibited.</p> <p>-A No tolerance to Poaching Policy should be developed and apply to all site personnel (workers) and visitors.</p> <p>-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 to wildlife crime.</p>	<p>-There are no incident reports of illegal hunting of wildlife by the crew.</p> <p>-Contact details of the Anti-poaching Police Unit provided and visible onsite</p>	<p>-Exploration Manager</p> <p>-ECO</p>	During site set up, and throughout exploration
Land Use	Conflict between land uses and	-Exploration activities should not in any way hinder the existing land uses within the EPL but rather promote co-existence	-Land access and use consents with clear conditions	-Exploration Manager	Throughout the exploration phase

Aspect	Impact	Management and Mitigation Measure(s)	Key Performance Indicator (KPI)	Implementation Responsibility	Timeline
	exploration activities	<p>throughout the project operations while respecting other land users such as eco-tourism and game hunting.</p> <p>-The project workers and vehicles should be limited to the actual EPL active sites only but not unnecessarily wander and drive around farms, respectively.</p> <p>-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.</p>	<p>-Compliance with conditions set within operational permits by relevant and affected landowners.</p> <p>-Little to no complaints of significant interference from land users/owners</p>	-PRO	
Visual (aesthetic)	The scarring of landscape and presence of exploration vehicles and machinery may impact the scenic view of the area for tourism and travellers on the roads.	<p>-The exploration activities should be done away from the roads, and explored sites rehabilitated as far as possible.</p> <p>-Concentrated stone block sampling to the areas behind the mountain that overlook the local roads. In other words, exploration activities that are likely to leave visible scars on the hills or mountains should be done on areas behind these mountains and not on the areas that are visible from the road.</p> <p>-Minimize the land scarring by targeting specific areas only.</p> <p>-The campsite (if onsite) should be established behind outcrops or thick vegetation where possible to limit their obvious presence to road users (tourists and travellers alike).</p>	<p>-No complaints of visual nuisance from the travellers or farmers.</p> <p>-No disturbed sites areas are left without rehabilitation</p> <p>-Exploration works are limited to areas far from the roads.</p>	-Exploration Manager	Throughout the exploration phase
Road use and safety	Increase in vehicular traffic flow	<p>-Project related goods and services should be delivered to site once to twice a week to reduce the daily movement of trucks and putting too much pressure on local roads.</p> <p>-If additional access roads (tracks) are required, the respective farmer/landowner should be consulted before creating new tracks to give consent and or guidance.</p> <p>-Drivers of all project phases' vehicles should be in possession of valid and appropriate driving licenses and adhere to the road safety rules.</p>	<p>-No complaints from the public or farmers regarding vehicular traffic issues related to the project activities.</p> <p>-All personnel operating the project vehicles and machinery are appropriately licensed and possession of valid driving licenses.</p>	<p>-Exploration Manager</p> <p>-ECO</p>	Throughout exploration phase

Aspect	Impact	Management and Mitigation Measure(s)	Key Performance Indicator (KPI)	Implementation Responsibility	Timeline
		<ul style="list-style-type: none"> -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 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 site should be done optimally during weekdays and between the hours of 8am and 5pm. -The site access road(s) should be maintained to an unacceptable standard for the vehicles. 	<ul style="list-style-type: none"> -Demarcated areas for parking, offloading, and loading zones are on sites. -No creation of unnecessary tracks on site. 		
Local roads	Overuse and maintenance	<ul style="list-style-type: none"> -Heavy trucks transporting materials and services to site should be scheduled to travel twice a week to avoid daily travelling to site, unless on cases of emergencies. -Consider frequent maintenance of local roads on the farms to ensure that the roads are in a good condition for other roads users such as farmers, and travellers from and outside the area. 	<ul style="list-style-type: none"> -Visible efforts of maintaining access and community roads by the Proponent 	<ul style="list-style-type: none"> -Proponent -Exploration Manager 	Throughout exploration, when necessary
Occupational and Community Health and safety	General health and safety associated with project activities in both phases	<ul style="list-style-type: none"> -During inductions, provide project workers with an awareness training of the risks of mishandling equipment and materials on site and health & safety risk 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. 	<ul style="list-style-type: none"> -Comprehensive health and safety plan for all exploration activities compiled. -Quarterly refresher training on health & safety 	<ul style="list-style-type: none"> -Proponent -Exploration Manager ECO 	Throughout exploration and trainings offered as and when required

Aspect	Impact	Management and Mitigation Measure(s)	Key Performance Indicator (KPI)	Implementation Responsibility	Timeline
		<ul style="list-style-type: none"> -All workers should be dewormed before commencing with exploration activities. This should be repeated as prescribed. -Heavy vehicle, equipment and fuel storage site 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 hole and the holes filled and levelled, and trenches backfilled respectively. -An emergency preparedness plan should be compiled, and all personnel appropriately trained. -Workers should not be allowed to enter the working sites when under the influence of alcohol as this may lead to mishandling of equipment which results into injuries and other health and safety risks. -Ensure that goods and projected loads are securely fastened to vehicles to avoid falling and injure 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 clearly written in the local languages, i.e., Afrikaans and English. 	<ul style="list-style-type: none"> -Occupational Health and Safety Personnel Health and Safety Trainings -Availability of fully-furnished first aid kits -Trained worker to administer first aid 		

Aspect	Impact	Management and Mitigation Measure(s)	Key Performance Indicator (KPI)	Implementation Responsibility	Timeline
	Potential increase of prevalence of HIV and AIDS, as well as other sexually transmitted diseases (STDs) prevalence	<ul style="list-style-type: none"> -Engage workers in sexual health talks and training about the dangers of engaging in unprotected sexual relations which results in contracting HIV/AIDS and other sexual related infections. -Provision of condoms and sex education through distribution of pamphlets and health trainings. These pamphlets can be obtained from the nearest local health facility in Omaruru. 	<ul style="list-style-type: none"> -No new infections recorded linked to project workers -Occupational health and safety personnel -Sex and Health Education/Awareness -Provision of condoms at the campsite 	<ul style="list-style-type: none"> -Exploration Manager -ECO 	Throughout exploration
	Accidental fire outbreak	<ul style="list-style-type: none"> -Portable and serviced fire extinguishers should be provided at site and camp. -No open fires to be created by project personnel onsite. -Consider using gas or paraffin cooks to prepare food instead of open fires. The cooks/stoves fire should be put out before leaving the camp (if the camp is established onsite/at the farms). -Make provision for smoking areas for crew members who smoke. This is to ensure that the cigarettes' fire is completely put out to and disposed of in allocated bins at the smoking area. -Potential flammable areas and structures such as fuel storage tanks should be marked as such with clearly visible signage. -Raise awareness to workers on the impact of careless handling of fires and flammable substances in the fire. 	<ul style="list-style-type: none"> -No wildfires recorded (due to presence of workers) -Fire extinguishers (1 per vehicle) and 1 per working site 	<ul style="list-style-type: none"> -Proponent -ECO 	Throughout exploration
Archaeology and heritage	Accidental disturbance of archaeological or heritage objects	<ul style="list-style-type: none"> -Buffer zones should be maintained & respected around known significant cultural heritage sites as far as possible. Graves, caves, rock shelters, and areas with cultural significance are excluded from any development. -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 	<ul style="list-style-type: none"> -Preservation of all artefacts and objects that are discovered on and around project site -Salvage equipment -Archaeologist to recommend further actions 	<ul style="list-style-type: none"> -Exploration Manager -ECO 	As and when required, i.e., prior to site set up, and during exploration.

Aspect	Impact	Management and Mitigation Measure(s)	Key Performance Indicator (KPI)	Implementation Responsibility	Timeline
		<p>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.</p> <p>-Efforts should be made to avoid damage to or destruction of any outcrop that harbours caves or rock shelters, if any are found at drill sites, then they should be marked and the sites should be adjusted to avoid them.</p> <p>-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).</p> <p>-Direct damage to archaeological or heritage sites should be avoided as far as possible and, where some damage to significant sites is unavoidable, scientific/historical data should be rescued.</p> <p>-During the prospecting and exploration works, it is important to take note and recognize any significant material being unearthed and making the correct judgment on which actions should be taken (refer to CFP Appendix 1 attached hereto).</p> <p>-The Proponent, direct employees and Contractors should adhere to the provisions of Section 55 of the National Heritage Act in the event significant heritage and cultural features are discovered in the course of the project works.</p>	<p>-Flag tapes</p> <p>-GPS (site marking)</p>	<p>-Operator (Driller or Excavating personnel)</p>	
<p>Littering and waste management (general waste and sanitation)</p>	<p>Environmental Pollution</p>	<p>-Workers should be sensitized to dispose of waste in a responsible manner and not to litter.</p> <p>-Dispose of waste in a responsible manner and not to litter.</p> <p>-After each daily works, ensure that there are no wastes left on the working sites or scattered around the camp.</p>	<p>-No visible litter around the project area</p> <p>-Provision of sufficient waste storage containers</p> <p>-Waste management awareness</p>	<p>-ECO</p> <p>-Exploration Manager</p>	<p>Throughout exploration phase</p>

Aspect	Impact	Management and Mitigation Measure(s)	Key Performance Indicator (KPI)	Implementation Responsibility	Timeline
		<ul style="list-style-type: none"> -All domestic and general operational waste produced daily should be contained onsite until such that time 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 soils affected by the spill. -A penalty system for 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 operation activities. 	<ul style="list-style-type: none"> -Waste disposal permits to municipalities -Environmental, Health and Safety Statements and Policy 		
	<p>Wastewater generated by exploration workers living on-site.</p>	<ul style="list-style-type: none"> -Potential contaminants such as hydrocarbons and wastewater should be contained on site and disposed of in accordance with municipal wastewater discharge standards so that they do not contaminate surrounding soils and eventually groundwater. -No open defecation is allowed on and around the site. -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 (mobile/portable chemical toilet if possible). -Emptying of chemical toilets according to the manufacturer's specifications. 	<ul style="list-style-type: none"> -Adequate toilet and basic ablution facilities on site -Chemical toilets Sewage removal operator -Waste treatment agents/chemicals. 	<ul style="list-style-type: none"> -Exploration Manager -ECO 	<p>Throughout exploration phase</p>

Aspect	Impact	Management and Mitigation Measure(s)	Key Performance Indicator (KPI)	Implementation Responsibility	Timeline
Air Quality	Dust generation	<p>-Exploration vehicles within the area should not be driven at a speed more than 40 km/h to avoid dust generation.</p> <p>-When and if the project reaches the advanced stages of exploration, 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.</p> <p>-Dust masks, eye protective glasses and other respiratory personal protective equipment (PPE) such as face masks should be provided to the workers on site drilling areas, where they are exposed to dust.</p> <p>-Excavating equipment should be regularly maintained to ensure drilling and excavation efficiency and so to reduce dust generation and harmful gaseous emissions.</p>	<p>-No complaints from the public about vehicle emissions and dust generation.</p> <p>-Visible efforts to curb dust</p> <p>-Complaint's logbook</p> <p>-Dust suppressant (Water)</p>	<p>-Exploration Manager</p> <p>-ECO</p>	Throughout exploration phase
Noise	Nuisance	<p>-Noise from operations' vehicles and equipment on the sites should be at acceptable levels.</p> <p>-Exploration hours should be restricted to between 07h30 and 17h00 to avoid noise and vibrations generated by exploration equipment and the movement of vehicles before or after hours.</p> <p>-No noise making exploration activities such as drilling should take place within 1.5km of the farmhouses.</p> <p>-When operating the drilling machinery onsite, workers should be equipped with personal protective equipment (PPE) such as earplugs to reduce exposure to excessive noise.</p>	<p>-No complaints of excessive noise from farmers</p> <p>-Complaint's logbook</p> <p>Noise protective equipment for workers</p>	<p>Exploration Manager</p> <p>-ECO</p>	Throughout exploration
Social nuisance	Local properties disturbance and values	<p>-The project workers and contractors should be informed of the importance of respecting the farmers' properties by not trespassing or injuring / killing or stealing their livestock and wildlife.</p>	<p>-No complaints from farmers about property theft, disturbance, or intrusion</p>	<p>-Exploration Manager</p> <p>-ECO</p>	Throughout the exploration phase

Aspect	Impact	Management and Mitigation Measure(s)	Key Performance Indicator (KPI)	Implementation Responsibility	Timeline
		<p>-Any worker or contractor found guilty of trespassing should be called in for disciplinary hearing and/or dealt with as per their employer' (Proponent)'s code of employment conduct.</p> <p>-The workers/contractors should be advised to respect the local's private properties, values, and norms.</p> <p>-No worker should be allowed to wander in people's private yards or fences (no-go areas) without permission.</p> <p>-The cutting down or damaging of vegetation belonging to the affected farmers or neighbouring farms, without the landowners' permission is strictly prohibited.</p>	<p>-Grievance / complaint logbook</p> <p>-Land access agreement conditions</p>		

Table 5-2: The mitigation measures for the site rehabilitation and decommissioning post-exploration

Aspect	Impact	Management and Mitigation Measure(s)	Key Performance Indicator (KPI)	Implementation Responsibility	Timeline
Progressive Rehabilitation and Decommissioning Phase					
Rehabilitation	Disturbance and damaging of land site land	<p>-All drilled boreholes and excavated pits related to the project activities should be capped and backfilled, respectively.</p> <p>-All waste generated and stored on site during exploration activities should be disposed of at the respective nearest solid waste management sites.</p> <p>-The stockpiled topsoil should be levelled soon after completion of works at sites.</p> <p>-Any temporary setup on site should be dismantled, and the area rehabilitated as far as practicable, to their original state.</p>	<p>-Capped boreholes and backfilled pits</p> <p>Excavators and other backfilling/demolishing machinery</p> <p>-No sign of waste or littering seen on site and around site areas.</p> <p>-Carrying away of waste, and removal of vehicles and equipment from site</p>	<p>-Proponent</p> <p>-Exploration Manager</p>	Progressive rehabilitation done throughout the exploration phase and complete decommission and rehabilitation done after completion of exploration works.

Aspect	Impact	Management and Mitigation Measure(s)	Key Performance Indicator (KPI)	Implementation Responsibility	Timeline
		-Explored areas on worksites should be progressively rehabilitated by stockpiling and backfilling. -Provision of both financial and technical resources for progressive rehabilitation.	-No stockpiled topsoil (topsoil is levelled after completion of each work) -Campsite dismantled and materials taken away from site. -Visible signs of stockpiled topsoil -Record of trenches excavated, and boreholes drilled -Waste containers on sites -Photo records of backfilled sites -Records of finances (Rehabilitation Trust Fund) set aside for decommissioning activities		

5.3 The Environmental Monitoring Actions

To ensure that the implementation of recommended environmental management measures is working and produces the desired results (minimizing slightly “high” to “medium” and the "medium" to uphold 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 Further 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: The Environmental Monitoring Measures

Impact	Parameter to be Monitored	Monitoring Objective	Key Performance Indicator (KPI)	Methods of Monitoring	Frequency	Responsible Party	Reporting structure	Threshold	Action if threshold is exceeded
Water and soil pollution									
Soil pollution by hydrocarbon (fuel and lubricant spills)	Complaints from farmers or occupiers of land within the project sites	To prevent contamination of site soils	No complaints from farmers about visible oil spills	Inspection of complaints logbooks	Weekly	ECO	ECO-> Exploration Manager	A logged complaint	Further consultations with the farmers
Wastewater generated by exploration workers living on-site.	Open defecation and urination.	To prevent environmental pollution	Adequate toilet facilities on site. Complaints from the public about open defecation and urination.	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	Visual observation	Weekly	ECO	ECO-> Exploration Manager	Proliferation of new vehicle tracks	Rehabilitation of affected explored areas

Impact	Parameter to be Monitored	Monitoring Objective	Key Performance Indicator (KPI)	Methods of Monitoring	Frequency	Responsible Party	Reporting structure	Threshold	Action if threshold is exceeded
			vehicle tracks. No new erosion gullies					Formation of new gullies in work areas	
Air quality									
Increase in dust generation, which might negatively affect occupational and residential respiratory health.	Complaints from public about increased in dust generation.	To reduce public complaints and prevent negative changes in air quality due to exploration activities	No complaints from the public about increased dust generation.	Inspection of complaints logbook.	Weekly	ECO	ECO-> Exploration Manager	A logged complaint	Dust suppression around working areas to reduce fugitive dust
Hydrocarbon emissions from vehicles	Complaints from the public about increased vehicles 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 projects team	To prevent illegal hunting of wildlife	Incidents reports of illegal hunting of wildlife by exploration workers.	Consultation with the local Police Service for reported	Weekly	ECO	ECO-> Exploration Manager > local Police Service (Anti-poaching Unit)	An incidents report logged with the local	Appropriate action will be decided by the local Police Service

Impact	Parameter to be Monitored	Monitoring Objective	Key Performance Indicator (KPI)	Methods of Monitoring	Frequency	Responsible Party	Reporting structure	Threshold	Action if threshold is exceeded
				incidents of poaching.				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
Occupational and Community / 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 environment damage caused by wildfires	No wildfires recorded (due to 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	Presence or unearthing of archaeological or cultural heritage resources	To prevent destruction of artefacts and sites	Preservation of all artefacts and sites that are discovered within the site	Inspection of records of findings	Daily	ECO Operator / Contractor	Operator->Foreman-> Superintended->ECO->Project Archaeologist -> National Heritage Council (NHC)	Unearthing of archaeological or cultural	Cease all activities on site and wait for NHC to inspect site and give

Impact	Parameter to be Monitored	Monitoring Objective	Key Performance Indicator (KPI)	Methods of Monitoring	Frequency	Responsible Party	Reporting structure	Threshold	Action if threshold is exceeded
heritage resources			boundary or around the project site area					heritage resources	further instructions / actions
Employment creation and Corporate Social Responsibility (CSR)									
Creation of employment	Creation of employment opportunities	To ensure that locals benefit from the project	Number of locals employed during exploration activities	Inspection of employment records	Monthly	Exploration Manager	Exploration Manager or Proponent	Number of those employed	None
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 increase in traffic on the roads. Complaints about damage to RA roads caused by	To ensure continued ease of access to RA roads by residents	No complaints from the public about increase off 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 threshold is exceeded
	movement of project vehicles and machinery.								
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 STIs 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
Social nuisance: Property invasion or disturbance and damage									
Potential intrusion or damage/destruction of private or public properties	Unauthorized intrusion and or damage to properties	To prevent crashes and tensions between the Proponent and the landowners	No complaints of property damage or intruding by project personnel	Liaison with property owners or occupiers of land	Monthly	PRO	Exploration Manager (or Proponent) -> PRO -> Landowners (farmers)	Arising new complaints	PRO to warn the personnel on respecting people's properties. If persists, then Code of Conduct to be implemented
Environmental Pollution (Littering)									
Environmental pollution from solid waste during exploration activities.	Scattered litter	To prevent littering of the general project area	No visible litter around the project area	Visual observation	Daily	ECO	ECO -> Exploration Manager	Visible littering around project site	Clean-up of the affected areas and ensuring workers utilise waste containers provided.
Visual									

Impact	Parameter to be Monitored	Monitoring Objective	Key Performance Indicator (KPI)	Methods of Monitoring	Frequency	Responsible Party	Reporting structure	Threshold	Action if threshold is exceeded
Visual impact owing to the project's exploration activities	Contrasting landscape (eyesore to travellers on the C36, D2344 and other unmarked local roads	To prevent and or reduce the appearance of contrasting land scars	Reduction of and insignificant (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 using other suitable visual mitigation measures. Ensuring that activities are only carried out on the targeted sites of EPL
Site Rehabilitation									
Soil and land disturbance because of exploration activities.	Abandoned and stockpiled topsoil as well as very disturbed land surface	To prevent major soil and 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 backfilling of topsoil and rocks

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 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 objectmust 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) or Technical Office 061 301 903**
- **National Museum (061 276 800)**
- **National Forensic Laboratory (061 240 461).**

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

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.

