UPDATED ENVIRONMENTAL MANAGEMENT PLAN (EMP)

For the proposed minerals exploration for base & rare metals, industrial minerals, and precious metals within EPL 6667

Ruacana District

Kunene & Omusati Regions

December 2023

APP: 2556

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DOCUMENT INFORMATION

Title	Updated Environmental Management Plan (EMP) for the proposed minerals exploration for base & rare metals, industrial minerals, and precious metals within EPL6667, Ruacana district, Kunene & Omusati Regions, Namibia
Updated By	Lovisa N Amwele
EMP being audited compiled by	Risk Based Solutions (RBS) cc (2020)
Client	Philco One Hundred and Seventy-Three (Pty) Ltd
Authorizer	Ministry of Environment Forestry and Tourism (MEFT)
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DOCUMENT APPROVAL

Role	Name	Signature	Date
Author	Lovisa N Amwele	LNA	06.12.2023
Reviewer **Client**	Tara French Don Horn		

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1. INTRODUCTION

1.1. BACKGROUND

Philco One Hundred and Seventy-Three (173) (Pty) Ltd (herein referred to as the proponent) holds mineral rights under the Exclusive Prospecting Licence (EPL) No. 6667 granted on 19/02/2018 by the Ministry of Mines and Energy (MME). The licence was renewed before it expired on the 18/02/2021 with validity until 08/06/2025. The EPL is granted for the prospecting of base and rare metals, industrial minerals and precious metals. The licence covers approximately 71931.4663 Ha located within communal land of Onhandungu, Okawani and Etoto in the Opuwo / Ruacana Districts, Kunene / Omusati Regions, in the northern Namibia. Access to the license area is though the C43 Road from Opuwo (FIGURE 2). Within the EPL area, a number of minor gravel roads used by local communities cut across the EPL area and will be used to access area/s of interest within the EPL area. The Proponent intends to continue with prospecting activities using techniques such as mapping, geophysical surveys, sampling and drilling, starting with the desktop studies, followed by regional and local field-based site-specific activities.

The proponent was issued with an Environmental Clearance Certificate (ECC) on the 13th of September 2018 valid for a period of three (3) years. A renewal was submitted by Risk Based Solutions cc (RBS) in July 2020 and a renewed ECC was granted on 16 November 2020 valid until 16 November 2023. Alliance Environmental Consultancy CC (AEC) (herein referred to as the consultant) has been appointed by the proponent to act on their behalf in renewing their Environmental Clearance Certificate (ECC) which expired on the 16th of November 2023.

The proposed prospecting activities are listed in the Environmental Management Act (EMA), 2007, (Act No. 7 of 2007) and the EIA Regulations, 2012 and cannot be undertaken without an Environmental Clearance Certificate (ECC). To date, only aerial geophysical survey and soil sampling has so far been conducted over the EPL area. Noting that the proponent wishes to continue with their exploration activities within EPL 6667 area and this EMP is updated to support the ECC renewal application for the continuation of prospecting program. The company conducted its activities in line with the provisions of the EMP and the conditions of the ECC granted to the operations. Therefore, on this basis the ECC should be renewed for the continuation of the minerals prospecting activities within EPL6667.

The corner coordinates of the EPL are provided in the table below.

TABLE 1 - CORNER COORDINATES FOR THE EPL

ID	LATITUDE	LONGITUDE		LATITUDE	LONGITUDE		LATITUDE	LONGITUDE
1	-17.795779	13.509687	10	-17.681881	13.698596	19	-17.625642	14.000012
2	-17.751956	13.512864	11	-17.700116	13.81179	20	-19.164617	17.961144
3	-17.721134	13.611773	12	-17.68459	13.981364	21	-17.734107	13.683908
4	-17.658578	13.613236	13	-17.602464	13.982035	22	-17.691175	14.000186
5	-17.632068	13.68483	14	-17.600594	14.000045	23	-17.795779	13.509687
6	-17.534066	13.720097	15	-17.481965	14.000199			
7	-17.57018	13.796588	16	-17.485432	14.24326			
8	-17.621129	13.794241	17	-17.535156	14.241316			
9	-17.633916	13.699102	18	-17.563489	14.277984			

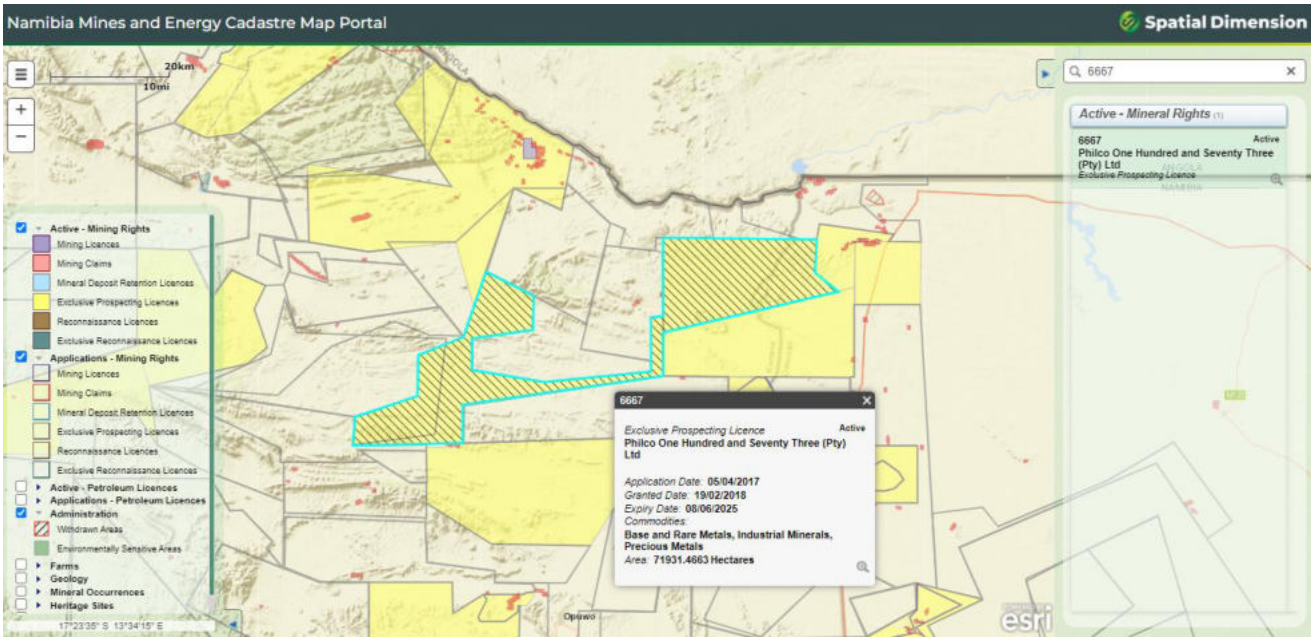
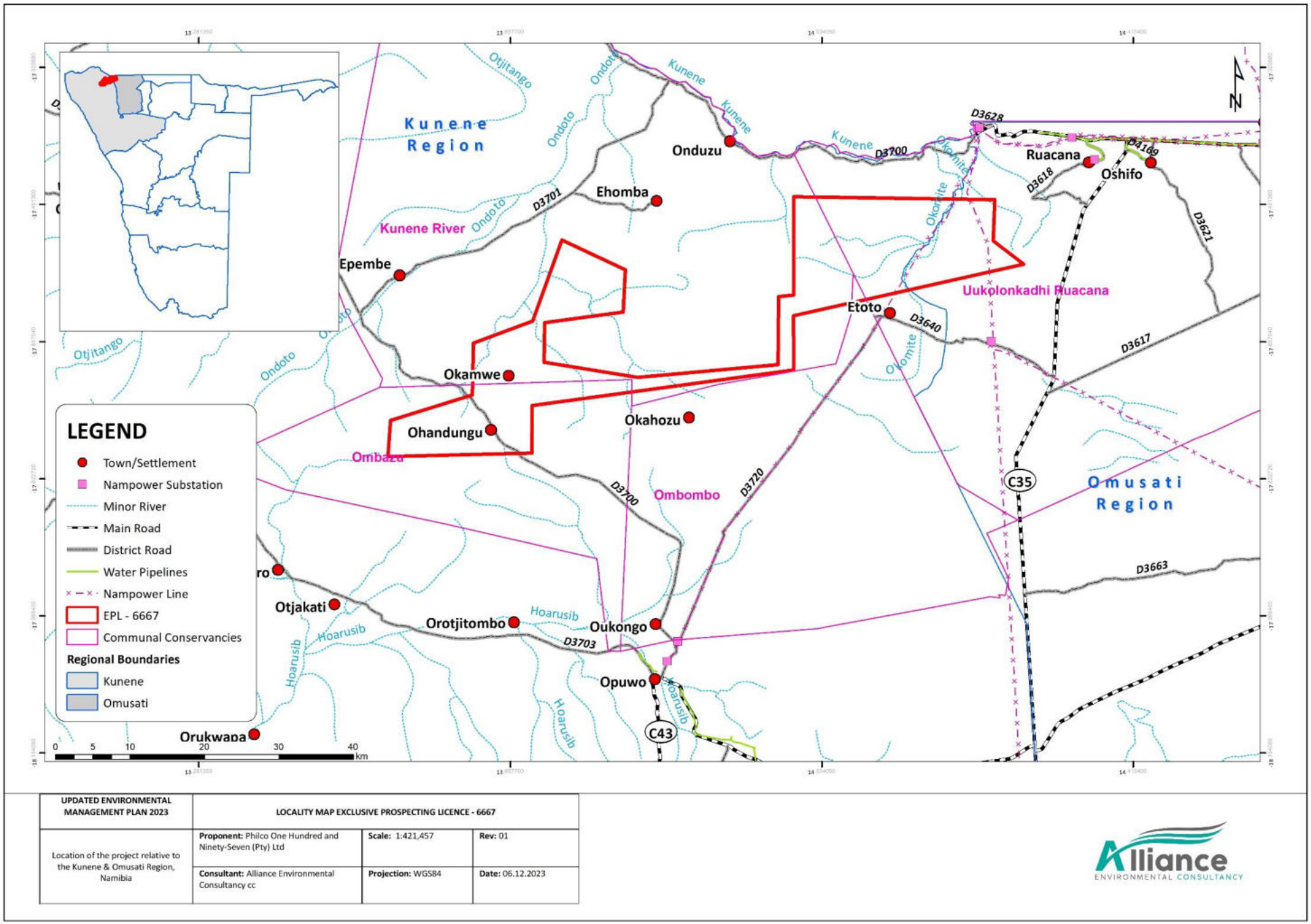


FIGURE 1 - LOCATION OF THE EPL AS INDICATED ON THE MME MINING CADASTRE (https://maps.landfolio.com/Namibia/).



UPDATED ENVIRONMENTAL MANAGEMENT PLAN 2023	LOCALITY MAP EXCLUSIVE PROSPECTING LICENCE - 6667		
Location of the project relative to the Kunene & Omusati Region, Namibia	**Proponent:** Philco One Hundred and Ninety-Seven (Pty) Ltd	**Scale:** 1:421,457	**Rev:** 01
	Consultant: Alliance Environmental Consultancy cc	**Projection:** WGS84	**Date:** 06.12.2023

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FIGURE 2 – REGIONAL LOCATION OF THE EPL AND SURROUNDING INFRASTRUCTURE.

FIGURE 3 - EPL LOCATION RELATIVE TO THE NATIONAL BOUNDARIES. (RBS, 2020)

1.2. PURPOSE OF THE DOCUMENT

Alliance Environmental Consultancy CC (AEC) has prepared this document in support of the ECC renewal for the proposed prospecting. This EMP is updated and conducted in terms of the Environmental Management Act, 2007 (Act No 7 of 2007). This Environmental Management Plan is a live document that has been prepared based on the environmental impacts identified in the Environmental Scoping and Impact Assessment (ESIA) and should be read in conjunction with the ESIA Report.

The aim of this document is to provide management measures to address the environmental impacts that have been identified and to give possible mitigation measures/recommendations. It is essential for personnel involved to fully be aware of the possible environmental issues and the means to avoid or minimize the potential impacts of activities on site.

Furthermore, the proponent fully understands the legal and policy requirements as a holder of the EPL. Impacts identified in the EIA form the basis of a set of environmental specifications that will be implemented on-site. These environmental specifications act as an agreement between the proponent and the Ministry of Environment, Forestry, and Tourism (MEFT).

1.3. LIMITATIONS OF THE UPDATED ENVIRONMENTAL MANAGEMENT PLAN (EMP)

The project-specific information used in this document is that provided by the Proponent, Consultants experience, relevant literature, as well as previous EMP conducted for the same project, therefore no specialist studies, site visits were conducted for this EMP update process. AEC makes the assumption that all project-related technical data and information provided by the Proponent is complete and accurate and that all information required for the creation of this EMP has been revealed.
Additionally, it is expected that the pertinent data from the many sources of literature studied is accurate. Lastly, this EMP was created under the presumption that the planned project will not undergo any substantial changes.

1.4. PROJECT ACTIVITIES

The proponent wishes to conduct an exploration program on EPL 6667 for base & rare metals, industrial minerals, and precious metals. The commencement of the project is planned as soon as the environmental clearance certificate is renewed as the physical EPL licence has been issued already by MME. The exploration program will be carried out as outlined in more detail below:

PLANNING PHASE ACTIVITIES

This will incorporate the procurement of all required permits and agreements with various state and parastatal agencies as well as surface landowners/land custodians. These will result in various agreements to be entered into between the proponent and the respective parties.

Possible parties that will be/are being consulted include the following:

- Ministry of Mines and Energy (MME)
- Ministry of Environment Forestry & Tourism (MEFT, this application)
- Respective Regional Councils
- Ministry of Agriculture, Water & Land Reform (MAWLR)
- Landowners/ Land custodians

INITIATION/PRE-OPERATIONAL PHASE

I. Accommodation

During this phase, a provisional field camp is planned with basic infrastructure as required for operations within the boundaries of the EPL, such providing accommodation on site. Alternatively, the workers can commute from the nearby village/town/settlement or any accommodation places that may be deemed sufficient by the proponent. Any infrastructure will be erected with the permission of the land custodians in the area. The accommodation area will be demarcated to limit the movement of equipment and personnel beyond the footprint of the camp area, and also to limit the movement of animals onto the site from the surrounds.

II. Access

Existing access roads will be utilized and if need be, upgraded to accommodate heavy motor vehicles and operational machines. The selective clearing of vegetation in areas designated for prospecting will be minimal from the foreseen operations. Usually, land is cleared at areas where drilling operations will be conducted or where the camping area will be erected. When lateral expansion is required the removal of vegetation will be done in association with the Directorate of Forestry that issues the relevant permits. This will apply during the operations phase.

III. Waste management

Solid waste will be removed off site and taken to the nearest registered dumpsite. The proponent intends to use portable toilets at work sites, when necessary. Alternatively, toilets may be established, with septic tanks to be emptied regularly using a tanker truck which removes the sewerage and takes it to the municipal sewerage works. For a longer-term field camp arrangement, a French drain system could be devised and constructed.

OPERATIONAL SUPPORT SERVICES

I. Water supply

Water supply sources being considered are either.

- Ground water abstraction; and
- NamWater

The proponent does not expect to use much water , as the only main activities are for camp use and for drilling (approximately 3000L – 4000L or less a month). It is suggested that amounts of water can be sourced from the nearest NamWater supply scheme or from one of the surrounding neighbors or community boreholes and then be trucked to the exploration site and camp, this is the preferred option.

If for any reason more water is required then the proponent suggests abstraction of ground water, which can be done at minimal extraction cost, a borehole can be sunk to augment supply volumes or an existing borehole can be utilized with the owner's permission. However, for this option depending on the required volumes (if exceeding limits for the applied purposes), groundwater exploration would need to be undertaken followed by the required permit application process with the Directorate of Water Affairs (DWA).

Where possible, and if water is found during the detailed exploration boreholes drilling operations, the Proponent shall support other land users in the area in terms of access to freshwater supply for both human consumption, wildlife and agricultural support as may be requested by the local community / landowners/s. The abstraction of the groundwater resources shall include water levels monitoring, sampling and quality testing on a bi-annual basis, and that the affected landowners must have access to the results of the water monitoring analyses as part of the ongoing stakeholder disclosure requirements on shared water resources as maybe applicable.

II. Power supply

No infrastructure development to get electricity from the national grid has been planned. All mobile equipment is diesel driven and self-propelled. Static equipment will use electricity generated by diesel generators. A small field of photovoltaic panels is also envisaged for power generation in the medium term.

III. Onsite fuel storage

Diesel storage at the site will be only temporary and intermittent during drilling and bulk sampling operations. Approximately 200 – 400 litres of diesel will be stored in a bunded fuel tank system,

conveniently placed and accessible for deliveries. This facility will be of modern construction, either double-skinned or 110% bunded to ensure spills are prevented.

Delivery systems will use sealed fittings to prevent spillage. The fuel facility, when in operation, is to be actively manned. Standardized spill kits and reporting systems will be in place to deal with any hydrocarbon spills. Contaminated soils will be transferred to a remediation site, which is specifically designed for such treatment.

PROSPECTING/OPERATIONAL PHASE ACTIVITIES

The EPL 6667 is situated in a highly perspective area for base and rare metals, industrial minerals and precious metals associated with local rock outcrops comprising rhyolite, basalt, amphibolite, phyllite, limestone and gneiss. Based on the historical exploration activities undertaken around the EPL area, various minerals occurrences are historically known to occur in the EPL area although very few have been investigated to prove if they are economic or not. Based on the regional geology and limited exploration activities undertake, there is good probability for discovering economic minerals resources within the EPL 6667 (RBS, 2020).

I. Vehicle, machinery and associated equipment

Main equipment types to be used will include 4X4 bakkies, drill rigs (Reverse Circulation (RC) or Diamond Drill Hole (DDH), excavators and front-end loaders to be used if overburden topsoil removal is required, water tankers for the camp site and to support drilling operations, portable analyses and geophysical equipment, sampling equipment (bags, sieves, spades etc.). The aforementioned will be stored in designated areas at the accommodation place.

The projected mineral exploration activities during prospecting follow a staged approach. The different work aspects and consecutive phases are summarized as follows:

II. Desktop studies including geological mapping.

High resolution data are purchased from the MME to assist in a desktop review of existing historic geological exploration reports data as well as all past research conducted in the general area to see if there are any prospective targets. The data available is used to understand the background of the area through remote sensing and topographic surveys. This involves a review of geological maps of the area and on-site ground traverses and observations. The maps and data will be updated where relevant information has been obtained.

III. Geophysical survey

The geophysical surveys include the collection of information of the substrata, by ground and airborne techniques, through sensors such as radar, magnetic and electromagnetic to detect any mineralization in the area. Ground geophysical surveys would be carried out using sensors mounted on vehicles or carried by hand. Aerial geophysical surveys would be carried out using sensors mounted on low flying aircraft or unmanned drones. The airborne geophysical technique tries to measure electrical conductivity and magnetic variations of the ground using measuring instruments suspended underneath a helicopter, drone or aircraft. Where necessary, permits will be obtained from Namibia Civil Aviation Authority (NCAA) to support the airborne geophysical surveys. Generally, these techniques are not intrusive in terms of impacts towards the environment.

IV. Geochemical sampling

This stage incorporates geochemical analyses, geochemical soil sampling programs, and additional ground geophysical surveys.

For soils sampling, it is done at depths of at least 10 - 30cm therefore firstly removing the upper surface of the soil that will be filled back once a sample is collected. The samples are collected into bags of approximately 100 - 500grams. Usually, soil samples are to be collected where drainage and catchment basins are poorly developed. Sampling can be carried out in up to 8 teams, each consisting of a field technician or geologist and local field assistants.

Other surface samples collected may include termite mounds and rocks if exposed at surface.

Once the exercise concludes, the samples are collected and sent to an analytical laboratory (as preferred by the proponent) for geochemical trace element analysis to determine if sufficient quantities of the desired mineralization are present.

Using the results obtained through the geophysical and geochemical surveys, a guidance map is created. When target areas are determined, it may be necessary for drill pads to be established. Efforts will be made to limit or minimize the amount of clearing of trees and shrubs, including by considering alternative sites for drilling. Should sensitive/protected species be present in the target area a trees removal and clearing permit is applied for through the Department of Forestry (DoF).

V. Exploration Drilling

Exploration drilling is the process of sampling rock below surface from an area, where it is suspected that there may be mineralization. The most commonly used drilling techniques are Reverse Circulation Drilling (RC) or Diamond Drilling. Both methods are applied in exploration, resource evaluation and subsequently in defining an ore reserve.

Exploration Diamond Drilling differs from other geological drilling in that a solid core is extracted from depth, for examination on the surface. The key technology of the diamond drill is the actual diamond bit itself. It is composed of industrial diamonds set into a soft metallic matrix. The drill produces a "core" which is logged, photographed and which can be split longitudinally for sampling purposes. Half of the split core is assayed while the other half is permanently stored for future use and reference.
RC Drilling uses a pneumatic hammer, which drives a rotating tungsten-steel bit. The technique produces an uncontaminated large volume sample, which is comprised of rock chips. It is relatively quick and cheap compared to Diamond Drilling. The RC technique is common for infill drilling, at a much higher density or narrower spacing to allow extrapolations of the rock units. Usually, the drill area is approximately 20m x 20m and during the drill process is off-limits to those not part of the exploration team for safety reasons.

Once the samples are sufficient and analysed at the laboratory the information may be used for resource modelling and delineation of mineral resources for further study. These may develop into mining targets after several further phases of work over 3-5 years of evaluation.

VI. Advanced prospecting/exploration

In the advanced stage of exploration, larger amounts of rock sample material may be required for performing processing trials and for metallurgical testing programs. Ground conditions and geotechnical parameters also need to be established for planning and costing purposes.
Bulk sampling for metallurgical tests and processing trials will be done to complement the material obtained during drilling. Possibly, pits or trenches are to be dug / excavated to a depth of 5m, and several hundred cubic meters of samples are taken. The location of the pits will depend on the drilling results and will be in close proximity where drilling has occurred. The size of the sample required depends on the nature of the mineralization as observed from drilling and sampling.

VII. Pre-feasibility and feasibility studies

If the detailed exploration activities yield positive results, the exploration data will be compiled into a pre-feasibility report, and upon positive results from further work, a detailed feasibility study will be conducted on the identified site-specific area where a mineral deposit is defined.
Additional detailed and site-specific drilling, bulk sampling, laboratory testing, and trial mining may be conducted.

VIII. Mining Licence Application or End of exploration Program

Only if an economic mineral resource is discovered within the EPL area, the proponent will compile an application for a mining licence and a detailed environmental impact assessment study will be

undertaken. The EIA will comprise of detailed site-specific specialists' studies of different aspects of the project these studies may include the following impact assessments; Hydrology and geohydrology, archaeology, air quality, traffic, biodiversity (fauna & flora), visual and soil etc.

Should there be no discovery of any economic minerals that warrants a Mining Licence, the proponent can decide to end the operations of the project and the area is rehabilitated.

DECOMMISSIONING AND FINAL REHABILITATION

In accordance with the Environmental management Act (EMA), the proponent is required to make funds accessible which will specifically be available and allocated for rehabilitation efforts. This fund should continually be available during the period of the active operation yet also be sufficient to cover all decommissioning activities when required.

Decommissioning activities will include the removal of any temporary infrastructure, rehabilitation of roads and other linear infrastructure, drill sites and bulk sampling pits, as necessary. This is done in order to reduce the effects of soil erosion and to re-establish normal ecosystem functionality so as to rehabilitate the environment. The proponent will review rehabilitation requirements with the local pastoralist and may not rehabilitate a road only at the request of the local landowner.

1.5. SUMMARY OF THE RECEIVING ENVIRONMENT

1.5.1. Land Use

The general land use of the area is mainly dominated by communal subsistence agriculture. Local communities farm with both small stock such as goats and cattle. Donkeys are used for labour-based activities such as fetching water and ploughing the land.

Other land use activities found in the general surrounding areas includes minerals exploration and ever-growing tourism activities particularly around the local conservancies due to the unique cultural tourism experiences, high tourism landscape value as well as a variety of major wildlife resources which includes elephant, kudu, oryx, ostrich, springbok, steenbok, jackal and klipspringer. However, the abundance of wildlife is under pressure from the ever-growing human population which is continuously taking away suitable habitats for other land uses.

1.5.2. Fauna and Flora

It is estimated that at least 67 species of reptile, 10 amphibian, 91 mammal and 203 bird species (breeding residents), at least 114 species of larger trees and shrubs and up to 65 grasses are known to or expected to occur in the general area of which a large proportion (e.g. 47.8% of reptiles) are endemics species. Although many endemic species are known to occur from the general area, it is currently not clear if any of these are associated with the proposed exploration area(s) or how exactly they will be affected by such activities. All human induced activities, including exploration activities have potential negative environmental consequences, but identifying the most important fauna and flora species including high risk habitats beforehand, coupled with environmentally acceptable recommendations (mitigating factors), lessens the overall impact of such activities (RBS, 2020).

1.5.3. Water resources/hydrology

Although the general area does not have economic water resources and is not a protected water resources area, the entire EPL area is dominated by dolomite, limestone, shale and quartzites and the carbonates have potential for groundwater occurrences associated with the solutions holes. The overall water vulnerability to pollution as a result of the proposed exploration as well as other existing activities is moderate. The general area has a number of Ephemeral River Channels which could be potential pathways for pollution migration especially during the rainy season from November to March. Discharge of liquid or solid wastes including wastewater, chemical, fuels or oils into any public stream is prohibited and the Proponent must implement the provisions of the EMP on water and waste management as detailed in Chapter 6 in the RBS 2020 updated scoping report. It is hereby recommended that a detailed site-specific hydrogeological specialist study including groundwater

modelling, water sampling and testing must be undertaken as part of the EIA and EMP that may be implemented to support the feasibility study for any viable mining project that may be development within the EPL area, if economic resources are discovered.

1.5.4. Geology

The EPL area lies within the north-south-trending coastal arm Damara Belt of the Damara Orogen formed during late Proterozoic to Early Palaeozoic time in a rifting environment (RBS, 2020). The Belt is characterized by high temperature-low pressure metamorphism and numerous granitic intrusions. The north-northwestern rift underwent multiple phases of subsidence. The Damaran rocks lie unconformably on early Proterozoic basement rocks of the Epupa and Huab Complexes. The Damara is made up of schists, gneisses and calc-silicates rocks. The earliest unit in the rift is the Nosib Group dominated by coarse clastic sedimentary rocks. The Nosib Group is a package of (meta-) sandstones, conglomerates and siltstones that has been informally subdivided into lowermost conglomerate-sandstone, middle siltstone-dominant, and uppermost sandstone-conglomerate sequences. The Nosib Group comprises quartzites, conglomerate, Schist, marble and mixitite covering much of the central part of the EPL. The western and eastern portions of the EPL are covered by dolomite, limestone, shale and quartzite of the Damara Sequence in the northern half and a mixture of Nosib Group and Damara Sequence in the southern half (FIGURE *4* below). Take note of the EPL size changes in FIGURE 5.

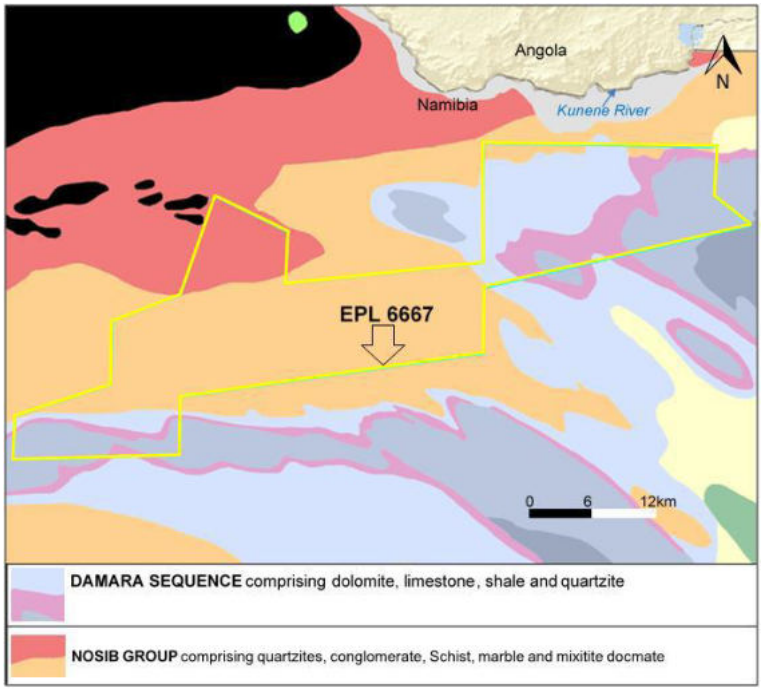


FIGURE 4 - SIMPLIFIED GEOLOGICAL MAP OF THE EPL 6667. (RBS, 2020). (DATA SOURCE: (SOURCE: HTTP://PORTALS.FLEXICADASTRE.COM/NAMIBIA).

1.5.5. Heritage

The general area around the EPL area may be associated with unknown archaeological resources protected by the National Heritage Act, 2004 (Act No. 27 of 2004) under the National Heritage Council of Namibia. The EPL area is likely to evidence from the early colonial period relates to mining in the general area and a combination of trade, missionary activity and indigenous tribes use of iron for various applications. The Proponent must not disturb major natural shelters or cavities that may be unearthed because they could hold some highly significant historical or cultural sites that would require detailed documentation and possibly mitigation measures to be adopted in the event of encroachment by mining activity.

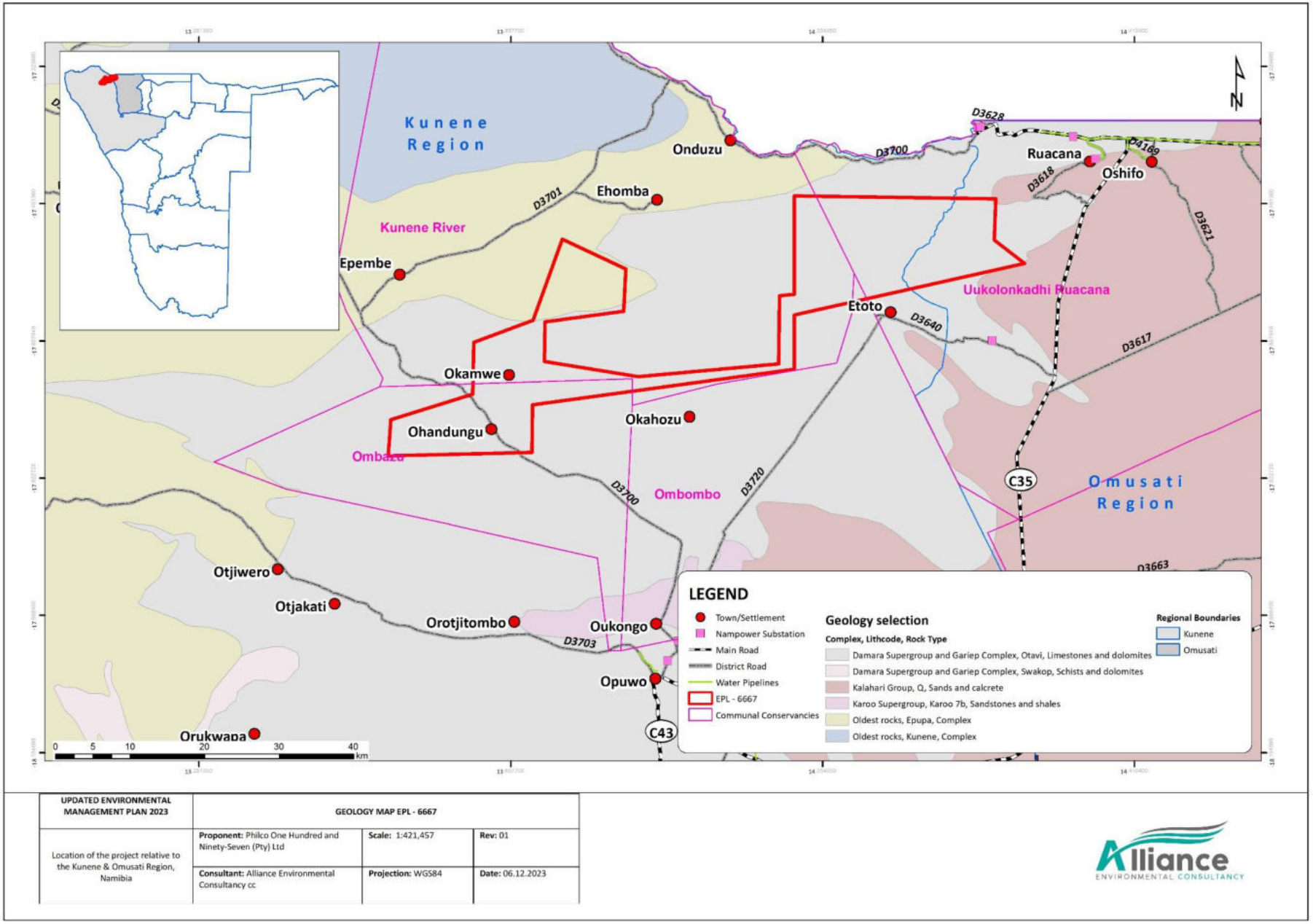
The area of interest for the proposed exploration and possible test mining probably has archaeological potential, although no archaeological sites have been recorded so far from within the area itself. The expectation is therefore:

- A high likelihood of Holocene age archaeological sites, including rock art, associated with outcropping granite in the northeast of the EPL.
- A high likelihood of late precolonial settlement sites throughout the entire tenement, especially in the vicinity of Kalkfeld settlement, springs and seepages, and.
- A high likelihood of early colonial settlement remains relating to the historical occupation of area that may be unknown or not recorded.

The following are the key recommended actions related to archaeology in the EPL Area:

- Contractors working on the site should be made aware that under the National Heritage Act, 2004 (Act No. 27 of 2004) any items protected under the definition of heritage found in the course of development should be reported to the National Heritage Council.
- The chance finds procedure as outlined in the EMP must be implemented at all times, and.
- Detailed field survey should be carried out if suspected archaeological resources or major natural cavities / shelters have been unearthed during the mining operations.

Figures 5 to 8 provide some baseline maps of the project area.



UPDATED ENVIRONMENTAL MANAGEMENT PLAN 2023	GEOLOGY MAP EPL - 6667		
Location of the project relative to the Kunene & Omusati Region, Namibia	**Proponent:** Philco One Hundred and Ninety-Seven (Pty) Ltd	**Scale:** 1:421,457	**Rev:** 01
	Consultant: Alliance Environmental Consultancy cc	**Projection:** WGS84	**Date:** 06.12.2023

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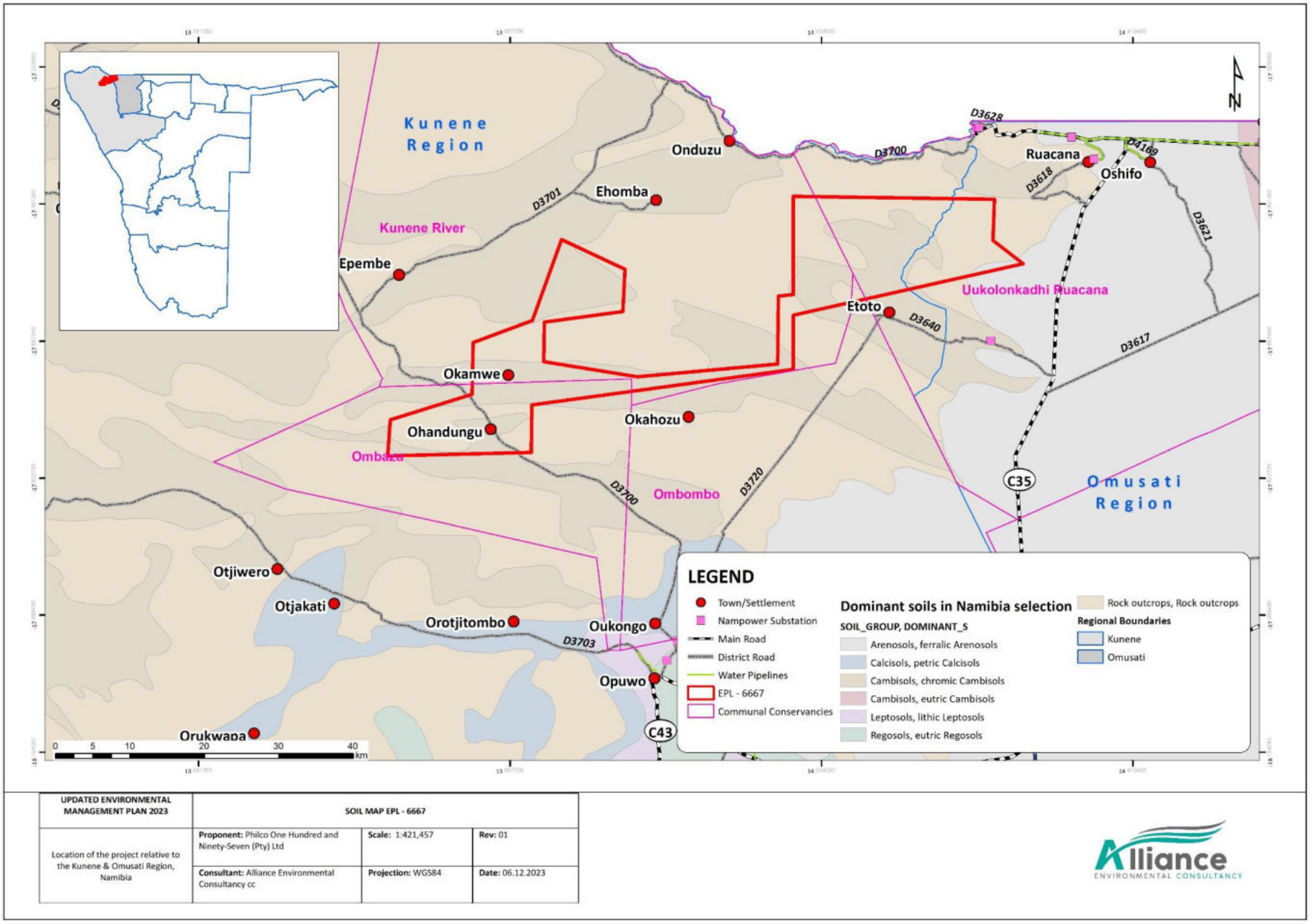
FIGURE 5 - GEOLOGY OF THE PROPOSED PROJECT AREA



UPDATED ENVIRONMENTAL MANAGEMENT PLAN 2023	SOIL MAP EPL - 6667		
Location of the project relative to the Kunene & Omusati Region, Namibia	**Proponent:** Philco One Hundred and Ninety-Seven (Pty) Ltd	**Scale:** 1:421,457	**Rev:** 01
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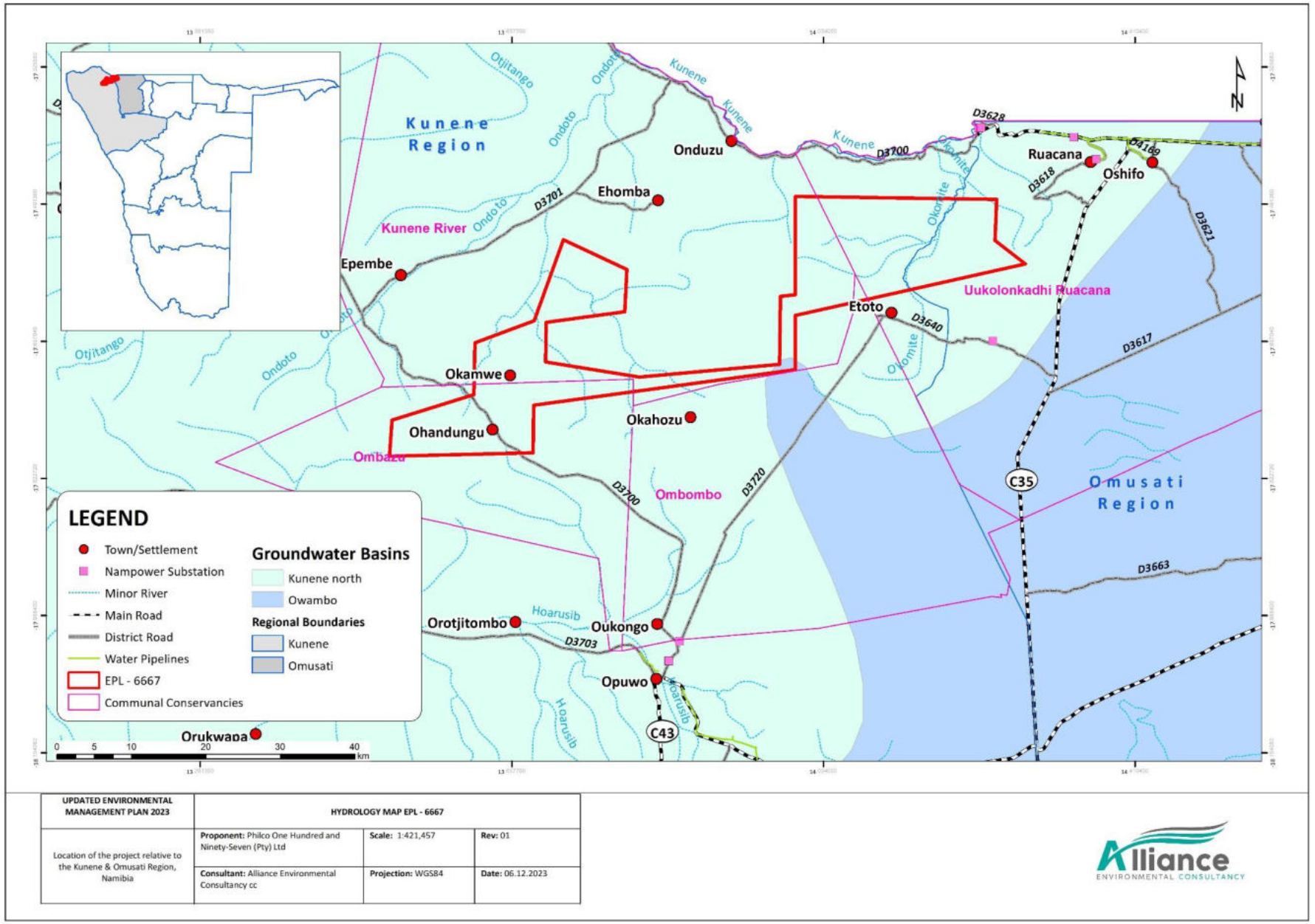
FIGURE 6 - DOMINANT SOIL TYPE SURROUNDING THE PROJECT AREA



UPDATED ENVIRONMENTAL MANAGEMENT PLAN 2023	HYDROLOGY MAP EPL - 6667		
Location of the project relative to the Kunene & Omusati Region, Namibia	**Proponent:** Philco One Hundred and Ninety-Seven (Pty) Ltd	**Scale:** 1:421,457	**Rev:** 01
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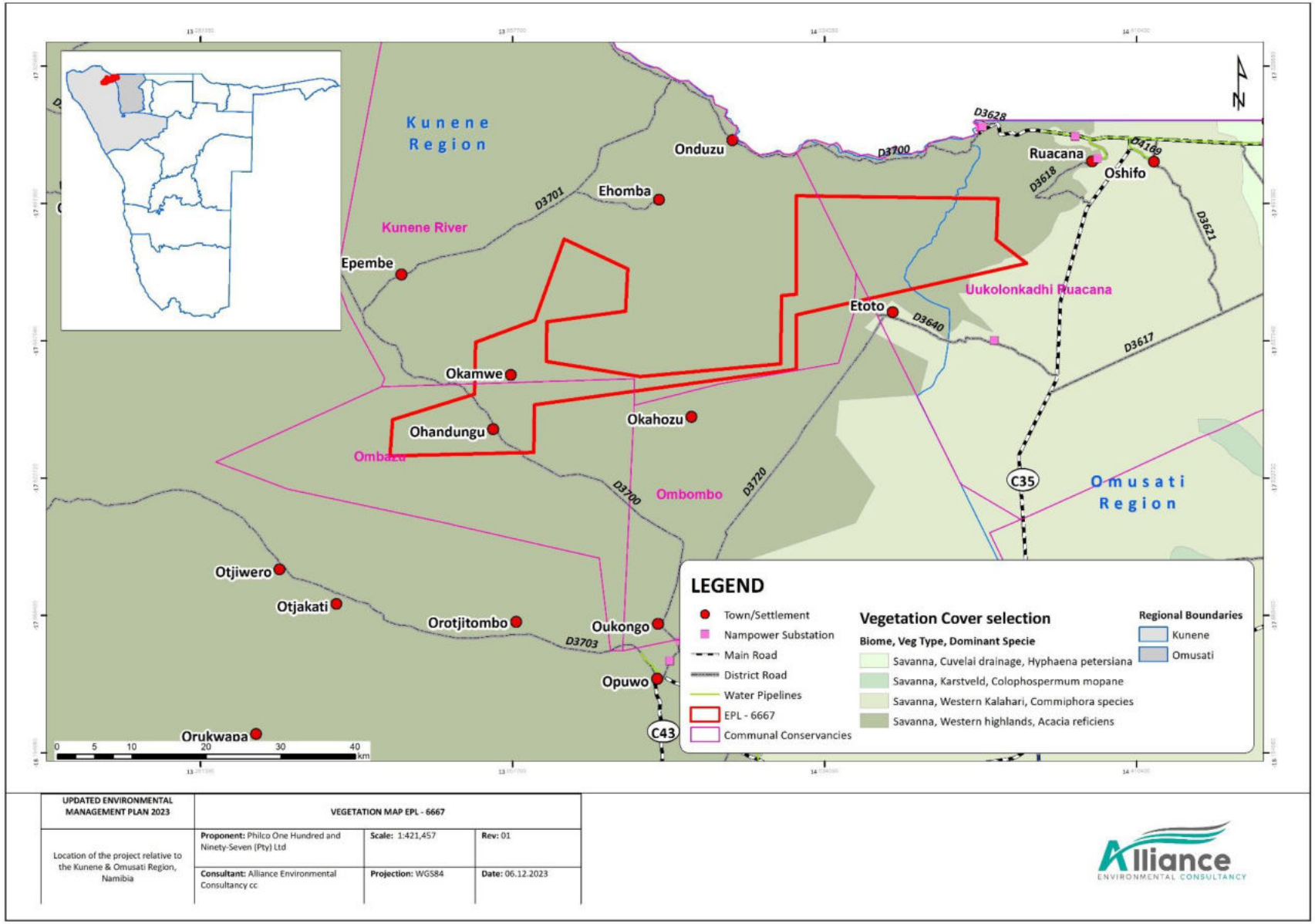
FIGURE 7 - GROUNDWATER BASINS AND HYDROLOGY OF THE PROJECT SITE



UPDATED ENVIRONMENTAL MANAGEMENT PLAN 2023	VEGETATION MAP EPL - 6667		
Location of the project relative to the Kunene & Omusati Region, Namibia	**Proponent:** Philco One Hundred and Ninety-Seven (Pty) Ltd	**Scale:** 1:421,457	**Rev:** 01
	Consultant: Alliance Environmental Consultancy cc	**Projection:** WGS84	**Date:** 06.12.2023

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FIGURE 8 - VEGETATION OF THE PROJECT SITE

2. ENVIRONMENTAL MANAGEMENT PRINCIPLES

The Proponent will ensure that all project participants adhere to the following company goals:

i. All employees will be obliged to undertake activities in an ecologically and socially responsible way. This applies to all consultants, workers, contractors, and subcontractors, as well as transporters, and visitors who are directly or indirectly requested by the Proponent to attend the work area as part of normal operations.
ii. Safeguard the health and safety of project personnel and the public against potential impacts of the project. This includes issues of road safety, precautions against dangers on site, potential hazards; and,
iii. Promote good relationships with the surrounding settlements and other stakeholders.
iv. Wise use and conservation of environmental resources, giving due consideration to the use of resources by present and future generations;
    a. Prevent or minimize environmental impacts;
    b. Minimize air, water, and soil pollution; and
    c. Conserve Biodiversity.

In order to achieve the project's goal, the following principles must be followed:

TABLE 2 - EMP PRINCIPLES

TERM	DESCRIPTION
Accountability and Commitment	The Company Senior Executives and Line managers will be held responsible and accountable for: a. Health and safety of site personnel while on duty, b. Environmental impacts caused by exploration activities or by personnel engaged in the daily operations at the site.
Competence	The company will ensure a competent workforce through appropriate selection, training, and awareness of all safety, health, and environmental matters.
Risk Assessment, Prevention, and Control	Identify, assess and prioritize potential environmental risks. Prevent or minimize risks through careful planning and design, allocation of financial resources, management, and workplace procedures. Intervene promptly in the event of adverse impacts arising.

TERM	DESCRIPTION
Performance and Evaluation	Set appropriate objectives and performance indicators. Comply with all laws, regulations, policies, and environmental specifications. Implement regular monitoring and reporting of compliance with these requirements.
Stakeholder Consultation	Create and maintain opportunities for constructive consultations with employees, authorities, and other interested or affected parties. Seek to achieve an open exchange of information and mutual understanding in matters of common concern.
Continual Improvement	Through continual evaluation, reports, and innovation, seek to improve performance regarding social health and well-being as well as environmental management throughout the lifespan of the project.
Financial Provisions for project activities	In line with the internationally recognised "polluter pays principle" the company will make the necessary financial provision for compliance with the EMP.

3. ROLES AND RESPONSIBILITIES FOR ENVIRONMENTAL MANAGEMENT

3.1. COMMUNICATION BETWEEN PARTIES

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

3.2. THE EXPLORATION COMPANY

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

- The EMP and its environmental specifications are included in contractual documents, and it is required that contractors, and subcontractors, consultants etc. do meet the EMP requirements;
- The company and all its subcontractors, consultants etc. comply with all Namibian legislation and policies and any relevant International Conventions;
- Compliance with the environmental specifications is enforced on a day-to-day basis;
- Environmental audits are conducted periodically by a suitably qualified Environmental Control Officer ECO to confirm that the environmental requirements are properly understood and effectively implemented;
- Sufficient budget is provided to implement those measures that have cost implications;
- The PM must commission tree surveys well in advance of planned track creations so that the necessary site visits by forestry personnel and forestry permits are acquired; and
- Open and effective communication is maintained between all parties concerning environmental management on the project.

3.3. SITE/PROJECT MANAGERS

Day-to-day responsibility for environmental management will be assigned to the Site/Project Manager as well as the Environmental Control Officer (ECO) for the duration of the project to:

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

3.4. ENVIRONMENTAL CONTROL OFFICER (ECO)

The proponent must appoint a suitably qualified ECO who is responsible to:

- Undertake environmental audits of overall compliance with the environmental specifications. This should be done at least bi-annually for the project area.
- Submit a site inspection report to the Managing Director.
- Advise the MD on interpretation and implementation of the environmental specifications as required; and,
- Make recommendations for remedial action in cases of non-compliance with the environmental specifications.
- The report should be submitted to the MEFT periodically at the time interval stipulated by law.

3.5. CONTRACTORS AND SUB-CONTRACTORS

The contractors will have the responsibility to:

- Familiarize themselves with the requirements of the EMP and comply with the environmental specifications within.
- Notify the ECO through the MD timeously in advance of any actions that might have significant negative impacts. Mitigatory measures should be discussed and implemented before negative impacts arise. Conduct or arrange for environmental training for employees and subcontractors.
- Undertake rehabilitation measures where required as far as possible, rehabilitation measures should be carried out progressively and not left till the end of the project.

4. ENVIRONMENTAL SPECIFICATIONS

The activities will be conducted in an environmentally and socially responsible manner. The contractor and all personnel on-site will comply with the environmental specifications contained in this section.

4.1. TRAINING AND AWARENESS

All site personnel and site contractors will receive the training to equip them with the necessary knowledge to comply with the environmental specifications. The MD will ensure that an appropriate level of training is provided at all levels of site personnel.

4.2. STAKEHOLDER RELATIONS

All site personnel will endeavor to maintain good relations with the landowners and members of the public. Any complaints received by the ECO should be recorded and will be addressed.

4.3. PERMITS

All relevant permits shall be obtained from relevant authorities.

The removal or relocation of rare and endangered plants will be conserved and should it be removed or relocated it shall be done with the required permits from the Directorate of Forestry. Further on the possible permits required is presented in (TABLE 3)

TABLE 3 - APPLICABLE PERMITS TO THE PROPOSED PROJECT

PERMITS/CERTIFICATES	ACTIVITY	VALIDITY
Fuel Consumer Installation Certificate - (MME)	Regulates the amount of fuel product in possession	Temporary/ permanent
Notice of intention to drill – (MME)	This is submitted to the mining commissioner prior to drilling operation	Valid for the drilling period in notice
Water abstraction permit – (DWA)	This is applied for at the Directorate of Water Affairs to outline the borehole locations and the quantities of water you intend to abstract ad for what sort of activities	Permit dependent
Forestry Permits – (DOF)	Regulates the forest species to be cleared.	Temporary.

4.4. ROAD SAFETY

The access roads can be dangerous at times due to dust from passing vehicles, poor camber, patches of loose sand, careless drivers, animals and other external factors. All drivers must be aware of these hazards and take precautions to avoid them. Such precautions will include, but not be limited to:

- Complying with speed limits.
- Reducing speed considerably when visibility is poor.
- Being wary of other vehicles.
- Travelling with lights on even in daylight.
- Slowing down for animals and birds on the road; and,
- Being cautious of other road users– taking into account reduced visibility due to dust.

4.5. ACCESS TRACKS

- The proponent will predominantly use existing tracks, and any new tracks or extensions should be established with the permission of the landowners and the Department of Forestry DoF when necessary (if larger areas require clearing).
- The selected access and site roads will be clearly marked. A single road only will be used to and from each destination. Turning points for vehicles will also be pre-selected and marked.
- Particular care will be taken to avoid damage to plants.
- Any elevated sites, or sites away from existing tracks, will be accessed on foot rather than by a vehicle.

4.6. CONSERVATION OF BIODIVERSITY

- Damage to protected species will be avoided at all costs.

4.7. WILDLIFE POACHING

NB: It is an offence to poach wildlife.

No animal or bird is to be captured, killed or harmed in any way. Anyone caught violating this law will face suspension from the project and could be liable for prosecution. In a likewise manner, domestic livestock on farms may also not be harmed.

4.8. SOIL MANAGEMENT AND EROSION CONTROL

- During any excavating and clearing the Contractor shall take care to remove as little topsoil as possible. All soil within 100mm of the cleared surface level shall be regarded as topsoil.
- Remove and separately stockpile any subsoil material that can be used for site backfilling.
- Avoid handling soil when wet as this may result in the loss of soil structure and compaction. Soils should not be handled during windy conditions, which may lead to the loss of soil through wind erosion.
- Soil erosion must be prevented at all times. Where evidence of soil erosion can and/or is taking place, this should be reported by the Contractor to the Project Manager (PM) or ECO.
- Unnecessary compaction of construction areas must be prevented, to reduce runoff velocity.

4.9. POLLUTION CONTROL

4.9.1. Spillage Incidents

- Should any incident occur in terms of spilling, they shall report it immediately to the PM and the Contractor shall be responsible for containing and cleaning up the spillage. The Contractor shall ensure that correct mitigation of the pollution is undertaken.

4.9.2. Air pollution / Dust emission

- Soil and sand stockpiles shall be located in sheltered areas not exposed to the wind.
- Retention of vegetation where possible will reduce dust travel.
- Exposed surfaces must be re-vegetated as soon as possible.
- The movement of vehicles and other vehicles should be strictly controlled in order to reduce the impact of increased air pollution.
- Adherence to speed limits shall be enforced.
- Ensure sensible and responsible use of equipment which generates dust.
- Limit operations during dusty working weather conditions.
- Vehicles and operating equipment must be regularly serviced.

4.9.3. Noise pollution

- Noise levels shall be kept within acceptable limits. All noise and sounds generated shall adhere to SABS 0103 specifications for maximum allowable noise levels for residential/communal areas.
- Noisy activities must be limited to between 06h00 to 19h00 to avoid disturbance towards adjacent landowners.

- Noisy activities should not be allowed on weekends and public holidays unless specific arrangements have been made with the proponent and provided that neighbors have been timeously notified.
- Vehicles and operating equipment must be regularly serviced.

4.10. WASTE MANAGEMENT

- The area needs to be kept clean, neat, and tidy to the satisfaction of the proponent and ECO. The proponent will provide bins at the worksites and will be responsible for the collection and containment of daily refuse and waste generated by staff. Bins will be secured in such a way that wind cannot remove papers and plastics. Bins will also be secured against animals around the vicinity.
- No waste will be buried/burnt on site. All waste will regularly be removed to an approved waste disposal facility (e.g., Opuwo).

4.11. HAZARDOUS SUBSTANCES

- All containers of fuel, oil, and any other hazardous substances will be kept sealed, and clearly labeled for identification.
- Tanks for fuels, oils, and any other hazardous substances need to be bunded to hold 110% of the capacity of the tank to contain any possible spills.
- If any spills occur, clean–up shall occur immediately and disposed of appropriately.

4.12. FIRE PREVENTION

- Ensure an Emergency Response Plan is compiled.
- No fires are to be left unattended.
- Charcoal sourced from the surrounding should be 100% cured to avoid combustion.

4.13. ARCHAEOLOGICAL SITES

- All archaeological remains are protected under the National Heritage Act (2004) and are not to be destroyed, disturbed, or removed. The Act also requires that any archaeological finds be reported to the Heritage Council Windhoek (**Tel. 061-244375**). The same applies to rock art sites.
- The ECO will be notified without delay of any archaeological finds.

4.14. HEALTH AND SAFETY

All company personnel will receive a detailed induction upon joining the project. The PM and/or ECO will ensure regular safety 'tool box' meetings are carried out at the site in order to maintain safety awareness and to inform staff of any changes or developments pertaining to safe operations since the last induction/meeting. These meetings and inductions will be recorded and will include all names of staff present and any follow-up or action required from the meeting.

- ***Dust:*** All staff will receive dust masks and proper PPE to prevent inhalation of potential dust while carrying out any dust-producing activities associated with the project
- Eating, drinking, and **smoking** while working with any materials that may contain radioactive or hazardous substances is forbidden. Good personal hygiene is encouraged (e.g., washing hands before eating) to prevent ingestion of potentially hazardous or radioactive materials.
- **Bees:** Bee stings are potentially dangerous to persons who are allergic to them. Bees are attracted to water, so water / liquid should not be left standing.
- **Snakes & Scorpions:** A number of poisonous snake and scorpion species may occur in the area. Therefore, precautions are required which include: -
  - Exercising caution when picking up rocks or equipment from the ground.
  - Looking at the ground when walking; and,
  - Wearing closed shoes and not walking barefoot.

In case of emergency, ensure that Aspivenin (suction syringe) is permanently available at all workstations for the first aid treatment of snake bites, scorpion stings and bee stings. Antihistamine tablets should also be available for the first aid treatment of allergic reactions to bee stings.

TABLE 4 - EMERGENCY CONTACT NUMBERS IN OPUWO

Ambulance	+264 65 270326
Fire Brigade	-
Electricity	+264 65 273076
Hospital / Clinic	+264 65 273026
Police	+264 65 273041
Water / Sewage	+264 65 273007

4.15. WORK STOPPAGE

The PM will have the right to order work to stop in the event of environmental specification infringements that could result in damage to plants, wildlife, or personnel. Work will continue once the situation is rectified and brought to a state of compliance.

4.16. COMPLIANCE MONITORING

Where necessary during exploration activities, the company ECO will conduct regular site compliance inspections. After each inspection the ECO will compile an EMP compliance report for submission to the PM and biannually to the MEFT or as required. Environmental monitoring programme is part of the EMP performances assessments and will need to be compiled and submitted as determined by the Environmental Commissioner. The process of undertaking appropriate monitoring as per specific topic (such as fauna and flora) and tracking performances against the objectives and documenting all environmental activities is part of internal and external auditing.

The monitoring of the EMP performance will require a report outlining all the activities related to effectiveness of the EMP at the end of the planned mineral exploration to be undertaken by the Project ECO with the support of the external specialist consultants as maybe required. The objective will be to ensure that corrective actions are reviewed, and steps are taken to ensure compliance for future EIA and EMP implementation.

The report shall outline the status of the environment and any likely environmental liability after the completion of the proposed / ongoing project activities. The report shall be submitted to the Environmental Commissioner in the Ministry of Environment Forestry and Tourism and will represent the final closure and fulfilment of the conditions of the ECC issued by the Environmental Commissioner and the conditions of the Pro-Forma Environmental Contract signed by the Proponent, Environmental Commissioner and the Mining Commissioner.

5. MITIGATION MEASURES

The purpose of the Environmental Management Plan is to provide a detailed plan to mitigate the negative and positive impacts identified in the environmental scoping and assessment report. Furthermore, it aims to provide actions with roles and responsibilities to implement the environmental specifications provided for to the proponent, contractors, subcontractors who will undertake exploration activities.

The following table provides a large-scale summary overview of all the major environmental management aspects. The updated scoping study submitted with the previously approved EMP also provides mitigation measures for impacts identified therein under **Section 5.4 , 5.5, & 5.6**.

TABLE 5 – EMP MITIGATION MEASURES

Aspect	MANAGEMENT DETAILS	RESPONSIBLE PERSONS	FREQUENCY
Access Control	• Make use of existing tracks/roads as much as possible throughout the area. • Only drive along the existing tracks and avoid unnecessary drives around the area as it may harm vertebrate fauna and unique flora and may also cause erosion related problems, etc. • Avoid off-road driving at night as this increases mortality of nocturnal species. • Implement and maintain off-road track discipline with maximum speed limits (30km/h or as otherwise specified by the PM) • Where tracks must be made to potential exploration sites off the main routes, the routes should be selected along already disturbed areas or where there is minimal biodiversity expected to occur. • Avoid placing tracks within drainage lines. Avoid collateral damage (i.e., select routes that do not require the unnecessary removal of trees/shrubs, especially protected species). • Rehabilitate all new tracks created if they will not be used by the community in the future.	Contractor, Project Manager/Site Manager	On-going
Establishing Camping and storage Areas	• Establishment of the supporting project infrastructure should be done in an area with the least disturbance to the environment and within the non-sensitive areas such as Ephemeral River channels / valleys. • Choice of location for storage areas must take into consideration prevailing winds, distance to water bodies and general on-site topography. • Storage areas must be designated, demarcated, and fenced if necessary. • Storage areas should be secure to minimize the risk of crime. • They should be safe from access by children and animals etc. • Fire prevention/fighting tools must be present at all storage facilities.	Contractor, Project Manager/Site Manager	On-going

Aspect	MANAGEMENT DETAILS	RESPONSIBLE PERSONS	FREQUENCY
	• Avoid and/or limit the use of lights during nocturnal exploration activities as this could influence and/or affect various nocturnal species – e.g. bats and owls, etc. Use focused lighting for the least effect. • Avoid introducing dogs and cats as pets to camp sites as these can cause significant mortalities to local fauna (cats) and even stock losses (dogs). • Rehabilitate all areas disturbed by the exploration activities such as the camp sites, exploration sites including all excavated areas.		
Establishing Storage Areas	**Hazardous Material Storage** • Hazardous substances are those that are potentially poisonous, flammable, carcinogenic, or toxic. Some examples are diesel, petroleum, oil, bitumen, cement, solvent-based paints, lubricants, explosives, drilling fluids. • Material safety Data Sheets (MSDSs) shall be readily available on site for all chemicals and hazardous substances to be used on site. Where possible and available, MSDSs should additionally include information on ecological impacts and measures to minimize negative environmental impacts during accidental releases or escapes. • Hazardous storage areas must be 110% bunded with an impermeable liner to protect groundwater and soil from contamination. The Contractor shall submit a method statement to the Project Manager for approval. • Storage areas containing hazardous substance materials must be clearly sign posted.	Environmental Control Officer(ECO), Proponent	

Aspect	MANAGEMENT DETAILS	RESPONSIBLE PERSONS	FREQUENCY
Education Of Site Staff on General Environmental Conduct	**Environmental Education and Awareness** • Ensure that all site personnel have a basic level of environmental awareness training. The proponent must submit a proposal for this training to the ECO for approval. Topics to be covered should include: o What is meant by "environment". o Why the environment needs to be protected and conserved. o How construction activities can impact on the environment. o What can be done to mitigate against such impacts. o Awareness of emergency and spills response provisions. o Social responsibility during operations, e.g., being considerate to local residents. • It is the proponent's responsibility to provide the site with the appropriate level of environmental training and to ensure that there is sufficient understanding to pass this information onto anyone operating at the site. • The need for a 'clean site' policy also needs to be explained to all workers.	Project Manager/Site Manager Environmental Control Officer(ECO), Proponent	During staff induction and ongoing
Education Of Site Staff on General Environmental Conduct	**Workers Conduct on site.** • A general regard for the social and ecological wellbeing of the site and adjacent areas is expected of the site staff. Workers need to be made aware of the following general rules: • No alcohol / drugs to be present on site. • No firearms allowed on site or in vehicles transporting staff to / from site(unless used by security personnel). • Prevent excessive noise. • Prevent unsocial behavior.	Proponent, Employees, Environmental Control Officer(ECO)	During staff induction and ongoing

Aspect	MANAGEMENT DETAILS	RESPONSIBLE PERSONS	FREQUENCY
	• Bringing pets onto the site is forbidden. • No harvesting of firewood from the site or from the adjacent areas. • Staff are to make use of the facilities provided for them, as apposed to ad-hoc alternatives, (e.g., fires for cooking, the use of surrounding areas / bush as a toilet is forbidden). • Trespassing on private / commercial properties adjoining the site is forbidden. • Driving under the influence of alcohol is prohibited.		
Social Impacts	• Avoid exacerbating the influx of unemployed people to the area and address the unrealistic expectations about large numbers of jobs would be created. • Develop a standardized recruitment method for sub-contractor and field workers. • The employment of local residents and local companies should be a priority. • Camp if required should be established in close consultation with the landowners. • Accommodation camp should consider provision of basic services. • Contract companies could submit a code of conduct, stipulating disciplinary actions where employees are guilty of criminal activities in and around the vicinity of the project area. Disciplinary actions should be in accordance with Namibian legislation. • Contract companies could implement a no-tolerance policy regarding the use of alcohol and workers should submit to a breathalyzer test upon request when reporting for duty daily. • Request that the Roads Authority erect warning signs of heavy operation vehicles on affected public roads. • Ensure that drivers adhere to speed limits and that speed limits are strictly enforced. • Ensure that vehicles are road worthy, and drivers are qualified.	Contractor, Project Manager/Site Manager	During staff induction and ongoing

Aspect	MANAGEMENT DETAILS	RESPONSIBLE PERSONS	FREQUENCY
	• Train drivers in potential safety issues.		
Biodiversity	**<u>Fauna and Flora</u>** • No protected vegetation may be cleared without prior permission from the forestry department. • Care must be taken to avoid the introduction of alien plant species to the site and surrounding areas. • Disturbance to birds, animals and reptiles and their habitats should be minimized wherever possible. • Avoid unnecessary development affecting areas viewed as important habitat e.g. Ephemeral River, in/close to drainage lines, cliffs, boulder and rocky outcrops in the area, etc. This would minimise the negative effect on the local environment especially unique features serving as habitat to various species. • Avoid off-road driving at night as this increases mortality of nocturnal species. • Implement and maintain off-road track discipline with maximum speed limits (e.g.,30km/h). • Remove and relocate slow moving vertebrate fauna (e.g. tortoises, chameleon, snakes, etc.) to suitable habitat elsewhere on property. • Avoid rocky outcrops throughout the entire EPL area. • Prevent and discourage the collecting of firewood as dead wood has an important ecological role – especially during the development phase(s). • Avoid and discourage open area fires as this could easily cause runaway veld fires causing problems that could result in major loss of grazing, domestic and wildlife mortalities. • Rehabilitate the disturbed areas such as access route “scars” and associated tracks	Employees, ECO, Contractor, Project Manager/Site Manager	Ongoing

Aspect	MANAGEMENT DETAILS	RESPONSIBLE PERSONS	FREQUENCY
	as well as excavated areas. • Implement erosion control. The area(s) towards and adjacent the drainage line(s) are easily eroded, and further development may exacerbate this problem. Avoid construction within 20m of the main drainage line(s) to minimise erosion problems as well as preserving the riparian associated fauna. • In an event of a discovery of economic minerals resources, a thorough investigation of water use, and ground water extraction should take place before actual mining activities commence as this would affect the local flora, especially the ephemeral riparian vegetation, not only locally, but downstream as well. • No domestic pets such as cats and dogs are allowed to accompany workers during the field-based exploration stage as cats decimate the local fauna and interbreed and transmit diseases to the indigenous African Wildcat that may be found in the local area.		
Visual	• Consider the landscape character and the visual impacts of the area (including camp site) from all relevant viewing angles, particularly from public roads. • Use vegetation screening where applicable. Do not cut down vegetation unnecessarily around the site and use it for site screening. • Avoid the use of very high fencing. • Minimise accessing roads or going off-road where it could result in land scarring . • Minimise the presence of secondary structures: remove inoperative support structures. • Remove all infrastructure and reclaim or rehabilitate the project site after project activities are completed.	Contractor, Project Manager/Site Manager	Ongoing

Aspect	MANAGEMENT DETAILS	RESPONSIBLE PERSONS	FREQUENCY
Air Quality	• Dust suppression techniques should be employed, where possible, if the specific operation activity is likely to create dusty atmospheric conditions in excess of the periodic extremes. • Avoid activities that create excessive dust on extremely windy days. • Personnel are required to wear personal protection equipment if excessive dust is created for prolonged working periods. • When necessary and if exploration that results in the generation of dust is ongoing for a period of over 2 years continuously, establish a monthly dust monitoring exercise to collect the baseline dust conditions in the area before excessive activities such as mining commences.	Contractor, Project Manager/Site Manager, ECO	Ongoing
Noise	• A grievance procedure will be established whereby noise complaints can be received, recorded, and responded to appropriately. • Machineries and vehicles (moving and stationed) should be serviced regularly. • A noise management standard operating procedure (SOP) for the activities happening on-site should be developed. • Avoid creating unnecessary noise by making sure that equipment not in use are always turned off and by avoiding operations during odd hours. • Fit sound mufflers on all machinery where applicable. • Equip employees with appropriate PPE (noise reduction earplugs/earmuffs) • Employees should work in shifts to avoid prolonged working hours and consequently prolonged exposure to noise.	Contractor, Project Manager/Site Manager	Ongoing
Health and safety	• Physical hazards: Follow national and international regulatory and guidelines provisions, use of correct Personal Proactive Clothing at all times, training programme, as well as the implementation of a fall protection program in accordance with the Labour Act. • Some of the public access management measures that may be considered in an		

Aspect	MANAGEMENT DETAILS	RESPONSIBLE PERSONS	FREQUENCY
	event of vandalism occurring are: – All exploration equipment must be in good working condition and services accordingly. – Control access to the exploration site through using gates on the access road(s) if required. – The entire site must be fenced off. The type of fencing to be used would, however, be dependent on the impact on the visual resources and/or cost. and. – Notice or information boards relating to public safety hazards and emergency contact details to be put up at the gate(s) to the exploration area.		
Protection of Soil and Ground/surface water as well as general water usage	• Always use as little water as possible. Reduce, reuse and re-cycle water where possible. • All leaking pipes / taps must be repaired immediately as they are noticed. • Never leave taps running. Close taps after you have finished using them. • The Proponent must obtain permission of the landowners before utilizing any water resources or any associated infrastructure. • Accidental spills that occur outside of the bund area must be contained and prevented from entering the stormwater system. • Immediately tell your Site manager or Environmental Control Officer / Site Manager when you spill, or notice any hazardous substance being spilled anywhere in the solar park areas. • Spills must be treated with the appropriate spill absorbent. • Any significant spills or leak incidents must be reported in terms of the National Environmental Management Act and the Water Act. • If there is a need to drill a water borehole to support the proposed exploration	Contractor, Project Manager/Site Manager	Ongoing

Aspect	MANAGEMENT DETAILS	RESPONSIBLE PERSONS	FREQUENCY
	programme the Proponent (Proponent) must obtain permission from the landowner and Department of Water Affairs in the Ministry of Agriculture and Forestry. • n an event of discovery of economic minerals resources, the sources of water supply for the mining related operations will be supplied by NamWater and the Proponent is advised to contact NamWater at the earliest stages of the development of any possible mining project, and. • If there are any further (larger scale) exploration/drilling activities and/or mining activities to follow from the initial planned drill holes, groundwater monitoring must be implemented to include water level monitoring and also water sampling on a bi-annual basis. In order to have greater transparency on the water monitoring activities, the affected landowners / farmers must be given full access to the results of the water monitoring analyses.		
Waste	• The domestic waste, which is separated from all paper and organic materials, is taken to the nearest official dumpsite. • Oil from the servicing of the vehicles and machines is collected in drums and is taken together with all other industrial waste that is generated on site to the nearest hazardous waste site. • Storage areas that contain hazardous substances must be bunded with an approved impermeable liner. • Bins and / or skips shall be provided at convenient intervals for disposal of waste within the project site. • Bins should have liner bags for efficient control and safe disposal of waste. • Recycling and the provision of separate waste receptacles for different types of waste should be encouraged. • Ensure good housekeeping.	All personnel	Ongoing

Aspect	MANAGEMENT DETAILS	RESPONSIBLE PERSONS	FREQUENCY
	Ablutions • Waterless toilets are to be maintained in a clean state and should be moved to ensure that they adequately service the work areas. • The Contractor is to ensure that open areas or the surrounding bush are not being used as a toilet facility.		
Heritage sites destruction during exploration activities	• In addition, where possible, activities are to be aligned along previously disturbed areas. Habitats surrounding the washes (rivers) may host sensitive plant species which require permits for removal to avoid destruction. No wandering around the site, collecting of plant species or hunting should be allowed. • A 'chance find' of any potential heritage site should be communicated to the police and the National Heritage Council of Namibia. • If activities occur at the location where a 'chance find' has been made, then the activities should cease until the necessary authorities have visited the site and provided the go ahead to proceed with activities.	Contractor, Project Manager/Site Manager	Ongoing
Rehabilitation	• Small samples are preferably removed from site to avoid additional scars in the landscape. • Litter from the site has been taken to the appropriate disposal site. • Debris, scrap metal, etc is removed before moving to a new site or on completion of the project work. • Water / Fuel tanks are dismantled and removed if not needed for further use. • Tracks on site and the access road are rehabilitated by smoothing the middle ridge between the tracks and raking the surface unless the owner/farmer has provided the proponent a request in writing to retain the track(s) • If applicable the stockpiled subsoil is to be replaced (spread) and/or the site is neatly contoured to establish effective wind supported landscape patterns.	Contractor, Project Manager/Site Manager	Progressively and prior ceasing project activities

Aspect	MANAGEMENT DETAILS	RESPONSIBLE PERSONS	FREQUENCY
	• Replace the stored topsoil seed bank layer. • Backfilling the trenches, pits and quarries using original excavated and stockpiled materials.		

6. MONITORING PLAN

The project monitoring is conducted under the EMP includes:

(i) **EMP compliance monitoring -** To be conducted by the ECO to verify EMP compliance during project implementation especially if the program continues for over a period required for monitoring by MEFT. The environmental monitoring programme is part of the EMP performances assessments and will need to be compiled and submitted as determined by the Environmental Commissioner. The process of undertaking appropriate monitoring as per specific topic (such as fauna and flora) and tracking performances against the objectives and documenting all environmental activities is part of internal and external auditing to be coordinated by the Project ECO.

(ii) The second part of the monitoring of the EMP performance will require a report outlining all the activities related to effectiveness of the EMP at the end of the planned mineral exploration to be undertaken by the Project ECO with the support of the external specialist consultants as maybe required. The objective will be to ensure that corrective actions are reviewed, and steps are taken to ensure compliance for future EIA and EMP implementation.

(iii) The report shall outline the status of the environment and any likely environmental liability after the completion of the proposed / ongoing project activities. The report shall be submitted to the Environmental Commissioner in the MEFT and will represent the final closure and fulfilment of the conditions of the ECC issued by the Environmental Commissioner and the conditions of the Pro-Forma Environmental Contract signed by the Proponent, Environmental Commissioner and the Mining Commissioner.

7. CONCLUSION

This updated Environmental Management Plan highlights the management measures that will be implemented to mitigate the environmental impacts of the proposed activities. The EMP is a legal document, which commits the applicant to comply with all management measures, monitoring programmes and other plans as presented herein. As part of the EMP, monitoring programmes have been provided to manage and control critical components of the environment. This is a live document which may be amended if project activities alter.

It is advised that the Environmental Management Plan should be implemented from the beginning of each exploration phase and exploration program and generally on an ongoing basis; that environmental performance is regularly monitored (so that the lessons learnt during the exploration phase can be incorporated into the improvement of the Environmental Management Plan over time); and that corrective measures are taken as or when required.

In an event that economic minerals resources are discovered within the EPL 6667 area and could lead to the development of mining project, a new Environmental Clearance Certificate (ECC) for mining will be required. The ECC being supported by this Report only covers the exploration phase. A separate field-based and site-specific Environmental Impact Assessment (EIA) and Environmental Management Plan (EMP) reports supported by specialist studies as maybe applicable must be prepared in order to support the application for the new ECC for mining operations. The EIA and EMP studies shall form part of the prefeasibility and feasibility study with respect to the test mining or possible mining operations.

8. REFERENCES

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