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Environmental Clearance Certificate (ECC) Renewal:

Mineral Exploration Activities on Exclusive Prospecting License (EPL) No. 7051 in the Omaheke Region, Namibia

Updated Environmental Management Plan (EMP)

ECC Application No. 221214000693 (APP-00693)

December 2022

Trans Kalahari Copper Namibia (Pty) Ltd

KOPORE METALS LIMITED

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Abbreviations and Acronyms

CFP	Chance Finds Procedure (Archaeology and Heritage Management)
DEAF	Department of Environmental Affairs and Forestry
DWSSC	Directorate of Water Supply and Sanitation Coordination
EA	Environmental Assessment
EAP	Environmental Assessment Practitioner
ECC	Environmental Clearance Certificate
EIA	Environmental Impact Assessment

EMA	Environmental Management Act
EMP	Environmental Management Plan
EPL	Exclusive Prospecting License
GG	Government Gazette
GN	Government notice
I&AP	Interested and Affected Party
MAWLR	Ministry of Agriculture, Water and Land Reform
MEFT	Ministry of Environment, Forestry and Tourism
MME	Ministry of Mines and Energy
NHC	National Heritage Council (of Namibia)
PRO	Public Relations Officer
RA	Roads Authority
RAB	Rotary Air Blast (RAB)/Percussion (drilling)
RC	Reverse Circulation (drilling)
RES	Resilient Environmental Solutions (*The Environmental Consultant*)
SHE	Safety, Health, and Environment

Appendices

Appendix A: Expired/current Environmental Clearance Certificate (ECC) issued in 2018.

Appendix B: ECC Renewal Application Resubmission Proofs (17/12/2021 and 14/12/2022)

Appendix C: CV of Mr. John Pallett (the Environmental Assessment Practitioner)

Appendix D: Chance Find Procedures (National Heritage Council)

Glossary

Environment - As defined in Environmental Management Act - the complex of natural and anthropogenic factors and elements that are mutually interrelated and affect the ecological equilibrium and the quality of life, including – (a) the natural environment that is land, water and air; all organic and inorganic matter and living organisms and (b) the human environment that is the landscape and natural, cultural, historical, aesthetic, economic and social heritage and values.

Environmental Management Plan – as defined in the EIA Regulations, a plan that describes how activities that may have significant environments effects are to be mitigated, controlled, and monitored.

Interested and Affected Party (I&AP) - in relation to the assessment of a listed activity includes - (a) any person, group of persons or organisation interested in or affected by an activity; and (b) any organ of state that may have jurisdiction over any aspect of the activity.

Mitigate - practical measures to reduce adverse impacts.

Proponent – as defined in the Environmental Management Act, a person who proposes to undertake a listed activity.

Significant impact - means an impact that by its magnitude, duration, intensity, or probability of occurrence may have a notable effect on one or more aspects of the environment.

1 Introduction

1.1 Project Background and Locality

Trans Kalahari Copper Namibia (Pty) Ltd, 100% Namibian-owned incorporated subsidiary of Kopore Metals Limited, an Australian publicly listed company (ASX: KMT) (ASX: KMT[1]) (hereinafter referred to as The Proponent) intends to continue with the mineral prospecting activities on Exclusive Prospecting License (EPL) 7051, in the Omaheke Region ("the Project"). The EPL formed part of the 8-EPL group, i.e., EPL 7049, EPL 7050, EPL 7051, EPL 7052, EPL 7053, EPL 7054, EPL 7055 and EPL 7056.

The EPL is located about 180km northeast of Gobabis in the Omaheke Region as shown on the locality map in

Figure 1-1. EPL 7051 covers a surface area of approximately 74,319.2023 hectares (ha). The EPL rights were granted to the Proponent by the Ministry of Mines and Energy (MME) on the 01st of July 2018 and expiring on the 30th of June 2023. Therefore, the EPL is active.

The Proponent's intention after obtaining the environmental clearance certificate is to continue with exploration works across the EPL.

[1] https://www.asx.com.au/asx/share-price-research/company/KMT

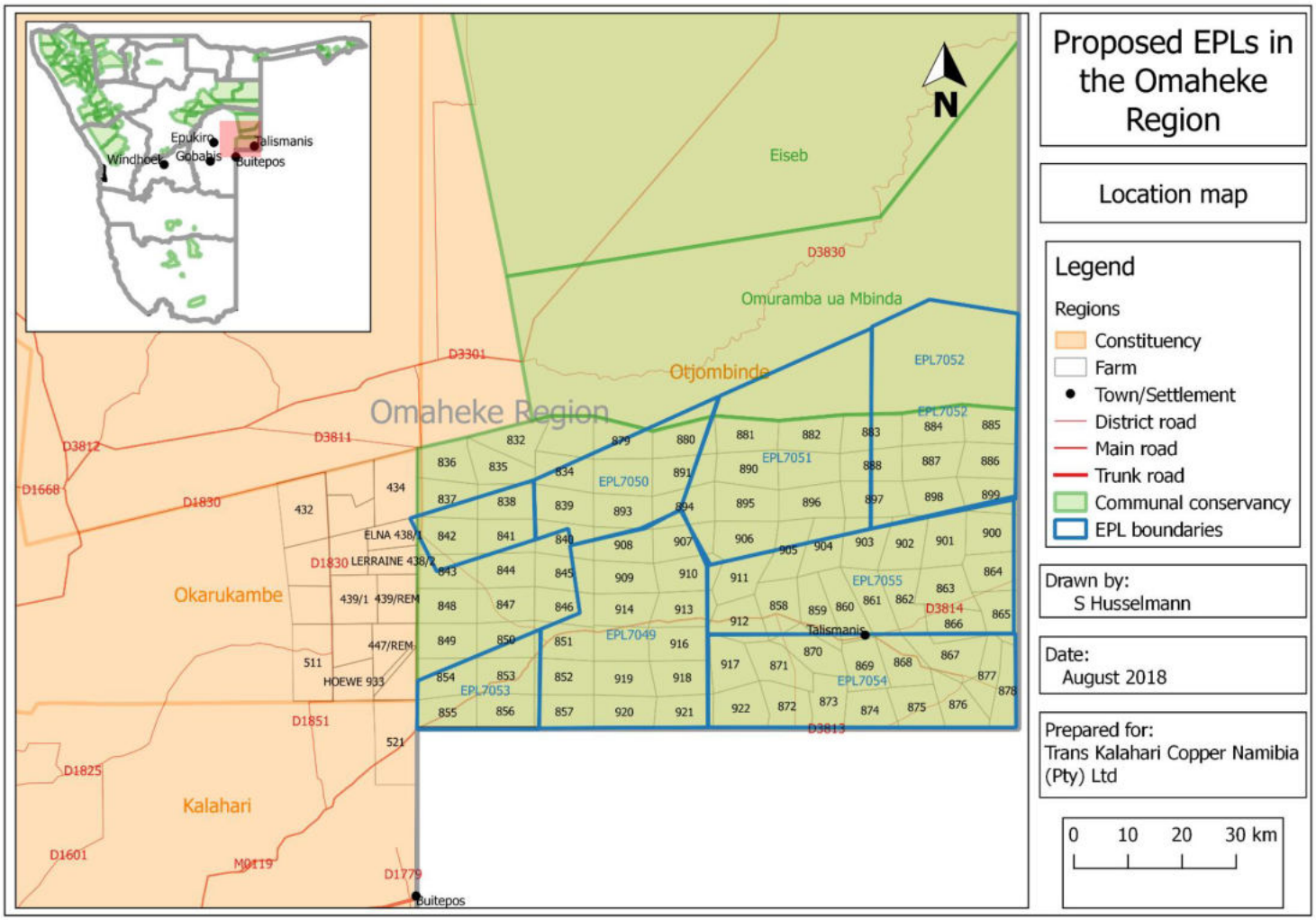


Figure 1-1: Location of EPL 7051 in the Omaheke Region

1.2 Environmental Clearance Renewal Process

Prospecting and exploration are listed activities in the Environmental Impact Assessment Regulations (2012) of the Environmental Management Act No. 7 of 2007, that may not be undertaken without an ECC.

Mining and Quarrying Activities

3.1 The construction of facilities for any process or activities which requires a licence, right or other form of authorisation, and the renewal of a licence, right or other form of authorisation, in terms of the Minerals (Prospecting and Mining Act), 1992.

The Project (the EPL activities) was issued with an ECC on the 11th of December 2018 but has since expired in December 2021 (Appendix A – copy of the expired ECC). Therefore, for the Project to remain compliant with the environmental legislation, a new ECC should be obtained from the Environmental Commissioner at the Department of Environmental Affairs and Forestry (DEAF) of the Ministry of Environment, Forestry and Tourism (MEFT).

1.2.1 Registration of Application for Environmental Clearance Certificate Renewal

The Environmental Clearance Certificate (ECC) renewal application was initially submitted to the office of the Environmental Commissioner at the DEAF of MEFT on the 17th of December 2021 and then resubmitted on the 14th of December 2022 (Appendix B – ECC Renewal Application Resubmission Proofs). This was done as prescribed by Regulation 6 (Form 1 of Annexure 1) of the EIA Regulations (GN. No. 30 of 2012), as provided for under Section 56 of the EMA. The ECC renewal application was registered on the ECC application portal, and the date stamped copy of the application submitted to the DEAF was uploaded on the ECC application portal (website).

1.2.2 The ECC Renewal and Document Requirement for Submission

After applying for an ECC renewal and the application screened by the DEAF on the portal, the required document for uploading thereon is the updated Environmental Management Plan (EMP), i.e., this document. This updated EMP comprises the following headings (chapters):

- Chapter 2: The description of Project activities (and updates thereto, if any),
- Chapter 3: The EMP roles and responsibilities. This chapter also includes the legal requirements in terms of project activities permitting/licensing, as deemed necessary and stipulated,
- Chapter 4.2: Environmental management and mitigation measures required to avoid or minimise the potential negative impacts.

1.2.3 The Environmental Assessment Practitioner

This updated EMP has been compiled by Mr. John Pallett with the assistance of Ms. Fredrika Shagama. Mr. Pallett is a certified Environmental Assessment Practitioner (EAP), with qualifications in geology (BSc) and zoology (BSc Honours). He specialises in providing environmental advice and evaluating environmental issues, particularly through Environmental Impact Assessments (EIAs) and strategic SEAs, for the benefit of managers, decision-makers, and the lay public. He has been affiliated to the Southern African Association for Impact Assessment (SAIEA) since 2008, and the Desert Research Foundation of Namibia – Environmental Evaluation Associates of Namibia (DRFN-EEAN) for 14 years up to 2008. Mr. Pallett' CV is attached hereto as Appendix C.

1.3 Project Need and Desirability

Namibia's Vision 2030, Namibia's National Development Plan 5, and the Harambee Prosperity Plan (HPP) all recognise a need for and place significant value on economic growth and employment creation. The potential mining of base and precious metals within the areas covered by the EPL has the potential to contribute to these national priorities.

Despite the current volatility within the copper market, demand for copper in the medium to long-term (i.e., approximately 10 years) is expected to exceed supply (Fatima, 2018). Exploration activities within the EPL seek to identify potential economic copper-silver mineralisation, which will require feasibility studies and if proven to be economic aid in mine planning. Future exploration programmes will utilise this information to enable a more effective and efficient exploration targeting and potential mining of any identified target deposits in future.

More geological information within the EPL is required with respect to base and rare metal deposits. Some of the geological information collected during the exploration process will be made available to the Ministry of Mines and Energy (MME).

It is therefore both necessary and desirable to continue with the mineral exploration on this EPL within the Omaheke Region (referred to hereafter as the Project).

2 Project Description

2.1 Project Inputs, Processes and Outputs

Based on the current EPL information, the Proponent has been exploring and intends to continue exploring for base and rare metals (target mineral groups) such as copper, lead, nickel, tin and zinc. Base metals are relatively common and inexpensive metals, as opposed to precious metals such as platinum or gold. In mining terms, base metals are specifically non-ferrous (i.e., contain no iron).

There have been some mineral prospecting and exploration activities done on EPL7051 between December 2020 and June 2021, i.e., from December 2020 to June 2021. An Environmental (Bi-annual) Monitoring Report was compiled until 11 June 2021. From 12 June 2021 to November 2022, there have not been any activities conducted on the EPL.

2.1.1 Project Inputs

The inputs required for minerals exploration activities in terms of vehicles and equipment include the following:

- 4x4 vehicles
- Truck mounted drill rig and diesel-powered generator for Percussion, reverse circulation, and diamond drilling.
- Diesel bowser (bunded)
- One Compressor
- Oils, grease, and drilling fluid (stored in manufacturers approved containers)
- Water bowser

Accommodation for all staff utilised for the airborne geophysics, soil sampling and ground geophysics had been sourced from nearby urban settlements. Only for the geological drilling activities will staff reside in temporary accommodation near exploration sites. During the 2020/2021 exploration works, an eight-man drilling crews as temporarily accommodated in in tents. This will be continued when resuming the works (after the ECC has been issued/renewed).

All equipment and vehicles and equipment will be stored at a designated area near the temporary accommodation.

The resource inputs required for the mining exploration activities include the following:

- **Water** – General water usage for camping could be up to a few hundred litres per day. Diamond drilling requires approximately 10,000 litres/day (up to a maximum of 25,000 litres/day in instances where for example fractured formations are encountered) per hole, bought from the nearest supplier and stored on site in industry standard water reservoirs. The number of diamond-drilled holes will depend on the results of the exploration programme. In the case of intersecting open fractures or faulted ground, stabilising agents and packing materials (non-toxic and biodegradable) such as bentonite may be used to seal the water loss and minimise water usage. This water will be bought from the nearest supplier. Rotary Air Blast (RAB)/Percussion and Reverse Circulation (RC) drilling do not require water for drilling.
  Only sources that can supply enough water for the drilling and still maintain the local community (in the case of communal land) or dam/reservoir, in the case of private farmland will be used. An illustration of the Proponent's commitment to sustainably source water is taken from existing exploration work conducted in the EPLs which have already been environmentally cleared. Round trips more than 40 km, using a 5,000-litre bowser have been done to get water for drilling in these areas. The Proponent will make use of one of their previous holes that may have intersected significant water, if more detailed drilling is required. To reduce reliance on water, the Proponent will, if possible, use a combination of RC drilling, which does not require water, and diamond drilling, where rock core samples are required.
  Any holes that intersect water on commercial farmland would be handed over to the farmer once the hole is no longer required for exploration. In the case that the holes are on communal land, they will be handed over to the Directorate of Water Supply and Sanitation Coordination (DWSSC) to manage and make them available for use by the surrounding community.
- **Fuel** – approximately 600 litres of diesel is required per day. A bunded diesel bowser, will remain on-site, which will be filled by a diesel bowser truck 2-3 times a week.
- **Electricity** – electricity for operations will be supplied by diesel generators.
- **Personnel** – Each rig (i.e., 3 in total) has an eight-man crew of which one would be supervisor, driver, and driller. The remaining members would be semi/unskilled labourers. A maximum of eight people will reside on-site at any given time during drilling operations.
- **Sanitation** – portable chemical toilets were made available at the temporary accommodation near exploration sites or a type of pit latrine (where excreta in the pit are treated to prevent the

waste from being a water pollution risk). This will be resumed onsite upon commencement of exploration activities.

2.1.2 Project Processes

The minerals exploration activities intended can be divided into two categories:

1. Non-invasive techniques:
    a. Airborne Geophysics.
    b. Ground Geophysics.
    c. Soil Sampling.
2. Invasive techniques:
    a. Diamond Drilling.
    b. Rotary Air Blast (RAB)/Percussion Drilling.
    c. Reverse Circulation (RC) Drilling.

Information regarding the general sequence of minerals exploration activities is provided first and then each exploration technique/process is described in turn.

2.1.3 Sequence of Minerals Exploration Activities

The Project includes a variety of exploration techniques, described in the following sections. The early phase, regional exploration, normally comprises a mixture of non-invasive techniques such as soil sampling and ground geophysics and invasive drilling techniques. Some of these tasks have been carried out during the period of September 2020 to September 2021. During these early phases, all the Proponent's employees and contractors employed industry standard best practice techniques and will incorporate the taking of 'before' and 'after' photographs. This photographic record was included in annual environmental monitoring report submitted in October 2021. This is aimed at demonstrating the minimum impact and environmental best practice that is adopted by the Proponent, sub-contractors, as well as to provide a record for the DEAF and Interested and Affected Parties (I&APs).

Induction on Health and Safety

Before any work is carried out all personnel (including fully employed, contracted, and casual) were/will be inducted on the Proponent's Environmental Health and Safety policy and procedures and processes to follow while conducting the work.

Consultation (Liaison) with Landowners

Consultations with all the landowners, users and community and government stakeholders were made to particularly obtain land use and access consents (for commercial farms). This was further done to explain the purpose and stage of exploration, determine the current operating procedures and rules of respective farms or area, and to develop land access agreements with each owner or user.

Duration of Mineral Exploration Works

Due to the iterative, results-driven and phased nature of mineral exploration programmes, 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. Soil sampling programmes may last from between one week to one month at a time over specific areas, until the area has been fully explored. 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.

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

2.1.3.1 Airborne Geophysics

The Proponent has conducted some ground and airborne geophysical surveys. Both geophysical techniques have been employed for mineral exploration for decades and proven to be very efficient and successful exploration techniques. On resuming the works, the Proponent will contemplate using both non-invasive methods.

The Proponent has successfully employed the electromagnetic (EM) and magnetic airborne geophysical techniques on the Kalahari Copper Belt and identified regional scale conductive and magnetic anomalies.

Figure 2-1: Airborne geophysics instruments

The airborne geophysical technique seeks to measure electrical (conductor) and magnetic variations in the physical parameters of the earth. Changes up to 600m below the earth's subsurface can produce measurable variations, which can be collected and analysed by highly sophisticated measuring instruments (Figure 2-1), suspended underneath a helicopter (on average 60m above the surface).

The main advantage of an airborne survey over a ground-based one is that a much greater land area can be covered in the same period.

2.1.3.2 Ground Geophysics

Ground geophysics entails the use of portable electronic equipment carried on foot by exploration staff within a target area. Two ground geophysics methods will be used – magnetometer and the Min-Max method:


Figure 2-2: Ground geophysics cutline and peg

1. A magnetometer measures the earth's magnetic field. It comprises a pole with a sensor on it and backpack and receiver. This equipment is carried by a person, who walks through the target area, and it takes readings every 20 -25 metres.
2. Max-Min is an electromagnetic method, which requires two people. One person walks 200m in front of the other. One person carries a backpack with a transmitter and the other person carries a backpack with a receiver. The electromagnetic field of a given area is thus measured.

Minor bush trimming is required where vegetation is too thick to walk through (Figure 2-2). In this instance, a one metre width area (25cm to either side of their shoulders) is trimmed.

2.1.3.3 Soil Sampling

Soil sampling (Figure 2-3) is the process of collecting and analysing unconsolidated soil to locate geochemical anomalies in the underlying rock and to use these to find ore bodies.

A soil sampling survey consists of a series of grids or lines where soil samples are collected generally at 25 metre or 50 metre intervals. The actual sampling involves removing the top two centimetres of material to make sure the top organic layer has been removed in a 20 cm by 20 cm area.


Figure 2-3: Soil sample collection and equipment

The clean area is homogenised down to a depth of 10 centimetres and then the soil material is put into a sieve to obtain a soil sample of approximately 100 grams. The remaining soil is returned into the hole and covered, and the organic layer is returned.

2.1.3.4 Diamond Drilling

Exploration diamond drilling is used in the mining industry to probe the contents of potential mineral ore deposits. By withdrawing a small diameter core of rock from the orebody, geologists can analyse the core by chemical assay and conduct petrologic, structural, and mineralogical studies of the rock.

Diamond core drilling uses a diamond-studded drill bit attached to the end of a hollow drill rod. Diamond drilling differs from other geological drilling in that a cylindrical core of solid rock is extracted during the process. Water is injected into the drill pipe, which serves the purpose of cooling and lubricating the drill bit as well as washing out drill cuttings.

Inside the drill rod, a core tube is attached to a cable via a latching mechanism. The core tube is lifted to the surface using the cable, so the solid core can be removed.

2.1.3.5 Rotary Air Blast (RAB)/Percussion Drilling

Like a water drilling rig, a percussion drilling rig (Figure 2-4) uses compressed air to drill. No water is used for drilling. The drill rod is a hollow steel tube.

When drilling through sand, a non-toxic biodegradable foam will be added, which holds the sand in place while drilling.

Once bedrock is reached, drilling will continue until a further two metres of bedrock are drilled. The bedrock sample is collected on the surface and geologically logged in the field. The bedrock sample analysis provides guidance in terms of drill targeting for potential future reverse circulation (RC) holes.

Figure 2-4: Scenes from typical drilling operation

As many as 8 holes are drilled at each site. Holes are drilled only as deep as the overburden at each site, estimated up to 60m depth. Generally, an initial percussion drilling programme would not exceed 1 000 m in total, unless further geological information is required.

After each percussion hole is completed and samples collected, every hole is filled up with any residual drill material that was collected during the drilling process. The hole is then capped just below surface with cement and marked bearing the name of the drilling hole.

The relevant landowners are then consulted and provided with details about the current boreholes to provide guidance on the depth of the overburden and the depth to the top of any borehole water (if intersected).

2.1.3.6 Reverse Circulation Drilling

Reverse circulation drilling is achieved by blowing compressed air down the annulus of the drill rod; the differential pressure creates air lift pushing water and cuttings up the inner tube that is inside each rod.

The drill cuttings travel up the inside of the drill rod and are collected in a sample bag on the surface. Samples are collected (Figure 2-4) every metre and the number of samples is therefore dictated by the depth of the hole.

Generally, a RC drilling program will see multiple holes drilled at 60-90° inclination and can range from 60 to 500m in depth.

2.1.4 Project Outputs

The main project outputs are as follows:

- **Solid waste** – general solid waste (food waste, plastic, paper, etc.) and mining exploration solid waste (used drill rig components, discard/waste rock samples etc.) will be generated by the mining exploration activities.
- **Liquid waste** – Wastewater will be produced by portable chemical toilets (where applicable) and washing facilities. The wastewater collected will be transported to the nearest suitable local authority wastewater treatment facility. Fuels and oils will be used on site and may spill.
- **Mining samples** – usable rock samples.

The above-described Project activities are associated with some potential negative impacts that the Proponent and associated personnel or contractors need to manage and mitigate. These impacts had been described and assessed in the Scoping Report (with the initial EMP) compiled in 2019. Therefore, this document only contains the updated management and mitigation measures (where necessary) as presented under the next chapter.

3 The EMP Roles and Responsibilities

The initial EMP of EPL7051 had identified the Exploration Manager and the Safety, Health and Environment (SHE) Officer as important roles to guide the environmental management of the exploration activities. These roles might however in practice, owing to various circumstances, be undertaken by one person. A list of specific responsibilities and duties to be undertaken by each are provided below.

It should be noted that the roles are delegated roles and the owners of Trans Kalahari Namibia (Pty) Ltd are ultimately responsible for the implementation of the EMP.

3.1 Exploration Manager

The Exploration Manager will be responsible for the following:

- Managing/overseeing the implementation of this EMP and updating it when necessary.
- Issuing fines to individuals who contravene EMP provisions and if necessary, removing such individuals from site.
- Setting up and managing the schedule for the day-to-day activities.
- Liaison with all relevant interested and affected parties/stakeholders.
- Ensuring all incidents are recorded and documented.
- Undertaking an annual review of the EMP and amending the document when necessary.

3.2 Safety, Environment and Health (SHE) Officer

The SHE Officer will be responsible for the following activities:

- Planning and carrying out site inductions to the workers on-site and visitors to the worksite(s).
- Ensure that the requirements of the EMP are carried out during applicable activities throughout the project life span, and monitor the overall implementation of the EMP.

3.3 Public Relations Officer (PRO) or Public Relations Specialist (PRS)

The PRO or PRS will be responsible for the following tasks:

- Liaising between the affected farmer and/or occupiers of land and the Proponent.
- Ensure effective communication with stakeholders (affected farmers or landowners or occupiers of land), 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.

4 Environmental Management Plan Actions

This chapter presents the environmental management and mitigation measures that will need to be implemented by the Proponent onsite during project implementation (see subheading 4.2). The first part of this chapter is the legal requirements in terms of Project activities that require approval, permits and or licenses before or when carrying them out – see subheading 4.1
The Proponent should assess these commitments in detail and should acknowledge their obligation to the specific management actions detailed in the tables of the following sections.

4.1 National Legislative: Required Approvals and Permits (Licenses)

Natural resource management within the Namibian context is provided for by legislation regulating its various social and biophysical sectors. There are several sectoral laws that fall under the general category of environmental law. This section however only focuses a list of legislations for which approvals/permits or licenses are required for certain project activities as listed in Table 4-1 below. The full list and description of the legal framework is provided in the 2019 Scoping Report compiled for the EPL.

Table 4-1: Legislation applicable to the project and the need for approvals and or permits.

Legislation: Custodian	**Provisions and Type of approvals/permits**	**Contact Details**
Environmental Management Act 2007 Environmental Impact Assessment (EIA) Regulations (EIAR) (GG No. 4878): Ministry of Environment, Forestry and Tourism (MEFT)	Activities listed in Government Notice (GN) No. 29 of GG No. 4878 require an Environmental Clearance Certificate (ECC). The amendment, transfer, or renewal of the ECC (EMA S39-42; EIAR Regs19 & 20). Amendments to this EMP will require an amendment of the ECC. The ECC needs to be renewed every 3 years.	Mr. Timoteus Mufeti: Environmental Commissioner Ministry of Environment, Forestry and Tourism (MEFT) Tel: +264 61 284 2701
Traditional Authority Act (Act No. 25 of 2000): Ministry of Urban and Rural Development MURD)	The Traditional Authorities should be involved in the planning of land use and development for their area. On communal land, the Proponent should engage the Traditional Authorities for land use consent.	Contact the relevant Traditional Authority of the affected part of the communal land covered by the EPL.

Legislation: Custodian	**Provisions and Type of approvals/permits**	**Contact Details**
Minerals (Prospecting and Mining) Act (No. 33 of 1992): Ministry of Mines and Energy (MME)	Section (S)52 requires mineral license holders to enter into a written agreement with affected landowners before exercising rights conferred upon the license holder. Therefore, the Proponent should enter into a written agreement with landowners before carrying out exploration. Section 54 requires written notice to be submitted to the Mining Commissioner if the holder of a mineral license intends to abandon the mineral license area. Therefore, the Proponent should ensure that all necessary permits/authorization for the EPL are obtained from the MME.	The Proponent should enter into land access agreements with the respective farmers of the affected parts of the EPL, where exploration activities are carried out. Ms. Isabella Chirchir: Mining Commissioner MME Tel: +264 61 284 8251.
Water Act 54 of 1956: Ministry of Agriculture, Water and Land Reform (MAWLR) Water Resources Management Act (No 11 of 2013): MAWLR	These permits include Borehole Drilling Permits, Groundwater Abstraction & Use Permits, and when required, the Wastewater / Effluent Discharge Permits).	Mr. Franciskus Witbooi Division: Water Policy and Water Law Administration Division Tel: +264 61 208 7158 Water Environment Division Ms. Elise Mbandeka Tel: +264 61 208 7167
Road Traffic and Transport Act 52 of 1999 and its 2001 Regulations: Ministry of Works and Transport (MWT)	Provides for the control of traffic on public roads and the regulations pertaining to road transport, including the licensing of vehicles and drivers, as well as road access permits.	Mr. Eugene de Paauw: Specialist Road Legislation Roads Authority of Namibia Tel.: +264 61 284 7027

Legislation: Custodian	**Provisions and Type of approvals/permits**	**Contact Details**
Petroleum Products and Energy Act (No. 13 of 1990) Regulations (2001): Ministry of Mines and Energy	Regulation 3(2)(b) states that "No person shall possess or store any fuel except under authority of 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"	Mr. Carlo Mcleod: Acting Director – Petroleum Affairs Ministry of Mines and Energy: Tel.: +264 61 284 8291
Forestry Act (No. 12 of 2001): MEFT	Permits are required for the removal of protected plants species.	Talismanis Forestry Office: MEFT Tel: +264 62 560 834
Nature Conservation Ordinance No. 4 of 1975 (as amended): MEFT	Permits are required for the removal of protected plants species.	
National Heritage Act No. 27 of 2004: Ministry of Education, Arts and Culture (MEAC)	To provide for the protection and conservation of places and objects of heritage significance and the registration of such places and objects. If discovered, a Consent to remove or relocate an archaeological resource from the affected areas of the EPL should be obtained from NHC.	Mrs. Erica Ndalikokule: Director National Heritage Council of Namibia (NHC) Ms. Agnes Shiningayamwe: Regional Heritage Officer Tel: +264 61 301 903
The National Monuments Act (No. 28 of 1969): MEAC	The Act enables the proclamation of national monuments and protects archaeological sites.	
Namibian Civil Aviation Regulations, 2001: MWT	Regulation 133.01.2 lays out requirements for commercial external-load operations. This applies to the airborne geophysical exploration related activities.	Namibia Civil Aviation Authority Tel: +264 83 235 2101

4.2 Environmental Management and Mitigation Measures

4.2.1 Operation Phase (Exploration Activities)

The aim of the management actions laid out below is to avoid potential impacts where possible. Where impacts cannot be avoided, measures are provided to reduce the significance of these impacts.

The following tables provide the mitigation measures recommended to manage the potential impacts identified in the scoping report for the project. These mitigation measures have been arranged as follows:

- Exploration (operations and site maintenance phase) management actions (Table 4-2),
- Environmental monitoring requirements (Table 4-3), and
- Decommissioning phase management actions (Section 4.2.3).

The mitigation measures included in Table 4-2 below apply to the operation and site maintenance phase (exploration and site maintenance stage) of the Project. It should be noted that there have not been any significant changes to the management and mitigation measures developed for the EPL in 2019. Therefore, the implementation of these measures will be continued once the exploration activities resumes (upon renewal of the ECC).

Table 4-2: Management and Mitigation measures for the Exploration (Operational) phase

Aspect	Impact	Mitigation Measure(s)	Key Performance Indicator (KPI)	Responsible Party	Resources	Deadline
Water Use/Availability	Over abstraction leading to the depletion of aquifer resources and lowering of water levels in nearby boreholes	-Water reuse/recycling methods should be implemented as far as practicable for the diamond drilling. Water used for the cooling of diamond drill rig components should be captured and used for the cleaning of equipment, if possible. -The Proponent should prioritize the use of reverse circulation (RC) technique as far as possible over diamond drilling. -If diamond drilling is necessary, consider transporting water from sources with sufficient supply or from beyond the exploration area.	Proof/ recording/ quantification of water saving efforts.	SHE Officer	Monitoring records	Throughout exploration phase

Aspect	Impact	Mitigation Measure(s)	Key Performance Indicator (KPI)	Responsible Party	Resources	Deadline
Water and soil pollution	Comprised water quality due to fuel and lubricant spills	-Regular inspections and servicing of vehicles and machinery off-site or in designated areas. -Fuels and lubricants must be stored in containers. If stored on the ground, these containers should be placed on a non-permeable surface (e.g., high-density polyethylene plastic sheets). -Polluted soil must be collected and transported away from the site to an approved and appropriately classified hazardous waste treatment facility. -Soil contamination should be minimised by lining the ground with durable plastic where necessary.	No complaints of contaminants in the water because of exploration activities No visible oil spills on the ground or contaminated spots.	SHE Officer	Complaints logbook Waste containers Non-permeable material to cover ground.	Throughout exploration phase

Aspect	Impact	Mitigation Measure(s)	Key Performance Indicator (KPI)	Responsible Party	Resources	Deadline
		-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. -The exploration effluent/wet waste and hydrocarbons should be contained on site in designated containers and disposed of in accordance with municipal wastewater discharge standards, so that they do not reach to local groundwater systems. -Chemical used for drilling activities (in the drilling mud) should be non-				

Aspect	Impact	Mitigation Measure(s)	Key Performance Indicator (KPI)	Responsible Party	Resources	Deadline
		hazardous and biodegradable.				
Water and soil pollution	Wastewater generated by exploration workers living on-site.	-Provision of toilet facilities for exploration workers (type of pit latrine or chemical toilet). -Emptying of chemical toilets based on the manufacturer's specifications. Treating latrine waste to render non-polluting.	Adequate toilet facilities on site.	SHE Officer	Chemical toilets or excavator (pit creation), waste treatment agents/chemicals	At site setup and throughout exploration phase
Air quality	Generation of dust from exploration activities resulting in increased particulate matter in the atmosphere which might negatively affect occupational and residential respiratory health.	-Provision of Personal Protective equipment to each employee on site. -Drilling equipment should be regular maintained to ensure drilling efficiency and so reduce dust generation. -Implementation of dust suppression measures where necessary, such as	No complaints from the public about excessive dust generation.	SHE Officer	Complaints logbook Dust suppression implement e.g., water bowser	Throughout exploration phase

Aspect	Impact	Mitigation Measure(s)	Key Performance Indicator (KPI)	Responsible Party	Resources	Deadline
		sprinkling of water in working areas, particularly close to homesteads. Vehicle speeds decreased further near homesteads to minimise potential dust impact. -Dry dust suppression methods should be employed to minimise dust generation. -The impact mitigation measures should be covered in the relevant farm access agreement as required by law on commercial farms.				
Air quality	Hydrocarbon emissions from vehicles	-Vehicles and machinery on site should be serviced regularly to prevent emission of harmful gases.	No complaints from the public about vehicle emissions.	SHE Officer	Complaints logbook Vehicle and machinery mechanic	Throughout exploration phase

Aspect	Impact	Mitigation Measure(s)	Key Performance Indicator (KPI)	Responsible Party	Resources	Deadline
Soils	Loss of topsoil	-To avoid the disturbance of new areas, use of existing tracks.	No proliferation of informal vehicle tracks. No new erosion gullies.	SHE Officer	Complaints logbook	
Illegal hunting	Illegal hunting of wildlife	-No hunting will be done by exploration personnel on-site. -Site personnel should refrain from killing/poaching or snaring or intentionally disturbing local animals that may be found on and around the exploration sites. -Personnel are not allowed to kill or in any way disturb local livestock.	Incident reports of illegal hunting of wildlife by the crew.	SHE Officer	Complaints logbook	During site set up, and throughout exploration phase
Habitat loss	Localised loss of habitat and vegetation	-All areas of interest to be clearly marked to prevent damage to areas unintended for exploration.	No disturbance to unmarked areas.	SHE Officer	Barricading tape (to indicate working areas)	Throughout exploration phase

Aspect	Impact	Mitigation Measure(s)	Key Performance Indicator (KPI)	Responsible Party	Resources	Deadline
		-Where clearing and/or damage is unavoidable, permits for clearing protected plant species should be obtained from the nearest Forestry office. Depending on the distance from the exploration points, these permits can be obtained either from the Gobabis or Talismanis Forestry office. -Personnel should refrain from damaging or cutting down vegetation that is not within exploration site footprints and not necessarily require removal for the exploration activities. -The movement of vehicles and machinery should be restricted to existing roads and tracks to prevent				

Aspect	Impact	Mitigation Measure(s)	Key Performance Indicator (KPI)	Responsible Party	Resources	Deadline
		unnecessary damage to the vegetation. -No personnel are allowed to, without permission cut down or damage trees belonging to the farmers.				
Health and safety	General health and safety risks associated with exploration drilling.	-A comprehensive health and safety plan should be compiled for all exploration drilling activities. -All personnel should be trained in/sensitised to the potential health and safety risks associated with their respective jobs. -Prior to operating and using site machines and equipment, personnel involved in different project tasks should be trained on how to use properly and correctly	Comprehensive health and safety plan for all exploration drilling activities compiled.	Exploration Manager	Time, printing resources.	Prior to site setup activities

Aspect	Impact	Mitigation Measure(s)	Key Performance Indicator (KPI)	Responsible Party	Resources	Deadline
		these, if they are not familiar with them. -Appropriate personal protective equipment should be provided to personnel. -Heavy vehicle, equipment and fuel storage site should be properly secured, and appropriate warning signage placed where visible. -An emergency preparedness plan should be compiled, and all personnel appropriately trained. -Drilled boreholes 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.				

Aspect	Impact	Mitigation Measure(s)	Key Performance Indicator (KPI)	Responsible Party	Resources	Deadline
Health and safety	Accidental fire outbreak	-Portable fire extinguishers should be provided on site. -No open fires to be created by personnel.	No wildfires recorded (due to presence of workers)	SHE Officer	Fire extinguishers (1 per vehicle)	Throughout exploration phase
Archaeology and cultural heritage	Potential disturbance to archaeological and cultural heritage resources	-A chance find procedure will be prepared prior to commencement of activities on site (see Appendix D for guideline document). -Caution should be exercised when carrying out excavations associated with the exploration activities if archaeological / heritage remains are discovered. -The Site Manager should receive training by a suitably qualified archaeologist with respect to the identification of archaeological/heritage	Preservation of all artefacts that are discovered around project area	SHE Officer	Salvage equipment	Prior to site setup activities

Aspect	Impact	Mitigation Measure(s)	Key Performance Indicator (KPI)	Responsible Party	Resources	Deadline
		remains and the procedures to follow when that such remains are discovered when digging. -Personnel should be informed not to not destroy /damage or throw away any unknown object found/discovered on site during operations, but to report these objects to the Site Manager/leader who then informs the NHC. -If any archaeological materials are found, the National Heritage Council's Chance Find Procedures should be followed. Furthermore, the worksite manager should be notified, and all on-site activities stopped immediately.				

Aspect	Impact	Mitigation Measure(s)	Key Performance Indicator (KPI)	Responsible Party	Resources	Deadline
Local Services infrastructure	Damage to water pipelines	-The Proponent's Public Relation Officer (PRO) should consult with the farmers to help in locating buried water pipelines on their properties (farms) to avoid pipeline damage. -If possible, heavy trucks should avoid driving over farm areas that are known to have pipelines or any related infrastructure buried. -The project personnel should be informed not to leave the farms' gates open, but close or lock them as instructed by the farm owners. -The Proponent should consider assisting the farmer to put up proper locks, because now the	Complaints from farm owners about damaged water pipes and fences or gates left open (livestock escaping from the farm through unclosed or locked gates).	PRO SHE Officer	Complaints logbook Gate locks	Throughout the exploration phase

Aspect	Impact	Mitigation Measure(s)	Key Performance Indicator (KPI)	Responsible Party	Resources	Deadline
		gates are closed with wires. -Project equipment and machinery should not be left leaning on the farm fences (using the fences as support). -Agreement and continued engagement with landowners / farm owners on use and maintenance of farm infrastructure (roads, fences, gates, boreholes, etc.) should be implemented and maintained.				
Communication	Lack of communication (proper liaison) between farmers and Proponent with regards to site use	-The Proponent should appoint a Public Relation Officer (PRO) to liaise with the farmers/landowners. -The PRO should be introduced to the farm owners and his or her contact details provided to	A PRO is appointed for the Project	Proponent SHE Officer	Complaints logbook PRO contact details to be provided to the affected farmers/landowners.	Throughout the exploration phase

Aspect	Impact	Mitigation Measure(s)	Key Performance Indicator (KPI)	Responsible Party	Resources	Deadline
		them prior to undertaking activities for easy communication during the exploration activities. The Proponent should compile a clear communication procedure/plan which should include a grievance mechanism. -The Proponent should enter into a written agreement with landowners before carrying out exploration on their land.				
Employment creation	Creation of employment opportunities	-Non-skilled labour should be sourced from the locally affected area, in accordance with procedures approved by the relevant authorities.	Number of locals employed during exploration activities	Exploration Manager	None	Throughout exploration phase

Aspect	Impact	Mitigation Measure(s)	Key Performance Indicator (KPI)	Responsible Party	Resources	Deadline
		-Equal opportunity should be provided for both men and women.				
Noise	Potential increase in noise levels	-Members of the crew will be required to keep noise levels down. -Machinery and vehicles should be serviced regularly so that they function normally without excessive noise. -Exploration activities will be restricted to daytime between 6am in the morning and 7pm in the evening. -Noise from vehicles and equipment on site should be reduced to acceptable levels. -When operating equipment such as the drilling rig and associated	Complaints from residents about noise.	SHE Officer	Complaints logbook	At site set up and throughout exploration phase

Aspect	Impact	Mitigation Measure(s)	Key Performance Indicator (KPI)	Responsible Party	Resources	Deadline
		accessories during drilling, workers should be provided with applicable personal protective equipment (PPE), such as earplugs. -Drilling activities usually done everyday week of the week to meet exploration deadlines and because of this there will be no limitation to days allocated to this. -However (with regards to the point above), to limit the noise from equipment and the movement of vehicles, exploration works should be limited to or only be done between 08h00 and 17h00.				
Traffic safety	Increase in traffic density.	-Drivers should drive slowly (40km/hour or less),	No complaints from members of the public	SHE Officer	None	Throughout exploration phase.

Aspect	Impact	Mitigation Measure(s)	Key Performance Indicator (KPI)	Responsible Party	Resources	Deadline
		and on the lookout for livestock and wildlife. -All drivers of the project vehicles should be in possession of valid and appropriate driving licenses to operate such vehicles. -Vehicle drivers should adhere to the road safety rules. -Project vehicles should be in a road worthy condition and serviced regularly to avoid accidents as a result of mechanical faults of vehicles. -Vehicle drivers should only make use of designated site access roads provided. -Vehicles drivers should not be allowed to operate				

Aspect	Impact	Mitigation Measure(s)	Key Performance Indicator (KPI)	Responsible Party	Resources	Deadline
		vehicles while under the influence of alcohol. -No heavy trucks or project related vehicles should be parked outside the allocated or designated project site boundaries.				
HIV and AIDS	Potential increase of prevalence of HIV and AIDS, as well as other STIs prevalence.	-The workers should be engaged in 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. These pamphlets can be obtained from local health facilities.	No new infections recorded linked to exploration workers.	SHE Officer	None	During site setup and throughout exploration phase

Aspect	Impact	Mitigation Measure(s)	Key Performance Indicator (KPI)	Responsible Party	Resources	Deadline
Littering	Environmental pollution from solid waste during exploration activities.	-Provision of animal-proof waste storage containers for storage of waste until disposal at a designated disposal site. -Personnel should dispose of waste in a responsible manner and not to litter. -The project sites should be equipped with different waste bins for each waste type (except for sewage that will be contained in the provided chemical toilets and/ or periodical type of pit latrine). -After each daily works, the Proponent should ensure that there is no waste left scattered on sites. -No waste may be buried or burned on site or	No visible litter around the project area	SHE Officer	Waste storage containers	Throughout exploration phase.

Aspect	Impact	Mitigation Measure(s)	Key Performance Indicator (KPI)	Responsible Party	Resources	Deadline
		anywhere else throughout the project lifecycle. -All domestic and general waste produced daily should be contained until such that time it will be transported to designated waste sites weekly or as required. -Provision of animal-proof waste receptacles for temporary storage until transported to waste sites.				

4.2.2 Environmental Monitoring

To support and ensure that the proposed mitigation measures are achieving the desired results, a monitoring plan must be implemented alongside the mitigation plan. The monitoring plan is presented in Table 4-3. The table provides details of required environmental monitoring in terms of each potential impact, parameters to be monitored, monitoring objective, reporting structures for monitoring, frequency, methods to be used, reporting structure, any thresholds that apply and relevant recommended actions.

Table 4-3: Environmental Monitoring requirements for impact mitigation 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									
Compromised water quality due to fuel and lubricant spills or wastewater	Complaints from farmers within the project sites	To prevent contamination of surface water groundwater	No complaints from farmers about visible oil spills	Inspection of complaints logbooks	Weekly	SHE officer	SHE Officer> Exploration Manager	A logged complaint	Further consultations with the farmer and tests
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 logbooks	Weekly	SHE Officer	SHE Officer> Exploration Manager	A logged complaint	Clean-up of affected areas.
Soils									

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
Loss of topsoil	Increased loss of soil	To prevent loss of topsoil	No proliferation of informal vehicle tracks. No new erosion gullies	Visual observation	Weekly	SHE Officer	SHE Officer> Exploration Manager	Proliferation of new vehicle tracks Formation of new gullies in work areas	Rehabilitation of affected 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	SHE Officer	SHE Officer> Exploration Manager	A logged complaint	Dust suppression around working areas to reduce fugitive dust

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
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	SHE Officer	SHE Officer> Exploration Manager	A logged complaint	Servicing of vehicles and machinery by a certified service provider
Poaching									
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 incidents of poaching.	Weekly	SHE Officer	SHE Officer> Exploration Manager> local police service	An incidents report logged with the local Police Service	Appropriate action will be decided by the local Police Service
Habitat loss									
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	SHE Officer	SHE Officer> Exploration Manager	Vegetation clearance outside of marked areas.	Rehabilitation of affected areas to the satisfaction of the SHE Officer

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
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	SHE Officer and Exploration Manager	SHE Officer> 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	SHE Officer	SHE Officer> Exploration Manager> local police service	Outbreak of wildfires due to the exploration workers	Rehabilitation of affected areas
Archaeology and cultural heritage									
Potential disturbance to archaeological and cultural heritage resources	Presence or unearthing of archaeological or cultural heritage resources	To prevent destruction of artefacts	Preservation of all artefacts that are discovered	Inspection of records of findings	Daily	SHE Officer	SHE Officer> Project Archaeologist>National Heritage Council (NHC)	Unearthing of archaeological or cultural heritage resources	Cease all activity on site and wait for NHC to inspect site

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
			around project area						
Employment creation									
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	Project Manager	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	SHE Officer	SHE Officer> Exploration Manager	A logged complaint about above normal noise levels	Revision of site activities
Traffic									
Increase in traffic density on declared Roads Authority (RA)	Complaints from the public about increase in	To ensure continued ease of access to RA roads by residents	No complaints from the public about increase off	Inspection of logbooks	Weekly	SHE Officer	SHE Officer> Exploration Manager> Roads Authority	A logged complaint about traffic increase or	Find alternative access roads for the team.

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
roads or damage to these.	traffic on RA roads. Complaints about damage to RA roads caused by movement of project vehicles and machinery.		traffic due to exploration activities					damage to RA roads	Rehabilitation of affected roads
HIV and AIDS									
Potential increase in HIV and AIDS prevalence.	New HIV or STIs infections	To prevent new infections in the area	No new HIV or STIs infections recorded	Liaison with local health facilities	Monthly	SHE Officer	SHE Officer> Exploration Manager> Ministry of Health and Social Services	Recorded new HIV or STIs linked to the exploration workers	Continued sex education and provision of condoms
Littering									
Environmental pollution from solid waste during	Scattered litter	To prevent littering of the general project area	No visible litter around the project area	Visual observation	Daily	SHE Officer	SHE Officer> Exploration Manager	Visible littering around project site	Clean-up of the affected areas and ensuring exploration

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
exploration activities.									workers utilise waste containers provided.

4.2.3 Decommissioning and Rehabilitation

Decommissioning and rehabilitation will involve the following:

- Capping of all drilled boreholes, except for (communal) boreholes that will be cased and appropriately capped before handing them over the Department of Water Supply and Sanitation Coordinate (at MAWLR) for proper handover to the communities (public use). Or if the water borehole(s) will be on private farm(s), it would be handed over to the respective farm owner(s).
- Collection and disposal of domestic waste at the nearest solid waste disposal site.
- Levelling of any topsoil stockpiled during exploration activities.
- Any temporary work camps setup should be dismantled, and the area rehabilitated as far as practicable, to their original state.

5 Conclusions and Recommendations

This chapter presents the conclusions to the ECC renewal application for consideration by the Proponent and relevant authorities. The conclusions and recommendations presented are based on the management and mitigation measures presented in Chapter 4 above.

5.1 Recommendations

The aim of this document was to review the existing EMP and based on new project information compile/update the EMP to enable the renewal of the expired ECC for the Project (exploration activities on EPL7051).

There have been some mineral prospecting and exploration activities done on EPL7051 between December 2020 and June 2021, i.e., from December 2020 to June 2021. An Environmental (Bi-annual) Monitoring Report was compiled until 11 June 2021. From 12 June 2021 to November 2022, there have not been any activities conducted on the EPL.

Since the Project activities have not been completed yet, the potential impacts remain the same, and their occurrence on site once would be encountered when exploration resumes. Therefore, the implementation of the recommended management measures (action plans) contained herein will be continued once the activities resumes.

The Environmental Consultant is therefore confident that once the Project activities resume, the Proponent will continue to manage and mitigate the potential negative impacts by effectively implementing the appropriate measures and with more effort and commitment put on implementation monitoring. It is therefore, recommended that the ECC is renewed, subject to the following recommendations:

- All required permits, licenses and approvals for the activities should be obtained as required (Table 4-1).
- All mitigations and monitoring measures listed in Table 4-2 and Table 4-3, respectively should be implemented as stipulated.
- All the necessary traffic safety and occupational health and safety precautions should be adhered to.
- Wastewater from the toilets and washing facilities should be treated separately.
- Toilet water should be treated using one of the following methods:
    - Discharged into chemical toilets and periodically emptied out before reaching capacity and transported to a wastewater treatment facility.

  - A type of pit latrine (where excreta in the pit is treated to prevent the waste from being a water pollution risk).

- Where clearing is unavoidable, permits for clearing protected plant species should be obtained from the nearest Forestry offices, either in Talismanis or Gobabis.
- Water reuse/recycling methods should be implemented as far as practicable for the diamond drilling.
- The Proponent should prioritize the use of reverse circulation (RC) technique as far as possible. However, if diamond drilling is required, the Proponent should consider carting (transporting) water from sources with sufficient supply or from elsewhere outside the exploration area.
- Areas where exploration activities have ceased should be rehabilitated, as far as practicable, to their original state.
- Site areas where exploration activities have ceased should be rehabilitated, as far as practicable.
- The implementation monitoring of mitigation measures should be conducted, applicable impact's actions taken, reporting done and recorded.
- The project' SHE Officer should effectively conduct EMP Compliance Monitoring. An Environmental Audit/Compliance Report shall be compiled for every monitoring period and submitted to the DEAF at MEFT for archiving.
- An ECC Renewal application should be submitted at least 3 months before the expiry date of the valid ECC to allow time for evaluation of the updated EMP by the DEAF.

5.2 Conclusion

RES Consultants recommend that the expired ECC be renewed so that the Proponent can continue with the exploration activities. It is crucial for the Proponent to effectively implement the recommended management measures to protect both the biophysical and social environment. The recommended management measures referred to herein are these listed in the initial EMP developed for EPL7051 and on which the first/expired ECC was issued in 2018. Monitoring of EMP implementation should be done to ensure that all potential impacts identified in the initial Scoping Report (and mitigated in this EMP) and other impacts that might arise during implementation are properly identified in time and addressed.

During the period of December 2020 to June 2021, exploration activities have been done in accordance with the EMP measures. RES Consultants are of the same hope that the Proponent will continue to maintain the same commitment towards environmental protection and sustainability, once the ECC is renewed and ensure timely renewal of the ECC.

APPENDIX A: EXPIRED ENVIRONMENTAL CLEARANCE CERTIFICATE (ECC) FOR EPL7051 (ISSUED BEFORE THE NEW ECC SYSTEM WITH IDENTIFICATION NUMBERS)

REPUBLIC OF NAMIBIA

MINISTRY OF ENVIRONMENT AND TOURISM

Tel: (00 26461) 284 2111
Fax: (00 26461) 232 057

E-mail: simon.hangula@met.gov.na

Enquiries: Mr. Simon Hangula

Cnr Robert Mugabe &
Dr Kenneth Kaunda Street
Private Bag 13306
Windhoek
Namibia

22 November 2018

OFFICE OF THE ENVIRONMENTAL COMMISSIONER

The Manager
Trans Kalahari Copper Namibia (Pty) Ltd
Private Bag 12012
Ausspannplatz
Windhoek

Dear Sir,

SUBJECT: ENVIRONMENTAL CLEARANCE CERTIFICATE FOR THE PROPOSED MINERALS EXPLORATION ACTIVITIES WITHIN EXCLUSIVE PROSPECTING LICENSES (EPL) NO. 7051, IN OMAHEKE REGION

The Environmental Scoping report and Environmental Management Plan submitted are sufficient as these have made an adequate provision of the environmental management for the proposed activities. From this perspective, regular environmental monitoring and evaluations on environmental performance should be conducted. Targets for improvements should be established and monitored throughout this process.

This Ministry reserves the right to attach further legislative and regulatory conditions during the operational phase of the project. From this perspective, I issue this clearance with the following condition: All relevant permits are obtained prior to the commencement of the proposed activities.

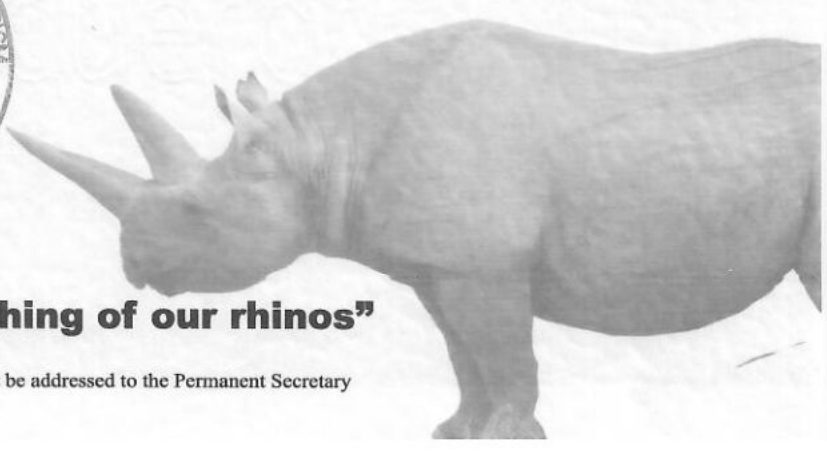
On the basis of the above, this letter serves as an environmental clearance certificate for the project to commence. However, this clearance letter does not in any way hold the Ministry of Environment and Tourism accountable for misleading information, nor any adverse effects that may arise from this project's activities. Instead, full accountability rests with Trans Kalahari Copper Namibia (Pty) Ltd and their consultants.

This environmental clearance is valid for a period of (three) 3 years, from the date of issue unless withdrawn by this office.

Yours sincerely,

MINISTRY OF ENVIRONMENT AND TOURISM
P/Bag 13306
Windhoek, Namibia
2018 -12- 11
Office of the Environmental Commissioner

Teofilus Nghitila
ENVIRONMENTAL COMMISSIONER



"Stop the poaching of our rhinos"

All official correspondence must be addressed to the Permanent Secretary

REPUBLIC OF NAMIBIA

PRO-FORMA ENVIRONMENTAL CONTRACT

WHEREAS the Applicant/ Company referred to below, has been notified under section 48(4) of the Minerals (prospecting and Mining) Act, 1992 that the Minister of Mines and Energy is prepared to grant the applicant Trans Kalahari Copper Namibia Pty Ltd subject to certain terms and conditions and;

WHEREAS such terms and conditions include the condition precedent that the applicant enters into an Environmental Contract with the Government of Namibia;

IT is hereby agreed as follows:

1. PARTIES.

The parties to this contract are: Trans Kalahari Copper Namibia (Pty) Ltd (hereinafter referred to as the "Holder") being the holder of ~~Non-Exclusive Prospecting Licence/~~ Exclusive Prospecting Licence/ ~~Reconnaissance License/ Mining Claim(s)/Mining License/~~ (delete those not applicable)

No. EPL7051

on the one hand, and THE GOVERNMENT OF NAMIBIA
(Hereinafter referred to as "the Government")

duly represented by:
THE MINISTRY OF ENVIRONMENT & TOURISM (MET)
and THE MINISTRY OF MINES & ENERGY (MME)

on the other.

2. GENERAL OBLIGATIONS.

2.1 The provisions contained in this contract are in addition to and do not detract from any obligations which the Holder may have under the Minerals (Prospecting and Mining) Act, 1992 (the Act).

2.2 The Holder recognises that its prospecting / mining operations may have significant impacts on the environment. Accordingly, the Holder undertakes that during the course of its operations it will take every practicable step necessary to ensure the mitigation of such impacts. In doing so it will liaise with the MET and MME as provided for in 3.3 and 4 below.

2.3 In particular the Holder will undertake necessary and adequate steps to ensure that

environmental damage is reduced to a minimum and prevented insofar, as is practicable.

2.4 Should the Holder not carry out its environmental obligations it shall be liable for the environmental damage that may result. In this regard the Government reserves the right to:

2.4.1 demand at any time financial or other guarantees to restore the environment or mitigate environmental damage which has, or which may occur, as a result of the Holder's activities;

2.4.2 itself undertake such mitigatory or restorative measures and to recover the costs thereof from the Holder;

2.4.3 claim compensation for environmental damage, which may have been brought about by the Holder's activities.

2.5 The Holder shall on completion or suspension of its operations, ensure that the impact on the environment is minimised and that every reasonable and practicable step is undertaken to ensure that the environment is left in a reasonable state. The provisions of clause 2.4 apply muutatis mutandis to environmental damage evident after prospecting; mining or other operations have been suspended or completed.

2.6 The Holder acknowledges that should it apply for a mining licence in consequence of its prospecting or other operations, it will have to comply with Namibia's National Environmental Assessment Policy (Directorate of Environmental Affairs, Jan, 1995) and that this will entail the carrying out of an Environmental Assessment (EA).

3. THE ENVIRONMENTAL CONDITIONS

3.1 In accordance with section 68(f) of the Act, which provides that an application for a licence shall contain particulars of the existing condition of the environment, an estimate of the effect which the proposed operations may have, and the proposed steps to be taken to prevent or minimise such effect, the Holder has attached Environmental Conditions marked Appendix A.

3.2 The Holder acknowledges that once the MET and MME has determined that the information furnished in Appendix A is satisfactory, it will form part of this contract.

3.3 The Holder warrants that the information contained in Appendix A is to the best of its knowledge and belief true and correct and that it will notify the Government of any material changes therein. Should there be such material changes, the Government reserves the right to re-negotiate the terms and conditions of this agreement.

TN

4. COMPLIANCE AND NOTIFICATION

4.1 The Holder acknowledges that the reports, which it is obliged to furnish to the MME (which is provided for in the notice from the office of the Mining Commissioner under section 48(4) of the Act) will include an Environmental Report.

4.2 The Holder acknowledges that officials from the MME and/or the MET may at any time conduct a compliance and/or performance inspection of its operations.

4.3 The Holder will keep records of its environmental performance and make these available to the officials referred to in 4.2.

SIGNED AT 1.33pm on this 16 day of July 2018

For the Holder:
(duly authorised thereto) .....

For the Government of Namibia: .....

Mr Teofilus Nghitila
Environmental Commissioner
Ministry of Environment and Tourism

MINISTRY OF ENVIRONMENT AND TOURISM
Private Bag 13306
Windhoek, Namibia
2018 -12- 11

Office of the

and

22.11.2018

.....

Mr. E. Shivolo
Mining Commissioner
Ministry of Mines and Energy

APPENDIX B: ECC RENEWAL APPLICATION RESUBMISSION PROOFS (17 DECEMBER 2021 AND 14 DECEMBER 2022, DATE STAMPED AS 13 DECEMBER 2022)

7051

Revenue Stamps

ANNEXURE 1

FORMS

Form 1

REPUBLIC OF NAMIBIA

ENVIRONMENTAL MANAGEMENT ACT (No. 7 of 2007)

(Section 32)

APPLICATION FOR ENVIRONMENTAL CLEARANCE CERTIFICATE RENEWAL

PART A: DETAILS OF APPLICATION

1.	Name:	Trans Kalahari Copper Namibia (Pty) Ltd
2.	Business Registration:	2017/1156
3.	Correspondence Address:	Private Bag 12012, Windhoek
4.	Name of Contact Person:	Silvia Kurz
5.	Position of Contact Person:	Company Secretarial Consultant
6.	Telephone No.:	+264-61-429 851
7.	Fax No:	+264-61-429 855
8.	E-mail Address:	silvia.kurz@lbcommserv.com

PART B: SCOPE OF THE ENVIRONMENTAL CLEARANCE CERTIFICATE

1. THE ENVIRONMENTAL CLEARANCE CERTIFICATE IS FOR:

The 'listed activities' that might be affected are listed below:

MINING AND QUARRYING ACTIVITIES

3.1 - The construction of facilities for any process or activities which requires a licence, right or other form of authorisation, and the renewal of a licence, right or other form of authorisation, in terms of the Minerals (Prospecting and Mining Act), 1992.

Revenue Stamps

NAMIBIA REVENUE N$200

NAMIBIA REVENUE N$100

MINISTRY OF ENVIRONMENT FORESTRY AND TOURISM RECEIVED 13 DEC 2022 Signature:

ANNEXURE 1

FORMS

Form 1

REPUBLIC OF NAMIBIA

ENVIRONMENTAL MANAGEMENT ACT (No. 7 of 2007)

(Section 32)

APPLICATION FOR ENVIRONMENTAL CLEARANCE CERTIFICATE RENEWAL

PART A: DETAILS OF APPLICATION

1.	Name:	Trans Kalahari Copper Namibia (Pty) Ltd
2.	Business Registration:	2017/1156
3.	Correspondence Address:	Private Bag 12012, Windhoek
4.	Name of Contact Person:	Silvia Kurz
5.	Position of Contact Person:	Company Secretarial Consultant
6.	Telephone No.:	+264-61-429 851
7.	Fax No:	+264-61-429 855
8.	E-mail Address:	silvia.kurz@lbcommserv.com

PART B: SCOPE OF THE ENVIRONMENTAL CLEARANCE CERTIFICATE

1. THE ENVIRONMENTAL CLEARANCE CERTIFICATE IS FOR:

The 'listed activities' that might be affected are listed below:

MINING AND QUARRYING ACTIVITIES

3.1 - The construction of facilities for any process or activities which requires a licence, right or other form of authorisation, and the renewal of a licence, right or other form of authorisation, in terms of the Minerals (Prospecting and Mining Act), 1992.

Revenue Stamps

Please refer to the Cover page (paid on 17 Dec 2021) but the application is allegedly lost (resubmission)

MINISTRY OF ENVIRONMENT, FORESTRY AND TOURISM
DIRECTORATE OF ENVIRONMENTAL AFFAIRS
13 DEC 2022
RECEIVED
Signature:

ANNEXURE 1

FORMS

Form 1

REPUBLIC OF NAMIBIA

ENVIRONMENTAL MANAGEMENT ACT (No. 7 of 2007)

(Section 32)

APPLICATION FOR ENVIRONMENTAL CLEARANCE CERTIFICATE RENEWAL (APP NO. 221214000693)

PART A: DETAILS OF APPLICATION

PROPONENT/APPLICANT'S INFORMATION:	ENVIRONMENTAL CONSULTANT'S INFORMATION:
1. **Name (Person or Business):** Trans Kalahari Copper Namibia (Pty) Ltd	1. **Name (Person or Business):** Resilient Environmental Solutions CC
2. **Business Registration / Identity No.:** 2017/1156	2. **Business Registration / Identity No:** CC/2018/05415
3. **Correspondence Address:** Private Bag 12012, Windhoek	3. **Correspondence Address:** P. O. Box 90709 Windhoek
4. **Name of Contact Person:** Silvia Kurz	4. **Name of Contact Person:** John Pallett
5. **Position of Contact Person:** Company Secretarial Consultant	5. **Position of Contact Person:** Environmental Assessment Practitioner
6. **Telephone /Mobile No.:** +264 (0) 61-429 851	6. **Telephone / Mobile No.:** +264 (0) 81 240 2528
7. **Fax No:** +264 (0) 61-429 855	7. **Fax No:** Not Applicable
8. **E-mail Address:** silvia.kurz@lbcommserv.com	8. **E-mail Address:** resilient.environment@gmail.com

PART B: SCOPE OF THE ENVIRONMENTAL CLEARANCE CERTIFICATE

1. THE ENVIRONMENTAL CLEARANCE CERTIFICATE IS FOR:

1. Non-invasive phase activities:
    a. Airborne Geophysics,
    b. Ground Geophysics,
2. Invasive phase activities:
    a. Soil Sampling,
    b. Diamond Drilling,
    c. Percussion Drilling, and
    d. Reverse Circulation (RC) Drilling

Typical activities associated with the invasive phase of exploration are as follows:

- Clearance of vegetation.
- Drilling/extraction of core samples for analysis of target resources.
- Off-road driving of vehicles (4X4s and truck with attached drilling equipment).
- Setting-up of temporary exploration camps.
- Storage of fuel.
- Operation of diesel electricity generators.

Upon renewing the environmental clearance certificate, Trans Kalahari Copper Namibia (Pty) Ltd intends to resume the prospecting and exploration activities across/within the EPL.

PART C: DECLARATION BY APPLICANT

I hereby certify that the particulars given above are correct and true to the best of my knowledge and belief. I understand the environmental clearance certificate may be suspended, amended or cancelled if any information given above is false, misleading, wrong or incomplete.

_____	JOHN PALLETT	Environmental Assessment Practitioner
Signature of Applicant	Full Name in Block letters	Position

on behalf of Trans Kalahari Copper Namibia (Pty) Ltd 14 December 2022
Date

APPENDIX C: CURRICULUM VITAE (CV) OF ENVIRONMENTAL ASSESSMENT PRACTITIONER (EAP) – JOHN PALLETT

CURRICULUM VITAE

JOHN RICHARD PALLETT

Born: 13 October 1960

Cell: +264 81 2402528

Email: jpallett@afol.com.na

I specialise in evaluating environmental issues and providing ecological and biodiversity advice for the benefit of managers, decision-makers and the lay public. This encompasses environmental assessments and compilation of publications on environmental issues. My work experience includes liaising with people on different levels such as rural communities, scientific researchers, engineers and directors in government departments, to improve management of natural resources for greater long-term benefit.

I have science qualifications in zoology and geology, experience in research and project management, a sharp eye for detail, and a keen interest in the natural sciences and conservation. I draw on my skills in writing, presentations and editing, to provide information that must be simple yet accurate, so that issues of natural resource management are correctly conveyed and understood.

Qualifications

- Accredited with the Environmental Assessment Professionals Association of Namibia (EAPAN) as a Practitioner, Lead Practitioner and Reviewer.
- Integrated Environmental Management certificate, University of Cape Town, 1991.
- B.Sc Honours Zoology *cum laude*, University of the Witwatersrand, 1986.
- B.Sc Zoology and Geology, University of the Witwatersrand, 1984.
- Joint Matriculation Board certificate, St. Stithians College, Johannesburg, 1977.

CV - J R Pallett

Work experience

Time period	Institution, role and experience
July 2018 - present	**Co-Director,** Resilient Environmental Solutions cc (RES). • Manage and conduct Environmental Impact Assessments (EIAs)
Oct 2008 - present	**Principal Scientist**, Southern African Institute for Environmental Assessment (SAIEA) • Coordinate and compile Strategic Environmental Assessments (SEAs) and natural resource management projects; • Guide and review Environmental Impact Assessments (EIAs); • Give training in EIA, SEA and Sustainable Development, in Namibia and other African countries.
Nov 1992- Sep 2008	**Environmental Practitioner** at Desert Research Foundation of Namibia (DRFN) and its consulting arm Environmental Evaluation Associates of Namibia (Pty) Ltd (EEAN). • Coordinate the Publications, Library and Information Management Desk – write, compile and manage information materials; • Coordinate the Energy Desk, focussed on renewable energy; • Consultant for EEAN, provide biodiversity specialist input to EIAs; • Facilitate community-based management of water and rangeland resources.
1992 - present	**Freelance editor and author** • Editor of Red Data Assessment of Carnivores of Namibia. • Editor/author of books on the Cuando River, Namib Desert, !Nara melons, southern African water, and the Sperrgebiet. • Edit scientific and lay publications for various clients: o GIZ (Basin Management Training Manuals) o Research and Information Services of Namibia (RAISON) (profiles of North-Central Namibia, Kavango) o Unam Multidisciplinary Research Centre (MRC) (project reports) o Lars Andersson (Ph.D thesis). • Co-author of Life Science textbooks.
Nov 1987 – Oct 1992	**Curator** of Mammals at the State Museum of Namibia, Windhoek. • Study behavioural interactions between yellow mongoose and Cape ground squirrels • Facilitate community participation in controlling bubonic plague in north-central Namibia. • Conduct mammal survey of West Caprivi in conjunction with Ministry of Environment and Tourism for Integrated Natural Resources and Community-Based Management. • Expand and curate the mammal scientific collection.

Project experience

Year, company	Project
2019-2022 RES	EIA of the proposed **Ondili Waterberg Lodge,** Otjozondjupa Region. For Ondili Lodge Management (Pty) Ltd
2019-2022 RES	EIA of the Proposed **Opuwo Abattoir Upgrade,** Kunene Region. For Ministry of Agriculture, Water and Land Reform.
2021-2022 SAIEA	Rapid Strategic Environmental Assessment of **Namibia's Central Marine Spatial Plan**. Led by SAIEA for GIZ.
2022 SAIEA	External review to IFC standards of EIA: Proposed **Wind Power Plant near Rosh Pinah**. For Envirodynamics.
2020 - 2022 SAIEA	Revision of the **Forest Act and Regulations**. Led by SAIEA for GIZ.
2021 SAIEA	External review to IFC standards of EIA: **Proposed Wind Power Plant near Lüderitz**. For Envirodynamics.
2019 - present RES	EIA of the **Proposed establishment of the Africa Millimetre Telescope on Gamsberg Plateau**. For Stichting Katholieke Universiteit and Radboud University, The Netherlands.
2019 SAIEA	Team member in the **Strategic Environmental and Socio-economic Impact assessment on Walvis Bay Corridor Group Corridors for Development of Namibia into a Logistics Hub for Southern Africa.** Led by SAIEA for GIZ.
2019 RES	EIA of a **Lodge Complex on Farm Oberland near Etosha** National Park, Kunene Region. For Ondili Lodge Management (Pty) Ltd
2019 SAIEA	External review to IFC standards of EIA: **Encroacher Bush Biomass Power Project** in Namibia. For NamPower.
2019 SAIEA	EIA of **Biological control of alien invasive cactus plants** in Namibia. For Namibian Chamber of the Environment.
2019 SAIEA	Environmental and Social Management Framework for the **Human-Wildlife Conflict Management Project**. For WWF Namibia
2018 RES	EIA of **8 EPLs in Omaheke Region**. For Trans Kalahari Copper Namibia (Pty) Ltd.
2018 SAIEA	External review of EIA: **Polihali Dam and associated infrastructure EIA, Lesotho.** For Lesotho Highlands Development Authority
2017 IEC	Fauna & flora specialist for **EIA: Proposed export abattoir in Outjo**. EIA led by Quivertree Consulting CC, for Fu Hai Trading Enterprises.
2017 SAIEA	External review to IFC standard of EIA: **Concentrated Solar Power facility near Arandis in the Erongo Region**. For NamPower.

CV - J R Pallett

Year, company	Project
2017 SAIEA	External review of EIA: **3D Seismic Surveys in Petroleum Exploration License Areas (PEL) 82 and 83, Namibia.** For GALP
2017 SAIEA	External review of EIA: **Bumbuna II Hydroelectric Project, Sierra Leone.** For Joule Africa.
2016-2017 IEC	EIA of **Right-of-way servitude and operations of Reiser Taxidermy**, Brakwater.
2015-2017 SAIEA	Team leader for the **Strategic Environmental Assessment of the Omaheke Integrated Regional Land Use Plan**. Led by SAIEA for the Ministry of Lands and Resettlement.
2016 SAIEA	External review of EIA: **Proposed pipeline from the Temane Liquids Processing Facility to a Floating, Storage and Offloading Unit in Inhambane Province, Mozambique.** For Sasol Petroleum Mozambique Limitada.
2016 SAIEA	Environmental input to **Oranjemund Integrated Urban Spatial Development Framework**. Led by SAIEA for Stubenrauch Planning Consultants.
2016 SAIEA	Environmental input to **Helao Nafidi Integrated Urban Spatial Development Framework**. Led by SAIEA for Stubenrauch Planning Consultants.
2016 SAIEA	External review of Environmental, Social and Health Impact Assessment for the **Freetown International Airport Project**. For Ministry of Trade and Aviation, Sierra Leone.
2015-2016 SAIEA	Team leader for the **Strategic Environmental Assessment of Large-scale bush thinning and value-addition activities in Namibia.** Led by SAIEA for the Gesellschaft für Internationale Zusammenarbeit (GIZ).
2015 SAIEA	Review of the current **Social and Environmental status, regulatory and institutional frameworks governing the extractive industry in Namibia**. Contribution to the Country Mining Vision, as a component of the African Mining Vision and the SADC Protocol on Mining, for UNDP Namibia.
2014-2015 SAIEA	Team Leader for **SEA of the Master Plan for the International Logistics Hub in Namibia**. Led by SAIEA for the Japan International Cooperation Agency.
2014 IEC	Bird specialist for the **EIA of the 400 kV Power Line from Ruacana to Oshivelo**. Led by EnviroDynamics for NamPower.
2014 IEC	Bird specialist for **EIA of the Proposed Okanjande graphite mine** and exploration activities. Led by EnviroDynamics for Gecko Graphite.
2014-2015 SAIEA	Team leader for the **Strategic Environmental Assessment of the Zambezi Integrated Regional Land Use Plan**. Led by SAIEA for the Ministry of Lands and Resettlement.
2013-2014	Team leader for the **Strategic Environmental Assessments** of the

CV - J R Pallett

Year, company	Project
SAIEA	Tourism Sector for the **NamPlace Projects** in the Greater Sossusvlei – Namib Landscape Area and the Greater Fish River Canyon Landscape Area. Led by SAIEA for the Ministry of Environment and Tourism.
2013 SAIEA and EMS	Namibian consultant for the project **The Application of Economic Instruments for Waste Oils and Used Lead Acid Batteries in Namibia.** Led by EMS Consulting (Belgium) for the Africa Institute.
2013 SAIEA	External review of EIA: **Proposed changes to Husab Mine**. EIA conducted by SLR for Swakop Uranium (Pty) Ltd.
2013 SAIEA	Team member in the project **Management Plan for the Proposed Bwabwata-Okavango Ramsar Site**. Led by SAIEA for the Ministry of Environment and Tourism.
2013 SAIEA	Team leader for the **Strategic Environmental Assessment of the Kavango Integrated Regional Land Use Plan**. Led by SAIEA for the Ministry of Lands and Resettlement.
2012 SAIEA	Team leader for the **Strategic Environmental Assessment of the Hardap Integrated Regional Land Use Plan**. Led by SAIEA for the Ministry of Lands and Resettlement.
2012 SAIEA	Capacity assessment of EIA sector and **SEA Training Workshop** for Guinea Environment Bureau (*Bureau Guineen d'Etudes et d'Evaluation de Environnement)*
2011 SAIEA	Compilation of **Park Management Plans** for the coastal parks (**Namib-Naukluft, Dorob and Skeleton Coast National Parks**) for Nacoma. Led by SAIEA for Ministry of Environment and Tourism.
2011 SAIEA	Provide guidance on EIA and SEA, and facilitate **SEA Training Workshop** for Sierra Leone Environmental Protection Agency (SLEPA).
2011 SAIEA	Team member for EIA Scoping for **Vision Industrial Park**, Swakopmund. Led by SAIEA for Gecko Namibia (Pty) Ltd.
2010-11 SAIEA	Country specialist for the **Strategic Environmental Assessment of the Karas Integrated Regional Land Use Plan**. Led by Planung+Umwelt for the GIZ and Ministry of Lands and Resettlement.
2010 SAIEA	Team leader for the **Strategic Environmental Assessment of CBEND replication** (Combating Bush Encroachment for Namibia's Development). Led by SAIEA for the National Planning Commission Secretariat.
2009-10 SAIEA	Biodiversity specialist in the **Strategic Environmental Assessment of the Central Namib Uranium Rush**. Led by SAIEA for Ministry of Mines and Energy.
2009 SAIEA	Trainer in the **Training Course for Communal Land Boards** on Sustainable Development and Environmentally Sound Decision-making. Led by Legal Assistance Centre and SAIEA for Ministry of Environment and Tourism.

CV - J R Pallett

Year, company	Project
2008-09 SAIEA	**Policy Review** for Namibia's Country Pilot Partnership for Integrated Sustainable Land Management Support and Adaptive Management in Namibia. Led by SAIEA for Ministry of Environment and Tourism.
2008-09 SAIEA	Compilation of **Process Framework for the NACOMA Project**. Led by SAIEA for the Ministry of Environment and Tourism.
2008 EEAN	Project coordinator of **Valencia Environmental Monitoring**. For Valencia Uranium Ltd
2007-08 EEAN	EIA of **Proposed Visitor's Centre for the Sperrgebiet National Park**. Input to Feasibility Study undertaken for Succulent Karoo Ecosystem Programme (SKEP), led by Nina Maritz Architects.
2007-08 EEAN	Project coordinator for **Rössing Biodiversity Assessment** as part of Rössing Mine Expansion EIA team, led by Ninham Shand.
2007-08 EEAN	EIA of **Proposed Uranium Mine at Goanikontes**. Ecology component of the EIA led by Alexandra Speisser Environmental Consultants, for Bannerman Mining Resources Namibia.
2007 EEAN	EIA of **Powerlines associated with Trekkopje Uranium Project and desalination plant at Wlotzkasbaken**. With Turgis Consulting, for Uramin.
2007 EEAN	EIA of **EPL 3573 Trekkopje Uranium Project**. With Colin Christian and Associates, for Uramin.
2007 DRFN	Project coordinator for **Biomass National Symposium** as part of the Renewable Energy and Energy Efficiency Capacity Building Project (Reeecap).
2006-07 EEAN	EIA of **Kavango Biofuels Project**. Research and review component of the EIA led by Colin Christian and Associates, for Prime Investments (Ltd).
2006-08 EEAN	Environmental Control Officer inspection at **Trekkopje Uranium Project**. For Directorate of Environmental Affairs, Ministry of Environment and Tourism.
2005-07 DRFN	Assistant team leader for **Participatory Poverty Assessment** of Karas Region. With Desert Research Foundation of Namibia, for National Planning Commission.
2005-2006 EEAN	EIA of **Proposed railway line from Katima Mulilo to the coast**. With Urban Dynamics, for Ministry of Works, Transport and Communication.
2005 EEAN	EIA of **Proposed powerlines from Kudu power station at Uubvley to Obib Substation**. Terrestrial ecology component of the EIA led by Envirodynamics, for Nampower.
2005 EEAN	EIA and Environmental Management Plan of **Proposed Kudu CCGT power station at Uubvley**. Terrestrial ecology component of the EIA led by Envirodynamics and CSIR, for Nampower.

CV - J R Pallett

Year, company	Project
2005 EEAN	EIA and route selection for **Proposed 132 kV power line from Kokerboom to Namib substations.** Terrestrial ecology component of the EIA led by Envirodynamics, for Nampower.
2004-06 EEAN	EIA component of **Prefeasibility Study of a future port facility in the vicinity of Cape Fria-Angra Fria**. With Technology Systems and Management, (Pty) Ltd, for Ministry of Works, Transport and Communication.
2004 EEAN	Team leader for **Regional and local-level capacity assessment under the National Capacity Needs Self-Assessment for Global Environmental Management (NCSA) project**. For Directorate of Environmental Affairs, Ministry of Environment and Tourism.
2002-2003 EEAN	EIA of **Regional Rural Water Supply Development Plan for Kavango Region.** In partnership with Lund Consulting Engineers for Directorate of Rural Water Supply, Ministry of Agriculture, Water and Rural Development (MAWRD).
2001 Private	**Assessment of seals and sealing in Namibia.** For the Wildlife Society of Namibia.
2001-2002 EEAN	Researcher for **State of the Environment Report on Waste Management in Namibia.** Led by EEAN for Ministry of Environment and Tourism.
2001-2002 EEAN	EIA of **Upgrading of Power Supply to Windhoek Central Business District.** In partnership with Bicon Namibia Consulting Engineers, for City of Windhoek.
2000-2002 EEAN	EIA of **Elimination of River Crossings in Sam Nujoma Drive.** With Klein Windhoek Valley consortium (Africon, Lund Consulting Engineers, Stewart Scott Namibia, EEAN) for City of Windhoek.
2000 EEAN	EIA of **Upgrading of Windhoek-Aris Road at Kruin.** In partnership with Stewart Scott Namibia for Namibia Roads Authority.
1999 EEAN	EIA of **Upgrading of Ondangwa-Oshikango road.** In partnership with Weder Meyer Louw Consulting Engineers, for Namibia Roads Authority.
1999 EEAN	EIA of **Ruacana South Rural Water Supply Scheme.** In partnership with Alexander and Becker Consulting Engineers, for Directorate of Rural Water Supply, MAWRD.
1999 EEAN	EIA of **Okakarara East Rural Water Supply Scheme.** In partnership with Stewart Scott Namibia, for Directorate of Rural Water Supply, MAWRD.
1993 EEAN	EIA of **Upgrading of Trans-Caprivi Highway.** In partnership with VKE Namibia Consortium Consulting Engineers, for Department of Transport, Ministry of Works, Transport and Communication.
1990 State Museum	**Mammal survey of West Caprivi**. Input to the biodiversity and social profile of West Caprivi Game Park, for the Ministry of Wildlife, Conservation and Tourism, Namibia.

Abbreviations:

CSIR	Council for Scientific and Industrial Research, South Africa
DRFN	Desert Research Foundation of Namibia
EEAN	Environmental Evaluation Associates of Namibia
EIA	Environmental Impact Assessment
EMS	Environmental Management Systems Consulting
ERM	Environmental Resources Management
IEC	Independent Environmental Consultants
MAWRD	Ministry of Agriculture, Water and Rural Development
MET	Ministry of Environment and Tourism
RES	Resilient Environmental Solutions cc
SAIEA	Southern African Institute for Environmental Assessment
SEA	Strategic Environmental Assessment

Publications – books and electronic

NCE, LCMAN, MEFT (eds) 2022. *Conservation status and Red List of the terrestrial carnivores of Namibia*. Edited by J Pallett and G Thomson. Namibian Chamber of Environment; Large Carnivore Management Association of Namibia; Ministry of Environment, Forestry and Tourism; Windhoek, Namibia.

Atlas of Namibia Team, 2022, *Atlas of Namibia: its land, water and life*, Namibia Nature Foundation, Windhoek.

Pallett J, Mukuumbuta-Guillemin I, Mendelsohn J. 2022. *Cuando State of the Basin Report*. Namibia Nature Foundation, Windhoek, and WWF Zambia, Lusaka.

Pallett JR, Osborne TO. 2015. Kori Bustard. In: Simmons RE, Brown CJ and Kemper J. *Birds to watch in Namibia: red, rare and endemic species*. Pp 55-57. Ministry of Environment and Tourism, and Namibia Nature Foundation, Windhoek.
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Scott HA, Shaw JM, Pallett JR. Ludwig's Bustard. In: Simmons RE, Brown CJ and Kemper J. *Birds to watch in Namibia: red, rare and endemic species*. Pp 52-54. Ministry of Environment and Tourism, and Namibia Nature Foundation, Windhoek.
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Birch C (ed). 2015. *Development of an inventory of ecosystem services in Namibia*. Department of Environmental Affairs, Ministry of Environment and Tourism, Windhoek. Contributing authors: Harper-Simmonds L, Mendelsohn J, Roux JP, Pallett J, Brown C, Middleton A, Kruse J.

Turpie, J., Midgley, G., Brown, C., Barnes, J., Pallett, J., Desmet, P., Tarr, J., Tarr, P. 2010. *Climate change vulnerability and adaptation assessment for Namibia's biodiversity and protected area system*. GEF/UNDP, Windhoek, Namibia.

SAIEA. 2009. *Impact assessment case studies from southern Africa*. E-book, www.saiea.com/Case_study_book_09.htm

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Marais, A.L. & Pallett, J. 2002. *Human and healthy: Life Science for Namibia Grade 10*. Out of Africa Publishers, Windhoek, Namibia

Marais, A.L. & Pallett, J. 2000. *Fur and feathers: Life Science for Namibia Grade 9*. Out of Africa Publishers, Windhoek, Namibia.

Marais, A.L. & Pallett, J. 1998. *Green and growing: Life Science for Namibia Grade 8*. Out of Africa Publishers, Windhoek, Namibia.

Heyns, P., Montgomery, S., Pallett, J. & Seely, M. (Eds.) 1998. *Namibia's Water: a decision makers' guide*. Department of Water Affairs, Ministry of Agriculture, Water and Rural Development, and Desert Research Foundation of Namibia. https://www.ircwash.org/resources/namibias-water-decision-makers-guide

Pallett, J. (Ed.) 1997. *Sharing water in southern Africa.* Desert Research Foundation of Namibia, Windhoek.

Pallett, J. (Ed.) 1995. *The Sperrgebiet: Namibia's least known wilderness. An environmental profile of the Sperrgebiet or Diamond Area 1, in south-western Namibia.* Namdeb and Desert Research Foundation of Namibia, Windhoek.

Publications - scientific papers

Silva JP, Marques A, Bernardino J, Allinson T, Andryushchenko Y, Dutta S, Kessler M, Martins R, Moreira F, Pallett J, Pretorius MD, Scott HA, Shaw J, Collar, N. 2022. The effects of powerlines on bustards: How best to mitigate, how best to monitor? *Bird Conservation International,* 1-14. doi:10.1017/S0959270922000314

Pallett J, Simmons RE, Brown CJ. 2022. Staggered towers on parallel transmission lines: a new mitigation measure to reduce collisions of birds, especially bustards. Namibian Journal of Environment 6 A: 14-21. https://nje.org.na/index.php/nje/article/view/volume6-pallett

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Dickman, C.R., Mannheimer, C. & Pallett, J.R. 1994. Dietary selectivity of the spotted eagle owl, *Bubo africanus*, in sand dunes of the western Kalahari. *Cimbebasia* 14: 31-36.

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Pallett, J.R. & Passmore, N.I. 1988. The significance of multi-note advertisement calls in a reed frog *Hyperolius tuberilinguis*. *Bioacoustics* 1:13-23.
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APPENDIX D: CHANCE FINDS PROCEDURE (CFP) FOR ARCHAEOLOGY AND HERITAGE RESOURCES MANAGEMENT

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.