ENVIRONMENTAL AUDIT REPORT FOR NAMIBIA RARE EARTHS (PTY) LTD



EXCLUSIVE PROSPECTING LICENCE (EPL) 3400 LOFDAL PROJECT

December 2019 to June 2022

| Submitted to: | The Environmental Commissioner | | | |
|---------------|--|--|--|--|
| | Ministry of Environment Forestry and Tourism | | | |
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| | Windhoek | | | |
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Environmental Officer Gecko Exploration (Pty) Ltd P.O. Box 2499 Windhoek, Namibia

TABLE OF CONTENTS

| 1. | SU | MMARY | .2 |
|----|-----|---|----|
| 2. | CO | NTACT DETAILS | .4 |
| 3. | PRO | OGRESS REPORT ON PROJECT ACTIVITIES | .5 |
| 3 | 8.1 | Exploration and Mining | .5 |
| 3 | 8.2 | Infrastructure Development | .8 |
| 4. | EN | VIRONMENTAL MONITORING AND AUDITING | .8 |
| 4 | .1 | Stakeholder Consultation / Communication Management Programme | .9 |
| 4 | .2 | Safety & Security Management Programme | .9 |
| 4 | .3 | Groundwater and Surface Water Monitoring | .9 |
| 4 | .4 | Air Monitoring | .9 |
| 4 | .5 | Weather Monitoring | 10 |
| 4 | .6 | Noise Monitoring | 11 |
| 4 | .7 | Soil Management Monitoring | 11 |
| 4 | .8 | Archaeology Management Programme | 11 |
| 4 | .9 | Waste Management Programme | 11 |
| 5. | CO | NCLUSION | 11 |

LIST OF FIGURES

| Figure 1. Project Location | 3 |
|---|-----|
| Figure 2. Overview map on the two drilling areas | 5 |
| Figure 3. The diamond borehole locations of Area 4 | 6 |
| Figure 4. The diamond borehole locations of Northern Splay area | 6 |
| Figure 5 – Images showing diamond drill site LND0005 before, during and after drilling | 7 |
| Figure 6 - Rehabilitated drill area and sump rehabilitation at diamond drill site L4D0126 | 7 |
| Figure 7 - Toilets for employees and guests. (Left). Female/guest shower. (Right) year 2020 | 8 |
| Figure 8 - Toilets and showers constructed in 2022 | 8 |
| Figure 9 - Dust Fallout Unit (LFD 01) | .10 |
| Figure 10 - Vantage 2 pro weather station at Lofdal camp | .11 |

LIST OF TABLES

| Table 1. Details of EPL holder | 4 |
|---|----|
| Table 2 - Location of the five (5) dust buckets | 10 |

ENVIRONMENTAL AUDIT REPORT FOR NAMIBIA RARE EARTHS (PTY) LTD EXPLORATION ACTIVITIES ON **EXCLUSIVE PROSPECTING LICENCE (EPL) 3400**

1. SUMMARY

This audit report covers the period December 2019 to June 2022 of exploration activities conducted by Namibia Rare Earths (Pty) Ltd on EPL 3400. The lastest site visit and environmental audit was carried out on this licence on 2 June 2022.

EPL 3400 is located approximately 25 km north-west of the town of Khorixas in Namibia's Kunene Region. The licence covers, amongst others, the farm Lofdal, from which the project name is derived. It falls within the //Huab and Doro !Nawas Conservancies. Since 2006 Namibia Rare Earths (Pty) Ltd (NRE), which was previously named Etruscan Resources Namibia (Pty) Ltd, has been conducting exploration activities on this EPL 3400. NRE discovered several significant rare earth occurrences within this EPL. The principal rare earth mineral of economic interest at Lofdal is xenotime. An application for a Mining Licence (ML-200), within the extend of this EPL was granted to NRE in 2021 for a period of 25 years, until 10 May 2046. A renewal for EPL 3400 was granted by MME, until 27 September 2023. *Figure 1* renders an overview on the location of the licences.

The Environmental Clearance Certificate for EPL 3400 was renewed in 2019 by the Department of Environmental Affair (DEA) for a period of three (3) years, valid for three years until the 04th of December 2022. The company holds a separate ECCs for its Mining Licence 200. The ECC for the mining and processing operations is valid until 11 May 2024, and a separate ECC was issued for the linear infrastructure (pipeline and powerline) is valid until the 08th of October 2024.

In December 2017 Namibia Critical Metal a company listed on the Toronto Stock Exchange and owner of NRE entered into an agreement with Gecko Namibia (Pty) Ltd (Gecko) allowing Gecko to acquire a majority interest in seven projects ranging from exploration opportunities to near-term feasibility stage. The Lofdal EPL-3400 formed part of this the agreement together with other projects of NRE. Project management is be streamlined through utilization of Gecko Namibia's in-country administrative capabilities and services.

Exploration activities were conducted on EPL-3400 and the enclosed ML-200 during the reporting period. Bi-annual environmental reporting for the activities on the EPL were compiled and submitted to DEA by A. Speiser Environmental Consultants cc until the end of 2021.



Figure 1. Project Location

NRE – EPL 3400 Environmental Audit Report – December 2019 to June 2022 p.3

2. CONTACT DETAILS

Table 1. Details of EPL holder

| ML 200 | Licence Holder Details |
|-----------------------------|--|
| Name of Holder | Namibia Rare Earths (Pty) Ltd |
| Name of Contact Person | Dr. Rainer Ellmies Mobile: +264 81 1280282 E-mail address: rainer.ellmies@gecko.na |
| Postal / Registered Address | P.O. Box 81307, Olympia, Windhoek |

3. PROGRESS REPORT ON PROJECT ACTIVITIES

3.1 Exploration and Mining

Gunzel Drilling was appointed to conduct an exploration and resource definition drilling programme in 2020. The program was conducted by means of one diamond drill rig and operated by six personnel. During the exploration work Gecko Exploration employed 17 people, eight workers from the surrounding farm land. *Figure 2* gives an overview on the two drilling areas, while *Figure 3* and *Figure 4* show the diamond borehole locations of the project's Area-4 and the Northern Splay area n more detail. 22 diamond drill holes with a total of 4,680 meters were drilled during 2020.

Mr. Ivor Powell of Namib Trees inspected the planned drill sites to survey for indigenous and/or protected tree species. The effort was made in view of mitigating the severity of damage during the drill pad preparation and drilling. During this exploration program and reporting period a total of 10 km of new tracks were created, of which approximately 3 km are located in Area-4, 4 km in the dolomite hill area and 3 km in the Northern Splay area. Most drill sites were sited on existing tracks. Further information of the exploration program is covered in the bi-annual reports as submitted for this EPL 3400.



Figure 2. Overview map on the two drilling areas



Figure 3. The diamond borehole locations of Area 4



Figure 4. The diamond borehole locations of Northern Splay area

All the driling sites were rehabilitated. **Figure 6** below shows diamond borehole LND0005 before, during and after drilling. **Figure 6** renders the rehabilitated drill site and the rehabilitation of the sump at borehole L4D0126.





Figure 5 – Images showing diamond drill site LND0005 before, during and after drilling



Figure 6 - Rehabilitated drill area and sump rehabilitation at diamond drill site L4D0126.

3.2 Infrastructure Development

During the first half of 2020 two toilets (one for permanent employees at the camp, and one for guests) were constructed as well a new separate shower for female workers and guests. Additionally, two toilest and two more showers where constructed during May 2022.

4. ENVIRONMENTAL MONITORING AND AUDITING



Figure 7 - Toilets for employees and guests. (Left). Female/guest shower. (Right) year 2020



Figure 8 - Toilets and showers constructed in 2022

4.1 Stakeholder Consultation / Communication Management Programme

Various authorities are kept informed continously on the progress of the project. These include the Aodaman Traditional authority and the representatives of the //Huab Conservancy. Several meeting were held with these and other groups of stakeholders during the first half of year 2022. There has not been any conflict between the proponent and the community during this reporting period. The project proponent seeks to maintain good relationships with the farmers and the community members in the area during the lifetime of the project.

Job provision to the local communities continues throughout. Maintenance of boreholes and the provision of diesel for pumping of water at Farm Lofdal is ongoing (for drilling, animals including elephants). Diesel was also provided for water pumping on farms Bergville and Potgietersrus, as required during drilling. Food, fuel, and other supplies sourced predominantly from the town of Khorixas

4.2 Safety & Security Management Programme

The safety protocols remained in place for the reporting period. The camp area where the workforce resides is fenced off and access controlled at the gate. The general housekeeping of the camp is very good.

No safety related incidents occurred at the Lofdal area during this reporting period. Some of the project personnel have been trained and attended a radition safety management course as suggested by the EMP.

4.3 Groundwater and Surface Water Monitoring

Both monitoring water boreholes, GW001 and GW002, have been capped and the sites are maintained clean. The company has contracted SLR environmental consultants for conducting a water abstraction, monitoring and sampling programme during first semester 2022.

4.4 Air Monitoring

The EIA / EMP included an air quality monitoring program and assessment to provide baseline information on ambient concentrations of pollutants impacting on the immediate environment and human health prior to commencement of mining operations within the surroundings of the proposed project development area. The Environmental Impact Assessment (EIA) that was conducted by SLR in 2016 provided recommendations for five (5) sites where dust should be monitored around the project area and to establish baseline data. The last monitoring network was installed during February 2015 and reamined in operation until December 2017. The proponent recently revived the dust monitoring campaign and dust sampling commenced in April 2022.

Dustfall is measured through the collection of fallout dust in buckets and reported on a monthly basis as mass per area per time (mg/m²/day). During the initial baseline sampling program Particulate Matter (PM2.5 and PM10) were also sampled by means of MiniVol stations, which capture air

particulates on a pre-weighed filter. Results were reported on the basis of concentration per volume $(\mu g/m^3)$.

The image below illustrates a dust fallout unit (LFD 01) and the table depicts the geographic location around the project area.



Figure 9 - Dust Fallout Unit (LFD 01)

| | | / • • • • • • • • • • | |
|-----------|--------------------------|-----------------------|---------------|
| BUCKET ID | DESCRIPTION | LATITUDE | LONGITUDE |
| LFD - 01 | Lofdal Camp | 20°15'49.9" S | 14°43'50.2" E |
| LFD - 02 | Rent Post | 20°20'48.9" S | 14°37'24.3" E |
| LFD - 03 | Near Proposed Mine Plant | 20°18'58.3" S | 14°42'30.8" E |
| LFD - 04 | Tussenby Post | 20°18'58.0" S | 14°46'32.9" E |
| LFD - 05 | Das Post | 20°22'26.4" S | 14°41'54.7" E |

Table 2 - Location of the five (5) dust buckets.

4.5 Weather Monitoring

In the assessment of the possible impacts from air pollutants on the surrounding environment and human health, a good understanding of the regional climate and local air dispersion potential of a site is essential. The EIA provided recommendations of one (1) site where a weather station is to be erected for baseline data collection purposes. Meteorological data was previously collected in 2017, however due to technical problems the station did not function continuously resulting in intermittend data only.

For this purpose a Vantage Pro-2 weather station was erected at the Lofdal camp in April 2022. The station is set up for continuous weather monitoring using weather link software. Going forward NRE's the environmental personnel will be downloading the weather data from this on-site weather station. The station will be recording the following parameters: Temperature, rainfall, wind speed and wind direction. The images below dipicts the setting of the weather station.

NRE – EPL 3400 Environmental Audit Report – December 2019 to June 2022



Figure 10 - Vantage 2 pro weather station at Lofdal camp

4.6 Noise Monitoring

No monitoring was carried out during the reporting period.

4.7 Soil Management Monitoring

Regular inspections of topsoil is being undertaken to ensure that the soil conservation procedure is being implemented.

4.8 Archaeology Management Programme

No chance finds were reported during this reporting period.

4.9 Waste Management Programme

No incidences were reported during this reporting period. All waste is removed off site and transported to the Khorixas waste dumpsite.

5. CONCLUSION

The company demostrated good and proactive environmental management during their exploration activities. Systems are in place for continuous environmental monitoring and mitigation activities going forward. Therefore on this basis, the Environmental Clearance Certificates (ECCs) can be renewed provided that the company adheres to all the management measures outlines in the EMP. More baseline data will be collected as of 2022 onwards, and this monitoring process will be maintained throughout the project life.



ENVIRONMENTAL MANAGEMENT PLAN FOR EXPLORATION ACTIVITIES ON EXCLUSIVE PROSPECTING LICENCE (EPL) 3400

REVISED JANUARY 2016

Compiled for: Namibian Rare Earth Inc P.O. Box Windhoek / Namibia

Compiled by: A. Speiser Environmental Consultants cc P O Box 40 386 Windhoek

| 1 | INT | RODUCTION AND BACKGROUND | .3 |
|---|-----|--|-----|
| 2 | PUI | RPOSE OF THE ENVIRONMENTAL MANAGEMENT PLAN (EMP) | .3 |
| 3 | RO | LES AND RESPONSIBILITIES | .4 |
| | 3.1 | Namibia Rare Earths Inc | . 4 |
| | 3.2 | Remote Exploration Services | . 4 |
| | 3.3 | A. Speiser Environmental Consultants | . 4 |
| | 3.4 | JGM | . 4 |
| | 3.5 | Monitoring | . 5 |
| 4 | EN | VIRONMENTAL MANAGEMENT PLAN FOR EXPLORATION ACTIVITIES | .6 |



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January 2016

ENVIRONMENTAL MANAGEMENT PLAN FOR EXPLORATION ACTIVITIES ON EXCLUSIVE PROSPECTING LICENCE (EPL) 3400

INTRODUCTION AND BACKGROUND 1

Namibian Rare Earth Inc (NRE) holds the mineral rights for base metals, precious metals and rare earths on the Exclusive Prospecting Licence (EPL) 3400. NRE appointed SternLink to manage the camp. The supervision of the drilling activities on EPL 3400 is carried out by NRE and SternLink. A. Speiser Environmental Consultants cc (ASEC) was appointed by NRE to compile an Environmental Management Plan (EMP) for the proposed drilling activities and to manage the implementation and environmental performance of the project. ASEC conducts biannual monitoring audits as stipulated in the Environmental Clearance Certificate. The original EMP was compiled in September 2010 and was revised for the 2011 drilling programme in May 2011 and in January 2016.

2 PURPOSE OF THE ENVIRONMENTAL MANAGEMENT PLAN (EMP)

The scope and objectives of the EMP were discussed with Mr. D. Burton of NRE. The purpose of the EMP is: -

- To summarise the project activities that have the potential for adverse environmental • impacts.
- To identify and outline the aspects of the environment which require management.
- To compile Project Environmental Specifications for inclusion in contract documents and enforcement on site.
- To set out the roles and responsibilities of all role-players with regard to environmental management.
- To specify rehabilitation requirements.
- To establish monitoring requirements to ensure that all workers on site comply with the Environmental Specifications. One of the senior geological team members on site should be designated by the Environmental Consultant to perform this function on a day-to-day basis.

3 ROLES AND RESPONSIBILITIES

The roles and responsibilities between Namibia Rare Earths Inc, RES and JGM (drilling contractor) shall clearly be defined.

3.1 Namibia Rare Earths Inc.

A contract between Namibia Rare Earths Inc. and SternLink clearly provides the responsibilities of both parties. Namibia Rare Earth shall appoint a representative to communicate the relevant aspects of the EMP to the contractors.

3.2 SternLink

SternLink will allocate a Project Geologist who will have the following duties and responsibilities:

- Ensure that drill contractors are aware of the EMP.
- Maintain a photographic record of areas before and during exploration activities and after rehabilitation.
- Communication with the landowner. The Project Geologist will inform NRE immediately about any disputes/problems to ensure that these can be addressed with the landowner immediately.
- SternLink is responsible to record any non-compliance with the EMP, and rectifying action are discussed with ASEC.
- The Project Geologist is responsible that all person onsite are aware of the Radiation Management programme.
- The Project geologist is responsible to ensure that radiation dosimeters are allocated to all person working on site. He is also responsible for the shipment to the analytical laboratory in South Africa.

3.3 A. Speiser Environmental Consultants

The duties of ASEC are to conduct the duties of the Environmental Officer (EO), which includes the following:

- Advise the Project Geologist regarding implementation and management aspects of the EMP.
- Inspect the drill sites after complaints that the mitigation measures of the EMP are not obeyed or any non-compliance occurred.
- Provide input into access roads to the drill sites.
- Inspect the rehabilitation areas during and after completion of rehabilitation activities. Advise the contractors during rehabilitation.
- Maintain a photographic record of activities relevant to environmental management.
- Conduct the Radiation Management Induction for the Project geologists.

3.4 Drilling Contractor

The duties of drilling contractor are as follows, should drilling resume:

- Be familiar with the contents of the EMP.
- Ensure that **all** staff and sub-contractors have the EMP explained to him / her to avoid any misunderstandings, e.g. induction session.
- Comply with the EMP.
- Activities not covered in the EMP which may lead to negative environmental impacts shall be discussed with the Project Geologist prior to commencement.

3.5 Monitoring

The Project Geologist shall be responsible for monitoring and enforcement of the EMP on a day-to-day basis. Any violation of the EMP shall be recorded and the agreed on measurements are taken, e.g. penalties. The violations are reported to NRE and ASEC.

Unless otherwise agreed, while drilling activities are on-going, the EO shall inspect the sites on which groundwork was conducted on a monthly basis. Should complaints arise that violation of the EMP occurred a monitoring visit shall be conducted immediately. All site inspections shall be announced in advance to ensure that JGM management and Project Geologist are on site. Further the EO shall be responsible for:

Contractor's queries to avoid / mitigate negative environmental impacts not covered in the EMP will be addressed by the EO without unreasonable delay.

A monitoring report shall be compiled after each site visit and distributed to the Project Geologist and Manager.

Bi-annual environmental audit reports to be submitted to the Department of Environmental Affairs.

4 ENVIRONMENTAL MANAGEMENT PLAN FOR EXPLORATION ACTIVITIES

The **Table** below sets out the general aspects, which should be addressed prior to any drilling activities to ensure that all exploration team members are aware of the aims set out in the EMP.

General Aspects

| Activity | Aspect | Affected environment | Potential impact | Mitigation measure/recommendations/explanation |
|---|---|-------------------------|---|--|
| Trenching or drilling programme initiation | To establish a strong Environmental Awareness Protocol from the beginning of the programme in order to ensure the least possible damage to the environment. | General EPL area | General behavior of exploration team in the EPL area. | Provision in the budget is made for Environmental Awareness and training and for internal and external Environmental Monitoring Costs as well as for rehabilitation costs. Responsibilities as set out in Chapter 3 are explained and adhered to. All individuals who work on, or visit, the sites are aware of the contents of the EMP. The EMP should be included in all Tender Documents. |
| Implementation of the EMP | To define roles and responsibilities in terms of the EMP. To make all persons aware of these roles and responsibilities to ensure that exploration activities are conducted in compliance with the EMP. To implement environmental management that is preventative and proactive. To establish the resources, skills, etc. | General EPL area | General behavior of exploration team in the EPL area. | Senior exploration staff and all senior contractors are aware of, and implementing, EMP requirements. These people shall be expected to know and understand the objectives of the EMP and will, by example, encourage suitable environmentally aware behavior to be adopted on all sites. Immediate recognition should be given to appropriate environmentally acceptable behavior. Any inappropriate behavior should be immediately corrected. An explanation as to why the behavior is unacceptable must be given, and, if necessary, the person could be disciplined, e.g. fees set out, for different non-environmental compliance. |

220 EMP for exploration activities on EPL 3400

| Activity | Aspect | Affected environment | Potential impact | Mitigation measure/recommendations/explanation |
|--|--|--|---|--|
| | required for effective environmental management. | | | |
| Environmental awareness briefing / training | To implement environmental awareness briefing / training for all individuals who visit, or work, on site. | General EPL area | General behavior of exploration team in the EPL area. | Every senior/supervisory member of the team is to familiarise themselves with the contents of the EMP and to understand their roles and responsibilities in 'walking the talk' and ensuring compliance with the EMP. If agreed upon the Environmental Consultants will hold an Environmental Awareness Briefing meeting which has to be attended by all exploration and drill contractors before the start of the drilling operation. The meeting should discuss the potential dangers to the environment of the following activities: littering, off-road driving, waste disposal, poaching & plant theft etc. The need to conserve water and implement water saving measures should also be presented. The need for soil / substrate preservation should be explained. Individuals can be questioned on the content of the EMP and can recall contents. |
| Public relations | To maintain sound relationships with the landowners and communities impacted by the work | | | The landowner is informed of the drilling activities and the time schedule. Permission to utilise borehole water is obtained from the landowner. No littering occurs. Have landowner compensation agreement in place |
| Accommodation | | | | As set out in the landowner compensation agreement. |
| Waste management | To maintain a clean and tidy site / area. | Fauna, general environment, visual impact | Disturbance to fauna. Visual impact | The following waste management procedures shall be implemented: Minimisation of waste production; Where possible, compact waste to reduce its bulk; What is taken in has to be taken out and disposed of at an official waste site; Waste containers with suitable lids are provided on site; Illegal dumping and littering is not to be tolerated. |

| Activity | Aspect | Affected environment | Potential impact | Mitigation measure/recommendations/explanation |
|--|---|--|--|---|
| Development of Access Roads and Tracks | Disturbance of general environment | General environment | Visual impact | Drill sites should be sited on existing or previously established tracks. If new tracks have to be created these should be discussed with the landowner, or as stipulated in the landowner compensation contract. If not otherwise agreed with the landowner, all newly created tracks shall be rehabilitated after the drill hole has been finalized, e.g. raking the middle 'berm', loosen the compacted ground by manual raking. |
| Management of drill sites | To undertake the respective drilling programmes in such a manner that it will be difficult to determine where these activities took place in 2 years time. | Disturbance of natural environment | Loss of indigenous vegetation Disturbance of fauna | Impervious rubber / plastic sheeting or oil absorbent mats are to be used to prevent pollution by diesel, oil and other related sources of pollution. All litter is placed in a container with a lid that is secured against wind. The rubbish is taken to an official waste site. Soil contaminated by oil or diesel is removed and dumped on an approved dumpsite and the area treated to neutralize hydrocarbon contamination. The drill sites are clearly demarcated to minimise the disturbed areas around boreholes. Holes / site are rehabilitated before moving to the next site to minimise vehicle movement to the area. Open water should be fenced off and preferably covered during night to avoid attraction of bees and wildlife. Sumps are fenced in while drying out before rehabilitation. Drilling will commence 24 hrs. During winter fire in a 2001 drum may be permitted. The drum should be placed on an open area, e.g. access road to ensure that no veld fires occur. Smoking (when handling samples or core only after washing hands) may be permitted. An ashtray, e.g. bucket filled with sand at drill sites or small water bottles with some water should be provided to all smokers. This will minimize the littering of cigarette butts and minimize veld fires. |
| Management of | To minimise the risk | General | | • The Project Geologist and Contractor have identified all activities that |

| Activity | Aspect | Affected environment | Potential impact | Mitigation measure/recommendations/explanation |
|-------------------------|--|-------------------------|------------------|---|
| hazardous substances | of pollution through the implementation of all reasonable measures to prevent leakage, spillage or inappropriate disposal of hazardous substances. To minimise the risk of hazardous substances affecting the health of all individuals and plant and animal life. To use biodegradable products as far as is reasonably possible. | environment | | involve the handling of potentially hazardous substances and protocols for the handling of these substances have been put in place and their implementation is supervised. Hazardous substances are handled in accordance with the manufacturer's specifications and existing legal requirements. The Project Geologist will encourage the use of the least polluting, most rapidly biodegradable cleaning product, solvent, etc. The Project Geologist and Contractor will ensure that all individuals, who could be exposed to hazardous substances, are adequately protected (PPE) and educated about the safe and proper methods for handling of these substances. Procedures for the containment and clean up of accidental hazardous accidents are developed by the Project Geologist in accordance to the manufacturer's specifications. The Project Geologist arrange and supervise the implementation of the necessary clean up procedures and proper disposal of contaminated soil, water and other materials at an approved facility. Clean up, and dispose of contaminated soil at an official waste site. Any hydrocarbon spills involving 2001 and more are reported to the Ministry of Mines and Energy (stipulated in the Petroleum Product Regulations, 2000, Section 49(1)(4)). |

| Activity | Aspect | Affected environment | Potential impact | Mitigation measure/recommendations/explanation |
|--|--|-------------------------|--|--|
| Surface & groundwater management | To conserve water. To avoid the pollution of any water and prevent polluted water from entering stream channels or underground aquifers. To monitor the rest water levels and quality of production boreholes, if water is encountered. | General environment | Visual Groundwater / stream pollution | Working areas, where hazardous substances are handled or stored, are designed to collect and contain hazardous substances. Impervious materials are provided, e.g. drip trays, or sumps to collect and contain liquid pollutants. |
| Site rehabilitation | To rehabilitate the drill sites and trenches to as close an approximation of the pristine state as is technically, financially and reasonably possible. | General environment | Visual impact Tourism activities | The following rehabilitation actions are recommended: All litter from the site i.e. bottles, tins, piping, etc are taken to an appropriate disposal site. All debris, scrap metal, etc is removed before moving to a new drill site. All water tanks are dismantled and removed. All sumps have been dried and be filled in. All the tracks to and at the site are rehabilitated by smoothing the 'middle mannetjie' and raking the surface. The following should be undertaken at all disturbed areas that require further rehabilitation: If applicable the stockpiled subsoil / substrate is to be replaced (spread) and/or the site is neatly contour to establish effective drainage patterns; Re-place the stored topsoil / substrate – if applicable. |

| Activity | Aspect | Affected environment | Potential impact | Mitigation measure/recommendations/explanation |
|---|---|------------------------|---------------------|--|
| Management of the natural habitat | To avoid, or reduce, the potential negative impact on the bio- physical environment, including the scenic value thereof. | General environment | Loss of habitat | Disturbed areas are kept to a minimum. No incidents of poaching or illegal plant or reptile collection are reported. Offenders will be handed over to the authorities. No permanent infrastructure will be developed at the exploration camp; Domestic or other animals are only brought to the exploration site after obtaining the consensus of the landowner. Any person who causes willful or malicious damage to the environment will be held responsible for repairing the damage immediately and handed over to the authorities. |
| Managing natural heritage sites & artifacts | To avoid disturbance of known archaeological / palaeontological sites. To record accurately any new sites found and report to the responsible authority. | | | The likelihood that a new site will be found is minimal. However the following measures are to be implemented in case of any new found: Documented consultation with an archaeologist, and/or local expertise when in doubt. All individuals are aware of which areas are sensitive. Every pile (not waste or ore material dumps) of stones is treated as a possible archaeological site. Do not use them, as the rocks could be a burial cairn or hunting blind. No heritage objects are moved without a permit from the National Monuments Council and any permitted removal of heritage objects is done under the supervision of a qualified archaeologist, palaeontologist or historian. Any archaeological sites that are found are not be disturbed, but be carefully photographed, the exact location recorded and the finding reported to the National Monuments Council. |

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