



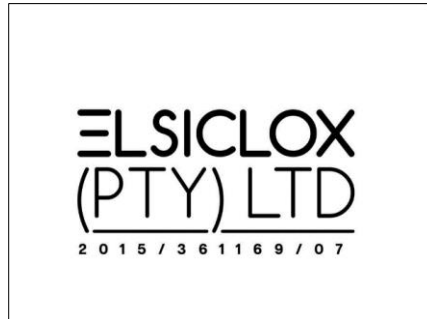
mineral resources

Department:
Mineral Resources
REPUBLIC OF SOUTH AFRICA

DRAFT BASIC ASSESSMENT REPORT

AND

ENVIRONMENTAL MANAGEMENT PROGRAMME REPORT



SUBMITTED FOR ENVIRONMENTAL AUTHORIZATIONS IN TERMS OF THE NATIONAL ENVIRONMENTAL MANAGEMENT ACT, 1998 AND THE NATIONAL ENVIRONMENTAL MANAGEMENT WASTE ACT, 2008 IN RESPECT OF LISTED ACTIVITIES THAT HAVE BEEN TRIGGERED BY APPLICATIONS IN TERMS OF THE MINERAL AND PETROLEUM RESOURCES DEVELOPMENT ACT, 2002 (MPRDA) (AS AMENDED).

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FILE REFERENCE NUMBER SAMRAD: REF NO: NC 30/5/1/1/2/13097 PR

1. IMPORTANT NOTICE

In terms of the Mineral and Petroleum Resources Development Act (Act 28 of 2002 as amended), the Minister must grant a prospecting or mining right if among others the mining “will not result in unacceptable pollution, ecological degradation or damage to the environment”.

Unless an Environmental Authorisation can be granted following the evaluation of an Environmental Impact Assessment and an Environmental Management Programme report in terms of the National Environmental Management Act (Act 107 of 1998) (NEMA), it cannot be concluded that the said activities will not result in unacceptable pollution, ecological degradation or damage to the environment.

In terms of section 16(3)(b) of the EIA Regulations, 2014, any report submitted as part of an application must be prepared in a format that may be determined by the Competent Authority and in terms of section 17 (1) (c) the competent Authority must check whether the application has taken into account any minimum requirements applicable or instructions or guidance provided by the competent authority to the submission of applications.

It is therefore an instruction that the prescribed reports required in respect of applications for an environmental authorisation for listed activities triggered by an application for a right or a permit are submitted in the exact format of, and provide all the information required in terms of, this template. Furthermore please be advised that failure to submit the information required in the format provided in this template will be regarded as a failure to meet the requirements of the Regulation and will lead to the Environmental Authorisation being refused.

It is furthermore an instruction that the Environmental Assessment Practitioner must process and interpret his/her research and analysis and use the findings thereof to compile the information required herein. (Unprocessed supporting information may be attached as appendices). The EAP must ensure that the information required is placed correctly in the relevant sections of the Report, in the order, and under the provided headings as set out below, and ensure that the report is not cluttered with un-interpreted information and that it unambiguously represents the interpretation of the applicant.

2. OBJECTIVE OF THE BASIC ASSESSMENT PROCESS

The objective of the basic assessment process is to, through a consultative process—

- (a) determine the policy and legislative context within which the proposed activity is located and how the activity complies with and responds to the policy and legislative context;
- (b) identify the alternatives considered, including the activity, location, and technology alternatives;
- (c) describe the need and desirability of the proposed alternatives,
- (d) through the undertaking of an impact and risk assessment process inclusive of cumulative impacts which focused on determining the geographical, physical, biological, social, economic, heritage , and cultural sensitivity of the sites and locations within sites and the risk of impact of the proposed activity and technology alternatives on the these aspects to determine:

- (i) the nature, significance, consequence, extent, duration, and probability of the impacts occurring to; and
- (ii) the degree to which these impacts—
 - (aa) can be reversed;
 - (bb) may cause irreplaceable loss of resources; and
 - (cc) can be managed, avoided or mitigated;
- (e) through a ranking of the site sensitivities and possible impacts the activity and technology alternatives will impose on the sites and location identified through the life of the activity to—
 - (i) identify and motivate a preferred site, activity and technology alternative;
 - (ii) identify suitable measures to manage, avoid or mitigate identified impacts; and
 - (iii) identify residual risks that need to be managed and monitored.

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EXECUTIVE SUMMARY

Elsiclox (Pty) Ltd has lodged an application to the Department of Mineral Resources and Energy (DMRE) for a prospecting right, to prospect Beryllium Ore, Quartz Ore, Lithium Ore, Bismuth Ore, Diamonds and Tantalum/ Niobium in terms of Section 16 and 20 of the Mineral and Petroleum Resource Development Act, 28 of 2002 (MPRDA). The application was accepted and assigned **reference number: NC 30/5/1/1/2/13097PR**.

Elsiclox (Pty) Ltd has appointed Lushika Services (Pty) Ltd as the Environmental Assessment Practitioners (EAP) to conduct the Environmental Impact Assessment (EIA) process. In terms of the NEMA (Act 107 of 1998) and EIA regulations of 2014 (amended April 2017), the proposed prospecting activity triggers Activity 20 and Activity 22 of Listing Notice 1 GNR 327 and the applicant cannot proceed without an Environmental Authorisation.

The proposed prospecting activities will be undertaken over a period of five (5) years and the activities will be conducted in progressive phases which include Non-invasive and invasive methods. The Non-invasive method will include desktop studies and geological mapping, whereas Invasive methods will include drilling and sampling.

The potential risks and key issues identified were based on consultation with Interested and Affected Parties (IAPs), internal process based on similar projects and the current state of the environment of the site. A description of the biophysical and social environment is included in the report, to ensure that all potential risks and issues are taken into consideration in all phases of the proposed project.

This document Draft Basic Assessment Report (DBAR) and the Environmental Management Programme (EMPr), was compiled in terms of the EIA Regulations of 2014 (amended, April 2017) and will be distributed for review by interested and affected parties including the competent authority.

PART A: SCOPE OF ASSESSMENT AND BASIC ASSESSMENT REPORT

1. CONTACT PERSON AND CORRESPONDENCE ADDRESS

1.1 Details of the EAP

LUSHIKA SERVICES	
Principal Environmental Assessment Practitioner	Mr Caiphus Mukwevho (Reg EAP)
Environmental Assessment Practitioner	Mr Gregory Netshilindi (Reg EAP) Mr Vhangani Mugeru (Reg EAP)
Physical Address	4343 Schaafma Street The Orchards 0182
Tel Number	063 942 4182
E-mail Address	info@lushikaservices.co.za/Caiphus@lushikaservices.co.za

1.2 Expertise of the EAP

Names	Expertise
Caiphus Mukwevho	Mr Mukwevho is an Environmental Assessment Practitioner (EAP) under Lushika Services. He obtained Bachelor of Environmental Science and Honours in Ecology and Resource Management both at the University of Venda, he boasts certificate in Geographic information System (GIS) and Environmental Management System (ISO 14001:2004), and he also serves at the Limpopo Branch of IAIASA. With over 3 years' experience as an EAP, he has undertaken Environmental Impact Assessment (EIA) for various projects including; prospecting and mining rights Borrow Pit closure application, Filling station, Mining Rights, feasibility studies for township establishment, Environmental Management Plans, Landfill audit and environmental monitoring, Mine Audit and Environmental Performance Assessment, Geotechnical Investigations and he has conducted various public participation processes. Mr Mukwevho is a registered Candidate Natural Scientist (Environmental Sciences) under SACNASP, Registered EAP under EAPASA, member of IAIASA and LRSSA. <i>C.V is attached in appendix 2(b)</i>

<p>Gregory Netshilindi</p>	<p>Mr. Gregory Netshilindi, is a Environmental Assessment Practitioner for Lushika Services (Pty) Ltd with over 3 and half years of experience in the mining and consulting industry. He holds an Honours BSc degree in Geology which he completed in 2011 and BSc in Environmental & Geographical Sciences which he completed in 2013, both of his qualifications were obtained from the University of Cape Town. Mr Netshilindi is a candidate natural Scientist with the South African Council of Natural Science Profession (SACNASP) and he is also in the process of registered as a Professional Natural Scientist and an Environmental Assessment Practitioner (EAP). He has undertaken environmental compliance/permitting (including basic assessments, applications for prospecting and mining rights and mining permits, and public participation/stakeholder engagement). Mr Netshilindi has been part of multiple projects including application for prospecting rights for phosphate in the Saldanha Bay Municipality, Western Cape Province for Acutupax; Application for prospecting rights for coal in the Sasolburg area, Free State Province for Dlamini Family Trust; Application for prospecting rights for coal in the Sasolburg area, Free State Province for Dlamini Family Trust ; Application for prospecting rights for diamond in the Barkly West area, Northern Cape Province for Arcon Resources; Application for prospecting rights for coal in the Hendrina area, Mpumalanga Province for Manngwe Mining; ; Application for prospecting rights for coal in the Breyten area, Mpumalanga Province for Manngwe Mining; Water Usage License Application for a 16.5 km pipeline from La Patrie to Moruleng Reservoir within the Moses Kotane Local Municipality, North West Province; proposed development of a filling station on the farm Chibase 213MT at Matatshe village within Thulamela local municipality of Vhembe district municipality in Limpopo province. Prior to Joining Lushika Services, Mr. Netshilindi worked as an Environmental Geologist for Minment Services and also undertaken a role as a Environmental Control officer for Kharifhate Consortium .Please refer to appendix 1 for Mr. Netshilindi`s CV which provides a detailed list of projects which illustrates Mr. Netshilindi`s competence in carrying out the EIA process. <i>C.V is attached in appendix 2(b)</i></p>
<p>Vhangani Muger</p>	<p>Mr. Vhangani Muger is an EAPASA registered EAP, who holds a B.Sc in Life and Environment majoring in Environmental Management and Geology from the University of Johannesburg, he also hold a B.Sc physical sciences majoring in Geology from the University of Limpopo. Mr. Muger has been working as an Environmental Assessment Practitioner for the past 6 years and his experience include projects in Prospecting Rights</p>

	Application, Mining Rights Applications in Limpopo, North West, Gauteng, Mpumalanga and the Northern Cape. He also has experience in Waste Licence Application, Water Use Licence Applications, and Environmental Impacts Assessment for developments such as filling stations, resorts and formalisation, just to list few (see CV on Appendix 2b)
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1.3 Location of the Overall Activity

Table 1: Details of the Location

Farm Name	Farm No	Farm Portion	SG Code	Administrative District	Extent of the Area Required for Prospecting (Hectares)	Distance and direction from nearest town
Gemsbok Vlake	140	0	C03600000000014000000	Kenhardt Magisterial District Khâi-Ma Local Municipality	22 457 Ha	The western part of the proposed extent to about 15km east of Poffader, the northern part about 17km south of Onseepkans.
		7	C03600000000014000007			
Mattheus-Gat	139	0	C03600000000013900000			
Scuit-Klip	92	0	C03600000000009200000			
		5	C03600000000009200005			

1.4 Locality map (Show nearest, town scale not smaller than 1: 250 000)

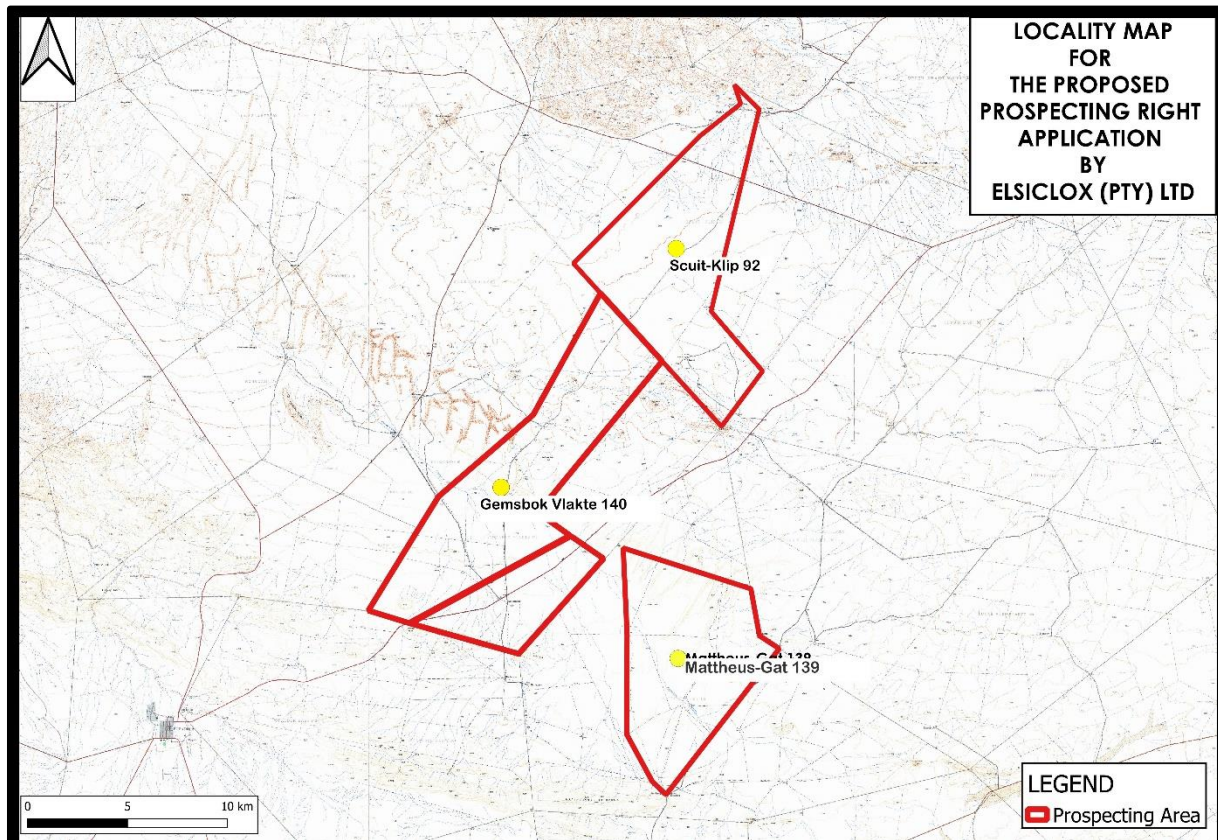


Figure 1: Locality Map

2. DESCRIPTION OF THE SCOPE OF THE PROPOSED OVERALL ACTIVITY

Both non-invasive and invasive prospecting activities will be undertaken as part of the proposed Prospecting Work Programme (PWP). The application will follow a phased approach, where the prospecting work program is divided into several sequential phases.

2.1 Description of Planned Non-Invasive Activities

These activities do not disturb the land where prospecting will take place e.g. aerial photography, desktop studies, aeromagnetic surveys, etc.

- DESKTOP STUDY:-

As the proposed area has been explored since the 1920s by the then Geological Survey of South Africa, literature review will entail comprehensive review of all available published and unpublished work such as books, journals,

historical drilling data, memoirs, remote sensing mediums such as aerial photographs, ASTER images, Landsat images.

- REMOTE SENSING:-

Remote sensing in the form of either aerial photographs, ASTER images, Landsat images, etc. will be conducted to identify and position the pegmatite bodies. It is important to note that the challenge with pegmatite bodies is that most are barren of economic minerals and those that do contain economic minerals may not all be economically viable.

- GEOLOGICAL MAPPING: -

Detailed mapping of the pegmatites will be conducted to assess their mineral content, zoned nature, as well as the grade and reserves of exploitable commodities. Mapping will also assist to communicate and confirm information gathered from literature review.

- SAMPLE ANALYSIS AND METALLURGICAL RECOVERY TESTS: -

All samples from the drilling and trenching will be collected to complete first-pass, low-cost metallurgical recovery tests mainly for feldspars, mica, quartz, tantalite, beryl, spodumene and other accessory minerals.

- GEOLOGICAL 3D MODELLING: -

A 3D modelling software will be used to generate models for all the pegmatites within the proposed prospecting area. Modelling will include integration of varied types of observations into 3D geo-models using geological mapping data, borehole data and interpretations and any other available field data. Once the models are finalised, a geostatistical review will be conducted and, a block model estimation will be done for all pegmatites to determine a mineral resource estimate.

2.2 Description of Planned Invasive Activities: -

(These activities result in land disturbances e.g. sampling, drilling, bulk sampling, etc)

- TRENCHING: -

As some of the pegmatites are reported in literature to be covered by a layer of sand, trenching will be conducted to confirm existence of such pegmatites. In addition to locating the pegmatites, trenching will also assist in confirming the depths of the pegmatites. The number, locations and sizes of trenches to be dug will depend on the results of the desktop study, remote sensing and RC drilling.

- REVERSE CIRCULATION (RC) DRILLING: -

Before drilling can commence, borehole planning will be conducted involving finalisation of the drilling program design and implementation procedures to ensure that drilling is conducted as safe and economic as possible. This phase will include cooperation between the drilling contractor, services contractors, geologists and other technical specialists. The planning process will also ensure that the health and safety of all working on the drilling sites and the environment are protected.

The number and locations of RC boreholes that will be drilled will depend on the results of Phase 1 (Desktop Study, Remote Sensing, Geological Mapping). For budget purposes, 300 boreholes have been budgeted for. The depth and spacing of the boreholes will be designed to allow good resolution of the pegmatite geometry and mineral distribution. The borehole plan will be distributed to the DMR for approval before any drilling can commence.

2.3 DESCRIPTION OF PRE-/FEASIBILITY STUDIES: -

(Activities in this section includes but are not limited to: initial, geological modeling, resource determination, possible future funding models, etc)

Subsequent to the investigation of the pegmatites by RC drilling, the data will be put into a database and modelled using a 3D geological modelling software. Should the first-pass metallurgical recovery tests from RC drilling and trenching samples prove positive for the minerals sought, a detailed metallurgical test work program (bulk sampling) will be considered to assist in making a final project decision. Should programme prove to be successful; a pre-feasibility study will be conducted to determine the viability of a mining operation prior to applying for a mining right application.

2.4 Listing and Specified Activities

This section present a list of activities that will be undertaken for the prospecting, the aerial covered by each activity and the listed activity triggered.

Table 2: Listing and specified activities

Name of Activity	Aerial extent of the activity	Listed Activity	Applicable Listing Notice
Activities directly related to prospecting of a mineral resource, including the operation of that activity which requires a prospecting right in terms of section 16 of the Mineral and Petroleum Resources	22 457 ha	X	GNR 327, Activity 20

Development Act, 2002 (Act No. 28 of 2002), including associated infrastructure, structures and earthworks.			
Desktop Study: Literature Survey / Review / acquisition of data	N/A	N/A	N/A
Ground Geophysical Surveys and Geological Field Mapping	22 457 ha	N/A	N/A
Data Compilation	N/A	N/A	N/A
Detailed Ground Geophysical Surveys	22 457 ha	N/A	N/A
Environmental Screening by ECO	22 457 ha	N/A	N/A
Placement of site Ablutions - Chemical Toilets	5m ²	N/A	N/A
Access Route (Mostly existing roads to be utilised. Access tracks will be made where there are no existing routes.) Approximate total length : 2500 m Approximate width: 3m)	2500m	X	N/A
Temporary general waste storage (General/domestic waste - Wheelie bin)	1m ²	N/A	N/A
Temporary hazardous waste storage (Hazardous waste – Sealed Wheelie bin)	1m ²	N/A	N/A
Decommissioning of the prospecting site including rehabilitation of drill sites as per the rehabilitation plan (Drill sites + Access tracks)	1.ha	X	GNR 327, Activity 22

2.5 The prospecting phases to be implemented

a) These intended prospecting activities will be conducted in phases using the aforementioned methods. The intended phases in sequence are indicated in the table below.

Table 3: Planned Prospecting Phases

PHASE	ACTIVITY (what are the activities that are planned to achieve optimal prospecting)	SKILL(S) REQUIRED (refers to the competent personnel that will be employed to achieve the required results)	TIMEFRAME (in months for the activity)	OUTCOME (What is the expected deliverable, e.g. geological report, analytical results, feasibility study, etc.)	TIMEFRAME FOR OUTCOME (deadline for the expected outcome to be delivered)	WHAT TECHNICAL EXPERT WILL SIGN OFF ON THE OUTCOME? (e.g. geologist, mining engineer, surveyor, economist, etc)
1	Non-Invasive Prospecting Desktop Study	Geologist	Month 1 – Month 3 (4 Months)	Desktop study report	Month 4	Geologist
	Non-Invasive Prospecting Remote Sensing	Geologist	Month 5 – Month 8 (4 Months)	Remote sensing report	Month 8	Geologist
	Non-Invasive Prospecting Geological Mapping	Geologist	Month 9 – Month 11 (3 Months)	Geological map	Month 11	Geologist
2	Invasive Prospecting RC Drilling and Sampling	Geologist	Month 12 – Month 17 (6 Months)	Borehole core data	Month 17	Geologist
	Invasive Prospecting					

	Trenching					
	Non-Invasive Prospecting Sample analysis and first-pass metallurgical recovery tests	Metallurgist Laboratory analyst	Month 18 – Month 23 (6 Months)	Metallurgical recovery tests results Analytical results	Month 23	Metallurgist Laboratory analyst
3	Non-Invasive Prospecting Geological Modelling 3D	Geologist	Month 24 – Month 29 (6 Months)	Geological model and competent persons report	Month 29	Geologist
4	Invasive Prospecting Possible Bulk Sampling Campaign	Geologist	Month 30 – Month 37 (8 Months)	Bulk sampling results	Month 37	Geologist
	Non-Invasive Prospecting Detailed Metallurgical Recovery Tests	Metallurgist	Month 38 – Month 40 (3 Months)	Metallurgical recovery tests results	Month 40	Metallurgist
5	Non-Invasive Prospecting Pre-feasibility Study	Mineral Economist/Geologist/ Metallurgist	Month 41 – Month 52 (12 Months)	Pre-feasibility Study Report	Month 52	Mineral Economist/ Geologist/ Coal metallurgist
6	Mining Application Right	Mineral Economist/ Geologist/ metallurgist	Month 53 – Month 60 (8 Months)	Mining Works Programme	Month 60	Mineral Economist/ Geologist/ Coal metallurgist

3. POLICY AND LEGISLATIVE CONTEXT

This section provides an overview of the governing legislation relating to the proposed project (Basic Assessment report for the proposed project).

3.1 The Constitution of Republic South Africa

The Constitution of the Republic of South Africa, Act 108 of 1996 (as amended) Section 24 states that:

“Everyone has the right— (a) to an environment that is not harmful to their health or well-being; and (b) to have the environment protected, for the benefit of present and future generations, through reasonable legislative and other measures that—

a) prevent pollution and ecological degradation;

b) Promote conservation; and

c) Secure ecologically sustainable development and use of natural resources while promoting justifiable economic and social development.”

3.2 Mineral and Petroleum Resources of Development Act

The Mineral and Petroleum Resources Development Act, 2002 (MPRDA), outlines the procedural requirements an applicant must follow to obtain a mining right before proceeding with a mining project. Applicants are required to obtain Environmental Authorisation (EA) in terms of the National Environmental Management Act 107 of 1998, as amended (NEMA).

The MPRDA is administered by the Department of Mineral Resources and Energy (DMRE) and governs the sustainable utilisation of South Africa’s mineral resources. The MPRDA aims to “make provision for equitable access to, and sustainable development of, the nation’s mineral and petroleum resources”.

In the event that the proposed activities require material (e.g. sand, gravel, aggregate) for construction, the MPRDA provisions may apply. In support of the application to obtain the mining right, the applicant is required to conduct a Basic Assessment process and Interested and Affected Parties (IAPs) consultation process, all of which must be submitted to the DMRE for adjudication.

433 National Environmental Management Act

The aim of the National Environmental Management Act (Act No 107 of 1998); is to provide for co-operative governance by establishing decision-making principles on matters affecting the environment. In terms of the NEMA EIA regulations, the applicant is required to appoint an EAP to undertake the EIA, as well as conduct the public participation process (PPP). In South Africa, EIAs became a legal requirement in 1997 with the promulgation of regulations under the Environment Conservation Act (ECA). Subsequently, NEMA was passed in 1998. Section 24(2) of NEMA empowers the Minister and any MEC, with the concurrence of the Minister, to identify activities which must be considered, investigated, assessed and reported on to the competent authority responsible for granting the relevant environmental authorisation.

On 21 April 2006, the Minister of Environmental Affairs and Tourism promulgated regulations in terms of Chapter 5 of the NEMA. These regulations, in terms of the NEMA, were amended in June 2010 and December 2014. The December 2014 NEMA regulations apply to this project. Mining activities officially became governable under the NEMA EIA in December 2014. The objective of the Regulations is to establish the procedures that must be followed in the consideration, investigation, assessment and reporting of the identified activities. The purpose of these procedures is to provide the competent authority with adequate information to refuse authorisation of activities which may impact negatively on the environment to an unacceptable degree. These procedures also aim to ensure that authorised activities are undertaken in a manner that responsibly manages environmental impacts.

In accordance with the provisions of Section 24 (5) and Section 44 of the NEMA, the Minister has published regulations (GN R. 326) pertaining to the required process for conducting EIAs in order to be considered for the issuing of EA. These regulations provide a detailed description of the EIA process to be followed when applying for EA for any listed activity.

A Basic Assessment process is undertaken for activities with potentially significant impacts that have potential impacts to the receiving environment and surrounding. The BAR provides a mechanism for the assessment of activities that are likely to have significant environmental impacts.

3.4 National Environmental Management Waste Act

The National Environmental Management: Waste Act, 2008 (NEM:WA) (Act 59 of 2008) lists mining activities that must be undertaken to manage waste generated by the project and prevent environmental pollution and littering. On 2 June 2014, the NEM:WA (amended) came into force. As per the amended Act, waste is longer governed by the MPRDA,

but is subject to all the provisions of the NEM:WA). As per Section 16 of the NEM:WA, “a holder of waste must, within the holder’s power, take all reasonable measures to:

- Avoid the generation of waste and where such generation cannot be avoided, to minimise the toxicity and amounts of waste that are generated;
- Reduce, re-use, recycle and recover waste;
- Where waste must be disposed of, ensure that the waste is treated and disposed of in an environmentally sound manner;
- Manage the waste in such a manner that it does not endanger health or the environment or cause a nuisance through noise, odour, or visual impacts;
- Prevent any employee or any person under his or her supervision from contravening the Act; and
- Prevent the waste from being used for unauthorised purposes.”

These general principles of responsible waste management will be incorporated into this project’s EMPr requirements. The NEM:WA provides for specific waste management measures to be implemented and provides for the licensing and control of waste management activities. Waste management activities apply to Category A, B and C according to GN R 921 (Nov 2013) and the proposed residue stockpiles in terms of Category B, Activity 11 of GNR 921, and, therefore, form part of the application process (NEM:WA – Planning and Management of Residue Stockpiles and Residue Deposits Regulations, 2015 (GN R 632).

This regulates the planning and management of residue stockpiles and deposits from a prospecting, mining, exploration or production operation.

3.4.2 NEM:WA – National Norms and Standards for the Assessment of Waste for Landfill Disposal, 2013 (GN R 635)

These norms and standards prescribe the requirements for the assessment of waste prior to disposal to landfill. The aim of the waste assessment tests is to characterise the material to be deposited or stored in terms of the above-mentioned waste assessment guidelines set by the Department of Environmental Affairs (DEA).

3.4.2 NEM:WA – Waste Classification and Management Regulations, 2013 (GN R 634)

Chapter 9 of the NEM:WA stipulates the requirements for a motivation for and consideration of listed Waste Management Activities that do not require a Waste Management License. The motivation must:

- Demonstrate that the waste management activity can be implemented without unacceptable impacts on, or risk to, the environment or health

- Must provide a description of the waste
- Description of waste minimisation or waste management plans
- Description of potential impacts, etc.
- The transitional provisions under Chapter 6 of this Regulation prescribes timeframes in which all waste must be classified within 18 months from the date of commencement of these regulations (23 August 2013).

Waste streams generated from mine activities will, where applicable, be classified to determine their nature (i.e. general or hazardous), managed and disposed of in accordance with the relevant legislation.

3.5 National Water Act

The National Water Act, 1998 (NWA) also has a role to play in regulating mining. Mining almost always uses water and/or has an impact on water resources, like streams, wetlands or rivers. The NWA is administered by the Department of Water and Sanitation (DWS).

The NWA Section 21 defines eleven water uses that require EA:

21 (a): taking water from a water resource

21 (b): storing water

21 (c): impeding or diverting the flow of water in a watercourse

21 (d): engaging in a stream flow reduction activity contemplated in section 36

21 (e): engaging in a controlled activity identified as such in section 37(1) or declared under section 38(1)

21 (f): discharging waste or water containing waste into a water resource through a pipe, canal, sewer, sea outfall or other conduit

21 (g): disposing of waste in a manner which may detrimentally impact on a water resource

21 (h): disposing in any manner of water which contains waste from, or which has been heated in, any industrial or power generation process

21 (i): altering the bed, banks, course or characteristics of a watercourse

21 (j): removing, discharging or disposing of water found underground if it is necessary for the efficient continuation of an activity or for the safety of people

21 (k): using water for recreational purposes. The proposed mine is in the process of applying for an Integrated Water Use Licence (IWUL) as per the water uses indicated.

4.6 National Environmental Management: Air Quality Act

The National Environmental Management: Air Quality Act (NEM:AQA) (Act No. 39 of 2004 as amended) is the main legislative tool for the management of air pollution and related activities.

The objectives of the Act are to protect the environment by providing reasonable measures for:

- The protection and enhancement of the quality of air in the republic
- The prevention of air pollution and ecological degradation
- Securing ecologically sustainable development while promoting justifiable economic and social development
- Generally, to give effect to Section 24(b) of the constitution in order to enhance the quality of ambient air for the sake of securing an environment that is not harmful to the health and wellbeing of people.

The NEM:AQA mandates the Minister of Environmental Affairs to publish a list of activities that result in atmospheric emissions and consequently cause detrimental effects on the environment, human health and social welfare. The Listed Activities and Minimum National Emission Standards were published on 22 November 2013 (Government Gazette No. 37054).

According to NEM:AQA, air quality management control and enforcement is the responsibility of local government, with district and metropolitan municipalities being the licensing authorities. Provincial government is primarily responsible for ambient monitoring and ensuring municipalities fulfil their legal obligations, with national government primarily as policy maker and coordinator. Each sphere of government must appoint an Air Quality Officer responsible for coordinating matters pertaining to air quality management. Under the old Act, air quality management was the sole responsibility of national government, with local authorities only being responsible for smoke and vehicle emission control. The National Pollution Prevention Plan Regulations, which came into effect on 21 July 2017, tie in with The National Greenhouse Gas Emission Reporting Regulations, which took effect on 3 April 2017.

These regulations aim to prescribe the requirements that greenhouse gas (GHG) pollution prevention plans need to comply with (in terms of priority air pollutants), as per NEM:AQA. The regulations specify who needs to comply, and

by when, and prescribes the content requirements. Mines do have an obligation to report on the GHG emissions under these regulations.

3.7 National Environmental Management: Biodiversity Act

The overarching aim of the National Environmental Management: Biodiversity Act (No 10 of 2004) (NEM:BA), within the framework of NEMA, is to provide for:

- The management and conservation of biological diversity in South Africa and of the components of such diversity.
- The use of indigenous biological resources in a sustainable manner.
- The fair and equitable sharing, among stakeholders, of benefits arising from bioprospecting involving indigenous biological resources.
- The South African National Biodiversity Institute (SANBI) was established on 1 September 2004 through the signing into force of the NEM:BA, its purpose being (*inter alia*) to report on the status of the country's biodiversity and the conservation status of all listed threatened or protected species and ecosystems.
- Other objectives include the identification, control and eradication of declared weeds and alien invaders in South Africa. These are categorised according to one of the following categories, and require control or removal:
 - ❖ Category 1a Listed Invasive Species: Category 1a Listed Invasive Species are those species listed as such by notice in terms of section 70(1)(a) of the Act as species which must be combated or eradicated.
 - ❖ Category 1b Listed Invasive Species: Category 1b Listed Invasive Species are those species listed as such by notice in terms of section 70(1)(a) of the Act as species which must be controlled.
 - ❖ Category 2 Listed Invasive Species: Category 2 Listed Invasive Species are those species listed by notice in terms of section 70(1)(a) of the Act as species which require a permit to carry out a restricted activity within an area specified in the Notice or an area specified in the permit, as the case may be.
 - ❖ Category 3 Listed Invasive Species: Category 3 Listed Invasive Species are species that are listed by notice in terms of section 70(1)(a) of the Act, as species which are subject to exemptions in terms of section 71(3) and prohibitions in terms of section 71A of Act, as specified in the Notice.
 - ❖ The provisions of this Act have been considered and, where relevant, incorporated into the proposed mitigation measures and requirements of the EMP. It is also appropriate to undertake a Fauna and Flora Impact Assessment for developments in an area that is considered ecologically sensitive which require environmental authorisation in terms of NEMA, with such Assessment taking place during the EIA phase.

3.8 The Conservation of Agricultural Resources Act

This Act informs the utilisation of the natural agricultural resources in South Africa to promote soil, water and vegetation conservation, as well as methods to combat weeds and invader plants to promote environmental resources sustainability.

3.9 National Heritage Resources Act

The National Heritage Resources Act (NHRA) (Act 25 of 1999) stipulates that cultural heritage resources may not be disturbed without authorisation from the relevant heritage authority. Section 34(1) of the NHRA states that, “no person may alter or demolish any structure or part of a structure which is older than 60 years without a permit issued by the relevant provincial heritage resources authority...”.

The NHRA informs the identification, evaluation and management of heritage resources and, in the case of Cultural Resource Management (CRM), affected by development (as stipulated in Section 38 of NHRA) and those developments administered through the NEMA, MPRDA and NEMWA legislation. In the latter cases, the feedback from the relevant heritage resources authority is required by the state and provincial departments managing these Acts before any authorizations are granted for development. The last few years have seen a significant change towards the inclusion of heritage assessments as a major component of EIAs required by NEMA and MPRDA. This change requires an evaluation of the section of these Acts relevant to heritage. The NEMA 23(2)(b) states that an integrated environmental management plan should, “...identify, predict and evaluate the actual and potential impact on the environment, socio-economic conditions and cultural heritage”.

Subsections (23)(2)(d), (29)(1)(d), (32)(2)(d) and (34)(b) require the (compulsory) inclusion of the identified cultural resources, the evaluation of the impacts of the proposed activity on these resources, the identification of alternatives and the management procedures for such cultural resources for each of the documents noted in the environmental regulations. Regulations under NEMA’s regulations on the Specialist Report requirements must be considered when compiling such a report.

The MPRDA and NEMA have similar definitions of “environment”. Both acknowledge cultural resources as part of the environment. Section 39(3)(b) of this Act specifically refers to the evaluation, assessment and identification of impacts on all heritage resources as identified in Section 3(2) of the NHRA. Section 40 of the same Act requires consultation with any state department administering any law relevant to such an application through Section 39 of the MPRDA. This implies the evaluation of Heritage Assessment Reports in Environmental Management Plans or Programmes by the relevant heritage authorities (Fourie, 2008b).

In accordance with the legislative requirements and EIA rating criteria, the regulations of the South African Heritage Resources Agency (SAHRA) and Association of Southern African Professional Archaeologists (ASAPA) have been incorporated to ensure that a comprehensive and legally compatible Heritage Impact Assessment (HIA) is compiled.

3.10 Environment Conservation Act, 1989 (Act 73 of 1989) – Noise control regulations

In terms of section 25 of the Environmental Conservation Act (ECA), the National Noise Control Regulations (NCR) (GN R154 in Government Gazette No. 13717 dated 10 January 1992) were promulgated. The NCRs were revised under GN R. 55 of 14 January 1994 to make it obligatory for all authorities to apply the regulations. The Gauteng Province promulgated provincial regulations: Noise Control Regulations of Gauteng 1999, (Provincial Gazette, Extraordinary no 75 of August 1999).

The noise control regulations must be considered in relation to the potential noise that may be generated during the construction and decommissioning phases of the proposed project. The two key aspects of the noise control regulations relate to disturbing noise and noise nuisance. Section 4 of the regulations prohibits a person from making, producing or causing a disturbing noise, or allowing it to be made produced or caused by any person, machine, device or apparatus or any combination thereof.

A disturbing noise is defined in the regulations as “a noise level which exceeds the zone sound level or if no zone sound level has been designated, a noise level which exceeds the ambient sound level at the same measuring point by 7 dBA or more”. Section 5 of the noise control regulations prohibits the creation of a noise nuisance. A noise nuisance is defined as “any sound which disturbs or impairs or may disturb or impair the convenience or peace of any person”. Noise nuisance is anticipated from the proposed project particularly to those residents that are situated near the project sites. South African National Standard 10103 also applies to the measurement and consideration of environmental noise and should be considered in conjunction with these regulations. A noise specialist study is proposed for the EIA.

3.11 Noise standards

The following South African Bureau of Standards (SABS) requirements relate to noise from mines, industry and roads:

- South African National Standard (SANS) 10103:2008. “The measurement and rating of environmental noise with respect to annoyance and to speech communication”.
- SANS 10210:2004. “Calculating and predicting road traffic noise”.
- SANS 10328:2008. “Methods for environmental noise impact assessments”.
- SANS 10357:2004. “The calculation of sound propagation by the Concave method”.
- SANS 10181:2003. “The Measurement of Noise Emitted by Road Vehicles when Stationary”.
- SANS 10205:2003. “The Measurement of Noise Emitted by Motor Vehicles in Motion”.

The relevant standards use the equivalent continuous rating level as a basis to determine what is acceptable. The levels may take single event noise into account, but single event noise by itself does not determine whether noise levels are acceptable for land use purposes. With regards to SANS 10103:2008, the recommendations are likely to inform decisions by authorities, but non-compliance with the standard will not necessarily render an activity unlawful. The noise assessment will take these noise standards and impacts into consideration.

3.12 Spatial Planning and Land Use Management Act 16 of 2013 (SPLUMA)

The Spatial Planning and Land Use Management Act (Act No. 16 of 2013) (SPLUMA) is a framework law, which means that the law provides broad principles for a set of provincial laws that will regulate planning for the country. The Act introduces provisions to cater for development principles; norms and standards; inter-governmental support; Spatial Development Frameworks (SDFs) across national, provincial, regional and municipal areas; Land Use Schemes (LUS); and municipal planning tribunals.

SPLUMA also provides clarity on how planning law interacts with other laws and policies. It is a uniform, recognisable and comprehensive system that addresses the past spatial and regulatory imbalances and promotes optimal exploitation of minerals and mineral resources. SPLUMA achieves this by strengthening the position of mining right holders when land needs to be rezoned for mining purposes. SPLUMA's impact on optimal exploitation is particularly evident where conflict exists between mining right holders and landowners. Economic and policy considerations, as well as practical necessities, often motivate the state to grant mining rights to entities other than landowners. SPLUMA is a new national framework Act that provides clear principles and standards for provincial and local governments to formulate their own new spatial planning and land use policies. The new provincial legislation can regulate, among other things, land development, land use management, spatial planning and municipal planning.

4. NEED AND DESIRABILITY OF THE PROPOSED DEVELOPMENT

Assessment of the geological data available has determined that the area in question may have the proposed minerals. In order to ascertain the above and determine the nature, location and extent of the subject minerals within the proposed prospecting area, it will be necessary that prospecting be undertaken. The prospecting will also determine if there are any features that may have an impact on the economic extraction of the subject minerals. The minerals that will be prospected area includes; Beryllium Ore, Quartz Ore, Lithium Ore, Bismuth Ore, Diamonds and Tantalum/Niobium on Portion 0 of Mattheus Gat 139, Portion 0 and 7 of Gemsbok Vlakte 140 and Portion 0 and 5 of Scuit Klip 92 situated within magisterial district of Kenhardt, Northern Cape Province.

A prospecting right will allow the Elsiclox (Pty) Ltd to survey or investigate the area with purpose of identifying an actual or probable mineral deposit. The data that will be obtained from the prospecting of the minerals being applied for will be necessary to determine how and where the minerals will be extracted and how much economically viable mineral reserves are available within the proposed prospecting area.

Currently South Africa is faced with an outbreak of illegal mining at a national scale which is associated with death of illegal miners as a result of conflict, thus mining prospecting activities reduces the probability of these incidents and on other hand promoting the sustainable and regulated exploration of natural resources in an environmental friendly manner.

Mining is not one of the key economic activities in the local municipalities where the proposed application area is situated, the proposed application presents an opportunity for the local municipalities to realize the potential mining activities within their jurisdiction.

5. MOTIVATION FOR THE OVERALL PREFERRED SITE, ACTIVITIES AND TECHNOLOGY ALTERNATIVE

The proposed site was selected based on extensive research and also following on information on existing Mining Activities within the area. In terms of the technologies proposed, the proposed prospecting methods and technologies have been chosen based on the known successful prospecting processes within the area. The prospecting activities proposed in the Prospecting Works Programme (PWP) is dependent on the preceding phase as previously discussed, therefore no alternatives are indicated, but rather a phased approach of trusted prospecting techniques.

The Northern Cape Pegmatite belt extends from the Kenhardt town northwest towards the South African/Namibian border, following the trace of the mighty Orange River. The distribution of pegmatites in the area is irregular and possibly shear related (Namaquan Orogeny) - Large swarms of pegmatites are seen in the Kenhardt area, South - Southwest

of Kakamas as well as East of Kakamas and in the Vioolsdrif area, extending into Namibia. The belt itself is hosted in the rocks of the regionally extensive Namaqua-Natal metamorphic province, bordering the Kaapvaal Craton.

Some of the techniques employed in the non-invasive prospecting activities will include a literature survey, field reconnaissance/mapping, and geophysical survey of the geology, outcrops. Some of the invasive prospective activities include prospecting boreholes, boreholes to confirm continuity of mineralization & potential deposit size and resource definition drilling.

Consultation with affected landowners and adjacent landowners will be conducted in order to keep them informed about the proposed prospecting activities as well as to capture any comments and concerns they may have regarding the prospecting activity.

It should be noted that the exact locations of the boreholes have not been identified at this stage. The location of these boreholes will be dependent on the findings of the non-invasive prospecting activities. Once the proposed target areas for the boreholes have been identified during the phases as set out in Table 6 above, these areas will be investigated and will be subject to the conditions of this document.

6. FULL DESCRIPTION OF THE PROCESS FOLLOWED TO REACH THE PROPOSED PREFERRED ALTERNATIVES WITHIN THE SITE

This section describes the specific site area and the location of site features, having taken into consideration the issues raised by interested and affected parties, and the consideration of alternatives to the initially proposed site layout.

6.1 Details of the development footprint alternatives considered

6.1.1 Location Alternative

No alternative site is being considered by the applicant due to the following reasons:

- There is an existing mining operation on the adjacent operation for same minerals applied for prospecting;
- Existing supporting infrastructure that has been placed at the current site and therefore only minor upgrades would be required to establish a site for prospecting activities.

6.1.2 Design/Layout Alternative

Since exploration is temporary in nature, no permanent structures will be constructed. Negotiations and agreements will be made with the land owners to use any existing infrastructure like access roads for the explorers, and any

infrastructures that may exist on site. Temporary structures will be introduced to the proposed prospecting area in areas without infrastructures on site or near the prospecting area.

6.1.3 Technology Alternative

The technologies listed in the PWP have been selected as they are proven effective in the determination of resource viability within the proposed prospecting area. Some of the techniques employed in the non-invasive prospecting will include a literature survey, field reconnaissance/mapping, and geophysical survey of the geology, outcrops. Invasive technology alternatives have also been considered. It is hereby noted that the different phases and timeframes of the prospecting herein envisaged are, by their nature, dependent on the results obtained during the preceding phases of such prospecting. The proposals set out in the PWP are therefore made on the basis that results obtained during the preceding phases may necessitate reasonable changes and adaptations to such proposals, which will be reported as prescribed.

6.1.4 Activity Alternative

Due to the unavailability of extensive historical borehole datasets, invasive prospecting activities such as drilling as well as non-invasive activities will be conducted during prospecting.

6.1.5 Operational Alternative

There will be no permanent service infrastructure such as water tanks, ablution facilities site offices. Construction of access road will be limited to areas where there is no access at all.

6.2 The option of not implementing the activity (no-go option)

The 'no-go' alternative is the option of not undertaking prospecting activities on the project site. The no-go option assumes the site remains in its current state. Drilling is required in order to investigate the potential and feasibility of the minerals on site. There is no potential for any future investment in a mine without the confirmation of the mineral resources availability which can only be obtained from drilling activities. Should the prospecting right not be granted, effectively the minerals being applied for will not benefit the local community. The socio-economic benefit and most notably the future employment and potential of mine development will be lost if the prospecting activities are not implemented in order to determine the feasibility of any deposits that may occur within the area.

- The mining sector forms part of the backbone of the South African economy. The Northern Cape Province mining sector is one of the main contributors to the national GDP and as such the option of not carrying out the prospecting activities would prevent future prospects of mining thus reducing the contribution to the GDP.
- The jobs that were to be created during prospecting phase will also be missed; these employment opportunities would be reduced, causing an economic burden on the government as people dependant on social grants would not be reduced.
- The state of the natural environment will remain the same, amongst other things the following will be beneficial:
 - There will be no geological and soil disturbance which may lead to ground water contamination
 - No excessive generation of wastes from the proposed activities
 - No compaction of path ways affecting the growth pattern of grasses and movement of micro animals
 - No disturbance of wild life in the surrounding game farms will occur.
 - The biodiversity will not be altered as there will be no removal of plants and induced noise from prospecting activities.

7. DETAILS OF PUBLIC PARTICIPATION FOLLOWED

This section of the report provides an overview of the tasks undertaken for the Public Participation Process (PPP) to date. The PPP was conducted in terms of Chapter 6 of the NEMA and included the following:

- 1) Identification of key Interested and Affected Parties (affected and adjacent landowners) and other stakeholders (organs of state and other parties)
- 2) Placement of site notices on farms, and other accessible public areas;
- 3) Formal notification of the application to key Interested and Affected Parties and other stakeholders;
- 4) Consultation and correspondence with I&AP's and Stakeholders and the addressing of their comments;
- 5) Newspaper advert.

7.1 Identification of key Stakeholders and affected parties

Public Participation is the involvement of all parties who are either potentially interested and/or affected by the proposed development. The principal objective of public participation is to inform and enrich decision-making. This is also its key role in this Environmental Impact Assessment (EIA) process.

Land owners (affected and adjacent) were identified through the site visit. Additional relevant organisations were also identified and notified of the application. This includes municipal and State departments with jurisdiction in the project area. Interested and Affected parties (I&AP's) representing the following sectors of society were identified:

- Department of Water and Sanitation
- Department of Agriculture and Rural Development
- Northern Cape Regional Land Claims Commissioner
- South African Heritage Resources Agency
- Northern Cape Provincial Heritage Resources Agency
- Eskom
- Transnet
- Namakwa District Municipality
- Khai-Ma Local Municipality

7.2 Formal notification of the application to key Interested and Affected Parties

The project was announced as follows:

- **Newspaper Advert Notice:**

The project announcement advertisement was published in the local newspaper. The newspaper advert is used to notify all interested and IAPs of the proposed project and for them register as stakeholders for the project. A newspaper advert was published on 8th July 2022 in the Gemsbok Newspaper (refer to the picture below)

Gesondheid se begroting so aangewend 57% van begroting gaan na salarisse

GEMSBOK-UPINGTON: "Ons begrotingsvoorsiening beloop R5 893 603 (vyf miljard ag honderd drie-en-negentig miljoen sechonderd-drie rand), insluitend voorwaardelike toekennings.

Die vergoeding van werknemers maak 57% uit van die begrotingsvoorsiening van die departement en is R3 385 568 (drie miljard driehonderd vyf-en-tigduisend vyfhonderd-acht-en-estig rand) "so het die Noord-Kaapse LUR van gesondheid, me Maruping Lekwene in sy begrotingsrede gesê.

Altesaam R1 879 042 miljard is die kollektiewe begroting wat deur die ses voorwaardelike toekennings in die departement gevorm word.

Di is noodsaaklik om daarop te let dat die Departement NUL (R 0) ongemiddelde uitgawes aangegaan het vergeleke met R234 miljoen van die vorige jaar. Verder, vermindering toelatings met R373 miljoen vanaf R590 miljoen van die vorige finansiële jaar. "Alhoewel ons in staat is om na te dink oor die aansienlike winste en prestasies wat ons tot dusver behaal het, is ons ook net so bewus van ons nuwe verpligtinge vir hierdie nuwe finansiële jaar.

In die vorige boekjaar het die Departement altesaam 589 permanente aanstellings en 747 kontrak-aanstellings aangestel. Daarsonder is hierdie hulle die kontrakte vir 750 COVID-19-brigades en 880 gesondheidsfasiliteitsassistentie henu.

Hierdie kontrakte is herin om kontantuit en verdere verbetering in diens te verseker.

'n Interne advertensie sal vir einde volgende week gepubliseer word in die werking van 249 permanente ondersteuningspersoneel wat wissel van buskondक्टर toegroeters, waggede toegroeters, skoonmakers, portiers, algemene assistente, drywers, register klerke, voegende diensle hulpvaardigheids, administratiewe klerke, lykwel assistente, ambagsnammie, menslike hulpbron en voorsieningskettering bestuur personeel.

Die advertensie vir hospitaalrade en kliniek-kontrakte sou in Junie gepubliseer word. "Ons moedig lede van die samelewing aan om bewaakende en gevulde deelneemers te nomineer.

Ongeveer 99 Post-Basiese Appekassassistentie sal volgende maand kwalifiseer. Na afloop van

hul studies sal hulle opgeneem en opgelei word op ons RX Solutions System en dit sal hulle in staat stel om die vlakke van hulles voorraad sowel as die benuttingstempo fyn dop te hou.

Daar sal ook mettertyd 33 berse op die gebied van Ortotiese en Prostetiese uitgerek word.

Wat konnektiwiteit betref, beoog die departement om 85% te bereik, wat 'n totaal van 133 koppel van 'n trekken van 159 fasiliteite in hierdie finansiële jaar is (dit is 'n inkrementele trekken).

Hulle het ook 'n rekenaargestuete versendingstelsel binne die EBW-oproepsentrums geïmplementeer. Die stelsel is aan die einde van Mei 2022 in werking gestel en implementering is besig om by die oproepsentrums aan die gang te wees.

Op EMS het hulle binne 'n tydperk van twee jaar ten minste 65 ambulansie in diens geplaas. Die departement is besig om nog 34 voertuie te bekom wat bestaan uit 32 ambulansie, 20 (4x4) ambulansie met veldryvermoë en twee bykomende pasiëntvoertuie vir aflewering vir einde hierdie finansiële jaar. "Vir die 2022/23 finansiële jaar het ons sowat R 413 miljoen vir die Mediese Nooddiens begroet."

Wat Infrastruktuur betref, sal ons in hierdie finansiële jaar begin met die bou van die nuwe Schmidt-drif-kliniek in die Strydomskloof plaaslike munisipaliteit.

Die nuwe Hemingway Gemeenskapsgeondheidsentrum (GKK) is verlate weke teen 'n koste van R35 miljoen in die Joe Morolong Plaaslike Munisipaliteit gegroep.

Bogobeberg-kliniek in die ZF Mqawana-distrik is ook teen die einde van Junie 2022 'n koste van R25 miljoen voltooi.

Die Strydomskloof-kliniek in Kathu, Groenwater-kliniek naby Postmasburg en die Ntsikelo-kliniek naby Upington sal vir einde Augustus 2022 bekend gestel word.

"Ons het ook beklemtoon dat die konstruksie

van die Baakhara Boshong-kliniek teen die einde van die derde kwartaal van die 2022/23 finansiële jaar gefinaliseer sal word, ook teen 'n koste van R25 miljoen. Tervyl, die Verpleegkollege & EMS-studenteverteltydperk na raming teen die einde van die vierde kwartaal voltooi sal wees teen 'n koste van R160 miljoen.

Wat MIV en VIGS betref, het die Provinsie 'n vermindering van kliënte op behandeling vir MIV en VIGS van 66 439 tot 61 713 teen einde Desember 2021 aangeteken.

Vir hierdie effek het ons R 779 753 miljoen



LUR van gesondheid, me Maruping Lekwene

Briewe Behalwe gemeenskap menswaardig

Geigte Redakteur,

Ek het 'n paar weke gelede die kantore van Kai Garib se kantore op Keimoes besoek. Dit was tydens 'n vergadering by die munisipaliteit se kantore.

Ek het by 'n dame wat daar werkzaam is verneem met wie ek my probleem kan bespreek.

My probleem is die volgende: Ooste wat daarmee hien is met die lasste vloed wat ons gehad het. Dit sluit in wassergrande met dreune in volle drag, laserlande, waatmeon sowel as boomteelende, sowel as ons keerwale.

Die dame ver wys my toe na 'n man, Mackay en sy wys my toe wie die man is. Ek groot hom toe en ek vra hom of hy my te woord sal staan om 'n gesprek met hom te kan voer oor bogenoemde probleme. Hy sit 'n rukkie stil. Hy staan toe op en verlaat die kantoor sonder om my te antwoord.

Na 'n lang ruk vra ek toe weer vir die dame of ek nog moet wag? Hoe kan skatend my so vredeer met sy optrede?

Ek en my vriende wat rade-boere is, voel by moet beskaf of by moet van sy pos vredeer word, want sy optrede wys sy onbevoegtheid.

Ons voel hy kan nie die gemeenskap menswaardig behandel nae. Die aangeselde mense by Kai Garib Munisipaliteit, moet ons te woord staan as ons probleme het.

- Mr. Dawid du Plessis,
Bella Vista Eiland, Keimoes.

Tronopvolger van KSG-groep raak 7!



Die jongste kind van die Strydomskloof-groep, 'n seun van 7 jaar.

ERRATUM: THIS ADVERT IS A RE-RUN OF A PREVIOUS ADVERT WE WISH TO DRAW YOUR ATTENTION TO THE UPDATED REQUIREMENTS UNDER NUMBER 3 BELOW

NORTHERN CAPE SMME TRUST
Department of Economic Development and Tourism
NORTHERN CAPE
REPUBLIC OF SOUTH AFRICA

CALLING ON SMMES IN RENEWABLE ENERGY TO SUBMIT THE EXPRESSION OF INTERESTS FOR THE ROOFTOP SOLAR PROGRAMME IN THE ZF MCGAWU, NAMAQWA, JOHN TAALO GAETSEWE AND PUXLEY-KA SEME DISTRICT MUNICIPALITIES (ALL LOCAL MUNICIPALITIES).

The Northern Cape SMME Trust calls on aspiring SMMEs and those already operating in renewable energy to submit their company profile for registration on the NC SMME's database. As Part of its ongoing partnership with Department of Economic Development and Tourism (DEDAT), the NC SMME Trust entered into an agreement with DEDAT to implement the rooftop solar programme on behalf of the SMMEs in the local municipalities within the above mentioned districts.

The programme's overall approach wishes to address the capacity gaps identified. One of the critical issues identified is the inclusivity and participation of SMMEs in the national rollout plans. The programme aims to develop and implement capacity building programmes for SMMEs to participate in the renewable energy space effectively.

We, therefore, call on all SMMEs and Cooperatives in the renewable energy sector (formal and informal) to register their expression of interests. The following criteria will be applied:

1. Registered businesses with DIC.
2. Business should be located in the local municipalities of the above four districts.
3. The following minimum requirements are compulsory:
 - I. Only companies with qualified electricians will be considered.
 - II. Preferences will be given to previously disadvantaged individuals.

The applications MUST be submitted to the local municipalities by no later than Friday, 29th July 2022 before 16:00. Please note that no late applications will be considered.

For enquiries, please contact:
Gospel Maho (NC SMME Trust)- Tel: 053 831 6666 Email: gsmah@ncsmmetrust.co.za
Bernard Mabele (Department of Economic Development and Tourism)- Tel: 053 830 4823 email- bmabele@ncpp.gov.za/bernard.mabele2011@gmail.com

NOTICE OF PUBLIC PARTICIPATION FOR THE PROPOSED MINERAL PROSPECTING RIGHT AND ENVIRONMENTAL AUTHORISATION

Notice is hereby given in terms of the National Environmental Management Act, 1998 (Act No. 107 of 1998); read with the Environmental Impact Assessment Regulations, 2014 (as amended) and Minerals and Petroleum Resources Development Act, 2002 (Act No. 28 of 2002):

Elitiek (Pty) Ltd has lodged Prospecting Right and Environmental Authorisation Application, for prospecting of Beryllium, Onyx, Quartz, Lithium, Onyx, Bismuth, Onyx, Diamonds and Tantalum Niobium on Portion 0 of Matheuse Gaf 139, Portion 0 of Gembo Valtre 140 and Portion 0, 3 and 5 of Scout Kloof 92 situated within magisterial district of Karoo, Northern Cape Province. The proposed prospecting activities triggers EIA Listed Activities and requires an Environmental Authorisation.

Registration of Interested and Affected Parties: All interested and affected parties (IAPs) are hereby invited to register and comment on the proposed application. A 30-calendar day registration period for IAPs will open from 18 July – 18 August 2022. Please submit your details and comments in writing to the contact details provided below. To register or comment please provide your name and contact details.

DMRE Reference: NC30/1/21/309PPR
EAP: Lushika Services (Pty) Ltd
Capitax Mubwaho
Call: 082 265 4524 or 087 265 7518
Email: capitax@lushikaservices.co.za or info@lushikaservices.co.za

NOTICE OF PUBLIC PARTICIPATION FOR THE PROPOSED MINERAL PROSPECTING RIGHT AND ENVIRONMENTAL AUTHORISATION

Notice is hereby given in terms of the National Environmental Management Act, 1998 (Act No. 107 of 1998); read with the Environmental Impact Assessment Regulations, 2014 (as amended) and Minerals and Petroleum Resources Development Act, 2002 (Act No. 28 of 2002):

Elitiek (Pty) Ltd has lodged Prospecting Right and Environmental Authorisation Application, for prospecting of Tantalum, Diamond, Lithium, Quartz, Gemstone, Mica, Beryllium and Bismuth on Portion 0 of Kooonose 31, Portion 0 of Lower Zwart Modder 79 and Portion 0 of Ouplaats 92 situated within magisterial district of Karoo, Northern Cape Province. The proposed prospecting activities triggers EIA Listed Activities and requires an Environmental Authorisation.

Registration of Interested and Affected Parties: All interested and affected parties (IAPs) are hereby invited to register and comment on the proposed application. A 30-calendar day registration period for IAPs will open from 18 July – 18 August 2022. Please submit your details and comments in writing to the contact details provided below. To register or comment please provide your name and contact details.

DMRE Reference: NC30/1/21/304PPR
EAP: Lushika Services (Pty) Ltd
Vhangani Mogen
Call: 081 464 0199 or 087 265 7518
Email: vhangani@gmail.com or info@lushikaservices.co.za

**MUNISIPALITEIT DAVID KRUIPER
MUNICIPALITY DAVID KRUIPER**

**KENNISGEWING K07-037/2022/NOTICE
K07-037/2022**
**2022-2027 GEÏNTEGREERDE
ONTWIKKELINGSPLAN (GDI)
2022-2027 INTEGRATED DEVELOPMENT PLAN**

Kennis gesêde ingevolge die bepalings van Hoofstuk 4 en Artikel 75(A)(3)(b) van die Plaaslike Reëling, Munisipale Geleëde, 2000 (Wet 32 van 2000), dat die Munisipale Raad die 2022/2027 Geïntegreerde Ontwikkelingsplan oorweg en goedgekeur het op Dinsdagaand, 30 Junie 2022.

Notice is hereby given in terms Chapter 4 and Section 75(A)(3)(b) of the Local Government Municipal Systems Act, 2000 (Act 32 of 2000) that the 2022/2027 Integrated Development Plan has been considered and approved by the Municipal Council on Thursday, 30 June 2022.

Die Geïntegreerde Ontwikkelingsplan is vir kennisname beskikbaar by die hoofkantoor en entruwe, alle sateelkantore en bibliotekes gedurende normale kantoorure, asook op die munisipale webtuiste by www.dka.gov.za.

The Integrated Development Plan is available for information purposes during office hours at the Reception of David Kruper Municipality, all satellite offices and libraries, as well as the municipal website at www.dka.gov.za.

David Kruper Hoofkantoor
David Kruper Bibliotek (Dorp)
Forum Bibliotek - Progress
Pahlaliko Bibliotek
Rooibode Bibliotek (ND Swart kantore)
Karoo Bibliotekantoor
Lambekwag Bibliotekantoor
Leonties Bibliotekantoor
Louisaalew Bibliotekantoor
Rooibode Bibliotekantoor
Sedibagg-Kalkoel Bibliotekantoor
Rietfontein Sateelkantoor
Klein Mar GemeenskapsBibliotekantoor
Groet Mar Kantoor
Pahlalibode GemeenskapsBibliotekantoor
Looos Bibliotek
Wetikon GemeenskapsBibliotekantoor
Andriesale Khonani-San Kantoor
Aslham GemeenskapsBibliotekantoor
Nomesep Mase GemeenskapsBibliotekantoor
Dwarlopadam GemeenskapsBibliotekantoor
Munisipale webtuiste: www.dka.gov.za

E NTOBA, MUNISIPALE BESTUURDER
Burgersentrum
Morgenton
Foonnommer: X5003, UPINGTON
8600
8 Julie 2022

- **Site notice placement: -**

In order to inform surrounding communities and adjacent landowners of the proposed development, A3 Sized Laminated Notices were plugged in and around the Location of the prospecting Area.



Site Notice No 1: Plugged at the entrance of Farm Gemsbok



Site Notice No 2: Plugged at the fence of farm Gemsbok along the N14 Road



Site Notice No 3: Plugged along at the fence of adjacent farm Scuilt Klip



Site Notice No 4: Plugged at the entrance of farm Scuilt Klip



Site Notice No 5: Plugged at the Hard Ware notice board along N14 Road Poffader



Site Notice No 6: Plugged at the Buchary notice board Poffader town

- **Written notification: -**

IAP's and other key stakeholders were sent notification letters, via e-mail. The notification letter presents a brief information about the application and further request all stakeholders to make inputs on the application including reviewing the DBAR. The notification letters outlined the date on which DBAR will be available and how stakeholders can engage Lushika Services.

- **Public Meeting: -**

Due to requirements of Covid-19 Regulations a public meeting has not been scheduled. A public meeting/openday will be scheduled in due course and will be communicated with all registered IAPs in a form of a newspaper advert and email communication.

- **Distribution of Draft BAR and EMP**

All registered stakeholders and IAPs were be informed of the availability of the Draft Basic Assessment Report and Environmental Management Programme including Specialist Reports for public review. The stakeholders and IAPs were also invited to submit their comments regarding the proposed project.

8. SUMMARY OF ISSUES RAISED BY INTERESTED AND AFFECTED PARTIES

The table below presents issues raised by stakeholders, during the stakeholder engagement meeting.

Table 4: Summary of issues raised by I&AP's

Interested and Affected Parties. List the names of persons consulted in this column, and Mark with an X where those who must be consulted were in fact consulted.	Date comments received	Issues raised	EAPs response as mandated by the applicant	Section and paragraph reference in this report where the issues and/ or responses were incorporated	
Affected Parties					
Landowner					
TGN Boerdery Trust (Gerhard Gerit)	X	25/07/22	<p>Landowner's Concerns</p> <ol style="list-style-type: none"> 1. It is hereby recorded that the affected properties, being the, REMAINDER OF GEMSBOKVLAKTE NR. 140 and REMAINDER OF THE FARM SCI-JIT KLIP NR. 92 are ecologically sensitive areas and all prospecting work will have to be carried out with great circumspection. 2. It is therefore contended that the applicant consult duly and properly with the Landowner so as to engage a mutually acceptable model which can be taken up in a legal and binding agreement between the parties regarding the use of the surface. 3. Any agreement for surface use will have to make provision for: <ol style="list-style-type: none"> 3.1 The duration; 	The letter from the landowner was acknowledged, consultation plan with the landowner has been designed and all issues raised in the letter will be addressed in the consultation process and subsequently detailed in the EMPr.	Section B (EMPr)

		<p>3.2 Compensation for damages to the surface;</p> <p>3.3 Compensation for stock losses and damages to equipment and infrastructure.</p> <p>4. It must also be noted that all prospecting work must be done strictly in accordance with approved Environmental Management Plans and approved Prospecting Work Program.</p> <p>5. Prospecting work must also be done strictly in accordance with the provisions of the Act and the terms of the Prospecting Right.</p> <p>6. The following aspects need further be addressed:</p> <p>6.1 There must be adequate provision made for capital to rehabilitate the land;</p> <p>6.2 No water can or may be extracted on the property without an express agreement in respect of water use;</p> <p>6.3 Detailed attention must be afforded to the following aspects of the environmental impacts:</p> <p>6.3.1 Loss of grazing;</p> <p>6.3.2 Pollution of all kinds;</p> <p>6.3.3 Stock theft;</p> <p>6.3.4 Refuge removal;</p> <p>6.3.5 Fire Hazards.</p> <p>7. Drilling equipment equipment on the property must not cause any damage to the flora and the soil.</p> <p>8. Damage to grazing must form part of the feasibility study and an expert of local grazing conditions must be engaged.</p> <p>9. The following actions by the prospecting applicant are expressly forbidden and prohibited:</p>		
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		<p>9.1 No trees, bushes or grazing may be destroyed by the applicant except when reasonably necessary for the applicant to execute his prospecting work on the property;</p> <p>9.2 No dogs or firearms on the property by any of the applicant or his contractors or employees;</p> <p>9.3 No new roads or footpaths on the property except those that are already there, otherwise routes planned in consultation with the Landowner;</p> <p>9.4 No firewood or any other wood may be collected on the Property;</p> <p>9.5 No pits or boreholes may be drilled or made closer than 300 meters . of any of the improvements on the farm i.e. water troughs, tanks, barns, feeding troughs; if any trenches, boreholes or if it must be closer than 300 meters then the improvements must be moved by the applicant at his own cost to the satisfaction of the Landowner;</p> <p>9.6 There must always be a person in charge of the contractors and employees on the property and no one is allowed to linger around on the property;</p> <p>9.7 All refuge must be removed and proper temporary sanitation facilities must be provided;</p> <p>9.8 Pollution of the property must be prevented and no oils may be spilled on the soil and proper arrangement</p>		
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			<p>must be made in the environmental management plan;</p> <p>9.9 Nobody may hunt on the property;</p> <p>9.10 No water may be extracted on the property;</p> <p>9.11 Nobody may reside on the property unless proper arrangements have been made with the Landowner;</p> <p>9.12 Only existing entrances must be used and gates must be locked and proper arrangements must be made with the Landowner;</p> <p>9.13 All gates must be closed;</p> <p>9.14 No vehicle may drive in the veld where there is no existing road;</p> <p>9.15 Proper provision must be made for the rehabilitation of any prospecting site and the flora must be reinstated and if necessary top-soil must be brought in from outside to effect proper rehabilitation;</p> <p>9.16 No mining is to be done under the authority of a prospecting permit, and strict provisions must be in place regarding sampling and removal of samples;</p> <p>9.17 There must be a proper surface Use Agreement which shall include compensation, conditions regarding dispute resolution and further include all provisions above where necessary improved or supplemented.</p> <p>10. All Parties are aware that the equipment used are normally wider wheel based than normal vehicles, using the farm roads. This causes damage to the</p>		
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			<p>vegetation and compensation must be paid according to an agreed formula.</p> <p>11. A condition must be included that where necessary the gates will be widened by the Landowner and that Teng Teng shall be liable for the costs thereof, strictly to be paid in advance to the Landowner. A quotation for the work and material will be provided and must be settled, before the work is undertaken.</p> <p>12. The Landowner proposes that an agreement be recorded that in all instances where a wider wheel based vehicle is used on the standard farm road, the area of grazing that will be damaged will be 1m wide x the distance travelled.</p>		
Flores Johannes Van der Colff	X	25/07/22			
Lawful Occupiers					
The occupiers of prospecting area are the landowners and have been identified and notified.					
Landowners or lawful occupiers on adjacent properties					
	X	25/07/22			
Municipality					

Mr Edward Vries	X	25/07/22			
Communities					
Agri Namakwa and Associated Farmers Associations (Dannie Jacobs)	X	25/07/22			
Dept. Land Affairs					
Nqabisa Mkalipi	X	25/07/22			
Traditional Leaders					
The property is privately owned, as such no traditional leader was notified.					
Dept. Environmental Affairs					
NC DENC (Awiwe Nyakaza)	X	25/07/22			
Other commenting authorities notified					
SAHRA	X	25/07/22			
NCPHRA (Rotha Andrew Timothy)	X	25/07/22			
DWS (Kobus Streudus)	X	25/07/22			

Northern Cape Dept of Agriculture, Env Affairs, Rural Dev & Land Reform (Bryan Fisher)	X	25/07/22			
Registered IAP					
Garib Advice and Development Initiative (Victor Sacco)	X	25/07/22	<p>Dear Sir/Madam</p> <p>This communique serves as response to your invitation published in the Gemsbok newspaper of July 8th, 2022. The</p> <p>NPO, GADI (see attached registration certificate) aims to:</p> <ul style="list-style-type: none"> • Enhance opportunities for Education • Support the Vulnerable in Society • Care for the Environment • Raise Awareness on Health Issues • Create opportunities for the Differently Abled <p>Therefore our organization, as an entity operating within the Kai !Garib Municipal area (<i>which is inclusive of the Magisterial District of Kenhardt</i>) would like to register as</p>	The NGO has been registered as an interested and affected parties. Draft BAR will be submitted to the NGO for reviews. The interest of the NGO are noted and have been addressed in the EMPr	Section B (EMPr)

		<p>an Interested and Affected Party. Our areas of interest will focus on <i>(but are not limited to)</i>:</p> <ul style="list-style-type: none"> - The impact your activities will have on the environment and how you might/will participate in activities to mitigate the effect of Climate Change. - What efforts or activities will be undertaken to rehabilitate land and mitigate soil erosion within the areas where you will undertake these mining activities. - How your Social and Labour Plans will support Job Creation endeavours and SMME's within the area, with special focus on vulnerable groups and skills transfer in the communities around your mining activities. <p>Thanks, in anticipation for your favorable response and willingness to assist in community development</p>		
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9. BASELINE ENVIRONMENT

This chapter provides a description of the local and receiving environment; this information is provided in order to assist the reader in understanding the potential impacts of the proposed prospecting activities on the environment of the application area. Various aspects have been investigated including the biophysical, social and economic that may be directly or indirectly affected. This information was sourced from secondary and primary data, a literature review to collect secondary data was done and a site visit was undertaken to collect primary data and to do ground-truthing.

9.1 Climate

The study area is characterised by the hot summers, the winters are cold and windy, and it is dry and mostly clear year round. Over the course of the year, the temperature typically varies from 7°C to 31°C and is rarely below 1°C or above 35°F. Based on the beach/pool score, the best time of year to visit Pofadder for hot-weather activities is from early December to mid March.

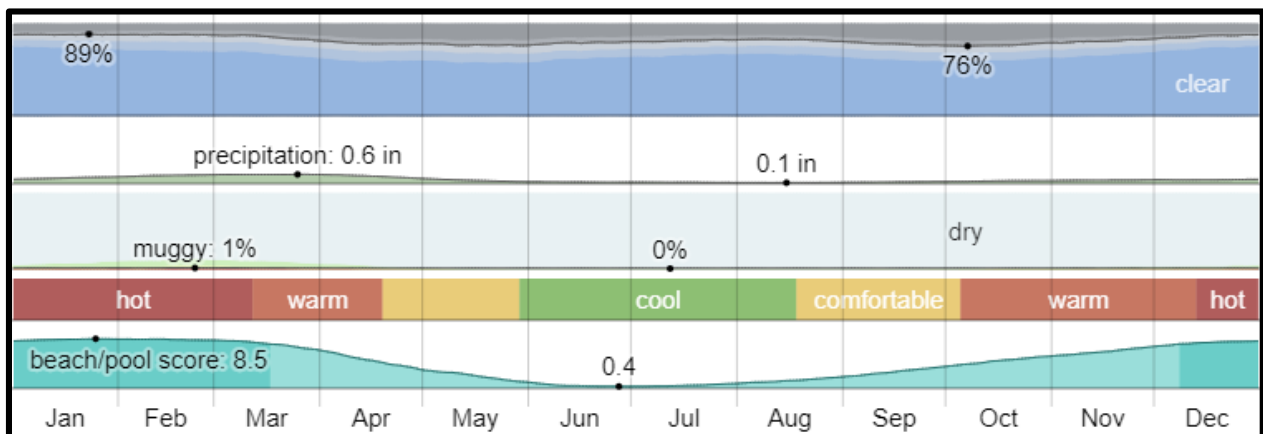


Figure 3: Month to Month weather of the study area

9.1.1 Temperatures

The hot season lasts for 3.9 months in the study area, from November 25 to March 23, with an average daily high temperature above 29°C. The hottest month of the year in the area is January, with an average high of 31°C and low of 18°C. The cool season lasts for 3.0 months, from May 24 to August 22, with an average daily high temperature below 18°C. The coldest month of the year in the study area is July, with an average low of 6°C and high of 16°C.

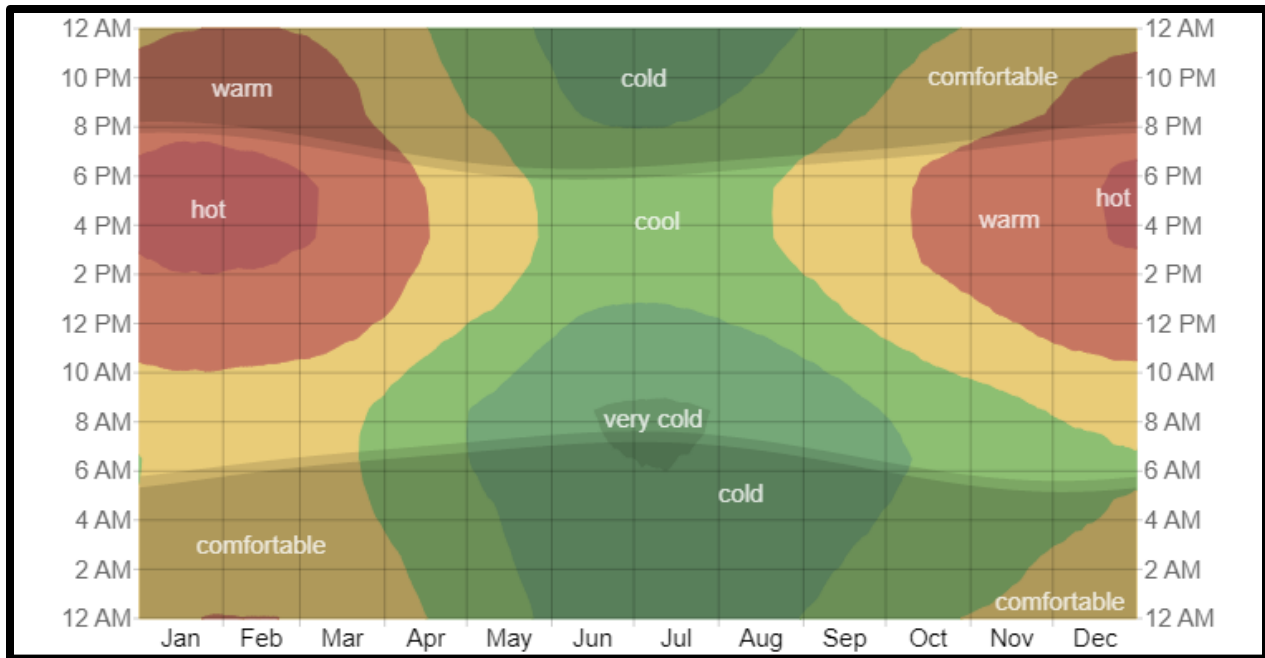


Figure 4: Hourly temperature of the study area month to month

9.1.2 Cloud Cover

The average percentage of the sky covered by clouds experiences mild seasonal variation over the course of the year. The clearer part of the year in the study area begins around November 21 and lasts for 4.3 months, ending around March 30. The clearest month of the year is January, during which on average the sky is clear, mostly clear, or partly cloudy 88% of the time. The cloudier part of the year begins around March 30 and lasts for 7.7 months, ending around November 21. The cloudiest month of the year is October, during which on average the sky is overcast or mostly cloudy 23% of the time.

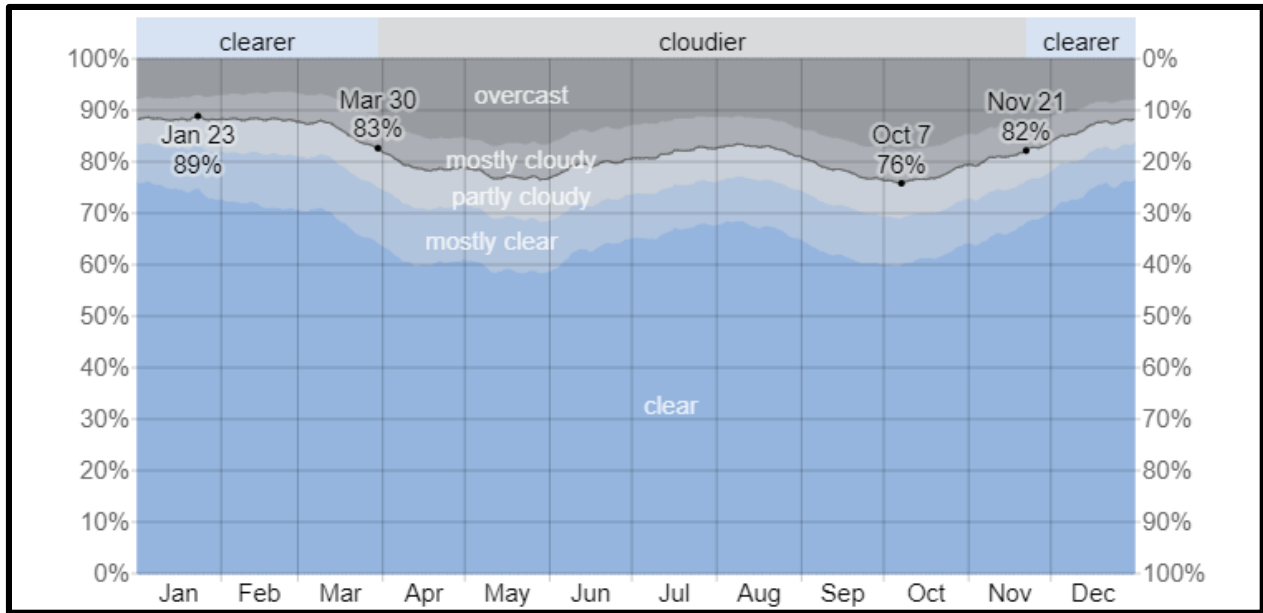


Figure 5: Cloud cover categories in the study area

9.1.2 Precipitation

The study area does not experience significant seasonal variation in the frequency of wet days (i.e., those with greater than 0.04 inches of liquid or liquid-equivalent precipitation). The frequency ranges from 1% to 10%, with an average value of 4%. Among wet days, we distinguish between those that experience rain alone, snow alone, or a mixture of the two.

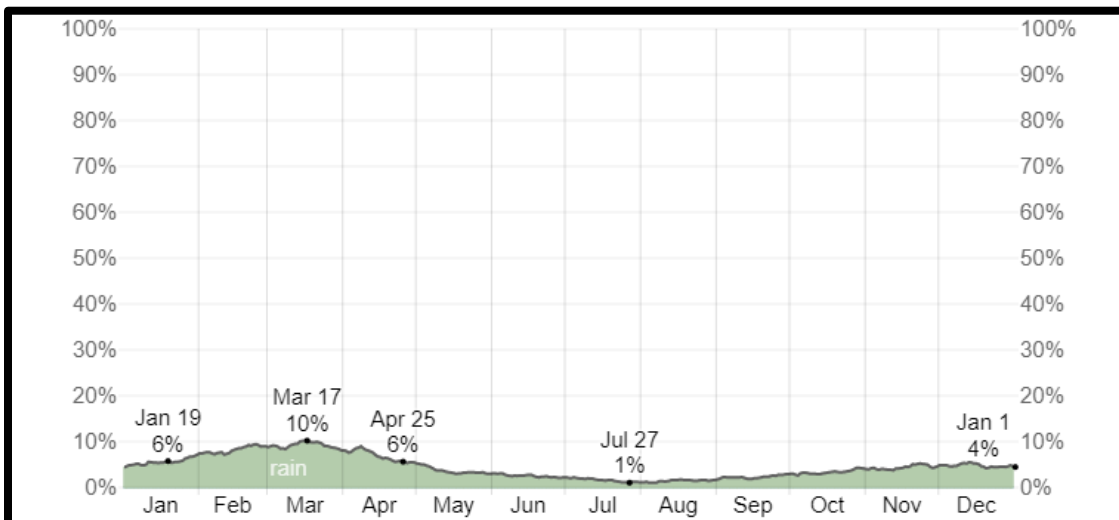


Figure 6: Daily rain chance for month to month at the study area

As shown in the figure above, the month with the most days of rain alone is March, with an average of 2.8 days. Based on this categorization, the most common form of precipitation throughout the year is rain alone, with a peak probability of 10% on March 17.

9.2 Topography

Mountainous and undulating landscape situated within the Witberg mountains. The only environmental feature that may prove significant is a relative major non-perennial stream. The topography of the study area can be described as plains, or rolling plains (irregular plains) with open high hills or ridges and level plains with some relief. There is also high open hills or ridges in the north towards the Orange river.

The slope of the area varies from lower than 2% to higher than 20% steep gradients. The area is characterised by localised thundershowers typical in the region combined with sparse vegetation suggest that the area is prone to rapid and turbulent runoff in the highland whilst slower sheet wash is expected in the lowland.

9.3 Soil and Land Capability

Soil, land use and land capability Soils with minimal development, usually shallow, on hard or weathering rock, with or without intermittent diverse soils. Lime generally present in part or most of the landscape. Freely drained, structure less soils quaternary sheet-wash alluvial deposits, sands, deep in places; in south, red yellow apedal, freely drained soils with a high base status. Land types includes Ag and Ae.

The soils of most of the area are red-yellow apedal soils, with a high base status and <300mm deep, typical of Ag and Ae land types. The soils are typically weakly structured with low organic content. These soils drain freely which results in a soil surface susceptible to erosion, especially wind erosion when the vegetation cover is sparse and gully erosion in areas where storm-water is allowed to concentrate. The soils in the area are generally not suitable for dry land crop production therefore the pre-prospecting land capacity is categorized as Class III grazing land. The productivity of the area is very low at 8 – 10 Ha/SSU.

9.4 Land Use

The dominant land use conditions are those of farming with small livestock e.g. sheep and goats. More than 50% of the area is use mainly as agriculture and Hunting. The grazing capacity of the area can be classified as 81-11ha/LSU. Current activities on the surround farms include livestock grazing at low densities, with sheep, goats and some cattle currently present to some of the surrounding farms. Surrounding farms are also used for the ranching of small stock,

mostly sheep, goats, and some cattle. The land is arid and primarily used for grazing. Surrounding farms are either privately owned or owned by the municipality and used for communal purposes. The land cover for the area is classified as shrub land and low fynbos.

The entire study area has extremely low agricultural potential and therefore very low agricultural sensitivity to development and consequent loss of agricultural land use. Agricultural potential and conditions are also very uniform across the site, and the choice of placement of facility infrastructure, including access roads and transmission lines therefore has negligible influence on the significance of agricultural impacts.

9.5 Geology

The Northern Cape Pegmatite belt extends from the Kenhardt town northwest towards the South African/Namibian border, following the trace of the mighty Orange River. The distribution of pegmatites in the area is irregular and possibly shear related (Namaquan Orogeny) - Large swarms of pegmatites are seen in the Kenhardt area, South - Southwest of Kakamas as well as East of Kakamas and in the Vioolsdrif area, extending into Namibia. The belt itself is hosted in the rocks of the regionally extensive Namaqua-Natal metamorphic province, bordering the Kaapvaal Craton.

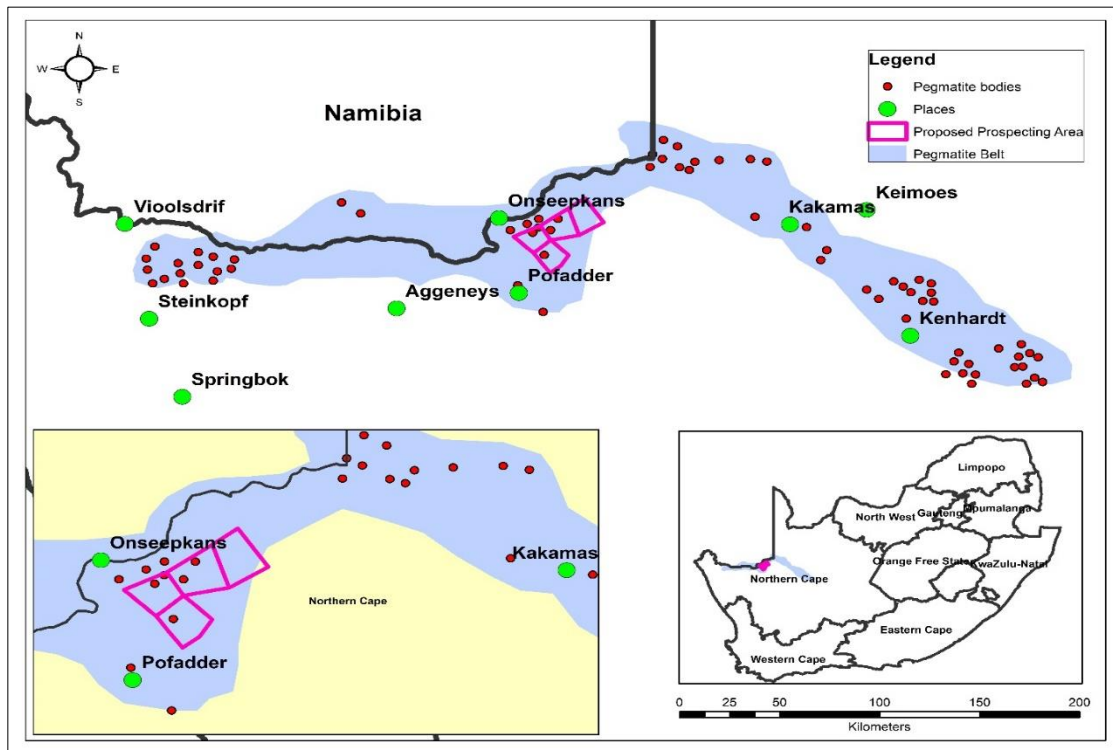


Figure 7: Pegmatite Belt and Pegmatite Bodies in the Northern Cape

The average width of the pegmatite belt is 60km, turning south-eastward into the area of Riemvasmaak and reaching the Kenhardt district, over a total length along strike of approximately 400km. Shown in (Figure 7) is the distribution of the belt and shown in (Figure 8) is an indication of host lithology.

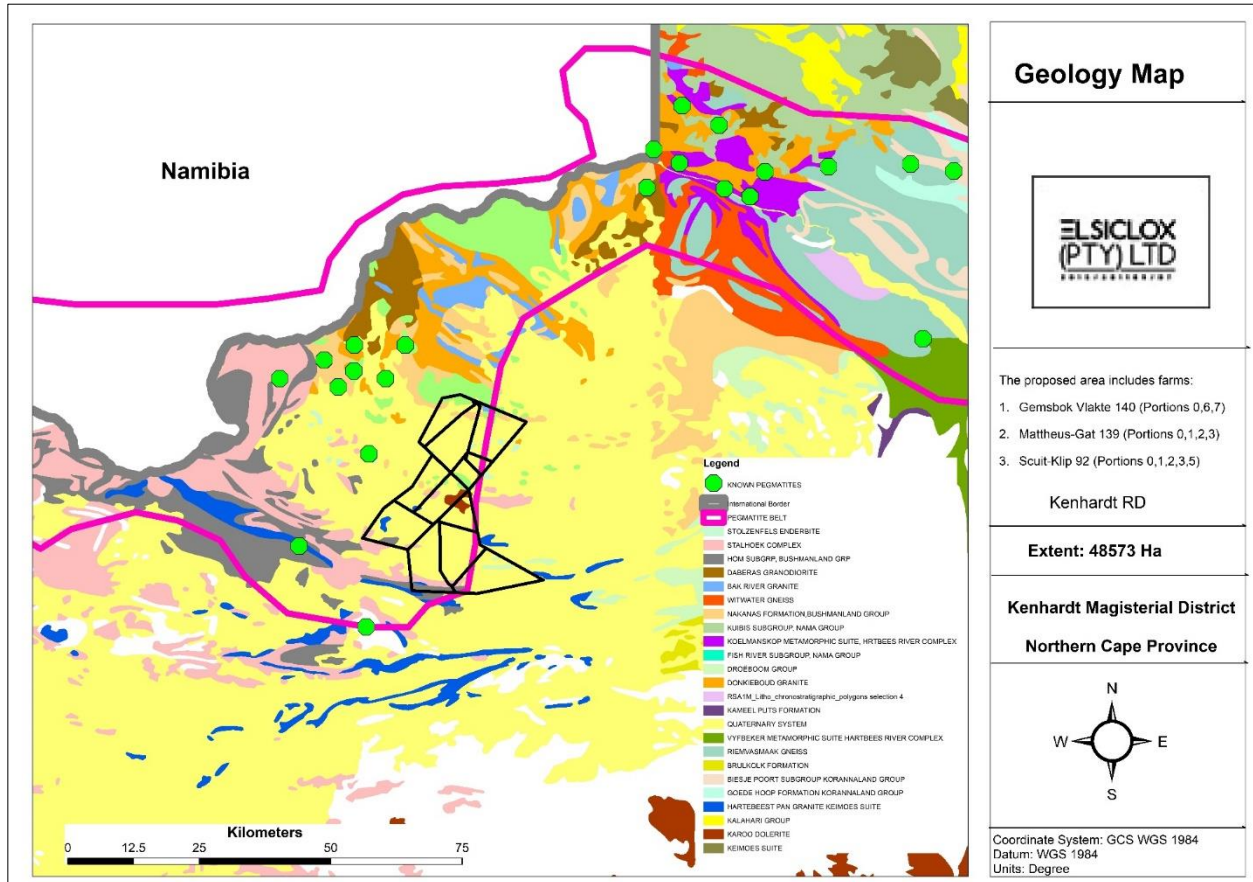


Figure 8: Geological Map of the study area

The pegmatites generally strike northwest although some pegmatites show no preferred orientation, striking in every possible direction. The pegmatites range in size from a few centimetres to more than 3km in length and about 100 m wide. Generally, the pegmatites dip at high angles, but a few lie at low angles resulting in large surface exposures. The pegmatites also differ in shape as some occur as thin veins, some as dykes and some as irregular discordant masses. The depth of these pegmatites is difficult to determine due to the irregularities of the pegmatites in size and shape.

Classification of pegmatites within the proposed prospecting area

The pegmatites can be classified as heterogenous (zoned) and homogenous (unzoned) pegmatites. The mineralogy of the heterogeneous pegmatites is either simple or complex, where simple pegmatites are enriched in rare earth minerals and show only accessory amounts of beryl. Complex types are beryl, lithium and columbite – tantalite enriched along with allanite, gadolinite, fergusonite and other rare earth species. In addition to this both simple and complex types contain quartz, feldspar and muscovite.

Homogeneous Pegmatites (Zoned)

These Pegmatites show distinct variation in mineralogy, over gradational or sharp contacts. Zone classification varies between pegmatites and is most commonly broken into core and wall zones. Rare for homogeneous pegmatites, most commonly developed only as a distinction between wall and core zones. Textural variation is also often used in conjunction with mineralogy to classify zones.

Homogeneous Pegmatites (Unzoned)

These Pegmatites show highly similar mineralogy throughout the body. Common for homogeneous pegmatites. Quartz and feldspar with minor muscovite are commonly the only minerals present; but in some cases, minor accessories such as tourmaline are present.

Heterogeneous Pegmatites (Zoned)

These Pegmatites show distinct variation in mineralogy, over gradational or sharp contacts. Zone classification varies between pegmatites and is most commonly subdivided into core and wall zones. In the case of heterogeneous pegmatites core zones are often sub classified using depth and mineralogy, i.e. – Upper core: Beryl – albite rich phase, lower core: Plagioclase – Muscovite rich phase. Larger pegmatites are in most cases heterogeneous with several sub zones. Textural variation is also often used in conjunction with mineralogy to classify zones.

Heterogeneous Pegmatites (Unzoned)

These Pegmatites show highly similar mineralogy throughout the body; But, unlike homogeneous pegmatites, there is a much greater variation in mineralogy. Quartz and feldspar are the main minerals. These pegmatites are also commonly rich in columbite-tantalite, beryllium minerals, phosphates, and other accessory phases (High variation from pegmatite to pegmatite).

9.6 Biodiversity

9.6.1 Flora

The study area is situated within the Desert Biome. The vegetation consists of Eastern Gariiep Plains Dessert and Eastern Gariiep Rocky vegetation types (Dg 9 and Dg10 according to Mucina and Rutherford, 2006). The area is not conserved in statutory conservation areas. Few intact examples of this vegetation still exist. The dominant species outside the disturbed area is covered by sparse open grassland, with prominent *Stipagrostis* grass species, along with scattered drought resistant dwarf shrubs. No protected plant species could be identified at the time of the site inspection.

The Eastern Gariiep Plains Desert consist out of often sloping plains, sharply contrasting with the surrounding rocky hills and mountains. Typical wash vegetation n in the breaks between the mountains to the Orange River Grassland dominated by “white grasses”, some spinescent (*Stipagrostis* species), on most of the flats with additional shrubs and herbs in the drainage lines or on gravellier or loamy soil next to the mountains.

The Eastern Gariiep Rocky Desert consist out of hills and mountains with mostly bare outcrops and covered with very sparse shrubby vegetation in crevices. Separated by broad sheet-wash plains (Dg 9). Habitats are mainly controlled by the topography, aspect, local climate and lithology. On the groot Pellaberg for example there is a sparse shrub land on the southern foothills (*Alon dichotoma*, *Rhigozum trichtomum* and *Petalidium setosum*) and a higher cover of plants in the southern ravines and rocky drainage lines. (*Abutilon pycnodon*, *Asparagus suaveoles*, *Ficus cordata*, *Rhus populifolio* and *R. viminalis*). On the higher southern slopes *Justicia orchioides* is often very dominant, with localised grassland directly between steep cliffs (*Enneapogon scaber*, *Troroa [his ramosissima* and *Danthoniopsis ramosa*). The south facing quartzite cliffs and steep slopes support chasmophytes (cremnophytes) such as *Ficus ilicina*, *Aloe dabenorisana* and *Bowiea gariiepensis*. On the summits and higher northern slopes there is a much higher preponderance of succulent plant including *Euphorbia avasmontana*, *Aloe dictoma*, *A. microstigma subsp microstigma*, *Pelargonium aridum* and *Kleinia longiflora*. Succulent plant is also important on the northern foothills and also include *Aloe dichotoma*, *Euphorbia avasmontana*, *Sarcostemma viminale* and the diminutive *Lapidaria margarethae*.

9.6.2 Fauna

Various small mammals and reptiles occur within the proposed prospecting area and the surrounding. Larger herbivore species are very scares or absent due to the conflicting land use. Animals that may occur in the area will be very similar to those found around Pella / Aggeneys and surrounding towns. Small mammals, reptiles and insects will occur in the

area. Most of the natural wild fauna within these areas are nocturnal; they include the silver back jackal, bat ear fox, cape hare and several other rodent species. No animals were spotted during the site inspection. The fauna at the site will not be impacted by the proposed prospecting activity as they will be able to move away or through the site, without being harmed. Workers should be educated and managed to ensure that no fauna at the site is harmed.

9.6.3 Critical Biodiversity Area (CBAs)

Critical Biodiversity Areas are areas required to meet biodiversity targets for ecosystems, species and ecological processes, as identified in a systematic biodiversity plan. Ecological Support Areas are not essential for meeting biodiversity targets but play an important role in supporting the ecological functioning of Critical Biodiversity Areas and/or in delivering ecosystem services. Critical Biodiversity Areas and Ecological Support Areas may be terrestrial or aquatic.

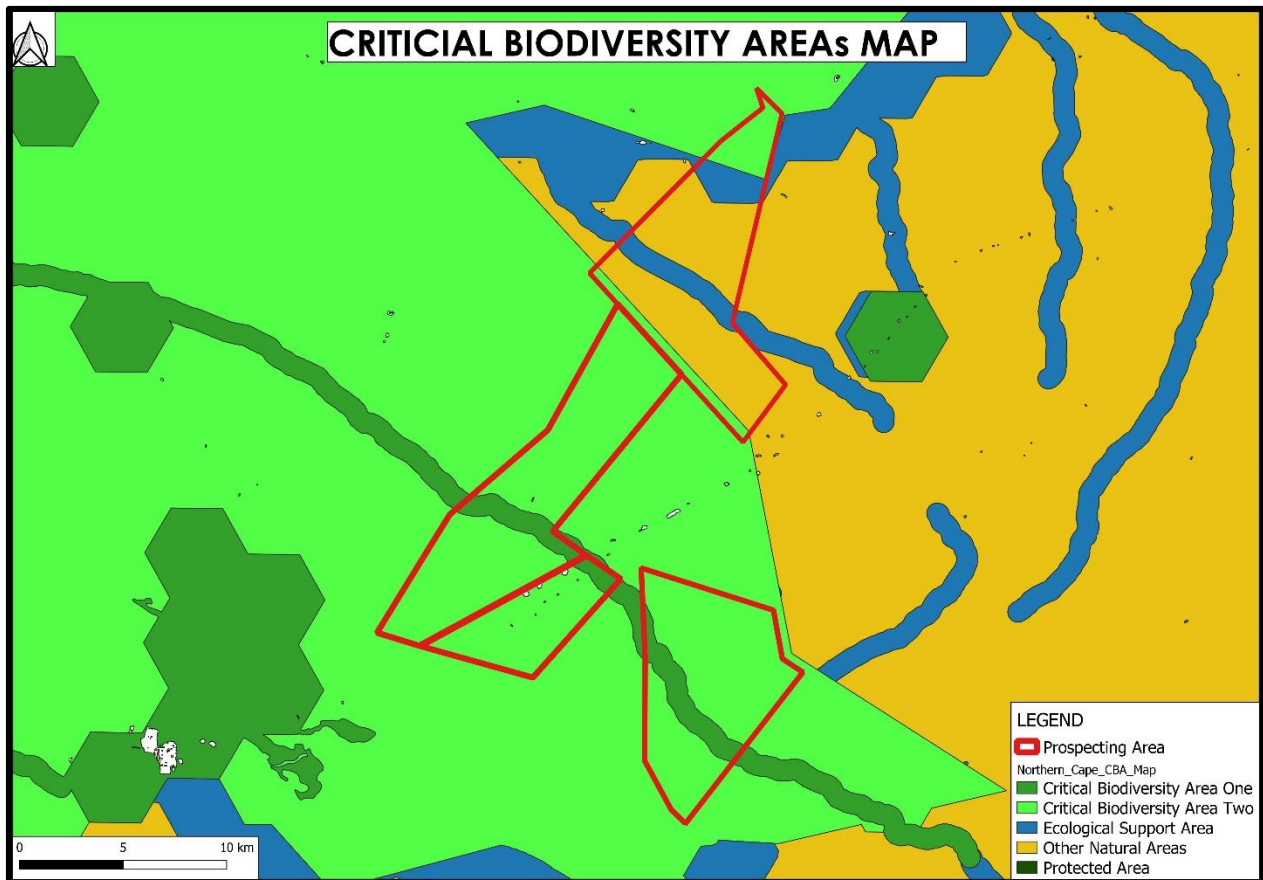


Figure 9: Northern Cape CBAs Map

The figure 9 above shows that the proposed prospecting area is largely located within the CBA, with patches of ESA that traverse on the 'north-east'.

The purpose of CBAs is to indicate spatially the location of critical or important areas for biodiversity in the landscape. The legend can be clarified as follows:

i) Critical Biodiversity Areas (CBAs)

- Ecosystems and species fully intact and undisturbed. These are areas with high irreplaceability or low flexibility in terms of meeting biodiversity pattern targets. If the biodiversity features targeted in these areas are lost, then targets will not be met.
- These are landscape that are at or past their limits of acceptable change

ii) Ecological Support Areas (ESAs)

- Ecosystems moderately to significantly disturbed, but still able to maintain basic functionality.
- Individual species or other biodiversity indicators may be severely disturbed or reduced.
- These are areas with low irreplaceability with respect to biodiversity pattern targets only.

9.7 Hydrology

9.7.1 Surface water

The proposed site falls within the Lower Orange Water Management Area (WMA), specifically in the Orange Sub Water Management Area (Boegoeberg Sub Catchment), in the D82A quaternary catchment area.

The Lower Orange WMA is the lowest WMA in the Orange River Basin and as such is affected by upstream activities. The area is arid with rainfall varying from 400 mm in the east to 50 mm on the west coast. The topography of the area is flat with large pans or (endoreic areas that do not contribute runoff to the Orange River system.

The Orange River, which forms a green strip in an otherwise arid landscape, also forms the border between South Africa and Namibia over about 550 km to the west of the 20-degree longitude. The Vaal River, the main tributary to the Orange River, has its confluence with the Orange River about 13 km west of Douglas. Other tributaries are the Ongers and Hartebeest Rivers from the south, and the Molopo River and Fish River (Namibia) from the north. There are a number of highly intermittent water courses along the coast which drain directly to the ocean.

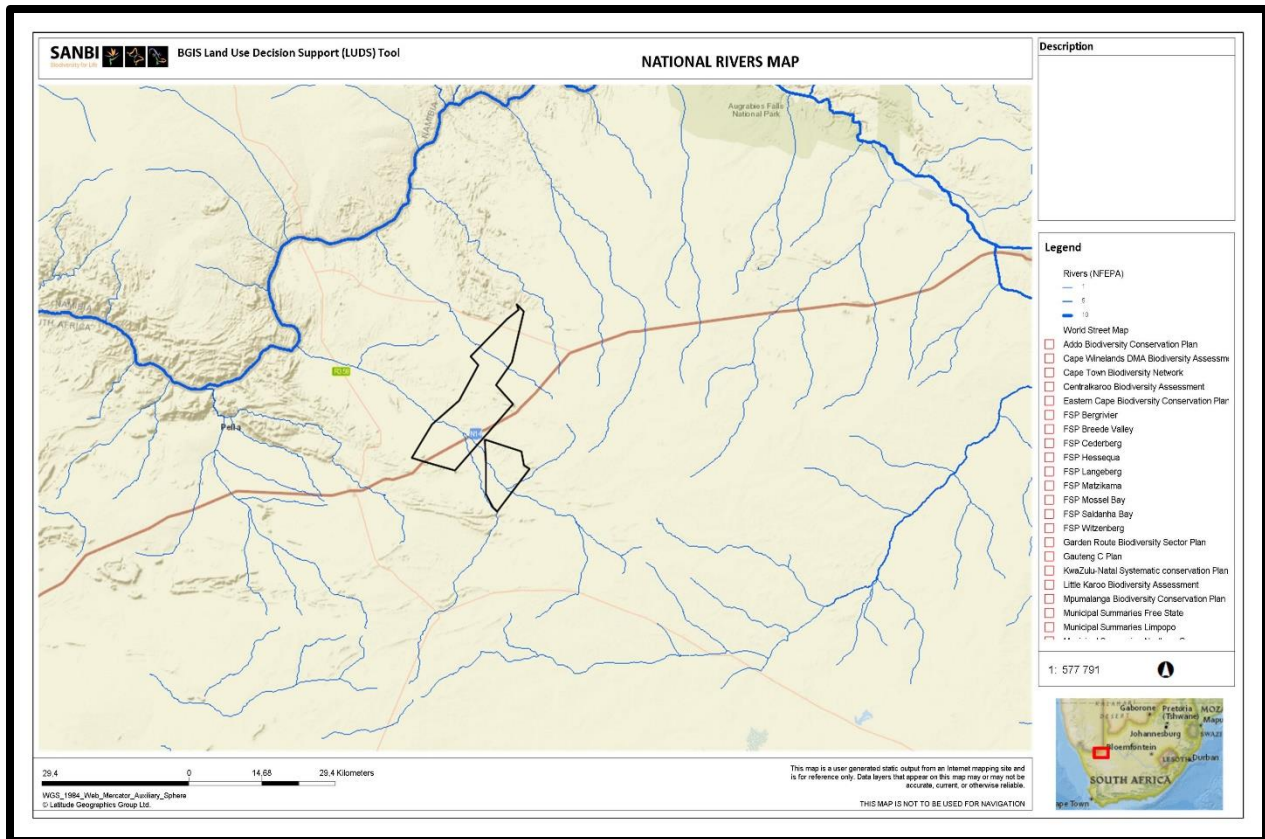


Figure 10: Map indicating the surface water features of the Prospecting Area

Large parts of the WMA also include conservation areas. Cultivation is restricted to isolated patches where somewhat higher rainfall occurs, and extensive irrigation is practised in the narrow ribbon of fertile alluvial soils along the Orange River valley. This irrigation is supplied by releases from the Vanderkloof Dam. Large mining operations occur in various parts of the water management area. There are no large urban developments or 68 power stations. Groundwater plays a major role in meeting the water requirements of the towns and rural settlements along the tributaries of the Orange.

9.7.2 Groundwater

The proposed prospecting activities will not have any influence on the quality or quantity of ground water. A negative impact on groundwater usually occurs where subsurface water is pumped out of an excavation pit. This can lower the water table in the immediate surroundings of the excavation, which can negatively impact upon surrounding wetlands (specifically hill slope or seepage wetlands) and boreholes. The proposed method of mining permit will not entail deep excavations from which groundwater will need to be removed and there are no known wetlands within the study area.

Groundwater quality is one of the main factors affecting the development of available groundwater resources. Although there are numerous problems associated with water quality, some of which are easily corrected, total dissolved solids

(TDS), nitrates (NO₃ as N) and fluorides (F) are thought to represent the majority of serious water quality problems. The water quality was evaluated in terms of TDS and potability.

The information was obtained from DWAF Geohydrology. The potability evaluation done was based on the evaluation of chloride, fluoride, magnesium, nitrate, potassium, sodium, sulfate and calcium using the Quality of Domestic Water Supplies, Volume 1 (DWAF, 1998). The portion of the groundwater resources considered to be potable has been calculated as the portion classified as ideal, good and marginal (Class 0 -blue, 1- green and 2 - yellow). Water classified as poor and unacceptable (Class 3 - red and 4 - purple) is considered not to be potable (See Point and diffusive pollution Agricultural activities are a source of diffuse water contamination.

The contribution of each farm on a local scale is often fairly small but the contribution on a catchment scale needs to be included in assessing any pollution situation. Most findings regarding this issue can only be assessed in a generic way due to the lack of data in the WMA. Nitrates are the contaminant of most concern, since they are very soluble and do not bind to soils, nitrates have a high potential to migrate to groundwater. Because they do not evaporate, nitrates/nitrites are likely to remain in water until consumed by plants or other organisms.

In general, the groundwater quality is rated as class 2 to class 4, marginal to completely unacceptable. The southern portion of the inland region, De Aar, Victoria West and Sutherland has a class 2 rating, together with the areas surrounding Prieska, Griekwastad, Upington and Springbok. The rest of the WMA, particularly north of Brandvlei and Carnarvon and the coastal strip are rated as class 3 and 4. The Sutherland, De Aar, Upington belt has a varying range of potable groundwater from a moderate 50% to approximately 90%. The balance of the WMA, has a predominant potable usage of less than 4 30%, with the occasional improvement to 50% (V3, 2002).

Agricultural activities are a source of diffuse water contamination. The contribution of each farm on a local scale is often fairly small but the contribution on a catchment scale needs to be included in assessing any pollution situation. Most findings regarding this issue can only be assessed in a generic way due to the lack of data in the WMA. Nitrates are the contaminant of most concern, since they are very soluble and do not bind to soils, nitrates have a high potential to migrate to groundwater. Because they do not evaporate, nitrates/nitrites are likely to remain in water until consumed by plants or other organisms.

9.8 Cultural Heritage

9.8.1 General Observations

It is an established fact that Stone Age material is widely distributed on the plains, ridges and valleys of the upper Karroo area north and south of the Orange-Vaal Rivers.

Other heritage resources that might occur in the broader areas are:

- Rock engravings (petroglyphs) dating from the Middle Stone Age to Later Stone Age periods
- Rock Paintings from the Middle Stone Age to Later Stone Age periods
- Buildings and objects associated with modern commercial farming from the 19th century
- Graves, burial grounds and human bones.

9.8.2 Key findings

The investigation of the proposed prospecting area did not find any sensitive heritage and archaeological sites, the pictures below show the view of the proposed prospecting area. Although no archaeological remains were found, it is possible that some significant features may be buried beneath the ground. Should buried archaeological materials and burials be encountered during the process of development the prospecting activities must be stopped. The prospecting area is located outside the high sensitive cultural sensitive areas of Northern Cape according to the DFFE Web Based Screening tool (refer to figure 11 below)

9.9 Socio-Economic Profile

Khâi-Ma Local Municipality is situated between S29° 08' 08, 7 and E19° 23' 27, 1 and falls within the Namakwa District of the Northern Cape Province of the Republic of South Africa. The Northern Cape is spatially the largest province in the country, but also has the lowest population and some of the least developed areas in terms of its economic and social development. Khâi-Ma with Pofadder as the seat is situated, in the central north region of the Namakwa District, which is the furthest north in terms of the provincial boundaries.

9.9.1 Demographics

The population for Khâi-Ma has an estimated total of 12,473 of all ages and races including foreigners based on the since the latest census in 2011 (2016 Community Survey) with a growing rate of 0,83%. The municipality is sparsely populated (+/- 1 person/km²); most people are settled in its five (5) towns and surrounding farms as mentioned in the previous paragraph. The municipality is characterized by vast tracts of land, pristine natural environment, unique mountains and its limited cell phone reception, which can be regarded as a unique attraction by some urban dwellers who wish to escape the rush of the cities. This inherent potential for ecotourism needs to be exploited and managed in a sustainable manner in order to retain this unique setting.

Table 5: Population by group (1996 – 2016)

	1996	2001	2011	2016
Black African	282	1 424	2 195	346
Coloured	7 904	8 880	9 359	10 997
Indian or Asian	1	9	55	119
White	1 321	1 156	754	1 011
Other	-	-	103	-
Unspecified	42	-	-	-
Total	9 550	11 469	12 465	12 473

As shown in the table above, the population of Khâi-Ma is predominately coloured followed by the white group, over 80% of the population is made up of the coloureds.

Table 6: Population by sex (1996 - 2016)

1996			2001			2011			2016*		
Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total
4 826	4 724	9 550	5 914	5 555	11 469	6 560	5 905	12 465	6 563	5 910	12 473

The population of Khâi-Ma for the past 20 years has been dominated by males, although there is no significant gap of the males and females in total population, the table above shows that the population from 1996 has been comprised of most males than females.

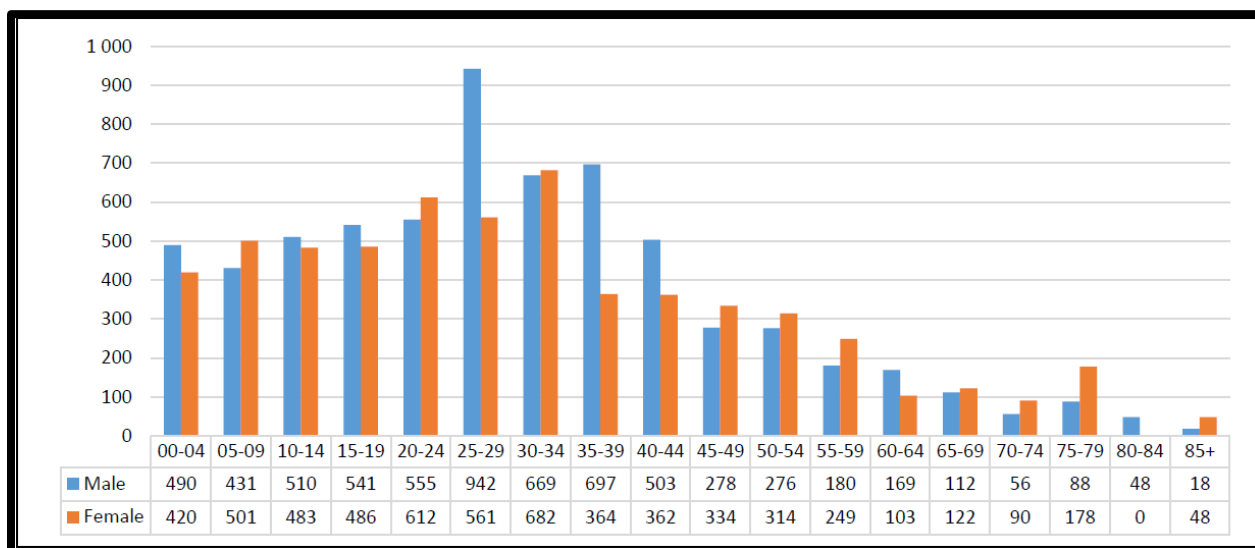


Figure 11: Population distribution by age group and sex

Figure 11 indicates that the greater proportion of the population in Khai-Ma municipality is young, consisting mainly of children and youth. There is however a greater proportion of males compared to females for the ages 10 to 19 years,

and the female population shows a slightly greater proportion in numbers compared to males for the ages 85 and above. This signifies a greater lifespan for females than males.

9.9.2 Economy

The Namakwa District Municipality contributes 0.21% to the GDP of South Africa which had a total GDP of R 4.97 trillion in 2020 (as measured in nominal or current prices). Its contribution to the national economy stayed similar in importance from 2010 when it contributed 0.27% to South Africa, but it is lower than the peak of 0.27% in 2010.

In 2020, the mining sector is the largest within Namakwa District Municipality accounting for R 3.94 billion or 40.4% of the total GVA in the district municipality's economy. The sector that contributes the second most to the GVA of the Namakwa District Municipality is the community services sector at 16.7%, followed by the agriculture sector with 10.2%. The sector that contributes the least to the economy of Namakwa District Municipality is the electricity sector with a contribution of R 166 million or 1.70% of the total GVA.

In 2020, Namakwa's Tress Index was estimated at 54.6 which are higher than the 43.2 of the province and higher than the 43.2 of the South Africa as a whole. This implies that - on average - Namakwa District Municipality is less diversified in terms of its economic activity spread than the national's economy. The Namakwa District Municipality has a very high concentrated mining sector.

For 2020 Namakwa District Municipality has a very large comparative advantage in the mining sector. The agriculture sector also has a very large comparative advantage. The Namakwa District Municipality has a comparative disadvantage when it comes to the manufacturing and electricity sector which has a very large comparative disadvantage. In general mining is a very concentrated economic sector. The entire Namakwa District Municipality-economy is centred around the mines in the area.

The proposed prospecting for minerals by Elsiclox (Pty) Ltd will enhance will ultimately have significant economic impact to the local economy of Khai-Ma Local Municipality and the NDM in general. The significant impact will come after the outcomes of prospecting activities are positive and the mineral to be prospected occur within the prospecting area viably.

10. IMPACTS AND RISKS IDENTIFIED INCLUDING THE NATURE, SIGNIFICANCE, CONSEQUENCE, EXTENT, DURATION AND PROBABILITY OF THE IMPACTS, INCLUDING THE DEGREE TO WHICH THESE IMPACTS

Table 7: Impacts Identified, phases and description

IMPACTS	PHASE	DESCRIPTION
Policy requirements	Planning	Identification of legislative requirements
Flora	Site establishment and	Destruction / loss of indigenous natural vegetation due to site preparation activities.
Fauna	Site establishment and Operational	Disturbance of species habitats (i.e. snake holes, spiders, reptiles, etc.)
Ground and Surface water	Site establishment and Operational	Spillage of fuels, lubricants and other chemicals
Geology	Operational	Removal of rocks and debris for analysis, disturbance of local geological formation.
Soils	Site establishment and operational	Disturbance of soils during site clearance and during drilling operations
Air Quality	Site establishment and Operational	Dust stemming from drilling and vehicles going to site
Traffic	Site establishment and decommissioning	Increase of traffic in the area as vehicles access and exit the site
Noise nuisance	Site establishment and Operational	Noise caused by moving vehicles and drill rigs
Economic	Operational	Project expenditure (incl. direct capital investment)
Socio-economic	Planning Phase	Potential friction with I&APs and Landowners, part time employment opportunities
Visual	Site establishment, Operational and Decommissioning	Visual disturbances with all the vehicles, signs and drilling rigs.
Cultural/Heritage - historical	Site establishment and Operational	Disturbance of artefacts of cultural and heritage importance (i.e. unidentified grave sites).
Waste	Site establishment and Operational Phase	Generation of solid waste on site.

10.1 Methodology used in determining and ranking the nature, significance, consequences, extent, duration and probability of potential environmental impacts and risks;

The potential environmental impacts associated with the project will be evaluated according to its nature, extent, duration, intensity, probability and significance of the impacts, whereby:

- **Nature:** A brief written statement of the environmental aspect being impacted upon by particular action or activity.
- **Extent:** The area over which the impact will be expressed. Typically, the severity and significance of an impact have different scales and as such bracketing ranges are often required. This is often useful during the detailed

assessment phase of a project in terms of further defining the determined significance or intensity of an impact. For example, high at a local scale, but low at a regional scale;

- **Duration:** Indicates what the lifetime of the impact will be;
- **Intensity:** Describes whether an impact is destructive or benign;
- **Probability:** Describes the likelihood of an impact actually occurring; and
- **Cumulative:** In relation to an activity, means the impact of an activity that in itself may not be significant but may become significant when added to the existing and potential impacts eventuating from similar or diverse activities or undertakings in the area

Table 8: Criteria for evaluating potential environmental impacts

CRITERIA	DESCRIPTION			
Extent	National (4) The whole of South Africa	Regional (3) Provincial and parts of neighbouring provinces	Local (2) Within a radius of 2 km of the site	Site (1) Within the site
Duration	Permanent (4) Mitigation either by man or natural process will not occur in such a way or in such a time span that the impact can be considered transient	Long-term (3) The impact will continue or last for the entire operational life of the development, but will be mitigated by direct human action or by natural processes thereafter. The only class of impact which will be non-transitory	Medium-term (2) The impact will last for the period of the site establishment phase, where after it will be entirely negated	Short-term (1) The impact will either disappear with mitigation or will be mitigated through natural process in a span shorter than the site establishment phase
Intensity	Very High (4) Natural, cultural and social functions and processes are altered to extent that they permanently cease	High (3) Natural, cultural and social functions and processes are altered to extent that they temporarily cease	Moderate (2) Affected environment is altered, but natural, cultural and social functions and processes continue albeit in a modified way	Low (1) Impact affects the environment in such a way that natural, cultural and social functions and processes are not affected
Probability of Occurrence	Definite (4) Impact will certainly occur	Highly Probable (3) Most likely that the impact will occur	Possible (2) The impact may occur	Improbable (1) Likelihood of the impact materialising is very low

Impact Reversal	Highly Impossible (4) Impact reversal will certainly be impossible	Moderate (3) Impact can be reversed to some extent with loss of natural resources	Possible (2) High possibility of impact reversal	Definite (1) Impact can be totally reversed
Loss of irreplaceable resources	Definite (4) Resources definitely be lost	Highly Probable (3) Most likely that resources will be lost	Possible (2) Resources may be lost	Improbable (1) Loss of resources is highly unlikely

Significance is determined through a synthesis of impact characteristics. Significance is also an indication of the importance of the impact in terms of both physical extent and time scale, and therefore indicates the level of mitigation required. The total number of points scored for each impact indicates the level of significance of the impact.

Significance=Extent+ Duration +Intensity x Probability

Table 9: Criteria for classifying impacts

Ranks/Level	Description
Low impact/ Minor (3 -10 points)	A low impact has no permanent impact of significance. Mitigation measures are feasible and are readily instituted as part of a standing design, construction or operating procedure.
Medium impact/ Moderate (11 -20 points)	Mitigation is possible with additional design and construction inputs.
High impact (21 -30 points)	The design of the site may be affected. Mitigation and possible remediation are needed during the construction and/or operational phases. The effects of the impact may affect the broader environment.
Very high impact/ Major (31 - 48 points)	Permanent and important impacts. The design of the site may be affected. Intensive remediation is needed during construction and/or operational phases. Any activity which results in a “very high impact” is likely to be a fatal flaw.
Status	Denotes the perceived effect of the impact on the affected area.
Positive (+)	Beneficial impact.
Negative (-)	Deleterious or adverse impact.

Neutral (/)	Impact is neither beneficial nor adverse.
It is important to note that the status of an impact is assigned based on the status quo – i.e. should the project not proceed. Therefore not all negative impacts are equally significant.	

The suitability and feasibility of all proposed mitigation measures is included in the assessment of significant impacts. This was achieved through the comparison of the significance of the impact before and after the proposed mitigation measure is implemented.

10.2 The positive and negative impacts that the proposed activity (in terms of the initial site layout) and alternatives will have on the environment and the community that may be affected

At this moment there is no alternative layout, should the comments from IAPs and other relevant stakeholders warrants that we change the layout or have alternative, those comments will be addressed accordingly. The impacts associated with drilling can be mitigated and after drilling has been completed; the drill pads will be rehabilitated to predrilling status.

Table 10: Positive and negative impacts

Impacted Environment	Impact	Status of impact
SITE ESTABLISHMENT AND OPERATIONAL PHASE		
Fauna and Flora	Destruction / loss of indigenous natural vegetation and plant species during site preparation	Negative
	Impact on animal species	Negative
	Establishment and spread of declared weeds and alien invader plants	Negative
Water resource	Damage to surface water and groundwater resulting in hydrological impacts	Negative
Air Quality	Dust emissions	Negative
Soils	Physical disturbance of soils during land clearing	Negative
Socio Economic	Direct employment and skills development	Positive
Visual aspect	Visual Disturbance (vegetation clearance and temporary infrastructures including equipment on site)	Negative
Cultural/Heritage-historical resources	Potential impact on heritage and archaeological resources	Undetermined at this stage
Waste generation	Generation of solid waste (e.g. littering)	Negative
DECOMMISSIONING PHASE		
Air quality	Dust emissions	Negative
Soil	Soil degradation	Negative

10.3 Motivation where no alternative sites were considered

The nature of the proposed activity dictates the proposed site location. The applicant has done preliminary studies that indicated that the minerals applied for prospecting can only be found within the proposed area.

10.4 Statement motivating the alternative development location within the overall site

Since prospecting is temporary in nature no permanent structures will be constructed, negotiations and agreements will be made with the farm owner to use any existing infrastructure like accommodation for the workers, access roads and other things. In addition to the information provided, each of the phases is dependent on the results and success of the preceding phase. The location and extent of soil sampling and possible drilling will be determined based on information derived from the geophysics surveys. Sampling and drill sites will be selected to avoid water courses where practicable.

11. ENVIRONMENTAL IMPACT ASSESSMENT

Table 11: Environmental Impact Assessment

Impact pathway	Nature of potential impact/risk	Phase impact occurs	Before Mitigation				Significance of impact	Reversibility of impact	Potential measures mitigation	After Mitigation				Ranking of impact/risk
			E	D	I	P				E	D	I	P	
Compliance with legislative requirements	Non commencement/ delayed commencement of proposed project	Planning	3	4	3	2	(20 -ve)	Yes	Comply with all legislative requirements as stipulated in the EIA 2017 regulations	1	1	1	2	(6 -ve)
Geological Field Mapping and Environmental Screening	Interference with existing land uses and Deterioration and damage to existing access roads and tracks	Planning	2	3	3	3	(18-)	Yes	Site access control, heritage impact assessment; consultation with Landowners and Site access control; Demarcation of access tracks to be used.	1	2	2	2	(10 -ve)
Destruction loss of indigenous	Habitat and loss of species	Site establishment and Operational	2	2	3	3	(21-ve)	Yes	Appoint an Environmental Control Officer (ECO) prior to commencement of site	1	1	2	2	(8 -ve)

Impact pathway	Nature of potential impact/risk	Phase impact occurs	Before Mitigation				Significance of impact	Reversibility of impact	Potential measures mitigation	After Mitigation				Ranking of impact/risk
			E	D	I	P				E	D	I	P	
natural vegetation	Alien plant invasions in disturbed areas	Site establishment and Operational	1	1	2	2	(8 -ve)	Yes	establishment phase. Responsibilities should include, but not necessarily be limited to, ensuring adherence to EMPr guidelines, guidance of activities, planning, reporting to authorities. Conduct a search and rescue operation for all conservation important plants on the site. This operation should be conducted during the austral summer period when vegetative and reproductive	1	1	1	2	(6 -ve)
Disturbance of soils	Exposed soils susceptible to erosion	Site establishment and Operational	1	1	2	2	(8 -ve)	Yes		1	1	1	2	(6 -ve)
Impacts on indigenous plant species	Plant species are especially vulnerable to infrastructure development due to the fact that they cannot move out of the path of the operational activities, but are also affected by overall loss of habitat.	Site establishment and Operational	1	2	2	2	(10 -ve)	Yes		1	2	1	1	(4 -ve)
Fauna	Faunal mortality and displacement on site.	Site establishment and Operational	1	2	3	3	(18 -ve)	Yes		2	1	1	2	(8 -ve)

Impact pathway	Nature of potential impact/risk	Phase impact occurs	Before Mitigation				Significance of impact	Reversibility of impact	Potential mitigation measures	After Mitigation				Ranking of impact/risk
			E	D	I	P				E	D	I	P	
Geology	Permanent removal of rocks and geological formations	Operational	1	4	3	4	(32 -ve)	No	Cap off and cement drill hole	1	3	1	3	(15 -ve)
Groundwater quality	The prospecting operations will require the drilling of boreholes. The boreholes may result in the drawdown, which may affect the yield to the surrounding groundwater users. Material used for backfilling may leach pollutants that will result in the pollution of the surrounding groundwater regime.	Operational	2	3	3	4	(32 -ve)	Yes	Groundwater monitoring network (both quality and quantity) should be established. Any spillage should be cleaned using spillage kit Ensure that the land owners' borehole yield is observed during the drilling operation. Should it be proven that the operation is indeed affecting the quantity and quality of groundwater available to users and surrounding water resources, the affected parties must be compensated	2	1	2	3	(21 -ve)

Impact pathway	Nature of potential impact/risk	Phase impact occurs	Before Mitigation				Significance of impact	Reversibility of impact	Potential mitigation measures	After Mitigation				Ranking of impact/risk
			E	D	I	P				E	D	I	P	
Air quality	Increase in traffic on unpaved roads and drilling activities will increase levels of dust generated on site. Greenhouse gases emitted from drilling machinery and vehicles used on site, could contribute to reduced levels of air quality.	Site establishment, Operational and Decommissioning	2	1	2	3	(15 -ve)	No	Use of water for dust spraying and wetting, proper grading of roads and keeping traffic to a reasonable level All equipment and vehicles must be serviced and be in good condition to reduce emissions.	2	1	2	2	(10 -ve)
Project expenditure (incl. direct capital investment)	Investment and growth in local economy	Operational Phase and decommissioning	2	1	2	4	(20)	No	None	2	1	2	4	(20)
Noise disturbance	Noise generated from prospecting operations activities may add to the current noise levels. This may have impacts on surrounding property owners and wildlife.	Operational	2	3	2	2	(14 -ve)	No	Engine silencers must be installed on all equipment and vehicles used on site Working must be restricted to 8 hours during daytime, to minimise the ecological and social disturbance.	1	2	2	2	(10 -ve)

Impact pathway	Nature of potential impact/risk	Phase impact occurs	Before Mitigation				Significance of impact	Reversibility of impact	Potential measures mitigation	After Mitigation				Ranking of impact/risk
			E	D	I	P				E	D	I	P	
Visual Disturbance	The activities undertaken during the site establishment or and associated infrastructure will be visible from the nearby roads and properties. However, due to the undulating topography, visibility for the most part will most probably be restricted to short distances.	Site establishment, Operational and Decommissioning	1	2	2	2	(10 -ve)	Yes	Inform the land owner on the type of machinery and equipment to be used at the prospecting site. Ensure that lighting is conducted in manner that will reduce the impacts on visual aspects at night times.	1	1	2	2	(8 -ve)
Socio-economic	Potential friction with local business individuals who are running tourist attractions and breeding game life.	Planning, Site establishment, Operational, decommissioning	3	3	2	3	(24 -ve)	Yes	Extensive public consultations which will increase public awareness record and address comments, concerns and questions.	1	2	1	2	(8 -ve)
	Temporary employment opportunities	Operational and Decommissioning	2	1	2	3	(15 +ve)	Yes	None	2	1	2	3	(15 +ve)

Impact pathway	Nature of potential impact/risk	Phase impact occurs	Before Mitigation				Significance of impact	Reversibility of impact	Potential measures mitigation	After Mitigation				Ranking of impact/risk
			E	D	I	P				E	D	I	P	
	Potential decline in local business due to prospecting activities.	Site establishment, Operational and Decommissioning	3	2	3	2	(16 -ve)	Yes	Prospecting should be conducted following best practices is to minimise negative economic impacts on local business	3	2	2	1	(7 -ve)
Cultural/ Heritage historical impacts	Discovery of gravesites and historical artefacts in the proposed area	Site establishment and Operational	1	2	2	3	(15 -ve)	Yes	Should any paleontological or cultural artefacts be discovered work at the point of discovery must stop, the location be clearly demarcated and SAHRA contacted immediately. Work at the discovery site may only be recommenced on instruction from SAHRA.	1	1	1	2	(6 -ve)
Traffic	Increase of traffic in the area as vehicles access the sites	Site establishment, Operational and Decommissioning	2	3	2	3	(28 -ve)	No	Abnormal Vehicles must move in and out of the site during off peak hours, to avoid congestion that may occur on the main road.	2	2	1	2	(10 -ve)

12. ASSESSMENT OF EACH IDENTIFIED POTENTIALLY SIGNIFICANT IMPACT AND RISK

(This section of the report must consider all the known typical impacts of each of the activities (including those that could or should have been identified by knowledgeable persons) and not only those that were raised by registered interested and affected parties).

Table 12: Potential Impacts and Risk

NAME OF ACTIVITY	POTENTIAL IMPACT	ASPECTS AFFECTED	PHASE	SIGNIFICANCE	MITIGATION TYPE	SIGNIFICANCE
Desktop Study	None Identified	N/A	Planning Phase	N/A	No mitigation proposed	N/A
Identification of legislative requirements	Commencement of activities without all the required licenses and permits	Policy and legal Requirements	Planning Phase	High	The applicant must ensure that all relevant legislations and regulations have been adhered to before commencement of the project.	Low
Set-up of drilling Equipment	Clearing of Vegetation	Flora and Fauna	Operational Phase	Low	Already cleared areas should be preferred over heavily dense areas	Low
Set-up of drilling Equipment	Theft	Socio-Economic	Operational Phase	Low	The site camp must be secured and entrance into the site must be controlled	Low
Preparation of drilling sites and access roads	Loss of Vegetation	Flora and Fauna	Operational Phase	Medium	Where possible existing access roads must be used	Low
Drilling Activities	Ground & Surface Water contamination	Hydrology	Operational Phase	Medium	The drill bits must be maintained in good condition to prevent leakages of oil when in the underground.	Low
					Aquifer detection methods should be applied before drilling can be undertaken.	Low
					Streams must be diverted where alluvial activities are taking place.	Low

NAME OF ACTIVITY	POTENTIAL IMPACT	ASPECTS AFFECTED	PHASE	SIGNIFICANCE	MITIGATION TYPE	SIGNIFICANCE
	Mortality and displacement of fauna	Fauna	Operational Phase	Medium	Search and rescue mission should be undertaken for species on drilling site	Low
	Waste Generation	Waste Management	Operational Phase	High	The mud generated from the drilling activities must be contained, and contaminated mud must be handled separately, treated or disposed of at an appropriate landfill. Skips and marked bins must be provided at the site for waste separation.	Medium
Drilling Activities	Spillages of hazardous chemicals	Soil & geology; Hydrology	Operational Phase	Medium	All substances required for vehicle maintenance and repair must be stored in sealed containers until they can be disposed of / removed from the site. All drill holes must be capped off and closed off with cement.	Low
				Medium	Hazardous substances / materials are to be transported in sealed containers or bags.	Low
				Medium	Spillages must be attended to as soon as they occur. Depending on the nature and extent of the spill, contaminated soil must be either excavated or treated on-site.	Low
	Destruction of Heritage Resources	Cultural and Heritage Social	Operational Phase	Medium	Should any paleontological or cultural artefacts be discovered work at the point of discovery must stop, the location be	Low

NAME OF ACTIVITY	POTENTIAL IMPACT	ASPECTS AFFECTED	PHASE	SIGNIFICANCE	MITIGATION TYPE	SIGNIFICANCE
					clearly demarcated and SAHRA contacted immediately. Work at the discovery site may only be recommenced on instruction from SAHRA.	
Decommissioning of Site Camp	Waste generation	Waste management	Decommissioning Phase	Medium	The uncontaminated stockpiled materials must be used for backfilling	Low
Decommissioning of Site Camp	Contamination of the Soil and Water	Soil and Hydrology	Decommissioning Phase	Medium	The hazardous substances onsite must be stored in marked containers. All the equipment must be shipped out of the site The compacted soils must be loosened and the topsoil must be spread above it. The seed spreading of indigenous species must take place to ensure regrowth.	Low

13. SUMMARY OF SPECIALIST

(This summary must be completed if any specialist reports informed the impact assessment and final site layout process and must be in the following tabular form):-

13.1 Heritage and Archaeological Study

The investigation of the proposed prospecting area did not find any sensitive heritage and archaeological sites, the pictures below show drone-view of the proposed prospecting area. Although no archaeological remains were found, it is possible that some significant features may be buried beneath the ground. Should buried archaeological materials and burials be encountered during the process of development the prospecting activities must be stopped.

The study reached the following recommendations and conclusion:

- The proposed development is scheduled to take place on already existing stand within a built up area.
- Ground trothing of the area found no important cultural heritage resource, archaeological materials or graves
- Although no archaeological remains were found, it is possible that some significant features may be buried beneath the ground. Should buried archaeological materials and burials be encountered during the process of development, the following must apply:
 - Work must stop immediately
 - A professional archaeologist or nearest heritage authority must be contacted.

The impacts associated with the proposed prospecting activities are likely to be from Medium to Low after implementation of mitigation measures. As a result, it is the opinion of the specialist that this proposed prospecting application be considered provided that the recommendations stipulated in this study are adhered to.

14. ENVIRONMENTAL IMPACT STATEMENT

14.1 Summary of key findings of environmental assessment:

In nature impacts associated with prospecting have very low impacts on the environment or socially. Usually the impacts caused during the prospecting activity can be reversed or rehabilitated.

The following actions are subject to the proposed mitigation measures and require monitoring:

- The clearing of vegetation
- The storage of hydrocarbon-based materials on site

- On-site waste management
- The creation of roads/tracks
- The removal of storage and soil
- The traversing of vehicles through populated areas within the prospecting area
- Groundwater: Monitor the water quality of the boreholes
- Noise generation

Monitoring of the required mitigation measures is to take place on site daily by the site geologist. Annual monitoring audits are to take place by an appointed independent environmental assessment practitioner.

14.2 Final Site Map

The exact locations of the drilling holes are indicated within the map provided although the map will be subjected to changes depending on the results of the preliminary drilling and assaying. The prospecting activities are conducted in phases, and each phase depends on the success of the previous phase. A detailed map showing all drilling points will be provided in the Final Basic Assessment Report

14.3 Summary of the positive and negative impacts and risks of the proposed activity and identified alternatives

a) Positive and negative impacts associated with the proposed prospecting activities include:

- Destruction / loss of indigenous natural vegetation during site preparation
- Impacts on plant species of concern during site preparation
- Impacts on fauna
- Establishment and spread of declared weeds and alien invader plants
- Physical disturbance of soils during land clearing
- Dust emissions
- Disturbance of the geological formation due to removal of rock material.
- Direct employment and skills development

- Impact on groundwater system during invasive phase of the proposed development.
- Impact on surface water
- Visual Disturbance
- Physical disturbance of soils during land clearing
- Disturbance of surrounding landowners activities and/or livelihoods
- Direct employment and skills development
- Potential impacts on heritage resources and archaeological resources

The proposed activities have low significance since these are short term activities, however socio-economic impacts such as employment has a medium significance. The probability of occurrence of an impact was determined and most of these activities can be controlled and impacts can be reduced or avoided. Generally prospecting activities have low impact on the environment. The planned activities negative impacts can be controlled and avoided or minimised therefore the layout does not require revision. Mitigation measures will be utilised to control, avoid and/or minimise all identified potential impacts.

15. PROPOSED IMPACT MANAGEMENT OBJECTIVES AND THE IMPACT MANAGEMENT OUTCOMES FOR INCLUSION IN THE EMPR;

The EMPr will seek to achieve a required end state and describe how activities could have an adverse impact on the environment will be mitigated, controlled and monitored. The EMPr will address the environmental impacts during the Site establishment, Operational, and Decommissioning Phases of the proposed project. Due regard will be given to environmental protection during the entire project. A number of environmental recommendations will therefore be made to achieve environmental protection. The environmental and social objectives will be set to allow prospecting in an environmental and socially responsible manner while ensuring that sustainable closure can be achieved. To achieve closure, the correct decisions need to be taken during the planning phase of the project.

The overall goal for environmental management for the proposed is to construct and operate the project in a manner that:

- Minimises the ecological footprint of the project on the local environment;

- Facilitates harmonious co-existence between the project and other land uses in the area;
- Contributes to the environmental baseline and understanding of environmental impacts of Prospecting activities in a South African context.

The following environmental management objectives are recommended for the proposed mineral prospecting development and associated infrastructure:

- Monitor soils so as to avoid unnecessary erosion, and implement erosion control measures to preserve the quality of the soil for rehabilitation.
- Development planning must restrict the area of impact to minimum and designated areas only.
- Monitor and prevent contamination, and undertake appropriate remedial actions.
- Limit the visual and noise impact on receptors.
- Avoid impact on possible heritage and archaeological resources.
- Promote health and safety of workers.
- Limit dust and other emissions to within allowable limits

16. ASPECTS FOR INCLUSION AS CONDITIONS OF AUTHORISATION

Elsiclox (Pty) Ltd must comply with all Environmental legislations. Specific environmental legislation to be adhered to include; National Environmental Management Act, Act 107 of 1998 (NEMA) and Minerals and Petroleum Resources Development Act, Act 28 of 2002 (MPRDA);

- It must also be noted that all prospecting work must be done strictly in accordance with approved Environmental Management Plans and approved Prospecting Work Program.
- Prospecting work must also be done strictly in accordance with the provisions of the Act and the terms of the Prospecting Right.
- The following aspects need further be addressed:
- There must be adequate provision made for capital to rehabilitate the land;

- No water can or may be extracted on the property without an express agreement in respect of water use;
- Detailed attention must be afforded to the following aspects of the environmental impacts:
 - ❖ Loss of grazing;
 - ❖ Pollution of all kinds;
 - ❖ Stock theft;
 - ❖ Refuge removal;
 - ❖ Fire Hazards.
- Drilling equipment on the property must not cause any damage to the flora and the soil.
- Damage to grazing must form part of the feasibility study and an expert of local grazing conditions must be engaged.
- The following actions by the prospecting applicant are expressly forbidden and prohibited:
 - No trees, bushes or grazing may be destroyed by the applicant except when reasonably necessary for the applicant to execute his prospecting work on the property;
 - No dogs or firearms on the property by any of the applicant or his contractors or employees;
 - No new roads or footpaths on the property except those that are already there, otherwise routes planned in consultation with the Landowner;
 - No firewood or any other wood may be collected on the Property;
 - No pits or boreholes may be drilled or made closer than 300 meters of any of the improvements on the farm i.e. water troughs, tanks, barns, feeding troughs; if any trenches, boreholes or if it must be closer than 300 meters then the improvements must be moved by the applicant at his own cost to the satisfaction of the Landowner;
 - Proper provision must be made for the rehabilitation of any prospecting site and the flora must be reinstated and if necessary top-soil must be brought in from outside to effect proper rehabilitation;
 - No mining is to be done under the authority of a prospecting permit, and strict provisions must be in place regarding sampling and removal of samples;

- There must be a proper surface Use Agreement which shall include compensation, conditions regarding dispute resolution and further include all provisions above where necessary improved or supplemented.
- All Parties are aware that the equipment used are normally wider wheel based than normal vehicles, using the farm roads. This causes damage to the vegetation and compensation must be paid according to an agreed formula.

17. DESCRIPTION OF ANY ASSUMPTIONS, UNCERTAINTIES AND GAPS IN KNOWLEDGE

The following assumptions, uncertainties, and gaps in knowledge are applicable to this BAR:

- The baseline environment was compiled through desktop studies only. The possibility exists that the desktop data is outdated or incomplete. A limited duration site visit was undertaken in order to verify the desktop data utilised. Furthermore, the description of the baseline environment will be further informed by the results of the public participation process.
- The potential impacts of any drilling activity on the groundwater regime will vary from site to site, even over short distances due to changes in geology and receptors. As no recent hydrocensus across the entire exploration area has been conducted, the EAP did not have access to, for example, positions of existing boreholes, dependency on groundwater, specific water quality, depth to groundwater levels and borehole depths. The sensitivity map and groundwater management plan, as presented in this report, must be seen as working documents that must be improved as more information becomes available.
- This report only provides a high-level desktop / strategic screening of potential heritage risk areas. The recommendations and conclusions regarding the assessment of the potential impacts will require confirmation by a detailed field-based survey before physical prospecting is to commence. Specifically, it should be noted that some of the heritage sites that are depicted on the historical topographic maps may no longer exist due to past disturbance and that there may be grave and burial ground sites that are not depicted on the historic maps which will be identified only by the subsequent field study.

18. REASONED OPINION AS TO WHETHER THE PROPOSED ACTIVITY SHOULD OR SHOULD NOT BE AUTHORISED

Based on the site investigations and analysis of the EAP it is suggested that the proposed activity should be authorised due to the following:

- Monitoring of the required mitigation measures is to take place on site daily by the site Geologist, Annual monitoring audits are to take place by an appointed independent Environmental Assessment Practitioner (EAP) to compile the required annual environmental compliance report required by the DMR

- The environmental impacts associated with the limited drilling activities are minimal provided that the proposed mitigation measures are implemented
- The desktop studies have proven that the site is located on a mineralized zone, prospecting activities must be undertaken to confirm the ore reserves
- The option of not approving the activities will result in a significant loss to valuable information regarding the status of the ore bodies present on these properties.
- In addition to this, should economical reserves be present and the applicant does not have the opportunity to prospect, the opportunity to utilize these reserves for future phases will be lost as well.
- The spatial extent of the physical impact is 1.89 ha over a prospecting right license area of 63 drill sites and 100m² of an access road which will be established in total throughout the duration of the drilling programme, Therefore the actual footprint to be permanently disturbed is minimal in comparison to the total site area of the total farm area will be impacted.
- With appropriate care and consideration the impacts resulting from drilling can be suitably avoided, minimised or mitigated
- It has also been noted that mining sector is the pillar of South African economy and also provides employment opportunities for many.
- A buffer of 50 m from wetlands and water courses should be established during the operational phase

19. PERIOD FOR WHICH THE ENVIRONMENTAL AUTHORISATION IS REQUIRED

The Prospecting Right has been applied for a period of five (5) years. The Environmental Authorisation should therefore allow for the five years of prospecting and one year for decommissioning and rehabilitation

20. UNDERTAKING

Confirm that the undertaking required to meet the requirements of this section is provided at the end of the EMPr and is applicable to both the Basic assessment report and the Environmental Management Programme report. The undertaking provided at the end of the EMPr is applicable to both, this Basic Assessment Report and the EMPr in Part B, below

21. FINANCIAL PROVISION

State the amount that is required to both manage and rehabilitate the environment in respect of rehabilitation

A total of R 164 366.00 is required to both manage and rehabilitate the environment in respect of rehabilitation.

21.1 Explain how the aforesaid amount was derived

The aforesaid amount was derived using the Department of Mineral Resource guideline document for the evaluation of the quantum of closure-related financial provision provided by the applicant.

21.2 Confirm that this amount can be provided for from operating expenditure

Should a Prospecting Right be granted to the **Elsiclox (Pty) Ltd** will make provision for the estimated closure cost by means of a Bank Guarantee or any other means available and accepted by the Competent Authority.

22. SPECIFIC INFORMATION REQUIRED BY THE COMPETENT AUTHORITY

22.1 Compliance with the provisions of sections 24(4) (a) and (b) read with section 24 (3) (a) and (7) of the National Environmental Management Act (Act 107 of 1998). The EIA report must include the:-

22.1.1 Impact on the socio-economic conditions of any directly affected person

Current land uses on the prospecting area, such as grazing, may be temporarily impacted through the presence of closed off areas that drill rigs will operate within. These are however, small areas. These areas will be rehabilitated post drilling activities and the areas will once again become available for grazing and other agricultural activities.

22.2 Impact on any national estate referred to in section 3(2) of the National Heritage Resources Act

Mitigation measures proposed in this report include that no drill site will be located within 100 m of any identified heritage site (which may occur during the prospecting programme) based on the desktop work undertaken. Should any paleontological or cultural artefacts be discovered work at the point of discovery must stop, the location be clearly demarcated and SAHRA contacted immediately. Work at the discovery site may only be recommenced on instruction from SAHRA.

22.3 Other matters required in terms of sections 24(4) (a) and (b) of the Act.

This BAR and EMPr has been compiled in accordance with the NEMA (1998), EIA Regulations (2014, amended April 2017) and MPRDA (2002). The EAP managing the application confirms that this BAR and EMPr is being submitted for Environmental Authorisation in terms of the National Environmental Management Act, 1998 in respect of listed activities that have been triggered by application in terms of the Mineral and Petroleum Resources Development Act, 2002 (MPRDA) (as amended). Should the DMR require any additional information, this will be provided upon request. No reasonable or feasible alternatives exist for this Prospecting Right Application and as such, motivation for no alternatives has been provided in the relevant sections above.

PART B ENVIRONMENTAL MANAGEMENT PROGRAMME

1. DETAILS OF EAP

The details of the EAP are provided in section 1.1 of part A of this document

2. DESCRIPTION OF ASPECTS OF THE ACTIVITY

The requirement to describe the aspects of the activity that are covered by the final environmental management programme is already included in PART A.

3. COMPOSITE MAP

No composite map can be presented at this stage

4. DESCRIPTION OF IMPACT MANAGEMENT OBJECTIVES INCLUDING MANAGEMENT STATEMENTS

4.1 Determination of closure objectives.

- Rehabilitation of areas disturbed as a consequence of prospecting to a land capability that will support and sustain a predetermined post-closure land uses;
- Removal of all infrastructure/equipment that cannot be beneficially re-used, as per agreements established, and returning the associated disturbed land to the planned final land use;
- Removal of existing contaminated material from affected areas;
- Establishment of final landforms that are stable and safe in the long run;
- Establishment and implementation of measures that meet specific closure related performance objectives;

Environmental management must be integrated, acknowledging that all elements of the environment are linked and interrelated, and it must take into account the effects of decisions on all aspects of the environment and all people in the environment by pursuing the selection of the best practicable environmental option.

4.1.1 Volumes and rate of water use required for the operation

The proposed prospecting activities will require water supply for the drilling activities, the water will be sourced from water service providers and will be carted onto the site in a tanker. A 2000 l water cart will be adequate for the size of this operation. The water will be used for dust suppression of access roads. Dust suppression will be conducted as and when necessary.

4.1.2 Has a water use licence has been applied for?

No water use license application has been lodged as there are no water resources that will be affected by the proposed prospecting activities. No groundwater will be used or abstracted during the prospecting operations. Moreover, a buffer of 50m from wetlands and water courses shall be established during the prospecting activities.

4.1.3 Impacts to be mitigated in their respective phases, Impact Management Outcomes and Impact Management Actions

Measures to rehabilitate the environment affected by the undertaking of any listed activity

Table 13: Impacts to be mitigated

POTENTIAL IMPACT	ASPECTS AFFECTED	MITIGATION MEASURES	COMPLIANCE WITH STANDARDS	TIME PERIOD FOR IMPLEMENTATION	MITIGATION TYPE	STANDARD TO BE ACHIEVED
SITE ESTABLISHMENT PHASE						
Site Establishment- access roads, to prospecting sites, establishment of the campsite, physical surveying of the site and pegging of drilling boreholes						
Loss of top soils and soil erosion	Soils, Land Use and Land Capability	Topsoil must be stockpiled immediately after clearing vegetation to prevent erosion of soil through surface runoff and wind. No topsoil or fertile soil (dark soil) may be stored within 32 m of a drainage line, watercourse or wetland Where applicable, construct berms in order to prevent rill erosion and donga formation. All cleared areas and sumps are to be monitored for erosion daily, any erosion forming is to be remediated with immediate effect.	Rehabilitation in terms of MPRDA and NEMA principles. Applicable guidelines from NEM:BA and Department of Agriculture, Forestry and Fisheries (DAFF) and Conservation of Agricultural Resources Act (CARA) regarding removal of species General implementation of activities taking Mining and Biodiversity Guidelines into account	During Site establishment	Control	Return as close as possible to pre-prospecting environment
Loss of natural vegetation in the affected areas.	Flora.	Site clearance will be limited to only areas where invasive prospecting	Rehabilitation in terms of MPRDA and NEMA principles.	During Site establishment	Control through visual	Adhere to rehabilitation standards and

		<p>activities will be undertaken Ensure minimal disturbance of vegetation when conducting geophysical surveys and geological mapping.</p> <p>No vegetation clearance or tree removal should take place prior to a suitable qualified specialist have identified the species and the necessary permits and licenses have been obtained for removal of protected or endangered species.</p> <p>No crops may be harvested from the farms where work is being undertaken by any member of Elsiclox (Pty) Ltd or contractors of Elsiclox (Pty) Ltd.</p>	Permits to (DAFF) and CARA for removal of species in terms of NEM:BA General implementation of activities taking Mining and Biodiversity Guidelines into account		monitoring and inspection	Biodiversity Guidelines
Migration of animal life due to disturbance caused proposed project	Fauna	<p>Use sites with most degraded environment for the site development.</p> <p>Trapping and killing of fauna will be prohibited at the prospecting site.</p>	General implementation of activities taking Biodiversity Act and its guidelines into account.	During Site establishment	Control through visual monitoring and inspection	Minimise impact on fauna
Deterioration of water quality in the nearby	Surface and Ground Water.	Site establishment should not be undertaken within sensitive landscapes, these areas will be avoided.	Water management measures in compliance with NWA,	During Site establishment	Avoid	Minimise the impacts on sensitive areas

Water courses and within the groundwater regime.		A distance of 32 meters should be kept between stockpiles and water courses Avoid stripping of areas within the operational site. Rehabilitate areas that may have been mistakenly stripped. Storm water upslope of the campsite and drill sites should be diverted around these areas.	1998 and DWS guidelines			such as wetlands and streams.
Air pollution through emissions from the vehicles and equipment used on the operational site.	Air quality.	Dust suppression will be conducted in areas with excessive dust emissions. Traffic will be restricted to demarcated areas. Traffic volumes and speeds within the operational site will be controlled. The prospecting will be undertaken such that the ambient air quality does not exceed the National Air Quality Standards	National Environmental Management Air Quality Act.	Throughout Site establishment	Minimise impact	The dust emissions are not to exceed the ambient air quality standards for rural areas
Increased noise levels.	Noise aspects	Limit the maximum speed to 30 km/h or less, subject to risk assessment. Less noisy equipment will be used, the equipment will be kept in good working order and	National Noise Control Regulations, SANS10103:2008 guidelines.	Throughout the Site establishment	Minimise impacts	The noise levels from the operational sites will be managed and levels will be within the regulated noise

		the equipment will be fitted with correct and appropriate noise abatement measures.				levels as set by the regulations
Visual impacts on the surrounding communities and road users from the site establishment.	Visual aspects. Neighbouring occupants	Temporary stockpiling of excavated material shall take place in demarcated areas. Stockpiles shall be positioned and sloped to create the least visual impact The prospecting area shall be enclosed to minimise visual disruption from machinery and equipment to be used Lighting will be conducted in a way that will decrease the impacts on visual aspects at night times.	Measures will be undertaken to ensure that the visual aspects from the site comply with the relevant visual standards and objectives including Municipal By Laws.	Throughout the duration of the Site establishment	Minimise impact	Ensure that all operations during the site establishment phase do not result in detrimental visual impacts on surrounding properties, communities and road
Impact from the influx of job seekers and employment of farm labourers.	Socio-Economic Aspect	Recruitment will not be undertaken on site. Farm labourers will not be employed unless agreed to with the farm owners. Ensure that all labourers are trained and adhere to all health and safety standards	Measures taken will be in line with the company's recruitment policies. Occupational Health and Safety Act	Throughout Site establishment	Control	Comply with all national health and safety standards as well as adhere to the company's recruitment policies.
Excessive Waste generation	Soil and Visual impacts	Minimise littering on site and ensure that all labourers are trained in environmental awareness.	Waste Management Act	Throughout the Site establishment	Avoid	Avoid the excessive generation of general waste during this phase

		<p>Bins (sufficient number and capacity) to store general and hazardous produced on a daily basis shall be provided at each drilling site.</p> <p>The waste bins must be sealed to avoid, leakage of leachate material and must be waterproof so that rain water cannot enter into them.</p> <p>Bins shall be emptied on a weekly basis or if there is a nauseous smell coming from them or vectors are breeding within them.</p> <p>An integrated waste management approach shall be used, based on the principles of waste minimisation, reduction, re-use and recycling of materials.</p>				
OPERATION PHASE						
Exploration : Sampling, stockpiling, use of campsite and rehabilitation of the disturbed area						
Soils contamination, disruption of the Soil profile Disturbance of ecological	Soils, Land Use, Land Capability and natural vegetation	Ensure that drilling machinery construction vehicles should be are well maintain to avoid spillage of hydrocarbons, to avoid soil and ground water contamination	Rehabilitation in terms of MPRDA and NEMA principles. Operational control procedures (e.g. spill / leak handling).	Throughout operational phase	Control	Return as close as possible to pre-prospecting environment

systems through destruction of natural vegetation. Loss of Land use		<p>All oil spills will be remedied using approved methodologies</p> <p>Sumps and boreholes should be returned to pre-drilling conditions.</p> <p>All waste generated during drilling ties should be collected and disposed of at a suitable registered waste facility</p> <p>Retain all vegetation cover around drilling sites; the grass is to be mowed as part of site establishment.</p> <p>No waste material or litter shall be burnt or buried on site.</p> <p>Post operational phase, the land will be returned to its previous state in as much as possible.</p>	<p>Incident Reporting System;</p> <p>Environmental Inspections;</p> <p>Planned Maintenance System; water quantity (abstraction) monitoring; continued communication with surrounding landowners.</p>			
Establishment of campsite and drilling operation may result in contamination of surface water run-off by hydrocarbon fluids and sedimentation	Surface and water	<p>A buffer of 50m from watercourse and wetlands should be maintained during the all prospecting activities</p> <p>Excess water and mud from drilling sites should be stored in sumps that are sizeable enough to contain them</p> <p>Storm water generated around drilling sites should be diverted</p>	<p>Water management measures in compliance with NWA,(National Water Act) 1998 and GN 704, 1999.</p>	Throughout operational phase	Minimise	Maintain groundwater quality

		<p>away from natural water courses</p> <p>Ensure that prospecting activities do not impact negatively on the quality and quantity of groundwater used by surrounding occupants</p>				
Air pollution caused by vehicle emissions and dust	Air Quality	<p>Dust suppression should be practiced during the operational phase</p> <p>Construction vehicles should be regularly maintained in order to minimize greenhouse gas emission</p>	National Environmental Management Act Air Quality Act	Throughout the operational phase	Control and minimise	Maintain air quality
Wetland--destruction and loss of aquatic habitat	Aquatic and terrestrial components	<p>A buffer of 50m from wetlands and watercourses should be established during the operational phase.</p> <p>Remove or eradicate all alien invasive vegetation growing on stockpiles or in any area of the drilling site footprint.</p>	National Environmental Management Act National Environmental Management Waste Act National Water Act (NWA) National Environmental Management: Biodiversity Act (NEMBA)	Throughout the operational phase	Avoid	Protect aquatic and terrestrial ecosystems in as far as possible.

Noise impacts	Fauna and Adjacent landowners/ occupants	Provide employees with ear plugs Use equipment that produces minimal noise as far as possible Avoid working outside normal working hours (i.e. 08:00 to 17:00) and during weekends All machinery and equipment must be maintained in good working order, and fitted with approved and specified muffler systems. Compliance with local by-laws and regulations regarding the noise and hours of operation	National Noise Control Regulations SANS 10103:2008	Throughout the operational phase	Minimise	Minimal noise
Visual impacts	Neighbouring occupants	Visual screening methods could be used on site to reduce visual impacts. Lighting will be conducted in a manner that will reduce the visual impact at night times.	National Road Traffic Act	Throughout the operational phase	Control	Minimise visual impacts
Impacts on heritage features	Heritage features on-site	No heritage features must be destroyed or removed without a permit in terms of SAHRA. Should any heritage features or remains be discovered, work is to stop, the area is to be demarcated and a qualified Archaeologist is to be contacted	South African Heritage Resources Agency	Throughout the operational phase	Stop and avoid	Protect heritage features

		and contracted to evaluate the site and apply for the appropriate permit if needed. Once the permit has been obtained from SAHRA the archaeologist is then to supervise the removal or destruction of the item. Once it has been moved or destroyed works can continue.				
Health and safety impacts	Socio economic Employees and land occupants	Neighbouring occupants should be warned about any disruptions prior the commencement of the activity Ensure that health and safety measures are put in place to protect employees and neighbouring occupants Provide employees with personal protective Equipment (PPE)	Occupational Health and Safety Act	Throughout the operational phase	Avoid	Avoid health risks and injury incidents
Traffic impacts	Traffic movement	Vehicles that are moving to the site should only move during the day when the is less traffic in the road.	National Traffic Act	Throughout the operational phase	Avoid	Avoid traffic congestion
Introduction of weeds and alien invasive plants	Flora	All sites disturbed by site establishment activities must be monitored for exotic or invasive plant species and weeds.	NEM:BA CARA	Throughout the operational phase	Control and avoid	Control in order to avoid alien plants invasion

		<p>Site clearance will encourage the introduction of alien invasive plant species; The NK24 Enterprises Contractor should train the labourers on the removal and disposal of alien vegetation (Mechanical and Chemical).</p> <p>Chemical (herbicides) or mechanical removal may be used. If chemical methods are used the method of use is to be undertaken in accordance with manufacturer's specification for the weeds and this method and management is to be approved by the ECO</p> <p>Any eradicated exotic/invasive plant or weed vegetation must be removed from site and disposed of at an approved waste disposal facility or an alternative eradication method approved by the competent authority</p>				
Soil erosion	Soil	Erosion protection measures are to be undertaken. Daily erosion protection monitoring is to take place at each drilling site	Rehabilitation in terms of MPRDA and NEMA principles.	Throughout the operational phase	Control and Remedy	Ensure that soil erosion is minimised

		<p>prior to commencement of the daily works. If any erosion is identified it is to be remediated prior to the commencement of works.</p> <p>Daily erosion checks are to be undertaken on the sump area. If cracks or erosion is identified the side walls are to be battered back to ensure a safe environment for all.</p> <p>Drainage channels must be kept free draining at all times.</p> <p>No pooling of water will be allowed, drainage diversions must be provided to prevent scour of the site, and this is also to direct water away from the impacted area to prevent erosion.</p>	<p>General implementation of activities taking Biodiversity Act and its guidelines into account</p>			
Waste generation	Soil and Visual impacts	<p>Minimise littering on site and ensure that all labourers are trained in environmental awareness.</p> <p>Bins (sufficient number and capacity) to store general and hazardous produced on a daily basis shall be provided at each drilling site.</p>	<p>National Environmental Management: Waste Management Act</p>	Throughout the operational phase	Avoid	Avoid the excessive generation of general waste during this phase

		<p>The bins are to be vandal proof, sealed bins that cannot leak leachate material and waterproof that rain water cannot enter into them.</p> <p>Bins shall be emptied on a weekly basis or if there is a nauseous smell coming from them or vectors are breeding within them.</p> <p>An integrated waste management approach shall be used, based on the principles of waste minimisation, reduction, re-use and recycling of materials.</p>				
DECOMMISSIONING PHASE						
Removal of temporary infrastructure and final rehabilitation of disturbed areas						
Compaction and contamination of soils within the rehabilitation site.	Soil	<p>All vehicles and machinery used at the rehabilitation site must be kept in good working order.</p> <p>No repairs of vehicles or machinery will be conducted at the rehabilitation site unless it is emergency repairs, which will be conducted on protected ground.</p>	<p>Rehabilitation in terms of MPRDA and NEMA principles.</p> <p>General implementation of activities taking Biodiversity Act and its guidelines into account.</p>	Throughout the Decommissioning Phase	Avoid	<p>Rehabilitation of drilling sites shall be undertaken in line with closure objectives and in consultation with landowners.</p>

		Movement of vehicles and machinery should be limited to demarcated routes, which will be rehabilitated when no longer in use				
Re-instatement of soil productivity, land capability, land use and topographical patterns.	Soil	Ensure that the soil in the vicinity of the rehabilitation site is not detrimentally impacted. All the waste from demolition must be collected from site for disposal. Once the area is shaped correctly the compacted areas are to be ripped at 300mm and topsoil is to be replaced. Areas that have not had topsoil striped are to be monitored for alien plant growth and vegetation recovery. If after a year the vegetation has not recovered the area is to be hand seeded with a Highveld indigenous grass	Rehabilitation in terms of MPRDA and NEMA principles. General implementation of activities taking Biodiversity Act and its guidelines into account.	Throughout the Decommissioning Phase	Avoid	Rehabilitation of drilling sites shall be undertaken in line with closure objectives and in consultation with landowners.
Pollution of surface water environment	Surface water	Ensure that the rehabilitation of the site does not have detrimental impacts on the surface water environment.	The surface water leaving the rehabilitation site will comply with the Department of Water and Sanitation target	Throughout the Decommissioning Phase	Avoid	Rehabilitation of drilling sites shall be undertaken in line with closure objectives and in

			of water quality parameters.			consultation with landowners.
Potential injuries to fauna and residents due to Geological instability.	Geology and social	Ensure that all drill holes have been refilled with rocks and or cement to avoid potential injuries to fauna and residents.	Rehabilitation in terms of MPRDA and NEMA principles Health and safety Act	Decommissioning Phase	Avoid	Rehabilitation of drilling sites shall be undertaken in line with closure objective
Air pollution from rehabilitation site.	Air Quality	Where necessary, wet suppression will be conducted at areas with excessive dust emissions. Vehicles and machinery will be well maintained. The traffic volumes and speed within the rehabilitation site will be controlled	National Environmental Management Air Quality Act	Throughout the Decommissioning Phase	Avoid	Rehabilitation of drilling sites shall be undertaken in line with closure objectives and in consultation with landowners.
Migration of animal life due to disturbance caused proposed project	Fauna	Use sites with most degraded environment for the site development. Trapping and killing of fauna will be prohibited at the prospecting site.	General implementation of activities taking Biodiversity Act and its guidelines into account.	During Site establishment	Control through visual monitoring and inspection	Minimise impact on fauna
Generated noise from the rehabilitation site	Noise	Smaller or less disruptive equipment should, where possible, be used when working near receptors. Equipment will be well maintained and fitted with the	National Noise Control Regulations, SANS10103:2008 guidelines.	Throughout the Decommissioning Phase	Avoid	Rehabilitation of drilling sites shall be undertaken in line with closure objectives and in

		correct and appropriate noise abatement measures.				consultation with landowners. Ensure that the rehabilitation activities do not have detrimental impacts on people.
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5. FINANCIAL PROVISION

5.1 Determination of the amount of Financial Provision

A total of R 164 366.00 is required to both manage and rehabilitate the environment in respect of rehabilitation, the table below shows the Quantum for provision of rehabilitation of disturbed area by proposed prospecting activities. Elsiclox (Pty) Ltd must update and review the quantum of the financial provision annually.

Table 14: Quantum for Elsiclox (Pty) Ltd

CALCULATION OF THE QUANTUM							
Applicant: Elsiclox (Pty) Ltd		Ref: NC 30/5/1/1/2/13097 PR					
Evaluators: Lushika Services							
No.	Description	Unit	A Quantity	B Master Rate	C Multiplication factor	D Weighting factor 1	E=A*B*C*D Amount (Rands)
1	Dismantling of processing plant and related structures (including overland conveyors and powerlines)	m3	0	14,71	1	1	0
2 (A)	Demolition of steel buildings and structures	m2	0	204,96	1	1	0
2 (B)	Demolition of reinforced concrete buildings and structures	m2	0	302,05	1	1	0
3	Rehabilitation of access roads	m2	100	36,68	1	1	3668
4 (A)	Demolition and rehabilitation of electrified railway lines	m	0	355,99	1	1	0
4 (B)	Demolition and rehabilitation of non-electrified railway lines	m	0	194,18	1	1	0
5	Demolition of housing and/or administration facilities	m2	0	408,93	1	1	0
6	Opencast rehabilitation including final voids and ramps	ha	0	214 888,54	1	1	0
7	Sealing of shafts adits and inclines	m3	0	110,03	1	1	0
8 (A)	Rehabilitation of overburden and spoils	ha	0	143 259,03	1	1	0
8 (B)	Rehabilitation of processing waste deposits and evaporation ponds (non-polluting potential)	ha	0	178 426,53	1	1	0
8 (C)	Rehabilitation of processing waste deposits and evaporation ponds (polluting potential)	ha	0	518 235,21	1	1	0
9	Rehabilitation of subsided areas	ha	0	119 957,86	1	1	0
10	General surface rehabilitation	ha	1	113 485,31	1	1	113485,31
11	River diversions	ha	0	113 485,31	1	1	0
12	Fencing	m	0	126,45	1	1	0
13	Water management	ha	0	43 150,31	1	1	0
14	2 to 3 years of maintenance and aftercare	ha	0	15 102,61	1	1	0
15 (A)	Specialist study	Sum	0			1	0
15 (B)	Specialist study	Sum				1	0
						Sub Total 1	117153,31
1	Preliminary and General		14058,3972		weighting factor 2 1		14058,3972
2	Contingencies				11715,331		11715,331
						Subtotal 2	142927,04
						VAT (15%)	21439,06
						Grand Total	164366

5.2 Describe the closure objectives and the extent to which they have been aligned to the baseline environment described under the Regulation.

For a prospecting operation such as this, the primary closure and environmental objectives are to:

- Minimise the area to be disturbed and to ensure that the areas disturbed during the prospecting activities are rehabilitated and stable, as per the commitments made in this EMP.
- Sustain the pre-prospecting land use.
- To record and communicate the results of the monitoring programme during decommissioning to the participating stakeholders.

5.3 Confirm specifically that the environmental objectives in relation to closure have been consulted with landowner and interested and affected parties.

The environmental objectives in relation to closure will be consulted with the farmers and affected parties. It will be explained that should the prospecting yield negative results, then the end use for area will revert to its pre-prospecting land use (minutes to be incorporated on the final report). The end-use of the area will therefore not be changed by the prospecting operations.

5.4 Provide a rehabilitation plan that describes and shows the scale and aerial extent of the main mining activities, including the anticipated mining area at the time of closure

Table 15: Rehabilitation Plan

ASPECT/ IMPACT	REHABILITATION MEASURE	MONITORING FREQUENCY & RESPONSIBILITY
Removal of site structures	Clear and completely remove from site all site plant equipment, storage containers, signage, temporary services, fixtures and any other temporary works; and Ensure that all access roads utilised during site establishment (which are not earmarked for closure and rehabilitation) are returned (as far as possible) to their state prior to site establishment.	Once-off; Elsiclox (Pty) Ltd
Vegetation clearing/Replanting	Remove any emerging alien and invasive vegetation to prevent further establishment; All planting work is to be undertaken by suitably qualified personnel making use of the appropriate equipment; Transplant during the winter (between April and September); and Plant indigenous plants to minimise the spread of alien and invasive vegetation.	When re-vegetation is done and in blooming season; Elsiclox (Pty) Ltd. or sub-contractor appointed
Topsoil replacement	Replace and redistribute stockpiled topsoil together with herbaceous vegetation, overlying grass and other fine organic matter in all disturbed areas of the prospecting site, including temporary access	Once-off; Elsiclox (Pty) Ltd.

	<p>routes and roads. Replace topsoil to the original depth (i.e. as much as was removed prior to site establishment).</p> <p>Prohibiting the use of topsoil suspected to be contaminated with the seed of alien vegetation. Alternatively, the soil is to be sprayed with specified herbicides.</p> <p>Where local soil has poor drainage, broken rock (Approx. 75 mm in diameter) must be placed to a depth of 150mm at the bottom of the planting hole prior to planting and backfilling with approved plant medium mixture.</p>	
Waste and Rubble Removal	Remove from site all domestic waste and dispose of in the approved manner at a registered waste disposal site.	Once-Off; Elsiclox (Pty) Ltd.
Solid and Hazardous Waste	<p>Dispose of all hazardous waste not earmarked for reuse, recycling or resale at a registered hazardous waste disposal site.</p> <p>Remove from site all temporary fuel stores, hazardous substance stores, hazardous waste stores and pollution control sumps. Dispose of hazardous waste in the approved manner.</p> <p>Do not hose oil or fuel spills into a storm water drain or sewer, or into the surrounding natural environment.</p> <p>Dispose of all visible remains of excess cement and concrete after the completion of tasks. Dispose of in the approved manner (solid waste concrete may be treated as inert rubble, but wet cement and liquid slurry, as well as cement powder must be treated as hazardous waste).</p>	Once-off; Elsiclox (Pty) Ltd
Erosion protection	<p>Protect all areas susceptible to erosion and ensure that there is no undue soil erosion resultant from activities within and adjacent to the operational site.</p> <p>Retain shrubbery and grass species wherever possible.</p> <p>Perform regular monitoring and maintenance of erosion control measures.</p>	After rainfall events; Elsiclox (Pty) Ltd or sub-contractor appointed

5.5 Explain why it can be confirmed that the rehabilitation plan is compatible with the closure objectives

Elsiclox (Pty) Ltd is required to make the prescribed financial provision for the rehabilitation or management of negative environmental impacts. If Elsiclox (Pty) Ltd fails to rehabilitate or manage any negative impact on the environment, the DMR may, upon written notice to the company, use all or part of the financial provision to rehabilitate or manage the negative environmental impact in question. Elsiclox (Pty) Ltd will specify that the appointed contractor is required to comply with all the environmental measures specified in the EMP. This will include avoiding unnecessary disturbance of natural vegetation and the rehabilitation of each drill site, immediately after drilling has been completed. All tracks to

the drill sites must be rehabilitated at the end of the prospecting programme. The financial provision provides for the final checking of all sites before site clearance.

5.6 Calculate and state the quantum of the financial provision required to manage and rehabilitate the environment in accordance with the applicable guideline

The quantum of financial provision for the rehabilitation of negative environmental impact was determined in accordance with the National Environmental Management Act, 1998 (Act No.107 of 1998): Regulation (GNR 940) pertaining to the financial provision for the rehabilitation, closure and post closure of prospecting exploration, mining or production operations (DEA,2014).

A total amount of R 164 366.00 will be set aside for rehabilitation purposes as estimated in line with the prospecting work programme.

5.6.1 Confirm that the financial provision will be provided as determined.

Elsiclox (Pty) Ltd undertakes to provide financial provision for the implementation of the rehabilitation plan.

6. Mechanisms for monitoring compliance with and performance assessment against the environmental management programme and reporting thereon, including

- a) Monitoring of Impact Management Actions
- b) Monitoring and reporting frequency
- c) Responsible persons
- d) Time period for implementing impact management actions

Table 16: Mechanism for monitoring compliance

SOURCE ACTIVITY MONITORING AND REPORTING	IMPACTS REQUIRING MONITORING PROGRAMMES	FUNCTIONAL REQUIREMENTS FOR MONITORING	ROLES AND RESPONSIBILITIES	FREQUENCY AND TIME PERIODS FOR IMPLEMENTING IMPACT MANAGEMENT ACTIONS
Site Establishment.	<ul style="list-style-type: none"> Dust Noise removal of vegetation disruption of animal life habitat destruction loss of geology change in topography 	<ul style="list-style-type: none"> Daily dust suppression Monthly dust bucket monitoring 	Geologist and Project Manager	Daily and monthly
Traffic management	<ul style="list-style-type: none"> Dust noise animal life disruption Traffic Congestion 	<ul style="list-style-type: none"> Monitor dust fallout levels monthly and Noise level Monitor the time frames in which heavy vehicles travel on main roads and national roads. 	Geologist and Project Manager	Monthly and when necessary
Ablution Facility	<ul style="list-style-type: none"> Land contamination Water contamination health hazard 	<ul style="list-style-type: none"> service the toilet facility monitor water quality 	Geologist and Project Manager	When necessary and monthly
Existing/Access Routes	<ul style="list-style-type: none"> dust animal life disruption Monitor dust. 	<ul style="list-style-type: none"> Monitor dust fall out levels Monitor speed on the road 	Geologist and Project Manager	Monthly and when necessary

6.1 Indicate the frequency of the submission of the performance assessment/ environmental audit report.

Regular monitoring of all the environmental management procedures and mitigation measures shall be carried out by Elsiclox (Pty) Ltd in order to ensure that the provisions of this EMP are adhered to. Formal monitoring and performance assessment of the EMP will be undertaken on a monthly basis.

7. ENVIRONMENTAL AWARENESS

7.1 Manner in which the applicant intends to inform his or her employees of any environmental risk which may result from their work

The following Environmental Awareness Training will be implemented by Elsiclox (Pty) Ltd in order to inform employees and contractors of the environmental risk that may result from their work, or the risk of their interaction with the sensitive environment. The training will be conducted as part of the induction process for all new employees (including contractors) that will perform work in terms of the proposed activities. Proof of all training provided must be kept on-site. The Environmental Awareness Training will, as a minimum cover the following topics.

Table 17: Environmental Awareness Plan

Surface and groundwater	<ul style="list-style-type: none">• Risks to surface and groundwater, e.g. fuel and chemical handling and further risks of erosion or damage to riparian vegetation.• How incidents should be reported, and emergency requirements.• The importance to reuse water and to prevent spillages.
Cultural Heritage	<ul style="list-style-type: none">• To respect all cultures and believes.• How to report any sightings of heritage importance as identified during operation activities (e.g. fossils)
Fauna	<ul style="list-style-type: none">• Overview of the fauna found on/around site and the uniqueness thereof.• Mitigation measures that all contractors and employees need to abide by.• No contractor or personnel allowed to catch or kill any species, and how any sightings should be reported if further actions are required (e.g. to catch and release).
Flora	<ul style="list-style-type: none">• Overview of the flora diversity on site, and the rare and endangered nature thereof.• Measures taken by the company to protect species.

	<ul style="list-style-type: none"> No contractor or personnel allowed to remove, harvest or destroy any flora species unless clearly instructed based on the operational plans.
Waste management	<ul style="list-style-type: none"> Measures to avoid waste generation and to participate in waste minimisation/reduction.
Traffic strategies	<ul style="list-style-type: none"> To stay on designated roads and not create new roads on areas that will not be used for prospecting purposes. To be aware of the fauna species and to be on the lookout and avoid collisions.
Emergency Preparedness and Response	<ul style="list-style-type: none"> How to report any emergency or incident. Incident and emergency reporting requirements
General rules and conduct	<ul style="list-style-type: none"> Respect for the sensitive environment. Do not litter. Respect for each other and for different cultures. Safety and health requirements

7.2 Manner in which risks will be dealt with in order to avoid pollution or the degradation of the environment

All employees must be provided with environmental awareness training to inform them of any environmental risks which may result from their work and the manner in which the risks must be dealt with in order to avoid pollution or the degradation of the environment. Employees should be provided with environmental awareness training before prospecting operations start. All new employees should be provided with environmental awareness training Induction courses will be provided to all employees by a reputable trainer.

8. SPECIFIC INFORMATION REQUIRED BY THE COMPETENT AUTHORITY

No risks have been identified other than those that have been identified within this document, these are to be communicated to all contractors and all contractors are to be provided with a copy of the approved EMP. Environmental training needs for each section should to be identified and addressed to ensure environmental management is part of day to day operations. The environmental risk responsibilities guide the training requirements of each individual. The responsibility for each level of management according to the Integrated Risk Management and ISO14001 role descriptions are. Environmental training recommended for the different levels of management guide the training needs identification process. This is a minimum guideline and any additional training can be added where

section specific issues or high-risk items require training and awareness It is the responsibility of the line manager to ensure environmental training needs for individual staff members are identified, agreed to, facilitated and tracked.

9. UNDERTAKING

a) The EAP herewith confirms

- i. the correctness of the information provided in the reports
- ii. the inclusion of comments and inputs from stakeholders and I&APs ;
- iii. the inclusion of inputs and recommendations from the specialist reports where relevant; and
- iv. that the information provided by the EAP to interested and affected parties and any responses by the EAP to comments or inputs made by interested and affected. Parties are correctly reflected herein.



Signature of the environmental assessment practitioner:

LUSHIKA SERVICES (PTY) LTD

Name of company:

AUGUST 2022

Date:

-END-