BASIC ASSESSMENT REPORT AND ENVIRONMENTAL MANAGEMENT PROGRAMME REPORT FOR THE APPLICATION OF A PROSPECTING RIGHT WITHOUT BULK SAMPLING SITUATED ON THE FARMS MATJESFONTEIN NO. 97, BLAAUWBLOEMETJES KEEP NO. 95, AND DE VREEDE NO. 133 IN THE ADMINISTRATIVE DISTRICT OF SUTHERLAND, NORTHERN CAPE

FOR
SUNNY MINING (PTY) LTD

DMR REF. NO. NC 12558 PR

COMPILED BY: ENGEDI MINERALS AND ENERGY (PTY) LTD

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mineral resources

Department:
Mineral Resources
REPUBLIC OF SOUTH AFRICA

BASIC ASSESSMENT REPORT

ANDENVIRONMENTAL MANAGEMENT PROGRAMME REPORT

SUBMITTED FOR ENVIRONMENTAL AUTHORISATIONS IN TERMS OF THE NATIONAL ENVIRONMENTAL MANAGEMENT ACT, 1998 AND THE NATIONAL ENVIRONMENTAL 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).

NAME OF APPLICANT: SUNNY MINING (PTY) LTD

PROJECT NAME: MATJESFONTEIN NO. 97, BLAAUWBLOEMETJES KEEP NO. 95, AND DE VREEDE NO. 133

DATE: 27 OCTOBER 2020

CELL NO: 076 453 7871

FAX NO: 086 675 6889

POSTAL ADDRESS: PO Box 8936, Edenglen

PHYSICAL ADDRESS: N/A

FILE REFERENCE NUMBER SAMRAD: NC 30/5/1/1/2/ 12558 PR

ABBREVIATIONS USED IN THIS REPORT

DMR	:	Department of Mineral Resources
DRPW	:	Department of Roads and Public Works
DWS	:	Department of Water and Sanitation
ECO	:	Environmental Control Official
EIA	:	Environmental Impact Assessment
EMP	:	Environmental Management Programme
NC	:	Northern Cape
IAPs	:	Interested and Affected Parties
LOM	:	Life of Mine
MPRDA	:	Minerals and Petroleum Resources Development Act
NEMA	:	National Environmental Management Act
SAHRA	:	South African Heritage Resources Agency

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 other the mining "will not result in unacceptable pollution, ecological degradation or damage to the environment".

Unless an Environmental Authorization can be granted following the evaluation of an Environmental Impact Assessment and an Environmental Management Program report in term so 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 authorization for listed activities triggered by an application for a right or a permit submitted in the exact format of, and provide all 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 Authorization 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 the sites and the risk of impact of the proposed activity and technology alternatives on 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 –

   a. Can be reversed

   b. May cause irreplaceable loss of resources; and

   c. 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.

PART A

SCOPE OF ASSESSMENT AND BASIC ASSESSMENT REPORT

3. Contact details of

a. Details of

i. Details of the EAP

Name of the Practitioner: Tshimangadzo Mulaudzi

Tel No.:079 362 6046

Fax No.:086 556 2568

Email address:mulaudzit@engedime.com

ii. Expertise of the EAP

1) **The qualifications of the EAP** (with evidence)

Tshimangadzo hold an Honours Degree in Mining and Environmental Geology from the University of Venda. He has since been working as an environmental geologist and environmental practitioner. He has 5 years' experience in Environmental Science, 3 years' experience in Geology, and 5 years' experience in public participation.

2) **Summary of the EAP's past experience** (in carrying out the Environmental Impact Assessment Procedure)

Tshimangadzo has been carrying out Environmental Impact Assessment Procedure since 2012, managing a construction company called Tshedza Concrete Art in Limpopo Province, Makhado town.

In 2014, he joined a large mining consulting company in Kimberly called Breeze Court Investments 47 (Pty) Ltd (Geologist and Mining Consulting firm). This is where Mr Mulaudzi acquired in-depth experience and know how in the mining consulting business by assisting the large to small scale mining companies to obtain prospecting right, mining rights, prospecting rights, technical co-operate permits, reconnaissance permits, exploration rights, production rights, integrated water use license, and environmental authorisation among other licenses.

Tshimangadzo has five years working experience in environmental management, geology and public participation process.

b. Location of the overall Activity.

Table 1: The Location of the Proposed Activity.

Farm name:	1. Matjesfontein No. 97, 2. Blaauwbloemetjes Keep No. 95, and 3. De Vreede No. 133
Application area (Ha):	18 072 Ha
Magisterial district:	Sutherland
Distance and direction from nearest town:	Approximately 10.6 km south-east of Sutherland
21 digit Surveyor General Code for each farm portion:	See Table 2 below.

Table 2: Details of the Proposed Site.

FARM NAME	FARM PORTION	21 SG CODE
Matjesfontein No. 97	1	C07200000000009700001
	Remaining extent	C07200000000009700000
Blaauwbloemetjes Keep No. 95	1	C07200000000009500001
	2	C07200000000009500002
	3	C07200000000009500003
	4	C07200000000009500004
	Remaining extent	C07200000000009500000
De Vreede No. 133	Remaining extent	C07200000000013300000

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

APPLICANT

SUNNY MINING (PTY) LTD

PLAN PREPARED IN ACCORDANCE WITH

REGULATION 2.2

OF THE MPRDA (ACT 28 OF 2002)

SKETCH PLAN FOR
PROSPECTING RIGHT

OVER THE AREA LETTERED
A, B, C, D, E, F, G, H, I, J, K, L, M, N, AND O

IN EXTENT 18 072 HA

SITUATED ON

MATJESFONTEIN 97, BLAAUWBLOEMETJES KEEP 95,

AND DE VREEDE 133

ADMINISTRATIVE DISTRICT OF SUTHERLAND
PROVINCE: NORTHERN CAPE

SURVEYED SYSTEM WGS: DD

CO-ORDINATES: WG 25

NAME	E	S
A.	20.7667981°	-32.4279747°
B.	20.7713544°	-32.4491497°
C.	20.7419156°	-32.5033047°
D.	20.7740489°	-32.5376356°
E.	20.7673919°	-32.5655125°
F.	20.7908778°	-32.5807819°
G.	20.8452111°	-32.5711675°
H.	20.8668594°	-32.5457864°
I.	20.8530400°	-32.4992500°
J.	20.8236922°	-32.4970925°
K.	20.8384815°	-32.4939258°
L.	20.8424278°	-32.4839339°
M.	20.9337047°	-32.4511072°
N.	20.9548731°	-32.4143861°
O.	20.8303167°	-32.4292547°

PLAN APPROVED: .....

REGIONAL MANGER: NORTHERN CAPE PROVINCE
DATE: .....

DRAWN AND COMPILED BY: ENGEDI MINERALS AND ENERGY (PTY) LTD MINING CONSULTANTS

....

SIGNATURE DATE

The Locality Map of the Farm Matjesfontein 97, Blaauwbloemetjes Keep 95, and De Vreede 133

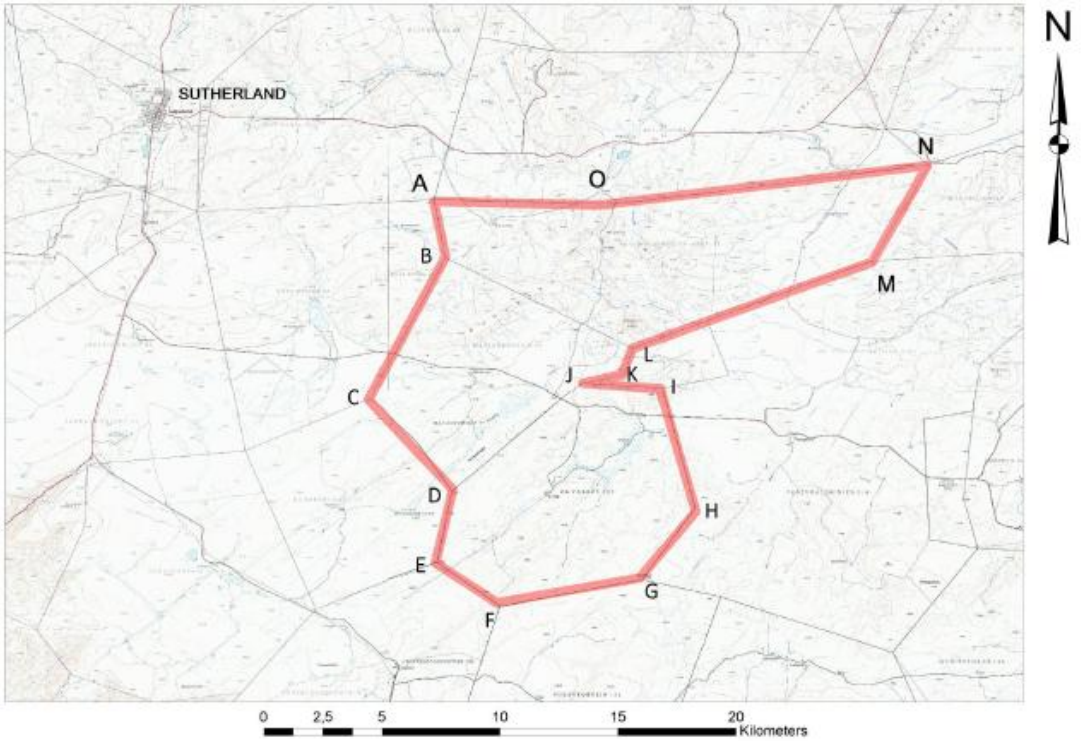


Figure 1: The locality Map.

c. Description of the scope of the proposed overall activity

(Provide a plan drawn to a scale acceptable to the competent authority but not less than 1: 10 000 that shows the location, and area (hectares) of all the aforesaid main and listed activities, and infrastructure to be placed on site)

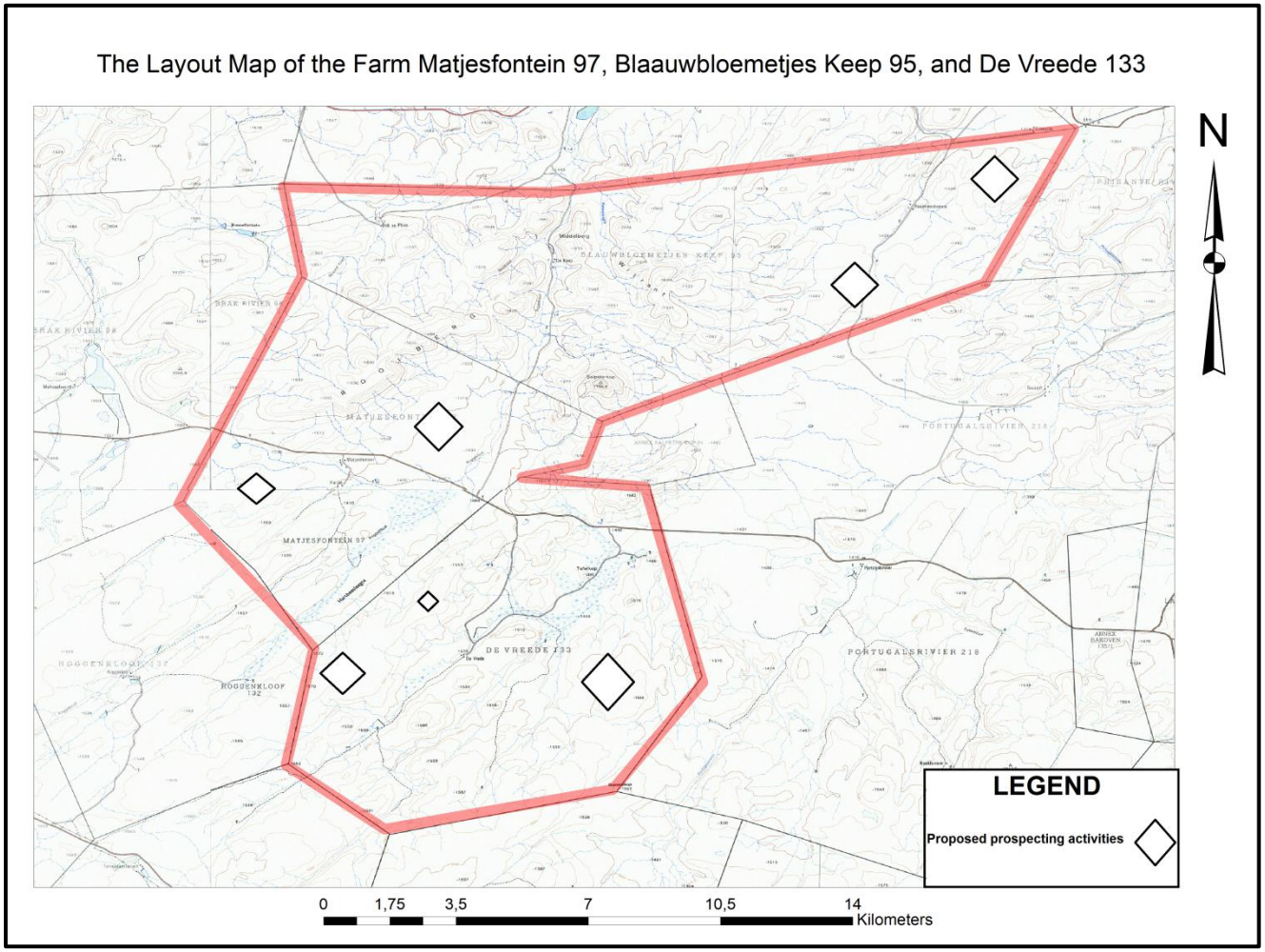


Figure 2: The area where the listed activated will take place.

i. Listed and specified activities

Table 3: Listed and specified activities

NAME OF ACTIVITY **(E.g. For prospecting –** drill site, site camp, ablution facility, accommodation, equipment storage, sample storage, site office, access route **etc…** **E.g. for mining** – excavation, blasting, stockpiles, discard dumps or dams, loading, hauling and transport, water supply dams and pitting and trenching, accommodation, offices, ablution, stores, workshops, processing plant, storm water control, berms, roads, pipelines, power lines, conveyors, **etc…**)	**AERIAL EXTENT OF THE ACTIVITY** (Ha or m2)	**LISTED ACTIVITY** (Mark with an X where applicable or affected**)**	**APPLICABLE LISTING NOTICE (*GNR 544, GNR 545 OR GNR 546)***
Establishment of prospecting site camps comprising of the drill site with sumps and parking for the drill rig, parking, equipment storage, geologist logging area, water storage, waste bins and portable toilets.	18 065 Ha	X	GNR 324 (previously GNR 984 &544) – Listing Notice 1 Activity No. 20

ii. **Description of the activities to be undertaken** (Describe Methodology or technology to be employed, including the type of commodity to be prospected/mined and for a linear activity, a description of the route of the activity)

This application is for a Prospecting Right

Summary:

Prospecting activities will be conducted in phases as discussed below. The level of work to be completed during each phase will depend on the results of the preceding phase. The prospecting operation will commence with review of all available literature from which a mapping programme will be designed. During mapping, test pits will be excavated to confirm the occurrence of lithologies associated with the mineralized reefs. Mapping and pitting will be followed by discovery drilling of a few tantalum, niobium, thorium, fluospar, barite, and rare earths core boreholes aimed at establishing the occurrence and depth of the mineralized ore body. Thereafter, a preliminary economic assessment will be conducted.

Should the assessment positive, further drilling will be conducted to define the resource. The final stage will be a pre-feasibility study to determine whether it will be economic to mine the resource.

Phase 1

Literature review

Initial Phase 1 work will include the collection and interpretation of all available data and the compilation of a Geographic Information Systems (GIS) database. The information to be collected will include aerial photos, ortho-photos, aeromagnetic data, topo-cadastral maps, geological maps, results of historic exploration programmes, and any other published literature and maps. The desktop study will aid in compiling a preliminary geological model of the area to be utilized in the planning geological mapping and sighting of drill holes.

Mapping

Mapping will involve ground thruthing the occurrence of the ore body within the proposed prospecting area; as shown in published geological maps. The Main Zone will be the target zone as it overlies the Critical Zone in which the ore body occurs. Mapping is completed that

meaningful structural and geological data may be derived from it and to confirm that the desktop study is accurate.

Test pitting

Test pitting will be conducted simultaneously with mapping to confirm the presence of Main Zone lithologies. The depth of test pits are likely to vary as all pits will be dug until natural outcrops are exposed. About five test pits each four square meters (4 m^2) in size will be excavated.

Phase 2

Discovery drilling and sampling

The results of the Phase 1 will be used to assist in the ideal location of ten tantalum, niobium, thorium, fluospar, barite, and rare earths drill holes at maximum depth of 1000 m. Initially, only four of the ten planned boreholes will be drilled. The objective of the initial drilling will be to confirm the occurrence of the Critical Zone within the proposed prospecting area. As a result of the known structural complexity of the area in which the proposed prospecting areas is located, initial boreholes will be widely spaced in order to increase the understanding of the overall geology. The expected depth of the Critical Zone will be guide by initial geological interpretation preexisting data, mapping and test pitting.

Sample analysis

The drill core will be sampled where a mineralized section is intersected. The core will be split into two halves, with one half of the core taken for assay purposes and the other half being retained. Each sample will be measured and weighed and the sample lengths will be recorded before dispatch for assays at a South African National Accreditation System (SANAS) accredited laboratory. Samples will be analyzed.

Phase 3

Preliminary economic assessment

A preliminary economic assessment is a study conducted to determine whether a project has the potential to be viable. At this stage, the mineralization, regardless of its quantity and

quality, is always considered to be a mineral resource. This study is generally based on industry standards rather than derived from detailed site-specific data.

Phase 4

Resource drilling and sampling

Subsequent to Phase 2 drilling, the results will be used to design a systematic drilling programme aimed at delineating a Mineral Resource on the Proposed Prospecting Area. The number of boreholes will depend greatly of the results of Phase 2 drilling; a minimum of five is planned thus far. This programme will be more focused more on parts on which the ore body were intersected.

Phase 5

Pre-feasibility study

The pre-feasibility and feasibility studies are more detailed. By the time a decision is made to proceed with a pre-feasibility study, a preliminary mineral resource report has been finalized and an ore body model demonstrating its shape, tones, and grade is available. A resource cannot be converted to a reserve unless it backed up by at least a pre-feasibility study. Their results will show with more certainty whether the project is viable. At this point, the mineral resources, or a portion thereof, becomes a mineral reserve.

The activities associated with the Prospecting Work Programme (PwP.) will be scheduled over a period of 5 years.

d. Policy and Legislative Context

Table 4: Legislation Applicable to the Application.

APPLICABLE LEGISLATION AND GUIDELINES USED TO COMPILE THE REPORT (a description of the policy and legislative context within which the development is proposed including an identification of all legislation, policies, plans, guidelines, spatial tools, municipal development planning frameworks and instruments that are applicable to this activity and are to be considered in the assessment process)	REFERENCE WHERE APPLIED	HOW DOES THIS DEVELOPMENT COMPLY WITH AND RESPOND TO THE LEGISLATION AND POLICY CONTEXT (E.g. in terms of the National Water Act a Water Use License has/has not been applied for)
National Environmental Management Act (NEMA), No. 107 of 198, as amended	Section 24	In terms of the National Environmental Management Act, an application for an Environmental Authorisation has been applied for.
Regulation 982. National Environmental Management Act (Act No. 107 of 1998): Environmental Impact Assessment Regulations, 2014	Regulation 19	In terms of the NEMA EIA Regulations a Basic Assessment Report (BAR) and Environmental Management Programme (EMPr) were prepared to submit to the competent authority.
Regulation 983. National Environmental Management Act (Act No. 107 of 1998): Listing	Regulation 20	In terms of NEMA EIA Regulations R.983, Listing notice 1, the activity triggers regulation 21 which refers to

notice 1: List of activities and competent authorities identified in terms of sections 24(2) and 24D		a prospecting right application and therefore needs an Environmental Authorizations to proceed as well as follow procedures as prescribed in regulation 19 of R.982 (EIA Regulations, 2014).
Mineral and Petroleum Resources Development Act (Act No. 28 of 2002)	Section 16	In terms of the MPRDA, any person who wishes to apply for a prospecting right must lodge the application in the prescribed manner.
Mineral and Petroleum Resources Development Amendment Act (Act No. 49 of 2008)	Section 12	In terms of the MPRDA, any person who wishes to apply for a prospecting right must simultaneously apply for an environmental authorisation and must lodge the application to requirements contemplated by competent authority.

e. Need and desirability of the proposed activities. (Motivate the need and desirability of the proposed development including the need and desirability of the activity in the context of the preferred location)

Exploration work is very important in coming up with a decision to open a mine. The planned surface work including drilling is important to be done on rocks that have potential to host the minerals to be explored.

Prospecting activities are needed to:

1. Confirm and obtain additional information concerning potential targets through non-invasive activities (e.g. desktop studies and ground geophysical surveys) and invasive (e.g. drilling) activities.
2. Assess if the resource can be extracted through future prospecting in an environmentally socially and economically viable manner.

Should prospecting activities prove that there are feasible minerals to allow for prospecting, a new mine may be developed which would generate extensive employment opportunities in an area where employment is needed.

f. Motivation for the overall preferred site, activities and technology alternative.

The study area has been transformed to some degree. Alternative land uses for the site would include grazing, farming activities. However, the study area is mineralised by tantalum, niobium, thorium, fluospar, barite, and rare earths which will be utilised to improve social and economic environments. Through implementing good practice environmental management measures and mitigation measures, it will ensure that both human and environment benefit from the development.

No location alternatives are applicable to this project since the tantalum, niobium, thorium, fluospar, barite, and rare earths and other minerals as stated above is contained in the proposed prospecting area. Locating the development to another area will result in the

minerals possibly not being found and the economy and society not benefitting from future proposed prospecting activities.

Full description of the process followed to reach the proposed preferred alternatives within the site.

NB!!! – This section is about the determination of the specific site layout and the location of infrastructure and activities on site, having taken into consideration the issues raised by interested and affected parties, and the consideration of alternatives to the initially proposed site layout.

i. Details of the development footprint alternatives considered.

With reference to the site plan provided below and the location of the individual activities on site, provide details of the alternatives considered with respect to:

- **a.** The property on which or location where it is proposed to undertake the activity;
- **b.** The type of activity to be undertaken;
- **c.** The design or layout of the activity;
- **d.** The technology to be used in the activity;
- **e.** The operational aspects of the activity; and
- **f.** The option of not implementing the activity

No alternatives are applicable to this project since the tantalum, niobium, thorium, fluospar, barite, and rare earths as stated above are contained in the proposed prospecting area. Locating the development to another area will result in the ore possibly not being found and the economy and society not benefitting from future proposed prospecting activities.

ii. Details of the Public Participation Process Followed (Describe the process undertaken to consult interested and affected parties including public meetings and one on one consultation. NB the affected parties must be specifically consulted regardless of whether or not they attend public meetings. Information to be provided to affected parties must include sufficient

detail of the intended operation to enable them to assess what impact the activities will have on them or on the use of their land).

Definitions:

'consultation' means a two way communication process between the applicant and the community or interested and affected party wherein the former is seeking, listening to, and considering the latter's response, which allows openness in the decision making process.

'community' means a group of historically disadvantaged persons with interest or rights in a particular area of land on which the members have or exercise communal rights in terms of an agreement, custom or law: Provided that, where as a consequence of the provisions of the Act negotiations or consultations with the community are required, the community shall include the members or part of the community, directly affected by prospecting or mining, on land occupied by such members or part of the community.

'Interested and affected' parties include, but are not limited to; –

- Host Communities
- Landowners (Traditional and Title Deed owners)
- Traditional Authority
- Land Claimants
- Lawful land occupier
- The Department of Land Affairs,
- Any other person (including on adjacent and non-adjacent properties) whose socio-economic conditions may be directly affected by the proposed prospecting or mining operation
- The Local Municipality,
- The relevant Government Departments, agencies and institutions responsible for the various aspects of the environment and for infrastructure which may be affected by the proposed project.

The following I&APs were contacted:

- Land owner/s
- Northern Cape Department of Economic Development, Tourism, Environmental Affairs, and Small Business;
- Chief Director: Department of Rural Development and Land Reform (Northern Cape);
- Karoo Hoogland Local Municipality– Municipal Office;
- Namakwa District Municipality– Municipal Office;
- Department of Water and Sanitation; and
- Other relevant parties or departments.

The identified I&APs were provided with information regarding the applied proposed prospecting. The final location of the planned excavations will be decided in consultation with the landowners during mining. All comments from the identified I&APs will be noted and taken into consideration.

After the directly affected land owner has been identified, these parties were consulted telephonically, per email or personally (whichever method is most convenient for the party concerned).

The public participation process mainly comprises engagement with Interested and Affected Parties (I&APs) and is of utmost importance in any environmental assessment process. The public participation process, *inter alia*, involves the following:

- Inform, raise awareness, educate and increase understanding of a broad range of environmental issues that might be arise with the proposed extension in the size of mining operation.
- Establish lines of communication between stakeholders, I&APs and the project team.
- Provide opportunity to all parties for the exchange of information and expression of views and concerns.

- Obtain contributions of stakeholders and I&APs and ensure that all views, issues, concerns and queries raised are fully documented.
- Identify all the significant issues associated with the proposed extension of project.

Engedi Minerals and Energy was appointed by **Sunny Mining (Pty) Ltd** as the independent consultant to conduct the public participation process as part of the Basic Assessment Report and Environmental Management Programme Report. As stipulated in Section 16 (5) (b) of the MPRDA (Act 28 of 2002) as amended by the MPRDA (Act 49 of 2008) and Regulations, Interested and Affected Parties (I&APs) need to be notified and consulted with, as part of a prospecting right application and extension thereof.

The public participation process aims to provide I&APs with objective information in order to assist them to:

- Raise issues of concern and make suggestions for enhanced benefits;
- Contribute local knowledge and experience;
- Verify that their issues have been captured;
- Verify that their issues have been considered; and
- Comment on the findings of the EMP.

An e-mail explaining the project and the background information will be sent to all other I&APs introducing the project. Specifically, the Northern Cape Department of Economic Development, Tourism, Environmental Affairs, and Small Business responded that **Engedi Minerals and Energy (Pty) Ltd** does not need to send them any information as the BAR and EMPr will be provided to them from the DMR once the BAR and EMPr is submitted.

The draft BAR and EMPr was made available for all the registered I&APs. The draft BAR and EMPr was made available to inform the I&APs of the activities, background information of the area, the possible impacts and mitigation measures and other relevant information, and to request input and comment on it.

Public Participation activities for the Application Process are summarized below together with the relevant reference for proof.

Table 5: Public Participation Activities.

ACTIVITY	DETAILS	REFERENCE IN REPORT
Placing of newspaper advertisement	An advert was placed in the Noordwester Newspaper – English (25 September 2020). A meeting with the I&APs could not take place under the strict Covid-19 Regulations, therefore, Engedi's e-mail address was made available on the newspaper advert, as well as on the notices placed in and around the proposed site. The community could request a consultation form.	**Appendix D_1** Proof of Advertisement
Putting up of site notices	English site notices were placed at the Project site and visible public venues on 11 September 2020. The public had until the 12th of October 2020 to submit their comments, however, to date; We have not received any comments, concerns or objections.	**Appendix D_2** Proof of Site Notices
Stakeholder consultations	The information documentation detailed above was distributed to identified stakeholders of e-mail.	**Appendix D_3** Consultations with Authorities

i. **The Environmental attributes associated with the alternatives.** (The environmental attributed described must include socio-economic, social, heritage, cultural, geographical, physical and biological aspects).

1. **Baseline Environment**

(a) **Type of environment affected by the proposed activity** (its current geographical, physical, biological, socio-economic, and cultural character).

The environment on site relative to the environment in the surrounding area

The magisterial district of Namakwa is situated in the Northern Cape Province. The Northern Cape is the largest province in South Africa and it shares its border with Namibia and Botswana. The proposed site for prospecting is situated within the Namakwa District Municipality and within the Karoo Hoogland Local Municipality. The proposed site within the district covers approximately 18 072 hectares.

Figure 3: The location of Sutherland within the Namakwa District Municipality and within the Karoo Hoogland Local Municipality.

The Namakwa District Municipality can be described as an arid region receiving some of the lowest average rainfall levels in the country. Water scarcity and soil salinity represent the main challenges facing agriculture in the district. In some areas, salinity levels are so high that salt mining operations have been established. The two rivers that are running through the district are the Orange River towards the northern boundary as well as the Oliphants/Doring River system.

1.1 Climate

Sutherland lies on 1458 m above sea level. The prevailing climate in Sutherland is known as a local steppe climate. There is not much rainfall in Sutherland all year long. The climate here is classified as BSk by the Köppen-Geiger system. The average annual temperature is 12.0 °C (Figure 4) in Sutherland. About 243 mm of precipitation falls annually (Figure 5).

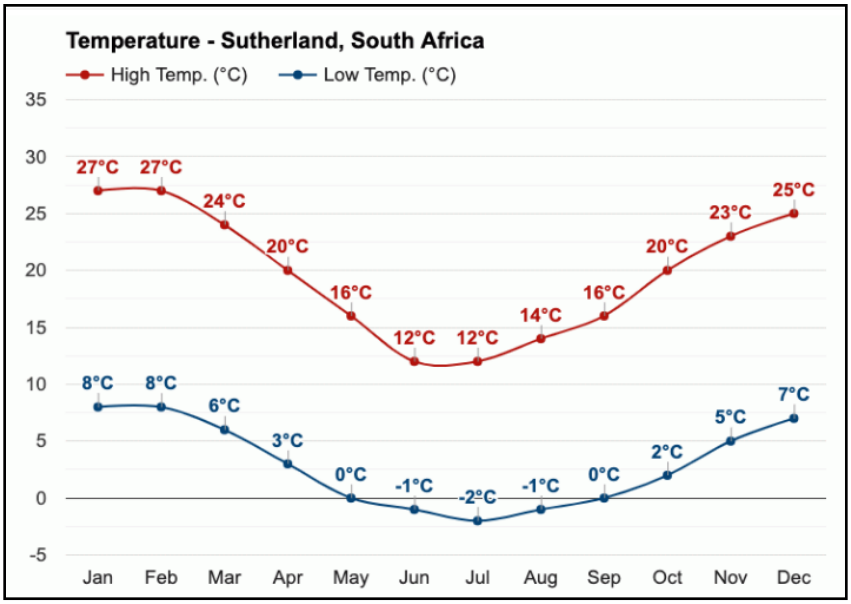


Figure 4: Graph indicating the average temperatures for the Sutherland region.

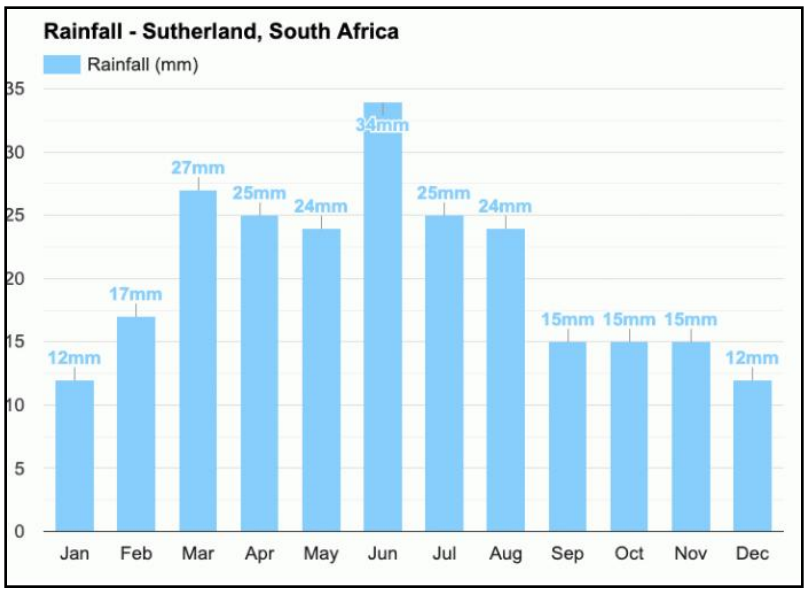


Figure 5: Graph indicating the average rainfall for the Sutherland region.

1.2 Geology

The geology of the Roggeveld is relatively simple, being composed of horizontal sediments of Beaufort Group (Adelaide Subgroup) sandstones and mudstones of the Karoo Supergroup. Landscapes dominated by this geology are typically "layered", comprising a series of tablelands interspersed by "steps" of harder sandstone. Intrusions of mid-Jurassic dolerite are common. These dolerites are virtually at the western and southern limits of their occurrence in this region, co-inciding largely with the Great Escarpment. Their resistance to erosion, compared to the sediments they have intruded, renders them prominent features of the landscape. They have thus no doubt played an essential role in protecting the Roggeveld Escarpment from more rapid erosion, and many of the highest points on the Roggeveld are capped with dolerite.

1.3 Soils

The Roggeveld region is notorious for its dolerite clays, which are particularly treacherous in winter, when large areas of hillslope covered by of soils 20–50 cm deep that appear dry but are in fact saturated from the continuous movement of water through the soil. On the flat plateaux, extensive areas are covered in reddish sandy-clays derived from horizontal shale, sandstone and mudstone strata that have been deeply weathered *in situ*. These soils can be as deep as 1 m, are also typically associated with high seasonal groundwater levels and the

irregular drainage systems that characterise the flattest parts of the plateau. These areas usually host an abundance of geophytes.

Soils derived from dolerite flats are fertile, neutral to alkaline, reddish-brown, clay soils. The remainder of the soils in the area, such as on dolerite outcrops, among tors and on other shallow stony ground, are lithosols, while colluvium and regolith occupy the steeper mountain slopes. Alluvial boulder piles, and beige alluvium deposits up to 3 m deep occupy the broader valleys at the base of the Great Escarpment.

1.4 Biological Environment

1.4.1. Vegetation

The study area falls within the Succulent Karoo Biome, a landlocked region within South Africa.

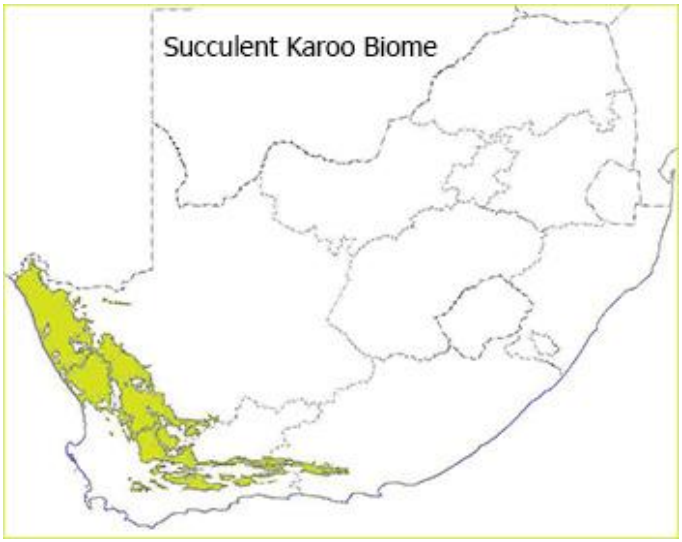


Figure 6: The location of the Succulent Karoo Biome within South Africa.

The Succulent Karoo forms part of the Greater Cape Floristic Region, and is home to a total of around 6 350 species of vascular plants, of which nearly 2 440 (40%) are endemic to the biome, therefore meaning that they are found nowhere else on earth. Many plant species in the Succulent Karoo are notable habitat specialists, occupying very specific habitat niches. One of the most famous plant species from the Succulent Karoo are the 'halfmens' of the Richtersveld (*Pachypodium namaquanum*) that can grow up to 4 m in height.

Roggeveld Karoo

The vegetation is dominated by dwarf, succulent shrubs, of which the Vygies (*Mesembryanthemaceae*) and Stonecrops (*Crassulaceae*) are particularly prominent. Mass flowering displays of annuals (mainly Daisies *Asteraceae*) occur in spring, often on degraded or fallow lands. Grasses are rare, except in some sandy areas, and are of the C3 type. The number of plant species mostly succulents - is very high and unparalleled elsewhere in the world for an arid area of this size.

Roggerveld Shale Renosterveld

This vegetation type is dominated by a species of grey-coloured plant called the renosterbos. However, the *Proteas*, *Ericas* and *Restios* - typical of fynbos habitats, tend to occur in very low abundance in renosterveld. There are few endemics to renosterveld vegetation alone, many of the species occurring in fynbos as well. However, species endemic to the Cape Floristic Region comprise about one-third of renosterveld plant species, and many of these belong to families which are not considered to be of "Cape affinity".

Typical renosterveld plants include:

- **Grasses**
  - *Themeda triandra*
- **Shrubs and small trees**
  - renosterbos, karee, wild rosemary, wild olive.
- **Perennials**
  - geophytes from the iris, amaryllis, hyacinth, orchid and other plant families.

1.4.1.1 Uses

- Originally, the San and Khoi used renosterveld plants for food, medicine and grazing. Because of their relatively small populations, they did not cause a great deal of damage to this ecosystem.
- Many renosterveld trees and shrubs produce berries, which attract fruit-eating birds (e.g. bulbuls, Cape white-eyes) and other animals (e.g. geometric tortoises, chacma baboons).
- During spring, renosterveld flowers attract a wide variety of pollinators, like bees, flies, beetles and sunbirds.

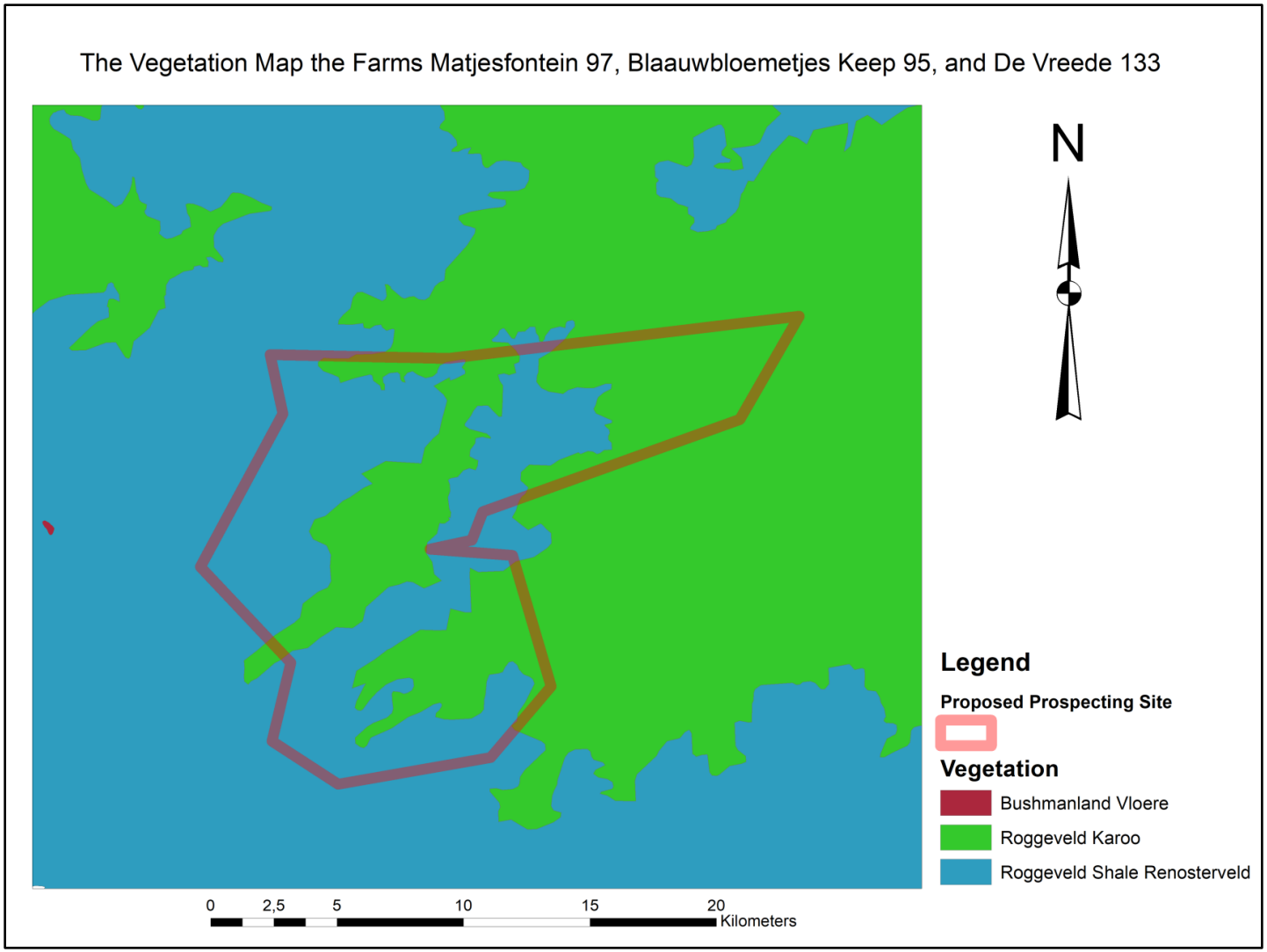


Figure 7: The vegetation map of the study area.

1.4.2. Fauna

Roggeveld Karoo

The Hantam-Roggeveld area is centred on the town of Calvinia and encompasses both the Bokkeveld and Roggeveld escarpments. Some 2500 species of plants occur in the Hantam-Roggeveld, of which about 10% are endemic. The rugged slopes and cool highlands include a wide range of species characteristic of the interface between the renosterveld and Succulent Karoo. Due to relatively low levels of transformation in this priority area, there are excellent opportunities to include viable populations of Black Rhinoceros and upland-lowland seasonal migration routes for animals, especially Springbok.

The Succulent Karoo has more than 225 bird species, 75 mammal species and more than 90 species of reptiles. Amphibians are relatively poorly represented due to the aridity of the region. There is one endemic bird, namely the Barlow's Lark and two endemic mammals, De Winton's Golden Mole and the Namaqua Dune Mole Rat. Invertebrate diversity is also high, with more than 70 scorpion species present.

Roggerveld Shale Renosterveld

Because of its high soil fertility, it is probable that all the herds of large game in the fynbos biome occurred in renosterveld. Thus mountain zebra, quagga, bluebuck, roan antelope, red hartebeest, eland, bontebok, elephant, black rhino and Cape buffalo were common, as were lion, cheetah, African wild dog, spotted hyena and leopard.

Two of these only ever occurred within the fynbos biome: bluebuck and bontebok. Of these large mammals, only the mountain zebra and leopard survived (by fleeing to the mountains), with the bontebok just surviving near Bredasdorp. All the other species became extinct in the fynbos biome (a tiny relict elephant population still survives in the area around the Gouritz River and surrounding areas within the fynbos biome area), although many have been introduced into conservation areas from outside the region. The quagga and bluebuck are extinct, although there is a project (the Quagga Project) to restore plains zebras with quagga-like markings.

1.4.3. Conservation areas

According to the National Environmental Management: Protected Areas (Act No 57 of 2003) the declaration of protected areas is:

- To protect ecologically viable areas representative of South Africa's biological diversity and its natural landscapes and seascapes in a system of protected area;
- To preserve the ecological integrity of these areas;
- To conserve biodiversity in these areas;
- To protect areas representative of all ecosystems, habitats and species naturally occurring in South Africa;
- To protect South Africa's threatened or rare species;
- To protect an area which is vulnerable or ecologically sensitive;
- To assist in ensuring the sustained supply of environmental goods and services;
- To provide for the sustainable use of natural or biological resources;
- To create or augment destinations for nature based tourism;
- To manage the inter-relationship between natural environment biodiversity, human settlement and economic development;
- Generally to contribute to human, social, cultural, spiritual and economic development; and
- To rehabilitate and restore degraded ecosystems and promote the recovery of endangered and vulnerable species.

The study area is not in close proximity to any conservation area.

1.5 Surface water

The study area falls within the Olifants-Doorn Water Management Area (WMA). The Olifants/Doorn WMA is located on the west coast of South Africa, extending from about 100 km to 450 km north of Cape Town. The south-western portion mainly falls within the Western Cape Province, and the north-eastern section falls within the Northern Cape Province.

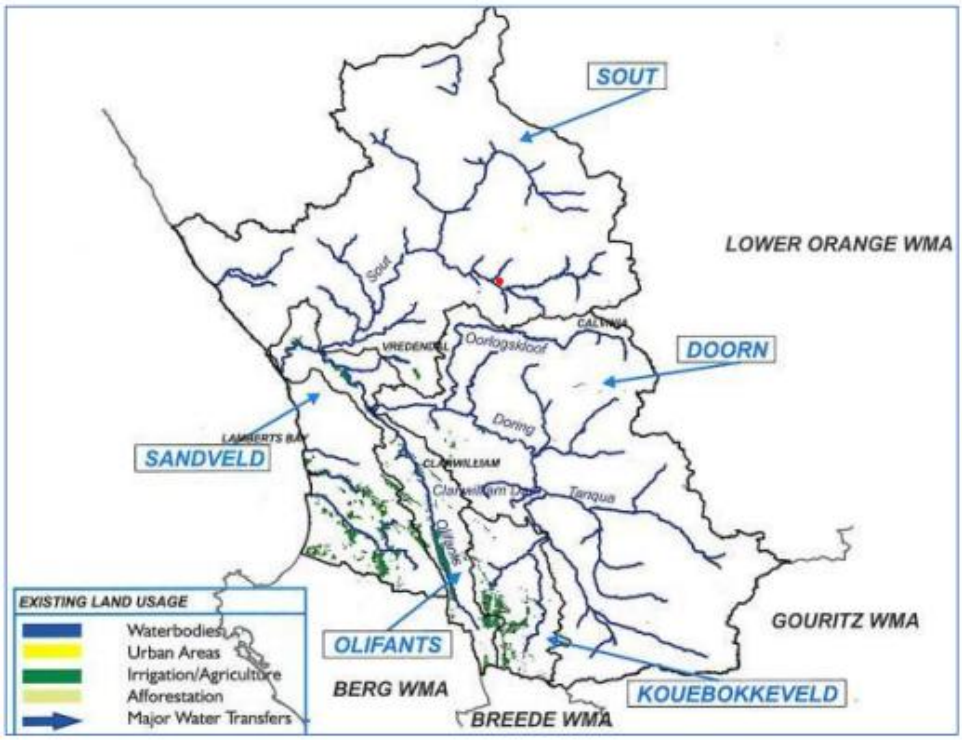


Figure 8: The location of The Olifants-Doorn WMA. It lies to the north of the Berg, Breede and Gouritz WMAs and to the west of the Lower Orange WMA.

The major river in the WMA is the Olifants River, of which the Doring River (draining the Koue Bokkeveld and Doring areas) and the Sout River (draining the Knersvlakte) are the main tributaries. The Olifants River rises in the mountains in the south-east of the WMA and flows in a north-westerly direction. Its deep narrow valley widens and flattens downstream of Clanwilliam until the river flows through a wide floodplain downstream of Klawer. The Doring River is a fan shaped catchment and rises in the south, flowing in a northerly direction. It is first joined by the Groot River and then by the Tra-Tra River flowing from the west and the Tankwa River from the east, before flowing in a westerly direction to its confluence with the Olifants River just upstream of Klawer.

The Olifants River and its tributary, the Doring River are important from a conservation perspective because they contain a number of species of indigenous and endemic fish that occur in no other river systems, and that are endangered. The Olifants estuary is one of only three permanently open estuaries on the west coast of South Africa. It therefore represents a critical habitat to many estuarine-associated fish species.

More than 90% of the land in the Olifants-Doorn WMA is used as grazing for livestock, predominantly for sheep and goats. Approximately 500 km^2 is under irrigation, of which almost 50% lies within the Olifants river catchment and includes citrus, deciduous fruits, grapes and potatoes, providing the mainstay of this WMA's economy (NWRS, 2004). In addition to the intensive irrigation practised along the Olifants River, significant irrigation also takes place in the Koue Bokkeveld, along the rivers and from groundwater in the Sandveld sub-area.

Water Quality

The surface water quality of the Olifants-Doorn WMA is quite variable. Water quality in the upper Olifants River, upstream of Clanwilliam Dam, is "ideal" and is suitable for all uses. There is evidence of elevated phosphate concentrations which may be the result of agricultural activities and wastewater return flows in the Citrusdal area. Physical and chemical characteristics of the WMA geology have a strong influence on the water quality. Water quality in the Upper Olifants and Koue Bokkeveld is good and suitable for all uses. The quality of water in the upper Doring River (E22), when flowing, is suitable for agriculture and domestic water supplies, however, at the end of summer the quality deteriorates.

Highly saline flows from the Tankwa Karoo tributaries have a sporadic influence. In the upper portions of the Sandveld sub-area water quality is poor, resulting from agricultural activities on the Malmesbury shales which are high in salts. Agricultural activities influence the water quality significantly throughout the WMA, especially during the summer months.

The NFEPA Rivers and Wetlands depict the area to have a stream that passes south of the farm (Figure 9). The image below depicts the area where the stream is located. Furthermore, two wetlands were identified close to the stream (Figure 10). However, prospecting activities will not be within 100 m of these water resources.

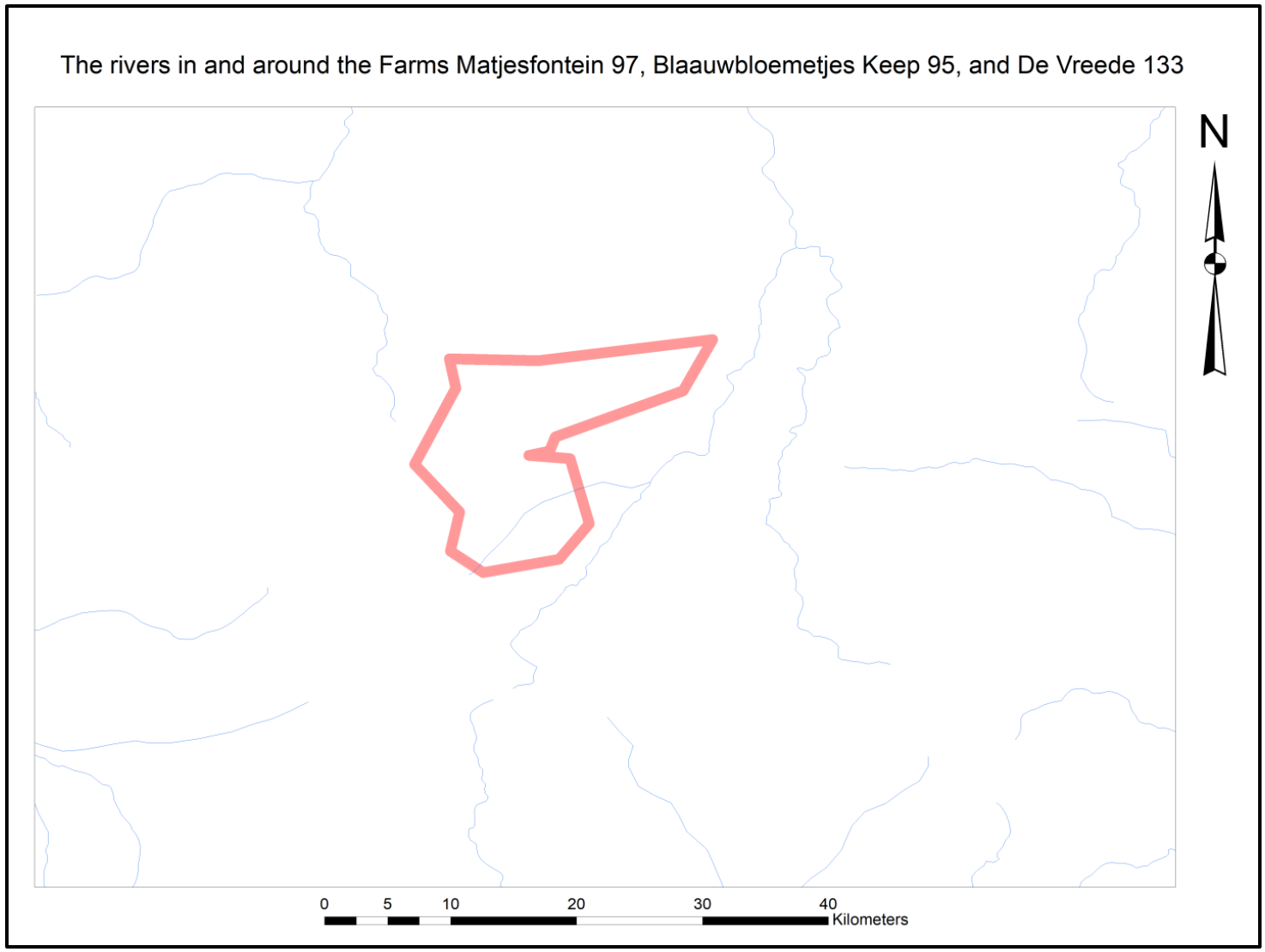


Figure 9: The Rivers located in and around the study area.

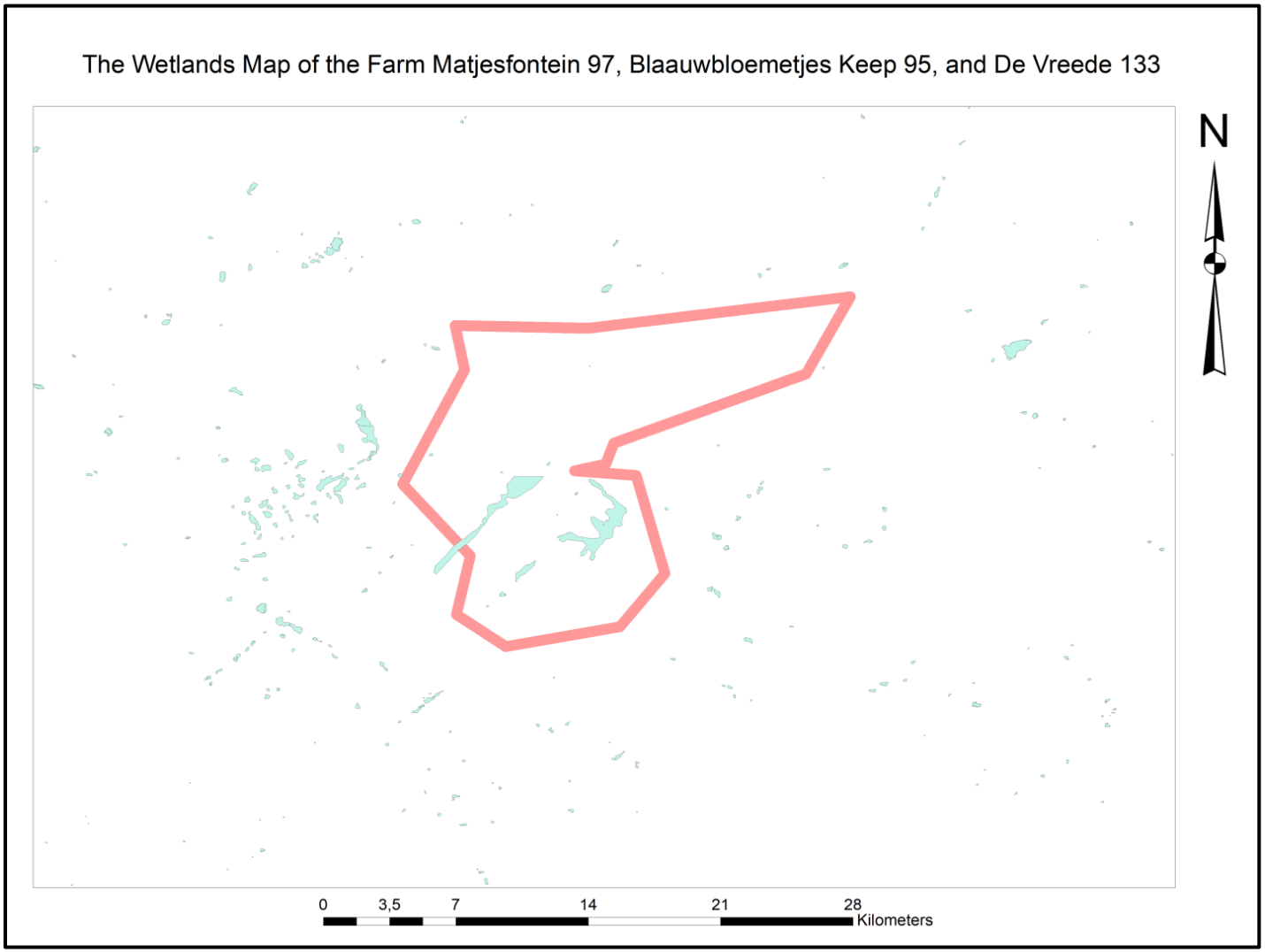


Figure 10: The wetlands found in and around the study area.

1.6 Socio-economic setting

The Namakwa District Municipality has the lowest population of all districts in the Northern Cape, although it is geographically the largest. With a population of 139 370 people, the Namakwa District housed 0.2% of South Africa's total population in 2019. Compared to Northern Cape's average annual growth rate (2.05%), the growth rate in Namakwa's population at 1.17% was about half than that of the province.

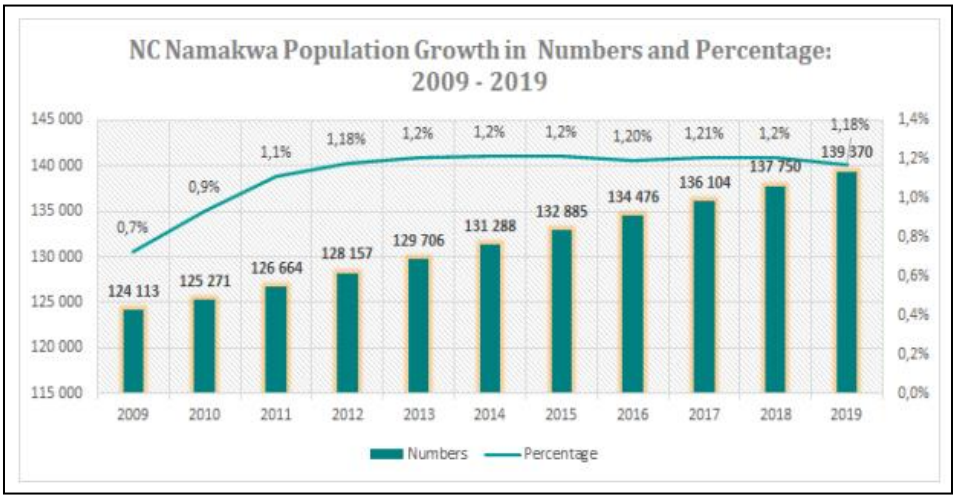


Figure 11: The population figures of the Namakwa District Municipality.

In 2018, the Namakwa District Municipality's population consisted of 7.32% African (9 670), 8.96% White (11 800), 83.06% Coloured (110 000) and 0.65% Asian (862) people.

Namakwa District Municipality's male/female split in population was almost equal with 49.96% males and 50.04% females in 2019. In total there were 69 700 (50.04%) females and 69 600 (49.96%) males. This is different from the Northern Cape Province where the female population counted 681 000 which constitutes 50.61% of the total population of 1.34 million.

The number of formally employed people in Namakwa District Municipality counted 31 400 in 2018, which is about 86.74% of total employment, while the number of people employed in the informal sector counted 4 800 or 13.26% of the total employment. Informal employment in Namakwa increased from 3 420 in 2008 to an estimated 4 800 in 2018. Namakwa's share of the total number of unemployed people in Northern Cape Province is 9.36% (12 000 people unemployed in Namakwa). This represents an increase of 1 760 (1.7%) from 10 200 in 2008.

With a GDP of R 10.5 billion in 2018 (up from R 6.49 billion in 2008), the Namakwa District Municipality contributed 10.65% to the Northern Cape Province GDP of R 98.6 billion in 2018 increasing in the share of the Northern Cape from 11.85% in 2008. In 2018, the Namakwa District Municipality achieved an annual growth rate of -0.54% which is a slightly lower GDP growth than the Northern Cape Province's -0.31%, and is lower than that of South Africa, where the 2018 GDP growth rate was 0.79%.

In 2018, the mining sector is the largest within Namakwa District Municipality accounting for R 3.4 billion or 35.6% of the total GVA in the district municipality's economy. Although the Namakwa District Municipality was a fairly constant district without many changes over the last few years, the district suddenly came into the limelight with the massive expansion in the mining sector in the Khai Ma Local Municipality. Apart from the growing mining interest in the district, the Boegoebay Port is also a potential catalytic project that could potentially uplift the Namakwa District Municipality in various ways including demographically, developmental, economic and infrastructure wise. Should this development be implemented the NDM will also become more significant from a national perspective and could potentially lure further investment. Unfortunately due to the global economic climate, the mining sector is estimated to grow the slowest with an average annual growth rate of - 3.60%. The mining development in the District can benefit from the new mining and renewable energy project if planned efficiently. Diversification and the development of a competitive manufacturing sector is a must with agriculture and mining as focus areas. In terms of access to basic services all the local municipalities are outperforming national, barring the slight underperformance of the provision of electricity in Karoo Hoogland and Hantam.

In the primary sector, agriculture is expected to grow faster at an average of 2.72% annually from R 726 million in Namakwa District Municipality to R 830 million in 2023. Most of the Orange River’s water is being used for the irrigation of high-value crops. Groundwater is also widely used for agricultural, municipal, and industrial land use. The main agricultural commodities produced in Namakwa District Municipality include small stock, lucerne, vegetables, and grapes. Sheep farming is practised on a small scale in Namakwa District Municipality from which wool and mutton products are produced. Niche opportunities for agro-processing have been identified in the form of high-value aquaculture (such as abalone).

Namakwa District Municipality had a total tourism spending of R 735 million in 2018 with an average annual growth rate of 10.3% since 2008 (R 275 million). Northern Cape Province had a total tourism spending of R 4.39 billion in 2018 and an average annual growth rate of 7.7% over the period. Total tourism spending in South Africa increased from R 153 billion in 2008 to R 296 billion in 2018 at an average annual rate of 6.8%. In Namakwa District Municipality the tourism spending as a percentage of GDP in 2018 was 7.00%. Tourism spending as a percentage of GDP for 2018 was 4.45% in Northern Cape Province, 6.06% in South Africa.

The sector that contributes the second most to the GVA of the Namakwa District Municipality is the community services sector at 16.1%, followed by the trade sector with 11.8%. The sector that contributes the least to the economy of Namakwa District Municipality is the electricity sector with a contribution of R 136 million or 1.42% of the total GVA.

In granting the Prospecting Right for the proposed area the Applicant may be able to assist in some of the urgent needs of the area/ town as indicated by the Karoo Hoogland Local Municipality.

1.6.8 Cultural/Heritage Environment

According to research and correspondence from SAHRA, the proposed development area was never formally been earmarked as a heritage site.

However, the Applicant is comfortable linking themselves to a range of conditions to ensure that through the proposed mining activities, they will:

- Not be using explosives or equipment that will make noise.
- Use mining materials that are environmentally friendly.

The Applicant is minimizing the use of machinery to create the maximum number of jobs and minimize noise and inconvenience to any party. The Applicant is further prepared if their proposals are not sufficient, to engage with the relevant Heritage Representatives as well as the owners of the land to discuss a consensus win - win agreement for all.

Description of the current land uses

Roggerveld Karoo

The area has little agricultural potential due to the lack of water. The paucity of grasses limits grazing, and the low carrying capacity requires extensive supplementary feeds. Much soil has been lost from the biome, through sheet erosion, as a consequence of nearly 200 years of grazing. Ostrich farming, with considerable supplementary feeding, is practised in the Little Karoo in the south of the biome. In areas adjoining the Fynbos Biome, wine grapes, fruit and other crops are cultivated using the Fynbos water catchments. Tourism is a major industry: both the coastal scenery and the spring mass flower displays are draw cards. Mining is important, especially in the north.

Roggerveld Shale Renosterveld

The high fertility of renosterveld soils has meant that most of the area has been converted to agriculture, mainly wheat.

It is alleged that the high shrub cover is a result of continuous grazing. Early records suggest that the renosterveld had abundant grasses, and that the game and Khoi cattle migrated over the region. With the establishment of European stock farmers, continuous grazing and the elimination of the diverse grazing-browsing fauna, the shrubby element was promoted. However, this theory is not universally accepted.

Description of specific environmental features and infrastructure on the site

The prospecting activities are not expected to affect any existing infrastructure, beyond requiring the use of existing farm access roads. As the invasive activities of this application include drilling of the resources that may occur in open land, these areas will not be disturbed. A safe 100 m buffer will be placed around existing infrastructure and no drilling activities will take place within this buffer area.

Environmental and current land use map (Show all environmental and current land use features)

It should be noted that while the whole of the Prospecting Right application area of 18 072 hectares are depicted on the maps, way less than that amount of space will be disturbed as a result of invasive prospecting activities.

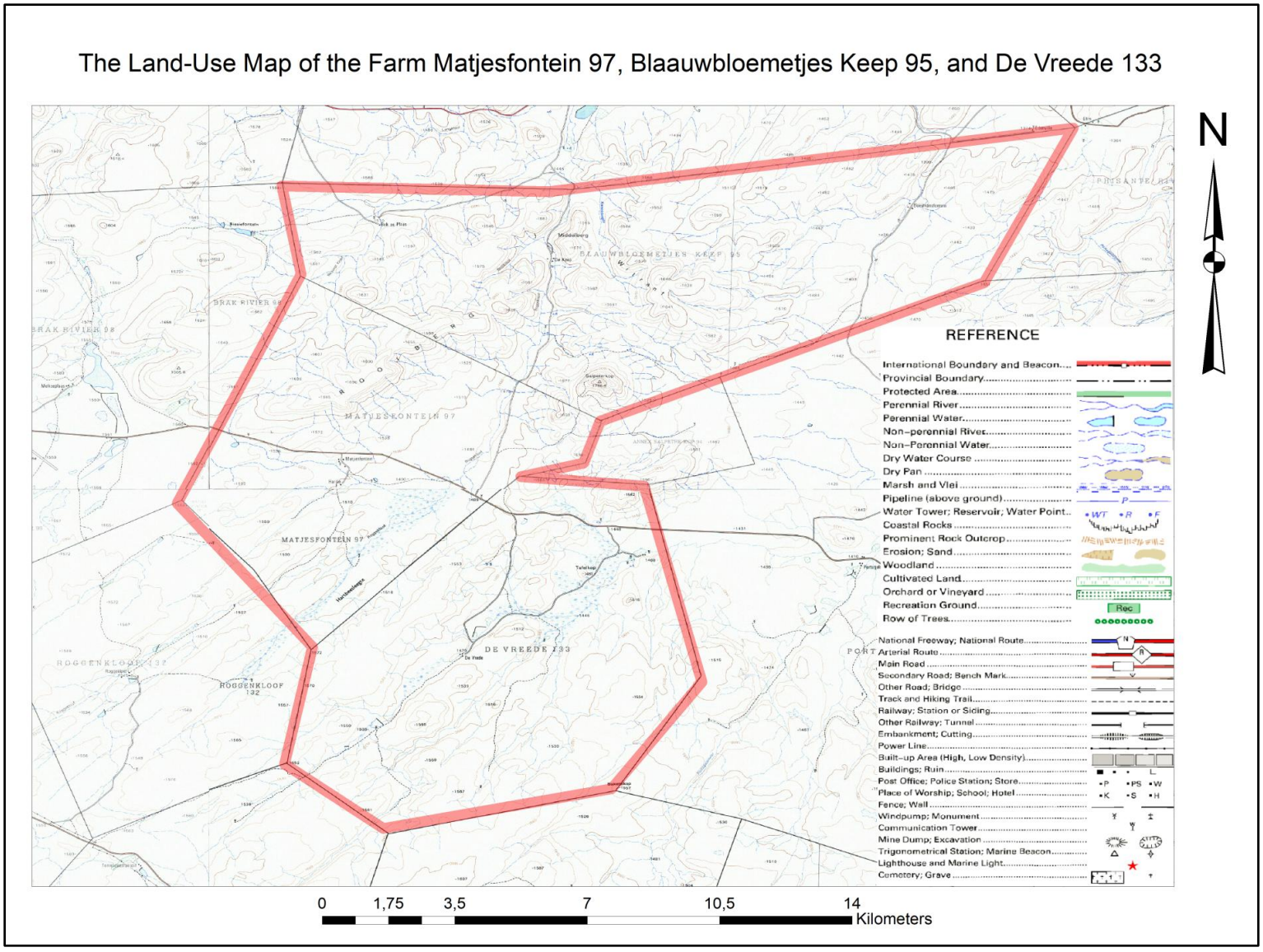


Figure 12: The land-use map of the study area.

iii. **Impacts and risks identified including the nature, significance, consequence, extent, duration and probability of impacts, including the degree to which these impacts** (Provide a list of the potential impacts identified of the activities described in the initial site layout that will be undertaken, as informed by both the typical known impact of such activities, and as informed by the consultations with affected parties together with the significance, probability, and duration of these impacts. Please indicate the extent to which they can be reversed, the extent to which they may cause irreplaceable loss of resources and can be avoided, managed or mitigated).

Potential impact of each main activity in each phase, and corresponding significance assessment

Table 6

NO	ACTIVITY	IMPACT	DURATION	INTENSITY	PROBABILITY	SIGNIFICANCE RATING	
1	Site Preparation	Loss of vegetation	3	5	10	80	High
		Habitat Destruction	3	5	10	80	High
		Visual scarring	3	4	8	56	Medium
		Soil erosion	3	4	6	42	Low
2	Excavations	Dust emissions	2	5	8	56	Medium
		Surface disturbances	4	4	10	80	high
		Drainage interruption	4	4	10	80	high
		Slope instability	4	3	3	42	low

		Noise	2.5	5	10	75	high
		Visual Scarring	3	4	8	56	medium
		Soil erosion	3	4	6	42	low
3	Blasting (if done)	Fly rock	2.5	5	10	75	high
		Noise and vibrations	2.5	5	10	75	high
		Dust	2.5	5	10	75	high
4	Stockpiles	Dust	2	5	8	56	medium
		Surface disturbances	3	5	10	80	high
		Drainage disruption	2.5	5	10	75	high
5	Loading, Hauling and transportation	Dust	2	5	10	70	medium
		Increased risk of accidents	2	4	4	16	low
		Noise	2.5	5	10	75	high
		Soil contamination from oil/fuel leaks	3	3	6	36	low

Potential cumulative impacts

Since there may be agricultural activities, the expected cumulative impact will be noise and dust.

Potential impact on heritage resources

No heritage sites may be present on the site, which may be disturbed and/or damaged during prospecting activities.

Potential impacts on communities, individuals or competing land uses in close proximity
(If no such impacts are identified this must be specifically stated together with a clear explanation why this is not the case.)

Expectations could be created that numerous job and business opportunities will become available during prospecting. All Interested and Affected Parties (I&APs) need to be informed throughout the prospecting process.

Confirmation that the list of potential impacts has been compiled with the participation of the landowner and interested and affected parties

The draft BAR and EMPr was made available to the interested and affected parties for comment and input. The list of potential impacts was included in the draft BAR and EMPr.

Confirmation of specialist report appended (Refer to guideline)

Heritage and Ecological studies were not conducted for this BAR and EMPr. The baseline information contained herein is based on a desktop study and one site visit.

iv. **Methodology used in determining and ranking nature, significance, consequences, extent, duration and probability of potential environmental impacts and risks;** (Describe how the significance, probability, and duration of the aforesaid identified impacts that were identified through the consultation process was determined in order to decide the extent to which they initial site layout needs revision).

Criteria of assigning significance to potential impacts

The significance of the impacts was determined through the consideration of the following criteria:

Table 7: Criteria of assigning significance to potential impacts.

Probability:	Provides a description of the likelihood/probability of the impact occurring
Extent:	Describes the spatial scale over which the impact will be experienced
Duration:	The period over which the impact will be experienced
Intensity:	The degree/order of magnitude/severity to which the impact affects the health and welfare of humans and the environment
Significance:	Overall significance of the impact on components of the affected environment and whether it is a negative or positive impact

The impacts were individually described and assessed using the criteria drawn from the Environmental Impact Assessment (EIA) Regulations, published by the DEA in terms of the NEMA (Act 107 of 1998).

The significance of each impact is assessed using the following formula (before and after mitigation):

Significance Point (SP) = (Probability + Extent + Duration) x Intensity

The maximum value is 150 SP. The impact significance will then be rated as follows:

Table 8

SP > 75	Indicates **high** environmental significance	An impact that could influence the decision about whether or not to proceed with the project regardless of any possible mitigation.
SP 30 – 75	Indicates **moderate** environmental significance	An impact or benefit which is sufficiently important to require management and which could have an influence on the decision unless it is mitigated.
SP < 30	Indicates **low** environmental significance	Impacts with little real effect and which should not have an influence on or require modification of the project design.
+	Positive impact	An impact that is likely to result in positive consequences/effects.

Probability (P)		
None (N)	1	The possibility of the impact occurring in none, due either to the circumstances, design or experience (0%).
Possible (P)	2	The possibility of the impact occurring is very low, due either to the

		circumstances, design or experience (25%).
Likely (L)	3	There is a possibility that the impact will occur to the extent that provisions must therefore be made (50%).
Highly likely (H)	4	It is most likely that the impacts will occur at some stage of the development and plans must be drawn up before carrying out the activity (75%).
Definite (D)	5	The impact will take place regardless of any prevention plans, and only mitigation actions or contingency plans to contain the effect can be relied on (100%).
Extent (E)		
Footprint (F)	1	The impact area extends only as far as the activity which occurs within the total site area.
Site (S)	2	The impact could affect the whole site or a significant portion of the site.
Regional (R)	3	The impact could affect the area including the neighboring farms, the transport route and/or the adjoining towns.
National (N)	4	The impact could have an effect that expands throughout the country.
International (I)	5	Where the impact has international ramifications that extend beyond the boundaries of the country.
Duration (D)		
The period over which the impact will be experienced		

Temporary (T)	1	0 – 3 years (or confined to the construction period).
Short term (S)	2	3 – 10 years (or confined to the construction and part of the operational period).
Medium term (M)	3	10 – 15 years (or confined to the construction and whole operational period).
Long term (L)	4	For the whole life of mine (including closure and rehabilitation period).
Permanent (P)	5	Beyond the anticipated lifetime of the project.
Intensity (I)		
Insignificant (I)	2	Will have a no or very little impact on the health and welfare of humans and environment
Low (L)	4	Will have a slight impact on the health and welfare of humans and environment
Moderate (M)	6	Will have a moderate impact on the health and welfare of humans and environment
High (H)	8	Will have a significant impact on the health and welfare of humans and the environment
Very high/ don't know (V)	10	Will have a severe impact on the health and welfare of humans and the environment

v. **Summary of the positive and negative impacts and risks of the proposed activity and identified alternatives;**

The preferred location is the only location plan currently under investigation. Due to the location and presence of the potential mineral resources, the initial site layout is the only alternative considered; however, as prospecting progresses through the aforementioned phases, the preliminary site layout may be slightly adjusted. The final locations of the drill holes can only be established once the geophysical survey has been completed in the noninvasive; Phase 1, of the activity and once agreements has been discussed and signed with the relevant landowners, and this can only be done once the PR right has been approved.

Until such time the preliminary layout remains the preferred layout. The identified potential impacts range from air pollution such as dust, noise pollution, soil pollution, waste pollution, water pollution, Fauna and Flora impacts, Visual impacts and socio-economic impacts. All these will be properly managed. None of these impacts will be significant since the proposed prospecting activities will be of small scale, short term, mitigation measures will be adhered to and concurrent rehabilitation will take place. Please refer to table 3 and table 4 which reviews the significance of impacts by taking the proposed mitigation measures into consideration.

vi. **The possible mitigation measures that could be applied and the level of risk.** (With regard to the issues and concerns raised by affected parties provide a list of the issues raised and an assessment/discussion of the mitigations or site layout alternatives available to accommodate or address their concerns, together with an assessment of the impacts or risks associated with the mitigation or alternatives considered).

MANAGING SOIL IMPACTS

These measures are targeted at managing soil erosion, soil contamination, compaction of soil and removal of topsoil

- The area that is stripped of vegetation should be kept to an absolute minimum
- Contractor shall at all times carefully consider what machinery is appropriate to the task while minimizing the extent of environmental damage and unnecessary

movements should be prohibited

- The topsoil, including the existing grass cover is to be shallowly ripped (only the depth of the topsoil) before removal. This is to ensure that organic plant material, and the natural seed base is included in the stripping process. The soil is to be stored and the soil stockpiles shall not be higher than 2 m or stored for a period longer than one year. The slopes of soil stockpiles shall not be steeper than 1 vertical to 2.5 horizontal.
- Topsoil shall be stored separately from subsoil and other overburden material.
- No vehicles shall be allowed access onto the stockpiles after they have been placed.
- Stockpiles shall not be allowed to become contaminated with oil, diesel, petrol, garbage or any other material, which may inhibit the later growth of vegetation.
- The contractor shall apply soil conservation measures to the stockpiles to prevent erosion.
- Ensure regular maintenance of equipment to prevent diesel and hydraulic spillages.
- Where possible ensure low work surface gradients so that run-off flows at a controlled rate so as to minimize channeling and soil erosion during high rainfall.
- At the end of operations, all disturbed areas shall be re-vegetated.

LOSS OF VEGETATION

- No protected species must be removed without a permit. A final walkthrough must be done by an ecologist to ensure that the areas where vegetation is to be cleared do not have protected species.
- Clearance of vegetation should be restricted to the absolute minimum required to facilitate access and undertake proposed prospecting activities. Disturbance of topsoil and vegetation rootstock must be minimized as far as possible.

- Any declared category 1 invasive species identified should be cleared.
- Rehabilitation strategies following operational activities must ensure that appropriate indigenous plant species are used and should be done as per rehabilitation plan

DUST AND VEHICLE FUMES

- Avoid unnecessary excessive vehicle movement.
- Limit vehicle speeds on unsurfaced roads.
- Rehabilitate disturbed areas with vegetation as soon as operation is completed.
- Maintain equipment and vehicles in good working order to avoid excessive .emissions
- Proposed prospecting working floors should be sprayed with water from time to time to reduce dust emission during operations
- Use rubber curtains/other material to limit dust during screening should be considered.
- Spray roads, material stockpiles and screening areas with water if dust becomes problematic.
- No fires should be allowed on the proposed prospecting site.

BLASTING (if done)

- All blasting and handling of blasting materials should be done in accordance with the Explosives Act and the Mine Health and Safety Act.
- A risk assessment has to be that takes into account the safety of the people, infrastructure and the surrounding environment. A pre and post blasting survey should be done.

- A blasting time schedule shall be distributed to all surrounding villages indicating the time and date for blasting activities. It is recommended that blasting takes place during daylight hours.
- At all times blasting shall be carried out that ground vibration, air blast and scatter are kept within such limits as to avoid damage to adjacent structures/machinery etc already placed at the works.
- Any fly rock should be cleared after blasting.

WASTE DISPOSAL

- All personnel must be instructed to dispose of waste in a proper manner in the correct designated areas.
- Suitable receptacles shall be available at all times and conveniently placed for the disposal of waste.
- No waste shall under any circumstance be disposed of in the veld. No burning of waste is permitted on site and the proposed prospecting area should be protected from illegal dumping of waste.
- All used oils, grease or hydraulic fluids shall be placed in appropriate impervious containers and these receptacles will be removed from the site on a regular basis for disposal at a registered or licensed disposal facility or sent for recycling/reuse with a registered facility.
- Spills should be cleaned up immediately by removing the spillage together with the polluted soil and by disposing of them at a recognized facility. In areas where the spills are some, an absorbent agent can be used and the area treated
- Contaminated materials and residues from machinery maintenance and other sources contaminated with hazardous waste should be stored in proper containers that avoid seepage to ground.
- The “reduce, reuse, recycle” waste management philosophy will be used where

possible.

- Only authorized registered waste disposal contractors should be hired for collection of waste for all waste streams

SOCIAL IMPACTS

- Effective two-way public disclosure and public consultation should be implemented to allay community perceptions. There should be an opportunity provided for the resolution of grievances or complaints received and recorded from individuals in the community.
- Community should be adequately informed of activities being done at the proposed prospecting that are likely to affect them.
- Labour recruitment should occur in a manner that is objective, transparent, and wherever possible, provide opportunities for people from the local area.
- The activities of contractors, consultants, and company employees should be routinely reviewed to ensure good community relations are being maintained. The project proponent should use its influence as employer to encourage responsible behavior among employees

STABILITY OF EXCAVATIONS

- Excavations shall take place only within the approved demarcated proposed prospecting area and appropriate barriers should be put as necessary.
- The proposed prospecting operator shall ensure that a place of work, whether temporary or permanent in or near the excavation has a structure and solidity appropriate to its use is operated, supervised and maintained, so as to withstand the environmental forces anticipated and be safe.
- The proposed prospecting operator shall ensure that material is not placed, stacked or used at the proposed prospecting near the edge of any excavation, where it is likely to endanger people at work and equipment or where it is likely to cause collapse of the side of the excavation.

- Excavations should be routinely inspected. If cracks occur in any structure they need to be investigated to ascertain if there is a risk to safety
- Overburden rocks and coarse material shall be placed concurrently in the excavations or stored adjacent to the excavation, if practicable, to be used as backfill material once the mineral or gravel has been excavated.
- An appropriate drainage provisions must be constructed as necessary to accommodate the surface water movement. If the water table is reached during excavations appropriate pumping facilities should be provided.
- Excavated areas should be kept in a safe and stable manner. No unstable block should be present. Reshaping of the proposed prospecting may need to be done to ensure that this objective is reached. The profiling should be done to match the surrounding landscape
- The proposed prospecting should be finished in such a manner that it is self-draining
- Top soil should be put back on the surfaces and the areas revegetated.

VISUAL IMPACTS

- The excavated area must serve as a final depositing area for the placement of overburden. Rocks and coarse material removed from the excavation must be dumped into the excavation.
- Once excavation parts that can be filled have been refilled with overburden, rocks and coarse natural materials, the borrow pit shall be profiled with acceptable contours and erosion control measures, the topsoil previously stored shall be returned to its original depth over the area. The profiling shall be done to match the surrounding landscape as far as is reasonable possible.
- The area shall be fertilized if necessary to allow vegetation to establish rapidly. The site shall be seeded with a local or adapted indigenous seed mix in order to

propagate the locally or regionally occurring flora.

- If a reasonable assessment indicates that the re-establishment of vegetation is unacceptably slow, the there may be need for the soil to be analyzed and any deleterious effects on the soil arising from the borrow pit, be corrected and the area be seeded with an indigenous vegetation seed mix that matches the surrounding flora.

EQUIPMENT USED ON SITE

- Only well-maintained vehicles and equipment should be operated onsite and all machinery should be serviced regularly during the proposed prospecting operation.
- The maintenance of vehicles and some equipment used for any purpose during the proposed prospecting operation will take place only in the maintenance workshops which are not located on the borrow pit. No vehicle may be extensively repaired in any place other than in the maintenance yard
- A maintenance schedule should be prepared in order to ensure that equipment is in is best form so as to no cause unnecessary pollution such as noise, emissions and makes effective use of energy.
- Equipment used in the proposed prospecting process must be adequately maintained so that during operations it does not spill oil, diesel, fuel, or hydraulic fluid.
- Machinery or equipment used on the proposed prospecting area must not constitute a pollution hazard. No equipment leaking oil should be used. Drip tray should be used to prevent pollution.

NOISE

- Construction activities required outside normal working hours must be approved by the Project Manager, and where necessary, advance warning provided to adjacent residents.

- Noise levels exceeding 85dB shall only be permitted where approved and with appropriate advanced warning to adjacent residents (minimum of 2 days) being provided.
- Noise that could cause a major disturbance should only be carried out during daylight hours and with advance warning provided as above.
- Adequate ear protection should be provided to employees in noisy areas
- No amplified music shall be allowed at the site.
- Construction vehicles and plant to be in good working order.

vii. **Motivation where no alternative sites were considered**

No location alternatives are applicable to this project since the tantalum, niobium, thorium, fluospar, barite, and rare earths are contained in the proposed prospecting area. Locating the development to another area will result in the ore possibly not being found and the economy and society not benefitting from future proposed prospecting and possible prospecting activities. The proposed site for the proposed prospecting is located within an area which is already severely disturbed as a result of acgricultural activities.

viii. **Statement motivating the alternative development location within the overall site.** (Provide a statement motivating the final site layout that is proposed.)

Each phase is dependent on the preceding phase and results thereof. The preferred location is thus the only location assessed. It should be noted that prospecting is a “locality bound” industry (it has to take place where the resources are) thus no alternative locations for prospecting can be assessed. However, alternative locations for infrastructural components of the project that are not locality bound can be considered. In this case however, the only infrastructural component of the proposed project is the location of the site camp. This location for this will be dependent upon landowner negotiations and thus as a result cannot be determined prior to the prospecting right being granted. Until such time the preliminary layout remains the preferred layout. The preliminary locations have however allowed for safe buffers around sensitive identified features.

i. **Full description of the process undertaken to identify, assess and rank the impacts and risks of the activity will impose on the preferred site (In respect to the final site layout plan) through the life of the activity.** (Including (i) a description of all the environmental issues and risks that were identified during the environmental impact assessment process and (ii) an assessment of the significance of each issue and risk and an indication of the extent to which the issue and risk could be avoided or addressed by the adoption of mitigation measures.)

An activity mapping exercise was conducted for the proposed activity, then potential environmental impacts where identified. The Department of Environmental Affairs (DEA) impact assessment matrix was used. The impact with medium to high significance requires mitigation/control measures, the following are the possible impacts the project will have on the environment:

- Dust generated during excavation, loading, transportation and offloading of gravel and dust generated by movement of vehicles from prospecting site to construction site causing air pollution.
- Noise generated by machinery during gravel prospecting and vehicles while transporting gravel from prospecting site to construction site
- Vegetation destruction due to clearing of the site for prospecting purposes.
- Ecosystem disturbance due to vegetation clearing.
- Erosion causes by removal of vegetation and stripping of top soil to extract the gravel
- Visual impact due to prospecting activities, pits will be enlarged and machinery around the site will disturb the natural visual landscape.
- Exposure of children to open pit filled with water resulting in drowning and death
- Open pits a danger to animals falling in and breaking limps
- Improper disposal of waste resulting in land pollution
- Fuel and oil leakages causing ground and surface water pollution

All impacts were identified by a combination of the following:

- Desktop analysis
- Consultation process with landowners and I&APs
- A site visit

j. **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 and affected parties).

NAME OF ACTIVITY	POTENTIAL IMPACT	ASPECTS AFFECTED	PHASE	SIGNIFICANCE	MITIGATION TYPE	SIGNIFICANCE
(E.g. For prospecting – drill site, site camp, ablution facility, accommodation, equipment storage, sample storage, site office, access route **etc…** **E.g. For mining –** excavations, blasting, stockpiles, discard dumps or dams, loading, hauling and transport, water supply dams and pitting and trenching, accommodation, offices, ablution, stores, workshops, processing plant, storm water control, berms, roads, pipelines, power lines, conveyors, **etc…)**	(Including the potential impacts for cumulative impacts) (E.g. dusts, noise, drainage surface disturbance, fly rock, surface water contamination, groundwater contamination, air pollution etc…		(In which impact is anticipated) (e.g. Construction, commissioning, operational, decommissioning, closure, post-closure)	(If not mitigated)	(modify, remedy, control, or stop) through (e.g. noise control measures, storm-water control, dust control, rehabilitation, design measures, blasting controls, avoidance, relocation, alternative activity etc…)	(If mitigated)
Site Establishment activities (fencing, signage, access formation, etc)	Loss of vegetation	Visual character, Land use	Pre-mining	Medium	Remedy through rehabilitation, Limit footprint	Low

	Habitat Destruction	Visual character	Pre-mining	Medium	Remedy through rehabilitation, Limit footprint	Low
	Visual scarring	Visual character	Pre-mining	Medium	Remedy through rehabilitation	Low
	Soil erosion	Visual character, Land use	Pre-mining	Medium	Remedy through rehabilitation, Limit footprint, Control through storm water control	Low
Clearance of area for mining	Visual scarring	Visual Character	Operational Phase	Medium	Remedy through rehabilitation	Low
	Destruction of flora and habitat	Visual Character, Land use	Operational Phase	Medium	Remedy through rehabilitation, Limit footprint and removal of vegetation	Low
	Loss of agricultural potential	Land use management	Operational Phase	Low	Control through soil conservation techniques Limit footprint of the proposed prospecting as far possible to limit	Low

					loss of agricultural land	
	Soil erosion	Land use	Operational Phase	Medium	Control through soil conservation techniques, Stop through appropriate storage of topsoil	Low
Excavation	Dust emissions	Air quality	Operational Phase	Medium	Control through dust control measures	Low
	Drainage disruption	Drainage	Operational Phase	Medium	Control through storm water controls	Low
	Slope instability	Topography	Operational Phase	Low	Control through slope management controls Low	Low
	Noise	Noise	Operational Phase	Low	Control through noise control measures	Low

	Visual Scarring	Visual Character	Operational Phase	Medium	Remedy through rehabilitation of already worked areas	Low
	Soil erosion	Land use	Operational Phase	Low	Remedy through the rehabilitation of already worked areas, Control through slope control, Stop through appropriate storage of topsoil	Low
	Destruction of heritage resource	Heritage issues	Operational Phase	Low	Avoidance	Low
Drilling & blasting (if done)	Noise and vibrations	Noise	Operational Phase	Medium	Control through blast control measures	Low
	Dust	Air quality	Operational Phase	Low	Control through dust control measures	Low
	Fly rock	Safety	Operational Phase	Low	Control through blast control	Low

					measures	
Waste Disposal and Material storage	Soil contamination	Land degradation	Operational Phase	Low	Avoidance	Low
	Water pollution	Water	Operational Phase	Low	Avoidance	Low
	Increased risk of fire	Safety	Operational Phase	Low	Avoidance	Low
Material handling, hauling and transportation	Dust	Air quality	Operational Phase	Low	Control through dust control measures	Low
	Increased risk of accidents	Safety	Operational Phase	Low	Stop through site management protocols	Low
	Noise	Noise	Operational Phase	Low	Control through noise control measures	Low
	Soil contamination from oil/fuel leaks	Land degradation	Operational Phase	Low	Stop through operational control measures e.g. drip	Low

					trays and use of well serviced machinery	
Removal of infrastructure & equipment and re- shaping of proposed prospecting	Noise	Noise	Decommissioning and closure	Low	Control through noise control measures	Low
	Dust	Air quality	Decommissioning and closure	Low	Control through dust Control measures	Low
	Soil contamination from oil/fuel	Land degradation	Decommissioning and closure	Low	Stop through operational Control measures, e.g. drip trays and use of well serviced machinery	Low
	Disruption of surface drainage	Water movement	Decommissioning and closure	Low	Control through storm water controls, remedy through rehabilitation	Low
Community and labour relations management	Community conflicts and tensions	Community relations	Operational	Low	Control through Site Management	Low

					protocols	
	Increase risk of fire	Fire risk	Operational	Low	Control through Site Management protocols	Low
	Reduced security on area	Safety Issues	Operational	Low	Control through Site Management protocols	
	Improved employment Improved skills	Community relations Community relations	Operational	Low	Control through Site Management protocols	Low

k. Summary of specialist reports

(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)

LIST OF STUDIES UNDERTAKEN	RECOMMENDATIONS OF SPECIALIST REPORTS	SPECIALIST RECOMMENDATIONS THAT HAVE BEEN INCLUDED IN THE EIA REPORT (Mark with an X where applicable)	REFERENCE TO APPLICABLE SECTION OF REPORT WHERE SPECIALIST RECOMMENDATIONS HAVE BEEN INCLUDED
Baseline desktop archaeological assessment	Included in report attached	X	**Appendix E**
Baseline desktop ecological assessment	Included in report attached	X	**Appendix F**

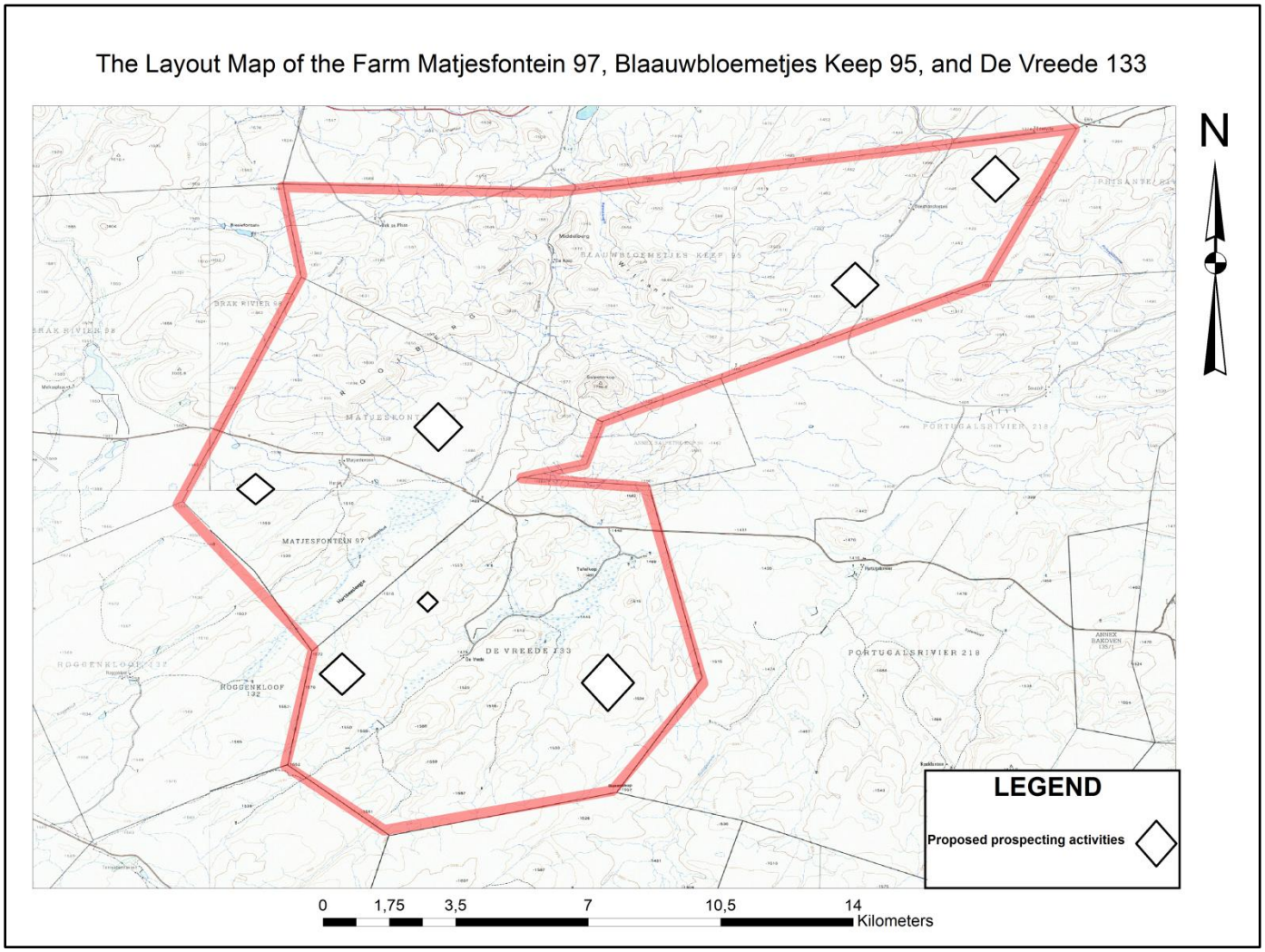
*Attach copies of Specialist Reports as appendices.

l. Environmental impact statement

i. Summary of the key findings of the environmental impact assessment;

If suggested mitigation measures are implemented and due to the small scale short term nature of the prospecting activities and the fact that the area will be rehabilitated back to its original state (i.e. agricultural land/grazing areas), it is unlikely that the proposed development will create any long-term negative impacts of high significance. On the contrary, the development will allow for business for local service companies and job creation in the short term. The majority of the negative impacts identified can be mitigated to low significance.

ii. **Final Site Map** (Provide a map at an appropriate scale which superimposes the proposed overall activity and its associated structures and infrastructure on the environmental sensitivities of the preferred site indicating any areas that should be avoided, including buffers) **Attach as Appendix C**



iii. Summary of the positive and negative impacts and risks of the proposed activity and identified alternatives;

The identified potential impacts for the preferred alternative range from air pollution such as dust, noise pollution, soil pollution, waste pollution, water pollution, fauna and flora impacts, visual impacts and socio-economic impacts. All these will be properly managed. None of these impacts will be significant since the proposed prospecting activities will be of small scale, short term, mitigation measures will be adhered to and concurrent rehabilitation will be practiced.

m. Proposed impact management objectives and the impact management outcomes for inclusion in the EMPr;

Based on the assessment and where applicable the recommendations from specialist reports, the recording of proposed impact management objectives, and the impact management outcomes for the development for inclusion in the EMPr as well as for inclusion as conditions of authorization

Air pollution

- Dust abatement by wetting down exposed areas at drill and camp sites where required.
- Vehicles will stay on the approved or available tracks as far as practically possible.
- Low speed limits will be set to avoid the creation of dust (40km/hr).
- All the equipment and vehicles will be equipped with the manufactures stock standard exhaust systems which will minimize the amount of emissions and noise from their engines.
- No burning of waste will be allowed on site.
- Fire extinguishers and other fire safety equipment will be available.
- Drilling locations as set out by the final layout plan will be adhered to.
- Excavations and other clearing activities will only be done during agreed working times and permitting weather conditions to avoid drifting of sand and dust into neighboring areas.
- Any complaints or claims emanating from the lack of dust control shall be attended to immediately by the Contractor.

Noise pollution

- The activities will comply with the provisions of the Mine Health and Safety Act, 1996 (Act 29 of 1996) and its regulations as well as other applicable legislations regarding noise control.
- Employees will be supplied with ear plugs. All prospecting vehicles will be maintained in a road worthy condition.
- All work will be limited to daylight hours i.e. between 6am and 6pm.

Waste pollution

- Scavenger proof bins will be made available to avoid windblown litter.
- Bins will be emptied on a regular basis.
- No burying and/or burning of waste is allowed.
- All waste bins and domestic waste will be removed from site on a regular basis.

Water pollution

- Prospecting activities will not be conducted within 32 m of a watercourse or drainage• line or within 500 m of a wetland. Should this become a requirement, the relevant permits will have to be obtained from DWS prior to drilling taking place. All preliminary drill hole locations are placed to NOT occur within these buffer zones.
- Limited amounts of water (approximately 2000 liters / day) will be used during drilling. Water will be trucked to site.
- Enviro-loo ablution facilities will not be placed within 32 m of any water body.
- No construction footprint will be placed inside or within 32 m of any water body or within 500 m of a wetland.

Hazardous materials

- Use and /or storage of materials, fuels and chemicals which could potentially leak into the ground will be controlled in a manner that prevents such occurrences.
- All storage tanks containing hazardous materials will be placed in bunded containment areas with sealed surfaces.
- The bund wall will be high enough to contain 110% of the total volume of the stored hazardous material with an additional allocation for potential high runoff storm water events.

- Any hazardous substances will be stored at least 100 m from any of the water bodies on site.
- Contaminated wastewater will be managed by the Contractor to ensure existing water resources on the site are not contaminated. All wastewater from general activities in the camp will be collected and removed from the site for appropriate disposal at a licensed commercial facility.

Soil pollution

- Dust abatement by wetting down exposed drill site and camp areas where required.
- Stockpiles will be below the 1.5 m height restriction.
- The use of oil drip trays under drilling equipment to ensure no spillage of oils and fuels onto the ground.
- Where possible, no major vehicle repairs will be done on site.
- Oils and fuel will be stored on bunded areas to avoid spillages.
- Any spillages which may occur will be investigated and immediate action will be taken. In the event of significant spills (in excess of 35 litres) of any hazardous substance, this will be recorded and reported to the environmental personnel, Department of Water and Sanitation (DWS), DMR and any other relevant authorities. In such cases the contaminated soil will be excavated and disposed at a suitably licensed and registered landfill.
- An emergency plan for spillages will be available on site.
- Storm water runoff in and around drill holes will be controlled.
- Wind screening and storm water control will be undertaken to prevent soil loss from the site.
- All erosion control mechanisms will be regularly maintained.
- Re-vegetation of disturbed surfaces will occur immediately after the construction and prospecting activities are completed.
- Rehabilitation will be undertaken progressively.

Fauna and flora

- Only demarcated areas for drilling will be cleared to the minimum level required for access and adjacent and/or other areas will not be disturbed. No trees will be removed.

- Place temporary facilities on already disturbed land as far as possible to limit impacts on vegetation.
- No firewood harvesting will be allowed.
- No fires will be made on site. Cooking will only be allowed on gas-stoves at designated areas.
- No hunting will be allowed.
- All equipment will be removed from site.
- No cigarette butts may be disposed of on the relevant properties.
- Rehabilitation will be done in such a manner that the site is in the original state prior to prospecting.

Rehabilitation

- Prior to rehabilitation of the site, all remnants of foreign debris shall be removed from the site.
- All holes will be covered first with subsoil and then with topsoil (minimum of 10cm deep). Topsoil will be spread to the original depth (30cm where possible).
- As topsoil will contain all cleared vegetation, no additional treatment will be required.
- The soil must cover all the roots and be well firmed down to a level equal to that of the surrounding in situ material.
- Control weeds by means of extraction, cutting or other approved methods.
- Monitoring will be undertaken once a month or until rehabilitation has been deemed successful.
- Follow up inspections will be conducted every two months to remove upcoming seedlings of alien vegetation.
- Continued monitoring throughout the life of the project will be required as the risk of alien plant species invasion is never eliminated.
- A single permanent marker will be required to mark the location of the drill hole for future reference. The siting of such a marker shall be cleared with the landowner.
- All rehabilitation referred to in this environmental management programme will be done concurrent to prospecting operations as set out in the MPRDA. Best practice methods will be used.
- Continuous monitoring of possible soil erosion will be required.

Cultural/Heritage

- The applicant will before commencing any prospecting activity, ascertain whether the designated site does not include a heritage site.
- Any heritage sites/artifacts found will be reported to SAHRA.
- National heritage sites will not be destroyed, damaged, excavated, altered, or defaced without a permit.
- Demolishing of buildings older than 60 years is subjected to approval - National Heritage Resources Act, 1999 (Act No 25 of 1999).
- Invasive activities will not be allowed within 100m from farm houses.
- Local museums as well as the South African Heritage Resource Agency (SAHRA) will be informed if any artifacts are uncovered in the affected area and mitigation measures recommended by SAHRA should be followed.
- The contractor will ensure that his workforce is aware of the necessity of reporting any possible historical or archaeological finds to the ECO so that appropriate action can be taken.
- Any discovered artifacts will not be removed under any circumstances. Any destruction of a site will only be allowed once a permit is obtained and the site has been mapped and noted.
- All health and safety aspects will be adhered to.

Hunting and livestock areas

- Mitigation alternatives are limited to timing of the flyovers which may affect aspects such as hunting activities.
- Site activities will be restricted to daylight hours between 6am and 6pm.
- Vehicles will remain on the existing tracks.
- Prospecting activities will be fenced off and will not be conducted within 100 m of pens or stalls.

Socio-economic

- Local labour and service companies will be used where possible.
- Prospecting Rights do not supersede property rights hence the applicant will comply with all reasonable requirements to minimize the impact of prospecting on landowners and agricultural activities

- All relevant mitigation measures as set out in Table 16 above.

Environmental Training

All site personnel will have a basic level of environmental awareness training. Topics covered should include;

- What is meant by “Environment”
- Why the environment needs to be protected and conserved
- How construction and prospecting activities can impact on the environment
- What can be done to mitigate against such impacts
- Awareness of emergency and spills response provisions
- Social responsibility during construction and prospecting e.g. being considerate to local residents

The need for a “clean site” policy also needs to be explained to the workers.

n. Aspects for inclusion as conditions of Authorization. Any aspects which must be made conditions of the Environmental Authorization.

EMPr must be on site

- The contractor and key personnel must get an understanding of the EMPr.
- An Environmental Control Officer must be appointed to ensure that environmental controls are being implemented, and quarterly reports must be forwarded to the Competent Authority (DMR among others).
- The proponent and contractor must be made aware that they are responsible for rehabilitating the environment they damage to the pre-state of which they found it to be.
- Upon getting done with the prospecting activity, closure report must be submitted to the competent authority

o. Description of any assumptions, uncertainties and gaps in knowledge (Which relate to the assessment and mitigation measures proposed)

Specialists were engaged, however, some impacts could have been missed.

p. Reasoned opinion as to whether the proposed activity should or should not be authorized

i. Reasons why the activity should be authorized or not.

Based on the analysis and findings as discussed throughout the report, there is no reason why the project should not be authorised. There are no environmental fatal flaws and all impacts can be effectively mitigated. The spatial extent of disturbance related to this activity is minimal and short term. The implementation of effective rehabilitation will ensure that the site is returned back to its original state and that the impacts are reversed. In addition to this the activity should be authorised in order for a better understanding of the mineral potential in the area to be obtained. Once a deposit is defined, a better understanding of its economic value will be achieved and this will then provide a better platform for making an informed decision about the potential for mining operations in this area.

ii. Conditions that must be included in the authorization

EMPr must be on site;

- The contractor and key personnel must get an understanding of the EMPr
- An Environmental Control Officer must be appointed to ensure that environmental controls are being implemented, and quarterly reports must be forwarded to the Competent Authority.
- The proponent and contractor must be made aware that they are responsible for rehabilitating the environment they damage to the pre-state of which they found it to be.
- Upon getting done with the mining activity, closure report must be submitted to the competent authority.

q. Period for which the Environmental Authorisation is required

The authorisation is required for the duration of the prospecting right which is an initial 5 years plus a potential to extend the right by an addition to this al 3 years. In addition to this the period should allow for a further 2 years for the application period. Thus a total of 10 years.

r. 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.

Herewith I, the person whose name and identity number is stated below, confirm that I am the person authorised to act as representative of the applicant in terms of the resolution submitted with the application, and confirm that the above report comprises BAR and EMPr compiled in accordance with the guideline on the Departments official website and the directive in terms of sections 29 and 39 (5) in that regard, and the applicant undertakes to execute the Basic Assessment Report and Environmental Management Programme as proposed.	
Full Names and Surname	Tshimangadzo Mulaudzi
Identity Number	8803265731082

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

This financial provision assessment focused on the existing and proposed mining activities and was calculated by means of the Department of Mineral Resources' (DMR) standard method for assessment of mine closure. The cost for rehabilitation and closure of the proposed site according to the DMR Guideline is R 53 870.73 for the full LoM.

i. **Explain how the aforesaid amount was derived.**

The closure cost assessment is done in accordance with the requirements of the National Environmental Management Act, 1998 (Act No. 107 of 1998) (NEMA) as amended and associated regulations. These Regulations provide that the holder of a Prospecting right must make full financial provision for rehabilitation of negative environmental impacts. The methodology used was based on the Department of Mineral Resources (DMR) "Guideline Document for the Evaluation of the Quantum of Closure-related Financial Provision provided by a Mine" (DME, 2005), as per the Mineral and Petroleum Resources Development Act, 2002 (Act No. 28 of 2002) (MPRDA).

The financial provision must guarantee the availability of sufficient funds to undertake the following:

- Rehabilitation of the adverse environmental impacts of the listed or specified activities;
- Rehabilitation of the impacts of the prospecting or mining activities;
- Decommissioning and closure of the operations;
- Remediation of latent or residual environmental impacts which become known in the future;
- Removal of building structures and other objects; and
- Remediation of any other negative environmental impacts.

The closure cost assessment has been developed in line with these requirements. The DMR Guideline format makes use of a set template for which defined rates and multiplication factors are used. The multiplication and weighting factors which ultimately define the rate to be used are determined by amongst others the topography, the classification of the mine according to mineral prospected, the risk class of the mine and its proximity to build up or urban areas.

The DMR Guideline Document for the Evaluation of the Quantum of Closure Related Financial Provision Provided by a Mine (DME, 2005), classifies a mine according to a number of factors which allows one to determine the appropriate weighting factors to be used during the quantum calculation.

The following factors are considered:

- The mineral prospected;
- Environmental sensitivity of the prospecting area;
- Type of prospecting operation; and
- Geographic location.

The financial provision for the Life of Mine of Modderfontein Mine is calculated to be R 53 870.73 based on the DMR method of calculation. The total cost includes contingencies, Preliminary and General (P&Gs) and is inclusive of VAT at 15%.

Table 17 presents the detailed forecast of the expected increase in financial provision as Sunny Mining (Pty) Ltd continues to progress through the construction phase into the operational phase in Year 2020. Sunny Mining (Pty) Ltd annually conducts a reassessment of their financial provision based on actual disturbances and it is recommended that this forecast be updated as the progress against the planned construction schedule can be verified.

Table 17: The calculated quantum.

CALCULATION OF THE QUANTUM

Applicant:	**Sunny Mining (Pty) Ltd - NC 12558 PR**	**Location:**	**SUTHERLAND**
Evaluators:	**Engedi Minerals and Energy (Pty) Ltd**	**Date:**	**Oct-20**

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	17	1	1	0
2 (A)	Demolition of steel buildings and structures	m2	0	241	1	1	0
2(B)	Demolition of reinforced concrete buildings and structures	m2	0	356	1	1	0
3	Rehabilitation of access roads	m2	0,01	43	1	1	0,43
4 (A)	Demolition and rehabilitation of electrified railway lines	m	0	419	1	1	0
4 (A)	Demolition and rehabilitation of non-electrified railway lines	m	0	229	1	1	0
5	Demolition of housing and/or administration facilities	m2	0	483	1	1	0
6	Opencast rehabilitation including final voids and ramps	ha	0,03	253019	1	1	7590,57
7	Sealing of shafts adits and inclines	m3	0	130	1	1	0
8 (A)	Rehabilitation of overburden and spoils	ha	0,03	168679	1	1	5060,37
8 (B)	Rehabilitation of processing waste deposits and evaporation ponds (non-polluting potential)	ha	0	210087	1	1	0
8 (C)	Rehabilitation of processing waste deposits and evaporation ponds (polluting potential)	ha	0	610192	1	1	0
9	Rehabilitation of subsided areas	ha	0,15	141244	1	1	21186,6
10	General surface rehabilitation	ha	0,01	133622	1	1	1336,22
11	River diversions	ha	0	133622	1	1	0
12	Fencing	m	0,02	152	1	1	3,04
13	Water management	ha	0	50807	1	1	0
14	2 to 3 years of maintenance and aftercare	ha	0,2	17782	1	1	3556,4
15 (A)	Specialist study	Sum	0			1	0
15 (B)	Specialist study	Sum				1	0
					Sub Total 1		38733,63
1	Preliminary and General		4648,0356		**weighting factor 2** 1		4648,0356

2	Contingencies	3873,363	3873,363
		Subtotal 2	47255,03
		VAT (15%)	6615,70
		Grand Total	**R 53 870,73**

ii. **Confirm that this amount can be provided for from operating expenditure.** (Confirm that the amount is anticipated to be an operating cost and is provided for as such in the Financial and Technical Competence Report (Ftat) or Prospecting Work Programme as the case may be).

Financial provision has been made available through the company's cash reserves. The reserves provide for sufficient funds for premature and planned closure of the prospecting operation. The quantum for financial provision for rehabilitation will be re-assessed on an annual basis and arrangement to fund shortfalls will be made.

t. Specific information required by the Competent Authority

i. **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:**

1. **Impact on the socio-economic conditions of any directly affected person.** (Provide results of investigation, assessment, and evaluation of the impact of the mining, bulk sampling or prospecting on any directly affected person including the landowner, lawful occupier, or, where applicable, potential beneficiaries of any land restitution claim, attach the investigation report as an **Appendix .**

Safety of people even animals if the open pits are not fenced off and guarded. If water accumulates after rain, there is a risk of drowning and death. The open pits are also a risk to animals falling in and breaking limps. The high vehicle movement to and from the drilling and pitting site a risk to accidents. Socio-economic impact will be due the job creation and revenue generation for the Karoo Hoogland Local Economic Development.

2. **Impact on any national estate referred to in section 3(2) of the National Heritage Resources Act.** (Provide the results of investigation, assessment, and evaluation of the impact of the mining, bulk sampling or prospecting on any national estate referred to in section 3(2) of the National Heritage Resources Act, 1999 (Act No. 25 of 1999) with the exception of the national estate contemplated in section 3(2)(*i*)(vi) and (vii) of that Act, attach the investigation report as **Appendix 2.19.2** and confirm that the applicable mitigation is reflected in 2.5.3; 2.11.6 and 2.12 herein).

No historical or cultural sites were identified. In case any human remains are excavated during operation, work should be stopped and a report made to the police and SAHRA for removal of the human remains.

u. Other matters required in terms of sections 24(4) (a) and (b) of the Act. (the EAP managing the application must provide the competent authority with detailed, written proof of an investigation required by section 24(4)(b)(i) of the Act and motivation if no reasonable or feasible alternatives, as contemplated in sub-regulation 22(2)(h), exist. The EAP must attach such motivation as **Appendix B**).

The proposed drilling activities requested as part of this authorisation is the only current viable manner in which a mineral deposit can be identified and used to generate a South African Mineral Reporting Codes (SAMREC) compliant resource which is a minimum requirement to determine whether it is viable to invest in a future mine.

PART A: APPENDIXES

APPENDIX A:

THE CURRICULUM VITAE OF THE EAP/ECO

CURRICULUM VITAE

OF

Tshimangadzo Mulaudzi

P.O Box 29567

Danhof

93120

Contacts: 0793626046 / 072 901 0990

E-mail: mulaudzit@engedime.com

Date of Birth:	26 March 1988	Nationality	: South African
Languages :	Speak and write (English and Tshivenda).	ID ender	: 8803265731082 : Male
Driver's license: Code 10 (C1)		Health status	: Excellent

EDUCACTIONAL QUALIFICATION

Institution	:	Litshovhu High School
Qualification	:	Grade 12 (Senior Certificate)
Major subject passed	:	Mathematics, Physical Science, Biology, Agric, English and Tshivenda all in Higher Grade.
Year	:	2006
Institution	:	University of Venda
Qualification	:	BSc (Honours). Mining and Environmental Geology
Subject passed	:	See attached Academic Record
Year	:	2011

SUMMARY

I am a Candidate in a possession of a BSc (Hons) in Mining and Geology with vast variety of experience in Geological, Geochemical, Geophysical Exploration, and Managing of a Manufacturing team. Currently I am working as a Consultant Geologist at Breeze Court Investments 47 (Pty) Ltd and i have gained experience in Map Production (Using ArcGis), Identification of Minerals, and Applications for (Prospecting Right, Mining Right, and Prospecting right on DMR Samrad online portal), Petroleum applications (Compilation of EMP, EIA, Progress report, Environmental Performance Assessment, Closure application, and Mineral Laws Administration (knowledge of MPRDA, 2002, NWA, 1998, NEMA, 1998, NHRA, 1999, MHSA, 1996, Mining Charter, 2010 and Freedom Charter, 1955.).

I have also worked with the small scale miners in the region of Northern Cape, Free State and Northern Cape helping them with the application for Prospecting right, prospecting right and also attend the site inspection with the officials from Department Mineral Resources to help the small scale miners to comply with the legislation of the department.

I served at the Makhado Municipality for two (2) years under Local Economic Development as an Intern (**In Mining, Environmental and Geology Sectors)** and was attending seminars on Local Economic Development issues, interacting with the stake holders and helping the Small Micro Medium Enterprises (SMME's) to get funds from the sponsors.

EMPLOYMEMT HISTORY

Job title	:	**Trainee Mine Geologist**
Name of organization	:	Agnes gold mine
Period	:	June 2010 – June 2011 (1 year)
Experiences and skills	:	Face mapping, stope observing, continuous sampling, Geological data capturing, Report writing and Geological mapping.
Job title	:	**Chief production, quality, and safety officer**
Name of Organization	:	Tshedza concrete art
Period	:	January 2012 – January 2013 (1 year, 1 month)
Experiences and skills	:	Managing high quality production and enforcing safe working Environment for workers
Job title	:	**LED Intern (in Mining, Environmental and Geology)**

Name of Organization	:	Makhado Local Municipality (Northern Cape)
Period	:	February 2013 – December 2014 (11 Months)
Experiences and skills	:	To formulate and implement measures and procedures to Facilitate for the development of SMME's. Implement Measures, processes, and procedures to attract the Investors, Facilitate and implement job creation projects and initiatives. Formulate, review and update LED plans in alignment with the Province and District Municipality. Facilitate and create Partnership with regard to service provider, trade exhibitions, Corporate and SMME's.
Job title	:	**Consultant Environmental Geologist and GIS specialist**
Name of organization	:	Breeze court investment (Pty) Ltd Geol& Min Consultants
Period	:	January 2014 – January 2015
Experiences and skills	:	Map Production (Using ArcGis), Identification of Minerals, and Applications for (Prospecting Right, Mining Right, and Prospecting right on DMR Samradonline portal), Technical Cooperation Permit, Reconnaissance Permit, Exploration Right, Production right (Petroleum applications) Compilation of EMP, EIA, Environmental Authorisation, Progress report, Environmental Performance Assessment, Closure application, and Mineral Laws Administration (Broad knowledge of MPRDA, 2002), Assisting small scale miners in the region of Northern Cape, Northern Cape, and Free State with application for Prospecting right and Prospecting right, help them with compliance in terms of the MPRDA, 2002. Also do the site inspection with the officials from Department of Mineral Resources, and help the miners and management to comply with the statutory while operating and always work in a safe working conditions and enforce also that the act of one employee must be safer towards another employee to achieve zero harm.
Job title	:	**Consultant Environmental Geologist and GIS specialist**
Name of organization	:	Engedi Minerals and Energy (Pty) Ltd
Period	:	February 2015 – Present
Experiences and skills	:	Map Production (Using ArcGis), Identification of Minerals, and Applications for (Prospecting Right, Mining Right, and Prospecting right on DMR Samradonline portal), Technical Cooperation Permit, Reconnaissance Permit, Exploration Right, Production right (Petroleum applications)

	Compilation of EMP, EIA, Environmental Authorisation, Progress report, Environmental Performance Assessment, Closure application, and Mineral Laws Administration (Broad knowledge of MPRDA, 2002), Assisting small scale miners in the region of Northern Cape, Northern Cape, and Free State with application for Prospecting right and Prospecting right, help them with compliance in terms of the MPRDA, 2002. Also do the site inspection with the officials from Department of Mineral Resources, and help the miners and management to comply with the statutory while operating and always work in a safe working conditions and enforce also that the act of one employee must be safer towards another employee to achieve zero harm.

Knowledge of Legislations and Acts

Constitution of the Republic of South Africa No.108 of 1996

Mineral and Petroleum Resources Development Act, 2002 (Act 28 of 2002)

Mineral and Petroleum Resources Development Act Amendments bill 15 of 2013

Mineral and Petroleum Resources Development Act Regulations

National Water Act, 1998 (Act 36 of 1998)

Mine Health and Safety Act, 1996 (Act 29 of 1996)

National Heritage Resources Act, 1999 (Act 25 of 1999)

National and Environmental Management Act, 1998 (Act 107 of 1998)

Public Finance Management Act, 1999 (Act 1 of 1999) and Act 29 of 1999 as Amended

2014 Environmental Impact Assessment Regulations

Mining Charter, 2010

Freedom Charter, 1955

Municipal System Act, 2000 (Act 32 of 2000)

Municipal Structure Act, 1998 (Act 117 of 1998) and as amended in Act 20 of 2002.

COMPETENCIES

Ability to relate with people,

Ability to work independently and as a team,
Determination to succeed,

Strong leadership skills,

Proactive, resourceful, well organized and able to meet deadlines, and

Ability to communicate effectively

EXTRAMURAL ACTIVITIES AND INTERESTS

I love reading newspapers, business literatures, watching discovery channels, News, writing and Public speaking, these help me share my ideas and opinion and to get my message across, and I love learning new things every day and I am eager to learn

REFERENCES

Name	:	Mr P. Makoela
Name of organization	:	Agnes gold mine (Pty) Ltd
Position	:	Head of department of geology section
Contacts	:	087 351 8304 (W), 076 311 7791 (C)
Name	:	Mr R.P. Mamphaga
Name of organization	:	Tshedza concrete art (Pty) Ltd
Position	:	Managing director
Contacts	:	011 024 1167 (W), 082 857 3204 (C)
Name	:	Mr P. Netshivhuyu
Name of organization	:	Makhado Local Municipality
Position	:	Supervisor
Contacts	:	072 718 3220(C)
Name	:	Mr A.J. Davids
Name of organization	:	Breeze Court Investments (Pty) Ltd
Position	:	Consultant Environmental Geologist
Contacts	:	082 707 3239 (C)

15 Barnes Street, Westdene,
Langebaan Building
Bloemfontein, South Africa
9301

P.O.Box 29567
Danhof
9310

pride, determination, and resilience
Reg. No. 2015/153624/07

Cell: 079 362 6046 (+27)

Tel: 051 430 1748 (+27)
Fax: 086 556 2568 (+27)

email: info@ engedime.com
mulaudzit@ engedime.com
www.engedime.com

14th of February 2020

UNDERTAKING AND DECLARATION UNDER OATH AS ENVIRONMENTAL ASSESSMENT PRACTITIONER (EAP)

As refer to the subject of the matter above;

I am hereby confirming that all the information contained in this report is true and correct And hereby declared that I, **Mr Tshimangadzo Mulaudzi,** of Identity number: **8803265731082,** I am an Environmental Geologist Consultants at Engedi Minerals and Energy (Pty) Ltd (Reg. No, 2015/153624/07), I am an Environmental Assessment Practitioner (EAP) registered with the SACNASP as Professional Natural Scientist (Pr.Nat.Sci -114578) and I am capable to compile Environmental reports in support of permits and rights application with Department of Mineral Resource (DMR) and Environmental authorisation with the Department of Environmental Affairs (DEA) and any relevant department including Department of Water and Sanitation amongst others.

This was done and signed at Bloemfontein on the 14th of February 2020

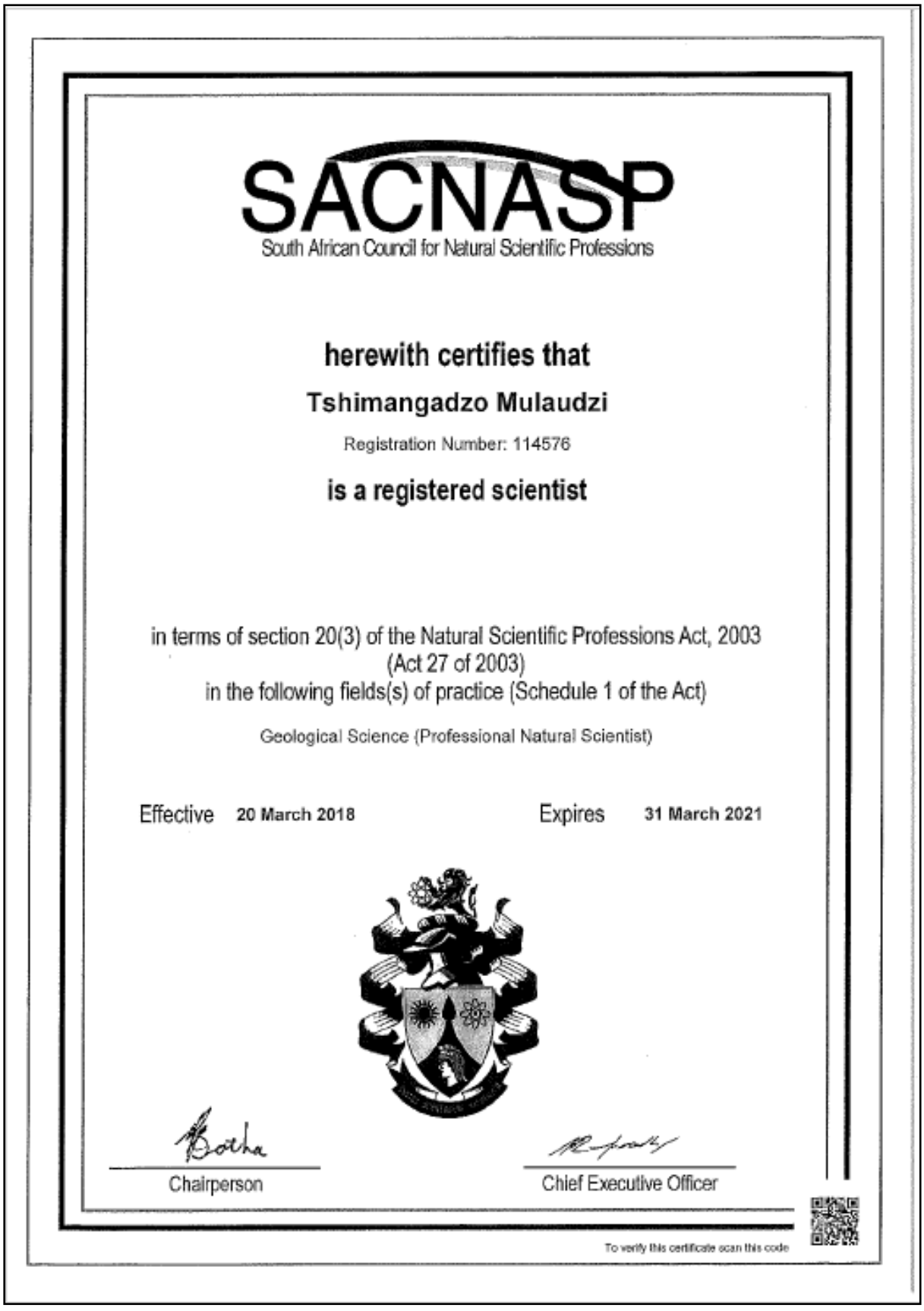
Yours sincerely

Mr T. Mulaudzi (Pr. Nat. Sci)
Engedi Minerals and Energy (Pty) Ltd (Consultant)

JACOBUS JOHANNES GROBBELAAR
KOMMISSARIS VAN EDE VIR DIE R.S.A.
COMMISSIONER OF OATHS FOR THE R.S.A.
DIREKTEUR :
Kirstein Grobbelaar Ingelyf
BARNESSTRAAT 15
WESTDENE
BLOEMFONTEIN
TEL: 051 410 4160
DATE: 14/02/2020

SERTIFISEER 'N WARE AFSKRIF
VAN DIE OORSPRONKLIKE
CERTIFIED A TRUE COPY
OF THE ORIGINAL

\



SACNASP

South African Council for Natural Scientific Professions

herewith certifies that

Tshimangadzo Mulaudzi

Registration Number: 114576

is a registered scientist

in terms of section 20(3) of the Natural Scientific Professions Act, 2003
(Act 27 of 2003)
in the following fields(s) of practice (Schedule 1 of the Act)

Geological Science (Professional Natural Scientist)

Effective **20 March 2018** Expires **31 March 2021**

Chairperson

Chief Executive Officer

To verify this certificate scan this code

APPENDIX B:

LOCALITY MAP

APPLICANT

SUNNY MINING (PTY) LTD

PLAN PREPARED IN ACCORDANCE WITH

REGULATION 2.2

OF THE MPRDA (ACT 28 OF 2002)

SKETCH PLAN FOR PROSPECTING RIGHT

OVER THE AREA LETTERED
A, B, C, D, E, F, G, H, I, J, K, L, M, N, AND O

IN EXTENT 18 072 HA

SITUATED ON

MATJESFONTEIN 97, BLAAUWBLOEMETJES KEEP 95,

AND DE VREEDE 133

ADMINISTRATIVE DISTRICT OF **SUTHERLAND**
PROVINCE: NORTHERN CAPE

SURVEYED SYSTEM WGS: DD

CO-ORDINATES: WG 25

NAME	E	S
A.	20.7667981°	-32.4279747°
B.	20.7713544°	-32.4491497°
C.	20.7419156°	-32.5033047°
D.	20.7740489°	-32.5376356°
E.	20.7673919°	-32.5655125°
F.	20.7908778°	-32.5807819°
G.	20.8452111°	-32.5711675°
H.	20.8668594°	-32.5457864°
I.	20.8530400°	-32.4992500°
J.	20.8236922°	-32.4970925°
K.	20.8384815°	-32.4939258°
L.	20.8424278°	-32.4839339°
M.	20.9337047°	-32.4511072°
N.	20.9548731°	-32.4143861°
O.	20.8303167°	-32.4292547°

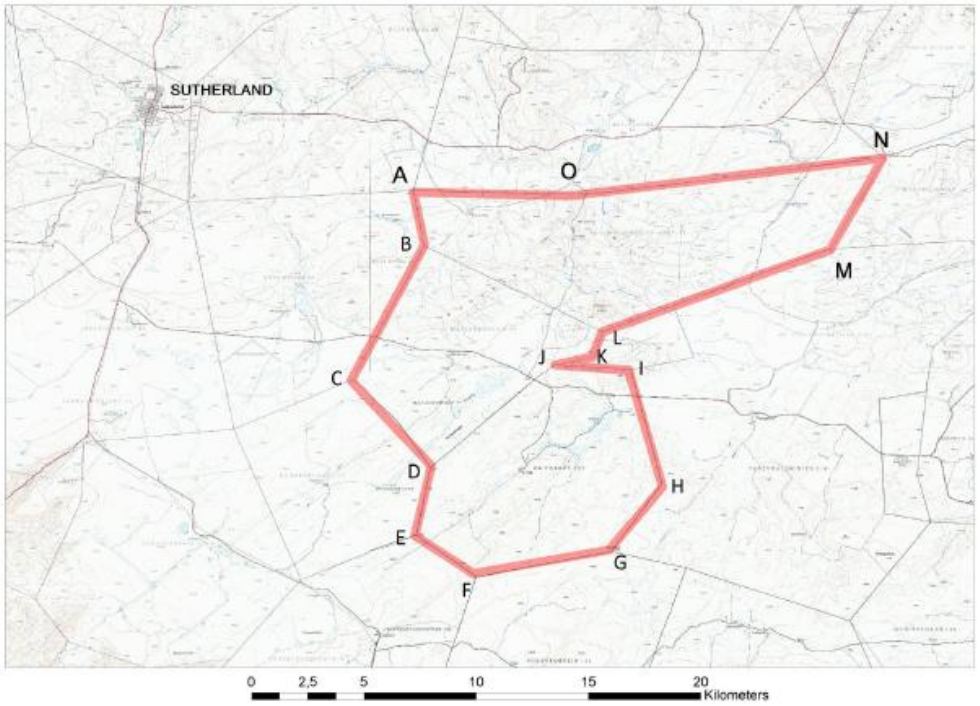
PLAN APPROVED: .....

REGIONAL MANGER: NORTHERN CAPE PROVINCE
DATE: .....

DRAWN AND COMPILED BY: ENGEDI MINERALS AND ENERGY (PTY) LTD MINING CONSULTANTS

....
SIGNATURE **DATE**

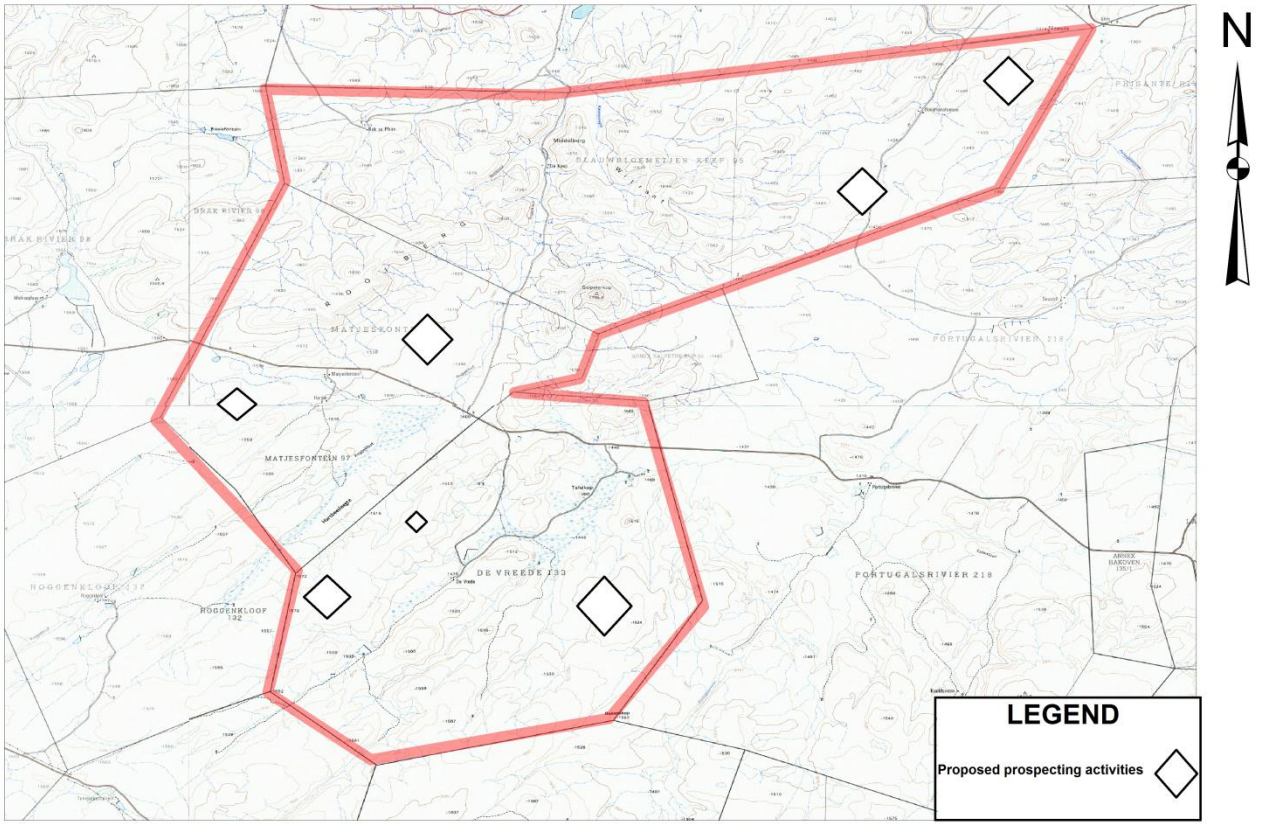
The Locality Map of the Farm Matjesfontein 97, Blaauwbloemetjes Keep 95, and De Vreede 133



APPENDIX C:

THE SITE PLAN

The Layout Map of the Farm Matjesfontein 97, Blaauwbloemetjes Keep 95, and De Vreede 133



APPENDIX D_1:

PROOF OF ADVERTISEMENT

BLADSY 9ES NOORDWESTER / OEWERNUUS / MESSENGER VRYDAG 25 SEPTEMBER 2020

ADVERTENSIETARIEF
E-POS:
noordwester@hantam.co.za
OM TE ADVERTEER SKAKEL:
NOORDWESTER
CALVINIA
JANETTA
027 341 1026
Oewernuus
PRIESKA
BETS DU PISANI
084 582 7024
MESSENGER
VICTORIA-WES
ANDRÉ
072 484 7669

AKKOMMODASIE
KAAPSTAD/BELLVILLE: Netjiese 1 en 2 slaapkamer selfsorg-woonstelle in veilige kompleks. Prys vanaf R700 per nag. **Tel: 083 261 9010.**
www.sorengeliselfcatering.co.za

CARNARVON BOUKONTRAKTEURS
CARNARVON: Ons vervaardig sementstene, randstene en plaveiblokke (400 mm x 400 mm & 300 mm x 300 mm) en "interlocking pavers". Skakel Gerrit: 082 864 8531

LOCKDOWN AFGESKUD

ALOE FEROX het vanjaar 'n gewigsverlies uitdaging geloods gedurende Februarie. Een van die persone wat hierdie uitdaging aanvaar het, was Wayne van Zyl. Hy het aan Aloe ferox die volgende vertel: "Wow, never in my wildest dreams did I expect to lose more than 11 kg's. I took 1 x APPETITE CONTROL capsule in the morning and 1 in the evening before meals. I also took my 15ml WHOLE LEAF JUICE 3 times a day in the morning, at lunch and in the evening. My health has improved considerably, I feel so much better these days. My blood pressure is back to normal, my cholestrol reading is 4.07 and my sugar reading averages 5.5.

That alone makes it worth to start living a healthier lifestyle.

As jy meer te wete wil kom oor APPETITE CONTROL (60kaps = R160), WHOLE LEAF JUICE (500ml = R174) en FABULOUS FIBRE BITTER (90kaps = R95) kontak jou Aloe ferox agent op Prieska by **084 582 7024** of stuur 'n whatsapp. Lieflike kersgeskenke is ook beskikbaar teen R55 elk vanaf Oktober. Die VOLGENDE BESTELLING IS OP MAANDAG, 26 OKTOBER 2020 om teen maandeinde af te lewer.

Neef Gert se Sêgoed
Swak besluit se nalatenskap is bankrotskap.

GELUKKIE OP HENDRIK SE VERJAARSDAG

HENDRIK BOSTANDER van Victoria-Wes was verras om die R350 per maand vir werkloses te ontvang na sy geslaagde aansoek. Daarby het hul uitgevind dat hy dieselfde dag verjaar. Daar is saam verjaardag gevier vir die eerste keer in sy 51 jaar.

Geseënd is EK
Nuwe profeet in Prieska
PROF MONA EN MAMA

Het 8.2m in my huis gesit. Alle dokters vra baie geld, maar Prof Mona & Mama vra geen geld. Gee hom slegs 'n donasie of geskenk nadat al jou probleme opgelos is. Ek het die 8.2m gebruik om al my skuld af te betaal, 'n huis, kar en 'n besigheid gekoop. Ons perfekte troue is 23 Oktober 2020. Help met vinnige betaling van jou pensioenfonds vertraging en Ongelukfonds uitbetaling net 7 dae.

Baie dankie!!! **Bel SMS vir hulp na 063 949 9406**

PROF HABIB
Is terug van die Rwenzoriberge met kragtige medisyne
★ Wen die Lotto/Kasino ★ Geld probleme
★ Geld dadelik in jou rekening ★ Towerbeursie
★ Verlore geliefdes - 24 uur
★ Huis skoon maak dieselfde dag
BEL / WHATSAPP 072 716 5846

LOST OR DESTROYED DEED

Notice is hereby given in terms of Regulation 68 of the Deeds Registries Act, 1937, of the intention to apply for the issue of a certified copy of Deed of Transfer Number T11920/1994 CTN, passed by in favour of **CHRISTINA ADRIANA ALIDA KEYSER and EBEN KEYSER**, in respect of certain **ERF 70 LOXTON SITUATED IN THE UBUNTU MUNICIPALITY, DIVISION VICTORIA WEST, PROVINCE NORTHERN CAPE and ERF 71 LOXTON SITUATED IN THE UBUNTU MUNICIPALITY, DIVISION VICTORIA WEST, PROVINCE NORTHERN CAPE**, which have been lost or destroyed.

All interest persons having objection to the issue of such copy are hereby required to lodge the same in writing with the Registrar of Deeds at Kimberley within two weeks from the date of publication of this notice.

Dated at CAPE TOWN this 22 September 2020

Applicant:	VisagieVos Attorneys
Address	181 Vasco Boulevard, Goodwood, 7460
Email address	sune@visagievos.co.za
Contact number	021 591 9221

HANTAM MUNISIPALITEIT
(Kennisgewing Nr. T 4/2020)
DORPAANLEGSKEMA: VOORGESTELDE ONDERVERDELING EN HERSONERING VAN ERF 675 LOERIESFONTEIN

Kennis geskied hiermee ingevolge die bepalings van die Ruimtelike Beplanning Grondgebruik Bestuur Wet, Wet 16 van 2013, dat Hantam Munisipaliteit van voorneme is om die onderstaande aksies op onroerende eiendom te oorweeg:

1. ERF 675 PLEINSTRAAT LOERIESFONTEIN
1.1 Voorgestelde onderverdeling en hersonering
2. Beskrywing van eiendom Erf 675 Loeriesfontein
3. Ligging Erf 675 Pleinstraat Loeriesfontein
4. Aansoeker Hantam Munisipaliteit
5. Geregistreerde Eienaar Hantam Munisipaliteit (Transportakte Nr. T159/1938)
6. Huidige gebruiksaanwending Vakant
7. Voorgestelde gebruiksaanwending Residensieel 2 (Groepbehuising)

Nadere besonderhede is verkrygbaar by die kantoor van die Departement Tegniese Dienste (Calvinia kantoor) gedurende normale kantoorure (07:30 tot 13:00 en 14:00 tot 16:30) en besware teen die aansoek, indien enige, moet aldaar skriftelik by die Hoof Stadsbeplanning en Boubeheer ingedien word om hom voor of op **Vrydag, 16 Oktober 2020** te bereik. Indien enige persoon wat kommentaar wil lewer/vertoë wil rig, nie kan skryf nie, kan sodanige persoon gedurende normale kantoorure voor of op **Vrydag 16 Oktober 2020**, by me. R. Lock aanmeld, waar sodanige persoon se kommentaar/vertoë op skrif gestel sal word.

J.I. Swartz
Munisipale Bestuurder
Munisipale Kantore
Privaatsak X14
CALVINIA 8190
lockg@hantam.gov.za
Tel. No. 027 341 8500
Faks: 027 341 8501

25 SEPTEMBER 2020

NOTICE – DMR REF. NO. NC 12558 PR

RE: APPLICATION FOR A PROSPECTING RIGHT TO PROSPECT FOR TANTULUM, NIOBIUM, THORIUM, FLUOSPAR, BARITE AND RARE EARTHS SITUATED ON THE FARMS MATJESFONTEIN NO.97, BLAAUWBLOEMETJES KEEP NO.95 AND DE VREEDE NO.133 IN THE MAGISTERIAL DISTRICT OF SUTHERLAND, NORTHERN CAPE PROVINCE.

Notice of public participation process is hereby given for the intent of **Sunny Mining (Pty) Ltd** to prospect Tantulum, Niobium, Thorium, Fluospar, Barite and Rare Earths on the above mentioned property. An application for a Prospecting Right and Environmental Authorisation was simultaneously lodged in terms of Section 16 of the Mineral Petroleum Resources Development Act, 2002 (Act No 28 of 2002) read together with Chapter 4 of the 2014 Environmental Impact Assessment Regulation, and it has been accepted and acknowledged by the Department of Mineral Resources in the Northern Cape Province.

In terms of the 2014 Environmental impact Assessment Regulation, Listing notice 1, activity no. 20 promulgated in term of Section 24(5) and 44 of the national Environmental Management Act (Act No 107 of 1998 as amended), read together with Chapter 6 of Environmental Impact Assessment regulation, 2014. The landowner or lawful occupier of the land, as well as any interested and affected parties must be notified and consulted regarding the proposed operation. The basic assessment report (BAR) must be submitted to the department of mineral resources and the copies of the draft BAR are available at the Local Public Library for reviewing and comments. You're hereby invited to address any comment to support / objection to the proposed operation to **ENGEDI MINERALS AND ENERGY (PTY) LTD** on / or before the **26th of OCTOBER 2020.** Please feel free to contact the undersigned on the following contact details:

Physical address: 15 Barnes Street, Langebaan building, Bloemfontein, 9301
Email: info@engedime.com
Phone: 051 430 1748
Fax: 086 556 2568

If no correspondence is received from you within the stated period, it will be accepted that you have no objections against the proposed mining activities.

Much blessings,
T. Mulaudzi (Consultant)

ENGEDI

Bid NC/SOC/011/2020 Closing Date: 23 October 2020 Closing Time: 11:00
Supply and delivery of educational toys to 14 Early Childhood Learning Centres [Frances Baard 8; Namakwa 6] within the Northern Cape Province

Required by: Department Social Development
Northern Cape Provincial Government

Specifications and bid documents are available at the Department of Social Development. However, due to COVID-19 bidders are advised not to visit the offices but to request bid documents via e-mail OR Download from the E-Tender Publication Portal: www.etenders.gov.za

Bid closes at (postal address): Department Social Development, Private Bag X5042, Kimberley, 8300
Street Address: 257 Barkly Road, Homestead, Latlhi Mabilo Complex, Ground Floor, Block C, Kimberley
Contact Persons: Adelaide Wax or Kedi Flatela
Telephone: 053 874 9215 or 053 874 9180
Facsimile: 086 225 7666 or 086 581 8668
Email: awax@ncpg.gov.za or kflatela@ncpg.gov.za

PLEASE NOTE:

1. From 18 April 2016, the South African Revenue Services (SARS) has introduced an enhanced electronic Tax Compliance Status (TCS) system which makes it easier for bidders to obtain Tax Clearance Certificate (TCC) - Tender as well as obtain a TCS Pin which can be used by authorised third parties to verify your compliance status online via SARS eFiling. In view of the above, a valid, printed tax clearance certificate – Tender – (not a tax clearance certificate "Good Standing") **must** be submitted at closing date and time (bid document NCP 2 refers).
2. This bid will be evaluated and adjudicated in terms of the 80/20 point system prescribed by the Preferential Procurement Policy Framework Act [PPPFA], 05 of 2000 and revised Regulations 2017.
3. A two stage bidding process will be followed, where the first stage involves minimum percentage qualification for functionality as a criterion and the second stage price and B-BBEE.
4. The Department intends to apply pre-qualification criteria for preferential procurement to advance certain designated groups in terms of section 2(1)(f) of the PPPFA and section 4 (1) (c) (v) of the revise regulation as follows:
   - The successful tenderer must subcontract a minimum of 30% of the value of the contract to an EME or QSE which is 51% owned by black people living in rural or underdeveloped areas or townships (Namakwa District and Frances Baard District). Only tenderers falling within the specific tendering condition may respond. Should the bidder fall within the objective criteria, then sub-contracting will not be necessary.
5. In order to qualify for preference points a valid, originally certified copy of bidders' B-BBEE status level verification certificate or sworn affidavit signed by the Exempted Micro Enterprise (EME) representative and attested by a Commissioner of Oath must be submitted at bid closing date and time.
6. Bidders are required to submit their detailed Central Suppliers Database (CSD) registration report (not the summary report) together with the bid document.
7. Names of bidders that submitted bids will be published on the website of the Office of the Premier: www//northern-cape.gov.za and/or e-tender portal on Friday, 06 November 2020.
8. Bidders could obtain details of successful/ unsuccessful information on e-tender portal after 120 days after closure of bid.

25 SEPTEMBER 2020

NOTICE – DMR REF. NO. NC 12558 PR

RE: APPLICATION FOR A PROSPECTING RIGHT TO PROSPECT FOR TANTULUM, NIOBIUM, THORIUM, FLUOSPAR, BARITE AND RARE EARTHS SITUATED ON THE FARMS MATJESFONTEIN NO.97, BLAAUWBLOEMETJES KEEP NO.95 AND DE VREEDE NO.133 IN THE MAGISTERIAL DISTRICT OF SUTHERLAND, NORTHERN CAPE PROVINCE.

Notice of public participation process is hereby given for the intent of **Sunny Mining (Pty) Ltd** to prospect Tantulum, Niobium, Thorium, Fluospar, Barite and Rare Earths on the above mentioned property. An application for a Prospecting Right and Environmental Authorisation was simultaneously lodged in terms of Section 16 of the Mineral Petroleum Resources Development Act, 2002 (Act No 28 of 2002) read together with Chapter 4 of the 2014 Environmental Impact Assessment Regulation, and it has been accepted and acknowledged by the Department of Mineral Resources in the Northern Cape Province.

In terms of the 2014 Environmental Impact Assessment Regulation, Listing notice 1, activity no. 20 promulgated in term of Section 24(5) and 44 of the national Environmental Management Act (Act No 107 of 1998 as amended), read together with Chapter 6 of Environmental Impact Assessment regulation, 2014. The landowner or lawful occupier of the land, as well as any interested and affected parties must be notified and consulted regarding the proposed operation. The basic assessment report (BAR) must be submitted to the department of mineral resources and the copies of the draft BAR are available at the Local Public Library for reviewing and comments. You're hereby invited to address any comment to support / objection to the proposed operation to **ENGEDI MINERALS AND ENERGY (PTY) LTD** on / or before the **26th of OCTOBER 2020.** Please feel free to contact the undersigned on the following contact details:

Physical address: 15 Barnes Street, Langebaan building, Bloemfontein, 9301
Email: info@engedime.com
Phone: 051 430 1748
Fax: 086 556 2568

If no correspondence is received from you within the stated period, it will be accepted that you have no objections against the proposed mining activities.

Much blessings,
T. Mulaudzi (Consultant)

APPENDIX D_2:

PROOF OF SITE NOTICES

11 SEPTEMBER 2020

NOTICE – DMR REF. NO. NC 12558 PR

RE: APPLICATION FOR A PROSPECTING RIGHT TO PROSPECT FOR TANTULUM, NIOBIUM, THORIUM, FLUOSPAR, BARITE AND RARE EARTHS SITUATED ON THE FARMS MATJIESFONTEIN NO.97, BLAAUWBLOEMETJES KEEP NO.95 AND DE VREEDE NO.133 IN THE MAGISTERIAL DISTRICT OF SUTHERLAND, NORTHERN CAPE PROVINCE.

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Email: info@engedime.com
Phone: 051 430 1748
Fax: 086 556 2568

If no correspondence is received from you within the stated period, it will be accepted that you have no objections against the proposed mining activities.

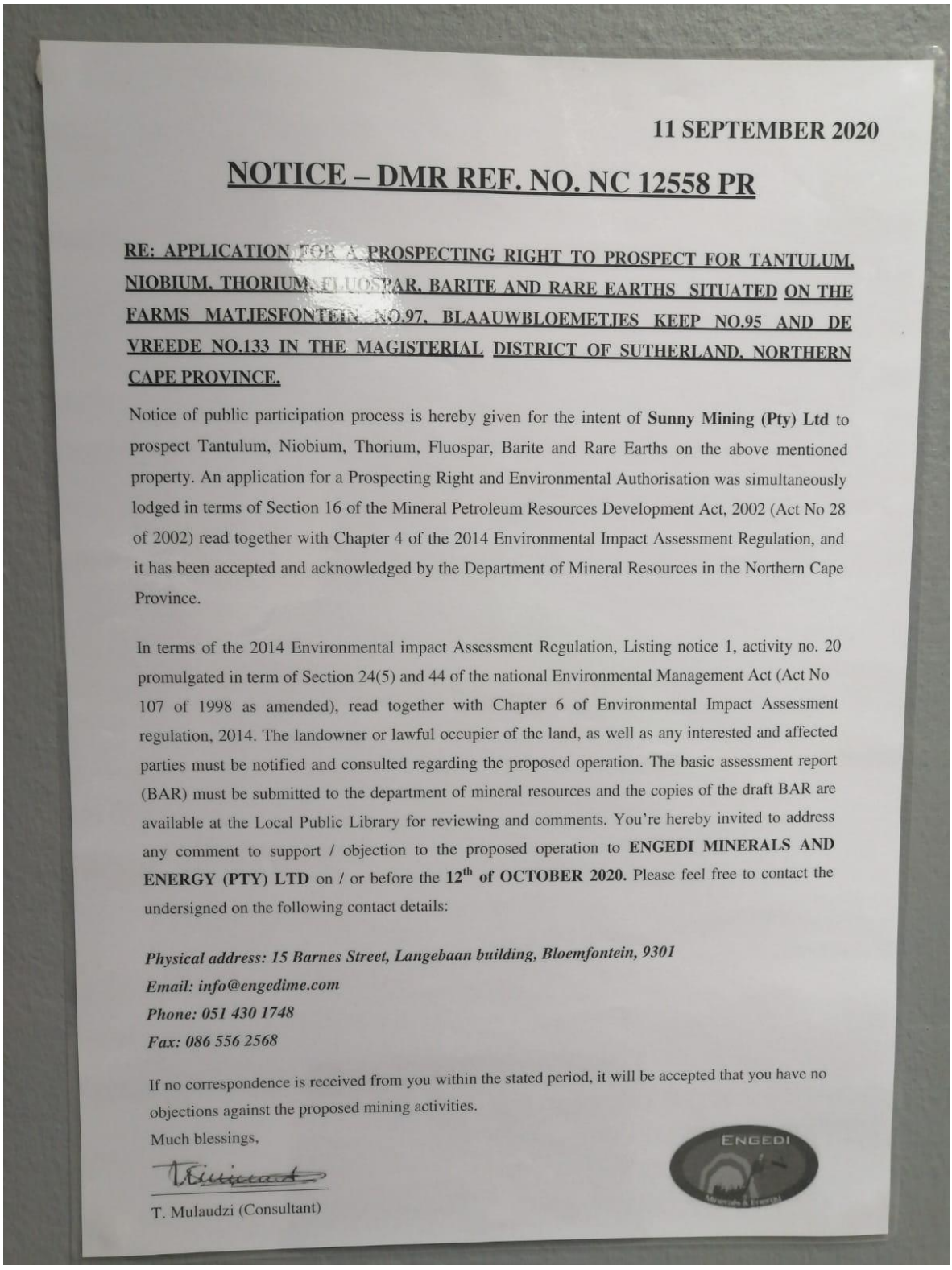
Much blessings.

T. Mulaudzi (Consultant)

ENGEDI

Figure 5: Notice at the site of prospecting activities.


11 SEPTEMBER 2020
NOTICE – DMR REF. NO. NC 12558 PR
SUTHERLAND SUCCESSES
TREATMENT
ALCOHOL
FAKE NEWS
WATERBEPERKINGS - SUTHERLAND
NATIONAL STATE OF DISASTER!



11 SEPTEMBER 2020

NOTICE – DMR REF. NO. NC 12558 PR

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Much blessings,

T. Mulaudzi (Consultant)

ENGEDI

Figure 6: The Notice placed at the local Library.

APPENDIX E:

BASELINE DESKTOP ARCHAEOLOGICAL ASSESSMENT

APPENDIX F:

BASELINE DESKTOP ECOLOGICAL ASSESSMENT

PART B

ENVIRONMENTAL MANAGEMENT PROGRAMME REPORT

1) Draft environmental management programme.

a. Details of the EAP, (Confirm that the requirement for the provision of the details and expertise of the EAP are already included in PART A, section 1(a) herein as required).

Tshimangadzo has been carrying out Environmental Impact Assessment Procedure since 2012, managing a construction company called Tshedza Concrete Art in Limpopo Province, Makhado town, Madabani village.

In 2014, he joined a large mining consulting company in Kimberly called Breeze Court Investments 47 (Pty) Ltd (Geologist and Mining Consulting firm). This is where Mr. Mulaudzi acquired in-depth experience and know how in the mining consulting business by assisting the large to small scale mining companies to obtain prospecting right, mining rights, prospecting rights, technical co-operate permits, reconnaissance permits, exploration rights, production rights, integrated water use license, environmental authorisation among other licenses.

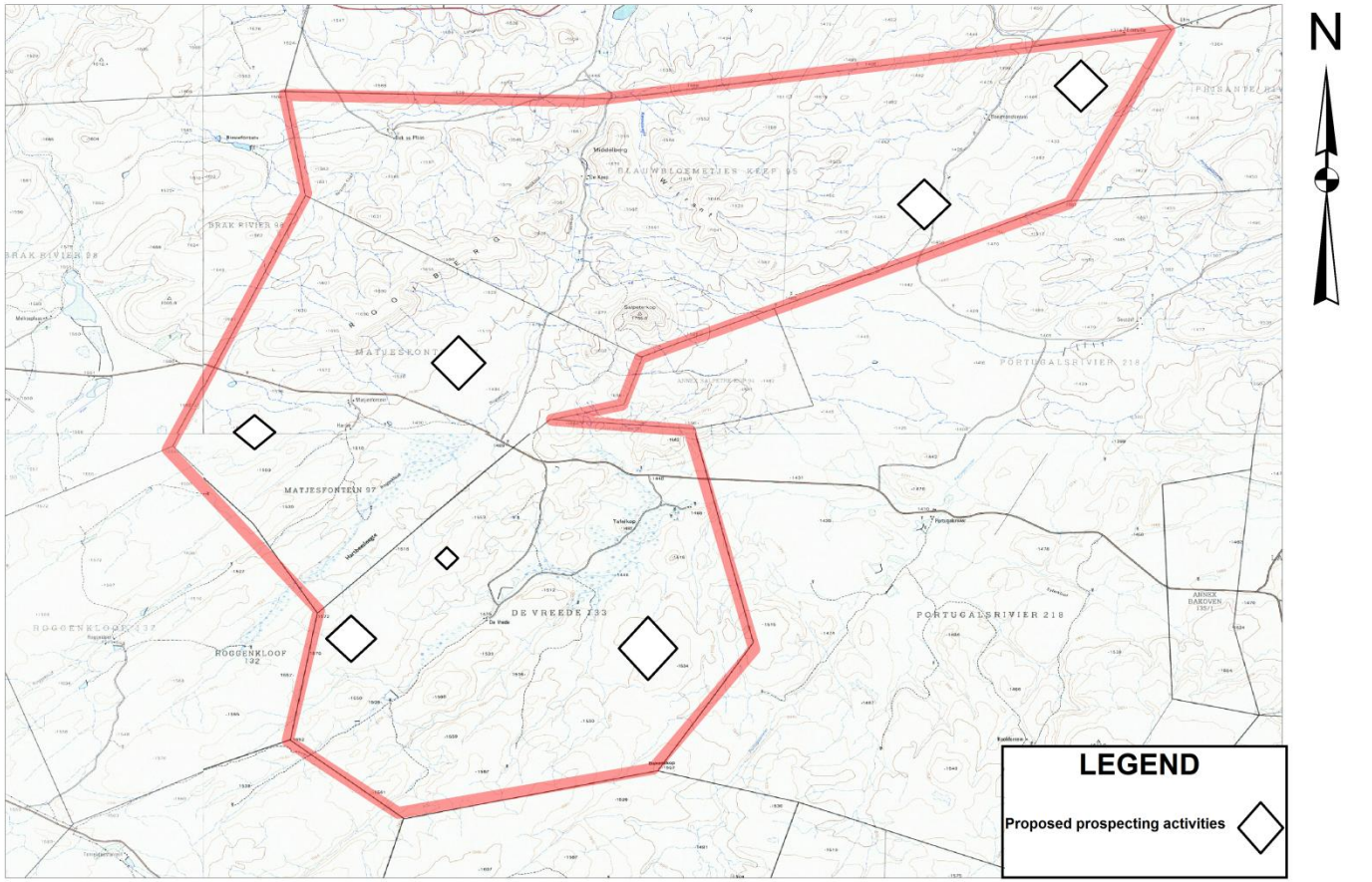
Tshimangadzo has five years working experience in environmental, geology and public participation.

b. Description of the Aspects of the Activity (Confirm that the requirement to describe the aspects of the activity that are covered by the draft environmental management programme is already included in PART A, section (1)(h) herein as required).

I, Tshimangadzo Mulaudzi, hereby confirm that the requirements to describe the aspects of the activity that are covered by the draft environmental management programme are already included in PART A, section 1(h) herein.

c. Composite Map (Provide a map **(Attached as an Appendix)** at an appropriate scale which superimposes the proposed activity, its associated structures, and infrastructure on the environmental sensitivities of the preferred site, indicating any areas that any areas that should be avoided, including buffers)

The Layout Map of the Farm Matjesfontein 97, Blaauwbloemetjes Keep 95, and De Vreede 133



d. Description of Impact management objectives including management statements

i. **Determination of closure objectives.** (ensure that the closure objectives are informed by the type of environment described)

The closure objectives provided below are to ensure that the closure of the site is compliant with the legislature and that the environment will be left in a state which is sustainable and not harmful.

Closure objectives include but are not limited to:

- To ensure closure complies with the Mineral and Petroleum Resources Development Act 28 of 2002.
- To ensure that the prospecting footprints are rehabilitated to an acceptable standard, where there is ecosystem functioning and that all environmental and social risks have been reduced and do not pose any threat to the environment.
- To ensure that the goals which were specified in the rehabilitation section of this report have been met and that the land may have a sustainable use.
- To implement management strategies that will ensure that the negative impacts (risks) associated with proposed prospecting are eliminated or minimized to acceptable standards.
- To leave the area in a manner that is environmentally safe and does not pose any health risks to the neighboring communities.

The objective of closure and rehabilitation for this area will be to leave the area in a functional state and returned to its pre-prospecting condition i.e. agricultural land (hunting and livestock grazing).

ii. Volumes and rate of water use required for the application.

The drilling activities will use between 2 000 L per day which falls within “small industrial user” where the use is less than twenty cubic metres per day for prospecting. Therefore the water that will be used for the prospecting activities will be sourced on agreement from an existing authorized water user (e.g. local municipality).

The department responsible for water resources shall be consulted with regards to any water related agreement with either the land owner or local municipality prior to drilling. No water will be abstracted in terms of section 21(a) of National Water Act, 1998 (Act no. 36 of 1998).

iii. Has a water use license been applied for?

A water use license has not been applied for. This is based on the limited amount of water required and the fact that no abstraction will be done. In addition, no drilling will take place within 32 m of any watercourse or within 500 m of a wetland.

iv. Impacts to be mitigated in their respective phases

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

ACTIVITIES **(E.g. For prospecting –** drill site, site camp, ablution facility, accommodation, equipment storage, sample storage, site office, access route **etc…etc…etc** **E.g. For mining –** excavations, blasting, stockpiles, discard dumps or dams, loading, hauling and transport, water supply dams and pitting and trenching, accommodation, offices, ablution, stores, workshops, processing plant, storm water control, berms, roads, pipelines, power lines, conveyors, **etc…etc…etc)**	**PHASE** (Of operation in which activity will take place. State; Planning and design, Pre-Construction, Construction, Operational, Rehabilitation, Closure, Post closure)	**SIZE AND SCALE OF DISTURBANCE** (volumes, tonnages and hectares or m^2)	**MITIGATION MEASURES** (describe how each of the recommendations in herein will remedy the cause of pollution or degradation and migration of pollutants)	**COMPLIANCE WITH STANDARDS** (A description of how each of the recommendations herein will comply with any prescribed environmental management standards or practices that have been identified by Competent Authorities)	**TIME PERIOD FOR IMPLEMENTATION** Describe the time period when the measures in the environmental management programme must be implemented. Measures must be implemented when required. With regard to Rehabilitation specifically this must take place at the earliest opportunity. With regard Rehabilitation, therefore state either – • Upon cessation of the individual activity Or • Upon cessation of mining, bulk sampling or alluvial tantalum, niobium, thorium, fluospar, barite, and rare earths prospecting as the case may be.

Site Establishment activities (fencing, signage, access formation, etc.)	Start-up	± 0.1ha	See appendix	Issues of compliance with standards will be incorporated into the day to day business activities at the proposed prospecting. The work methods used the monitoring and measures done and the review processes will be aimed at ensuring that legal thresholds as set out in the environmental standards are complied with. This will include compliance with standards as per COLTO 1998, the standards as per Mining and Petroleum Resources Development Act regulations, Mine Health and Safety Act regulations, National Water Act regulations. COLTO 1998 Refers to - Standard Specification for Road and Bridge Works for State Road Authorities by the South African Committee of Land Transport Officials.	During start up, operational phase
Clearance of area for mining	Start up& Operational Phase	5ha	See appendix	The work methods used, the monitoring and measurements done and the review processes will be aimed at ensuring that legal thresholds as set out in the environmental standards are complied with. This will include compliance with standards as per COLTO 1998, the standards as per	During start up, operational phase as necessary

				Mining and Petroleum Resources Development Act regulations, Mine Health and Safety Act regulations, and Conservation of Agricultural Resources Act	
Excavation of material	Operational	5ha	See appendix	Management of legal compliance will be incorporated into normal business activities. This means that particular responsibilities need to be clearly defined for the identification of relevant issues and delivery of compliance. This will help to ensure that adequate resources are available to support these activities. Environmental standards as set out in COLTO 1998, Mining and Petroleum Resources Development Act regulations, Mine Health and Safety Act regulations and Water Act regulations.	Operational Phase
Drilling & blasting (if done)	Operational	As needed	See appendix	This will be achieved by clearly outlining the environmental standards to be achieved and the Thresholds which are not to be exceeded in the management system used at the site. This will include compliance with standards as per COLTO 1998, Explosive Act regulations, Mine Health and Safety Act Regulations and the Hazardous Substances Act	Operational Phase (when necessary

Waste Disposal and Material storage	Operational	Undetermined	See appendix	The waste management hierarchy and the proximity principle will be used in ensuring that the environmental standards as set out in COLTO 1998 and the National Environmental Management Waste Act regulation and National Water Act regulation, are complied with.	Operational Phase
Material handling, hauling and transportation	Operational	Undetermined	See appendix	Issues of compliance with standards will be incorporated into the day to day business activities at the proposed prospecting to ensure that legal thresholds as set out in the environmental standards are complied with. This will include compliance with standards as per COLTO 1998, the standards as per Mining and Petroleum Resources Development Act regulations, Mine Health and Safety Act regulations, National Water Act regulations, Mine Health and Safety Act regulations.	Operational phase
Removal of infrastructure & equipment	Decommissioning and closure	Affected areas	See appendix	The recommendations will incorporate factors that include the elimination or the minimization of negative impacts in the work methodologies used during decommissioning so as to comply with the standards as per COLTO 1998, Mining and Petroleum	At decommissioning

				Resources Development Act regulations, Mine Health and Safety Act regulations and the National Environmental Management Act.	
Re-shaping of proposed mining	Decommissioning and closure	5h	See appendix	Considerations with the elimination or at least the minimization of any future impacts from the proposed prospecting and the long term stability of the facility and any concerns in relation to the long term liability for the proposed prospecting and its aesthetics will be incorporated in order to ensure compliance with standards as set out in COLTO 1998, Mine Health and Safety Act regulations, National Environmental Management Act and National Water Act regulations.	Closure period
Community and labour relations management	Operational	N/A	See appendix	Will comply with standards as per COLTO 1998, Basic Conditions of Employment Act regulations, Employment equity Act, Labour Relations Act and Skills Development Act	During Operational Phase
Revegetation of disturbed areas	Closure	5ha	See appendix	The future impacts from the proposed prospecting and the long term stability of the area, any concerns in relation to the long term liability for the facility and its aesthetics will be taken into account to	During Operational Phase in sections where mining has been completed and during closure

				ensure compliance with the environmental standards as set out in COLTO 1998, the National Environmental Management Act, Conservation of Agricultural resources Act, National Environmental Management Biodiversity Act regulations.	

e. **Impact Management Outcomes** (A description of impact management outcomes, identifying the standard of impact management required for the aspects contemplated in paragraph)

ACTIVITY (whether listed or not listed) (E.g. Excavations, blasting, stockpiles, discard dumps or dams, loading, hauling and transport, water supply dams and pitting and trenching, accommodation, offices, ablution, stores, workshops, processing plant, storm water control, berms, roads, pipelines, power lines, conveyors, etc…etc…etc)	**POTENTIAL IMPACT** (e.g. dust, noise, drainage surface disturbance, fly rock, surface water contamination, groundwater contamination, air pollution etc…etc…etc…)	**ASPECTS AFFECTED**	**PHASE** In which impact is anticipated (e.g. Construction, commissioning, operational, decommissioning, closure, post-closure)	**MITIGATION TYPE** (modify, remedy, control, or stop) through (e.g. noise control measures, storm-water control, dust control, rehabilitation, design measures, blasting controls, avoidance, relocation, alternative activity etc…etc…etc…)	**STANDARD TO BE ACHIEVED** (Impact avoided, noise levels, dust levels, rehabilitation standards, end use objectives etc…etc…etc…)
Site Establishment activities (fencing, signage, access formation, etc.)	Loss of vegetation	Visual character, land use	Start-up	Remedy through rehabilitation Limit footprint	Impact managed effectively, Rehabilitate to a self-sustaining environment
	Habitat Destruction	Visual character, land use	Start up	Remedy through rehabilitation Limit footprint	Impact reduced
	Visual scarring	Visual	Start up and	Remedy through rehabilitation	Impact managed

		character	operational		effectively
	Soil erosion	Visual character, land use	Start up and operational	Remedy through rehabilitation, Storm water control. Limit footprint, Control through storm water control	Impact avoided
Clearance of area for mining	Visual scarring	Visual Character	Operational Phase	Remedy through rehabilitation Limit footprint and removal of vegetation.	Impact managed to acceptable levels, residual impact reduced
	Destruction of flora and habitat	Visual Character, land use	Operational Phase	Remedy through rehabilitation	Impact reduced to a satisfactory level, Rehabilitate to an end land use similar to that prior to the activity (depending on the end land use objectives)
	Loss of agricultural potential	Land use management	Operational Phase	Use soil conservation techniques Limit Foot print	Impact managed to ensure suitable soil fertility levels, Rehabilitate to an end land use similar to that prior to the activity.
	Soil erosion	Visual character, land use	Start up and operational	Remedy through rehabilitation, Storm water control	Impact avoided

Excavation	Dust emissions	Air quality	Operational Phase	Control with dust control measures	Particulates reduced to acceptable levels
	Drainage disruption	Drainage	Operational Phase	Control with Storm water controls	Good surface water run-off established
	Slope instability	Topography	Operational Phase	Control with slope management controls	Stable surfaces established
	Noise	Noise	Operational Phase	Control with Noise control measures	Noise reduced to acceptable levels
	Visual Scarring	Visual Character	Operational Phase	Rehabilitation	Impact managed effectively, residual impact reduced
	Soil erosion Land	Land use	Operational Phase	Rehabilitation, use slope management control	Impact levels avoided
	Destruction of heritage	Heritage issues	Operational Phase	Avoidance	Impact Avoided
Drilling & blasting (if done)	Noise and vibrations	Noise	Operational Phase	Control with blast control measures	Noise levels reduced to acceptable levels
	Dust	Air quality	Operational Phase	Control with dust control measures Control with blast control	Particulates reduced to acceptable levels
	Fly rock	Safety, Land	Operational Phase	Control with blast control measures	Fly rock minimized

		degradation			
Waste Disposal and Material storage	Soil contamination	Land degradation	Operational Phase	Avoidance, Operational control measures	Impact Avoided
	Water pollution	Water	Operational Phase	Avoidance, Operational control measures	Impact Avoided
	Increased risk of fire	Safety	Operational Phase	Avoidance, Operational control measures	Impact avoided or managed to low levels
	Dust	Air quality	Operational Phase	Dust Control measures	Particulates reduced to acceptable levels
	Increased risk of accidents	Safety	Operational Phase	Site management protocols	Accidents avoided or reduced to low levels
	Noise	Noise	Operational Phase	Noise control measures	Noise reduced to acceptable levels
	Soil contamination from oil/fuel leaks	Land degradation	Operational Phase	Operational control measures	Impact managed to suitable soil fertility levels
Removal of infrastructure &equipment and re-shaping of proposed prospecting	Noise	Noise	Decommissioning and closure	Control with noise control measures	Noise levels reduced to acceptable levels
	Dust	Air quality	Decommissioning and closure	Control with dust control measures	Particulates reduced to acceptable levels
	Soil contamination from oil/fuel	Land degradation,	Decommissioning and closure	Control with operational control measures	Impact managed to suitable soil fertility

		water pollution			levels, pollution of water avoided
	Disruption of surface drainage	Water movement	Decommissioning and closure	Control with storm water controls	Free drainage achieved
	Community conflicts and tensions	Community relations	Operational	Control using site management protocols	Reduction in complaints and incidences of conflict
	Increased risk of fire	Fire risk	Operational	Control using site management protocols	Fires avoided and risk reduced
	Reduced security on area	Safety Issues	Operational	Control using site management protocols	Improvement in security and elimination of theft incidences
	Improved employment	Community relations	Operational	Control using site management protocols	Increase in number of people employed
	Improved skills	Community relations	Operational	Control using site management protocols	Improvement in skills level

f. **Impact Management Actions** (A description of impact management actions, identifying the manner in which the impact management objectives and outcomes contemplated in paragraphs (c) and (d) will be achieved).

ACTIVITY (whether listed or not listed) (E.g. Excavations, blasting, stockpiles, discard dumps or dams, loading, hauling and transport, water supply dams and pitting and trenching, accommodation, offices, ablution, stores, workshops, processing plant, storm water control, berms, roads, pipelines, power lines, conveyors, etc…etc…etc)	**POTENTIAL IMPACT** (e.g. dust, noise, drainage surface disturbance, fly rock, surface water contamination, groundwater contamination, air pollution etc…etc…etc…)	**MITIGATION TYPE** (modify, remedy, control, or stop) through (e.g. noise control measures, storm-water control, dust control, rehabilitation, design measures, blasting controls, avoidance, relocation, alternative activity etc…etc…etc…)	**TIME PERIOD FOR IMPLEMENTATION** Describe the time period when the measures in the environmental management programme must be implemented. Measures must be implemented when required. With regard to Rehabilitation specifically this must take place at the earliest opportunity. With regard Rehabilitation, therefore state either – • Upon cessation of the individual activity Or Upon cessation of mining, bulk sampling or alluvial tantalum, niobium, thorium, fluospar, barite, and rare earths prospecting as the case may be.	**COMPLIANCE WITH STANDARDS** (A description of how each of the recommendations in 2.11.6 read with 2.12 and 2.15.2 herein comply with any prescribed environmental management standards or practices that have been identified by Competent Authorities).
Site Establishment activities (fencing, signage, access formation,	Loss of vegetation	Remedy through rehabilitation	Start-up	Issues of compliance with standards will be incorporated into the day to day business activities at the proposed

etc.)				prospecting. The work methods used the monitoring and measures done and the review processes will be aimed at ensuring that legal thresholds as set out in the environmental standards are complied with. This will include compliance with standards as per COLTO 1998, the standards as per Mining and Petroleum Resources Development Act regulations, Mine Health and Safety Act regulations, National Water Act
	Habitat Destruction	Limit footprint	Start-up	
	Visual scarring	Remedy through rehabilitation	Start up and operational	
	Soil erosion	Limit footprint	Start up and operational	
Clearance of area for mining Excavation	Visual scarring	Remedy through rehabilitation	Operational Phase	The work methods used, the monitoring and measurements done and the review processes will be aimed at ensuring that legal thresholds as set out in the environmental standards are complied with. This will include compliance with standards as per COLTO 1998, the standards as per Mining and Petroleum Resources Development Act regulations, Mine Health and Safety Act regulations, and Conservation of Agricultural Resources Act.
	Destruction of flora and habitat	Remedy through rehabilitation	Operational Phase	
	Loss of agricultural potential	Soil conservation techniques, Limit footprint of the proposed prospecting	Operational Phase	
	Soil erosion	Remedy through	Operational Phase	

		rehabilitation, Storm water control		
	Dust emissions	Control with dust control measures	Operational Phase	
Drilling & blasting (if done)	Drainage disruption	Control with Storm water controls	Operational Phase	Management of legal compliance will be incorporated into normal business activities. This means that particular responsibilities need to be clearly defined for the identification of relevant issues and delivery of compliance. This will help to ensure that adequate resources are available to support these activities. Environmental standards as set out in COLTO 1998, Mining and Petroleum Resources Development Act regulations, Mine Health and Safety Ac
	Slope instability	Control with slope management controls	Operational Phase	
	Noise	Control with Noise control measures	Operational Phase	
	Visual Scarring	Rehabilitation	Operational Phase	
	Soil erosion	Rehabilitation, use slope management control	Operational Phase	
	Destruction of heritage resource	Avoidance	Operational Phase	
	Noise and vibrations	Control with blast control measures	Operational Phase	
Waste Disposal and Material storage	Dust	Control with dust control measures Control with blast control measures	Operational Phase	This will be achieved by clearly outlining the environmental standards to be achieved and the thresholds which are not to be exceeded in the management system used at the site. This will include compliance with standards
	Fly rock	Control with blast control	Operational Phase	

		measures		as per COLTO 1998, Explosive Act regulations, Mine Health and Safety Act Regulations and the Hazardous Substances Act
	Soil contamination	Avoidance, Operational control measures	Operational Phase	
Material handling, hauling and transportation	Water pollution	Avoidance, Operational control measures	Operational Phase	The waste management hierarchy and the proximity principle will be used in ensuring that the environmental standards as set out in COLTO 1998 and the National Environmental Management Waste Act regulation and National Water Act regulation, are complied with.
	Increased risk of fire	Avoidance, Operational control measures	Operational Phase	
	Dust	Control with dust Control measures	Operational Phase	
Removal of infrastructure & equipment and re-shaping of proposed prospecting	Increased risk of accidents	Site management protocols	Operational Phase	Issues of compliance with standards will be incorporated into the day to day business activities at the proposed prospecting to ensure that legal thresholds as set out in the environmental standards are complied with. This will include compliance with standards as per COLTO 1998, the standards as per Mining and Petroleum Resources Development Act regulations, Mine Health and Safety Act regulations, National Water Act regulations, Mine Health and Safety Act regulations
	Noise	Control with noise control measures	Operational Phase	
	Soil contamination from oil/fuel leaks	Control with operational control measures	Operational Phase	
	Noise	Control with noise control measures	Decommissioning and closure	
Community and labour relations management	Dust	Control with dust control measures	Decommissioning and closure	The recommendations will incorporate factors that include the elimination or the minimization of negative impacts in the work
	Soil contamination from	Control with operational	Decommissioning and	

	oil/fuel	control measures	closure	methodologies used during decommissioning so as to comply with the standards as per COLTO 1998, Mining and Petroleum Resources Development Act regulations, Mine Health and Safety Act regulations and the National Environmental Management Act.
	Disruption of surface drainage	Control with storm water controls	Decommissioning and closure	
	Community conflicts and tensions	Control using site management protocols	Operational	
Site Establishment activities (fencing, signage, access formation, etc.)	Increased risk of fire	Control using site management protocols	Operational	The future impacts from the proposed prospecting and the long term stability of the area, any concerns in relation to the long term liability for the facility and its aesthetics will be taken into account to ensure compliance with the environmental standards as set out in COLTO 1998, the National Environmental Management Act, Conservation of Agricultural resources Act and National Environmental Management Biodiversity Act regulations
	Reduced security on area	Control site management protocols	Operational	
	Improved employment	Control site management protocols	Operational	
	Improved skills	Controls site management protocols	Operational	
	Loss of vegetation	Remedy through rehabilitation	Start-up	

g. Financial Provision

1. Determination of the amount of Financial Provision.

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

The closure objectives provided below are to ensure that the closure of the site is compliant with the legislature and that the environment will be left in a state which is sustainable and not harmful.

Closure objectives include but are not limited to:

- To ensure closure complies with the Mineral and Petroleum Resources Development Act 28 of 2002.
- To ensure that the prospecting footprints are rehabilitated to an acceptable standard, where there is ecosystem functioning and that all environmental and social risks have been reduced and do not pose any threat to the environment.
- To ensure that the goals which were specified in the rehabilitation section in this report have been met and that the land may have a sustainable use.
- To implement management strategies that will ensure that the negative impacts (risks) associated with proposed prospecting are eliminated or minimized to acceptable standards.
- To leave the area in a manner that is environmentally safe and does not pose any health risks to the neighboring communities.

The objective of closure and rehabilitation for this area will be to leave the area in a functional state and returned to its pre-prospecting condition i.e. agricultural land. The extent of the proposed site is approximately 18 072 hectares. Based on the anticipated amount of drill holes (i.e. 25 phased over a 5 year period), storage area, the total disturbed extent equates to approximately 3 000 hectares.

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

Yes it is confirmed.

c. 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.

Rehabilitation plan

The exact location and extent of the prospecting activities, including the need for construction of new access tracks, will be determined once all available information has been evaluated. It is therefore not possible to include a rehabilitation plan showing the areas and aerial extent of the main mining activities, including the anticipated prospected area at the time of closure. The extent of the proposed mining area is however shown in.

The following environmental controls will be implemented during mining to aid or reduce rehabilitation:

- The environment will be returned to its original state, as far as possible. No physical infrastructure will be left on the site.
- Vegetation cleared from each excavations development will be stored within / adjacent to the excavations site for final rehabilitation.
- Topsoil will be stripped within the excavations site, to a depth of 300mm, and placed separately within the excavations site. All topsoil removed will be appropriately protected from erosion for use during rehabilitation.
- Where vegetation has been removed, they shall be re-established systematically where they used to be.
- The area will be level and even, and in a natural state containing no foreign debris or other materials and to ensure ecological, hydrological and topographical integrity.

- All excavations created will be capped and sealed. Where necessary, excavations will be labelled for future use and for reference purposes.
- Mining activities will be restricted to the designated prospecting sites and agreed upon access tracks. No further disturbances will be permitted.
- Following rehabilitation the site will blend suitably with the surrounding environment.

Rehabilitation of excavations.

- Progressive rehabilitation will be undertaken during prospecting (Concurrent rehabilitation). Each excavations and associated disturbed areas will be rehabilitated when excavations is completed at each excavations site.
- Once the excavations has been refilled with rocks and coarse natural materials and profiled with acceptable contours and erosion control measures, the topsoil will be replaced across the disturbed area and shaped to allow a free draining surface. No ponding on the disturbed area will be allowed.
- Cleared vegetation will be used as brush-cut packing on the disturbed areas after rehabilitation to prevent erosion while natural vegetation re-establishes. NO alien plant material will be used for this purpose.
- In cases where native vegetation has been removed or damaged and where re-vegetation is required, species endemic to the area will be re-established.
- An inspection will be held after rehabilitation to determine alien and invasive species growth and the necessary corrective action will be implemented.

Closure objectives and their extent of alignment to the pre-prospecting environment

The following closure objectives will be applicable for rehabilitation:

- Disturbed land will be rehabilitated to a stable and permanent form suitable for subsequent land use.
- There will be no adverse environmental effect outside the disturbed area and the affected area will be shaped to ensure effective drainage and prevent ponding on site.

- The disturbed area will not require any more maintenance than that in or on surrounding land after mining is completed.

  If the commitments in this BAR are adhered to and rehabilitation is undertaken as described above, it is not anticipated that there will be any long-term management or maintenance required for areas disturbed during prospecting.

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

Rehabilitation measures have been designed to meet closure objectives as stipulated in various sections of the report.

The objectives of rehabilitation and closure are:

- To ensure that vegetation clearing is done in an appropriate manner.
- To leave the site in a safe state for humans and animals, as it was originally.
- To remove all equipment, excess topsoil and any waste generated.
- To backfill drill holes adequately.
- Ensure that the water resource and underground water is not affected by prospecting or rehabilitation activities.

Prospecting area establishment, access footpaths, roads and tracks

- Ensure that the prospecting area is placed in an already disturbed area to limit vegetation disturbance. Ensure all equipment; fuel and waste have been removed from site.
- Place a natural barrier at the junction to the footpath/track/road being rehabilitated e.g. rocks to prevent further access.
- Loosen compacted soil on tracks when tracks are not needed again.
- Seeding to be done where required with appropriate seed.
- Daily site access will occur by the required vehicles.
- As far as possible, existing roads will be used. Consultation with the relevant landowner will be done where this is not possible.

- No new access roads will be constructed however should there be a need to establish access roads, these will be constructed in such a way that vegetation clearance is limited, and existing structures such as fence lines are followed as far as possible.
- No fences will be cut and all access gates will be left in their original state.

Drilling sites

- Prior to drilling a photographic record of the site will be established.
- Drill sites will be selected based on geological information. These locations will be discussed with the relevant landowner.
- Drill sites will be marked with pegs that will be removed once the activity is complete. All drill sites will be screened for species of conservation concern.
- Vegetation removed must include the 1st upper 30cm, where possible, of soil and stockpiled (topsoil).
- Topsoil and subsoil will be separated. Topsoil will be used in the rehabilitation phase.
- Since the plant material removed from the site are to be mixed into the topsoil to supplement the organic nutrient content of the soil, no further soil conditioning in terms of fertilising is deemed necessary.
- All cleared invasive alien vegetation will be removed from site.
- If drilling is required in grazing areas, consultations will be held with the relevant landowners to discuss consent and compensation.
- Backfilling will be done via raking of the suitable material over the disturbed areas.
- Drill holes will be plugged, capped and marked.
- All litter will be removed from site and the surrounds.
- Severely compacted soil will be loosened / scarified to allow water and seed penetration.
- Enviro-loo ablution facilities will be used and will be removed and the contents disposed of at an approved facility.
- Fires are prohibited on site.
- Where possible, no major servicing of vehicles will be allowed on site.
- Photographs of the site; file information with dates and notes when first monitoring is due as imperative.

Waste Disposal

- Scavenger proof waste bins will be available for waste disposal.
- All generated waste and litter will be removed from site on a weekly basis.
- Enviro-loo ablution facilities will be outsourced, maintained and serviced on a regular basis by a licensed service provider.
- All spills / leaks will be contained in an appropriate manner and removed from site to a licensed facility.

Rehabilitation

- Prior to rehabilitation of the site, all remnants of foreign debris shall be removed from the site.
- All holes will be covered first with subsoil and then with topsoil (minimum of 10 cm deep). Topsoil will be spread to the original depth (30 cm where possible).
- As topsoil will contain all cleared vegetation, no additional treatment will be required.
- The soil must cover all the roots and be well firmed down to a level equal to that of the surrounding in situ material.
- Control weeds by means of extraction, cutting or other approved methods.
- Monitoring will be undertaken once a month or until rehabilitation has been deemed successful.
- Follow up inspections will be conducted every two months to remove upcoming seedlings of alien vegetation.
- A single permanent marker will be required to mark the location of the drill hole for future reference. The siting of such a marker shall be cleared with the landowner.
- All rehabilitation referred to in this environmental management programme will be done concurrent to prospecting operations as set out in the MPRDA. Best practice methods will be used.
- Continuous monitoring of possible soil erosion will be required.

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

CALCULATION OF THE QUANTUM

Applicant:	**Sunny Mining (Pty) Ltd - NC 12558 PR**	**Location:**	**SUTHERLAND**
Evaluators:	**Engedi Minerals and Energy (Pty) Ltd**	**Date:**	**Oct-20**

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	17	1	1	0
2 (A)	Demolition of steel buildings and structures	m2	0	241	1	1	0
2(B)	Demolition of reinforced concrete buildings and structures	m2	0	356	1	1	0
3	Rehabilitation of access roads	m2	0,01	43	1	1	0,43
4 (A)	Demolition and rehabilitation of electrified railway lines	m	0	419	1	1	0
4 (A)	Demolition and rehabilitation of non-electrified railway lines	m	0	229	1	1	0
5	Demolition of housing and/or administration facilities	m2	0	483	1	1	0
6	Opencast rehabilitation including final voids and ramps	ha	0,03	253019	1	1	7590,57
7	Sealing of shafts adits and inclines	m3	0	130	1	1	0
8 (A)	Rehabilitation of overburden and spoils	ha	0,03	168679	1	1	5060,37
8 (B)	Rehabilitation of processing waste deposits and evaporation ponds (non-polluting potential)	ha	0	210087	1	1	0
8 (C)	Rehabilitation of processing waste deposits and evaporation ponds (polluting potential)	ha	0	610192	1	1	0
9	Rehabilitation of subsided areas	ha	0,15	141244	1	1	21186,6
10	General surface rehabilitation	ha	0,01	133622	1	1	1336,22
11	River diversions	ha	0	133622	1	1	0
12	Fencing	m	0,02	152	1	1	3,04
13	Water management	ha	0	50807	1	1	0
14	2 to 3 years of maintenance and aftercare	ha	0,2	17782	1	1	3556,4
15 (A)	Specialist study	Sum	0			1	0
15 (B)	Specialist study	Sum				1	0
					Sub Total 1		38733,63

1	Preliminary and General	4648,0356	**weighting factor 2** 1	4648,0356
2	Contingencies	3873,363		3873,363
			Subtotal 2	47255,03
			VAT (15%)	6615,70
			Grand Total	**R 53 870,73**

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

Yes, it is confirmed.

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

g) Monitoring of Impact Management Actions.
h) Monitoring and reporting frequency.
i) Responsible persons.
j) Time period for implementing impact management actions.
k) Mechanism for monitoring compliance.

SOURCE ACTIVITY	IMPACTS REQUIRING MONITORING PROGRAMMES	FUNCTIONAL REQUIREMENTS FOR MONITORING	ROLES AND RESPONSIBILITIES (FOR THE EXECUTION OF THE MONITORING PROGRAMMES)	MONITORING AND REPORTING FREQUENCY and TIME PERIODS FOR IMPLEMENTING IMPACT MANAGEMENT ACTIONS
Site Establishment activities (fencing, signage, access formation, etc.)	Loss of vegetation, Habitat destruction, Visual scarring, Soil erosion	Visual checks, monitoring incidences of non-compliance, recording of key parameters	Appointed Contractor	At start and as and when required. Record incidences of non-compliance monthly.
Clearance of area for mining	Visual scarring, Destruction of flora and habitat, Loss of agricultural potential, soil erosion	Visual checks, monitoring incidences of non-compliance, recording of key parameters	Appointed Contractor	At start and as and when required. Record incidences of non-compliance monthly.
Excavation	Dust emissions, Drainage	Visual checks, monitoring	Appointed Contractor	At start and as and when

	disruption, Slope instability, Visual Scarring, Soil erosion, Destruction of heritage resource	incidences of non-compliance, recording of key parameters		required. Record incidences of non-compliance monthly.
Drilling & blasting (if done)	Noise and vibrations, Dust, Fly rock	Visual checks, monitoring incidences of non-compliance, recording of key parameters	Appointed Contractor	At start and as and when required. Record incidences of non-compliance monthly.
Waste Disposal and Material storage	Soil contamination, Water pollution, Increased risk of fire	Visual checks, monitoring incidences of non-compliance, recording of key parameters	Appointed Contractor	At start and as and when required. Record incidences of non-compliance monthly.
Material handling, hauling and transportation	Dust, Increased risk of accidents, Noise, Soil contamination	Visual checks, monitoring incidences of non-compliance, recording of key parameters	Appointed Contractor	At start and as and when required. Record incidences of non-compliance monthly.
Removal of infrastructure & equipment and re-shaping of proposed prospecting	Noise, Dust, Soil contamination, Disruption of surface drainage	Visual checks, monitoring incidences of non-compliance, recording of key parameters	Appointed Contractor	At start and as and when required. Record incidences of non-compliance monthly.
Community and labour relations management	Community conflicts and tensions, Increase risk of	Visual checks, monitoring incidences of non-	Appointed Contractor	At start and as and when required. Record

	fire, Reduced security on area, Improved employment rates, Improved skills	compliance, recording of key parameters		incidences of non-compliance monthly.

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

The BAR and EMPr will be audited by an independent party on an annual basis to determine the level of compliance. The results of this audit will be used to improve environmental management procedures, where required. The audit report will also be submitted to the Department of Mineral Resources (DMR) upon completion.

i) Environmental Awareness Plan

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

Induction (including environmental awareness) training will be conducted on all people involved in the prospecting programme, including truck drivers, mine managers crew and relevant technical services, prior to the commencement of any work; according to the relevant legislation, **Engedi Minerals and Energy (Ltd) Pty** Standard Operational Procedures (SOPs) and this EMP. **Engedi Minerals and Energy** will do in-house training, should it be necessary to its personnel on site. The mining contractor will be responsible for training its mining crew and supervisor.

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

Description of solutions to risks

(Describe the manner in which the risk must be dealt with in order to avoid pollution or degradation of the environment)

It is essential that people involved in the mining programme know how to respond in the event of an environmental emergency situation in order to avoid significant environmental degradation or injury to human health. Ideally such incidents should not occur. If people involved in the mining programme implement all management measures outlined in this EMPr, the likelihood of such incidents occurring is greatly reduced. However, despite the best intentions and the best environmental management practices, it is impossible to ensure that no incidents will ever occur during prospecting activities. Therefore, it is vital to ensure that all personnel are aware of the management measures to be undertaken in the event of an accident.

Two emergency incidents have been identified:

- Hydrocarbon spills.
- The outbreak of fire.

Emergency incident procedures are outlined below. An Environmental Officer will be appointed to the project to manage all environmental related aspects of the prospecting programme.

Emergency planning

- The site and all people involved in the prospecting mining programme are to be managed in strict accordance with the Occupational Health and Safety Act (Act No. 85 of 1993).
- Potentially hazardous areas are to be cordoned off and clearly marked at all times.
- No unauthorized firearms are permitted on site.
- Adequate emergency facilities (e.g. first aid kit) must be provided for the treatment of an emergency on site.
- Emergency contact numbers are to be displayed conspicuously.
- Necessary Personal Protective Equipment (PPE) and safety gear appropriate to the task being undertaken is to be provided to all personnel working on site (e.g. hard hats, safety boots, ear plugs, masks, etc.).
- All vehicles and equipment used on site must be operated by appropriately trained and/or licensed individuals in compliance with all safety measures.

Management of fire risks

- Each mining site will be cleared of vegetation.
- “No Smoking” signs must be prominently displayed.
- Fires will only be allowed within a facility especially constructed for the purpose of keeping warm and for cooking.
- No burning of refuse or vegetation is permitted.
- Fire equipment must be easily accessible.
- Fire equipment must be serviced, full and in good working order.

Management of spills

- Ensure that a proper spill-kit is available on site. The kit must include absorptive material that can handle all forms of hydrocarbon.
- Ensure that any hydrocarbon spills are cleaned up as soon as possible.
- At least one person on site must receive formal training in the use of the spill control kit.
- Equipment is to be required immediately upon developing leaks.
- A drip tray, a thin concrete slab or a PVC lining shall be used to prevent soil and water contamination.
- All spills on site must be reported to the Environmental Officer.
- Spread absorbent sand on areas where oil spills have occurred. Oil-contaminated soils are to be removed to a contained storage area and disposed of appropriately.
- Non-degradable waste must be collected and disposed of at a registered waste site.

Incident reporting

- The supervisor on site must take corrective action to mitigate an incident appropriate to the nature and scale of the incident, immediately after the occurrence of the incident.
- Residual environmental damage that remains after having taken corrective action must be rehabilitated.
- Change operating procedures where necessary to prevent recurrence of similar incident.
- All incidents must be recorded in an Environmental Incident Report, within 24 hours of the incident occurring. Additional documents, including photos must be appended to the incident report to provide a comprehensive record of the incident and the corrective and preventative action taken.
- All incidents will be investigated in collaboration with the Environmental Officer. The focus of these investigations shall not be to apportion blame to specific employees, but to ascertain the root cause of the incident and to prevent a recurrence of similar incidents.

1.7 Environmental awareness training

(Describe the general environmental awareness training and training on dealing with emergency situations and remediation measures for such emergencies).

A number of key elements must be addressed during an environmental awareness training session, since it is recognised that the majority of employees are generally not informed about the environment. The following key elements must be addressed:

- An explanation of the basic key concepts;
- The importance of the environment, including the management thereof;
- Examples of environmental degradation;
- The role that the employees have in protecting the environment;
- Examples of pollution;
- Simple, easy-to-follow rules to protect the environment; and
- South African laws which protect the environment.

All people involved in the mining programme must receive environmental awareness training, to ensure that they are aware of their responsibilities and are competent to carry out their work in an environmentally acceptable manner. The training must also contain all relevant sections of the EMPr and must be presented in a clear, understandable manner. Relevant sections of the EMPr include:

- Access, including use of roads, tracks, gates, etc.;
- Control measures required to manage excluded and exempted areas;
- The handling, storage and disposal of waste;
- Emergency response procedures;
- Control of alien and invasive plant species;
- Fire prevention;
- Sediment and erosion control;
- Control measures to be implemented with regards to the management of water, noise and dust; and
- Rehabilitation of excavations sites and access tracks.

This training may take the form of a PowerPoint presentation, information posters or pamphlets, and other easily accessible methods of information communication.

j) **Specific information required by the Competent Authority (**Among others, confirm that the financial provision will be reviewed annually).

The BAR and EMPr will be audited by an independent party on an annual basis to determine the level of compliance. The results of this audit will be used to improve environmental management procedures, where required. The audit report will also be submitted to the Department of Mineral Resources (DMR) upon completion.

SUNNY MINING (PTY) LTD will undertake rehabilitation to minimise negative impacts on the environment.

2) UNDERTAKING

The EAP herewith confirms:

a)	The correctness of the information provided in the reports	X
b)	The inclusion of comments and inputs from stakeholders and I&APs;	X
c)	The inclusion of inputs and recommendations from specialist reports where relevant ; and	
d)	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.	X

Signature of the environmental assessment practitioner:

Engedi Minerals and Energy

Name of company:

27 October 2020

Date:

-END-