mineral resources

Department:
Mineral Resources
REPUBLIC OF SOUTH AFRICA

DMRE Reference Number: LP 30/5/1/1/2/14980 PR

FINAL BASIC ASSESSMENT REPORT
And
ENVIRONMENTAL MANAGEMENT PROGRAMME REPORT FOR THE PROSPECTING APPLICATION WITHOUT BULK SAMPLING

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Property: The Farm Middelkop 362 KQ in the Magisterial Thabazimbi -Limpopo

Date: 07 September 2023

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

1. IMPORTANT NOTICE

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

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

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

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

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

2. OBJECTIVE OF THE BASIC ASSESSMENT PROCESS

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

(a) determine the policy and legislative context within which the proposed activity is located and how the activity complies with and responds to the policy and legislative context;

(b) identify the alternatives considered, including the activity, location, and technology alternatives;

(c) describe the need and desirability of the proposed alternatives,

(d) through the undertaking of an impact and risk assessment process inclusive of cumulative impacts which focused on determining the geographical, physical, biological, social, economic, heritage , and cultural sensitivity of the sites and locations within sites and the risk of impact of the proposed activity and technology alternatives on the these aspects to determine:

(i) the nature, significance, consequence, extent, duration, and probability of the impacts occurring to; and

(ii) the degree to which these impacts—

(aa) can be reversed;

(bb) may cause irreplaceable loss of resources; and

(cc) can be managed, avoided or mitigated;

(e) through a ranking of the site sensitivities and possible impacts the activity and technology alternatives will impose on the sites and location identified through the life of the activity to—

(i) identify and motivate a preferred site, activity and technology alternative;

(ii) identify suitable measures to manage, avoid or mitigate identified impacts; and

(ii) identify residual risks that need to be managed and monitored.

PART A

3. SCOPE OF ASSSSMENT AND BASIC ASSESSMENT REPORT

4. Contact Person and correspondence address

a) Details of

i) Details of the EAP

Name of the Practitioner: Mr BT Kgosana **Company: Mfri Minerals (Pty) Ltd** **Tel No.: 066 550 2698** **Fax No. : 086 248 9127** **E-mail address: mfriminerals@yahoo.com**

ii)Expertise of the EAP.

Experience in EIA work **Previously Worked for DMRE (as an Environmental Officer), NMC Consulting (as an Environmental Consultant) and DEA&DP (as an Environmental Officer).** **Registered as an EAP Ref No. 2021/3881**

iii)The qualifications of the EAP

Summary of the EAP's past experience.

Qualification in Environmental Science An Environmental Officer at DMR. An Environmental Officer at DEA&DP in Western Cape Provincial Government. An Environmental Consultant at NMC Consulting.

- Who will evaluate and approve the BAR and EMPr

b) Stakeholders.

Before the proposed project can proceed, an Environmental Assessment Practitioner (EAP) must compile an application for an environmental authorisation for the proposed project. An impact assessment (basic assessment process) must be undertaken in support of the application for an environmental authorisation. The basic assessment process will determine the potential environmental impacts that may result from the proposed project and an environmental management programme will be compiled to provide measures for mitigation against the identified impacts. The above-mentioned application must be made to the competent authority and in terms of section 24D (1) of NEMA, the Minister responsible for mineral resources is the responsible competent authority for this application. In view of the above, the application for the environmental authorisation for the proposed project was submitted to the Department of Mineral Resources (DMR), Limpopo Regional Office for their consideration and decision making. In the spirit of co-operative governance and in compliance with the requirements of NEMA and the MPRDA, the competent authority may, during the processing for the environmental authorisation application, consult with other organs of

state that administers laws that relate to matters affecting the environment relevant to this application. Note that during the public participation process for the proposed project, the EAP will also consult with the below listed state authorities. The organs of state that are to be consulted may include the following:

- Relevant commenting provincial department of Limpopo province;
- Landowners/Farm owners/local occupiers;
- Thabazimbi Magisterial Municipality and the Waterberg District Municipality;
- National Department (drdlr, daff and dws)

Note however that this list is not exhaustive as more organs of state may be identified by the competent authority and EAP during the continuous public participation process.

b) Location of the overall Activity.

Farm Name:	The Farm Middelkop 362 KQ
Application area (Ha)	2944 ha
Magisterial district:	Thabazimbi
Distance and direction from nearest town	The proposed site is situated in Thabazimbi magisterial district and surrounded by Acacia Mine approximately 11km South East of the site and Tumela Mine ± 21km on the east of the proposed prospecting. Mokgolwaneng village is 4km west of the site.
21 digit Surveyor General Code for each farm portion	T0KQ00000000036200000
Locality map	Attach a locality map at a scale not smaller than 1:25000 (**Figure 1**).
Description of the overall activity. (Indicate Prospecting Right, Mining Right, Mining Permit, right, Bulk Sampling, Production Right, Exploration Right, Reconnaisance permit, Technical co-operation permit, Additional listed activity)	The proposed activity includes drilling of diamond core method, creation of swamp and clearance of 0,5 metre by 0,5 metre borehole vegetation.

c) Locality map

Figure 1: Locality Map

d) Description of the scope of the proposed overall activity.

The detailed geology and mineral potential of the area is relatively unknown, and as such exploration work will commence from a very basic level. Since exploration is temporary in nature no permanent structures will be constructed, negotiations and agreements will be made with the farm owners to use any existing infrastructure like access roads. The Prospecting Work Programme will therefore be designed in phases, each phase conditional on the success of the previous phase and will include:

The prospecting work will be divided into phases.

Phase	**Activity** (what are the activities that are planned to achieve optimal prospecting)	**Skill(s) required** (refers to the competent personnel that will be employed to achieve the required results)	**Timeframe** (in months) for the activity)	**Outcome** (What is the expected deliverable, e.g. Geological report, analytical results, feasibility study, etc.)	**Timeframe for outcome** (deadline for the expected outcome to be delivered)	**What technical expert will sign off on the outcome?** (e.g. geologist, mining engineer, surveyor, economist, etc)
Phase 1: Target Definition	**Non Invasive Prospecting Activities** -Collate current data -Literature Surveys -Geophysical Surveys	Geologist	12 Months	Digital Data of the geological structural, block and grade model Map or plans of the detailed information gathered Depiction of geophysical anomalies indicating the depositional environment	Month 0-12	Geologist
Phase 2 Ore body Delineation	**Invasive Prospecting Activities** • Drilling of boreholes • No bulk sampling for this prospecting.	Geologist Driller Earth Moving Equipment Operators Laboratory Technicians	12 Months	• Understanding the mineral distribution and grade of the orebody • Updated geological structural model • Technical geological report	Month 13-24	• Geologist • Environment Practitioner • Laboratory Supervisor
Phase 3: OreBody Delineation & Definition	**Invasive Prospecting Activities** • linfill boreholes in previous Inferred	• Driller • Geologist • SHEQ	24 Month	• Geological logs of each borehole • Borehole database	Month 25-48	• Geologist • SHEQ Officer • Laboratory Supervisor

	Resources area • Lithological logging of boreholes • Sampling of mineral • Analysis of mineral • Updating of geological structural model • Estimation of Indicated Resource • Conduct bi-annual EMP compliance investigation	Officer • Laboratory Analysts		• sample analysis results of individual samples • Updated geological structural model • Annual progress report for DMR • Technical geological report or CPR if Indicated Resource was estimated • Feedback to landowners on progress made on a quarterly basis, or as required • Bi-annual EMP compliance report for DMR		
Phase 4: **Pre-feasibility**	• Pre-feasibility study	• Geologist • Economist • Metallurgist	6 Month	• Feedback to landowners on progress made on a quarterly basis, or as required • Pre-feasibility study report	Month 48-54	• Geologist • Environment Practitioner • Metarlugist
Phase 5: **Mining Right Application**	If feasible • Environmental Impact Assessment • Mining Right Application	• Environmental • Geologist	6 Month	If feasible • EIA and EMP reports • Mining Right Application acceptance letter	Month 60	• Environmental Practitioner • Geologist

Table 1: Specific Prospecting activities

(i) Listed activities for NEMA as amended

Applied Listed activities in terms of NEMA (ACT 107 of 1998) and EIA Regulation 2014 as amended.		
Indicate the Activity Number:	Provide the relevant **Activity (ies)** as set out in **Listing Notice 1, 2 & 3**(GN R327, GNR325& GNR324)	**Describe each listed activity as per the project description (and not as per wording of the relevant Government Notice)**
Activity 20	Listing Notice 1 GN R327	**Any activity including the operation of that activity which requires a prospecting right in** **terms of section 16 of the Mineral and Petroleum Resources Development Act, 2002** **(Act No. 28 of 2002), including—** (a) **associated infrastructure, structures and earthworks, directly related to prospecting of a mineral resource; or** including activities for which an exemption has been issued in terms of section 106 of the Mineral and Petroleum Resources Development Act, 2002 (Act No. 28 of 2002) (b) **the primary processing of a mineral resource including** winning, **extraction, classifying, concentrating,** crushing, screening or washing; but excluding the secondary processing of a mineral resource, including the smelting, beneficiation, reduction, refining, calcining or gasification of the mineral resource in which case activity 6 in Listing Notice 2 applies.
Activity 27	Listing Notice 1 GN R327	**The clearance of an area of 1 hectares or more, but less than 20 hectares of** **indigenous vegetation**, except where such clearance of indigenous vegetation is required for— (i) the undertaking of a linear activity; or (ii) (ii) maintenance purposes undertaken in accordance with a maintenance management plan.
Applicable Section and Regulation of MPRDA No. 28 of 2002		
Section 16 of MPRDA	Application for prospecting right without bulk sampling	

Table 2: Listed Activities

NAME OF ACTIVITY (E.g. For - 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 boreholes, accommodation, offices, ablution, stores, workshops, processing plant, storm water control, berms, roads, pipelines, power lines, conveyors, etc…etc…etc.)	**Aerial extent of the Activity Ha or m²**	**LISTED ACTIVITY** (Mark with an X Where applicable affected).	**APPLICABLE LISTING NOTICE (GNR 324, GNR 325 or GNR 327 as amended)**	**WASTE MANAGEMENT AUTHORISATION** (Indicate whether an authorisation is required in terms of the Waste Management Act). **(Mark with an X)**
Prospecting right application	2944ha refer to PWP	X	No R 327 (as amended) Activity 20 Listing Notice 1	The activities listed under Category A are equivalent to those that require a basic assessment Process As Stipulated in the environmental impact assessment regulations made under section 24(5) of the National Environmental Management Act, 1998 (Act No. 107 of 1998.). The Storage of domestic waste to avoid littering on the prospecting area.
Desktop studies, further feasibility study investigation and mineral resource estimation	2944ha refer to PWP	-	Not Listed	
Drill rig Drill Site (100 square metre)	Approximately 3.5 square meter	Activity 20 Listing 1	No R 327 (as amended) Activity 20 Listing Notice 1	
Sump and water disposals	2m*2m	Activity 20 Listing 1	No R 327 (as amended) Activity 20 Listing Notice 1	
Generator	1m*1m	Activity 20 Listing 1	Not Regulated	
Waste Drum	1m*1m	Activity 20 Listing 1	No R 327 (as amended) Activity 20 Listing Notice 1	
Ablution Facility	1m *1m	Activity 20 Listing 1	Not Regulated	
Sample Storage	1m*1m	Activity 20 Listing 1	No R 327 (as amended) Activity 20 Listing Notice 1	
Access route	1000 square metre	Activity 20 Listing 1	No R 327 (as amended) Activity 20 Listing Notice 1	
Tractor and associated tools	3m*3m	Activity 20 Listing 1	Not Regulated	
Scrapping the surface and Re-vegetating	0.02Ha	Activity 20 Listing 1	No R 327 (as amended) Activity 20 Listing Notice 1	

Table 3: Specific activities

(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)

The following section presents a detailed description of all the activities associated with the proposed Prospecting Application. Due to the nature of the Prospecting Works Programme, and the fact that the specific prospecting activities required are dependent on the preceding phase, assumptions are presented where required. These assumptions are based on similar projects undertaken by the Applicant and therefore be regarded as indicative of what will be undertaken.

Access Roads

Access to the site will be required during drilling activities (Phase 2 and 3). Access requirements can only be determined after Phase 1 has been concluded. A number of existing roads and tracks already traverse the proposed prospecting site and where practicable, these roads will be used.

Once drill site have been identified, the existing roads will be utilized, however, temporary access roads may be established for repeated access to the drill site if the identified drill site cannot be access via existing roads and tracks.

Water Supply

It is anticipated that water brought onto the site, will be sourced from the nearest stream (*Buffelsrivier* and its tributaries- *Gwamana* Stream), Water will be trucked from the nearby to the identified drill sites, water bowers will be deployed to these sites as and when required.

Continuous water supply will be required during drilling, at an estimated rate of 1,000 litres per hour. On-site water storage tanks with a capacity of 15,000 for water supply to the drill, will be installed.

Additional water requirements relates to the potable water supply for employees and workers. A temporary 260 litre on-site vertical water storage tank for drinking water and general use by persons will be provided at the drill site.

Ablution

Ablution facilities at the drill site will involve the installation of drum or tank type portable toilets.

Temporary Office Area

No offices will be required during drilling.

Meals will be provided to the staff and workers as no heating and / or cold storage facilities will be available. A shaded eating area will be provided.

Accommodation

No accommodation for staff and workers will be provided on -site and all persons will be accommodated in nearby towns, Workers will be transported to and from the prospecting site on a daily basis.

Night security staff will be employed once equipment has been established on site.

Blasting

As the Prospecting Works Programme does not allow for bulk sampling, no blasting will take place.

Storage of Dangerous Goods

During the diamond drilling activities limited quantities of diesel fuel, oil and lubricants will be stored on site. The only dangerous good that will be stored in any significant quantity is diesel fuel. A maximum amount of 60m ^{3} will be stored in above ground diesel storage tanks.

Detailed Prospecting Activities

Phase 1: Data acquisition and a Desktop study

A desktop study of all available data for the area will be undertaken to accumulate as much regional and historical data around the area as possible. This includes published geological reports, infrastructure mapping, satellite imagery and existing geophysical information (if available) mineral deposits will be targeted.

Phase 2: Target Generation and Ground Truthing and Delineation Magnetometer Surveys

Should the initial results of the desktop study be encouraging, further data will be generated through a ground magnetometer survey. Anomalies identified through the initial magnetic survey will be followed by more detailed anomaly-specific ground geophysics (magnetic and gravity)

It is currently foreseen that the ground magnetics survey will be carried out on parallel lines spaced at 100m across the prospecting area using a magnetometer. A magnetometer is an instrument used to measure the strength and/or direction of the earth's magnetic field in the direct vicinity of the instrument. Local magnetic intensity is directly affected by the magnetic properties of the underlying rock mass, so magnetic surveying can be used to detect and map out magnetically distinct geological entities. In the case of applied mineral intrusion, the present mineral will usually have a

different magnetic susceptibility to the surrounding host rock and, depending on the magnetic susceptibility difference, will be detectable by magnetic surveying.

A ground magnetic survey is usually carried out using two proton precession magnetometers. One is kept stationary at a "base-station" for the duration of the survey, and measures diurnal variation in the earth's magnetic field. The other magnetometer ("roving magnetometer") is moved over the area of interest usually on a pre-determined grid of parallel straight lines. The base station data is used to correct the survey data for diurnal variation in the earth's magnetic field. The corrected magnetic survey data is then processed and gridded to reveal changes in the magnetic field over the area surveyed caused by changes in the underlying rock mass.

Proton magnetometers are small, portable machines that are easily carried by one person. Magnetic surveying needs little or no bush clearing and is extremely low impact from an environmental perspective. As no significant environmental impacts are expected during this phase, rehabilitation will not be require.

Soil Sampling

Based on the outcomes of the magnetic survey, No soil sampling will be undertaken for target areas.

Core Diamond Drilling

- The boreholes planned for this phase will amount to 100 meters of core drilling. The drilling time is estimated at one month with one drill rig.
- A minimum of 1 sample per seam intersection will be taken. More samples will be required when large variations applied mineral quality occur within a seam. Therefore an estimated one sample per borehole is budgeted for.
- Full washabilities with proximate, CV and other constituents analyses will be carried out and all samples and reporting of results is expected within 28 days after submission.
- Establishment of data base, recording of borehole logs, evaluation and geological modelling will be carried out after all the results have been recorded.
- Pre-feasibility study and planning of phases for exploration drilling will finalize this phase.

e) Policy and Legislative Context

APPLICABLE LEGISLATION AND GUIDELINES USED TO COMPILE THE REPORT	REFERENCE WHERE APPLIED	HOW DOES THIS DEVELOPMENT COMPLY WITH AND RESPOND TO THE LEGISLATION AND POLICY CONTEXT
Specific Environmental Management Acts (SEMAs)		
National Environmental Management: Biodiversity Act, 2004	Presence of trees	The EMPr will regulate the applicant to apply for Tree Removal Permit from the local authority if necessary prior to the potential removal of any sensitive and/or protected species. When applicable as the proposed activity as of small scale.
National Heritage Resources Act, 1999	The activity will trigger the requirements under Section 38 of the NHRA. However, the requirements for permits are not yet known.	No sign of Archaeological and Cultural Heritage material on the site
National Legislation		
National Environmental Management Act, 1998	This Basic Assessment Report & EMP	An Application for Environmental Authorisation was submitted to the DMR. The application was acknowledged by the DMR (MP 30/5/1/1/2/ 14980 PR). The DMR requested the submission of the Basic Assessment Report and EMP

		within 90 days of the letter.
APPLICABLE LEGISLATION AND GUIDELINES USED TO COMPILE THE REPORT	**REFERENCE WHERE APPLIED**	**HOW DOES THIS DEVELOPMENT COMPLY WITH AND RESPOND TO THE LEGISLATION AND POLICY CONTEXT**
National Water Act, 1998	Groundwater abstraction as part of drilling activities	In terms of Government Notices Regulation 399, the applicant will be allowed to abstract 75m ^{3} of groundwater per hectare per annum from groundwater within the Quaternary Catchment to be identified during PPP. This use will be Generally Authorized. Clarification is required from the DWS whether a Section 21 (c) & (i) Water Use License will be required.
Mineral and Petroleum Resources Development Act, 2002	Application for Prospecting right in terms of Section 16	A Prospecting Application has been submitted to the DMR by the Applicant. The application was accepted by the DMR (MP 30/5/1/1/2/ 14980PR).
Municipal Plans		
Integrated Development Plan (IDP)	Land Claims	One of the key issues identified by the IDP is the need to facilitate the land

APPLICABLE LEGISLATION AND GUIDELINES USED TO COMPILE THE REPORT	**REFERENCE WHERE APPLIED**	**HOW DOES THIS DEVELOPMENT COMPLY WITH AND RESPOND TO THE LEGISLATION AND POLICY CONTEXT**
Strategic Development Framework	Alternatives	In terms with the SDF of the Thabazimbi local Municipality,

(SDF)		various strategies and associated policies should be adopted to ensure effective spatial development. In terms of Section 5.1 of the SDF the municipality must provide alternative means of support for rural/informal population in order to decrease dependence on the environment and subsistence agriculture. For this purpose the following policies are adopted: Maximize economic benefit from mining industrial, business, agricultural and tourism development within the area Promote a climate for economic development. Improve public and investor confidence in the region through crime reduction and infrastructure development.

Table 4: Legislative Framework

f) 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).

In terms of the latest DEA Guideline on Need and Desirability, a need and desirability assessment is required to explain how the development would benefit the local/regional/national community. In terms of need, the applicant has to explain and emphasize how the development will benefit the local/regional/national community. Whilst in terms of desirability, the applicant has to explain how the location of the development in that particular area would be more desirable than establishing it in another area. The applicant can also show the desirability of the development by explaining how that particular development could provide a service to the area.

Guidelines on Need and Desirability (2010) suggest that the concept of need and desirability can be explained in terms of the general meaning of its two components in which 'need' refers to time and 'desirability' to place i.e. is it the right time and is it the right place for locating the type of land-use / activity being proposed? In other words, need and desirability can be equated to wise use of land; i.e. the question of what is the most sustainable use of land.

South African economy is highly dependent on the available mineral mined within various provinces. These ensure that the economy is globally recognized and the livelihood on the different peoples/communities is enhanced with the benefit from the mining industry.

The initial phase of entering the mining industry requires one to be associated with the existence of the mineral of interest prior any mining right application can be made. In that, prospecting right application is the first step in order to determine the availability of the mineral of interest.

In light of the above, this prospecting right application has the following need and desirability:

Educational

Counsel of Geo-science conducted some research in so far as the South African mineralogy is concern. However, due to vast mineral existence and huge area to cover, more information is required to update their system and have more informative data. In that, conducting this prospecting will ensure that additional information is provided to the relevant government Departments.

Feasibility

The prospecting operation aims at providing the applicant with the feasibility of conducting the mining operation on the area of interest for the specific mineral. The required information for the said feasibility study includes the following:

- Depth of the mineral(determine open cast and/or underground operation)
- Seam thickness (determine mining method and duration)
- Quantity (duration of the project)
- Quality(market, price and beneficiation requirements)
- Overall geology (mine planning)

The above mentioned information will determine if the applicant will venture into the mining right application. As a result, it's critical to obtain the aforementioned information as the need of the project to either realize the prospects of mining operation.

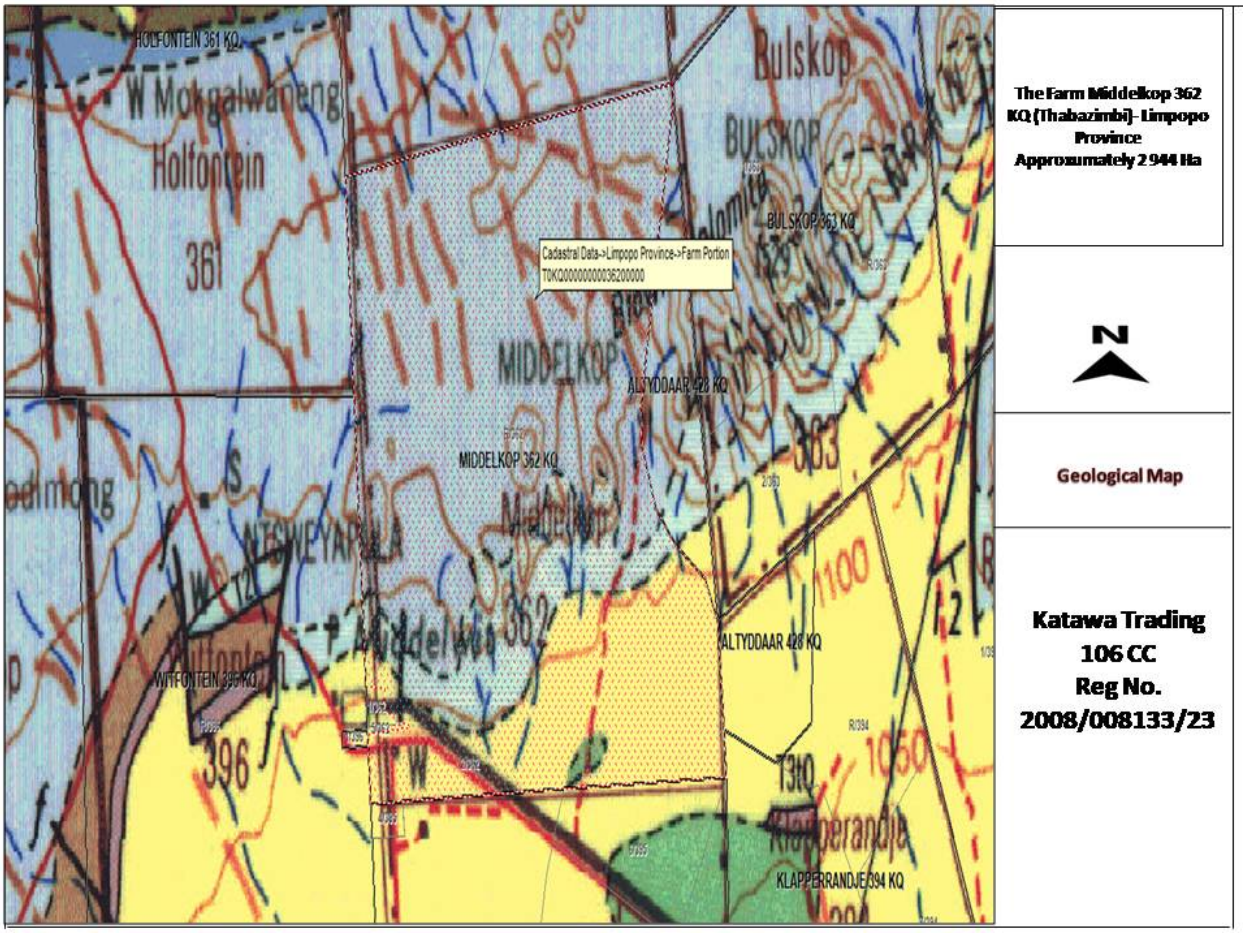


Figure 2: Geological Map

Geological Formation

The proposed area is located in a triangular segment of lithologies of Lower, Critical and Main Zones of the Bushveld Complex. The Lower Critical Zone consists mainly of Ruighoek Pyroxenite that hosts the Lower Group of chromitite layers, from the LG1 to the LG6A.

The LG6A layer is developed within pyroxenite, overlain by a coarse-grained pyroxenite. The ore is fine grained, solid and well packed. Pyroxenite bands or lenses may occur in the bottom contact of this layer. Immediate hanging wall and footwall pyroxenite is solid, and unaltered. The LG6A layer is separated from the LG6 layer by fine- to medium-grained pyroxenite with an average thickness of 12.00 m. The LG6A seam averages 0.30 m in thickness.

The LG6 layer is a fine-grained, well packed-chromitite, with sharp top and basal contact. It usually includes a disseminated band up to 15 cm thick in the top contact of the layer. The immediate footwall consists of alternating pyroxenite layers. The LG6 seam averages 1.01 m in thickness.

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

The prospecting activities are similar in nature and mostly done in the same sequence. In that, the preferred site was determine by the geologist with consultation of Environmental Assessment Practitioner (EAP) and the landowner. The preferred activities are as following:

- Surveying
- Site clearance
- Site establishment
- Engage the drill rig
- Digging sump
- Drilling
- Storage of samples into core trays

The proposed activities were evaluated to determine the preferred site, activities and technology.

h) 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.

Geological Mapping

The geologist has first identified areas which appear to be bearing the mineral of interest. Thereafter, proposed borehole plan has been submitted to all stakeholders including the landowner, EAP and other affected people. As a result, if no concern are provided regarding the said plan, then the alternatives will not be determine in which is the case in this prospecting right application.

(i). Details of the development footprint alternatives considered.

With reference to the site plan provided 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;

The geologist has first identified areas which appear to be bearing the mineral of interest. Thereafter, proposed borehole plan has been submitted to all stakeholders including the landowner, EAP and other affected people. As a result, if no concern are provided regarding the said plan, then the alternatives will not be determine in which is the case in this prospecting right application. Moreover, the footprint of the proposed is prospecting remains 100m^2 which includes the following:

- Drill rig
- Core tray
- Caravan

- Generator
- Water cart

(b) The type of activity to be undertaken;

The prospecting activities are similar in nature and mostly done in the same sequence. In that, the preferred site was determine by the geologist with consultation of Environmental Assessment Practitioner (EAP) and the landowner. The preferred activities are as following:

- Surveying
- Site clearance
- Site establishment
- Engage the drill rig
- Digging sump
- Drilling
- Storage of samples into core trays

(c) The design or layout of the activity;
The identified areas as named borehole location are available to provide the exact area which will be drilled accompanied by the coordinates of each area.

(d) The technology to be used in the activity;

The following are the technology applicable for the drilling of the boreholes to obtain the information for the feasibility study:

- Drill rig
  There are numerous drill rigs in the mining industry which can be utilized for the drilling of this reserve. However, diamond drill results are magnificent and is effective and efficient as compare with the tractor
- Core tray
  The aluminum trays will be utilized on the cleared surface in order to cater for the samples which will be obtained from the drilling. It's environmentally sustainable for this tray unlike using some plastic containers which has potential of polluting the samples and does not last for many years.
- Caravan
- Generator
- Water cart

(e) The operational aspects of the activity; and
The prospecting activities are similar in nature and mostly done in the same sequence. In that, the preferred site was determine by the geologist with consultation of Environmental Assessment Practitioner (EAP) and the landowner. The preferred activities are as following:

- Surveying
- Site clearance

- Site establishment
- Engage the drill rig
- Digging sump
- Drilling
- Storage of samples into core trays

(f) The option of not implementing the activity.

The proposed activities have very low significance since these are short term activities. The probability of occurrence of an impact was determined and most of these activities can be controlled and impacts can be reduced or avoided. The probability was also used basing on looking at other prospecting activities of similar nature. Generally prospecting activities have low impact on the environment. The planned activities negative impacts can be controlled and avoided or minimized therefore the layout does not require revision. Changes in plan will be discussed with the farmers and approvals will be signed

(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 attended 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.

Identification of the interested and affected parties:

Identify the Municipal
Identify the Government Departments
Identify the different landowners
Identify the social and environmental agency
Identify mining companies in close proximity
Identify traditional authority

Develop the I&AP Database

Contact details
Email address
Postal address
Fax
Telephone

Develop Background Information Document

Provide the process for the environmental authorization
Provide the process for the prospecting right application

Provide full description of the property, area, proposed activities, impacts and mitigation

Include the Regulation plan 2.2

Include the locality plan

Distribution of the information to the interested and affected parties

Distribute the site notices

Advertise on the local newspaper

Discuss in the meeting

Email distribution

Fax all I&AP

Obtain the respond, issues and concern from I&AP

Capture the issues

Provide mitigation measures

Communicate the mitigation measures to the I&AP

Forward the Public Participation Report to the Department

Information to be provided to Interested and affected parties

The site plan.

List of activities to be authorized

Scale and extent of activities to be authorized

Typical impacts of activities to be authorized (e.g.surface disturbance, dust, noise, drainage, fly rock etc.)

The duration of the activity.

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)

(iii) Summary of issues raised by I&Aps

(Complete the table summarizing comments and issues raised, and reaction to those responses)

Landowner (I&AP)	Date	How did consultation take place?	Issues/comments/concerns	Responses
Portion 0, 3 and 8 of the farm has no record of Title deed. Has is been concluded that it owned by the states.	09/06/23	Site Notices and Newspaper Advert	No response from the landowner.	EAP has no respond since they are no issues raised.
Portion 1 and 2 is owned by Transnet	09/06/23	Site Notices and Newspaper Advert	No response from the landowner.	EAP has no respond since they are no issues raised.
Portion 5 is owned by J C I Gold LTD	09/06/23	Site Notices and Newspaper Advert	No response from the landowner.	EAP has no respond since they are no issues raised.
Portion 7 is owned by Eagle Pride Hatchery Pty Ltd	09/06/23	Site Notices and Newspaper Advert	No response from the landowner.	EAP has no respond since they are no issues raised.
Portion 9 is owned by Grobler Alleta Elizabeth	09/06/23	Site Notices and Newspaper Advert	No response from the landowner.	EAP has no respond since they are no issues raised.
Thabazimbi Local Municipality Email: mabotjams@thabazimbi.gov.za	09/06/23	Email, Site Notices and Newspaper Advert	The email was sent to the government and no formal response thus far.	EAP has no respond since they are no issues raised.
(The Department of Land Affairs) Email: ntokozo.nkambule@drdlr.gov.za	09/06/23	Email, Site Notices and Newspaper Advert	The email was sent to the government and no formal response thus far.	EAP has no respond since they are no issues raised.

CC: petruscha.lindoor@drdlr.gov.za CC: lazarus.masuku@drdlr.gov.za				
Department of Agriculture, Forestry and Fisheries Email: marym@daff.gov.za Email: rhulanic@daff.gov.za	09/06/23	Email, Site Notices and Newspaper Advert	The email was sent to the government and no formal response thus far.	EAP has no respond since they are no issues raised.
Department of Water and Sanitation Peter Ackerman Tell: 012 336 8217 Email: ackermanS@dws.gov.za Seani Nevondo Tell:012 318 0516 Email: NevondoS@dws.gov.za	09/06/23	Email, Site Notices and Newspaper Advert	The email was sent to the government and no formal response thus far.	EAP has no respond since they are no issues raised.
• A newspaper advert was placed for this proposed prospecting application and published on 21 July 2023 (Platinum Bushvelder Newspaper). • The BAR was not circulated locally using libraries • The notice board were erupt around the property on 25 July 2023. • Consult the report of consultation with land owner's interested and affected parties in respect of the prospecting right attached as appendix A.				

Table 5: Consultation Reporting

iv) 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.

Topography

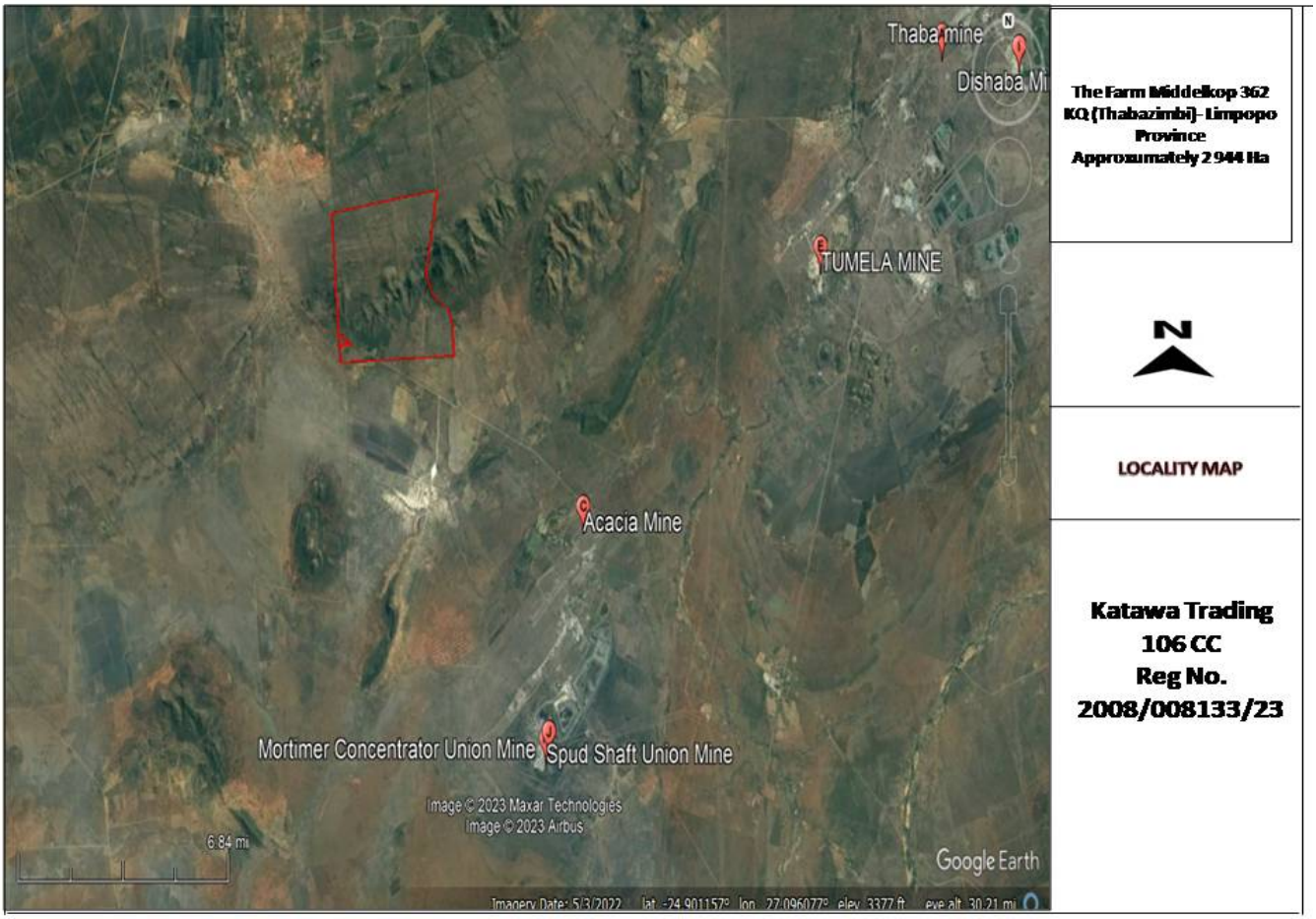


Figure 4: Topography

The topography is flat, with a slight slope (about 1 in 100) to the north-west and various artificial landforms such as the tailings dams and rock dumps at the adjacent Acacia mine. There are several isolated ridges and outcrops about 7 km to the north-east and 10 km to the west-north-west.

Vegetation

The vegetation community is dominated by pioneer graminoid species such as *Aristida* spp, *Eragrostis* spp, *Sporobolus* spp and *Digitaria* spp . Woody species have begun to recolonise the area and the woody layer is dominated by species such as *Acacia erubescens, A. karroo* and *A. mellifera*. Species such *Grewia subspathulata, Acacia gerrardii and Ozoroa paniculosa* are also

found in this vegetation community, but to a much lower extent. Graminoid species are dominant in areas where rehabilitation was successful. In areas where bush encroachment control has not been successful, woody species such as *Acacia mellifera* have encroached and hampered colonisation by graminoid species.

No Red Data plant species were recorded in this vegetation community, and due to the transformed nature it is highly unlikely that any Red Data or protected species will occur in this vegetation community.

Image 1: Vegetation Type

Action

Construction of access roads and traces are likely to cause vegetation disturbance. Noise can also frighten the said species.

Mitigation measures

Prospecting boreholes sites will be located on already disturbed areas to avoid the disruption of important habitat sites, existing farm roads will be used to avoid disturbing the vegetation and Drill rigs will be fitted with silencers to minimize noise pollution.

Animals
Recorded Species includes:

Scientific Name	Common Name	NEM:BA Threatened and Protected Species List (2007)	IUCN Red List of Threatened Species (2012.2)
Lemniscomys rosalia	Striped Mouse	Not listed	Least concern
Mastomys coucha	Multimammate Mouse	Not listed	Least concern

Saccostomus campestris	Pouched Mouse	Not listed	Least concern
Lepus saxatili	Scrub Hare	Not listed	Not Listed
Neoromicia capensis	Cape serotine	Not listed	Least concern
Tadarida aegyptiaca	Egyptian free-tailed bat	Not listed	Least concern

Table 6: Mammal species recorded during the 2013 and 2016 surveys

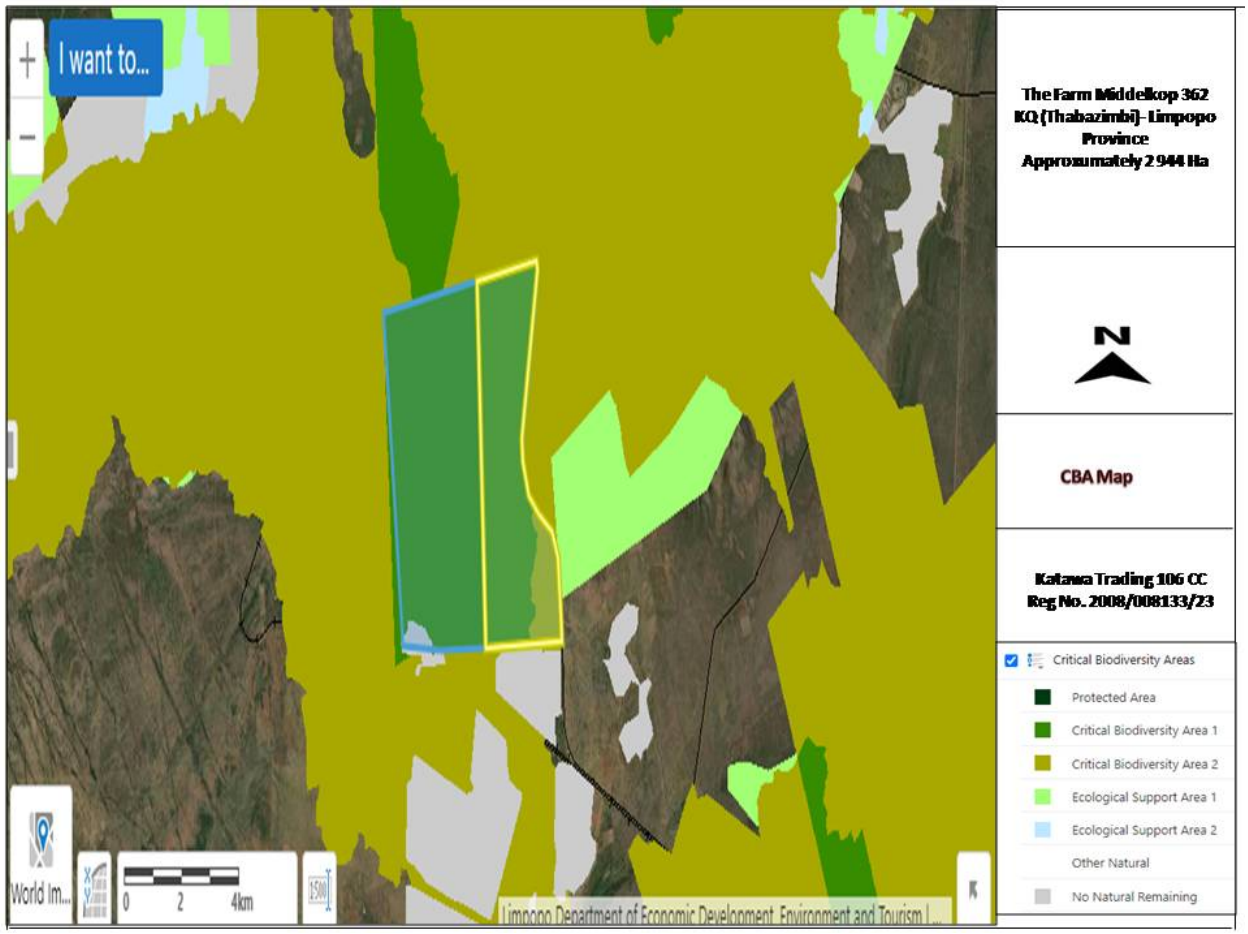


Figure 6: SANBI CBA

Action

Construction of access roads and traces are likely to cause livelihood of fauna disturbance. Noise can also frighten the said species.

Mitigation measures

Prospecting boreholes sites will be located on already disturbed areas to avoid the disruption of important habitat sites, existing farm roads will be used to avoid disturbing the vegetation and Drill rigs will be fitted with silencers to minimize noise pollution

Environmental Themes and attributes:

According to the Screening Tool Report (generated from the Screening Tool developed by the National Department of Environmental Affairs and dated 05 September 2023), the proposed site is located within a very high sensitivity area from an agricultural perspective, a high sensitivity area from an animal species perspective, a lower sensitivity area from an aquatic biodiversity perspective, a low sensitivity area from an archaeological and cultural heritage perspective, a lower sensitivity area from a civil aviation perspective, a low sensitivity area from a defence perspective, a very high sensitivity area from a paleontological perspective, a lower sensitivity area from a plant speciaes perspective and a very high sensitivity area from a terrestrial biodiversity perspective. Table below:

Theme	Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
Agriculture Theme	X			
Animal Species Theme		X		
Aquatic Biodiversity Theme				X
Archaeological and Cultural Heritage Theme				X
Civil Aviation Theme				X
Defence Theme				X
Paleontology Theme	X			
Plant Species Theme				X
Terrestrial Biodiversity Theme	X			

In addition, the Screening Tool Report (dated 05 September 2023) identified the following specialist assessments to be undertaken:

- An Agricultural Impact Assessment;
- An Archaeological and Cultural Heritage Impact Assessment;
- A Palaeonotological Impact Assessment;
- A Terrestrial Biodiversity Impact Assessment;
- An Aquatic Biodiversity Impact Assessment;
- An Noise Impact Assessment;
- A Radioactivity Assessment;
- A Plant Species Assessment; and
- An Animal Species Assessment.

v) Impacts and risks identified including the nature, significance, consequence, extent, duration and probability of the 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 impacts of such activities, and as informed by the consultations with affected parties together with the significance, probability, and duration of the 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 impacts per activity and listed activities

Element	Aspects and impacts	Mitigation	Impact (post-mitigation)			
			Extent	Duration	Probability	Level of significance
soil	The potential impact of the proposed prospecting on the vegetation would occur at proposed drilling sites and the access routes used to get to these sites. However large parts of the site have been transformed.	Environmental awareness training. Drillers to comply with all EMP procedures. Drilling sites to be located in disturbed areas wherever possible. The prospecting area including drill sites and access routes are to be rehabilitated to as near original condition as possible. No fires to be made in the prospecting area.	Low	Short term	Definite	low
Vegetation	Potential impacts of the proposed prospecting on the vegetation would occur at proposed drilling sites and the access route used to get to the sites, large parts of the site have been	Environmental awareness training. Drilling contractors to comply with all EMP procedures. Drilling sites to be located in a disturbed area where possible. The proposed area including drill sites and access route	Low	Short term	Definite	low

	transformed and disturbed and no access roads will be constructed	are to be rehabilitated to near original condition as possible. No fires to be made in the prospecting area				
Animal life	Animal life will be affected in the immediate vicinity of the drilling rig. It is anticipated that the noise and general activity will keep the animal life away from the site while the prospecting is ongoing.	Environmental awareness training for workers. If any animals are encountered they must not be killed or injured, but should rather be removed or chased away from the site. All gates will be kept closed	Low	Short term	Definite	low
Surface water	There are several wet land on the site	There will be 100meters buffer zone (100m away from any wet land)	Low	Short term	Definite	low
Ground water	No ground water will be used or abstracted during the prospecting operation	Drilled area will be rehabilitated and capped	Low	Short term	possible	low
Air quality	Dust may be created during vehicles movement on dust roads and during drilling operations	Water Cart will be utilized to suppress dust generated during site establishment to avoid the atmospheric pollution Install dust bucket on area and the surrounding to determine the influence of the proposed operation. These will act as a monitoring	Low	Short term	possible	low

		procedure to determine the effectiveness of the proposed dust suppression measures and where possible provide the most appropriate mitigation measures.				
Noise	Noise will be created by drill rig and vehicle.	All equipment will be fitted with silencers to minimize noise.	Low	Short term	possible	low
Cultural heritage	There are no craves on the farms	There will be no erect or construction of buildings, roads, railway, or any structure within a horizontal distance of 100 meters form the workings of an operation, or such lesser distance and conditions There will be no prospecting activity on area that are stated as of highly significant or concern such as graves	Low	Short tem	Possible	Low
Visual	The prospecting acitivities will not change the visiual character of the property	Rehabilitate drill sites Capped	Low	short term	definite	low
Socio economic	The effect of these prospecting activities for employment and socio economic regime would be positive, but very	Environmental awareness training will be provided to all workers. Maximize procurement of goods and services from local providers	Low	Short term	Definite	Low (positive)

	limited in extent and duration. If a significant resources is delineated this could have a significant positive socio economic impact, however a mining right application would be subject to a separate EIA process					
Social neighbor	The prospecting operations should not impact on the neighbor due to the distance and low intensity of the prospecting operation	Ensure compliance with the EMP. Ensure workers do not trespass onto neighbor's property. Maintain communication and keep a complaints register on site	Low	Short term	Definite	Low
Solid waste	All solid waste will be transported to the nearest municipal waste site. Any industrial (hazardous) waste will be transported to a suitable waste disposal facility	Ensure compliance with EMP. Include in environmental awareness training. Workers will not stay overnight at the site.	Low	Short term	Definite	Low
Traffic and access	Prospecting activities will generate very limited additional traffic. Prospecting vehicles are to access the property via existing roads and tracks only	Comply with traffic regulations. Keep to speed limits. Ensure compliance with EMP.	Low	Short term	Definite	Low
Cumulative impacts	There are no cumulative	No mitigation required for	N/A	N/A	N/A	N/A

	impacts associated with this prospecting programme.	prospecting.				

vi) Methodology used in determining and ranking the 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 the initial site layout needs revision).

Criteria of assigning significance to potential impacts

The evaluation of impacts is conducted in terms of the criteria. The various environmental impacts and benefits of this project are discussed in terms of impact status, extent, duration, probability, and intensity. Impact significance is regarded as the sum of the impact extent, duration, probability and intensity and a numerical rating system has been applied to evaluate impact significance; therefore an impact magnitude and significance rating is applied to rate each identified impact in terms of its overall magnitude and significance.

In order to adequately assess and evaluate the impacts and benefits associated with the project it was necessary to develop a methodology that would scientifically achieve this and to reduce the subjectivity involved in making such evaluations. To enable informed decision-making it is necessary to assess all legal requirements and clearly defined criteria in order to accurately determine the significance of the predicted impact or benefit on the surrounding natural and social environment.

Impact Status

The nature or status of the impact is determined by the conditions of the environment prior to construction and operation. A discussion on the nature of the impact will include a description of what causes the effect, what will be affected and how it will be affected. The nature of the impact can be described as negative, positive or neutral.

Status of Impact

RATING	DESCRIPTION	QUANTITATIVE RATING
Positive	A benefit to the receiving environment.	**P**
Neutral	No cost or benefit to the receiving environment.	**-**
Negative	**A cost to the receiving environment.**	**N**

Impact Extent

The extent of an impact is considered as to whether impacts are either limited in extent of if it affects a wide area or group of people. Impact extent can be site specific (within the boundaries of the development area), local, regional or national and/or international.

Extent of Impact

RATING	DESCRIPTION	QUANTITATIVE RATING
Low	Site Specific; Occurs within the site boundary.	1
Medium	Local; Extends beyond the site boundary; Affects the immediate surrounding environment (i.e. up to 5 km from the Project Site boundary).	2
High	Regional; Extends far beyond the site boundary; Widespread effect (i.e. 5 km and more from the Project Site boundary).	3
Very High	National and/or international; Extends far beyond the site boundary; Widespread effect.	4

Impact Duration

The duration of the impact refers to the time scale of the impact or benefit.

Duration of Impact

RATING	DESCRIPTION	QUANTITATIVE RATING
Low	Short term; Quickly reversible; Less than the project lifespan; 0 – 5 years.	1
Medium	Medium term; Reversible over time; Approximate lifespan of the project; 5 – 17 years.	2
High	Long term; Permanent; Extends beyond the decommissioning phase; >17 years.	3

Impact Probability

The probability of the impact describes the likelihood of the impact actually occurring.

Probability of Impact

RATING	DESCRIPTION	QUANTITATIVE RATING
Improbable	Possibility of the impact materialising is negligible; Chance of occurrence <10%.	1
Probable	Possibility that the impact will materialise is likely; Chance of occurrence 10 – 49.9%.	2
Highly Probable	It is expected that the impact will occur; Chance of occurrence 50 – 90%.	3
Definite	Impact will occur regardless of any prevention measures; Chance of occurrence >90%.	4
Definite and	Impact will occur regardless of any prevention measures; Chance of occurrence >90% and is likely to	5

Cumulative	result in in cumulative impacts	

Impact Intensity

The intensity of the impact is determined to quantify the magnitude of the impacts and benefits associated with the proposed project.

Intensity of Impact

RATING	DESCRIPTION	QUANTITATIVE RATING
Maximum Benefit	Where natural, cultural and / or social functions or processes are positively affected resulting in the maximum possible and permanent benefit.	+ 5
Significant Benefit	Where natural, cultural and / or social functions or processes are altered to the extent that it will result in temporary but significant benefit.	+ 4
Beneficial	Where the affected environment is altered but natural, cultural and / or social functions or processes continue, albeit in a modified, beneficial way.	+ 3
Minor Benefit	Where the impact affects the environment in such a way that natural, cultural and / or social functions or processes are only marginally benefited.	+ 2
Negligible Benefit	Where the impact affects the environment in such a way that natural, cultural and / or social functions or processes are	+ 1
RATING	**DESCRIPTION**	**QUANTITATIVE RATING**
	negligibly benefited.	
Neutral	Where the impact affects the environment in such a way that natural, cultural and / or social functions or processes are not affected.	0
Negligible	Where the impact affects the environment in such a way that natural, cultural and / or social functions or processes are negligibly affected	- 1

Minor	Where the impact affects the environment in such a way that natural, cultural and / or social functions or processes are only marginally affected.	- 2
Average	Where the affected environment is altered but natural, cultural and / or social functions or processes continue, albeit in a modified way.	- 3
Severe	Where natural, cultural and / or social functions or processes are altered to the extent that it will temporarily cease.	- 4
Very Severe	Where natural, cultural and / or social functions or processes are altered to the extent that it will permanently cease.	- 5

Impact Significance

The impact magnitude and significance rating is utilized to rate each identified impact in terms of its overall magnitude and significance.

Impact Magnitude and Significance Rating

IMPACT	RATING	DESCRIPTION	QUANTITATIVE RATING
Positive	High	Of the highest positive order possible within the bounds of impacts that could occur.	**+ 12 – 16**
	Medium	Impact is real, but not substantial in relation to other impacts that might take effect within the bounds of those that could occur. Other means of achieving this benefit are approximately equal in time, cost and effort.	**+ 6 – 11**
IMPACT	**RATING**	**DESCRIPTION**	**QUANTITATIVE RATING**
	Low	Impacts is of a low order and therefore likely to have a limited effect. Alternative means of achieving this benefit are likely to be easier, cheaper, more effective and less	**+ 1 – 5**

		timeconsuming.	
No Impact	No Impact	Zero impact.	**0**
Negative	Low	Impact is of a low order and therefore likely to have little real effect. In the case of adverse impacts, mitigation is either easily achieved or little will be required, or both. Social, cultural, and economic activities of communities can continue unchanged.	**- 1 – 5**
	Medium	Impact is real, but not substantial in relation to other impacts that might take effect within the bounds of those that could occur. In the case of adverse impacts, mitigation is both feasible and fairly possible. Social cultural and economic activities of communities are changed but can be continued (albeit in a different form). Modification of the project design or alternative action may be required.	**- 6 – 11**
	High	**Of the highest order possible within the bounds of impacts that could occur. In the case of adverse impacts, there is no possible mitigation that could offset the impact, or mitigation is difficult, expensive, time-consuming or a combination of these. Social, cultural and economic activities of communities are disrupted to such an extent that these come to a halt.**	**- 12 - 16**

Table 7: Impact Rating

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

(Provide a discussion in terms of advantages and disadvantages of the initial site layout compared to alternative layout options to accommodate concerns raised by affected parties)

The positive impacts of the activities is the creation of employment which is really required in the region

The proposed activities have very low significant since these are short term activities. The probability of occurrence of an impact was determined from the most of these activities can be controlled and impacts can be reduced or avoided. The probability was also used basing on looking at other prospecting activities of similar nature. Generally prospecting activities have low impact on the environment. Planned activities negative impact can be controlled and avoided or minimized therefore the layout does not require revision. Changes in plan will be discussed with the farmers and approvals will be signed.

As discussed in the previous section, Katawa Trading applied for prospecting rights. Based on the outcomes of that study, the possibility to encounter the mineral of interest/ reserve identified. The site is therefore regarded as the preferred site and alternative sites are not considered.

Potential impact on heritage resources

There are no graves identified through the communication with landowners, desktop investigation and Site Visit. No prospecting will be conducted within 100 meters of the significant area

The fact that the prospecting activities will be undertaken in a phased approach will provide the opportunity to the prospecting team to demarcate areas of cultural and/or heritage significance (such as graves and stone kraals). With the early identification of these the impact on these will be avoided.

Potential impacts on communities, individuals or competing land usesin close proximity

The following impacts are regarded as community impacts:

- Potential water and soil pollution resulting from hydrocarbon spills and soil erosion;
- Poor access control resulting in impacts on cattle movement, breeding and grazing practices;
- Influx of persons (job seekers) to site as a result of increased activity and the possible resultant increase in opportunistic crime; and
- Visual Impact

Prospecting will be undertaken by specialist sub-contractors and it is not anticipated that employment opportunities for local and / or regional communities will result from the prospecting activities.

Potential cumulative impacts.

There are no cumulative impacts identified, as the is no known prospecting activities occurring on the same area.

ix) Motivation where no alternative sites were considered.

The prospecting activities are similar in nature and mostly done in the same sequence. In that, the preferred site was determine by the geologist with consultation of Environmental Assessment Practitioner (EAP) and the landowner. The preferred activities are as following:

- Surveying
- Site clearance
- Site establishment
- Engage the drill rig
- Digging sump
- Drilling
- Storage of samples into core trays

The proposed activities were evaluated to determine the preferred site, activities and technology.

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

The prospecting activities are similar in nature and mostly done in the same sequence. In that, the preferred site was determine by the geologist with consultation of Environmental Assessment Practitioner (EAP) and the landowner. The preferred activities are as following:

- Surveying
- Site clearance
- Site establishment
- Engage the drill rig
- Digging sump
- Drilling
- Storage of samples into core trays

The proposed activities were evaluated to determine the preferred site, activities and technology.

i) Full description of the process undertaken to identify, assess and rank the impacts and risks the activity will impose on the preferred site (In respect of the final site layout plan) through the life of the activity. (Including (i) a description of all environmental issues and risks that erer 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.

Criteria to Consider when Determining Severity of impacts

The ranking of impacts / determination of significance is estimated using two criteria, namely Consequence and Probability. These consider the contributing factors / criteria listed in the legislation. The definitions of each are provided below.

The **Consequence** of an impact resulting from an aspect is expressed as a combination of:

Nature of impact: An indication of the extent of the damage (negative impacts) or benefit (positive impacts) the impact inflicts on natural, cultural, and/or social functions (environment).

Extent of impact: A spatial indication of the area impacted (i.e. how far from activity the impact is realised).

Duration of impact: A temporal indication of the how long the effects of the impact will persist, assuming the activity creating the impact ceases. For example, the impact of noise is short lived (impact ceases when

activity ceases) whereas the impact of removing topsoil exists for a much longer period of time.

Frequency of the impact occurring: An indication of how often an aspect, as a result of a particular activity, is likely to occur. Note that this does not assess how often the impact occurs. It applies only to the aspect. For example driving takes place daily whilst other activities takes place monthly while the resultant frequency of the impacts occurring will vary based on a number of factors.

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 interested and affected parties).

NAME OF ACTIVITY **(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 boreholes, accommodation,	**POTENTIAL IMPACT** (Including the potential impacts for cumulative impacts) (e.g. dust, noise, drainage surface disturbance, fly rock, surface water contamination, groundwater contamination, air pollution etc….etc…)	**ASPECTS AFFECTED**	**PHASE** In which impact is anticipated (e.g. Construction, commissioning, operational Decommissioning, closure, post-closure)	**SIGNIFICANCE** if not mitigated	**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) E.g. Modify through alternative method.	**SIGNIFICANCE** if mitigated

offices, ablution, stores, workshops, processing plant, storm water control, berms, roads, pipelines, power lines, conveyors, etc…etc…etc.)					Control through noise control Control through management and monitoring through rehabilitation..	
Drilling	Noise	Animals and people	Operational Prospecting phases 2	medium	Noise control. Ensure vehicles and equipment are maintain. Silencers should be fitted on all engines	low
Drilling	Surface disturbance	Animals and people	operational Prospecting phases 2	high	Rehabilitation each site as soon as the drilling is completed	low
Drilling	Ground water pollution	Animals and peple	Prospecting phases 2	Medium	Establish EMP procedures to minimize hydrocarbon spills	low

Site Camps	Solid waste	Animals, people and environment	Prospecting phases 2	low	Environmental awareness training . Workers will not stay overnight	low
Sump	surface disturbance	Vegetation	Operational Prospecting phases	Low	Rehabilitation	low
Equipment	Noise , surface disturbance	People and animals	Construction operational and decommissioning	Low	All equipment will be fitted with silencers to eliminate noise	Low
Demarcate and /or prepare the drill site		People, animals and Vegetation	Operational	Low	Small amount of soil and vegetation will be clear to allow the clear drilling of boreholes. All disturbed areas (including	Low

					roads) are ripped and allowed to return to the natural state. Seeding is not done as experience has shown that the natural process returns the site to its former state within a seasonal cycle. All barricades are removed.	
Hydrocarbon storage	Soil pollution	Environment	Operational Prospecting phases2	low	The storage of petrol and diesel for drilling truck. These hazard substances will also be stored	Low

					on the established site of camp. Upon completion of the drilling process, the drill rig and diesel drums are removed from site. Tarpaulins will be utilised when handling any oil, grease and hydraulic fluids by placing it on the ground to prevent the chemicals coming in contact with the soil.	
Waste disposal	disposal of food parcels.	Animals and people	Prospecting phases	Low	Suitable covered 210 litre drums for various types of	Low

					waste (e.g. glass, plastic and paper) will be available at all times on site and conveniently placed for the disposal of waste and these drums will be removed from site on weekly basis for recycling or disposal at a licensed disposal facility	
Ablution	Pre construction phase removable toilets will be used.	Environment	Prospecting phases	low	Chemical toilets will be utilised as that may be the case no measure where identified	Low

Water storage			No measures			
Scrapping the surface	Pre-operational	0.005 Ha				
Re-vegetating	Rehabilitation	0.005 Ha				

Table 8: Impact Rating

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.
No specialist studies have been undertaken	N/A	N/A	N/A

Basic Assessment with no specialist input.

In conclusion the EAP deemed input of specialist as unnecessary due to the fact that the applicant intent to avoid any sensitive environmental features including any water courses (drilling nearby- tributaries) and railway lines.

Further environmental assessment is not required due to the nature and extent of the proposed activity. Only drilling will be conducted, no blasting and bulk sampling will be conducted.

The Screening Tool Report only rate aquatic, paleontology and terrestrial biodiversity which when assesses by the EAP looking at the nature of the proposal are been deemed low to medium impact because only the stratography/geology of the area will be impacted.

I) Environmental impact statement

(i) Summary of the key findings of the environmental impact assessment;

The proposed prospecting operation will not affect any existing alternative land uses on the property or on adjacent property or non-adjacent property. The following actions are subject to the proposed mitigation measures and require monitoring:

The clearing of vegetation

- The storage of hydrocarbon based materials on site
- On-site waste management
- The creation of roads/tracks
- The removal of storage and soil
- The traversing of vehicles through populated areas within the prospecting area
- Groundwater: Monitor the water quality of the boreholes
- Surface Water: Monitor water quality of the stream and stream flow

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

The topography on the site consists of a gradual and smooth slope. A Kaalspruit stream is located which isVaal Sub-Catchment tributary.
The area lies within a summer rainfall region with an average annual rainfall. There is a large difference between summer and winteraverage temperatures with frost regularly occurring in winter.

(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 .

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

Proposed activity	Potential impacts
Desktop study	No impacts on site
Ground geophysical, soil geochemistry	Low impacts from short-term staff and vehicle access to the site, interfering with the animal grazing

	paddocks managing fences and gates Livestock falling into dug trenches Creation of employment
Drilling	Access tracks Disturbance of vegetation and topsoil Oil & fuel spills Dust & noise Labour issues Litter Possible discovery of fossils Creation of employment
Sample processing/evaluation/ decision making	No impacts on site
Rehabilitation	Replacing topsoil and covering the area back to its original stage. The topsoil stockpiles will be stored, shaped and sited in such a way that they do not interfere with the flow of water to cause damming or erosion, or itself eroded by the action of water.

Increased ambient noise levels resulting from mining activities.

Potential water and soil pollution impacts resulting from hydrocarbon spills and soil erosion which may impact on environmental resources utilized by communities, landowners and other stakeholders.

Potential water and soil pollution impacts resulting from hydrocarbon spills and soil erosion which may impact on ecosystem functioning.

Increased vehicle activity within the area resulting in the possible destruction and disturbance of fauna and flora.

Poor access control to farms which may impact on cattle movement, breeding and grazing practices.

Influx of persons (job seekers) to site as a result of increased activity and the possible resultant increase in opportunistic crime.

Potential visual impacts caused by drilling activities.

Prospecting will be undertaken by specialist sub-contractors and it is not anticipated that employment opportunities for local and / or regional communities will result from the prospecting activities.

The proposed activities have very low significance since these are short term activities. The probability of occurrence of an impact was determined and most of these activities can be controlled and impacts can be reduced or avoided. Generally prospecting activities have low impact on the environment. The planned activities negative impacts can be controlled and avoided or minimized therefore the layout does not require revision. Mitigation measures will be used to control any potential impact.

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 authorisation.

The objectives of the EMPr will be to:

Provide sufficient information to strategically plan the prospecting activities as to avoid unnecessary social and environmental impacts.
Provide sufficient information and guidance to plan prospecting activities in a manner that would reduce impacts (both social and environmental) as far as practically possible.
Ensure an approach that will provide the necessary confidence in terms of environmental compliance.

Provide a management plan that is effective and practical for implementation.

Through the implementation of the proposed mitigation measures, it is anticipated that the identified social & environmental Impacts can be managed and mitigated effectively. Through the implementation of the mitigation and management measures it is expected that:

Noise impacts can be managed through consultation and trough the restriction of operating hours;

The pollution of soil and water resources can be effectively managed through containment;

Ecological impact can be managed through the implementation of pollution prevention measures, minimizing land clearing, restricting working hours (faunal disturbance) and rehabilitation.

Concerns regarding access control to farms can be managed through the development and ensuring compliance to an appropriate access control procedure.

Risks associated with crime can be mitigated through avoiding recruitment activities on site, as well as monitoring and reporting.

Visual impact can be minimized through giving consideration to site infrastructure placement and materials used.

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

A map detailing the drilling locations should be submitted to the relevant landowners and the DWS and DMR prior to the commencement of these activities;

No activities may be undertaken within 100m of the wetland, rivers, water courses and pans;

No aspect to be included as conditions of Authorisation.. The company should comply with all environmental legislation. Specific aspects to be adhered to from environmental legislation include; National Environmental Management Act, Act 107 of 1998 (NEMA), Minerals and Petroleum Resources Development Act, Act 28 of 2002 (MPRDA), National Water Act, Act36 of 1998 (NWA) and Conservation of Agricultural Resources Act, Act No. 43 of 1983 (CARA)

o) Description of any assumptions, uncertainties and gaps in knowledge.
(Which relate to the assessment and mitigation measures proposed) Due to significant time constraints allowed for the assessment of the impacts, and at the time of compiling the draft Basic Assessment Report and EMP:

- No assumptions, uncertainties and gaps in knowledge. All mitigation measures are possible and practical.

p) Reasoned opinion as to whether the proposed activity should or should not be authorised

i) Reasons why the activity should be authorized or not It is the opinion of the EAP that the activity may be authorized.

The site is therefore regarded as the preferred site and alternative sites are not considered.

The option of not approving the activities will result in a significant loss of economic development All activities should be authorized. Monitoring of the required mitigation measures is to take place on site daily by the site geologist. Annual monitoring audits are to take place by an appointed independent environmental assessment practitioner to compile the required annual environmental compliance report required by the DMR

ii) Conditions that must be included in the authorisation

The following conditions should be included into the authorisation:

A map detailing the locations should be submitted to the relevant landowners and the DWS and DMRE prior to the commencement of these activities;

No activities may be undertaken in the pans;

No activities may be undertaken within 100m of the wetland, rivers, water courses and pans;

The company should comply with all environmental legislation. Specific aspects to be adhered to from environmental legislation include; National Environmental Management Act, Act 107 of 1998 (NEMA), Minerals and Petroleum Resources Development Act, Act 28 of 2002 (MPRDA), National Water Act, Act36 of 1998 (NWA) and Conservation of Agricultural Resources Act, Act No. 43 of 1983 (CARA)

q) Period for which the Environmental Authorisation is required.

The application for prospecting has been applied for a period of five 5 years including the decommissioning and rehabilitation

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.

- Confirmed

s) Financial Provision

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

- **R 79 729.00**

According to the section 24P of the Act: Financial provision for remediation of environmental damage (1) 'An applicant for an environmental authorization relating to prospecting, exploration, mining or production must, before the Minister responsible for mineral resources issues the environmental authorisation, comply with the prescribed financial provision for the rehabilitation, closure and ongoing post decommissioning management of negative environmental impacts'.

The "Guideline Document for the Evaluation of Financial Provision made by the Mining Industry" was developed by the DMR in January 2005, in order to empower the personnel at Regional DMR offices to review the quantum determination for the rehabilitation and closure of mining sites.

With the determination of the quantum for closure it must be assumed that the infrastructure has no salvage value (clean closure). The closure cost estimate (clean closure) was determined in accordance with the DMR guidelines and is based, where possible, on actual costs provided by a third party contractor. The closure costs are as follows:

CALCULATION OF THE QUANTUM

KATAWA TRADING 109 CC (Reg: 2008/008133/23)
Entity type: Close Corporation
8 Corridor Crescent, N4 Business Park, Ben Fluer, Witbank
DMRE Reference Number: LP 30/5/1/1/2/14880 PR

Location: Farm Middelkop 362 KQ (NOKQ0000000003620000)

Date: 06 Sep 2023

Risk Class: C
Area Sensitivity: LOW

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	15.87	1.00	1.00	0
2(A)	Demolition of **steel buildings and structures**	m2	0	221.02	1.00	1.00	0
2(B)	Demolition of **reinforced concrete buildings and structures**	m2	0	325.71	1.00	1.00	0
3	Rehabilitation of **access roads**	m2	0	39.55	1.00	1.00	0
4(A)	Demolition and **rehabilitation of electrified railway lines**	m	0	383.87	1.00	1.00	0
4(B)	Demolition and **rehabilitation of non-electrified railway lines**	m	0	209.38	1.00	1.00	0
5	Demolition of **housing and facilities**	m2	0	442.03	1.00	1.00	0
6	**Opencast rehanilitation including final void and ramps**	ha	0	224,971.28	1.00	1.00	0
7	Sealing of shafts, adits and inclines	m3	0	118.65	1.00	1.00	0
8(A)	**Rehabilitation of overburden and spoils**	ha	0	154,478.73	1.00	1.00	0
8(B)	Processing waste desposits and evaporation pons (salt)	ha	0	192,400.46	1.00	1.00	0
8(C)	Processing waste desposits and evaporation pons (acid, metals)	ha	0	568,822.15	1.00	1.00	0
9	Rehabilitation of subsided areas	ha	0	129,352.67	1.00	1.00	0
10	General **Surface rehabilitation and Grassing**	ha	1	122,373.21	1.00	1.00	61,187
11	River Diversions	ha	0	122,373.21	1.00	1.00	0
12	Fencing	m	0	139.59	1.00	1.00	0
13	Water Management	ha	0	46,529.74	1.00	1.00	0
14	2 to 3 years of maintenance and aftercare	ha	1	16,286.41	1.00	1.00	8,143
	Specialist study	Sum	0	27,917.84	1.00	1.00	0
15B	Specialist studies (soil remediation)	ha	0	27,917.84	1.00	1.00	0.00
						SubTotal 1	**69,329**

(Sum of items 1 to 15B above)

1	Preliminary and General	6.0% if Subtotal 1 > 100 000 000	Weighting factor 2	0
		12.0% if Subtotal 1 < 100 000 000	1.00	0
7	Contingency	10.0% of Subtotal 1		0

SubTotal 2 69,329

(Subtotal 1 plus sum of management and contingency)
Add Vat (15%) 10,399

GRAND TOTAL ZAR 79,729
(Subtotal 2 plus VAT)

See appendix B also.

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

i) Explain how the aforesaid amount was derived.

Table attached

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 Mining work programme, Financial and Technical Competence Report or Prospecting Work Programme as the case may be).

It is hereby undertaken that the amount of **R 79 729.00** in the form of a bank guarantee for rehabilitation purposes as required in terms of section 24P of the Act: Financial provision for remediation of environmental damage.

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.

Current land uses inside the prospecting area, such as grazing, may be temporarily impacted through the presence of the fenced areas that drill rigs will operate within. These are however, small area. These areas will be rehabilitated post drilling activities and the areas will once again become available for grazing. The farmers raised issues like leaving the gates open and opening of many access roads

During the site visit, there was no known cultural/archaeological/heritage site identified on the area of concern that can be affected by the proposed prospecting activities. Land owner advised that there are graves on site; no prospecting activities will take place 100meters near graves or sensitive area

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

Landowner advised that there are graves on site, No prospecting activities will take place 100 meters near graves

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 as 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

mineral resources

Department:
Mineral Resources
REPUBLIC OF SOUTH AFRICA

DMRE Reference Number: LP 30/5/1/1/2/14980 PR

PART B
FINAL ENVIRONMENTAL MANAGEMENT PROGRAMME REPORT FOR THE PROSPECTING APPLICATION WITHOUT BULK SAMPLING

Applicant: KATAWA TRADING 106 PTY LTD (Reg No. 2008/008133/23)
Address: Number 8
Building 29
Voortreker Road
Industrial city
Witbank
1035
Tel: 013 656 2205
Cell No: 061 518 6992,
Email: nmtsweni1@gmail.com
Property: The Farm Middelkop 362 KQ in the Magisterial Thabazimbi -Limpopo

Date: 07 September 2023

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

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).

- The requirement for the provision of the details and expertise of the EAP are included
  Please see appendices

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).

- The requirement to describe the aspects of the activity that are covered by the draft environmental management programme is al read y included in **PART A**

c) Composite Map

(Provide a map 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 method of core drilling:
- Diamond Core Drilling Method without bulk sampling

d) **Description of Impact management objectives including management statements**

Mining Activities	Impacts Identified	Mitigation Measures	Management Cost	Final Rehabilitation Cost
Site Establishment • There will be no camp on the site. • Sumps • Core storage areas • Demarcate and/or prepare the drill site	• Destruction of soil fertility. • Generation of noise. • Generation of dust. • Destruction of vegetation. • Soil erosion as the result of exposed surfaces.	• Topsoil will be removed from all area where physical disturbance of the surface will occur. • The topsoil stockpiles will be stored, shaped and sited in such a way that they do not interfere with the flow of water to cause damming or erosion, or itself eroded by the action of water • All equipments will be fitted with silencers to eliminate noise • Water Cart will be utilised to surpass dust generated during site establishment to avoid the atmospheric pollution • Install dust bucket on mining area and the surrounding to determine the influence of the proposed mining operation. These will act as a monitoring procedure to determine the effectiveness of the proposed dust suppression measures and	R3,750.00 / borehole	R 25 923.00

		where possible provide the most appropriate mitigation measures.		
Construction of Access roads/traces	Possible impacts are the following: • Destruction of soil fertility. • Generation of noise. • Generation of dust • Exposing the area to soil erosion However, there will be no construction of access roads/ traces on the site.	• During the construction of drilling roads, the topsoil will be removed and stored separately, in which at the latter stage the said topsoil will be used for backfilling. • All equipments will be fitted with silencers to eliminate noise • Water Cart will be utilised to surpass dust generated during this phase and also to surpass dust from vehicular movement. • Ensure that the exposed areas are concurrently rehabilitated to avoid erosion.		
Drilling (proposal of 20 borehole and additional10 boreholes).	• Generation of noise. • Generation of dust	• However, all vehicles, diesel generators, compressors and other machinery will be fitted with silencers or mufflers to minimise the noise generation. • This process/drilling utilises water in that no dust is expected from the drilling	R11, 560.00	R 25 923.00

Hydrocarbon Storage	• Soil pollution due to oil spillages	• Tarpaulins will be utilised when handling any oil, grease and hydraulic fluids by placing it on the ground to prevent the chemicals coming in contact with the soil.	R6,700.00	
Waste Disposal	• Nuisance and littering of the surrounding area.	• Suitable covered 210 litre drums for various types of waste (e.g. glass, plastic and paper) will be available at all times on site and conveniently placed for the disposal of waste and these drums will be removed from site on weekly basis for recycling or disposal at a licensed disposal facility.	R2,520.00	
Ablution	• Air pollution and possible odour generation by smell. The will be no waste disposal of toilets on the site.	• Chemical toilets will be utilised as that may be the case no measure where identified	R2,494.00	
Water storage	• No impacts, there will be no storages of water on the site.	• No measures	No finance	
Total Concurrent Rehabilitation			R 27, 024.00	
Final Rehabilitation Cost				**R 51 846.00**

i) **Determination of closure objectives.** (ensure that the closure objectives are informed by the type of environment described)
Ensure all environmental safeguards are implemented correctly.
Manage site activities effectively and coordinate with the surrounding farming activities.
Minimise impacts on the environment.
Minimise impacts on the receiving environment.
Monitor the impact of the project on the receiving environment.

The following section details the goals and objectives that aim to achieve. It includes both a commitment to ensure legal compliance and then highlights the goals and objective for those impacts which are deemed most significant for exploration.

Environmental Legislation

To comply with all environmental legislation. Specific aspects to be adhered to from environmental legislation include;

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

As the NEMA is the cornerstone of all environmental legislation, the management measures implemented by the company will strive to adhere to the principles of

NEMA:

- That the disturbance of ecosystems and loss of biological diversity are avoided, or, where they cannot be altogether avoided, are minimized and remedied;
- That pollution and degradation of the environment are avoided, or, where they cannot be altogether avoided, are minimized and remedied;
- That the disturbance of landscapes and sites that constitute the nations cultural heritage is avoided, or where it cannot be altogether avoided, is minimized and remedied;
- That waste is avoided, or where it cannot be altogether avoided, minimized and reused or recycled where possible and otherwise disposed of in a responsible manner;
- that the use and exploitation of non-renewable natural resources is responsible and equitable, and takes into account the consequences of the depletion of the resource;
- that a risk averse and cautious approach is applied, which takes into account the limits of current knowledge about the consequences of decisions and actions; and

- that negative impacts on the environment and on people's environmental rights be anticipated and prevented, and where they cannot be altogether prevented, are minimized and remedied

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

ii) **Volumes and rate of water use required for the operation.**

1000/borehole and maximum of 30 000litres for the duration of the prospecting right

iii) Has a water use license has been applied for?

No water use license is required at the moment since the prospecting activities do not trigger water uses.

iv) Impacts to be mitigated in their respective phases

Measures to rehabilitate the environment affected by the undertaking of any listed activity is presented in the following table.

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 boreholes, 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-connstruction, 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 to Rehabilitation, therefore state either:- .. Upon cessation of the individual activity or. Upon the cessation of mining, bulk sampling or alluvial diamond prospecting as the case may be.
Site office and core shed	Prospecting	N/A	Arrangement may be done with landowners to use existing structure for offices and core shed	N/A	N//A

Accommodation	Prospecting	N/A	In order to minimize impacts in prospecting area, no camp site will be established. All employees will stay outside prospecting area. The employees will drive to the site every day when drilling operations are in progress. A security company may be contacted to protect the drilling equipment overnight or over weekends if the drill contractor have a weekend off.	N/A	N/A
	Prospecting	0.002ha	The area that was disturbed by the drilling operation at each site shall be rehabilitated, as far as is practicable, to its original state as soon as the drilling is completed. Photographs, for monitoring purposes, should be taken before drilling commences and after each drilling site has been rehabilitated. These photographs should be included in the required Performance	Will ensure that all employees, contractors and visitors comply with the EMP	NO trenches will be constructed. Rehabilitate upon cessation of the individual activity that is as soon as a trench is completed. No trench shall be left open overnight unless if guarded.

			Assessment Reports.		
Drill site	Prospecting	0.05ha	Every effort must be made to minimize the area needed at each drilling site. Vegetation should not be cut or trimmed unless absolutely essential. The area that was disturbed by the drilling operation at each site shall be rehabilitated, as far as is practicable, to its original state as soon as the drilling is completed. Photographs, for monitoring purposes, should be taken before drilling commences and after each drilling site has been rehabilitated. These photographs should be included in the required Performance Assessment Reports.	Will ensure that all employees, contractors and visitors comply with the EMP	Rehabilitate upon cessation of the individual activity that is as soon as a drillhole is completed.
Access route	Prospecting	1500m	No new roads are to be constructed on this site. Tracks across areas covered by natural vegetation will be kept	Will ensure that all employees, contractors and visitors comply with the EMP	Rehabilitate immediately

			to the absolute minimum required. Employees must comply with all speed and traffic regulations on public roads and should not exceed 40km/hour on farm roads		

Mining Activities	Impacts Identified	Mitigation Measures
Site Establishment • Camps • Sumps • Core storage areas • Demarcate and/or prepare the drill site	• Destruction of soil fertility. • Generation of noise. • Generation of dust. • Destruction of vegetation. • Soil erosion as the result of exposed surfaces.	• Topsoil will be removed from all area where physical disturbance of the surface will occur. • The topsoil stockpiles will be stored, shaped and sited in such a way that they do not interfere with the flow of water to cause damming or erosion, or itself eroded by the action of water • All equipments will be fitted with silencers to eliminate noise • Water Cart will be utilised to surpass dust generated during site establishment to avoid the atmospheric pollution • Install dust bucket on mining area and the surrounding to determine the influence of the proposed mining operation. These will act as a monitoring procedure to determine the effectiveness of the proposed

		dust suppression measures and where possible provide the most appropriate mitigation measures.
Construction of Access roads/traces	Possible impacts are the following: • Destruction of soil fertility. • Generation of noise. • Generation of dust • Exposing the area to soil erosion However, there will be no construction of access roads/ traces on the site.	• During the construction of drilling roads, the topsoil will be removed and stored separately, in which at the latter stage the said topsoil will be used for backfilling. • All equipments will be fitted with silencers to eliminate noise • Water Cart will be utilised to surpass dust generated during this phase and also to surpass dust from vehicular movement. • Ensure that the exposed areas are concurrently rehabilitated to avoid erosion.
Drilling	• Generation of noise. • Generation of dust	• However, all vehicles, diesel generators, compressors and other machinery will be fitted with silencers or mufflers to minimise the noise generation. • This process/drilling utilises water in that no dust is expected from the drilling
Hydrocarbon Storage	• Soil pollution due to oil spillages	• Tarpaulins will be utilised when handling any oil, grease and hydraulic fluids by placing it on the ground to prevent the chemicals coming in contact with the soil.

Waste Disposal	• Nuisance and littering of the surrounding area.	• Suitable covered 210 litre drums for various types of waste (e.g. glass, plastic and paper) will be available at all times on site and conveniently placed for the disposal of waste and these drums will be removed from site on weekly basis for recycling or disposal at a licensed disposal facility.
Ablution	• Air pollution and possible odour generation by smell. The will be no waste disposal of toilets on the site.	• Chemical toilets will be utilised as that may be the case no measure where identified
Water storage	• No impacts, there will be no storages of water on the site.	• No measures

Table 9: Mitigation Measures

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 boreholes, 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…)**	**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) E.g.** **Modify through alternative method.** **Control through noise control** **Control through management and monitoring** **Remedy through rehabilitation..**	**STANDARD TO BE ACHIEVED (Impact avoided, noise levels, dust levels, rehabilitation standards, end use objectives) etc.**
Movement of vehicles and machinery	Surface disturbance, dust, noise, spillage, aesthetic, disturbance of "peace and	Moderate to High	**Construction, commissioning, operational**	Dust suppression, speed limits Vehicle maintenance, modern exhaust systems,	Low

	tranquillity", introduction and propagation of alien species			prohibition of burning of material on site Personal protection equipment, Comply with MHS Act, 1996 Prevent introduction of foreign flora elements Alien species eradication programme	
Establishment of site	Surface disturbance / ecological degradation, dust, noise, spillages, disturbance of water features Destruction of heritage, socio-economic and cultural features	High	**Construction**	Avoid unnecessary encroachment on unplanned areas Rehabilitate with objective of returning land to initial land use Keep 100 m horizontal buffer / distance from water bodies Keep appropriate distance from sensitive and protected site (100m to 500 m)	Moderate

				Follow approved plans at all times Where applicable, restore biodiversity after closure by reinstating indigenous species Prohibit hunting of wild life and wood collection Constant supervision and protocols	
Operational phase	Dust, destruction of water resources, water pollution, safety, poor hygiene & destruction of property by veld fires Source: workforce	High	Operational phase	Keep 100 m horizontal buffer / distance from water bodies Keep appropriate distance from sensitive and protected site (100m to 500 m) Erosion prevention Concurrent rehabilitation Storm water management Prevention of spillages Prevention of soil erosion	Moderate

				Maintain security and prevent access to site Rehabilitate excavations and disturbed land concurrently Veld fire management plan	
Vehicle maintenance	Spillages and waste	Moderate	Maintenance	Waste disposal protocol Attend to spillages instantly - absorbents Designated waste disposal	Negligible
Rehabilitation	Noise, dust, spillages	Moderate	Closer	Positive impact – rehabilitate concurrently	Negligible

Table 10: Management Measures

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 boreholes, 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…)	**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, alterative activities 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 to Rehabilitation, therefore state either:-.. Upon cessation of the individual activity or. Upon the cessation of mining, bulk sampling	**COMPLIANCE WITH STANDARDS** (A description of how each of the recommendations in 2.11.6 read with 2.12 and 2.15.2 herein will comply with any prescribed environmental management standards or practices that have been identified by Competent Authorities)

			or alluvial diamond prospecting as the case may be.	
Site office and core shed	Physical surface disturbance	No construction on site. If need be to utilize existing building and agreement to be done with land owners	N/A	N/A
Accommodation	Physical surface disturbance	No construction on site. If need be to utilize existing building and agreement to be done with land owners	N/A	N/A
Site establishment	Dust and noise from vehicles driving in the farm to access the proposed drill site	Noise control, Reduce dust by driving slow. Ensure vehicles and equipment are maintained. Silencers should be fitted on all engines.	Ongoing during activity	will ensure that all employees, contractors, visitors comply with the EMP
Drilling	noise	Ensure vehicles and equipment are maintained. Silencers should be fitted on all engines.	Ongoing during activity	will ensure that all employees, contractors, visitors comply with the EMP

Drill site	dust	Put dust control measures	Ongoing during activity	will ensure that all employees, contractors, visitors comply with the EMP
Drill site	Removal of top soil for sump. Drainage surface disturbance	Rehabilitation ground soon after drilling	Upon cessation of individual activity	will ensure that all employees, contractors, visitors comply with the EMP
Drill	Use of drilling mud during drilling operations	Put control measures	Ongoing during activity	will ensure that all employees, contractors, visitors comply with the EMP
Drilling	Failure of drill sludge control system	Establish EMP procedures to minimise hydrocarbon spills	Ongoing during activity	will ensure that all employees, contractors, visitors comply with the EMP
Drilling	Breakdown of machinery, oil spillages	Establish EMP procedures to minimise hydrocarbon spills	Ongoing during activity	will ensure that all employees, contractors, visitors comply with the EMP
			Ongoing during activity	will ensure that all employees, contractors, visitors comply with the EMP

Table 11: Management Action

Financial Provision = R 79 729.00

(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.

For a prospecting operation such as this, the primary closure and environmental objectives are to:
Minimise the area to be disturbed and to ensure that the areas disturbed during the prospecting activities are rehabilitated and stable, as per the Commitments made in the EMP.

Sustain the pre-prospecting land use.

To record and communicate the results of the monitoring programme during decommissioning to the participating stakeholders.

To receive an effective closure certificate (should the prospect indicate that the resource(s) would not support a sustainable mining operation).

Closure and environmental objectives
If the prospecting programme indicates sufficient economical viable reserves are available, an application for a mining right will be lodged.
All prospecting boreholes will be backfilled and a concrete plug will be installed at a depth of 500mm below surface elevation. Subsoil and a minimum 300mm layer of topsoil will be placed over the concrete plug
All sumps will be backfilled to surface and covered with a 300m layer of topsoil.
All roads and traces will be scarified and ripped to a depth of 100mm to allow re-vegetation.
No prospecting infrastructure will be left on site
Once the prospecting activities are completed, the area will have a land use and capability comparable to the pre-prospecting land use and capability, and all affected area will have a sustainable vegetation cover.

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

This Basic Assessment Report and Environmental Management Plan will be made available to each registered stakeholder for review and comment. All comments will be captured in the issues and response section and will be included into the report.

PHASE	Activity	Expertise required	Duration
1	Data collecting Data modelling Borehole surveying & staking	Mine Surveyor Geologist	12 months
2	**Construction Phase** Site preparation • Access roads • Core stores area • Sumps **Operational Phase** Drilling of boreholes **Closure Phase** Final rehabilitation • scraping the surface • re-vegetating the disturbed area • sealing of the boreholes Logging & assaying	Drill contractor & geologist	13-24 months
3	**Post Closure Phase** Pre-feasibility study EMP studies Mining right Application	Mining engineer Environmentalist Economist	60 months

(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.

The activities involved are for prospecting and will involve no permanent removal of soil and rock. Should the prospecting yield negative results, then the end use for area will revert to its pre-prospecting land use. The end-use of the area will therefore not be changed by the prospecting operations. However, should the prospecting operation yield positive results, then the farm could be subject to a mining rights application and another more comprehensive Public Participation, Scoping, EIA and EMP process. If a mining right is granted then the area will be rehabilitated according to the requirements of the approved Environmental Management Programme that would apply throughout the life of the mine.

As previously mentioned, each phase of the prospecting activities is dependent on the success of the previous. Depending on the outcome of the Phase 1 assessment, an airborne / ground geophysics survey and/or loam sampling programme will be initiated. Targets that have been prioritized through detailed anomaly-specific loam sampling will be tested by initial drilling.

The location and extent of soil sampling and drill sites can therefore not be determined at this stage.

Mapping of the prospecting activities could thus not be undertaken.

Due to the nature of the activities, the impacts will be very limited and of short duration. The management plan is provided in such a manner as to ensure concurrent rehabilitation. The areas for drilling purposes will be the main area experiencing impacts. In this event the activities will be temporary in nature, and a detailed management plan has been provided to address potential impacts associated with these activities.

The only rehabilitation that will specifically be required is borehole capping and revegetation:

Borehole capping

Drill holes must be permanently capped as soon as is practicable.

Re-vegetation

It is recommended that a standard commercial fertilizer high in the standard elements is added to the soil before re-vegetation, at a rate of 10-20kg/ha (application rate to be confirmed based on input from a suitably qualified specialist). The fertilizer should be added to the soil in a slow release granular form.

A suitably qualified ecologist will be appointed to determine the appropriate veld grass mix for hand seeding.

Re-vegetation efforts will be monitored every second month for a period of six months after initial seeding. An effective vegetation cover of 45% must be achieved. Re-seeding will be undertaken if this cover has not been achieved after six months.

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

The amount for rehabilitation is anticipated to be an operating cost and provided for in the Prospecting Work Programme Drill site rehabilitation will be undertaken by the contract drilling company on completion of every borehole. This will include:

The removal of all wastes generated on-site by the drilling activity.

Backfilling of sumps, where applicable

The ripping of cleared and compacted soils where this may have occurred; and

The re-contouring of drill sites to resemble the topography similar to that prior to the commencement of drilling activities

Take photos of the site before prospecting commences and after prospecting

(g) **Calculate and state the quantum of the financial provision required to manage and rehabilitate the environment in accordance with the applicable guideline**.

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

It is hereby undertaken that the amount of **R 79 729.00** in the form of a bank guarantee for rehabilitation purposes as required in terms of section 24P of the Act: Financial provision for remediation of environmental damage.

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

The Site Manager is responsible for oversight of all EMP requirements. He/she may appoint an assistant to conduct internal monitoring of activities.

The latter will be responsible for the monitoring of day-to-day activities related to the process and report any environmental incidents to the Site Manager as per procedure to be established by both parties.

Communication lines will be drawn and will cascade from the Site Manager through to the general workers.

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
Phase1: Data Acquisition and Desktop Study	None identified.	None	N/A	N/A

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
				3. All corrective action and close out of grievances to be signed-off by Environmental Management. 4. Proof of consultation to be submitted to the Department of Mineral Resources prior to airborne survey is conducted. 5. Record of grievances, corrective action taken and close out to be submitted to the Department of Mineral resources at the end of the project phase 1 and 2.
Phase 3: Ground Geophysics	All site activities to be undertaken must be communicated with directly affected landowners.	As soon as the extent of site activities are known. These must be communicated with directly affected landowners. The following procedures must developed in conjunction with these landowners: 1. Emergency Preparedness Response Plan; and	Prospecting Manager	Confirmation of the extent of site activities to be submitted to the Department of Mineral Resources prior to such activities been undertaken. Proof of consultation with directly affected landowners and the

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
		2. Access control procedures and requirements.		outcome of such consultation to be submitted to the Department of Mineral Resources. 3. Continuous monitoring of compliance with the access control procedure will be undertaken.
Phase III: Exploratory Drilling	Visual inspection of soil erosion and / or compaction	All exposed areas, access roads, the drill pad and soil stockpiles must be monitored for erosion on a regular basis and specifically after rain events.	Prospecting Manager Contractor	Weekly and after rain events 1. Monthly monitoring reports to be signed-off by the Environmental Manager. 2. Corrective action to be confirmed and signed-off by the Environmental Manager. 3. Consolidated monthly monitoring reports (including the corrective action taken) to be submitted to the Department of Mineral Resources.
	Dust generated will be	If dust outfall is excessive and	Prospecting Manager	On-going

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
	assessed through visual observation	regarded to affect any sensitive receptors a monitoring programme must be initiated based on the input of a suitably qualified air quality specialist.	Contractor	1. Monthly monitoring reports to be signed-off by the Environmental Manager. 2. Corrective action to be confirmed and signed-off by the Environmental Manager. 3. Consolidated monthly monitoring reports (including the corrective action taken) to be submitted to the Department of Mineral Resources.
	Visual inspection of biodiversity impacts and the occurrence of invader species	Visual inspection of clearing activities and other possible secondary impact on biodiversity will be undertaken. The introduction of alien invasive vegetation species will be determined.	Prospecting Manager Contractor	Once-off during clearing activities Weekly inspection of secondary impacts 1. Monthly monitoring reports to be signed-off by the Environmental Manager. 2. Corrective action to be confirmed and signed-off by the Environmental Manager.

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
				3. Consolidated monthly monitoring reports (including the corrective action taken) to be submitted to the Department of Mineral Resources.
	Visual inspection of pollution incidents, the integrity of secondary containment structures and waste management	All secondary containment structure will be inspected on a regular basis to confirm the integrity thereof and to identify potential leaks. All spill incidents will be identified and corrective action taken in accordance with an established spill response procedure. Waste management practices will be monitored to prevent	Prospecting Manager Contractor	Daily 1. Monthly monitoring reports to be signed-off by the Environmental Manager. 2. Corrective action to be confirmed and signed-off by the Environmental Manager. 3. Consolidated monthly monitoring reports (including the corrective action taken) to be submitted to the Department of Mineral Resources. 4. Incident reporting will be undertaken as required in terms of the relevant legislation including, but

		contamination and littering.		

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
				not limited to, the: a) Mineral and Petroleum Resources Development Act 28 of 2002; and b) National Water Act 36 of 1998.

Post Closure Monitorin	Follow up inspections and monitoring of rehabilitation	Inspection of all rehabilitated areas to assess whether any soil erosion is occurring and implement corrective action where required. Confirm that the set target of 45% cover for all re-vegetated areas have been achieved after a period of 6 months and re-seed where required Identify any areas of subsidence around drill holes and undertake additional backfilling if required.	Prospecting Manager	Monthly for a period of 6 months after rehabilitation activities are concluded. 1. Monthly monitoring reports to be signed-off by the Environmental Manager. 2. Corrective action to be confirmed and signed-off by the Environmental Manager. 3. Consolidated monthly monitoring reports (including the corrective action taken) to be submitted to the Department of Mineral Resources. 4. Final impact and risk assessment report for site closure to be submitted to the Department of Mineral Resources for approval.

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

Annual performance assessments must be undertaken on the EMP. These reports must also include the assessment of the financial provision. The reports should be submitted to the DMR.

m) Environmental Awareness Plan

Type of training	Training Targets	Standards
• Induction programme – legal aspects • Specific environmental aspects: waste, water, hydro carbons, dust, material handling rehabilitation • Competency • Health and safety – dust management, emergency preparedness, first aid. • Fauna and flora protection	• Management • Supervisors • Operators • Visitors • Contractors	• Records • Standard operating procedures • Signage • Personal Protection Equipment

- Communication lines will be drawn and will cascade from the Site Manager through to the general workers.
- On a regular basis, all aspects of the operation will be checked against the prescripts of the EMP and its supporting procedures and, if established that certain of the aspects are not addressed or impacts on the environment are not mitigated properly, it will be immediately communicated to the operational team by management.
- Should the mitigation measure not be in line with the prescripts, amendments will be made and the employees will be made aware of the changes and encouraged to adhere to such.
- All site personnel will be inducted at the site and will be taken through the EMP and other relevant legal requirements to familiarize them with same.

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

ENVIRONMENTAL AWARENESS PLAN

In terms of section 39(3)(c) of the Mineral and Petroleum Resources Development Act, 2002 (Act 28 of 2002), the applicant must compile and implement an environmental awareness plan. The above-mentioned

environmental awareness plan must describe the manner in which the applicant will inform their employees of any environmental risk which may result from their work and the manner in which the environmental risks will be addressed to avoid pollution or/and degradation of the environment.

This document, therefore concerns the details of the environmental awareness plan for the proposed prospecting operation as required by the Mineral and Petroleum Resources Development Act, 2002 (Act 28 of 2002).

In view of the above, the company has developed an environmental awareness plan for the proposed prospecting operation, which is explained in more detail below.

Note: The responsible person will revise these environmental awareness procedures from time to time. The date of commencement of the revised procedure will always be indicated to prevent confusion.

This Environmental Awareness (Standard Training Procedure) sets out the applicant's training objectives regarding to environmental awareness. It is a stand-alone procedure, which serves to improve awareness, training and competency in the environmental field. It contains no detail on the training initiatives but rather serves to ensure that a responsible person is appointed to deal with and increase environmental awareness on the area

Objectives and Legal Requirements

Objectives

The following are the objectives of the environmental awareness plan.

- To identify the necessary training needs for different categories in the area.
- To train all employees on environmental issues on the area.

Legal requirements

The following legislation apply to this environmental awareness plan

- Employment Equity Act, 1998 (Act 55 of 1998).
- National Environmental Management Act, 198 (Act 77 of 1998).
- Mineral and Petroleum Resources Development Act, 2002 (Act 28 of 2002).

Manner of informing employees of risks to avoid pollution and degradation of the environment

Induction Programme

An Induction Programme (prospecting guidelines and operation induction), which will include environmental awareness programme will be established for Silver Sun prospecting activities. During the training sessions various topics will be discussed such as, but not limited to; Water Pollution Prevention, Good Environmental Housekeeping, etc. Through the Induction Programme, the contractor, safety officer, or any other responsible appointed person shall ensure that all staff receives training in:

- Administrative requirements and procedures, which will include the Environmental Emergency Procedures.
- Resource conservation and environmental reporting and general environmental awareness for mine related environmental issues.

All employees (including contractor employees) will undergo induction. The induction includes training and awareness on environmental issues on the prospecting and is

. *Trainee needs*

The identification of environmental training and environmental awareness needs are derived from an analysis of the type of role different categories of employees play at the site and prospecting operation as a whole. The following categories are considered:

- Senior Management
- Middle management (Environmental Officers)
- Supervisors
- Operators of the drilling machine.
- Visitors and contractors

- The contractor hired is very professional and highly qualified to the field; the contractor has a background of environmental management.

- The will be a work shop for uneducated employees in the field of environmental management and the contractor will make sure that all the employee obey to the rules and regulation sign the contract to follow the environmental management rules.

Frequency	Time allocation	Objective
Induction (all staff and workers)	1 hour training on environmental awareness training as part of site induction	1. Develop an understanding of what is meant by the natural environmental and social environment and establish a common language as it relates to environmental, health, safety and community aspects. 2. Establish a basic knowledge of the environmental legal framework and consequences of non-compliance. 3. Clarify the content and required actions for the implementation of the Environmental Management Plan. 4. Confirm the spatial extent of areas regarded as sensitive and clarify restrictions. 5. Provide a detailed understanding of the definition, the method for identification and required response to emergency incidents.
Monthly Awareness Talks (all staff and workers)	30 minute awareness talks	Based on actual identified risks and incidents (if occurred) reinforce legal requirements, appropriate responses and measures for the adaptation of mitigation and/or management practices.
Risk Assessments (supervisor and workers involved in task)	Daily task based risk assessment	Establish an understanding of the risks associated with a specific task and the required mitigation and management measures on a daily basis as part of daily tool box talks.

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

In case of emergency the land owner and relevant authority will be contacted. All employees will be given a list of relevant authorities and that of the land owner.

Each of these categories has different responsibilities and therefore has different knowledge requirements and environmental awareness training needs, to obtain that knowledge.

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

No specific information was required by the Competent Authority.

2) UNDERTAKING

The EAP herewith confirms

a) the correctness of the information provided in the reports

b) the inclusion of comments and inputs from stakeholders and I&APs ;

c) the inclusion of inputs and recommendations from the 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.

I, Mr Bernard Kgosana, declarethat –

- **General declaration:**

· I act as the independent environmental practitioner in this application

· I will perform the work relating to the application in an objective manner, even if this results in views and findings that are not favorable to the applicant

· I declare that there are no circumstances that may compromise my objectivity in performing such work;

· I have expertise in conducting environmental impact assessments, including knowledge of the Act, Regulations and any guidelines that have relevance

to the proposed activity;

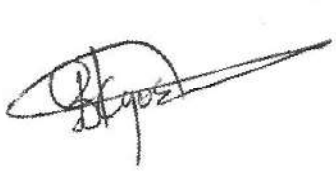
- I will comply with the Act, Regulations and all other applicable legislation;
- I will take into account, to the extent possible, the matters listed in regulation 8 of the Regulations when preparing the application and any report relating to the application;
- I have no, and will not engage in, conflicting interests in the undertaking of the activity;
- I undertake to disclose to the applicant and the competent authority all material information in my possession that reasonably has or may have the potential of influencing - any decision to be taken with respect to the application by the competent authority; and - the objectivity of any report, plan or document to be prepared by myself for submission to the competent authority;
- I will ensure that information containing all relevant facts in respect of the application is distributed or made available to interested and affected parties and the public and that participation by interested and affected parties is facilitated in such a manner that all interested and affected parties will be provided with a reasonable opportunity to participate and to provide comments on documents that are produced to support the application;
- I will ensure that the comments of all interested and affected parties are considered and recorded in reports that are submitted to the competent authority in respect of the application, provided that comments that are made by interested and affected parties in respect of a final report that will be submitted to the competent authority may be attached to the report without further amendment to the report;
- I will keep a register of all interested and affected parties that participated in a public participation process; and
- I will provide the competent authority with access to all information at my disposal regarding the application, whether such information is favorable to the applicant or not
- all the particulars furnished by me in this form are true and correct;
- will perform all other obligations as expected from an environmental assessment practitioner in terms of the

Regulations; and

- I realise that a false declaration is an offence in terms of regulation 71 of the Regulations and is punishable in terms of section 24F of the Act.

Disclosure of Vested Interest

- I do have vested interest (either business, financial, personal or other) in the proposed activity proceeding other than remuneration for work performed in terms of the Regulations;



Signature of the environmental assessment practitioner:

MFRI Minerals (Pty) Ltd

Name of company:

07 September 2023

Date:

-END-

APPENDICES

Appendix A-CONSULTATION REPORT

Appendix B:- QUANTUM FINANCIAL PROVISION