

Prospecting Right Application for Chrome Ore, Cobalt, Copper Ore, Gold Ore, Phosphate Ore, Iron Ore, Lead, Molybdenum Ore, Nickel Ore, Platinum Group Metals, Rare Earths, Silver Ore, Vanadium Ore and Zinc Ore on Portion 1, Portion 2, and Remaining Extent of the Farm Breda 373 LR, of the Farm Duren 387 LR and on Remaining Extent of the Farm Polen 389 LR, situated in Mogalakwena Limpopo Province.

DMRE REF: LP 30/5/1/1/2/ (13837) PR

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BASIC ASSESSMENT REPORT AND ENVIRONMENTAL MANAGEMENT PROGRAMME REPORT

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

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IMPORTANT NOTICE

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

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 conforms to the requirements of the EIA Regulations, any protocol or minimum information requirements relevant to the application as identified and gazetted by the Minister in a government notice or instruction or guidance provided by the competent authority to the submission of application.

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.

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 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—

DOCUMENT CONTROL		
Document Title	Basic Assessment Report and Environmental Management Programme report for Chrome Ore, Cobalt, Copper Ore, Gold Ore, Phosphate Ore, Iron Ore, Lead, Molybdenum Ore, Nickel Ore, Platinum Group Metals, Rare Earths, Silver Ore, Vanadium Ore and Zinc Ore on Portion 1, Portion 2, and Remaining Extent of the Farm Breda 373 LR, of the Farm Duren 387 LR and on Remaining Extent of the Farm Polen 389 LR, situated in Mogalakwena Limpopo Province. DMRE REF: LP 30/5/1/1/2 (13837) PR.	
	Version 2:	Final Basic Assessment Report and Environmental Management Programme.

- (i) identify and motivate a preferred site, activity and technology alternative; (ii) identify suitable measures to manage, avoid or mitigate identified impacts; and
- (iii) identify residual risks that need to be managed and monitored.

QUALITY CONTROL			
	Compiled By	Reviewed By	Distribution
Name	TC Rakuambo		
Designation	Junior Consultant		

DISCLAIMER

The opinions expressed in this Report have been based on the information sourced by Singo consulting through desktop studies, Previous studies and the local knowledge of land occupiers/ landowners. Opinions presented in this report apply to the site conditions and features as they existed at the time of Singo Consulting's investigations, and those reasonably foreseeable. These opinions do not necessarily apply to conditions and features that may arise after the date of this Report, about which Singo Consulting had no prior knowledge nor had the opportunity to evaluate.

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ABBREVIATIONS

CA	Competent Authority
CBA	Critical Biodiversity Area
DAFF	Department of Agriculture, Forestry and Fisheries
DEFF	Department of Environmental, Forestry and Fisheries
DMRE	Department of Mineral Resources & Energy
DWS	Department of Water and Sanitation
EA	Environmental Authorisation
EAP	Environmental Assessment Practitioner
EIA	Environmental Impact Assessment
EIR	Environmental Impact Report
EMPR	Environmental Management Programme report
ESA	Ecological Support Area
ESM	Environmental Site Manager
GDP	Gross Domestic Product
GN	Government Notice
GIS	Geographic Information System
GPS	Global Positioning System
GVA	Gross Value Added
I&APs	Interested and Affected Parties
IDP	Integrated Development Plan
IEM	Integrated Environmental Management
Mamsl	Meters above mean sea level
MHSA	Mine Health and Safety Act (Act No. 29 of 1996) [as amended]
MPRDA	Mineral and Petroleum Resources Development Act (Act No. 28 of 2002) (as amended)
NEMA	National Environmental Management Act, 1998 (Act no 107 of 1998) (as amended)
NEMAQA	National Environmental Management: Air Quality Act (Act No. 39 of 2004) (as amended)
NEMBA	National Environmental Management: Biodiversity Act, 2004 (Act No. 10 of 2004)
NEMWA	National Environmental Management: Waste Act

	(Act No. 59 of 2008) (as amended)
NHRA	National Heritage Resource Act, 1999 (Act No. 25 of 1999)
NVFFA	National Veld and Forest Fire Act (Act No. 101 of 1998)
NWA	National Water Act, 1998 (Act No. 36 of 1998) (as amended)
PM	Public Meeting
PPE	Personal Protective Equipment
PPP	Public Participation Process
SAHRA	South African Heritage Resources Agency
SANS	South African National Standards
SAWS	South African Weather Service
SDF	Spatial Development Framework
SLP	Social and Labour Plan
SM	Site Manager
VAC	Visual Absorption Capacity

PART A:

SCOPE OF ASSESSMENT AND BASIC ASSESSMENT REPORT

1 INTRODUCTION

Singo Consulting (Pty) Ltd on behalf of Stazalor (Pty) Ltd submitted an application for a Prospecting Right subject to Section 16 of the Mineral and Petroleum Resources Development Act, 2002 (Act 28 of 2002) (MPRDA) and an application for an Environmental Authorisation in terms to Chapter 6 of GNR 982 enacted under the National Environmental Management Act (Act 107 of 1998) (NEMA) for Chrome Ore, Cobalt, Copper Ore, Gold Ore, Phosphate Ore, Iron Ore, Lead, Molybdenum Ore, Nickel Ore, Platinum Group Metals, Rare Earths, Silver Ore, Vanadium Ore and Zinc Ore.

The proposed project will aim to ascertain if economically viable mineral deposits exist within the application area. In order to undertake the Proposed prospecting activities, Stazalor (Pty) Ltd will require a Prospecting Right in terms of the Mineral and Petroleum Resources Development Act (MPRDA, Act No.28 of 2002). The Applicant is also required to obtain an Environmental Authorisation (EA) in terms of the National Environmental Management Act (NEMA, Act No. 107 of 1998) which involves the submission of a Basic Assessment Report and Environmental Management Programme report (BAR & EMPr).

Singo Consulting (Pty) Ltd has been appointed by Stazalor (Pty) Ltd to manage the Environmental Authorisation process by conducting Environmental Impact Assessment, Public Participation for the proposed project and to compile the Basic Assessment Report and Environmental Management Programme report in support of the Prospecting Right application which in turn will be submitted to the Department of Mineral Resources and Energy for adjudication. This BAR & EMPr has been designed to meet the specifications as set out in the NEMA's 2014 EIA Regulations. Feedback received from stakeholders will form basis of this BAR & EMPr.

Locality Description: The proposed Prospecting Right Application covers on Portion 1, Portion 2 and Remaining Extent of the Farm Breda 373 LR, of the Farm Duren 387 LR and on Remaining Extent of the Farm Polen 389 LR encircling a total of 3 970.380Ha. The project area

lies Approximately 33.2km North-East of Mokerong Town, approximately 19km North-West of N11 and Approximately 15.3km South-West of Reabilwe Primary School. It is easily accessible via the N11 then to the gravel road.

1.1 Details of the Environmental Assessment Practitioner

Singo Consulting (Pty) Ltd was appointed by Stazalor (Pty) Ltd as an independent EAP to compile this report. The contact details of the consultants who compiled this report are as follows:

Table 1: Details of the EAP that prepared the Report

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1.2 Qualifications of the EAP

For carried out Environmental Impact Assessments: See attached Curriculum Vitae attached as *Appendix 7*

Summary of EAP's Past Experience

In the year 2008, Singo Consulting (Pty) Ltd was established as an Independent Consulting Company focused to create opportunities within the Mining and Environmental Industry. With time, Singo Consulting (Pty) Ltd has diversified its services, providing high value Geological, Hydrological, Environmental, Cleaning and Rehabilitation specialized services to clients across a range of industries that are primarily natural resource based.

The company aims to be a consulting firm that communicates sound environmental services solutions. Singo Consulting (Pty) Ltd takes pride in the fact that it holds no equity in any project which in turn permits it to offer clients objective support on crucial issues.

2 Locality of the overall Activity

Table 3: Location of the Overall Activity

Farm Name:	On Portion 1, Portion 2, and Remaining Extent of the Farm Breda 373 LR, of the Farm Duren 387 LR and on Remaining Extent of the Farm Polen 389 LR.		
Application area (Ha)	3 970.380Ha		
Magisterial district:	Mogalakwena		
Distance and direction from nearest town	Approximately 33.2km North-East of Mokerong Town, approximately 19km North-West of N11 and Approximately 15.3km South-West of Reabilwe Primary School		
21 digit Surveyor General Code for the Farm	TOLR00000000037300000 TOLR00000000038700000 TOLR00000000038900000		
Coordinates			
	ID	X	Y
	A	28.676439	-23.354528
	B	28.730110	-23.355885
	C	28.720763	-23.372468
	D	28.735688	-23.386188
	E	28.744433	-23.407596
	F	28.715185	-23.43594
	G	28.697696	-23.392218
	H	28.660759	-23.386037
	ID	28.657593	-23.378951
	J	28.657685	-23.375956
	K	28.657400	-23.375005
	L	28.659303	-23.372054
	M	28.662452	-23.370577

N	28.665650	-23.367208
O	28.669819	-23.36321
P	28.673074	-23.362639
Q	28.676101	-23.362582
R	28.677472	-23.36064
A	28.676439	-23.354528

Locality map

See Figure 1 & 2 below

(show nearest town, scale not smaller than 1:250000)



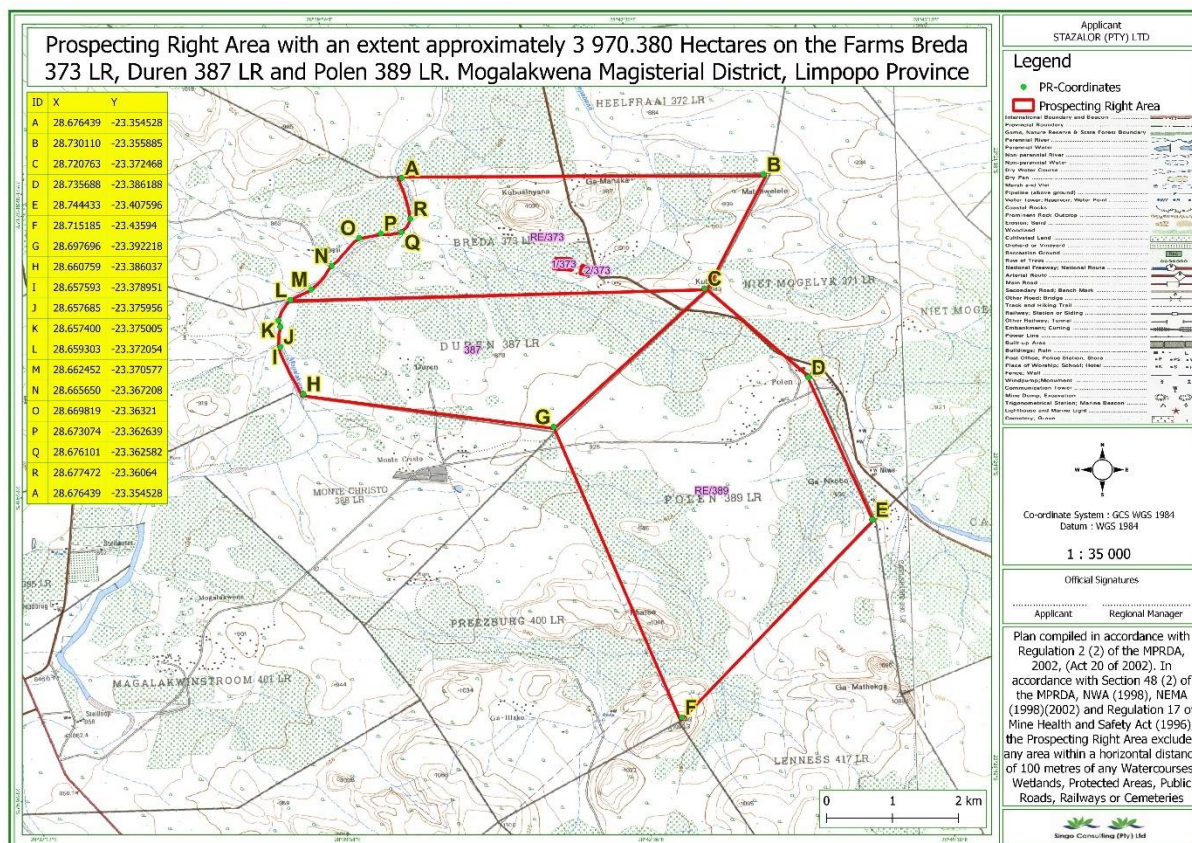


Figure 2: Regulation Map

4 DESCRIPTION OF THE SCOPE OF THE PROPOSED OVERALL ACTIVITY

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

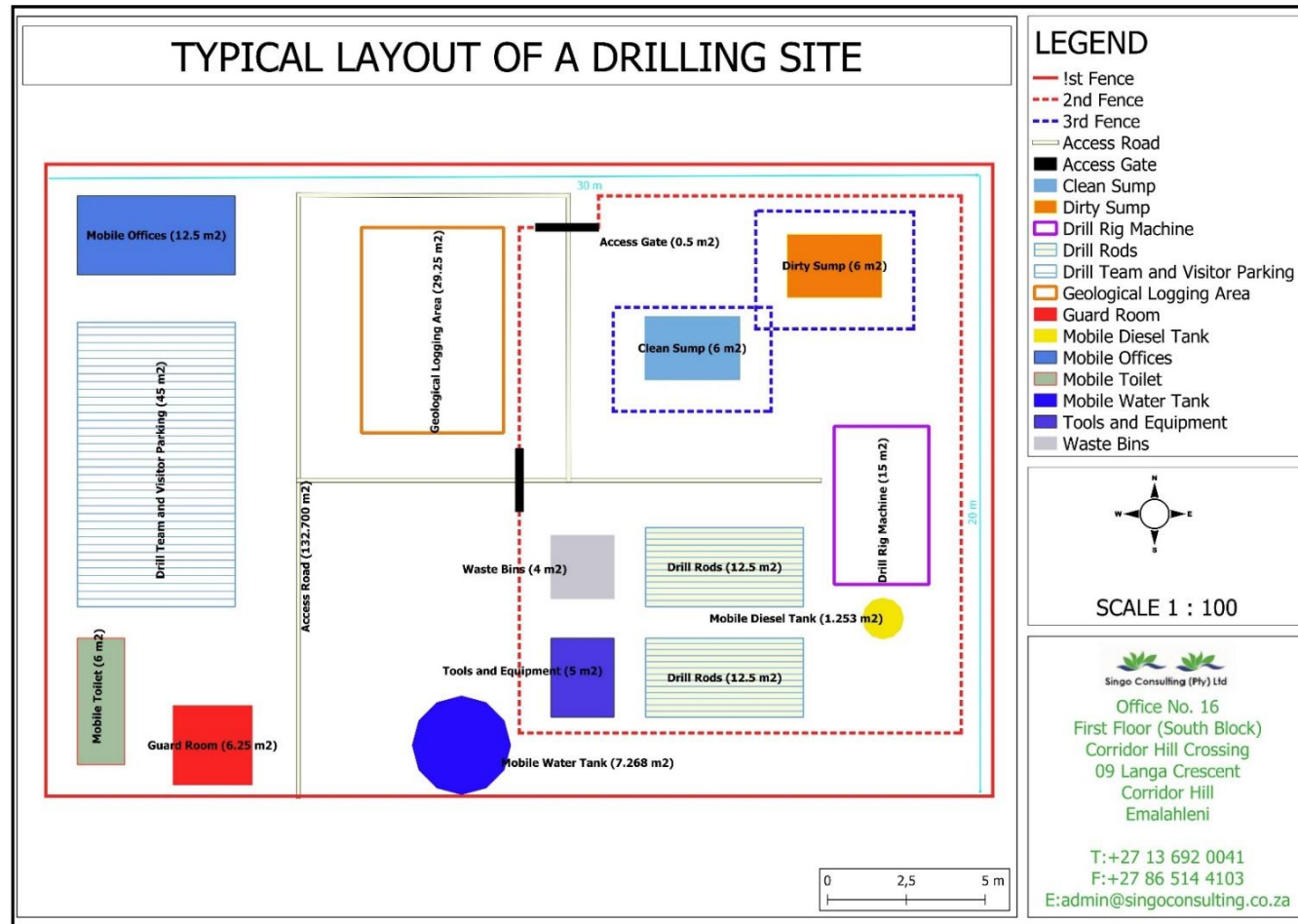


Figure 3: Typical Layout of a Drill Site

4.1 Listed and specified activities

Table 4: Listed and specified activities

NAME OF ACTIVITY (E.g. For prospecting - drill site, site camp, ablution facility, accommodation, equipment storage, sample storage, site office, access route etc...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, plant, storm water control, berms, roads, pipelines, power lines, conveyors, etc...etc...etc.)	Aerial extent of the Activity Ha or m ²	LISTED ACTIVITY (Mark with an X where applicable or affected).	APPLICABLE LISTING NOTICE GNR 327, 325 & 324	WASTE MANAGEMENT AUTHORISATION (Indicate whether an authorisation is required in terms of the Waste Management Act). (Mark with an X)
Prospecting Area	3 970.380Ha ha	X	GNR 327 Listing Notice 1, Activity 20.	Not required
Vegetation clearing	0.9 ha		Not Listed	
Drilling	0.9 ha		Not Listed	

Total area to be disturbed

$$30 \times 20 = 600 \text{m}^2$$

$$15 \text{ boreholes} \times 600 \text{m}^2 = 9000 \text{ m}^2$$

$$9000 \text{ m}^2 \div 10000 = \mathbf{0.9ha}$$

Drilling method	Diamond drilling
Number of boreholes	15
Depth of boreholes	100m
Duration of drilling	A borehole takes about 4 days to complete; 15 will take at least 60 days.
Demarcated working area	0.9 ha for all 15 drilling sites

4.2 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)

Activities for the prospecting of Stazalor (Pty) Ltd will be done in three phases. The Proposed Prospecting area is depicted by Figure 1-2 above clearly showing the areas of interest.

A total number of proposed boreholes to be drilled for the operation is 15. Vegetation will be cleared at each drilling site and progressing rehabilitation will take place after each drill site. The total vegetation clearing for the for the overall activities is 0.9 ha. The Proposed project area will be accessed through N11 then enter through gravel road. Access within the Farm will be communicated with the respective Landowners.

As part of the proposed Prospecting Work Program (PWP), both non-invasive and invasive prospecting activities will be conducted. The framework will adopt a staggered strategy, where the work program for prospecting is split into several sequential phases.

There will be a brief period at the end of each phase to compile and review outcomes. The findings will decide not only whether prospecting progresses but also how it will proceed. The applicant will only take action over the next prospecting phase once satisfied with the results obtained in the previous phases. Moreover, if need arises, smaller, non-core parts of the prospecting work program will be undertaken. A detailed descriptive of the invasive and non-invasive activities planned is presented below.

Phase 1 (Non-invasive)

Desktop study: All historical geological data (including assays and mineralogy) will be gathered and evaluated. This will include assessments of any existing mining operations in the area, boreholes and any relevant data from any institution that may have done work in and around that that specific area. As part of this phase, remote sensing studies will be carried out to prepare for the implementation of subsequent phases.

Preliminary field work: This allows the implementation of survey grids for geological and structural mapping as well as geophysical surveys. Following these activities, proposed drill

sites for the drilling program will be pegged. At the end of this phase, a preliminary report with updated maps will be produced.

Geophysics: In smaller areas, a hand-held instrument is used to search for ore underground. In larger areas, an instrument is mounted on an aircraft, which is then used to survey the area for ore targets. The procedure is non-invasive.

Phase 2: Invasive

Field mapping: This is the verification of on-site field lithology based on the geological map and geophysical data. This includes ground mapping of geological features, including rock outcrops, lithological contact zones, geological structural features, surface depressions and vegetation types. This may include collecting data from outcrops for analysis, as the outcrop also indicates what can be found underground.

Site establishment:

This is the mobilisation of all project equipment to the site or a nearby location in order to conduct efficient prospecting. There is very little environmental impact with regards to this. Rehabilitation will take place progressively per drill site. Site Establishment includes

- **Ablution:** Portable chemical toilets
- **Temporary office area:** A temporary site office shaded area will be erected at the drill site. This will be used for daily project administration.
- **Accommodation:** No accommodation for staff and workers will be provided on-site; 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.
- **Storage of dangerous goods:** During the drilling activities there will be no storage of diesel fuel, oil and lubricants on site. Trucks and other mobile transports will utilise the nearby filling station. Significant amount of diesel will be transported to site for the drill rig machine on a daily basis for the duration of the prospecting activities.



Figure 4: Typical example of mobile toilets to be adopted



Figure 5: Typical example of Gazebo as a usage for temporary offices/shaded Area.



Figure 6: Typical example of portable diesel storage tank

Drilling:

A core drilling program will be carried out, which will be informed by the results of the previous phased approach and will aid in the identification of areas to be drilled. To evaluate the area, logging and sampling of the borehole core will be performed. The drill core samples will be sent to an accredited laboratory for analysis and determination of the average mineral content.

At least ten holes will be drilled during this phase. The drill bit size is NQ (76.7 mm in diameter) and will drill to an average depth of 100 m, which will cover an area of 0.6 ha at any given drilling time (total area of disturbed area per drilled borehole).

Pre-feasibility studies:

Geological modelling of gathered existing geological data and prospecting data will be performed, if the results warrant it.

Phase 3:

Closure & rehabilitation: This includes progressive rehabilitation and closing borehole openings, re-vegetating, returning soil stockpiles, and removing any prospecting-related waste. This will restore the area to as good or better condition than it was before prospecting began.

5 POLICY & LEGISLATIVE CONTEXT

Table 5: Policy and Legislative Context

Applicable Legislation and Guidelines	Reference Where Applied (i.e. where in this document has it been explained how the development complies with and responds to the legislation and policy context)	How does this Development Comply with and Respond to the Legislation and Policy Context
National Environmental Management Act (No. 107 of 1998) (NEMA):	This entire report is prepared as part of the prospecting right application under the NEMA, section 24	In terms of the National Environmental Management Act an Application for Environmental Authorisation subject to a Basic Assessment Report. The application was lodged at the DMRE
Minerals and Petroleum Resources Development Act (No.28 of 2002) (MPRDA): In support of the Prospecting Right Application submitted by Stazalor (Pty) Ltd, the applicant is required to conduct a NEMA BAR process in terms of Section 5A and Chapter 16 of the MPRDA.	This entire report is prepared as part of the Prospecting Right Application under the MPRDA, section 16(2).	The application is for a prospecting right and therefore all regulations pertaining to the application process of a prospecting right and environmental management are applicable to this application. DMRE REF: LP 30/5/1/1/2/ 13837 PR
National Water Act (No. 36 of 1998) (NWA): Water may not be used without prior authorisation by the DWS. Section 21 of the National Water Act (No.36 of 1996) the NWA water uses for which authorisation is required.	No Water Use Licence has been applied for this prospecting project.	No water use license is required for this Application. The water required will be bought from the municipality or licensed water supplier that sells potable water or treated industrial water for which a water sale agreement will be drawn and agreed upon before work commences. Appropriate dust extractions /suppression equipment will be a condition imposed on the drill contractor for their drill rigs.

The National Environmental Management: Biodiversity Act (Act No. 10 of 2004 – NEMBA) Section 57 and 87	Regulations published under NEMBA provides a list of protected species (flora and fauna), according to the Act (GN R. 151 dated 23 February 2007, as amended in GN R. 1187 dated 14 December 2007) which require a permit in order to be disturbed or destroyed	No applications have been submitted in terms of the National Environmental Management: Biodiversity Act.
Dr Pixley Ka Isaka Seme Local Municipality Integrated Development Plan (IDP) Strategic Development Framework (SDF)	Needs and Desirability, socio-economic needs. Land use	Incorporated in Section 9.1 of this BAR. The applicant acknowledges the need to maximize economic benefit from mining, industrial, business, agricultural and tourism development in the area and promote a climate for economic development in line with the municipal development frameworks.
Municipality By-Laws: Waste Management by-law Act 59 of 2008, Air Quality Management By-law Act 39 of 2004, Noise control by-law, Spatial Planning and Land Use Management act no 16 of 2013 (SPLUMA).	Environmental Management measures awareness plan	Best practice guidelines will be followed for any by-law's management and the development of the mine environmental and other legislative management.
Constitution of South Africa, Specifically, everyone has the right: a) to an environment that is not harmful to their health or wellbeing; and b) to have the environment protected, for the benefit of	BAR & EMPr	Prospecting activities will only proceed after effective consultation. All activities will be conducted in a manner that does not violate the Constitution of the Republic of South Africa.

<p>present and future generations, through reasonable legislative and other measures that</p> <p>i) prevent pollution and ecological degradation;</p> <p>ii) promote conservation; and</p> <p>iii) secure ecologically sustainable development and use of natural resources while promoting justifiable economic and social development.</p>		
National Heritage Resources Act, 1999	Management measures	Should archaeological artefacts or skeletal material be revealed in the area during development activities, such activities should be halted, and SAHRA notified in order for an investigation and evaluation of the find(s) to take place.

6 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).

Modern life is unimaginable without electricity. It lights houses, buildings, and streets; provides domestic and industrial heat; and powers most equipment and machinery used in homes, offices and factories. Chrome Ore, Cobalt, Copper Ore, Gold Ore, Phosphate Ore, Iron Ore, Lead, Molybdenum Ore, Nickel Ore, Platinum Group Metals, Rare Earths, Silver Ore, Vanadium Ore and Zinc Ore is the most abundant source of electricity worldwide, currently providing more than 36% of global electricity. Chrome Ore, Cobalt, Copper Ore, Gold Ore, Phosphate Ore, Iron Ore, Lead, Molybdenum Ore, Nickel Ore, Platinum Group Metals, Rare Earths, Silver Ore, Vanadium Ore and Zinc Ore-fired power plants provide affordable, reliable and constant power that is available on demand to meet energy consumption needs. As much of the world lacks access to modern, clean energy, Chrome Ore, Cobalt, Copper Ore, Gold Ore, Phosphate Ore, Iron Ore, Lead, Molybdenum Ore, Nickel Ore,

Platinum Group Metals, Rare Earths, Silver Ore, Vanadium Ore and Zinc Ore is still essential to alleviating worldwide energy poverty (www.smenet.org).

The applicant has identified this opportunity upon the Farm Breda 373 LR, Duren 387 LR and Polen 389 LR which is owned by Government. Based on the location of the proposed site, prospecting is favoured and most likely to yield positive feedback. Major activities taking place cultivated land, natural vegetation and build-up area. Drill sites will be aimed at minimising the impacts of the drilling activities on the current landuse.

Table 6: Need and desirability considerations

Prospecting activities does not offer many tangible benefits as it is the initial phase of mining. Prospecting precedes mining; however, it is during the prospecting phase that findings were established on whether the available mineral reserves can be mined at an economic gain. It is understood that the mining plays an important role in South African economy and boast a large labour force; hence a greater significance is placed on prospecting for realization of mining benefits.

The country is also one of the world's most important mining countries in terms of the variety and quantity of minerals produced. It has the world's largest reserves and production of Chrome Ore, Cobalt, Copper Ore, Gold Ore, Phosphate Ore, Iron Ore, Lead, Molybdenum Ore, Nickel Ore, Platinum Group Metals, Rare Earths, Silver Ore, Vanadium Ore and Zinc Ore.

7 MOTIVATION OF THE OVERALL PREFERRED SITE, ACTIVITIES AND TECHNOLOGY ALTERNATIVE

The geology is the primary driver in determining the location of prospecting and mining. After due consideration and conducting background and desktop studies, Geological formation comprises of Waterberg Supergroup intruded by BIC. (See **Figure 7** for the project geology).

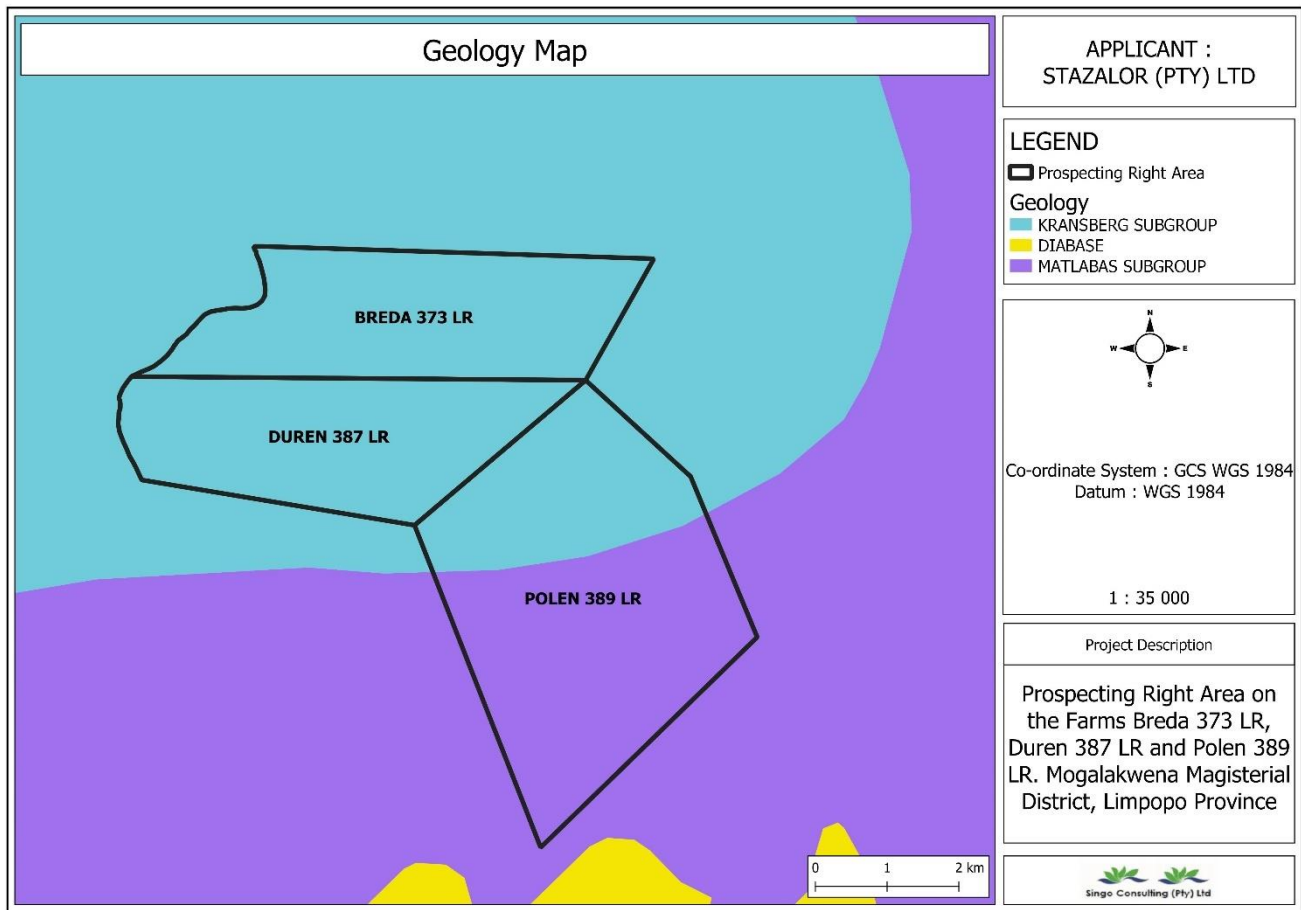


Figure 7: Geological map

8 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.)

8.1 Details of all 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;
- (b) the type of activity to be undertaken;
- (c) the design or layout of the activity;
- (d) the technology to be used in the activity;
- (e) the operational aspects of the activity; and
- (f) the option of not implementing the activity)

8.1.1 The property on which or location where it is proposed to undertake the activity

The prospecting Right application directly affects on Portion 1, Portion 2, and Remaining Extent of the Farm Breda 373 LR, of the Farm Duren 387 LR and on Remaining Extent of the Farm Polen 389 LR. The development footprint encircles 3 970.380Ha.

8.1.2 The type of activity to be undertaken

No bulk sampling work will be carried out during this prospecting program. Invasive prospecting activities such as drilling as well as non-invasive activities will be conducted during prospecting due to the unavailability of extensive historical borehole datasets.

8.1.3 Design or Layout

No permanent structures will be constructed since exploration is temporary in nature. Landowners will be consulted duly for access and usage of the existing access roads.

- Portable ablution facilities will be used.
- It is planned to use one drill rig for all 10 drill holes.
- Rehabilitation will closely be controlled and supervision will be focussed.
- No changes to the layout are considered, however, the holes can be orientated to match the shape of the good quality of resource with the geophysical survey information.
- Buffer zones will apply to all the sensitive areas on site

8.1.4 Technology Alternatives

The technology chosen is deemed effective for exploring deposits of this type, resource definition and evaluation. This is inclusive of the non-invasive and invasive technology. The non-invasive includes desktop studies, geological file mapping and geophysical survey whilst invasive includes the prospecting boreholes for resource estimation. Prospecting will be done in interrelated phases. Alternatives will be considered once the preceding phase necessitate reasonable changes and adaptations.

8.1.5 The operational aspects of the activity

A prospecting period of five years has been applied for. No permanent services including water supply, electricity, or sewerage facilities are required. All infrastructure to be developed will be mobile and temporary including portable toilets and water tanks.

8.1.6 The option of not implementing the activity

Not implementing the prospecting activities will result in a loss of information of mineral reserves present on the study area. Should economically feasible reserves exist on the study area and the applicant cannot prospect, the opportunity to utilise the reserves for future Chrome Ore, Cobalt, Copper Ore, Gold Ore, Phosphate Ore, Iron Ore, Lead, Molybdenum Ore, Nickel Ore, Platinum Group Metals, Rare Earths, Silver Ore, Vanadium Ore and Zinc Ore mining will be lost, i.e. the minerals will be sterilised and resultant socio-economic benefits will be lost. The proposed prospecting activities have the potential to have a negative impact on the ecological environment as well as the social environment of the area. These impacts, however, can potentially be prevented, minimised, mitigated and managed to low and very low levels, as shown through the impact assessment.

8.2 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)

The Public Participation is the basis of any EIA process. The Public Participation Process (PPP) seeks to provide the opportunity for all stakeholders including potential players and all applicable I&APs, state departments, state bodies and the competent authority (CA) to register so that they can raise concerns, contribute to local knowledge, comment on the Draft Basic Assessment Report (DBAR) & Environmental Management Programme report (EMPr) but most importantly provide suggestions for enhanced benefits. Comments received during the Public Participation Process are incorporated into the Final BAR & EMPr to be submitted to the competent Authority being the Department of Mineral Resources & Energy for Adjudication.

Defining Stakeholders

The term public can be taken to mean any individual or group in society, including the government and business sector. Who or what is included in the "public" depends very much on activities under consideration. The term "stakeholder" helps clarify the meaning or "public" in the context of development activities.

A Stakeholder is any person, group of institution that has an interest in an activity, project or program. This includes both intended beneficiaries and intermediaries, those positively

affected, and those involved and/or those who are generally excluded from the decision-making process.

Stakeholders can usefully be categorized in five main types:

- Directly affected people (who live or work where the project will be located)
- indirectly affected people (who live nearby or use resources from the project area)
- public sector agencies (ministries, provincial or local government, government mandated mass organizations)
- private developers (private companies with a direct investment in the project) and their subcontractors and financiers
- others (donors, NGOs with a stake in the project, external advisors, the business sector).

Objectives of the Public Participation

- Main objectives for involving the public are:
- the identification of key issues of concern to the public, addressing public perceptions,
- the provision of local expertise and knowledge,
- the identification of possible alternatives/options,
- ensuring that affected groups are involved at the very beginning of project design, and
- the critical review of documentation.

The separation of these objectives is somewhat artificial as the achievement of one will often depend upon the achievement of another.

Identification of Interested and Affected Parties

Interested and Affected Parties Identification Procedure

The Interested & Affected Parties for this particular project were identified through e-mail media communications. Other means of Identification & notification adopted was through the print media (in a form of newspaper) and placement of notices in public spaces.

Newspaper Advertisements

Newspaper advertising is used to target particular demographics that are traditionally much harder to reach through other media such as the internet and other social networks. A newspaper advertisement was published on the 17th of November 2021 on the to notify all the Interested & Affected Parties of the proposed development. See **Figure 8** for the published newspaper Advertisement.

Consultation with stakeholders shearing BID for the proposed project

Emails shearing BID were submitted to all organs of state and relevant authorities i.e Department of Agriculture, Land Reform and Rural Development (DALRRD), South African National Roads Agency Ltd (SANRAL). Electronic copies that were continuously made available upon request from Singo Consulting (Pty) Ltd via emails; Dropbox link; Google drive; WeTransfer, etc.

Consultation and Correspondence with I & Ap's and Stakeholders

All comments received from I&APs and organs of state and responses sent thus far have been included in this BAR and EMPR for adjudication.

THE Rope & Ride Line Dancers smiled broadly last week at the South African Country Music Artist Foundation awards. The awards were held at the Castle da Angelo wedding venue in Pretoria and the line dancers' moves to their three songs won them a first place finish. They received a golden trophy and certificate.

Lizelle Senekal said she was encouraged to take part in line dancing in 2017. In the same year, she received her teacher's certificates with a 98% pass rate. Another accolade, the Boots and Fire Certificate, followed in 2019.

Lizelle said their group has

performed with various artists such as Sean Miles, Duan Coetzee, Harbottle and the Bachelors, Badoes Girls of South Africa. "We danced when singers such as Lance James and Barbara Roy performed."

The group recently participated in the American Dancing awards where they took home the ultimate silver trophy. The victory secured them a place in the South African line dance team, and the group were to participate in Orlando, Florida.

"Due to the Covid-19 pandemic, the possibilities of participating at the competition have been jeopardised," added Lizele.

To find out more about their performances, contact Lizele on 079 983 2658.

Swimmers blink
uit in die water.

TUKS Mokopane se swemmers het verlede Saterdag laat spaander in die water. Die swemmers het in die Polokwane munisipale swembad aan 'n klubkompetisie deelgeneem. Daar was onder meer gewen te sien die swemmers van klubs in Lephalale, Tzaneen, Musina en Polokwane. Die swemmers het almal goeie tye behaal en hoop om aanstaande jaar te kwalifiseer om aan die Limpopo kampioenskappe deel te neem.



Kranke Nel is een van de uitblinkers in die water



Luan Venter wys sy vernuf.

NOTICE OF PUBLIC PARTICIPATION FOR PROSPECTING RIGHT AND ENVIRONMENTAL AUTHORIZATION APPLICATION.

APPROVED FOR THE FOLLOWING REASON: Academy of EPT has not received an appropriate amount.
(USMINE Ref: LP 30/51/1/12/13837) PR) for the purpose of prospecting for Chromite Ore, Cobalt, Copper Ore, Gold Ore, Phosphate Ore, Iron Ore, Lead, Molybdenum Ore, Ore, Platinum Group Metals, Rare Earths, Silver Ore, Vanadium Ore and Zinc Ore. Portion 1, Portion 2 and Remaining Extent of the Farm Breda 373 LR, of the Farm Duren 387 LR and on Remaining Extent of the Farm Polen 389 LR situated within

Notice is hereby given in terms of the Mineral and Petroleum Resource Development Act (MPRDA) (Act 28 of 2002) and MPRDA regulations 2014, published under Government Notice No. 9 of 2014 in the *Gazette* No. 3822 of 8 December 2014, amended on 7 April 2017, that Stazalor (Pty) Ltd

INVITATION TO COMMENT

Registration as Interested & Affected Party: As part of the EIA process, most especially Public Participation Process (PPP) for this proposed project, interested and affected Parties (I&APs) are invited to register and kindly submit any comments or concerns to us at **Taklank Rakumboko**. The public is also invited to review and comment on the draft Assessment Report (RAR) and Environmental Management Programme report (EMPr). Tak BAR & EMPr will be available for review for 30 days: calendar period from **Monday the 8 December 2021 till Tuesday the 1st February 2022** (exclusion period from the 16 December 2021 until the 7 January 2022). Registration 3 containing:
PPP Guidelines of NEMA, ElA Regulations. The Draft RAR & EMPr will be available at Mawolingwong Public Library, 1830 Rufus Sakamale St., Mawolingwong A. Bako 06269), and via copy upon request from Sango Consulting Pty Ltd using the detailed link contained below. Copy copies: Dropbox Link: Google-drive, WeChat etc.

ENVIRONMENTAL ASSESSMENT PRACTITIONER AND CLIENT DETAILS

 **Singo Consulting (Pty) Ltd**
Office No 16, Corner Hill Crossing
1 Lange Crescent, Corner Hill
Edinburgh, 2015

Contact person: Ms Takalani Rakusambo
Tel: +27 11 692 0041
Fax: +27 18 514 4103
Cell: +27 82 575 3178
Email: takalani@singoconsulting.co.za
Website: www.singoconsulting.co.za

**P.O. Box 1015
River Crescent
Die Heuwel
1042**
Contact person: Mr Sonmbo Selwe
Debedu
Tel No: +27 13 692 4078
Fax No: +27 82 575 3178
Email: sonmbo@remowee.co.za

KEANU GAAN MIK VIR KOLHOUE
Keanu Potgieter (13) van Laerskool Krugerpark het onlangs sy Limpopokieure in ghoif verwerf. Hy gaan in Desember sy slag op die Silver Lakes Ghoftbaan in Pretoria wys teen die spanne van Gauteng en die Kaap.

34

Site Notice Placement

A2 site notices (in English) were placed on site along roads, Mogalakwena Municipality and near adjacent communities of the proposed project area. The on-site notices included the following information:

- Project name.
- Applicant name.
- Project location.
- Map of proposed project area.
- Project description.
- Legislative requirements.
- Relevant contact details of the EAP and Applicant for the proposed project.

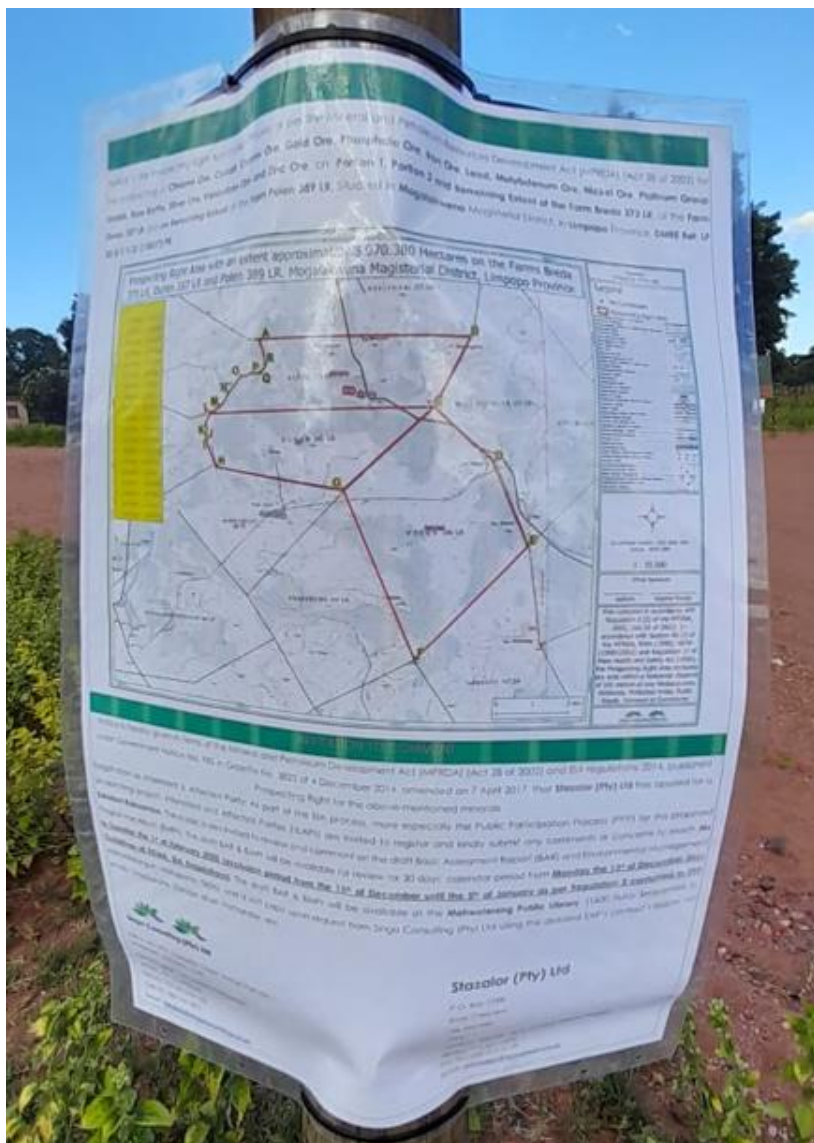




Figure 9: Proof of Site Notices.

WinDeed Database Deeds Office Property

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BREDA, 373, 0 (LIMPOPO)

GENERAL INFORMATION

Date Requested 2021/11/08 12:19
Deeds Office LIMPOPO
Information Source WINDEED DATABASE
Reference -

**PROPERTY INFORMATION**

Property Type FARM
Farm Name BREDA
Farm Number 373
Portion Number 0
Local Authority MOGALAKWENA LOCAL MUNICIPALITY
Registration Division LR
Province LIMPOPO
Diagram Deed DB181/36
Extent 1079.0062H
Previous Description -
LPI Code TOLR00000000037300000

OWNER INFORMATION**Owner 1 of 1**

Type ADMINISTRATOR
Name GOVERNMENT OF LEBOWA
ID / Reg. Number -
Title Deed T38131/1946PTA
Registration Date 1946/12/05
Purchase Price (R) -
Purchase Date -
Share 0.00
Microfilm 1993 0190 5144
Multiple Properties NO
Multiple Owners NO

ENDORSEMENTS (4)

#	Document	Institution	Amount (R)	Microfilm
1	CONVERTED FROM PTA			
2	LEBOWA			
3	K704/1946RMPTA			
4	LR,373			

HISTORIC DOCUMENTS (1)

#	Document	Owner	Amount (R)	Microfilm
1	T38131/1946PTA	BAKONI STAM-TRIBE	-	1993 0190 5144

DISCLAIMER

This report contains information gathered from the WinDeed database and we do not make any representations about the accuracy of the data displayed nor do we accept responsibility for inaccurate data. LexisNexis will not be liable for any damage caused by reliance on this report and for legal purposes encourage validation on ownership details with the Deeds Office. This report is subject to the terms and conditions of the [WinDeed End User Licence Agreement \(EULA\)](#).

Windeed Search Result of the Farm Breda 373 LR.

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DUREN, 387, 0 (LIMPOPO)

GENERAL INFORMATION

Date Requested 2021/11/08 14:40
Deeds Office LIMPOPO
Information Source WINDEED DATABASE
Reference -

**PROPERTY INFORMATION**

Property Type FARM
Farm Name DUREN
Farm Number 387
Portion Number 0
Local Authority MOGALAKWENA LOCAL MUNICIPALITY
Registration Division LR
Province LIMPOPO
Diagram Deed DB181/26
Extent 1007.1317H
Previous Description -
LPI Code T0LR00000000038700000

OWNER INFORMATION**Owner 1 of 1**

Type UNKNOWN
Name ** FOR INFO REFER TO REGISTRAR OF DEEDS **
ID / Reg. Number -
Title Deed REPLACED
Registration Date -
Purchase Price (R) -
Purchase Date -
Share 0.00
Microfilm -
Multiple Properties NO
Multiple Owners NO

ENDORSEMENTS (6)

#	Document	Institution	Amount (R)	Microfilm
1	CONVERTED FROM PTA			
2	K5657/2001RMPTA			
3	RELEASED AREA			
4	K37/1951SPTA			
5	K4807/2003RMPTA			
6	LR,387			

HISTORIC DOCUMENTS

No documents to display

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Windeed Search Result of the Farm Duren 387 LR.

WinDeed Database Deeds Office Property

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POLEN, 389, 0 (LIMPOPO)

GENERAL INFORMATION

Date Requested 2021/11/08 14:35
Deeds Office LIMPOPO
Information Source WINDEED DATABASE
Reference -

**PROPERTY INFORMATION**

Property Type FARM
Farm Name POLEN
Farm Number 389
Portion Number 0
Local Authority MOGALAKWENA LOCAL MUNICIPALITY
Registration Division LR
Province LIMPOPO
Diagram Deed DB181/25
Extent 1852.9842H
Previous Description -
LPI Code T0LR00000000038900000

OWNER INFORMATION**Owner 1 of 1**

Type TRUST
Name BATLOKOA TRIBE
ID / Reg. Number -
Title Deed T25862/1944PTA
Registration Date 1944/09/28
Purchase Price (R) -
Purchase Date -
Share 0.00
Microfilm -
Multiple Properties NO
Multiple Owners NO

ENDORSEMENTS (7)

#	Document	Institution	Amount (R)	Microfilm
1	CONVERTED FROM PTA			
2	K4802/2003RMPTA			
3	K37/1951SPTA			
4	K5658/2001RMPTA			
5	RELEASED AREA			
6	LEBOWA			
7	LR,389			

HISTORIC DOCUMENTS

No documents to display

DISCLAIMER

This report contains information gathered from the WinDeed database and we do not make any representations about the accuracy of the data displayed nor do we accept responsibility for inaccurate data. LexisNexis will not be liable for any damage caused by reliance on this report and for legal purposes encourage validation on ownership details with the Deeds Office. This report is subject to the terms and conditions of the [WinDeed End User Licence Agreement \(EULA\)](#).

Windeed Search Result of the Farm Polen 389 LR

Figure 10: Windeed Search Results

List of Authorities Identified and Notified

The following authorities and stakeholders have been identified and notified of the proposed prospecting right application and environmental authorisation.


- Mogalakwena Letaba Local Municipalities.
- Department of Economic Development Environment and Tourism (LEDET)
- Department of Tourism
- Department of Environmental Affairs.
- Department of Agriculture, Forestry and Fisheries.
- Department of Labour
- Department of Public Works, Road, and Infrastructures
- Department of Water and Sanitation.
- Department of Rural, Environmental and Agricultural Development.
- Department of Rural Development and Land Reform.
- Department of Mineral Resources and Energy.
- South African National Roads Agency Ltd (SANRAL).
- South African National Parks (SANPARKS)
- Eskom SOC Limited.
- Transnet SOC Limited.


Summary of issues raised by I&APs



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



Table 7: Summary of issues raised



Interested and Affected Parties List the names of persons consulted in this column, and Mark with an X where those who must be consulted were in fact consulted		Date Comments Received	Issues Raised	EAPs response to issues as mandated by the applicant	Section and paragraph reference in this report where the issues and or response were incorporated
AFFECTED PARTIES					
Landowners/s					
GOVERNMENT OF LEBOWA Breda 373 LR, Duren 387 LR and Polen 389 LR			No issue raised.	Consultation Letter was sent to through Corrier 14/12/2021.	
Lawful occupier/s of the Land					
Landowners or Lawful occupiers on adjacent properties					

Interested and Affected Parties List the names of persons consulted in this column, and Mark with an X where those who must be consulted were in fact consulted		Date Comments Received	Issues Raised	EAPs response to issues as mandated by the applicant	Section and paragraph reference in this report where the issues and or response were incorporated
Municipality					
District Municipality					
Organs of state (Responsible for infrastructure that may be affected Roads Department, Eskom, Telkom, DWA					
 DEPARTMENT OF ECONOMIC DEVELOPMENT, ENVIRONMENT & TOURISM Department of Economic Development Environment and Tourism (LEDET)			No issue raised	An email of consultation was sent to the Department on the 12/11/2021.	


Interested and Affected Parties List the names of persons consulted in this column, and Mark with an X where those who must be consulted were in fact consulted	Date Comments Received	Issues Raised	EAPs response to issues as mandated by the applicant	Section and paragraph reference in this report where the issues and or response were incorporated
 <p>tourism Department: Tourism REPUBLIC OF SOUTH AFRICA</p>		No issue raised	An email of consultation was sent to the Department of Tourism on the 12/11/2021.	
Dept. Environmental Affairs		No issue raised	An email of consultation was sent to the Department of Environmental Affairs on 12/11/2021.	See appendix 3 for full consultation

Interested and Affected Parties List the names of persons consulted in this column, and Mark with an X where those who must be consulted were in fact consulted		Date Comments Received	Issues Raised	EAPs response to issues as mandated by the applicant	Section and paragraph reference in this report where the issues and or response were incorporated
 agriculture, forestry & fisheries Department: Agriculture, Forestry and Fisheries REPUBLIC OF SOUTH AFRICA			No issue raised	An email of consultation was sent to the Department of Agriculture, Forestry and Fisheries (DAFF) on the 12/11/2021.	
 labour Department: Labour REPUBLIC OF SOUTH AFRICA			No issue raised	An email of consultation was sent to Department of Labour on the 12/11/2021.	

Interested and Affected Parties List the names of persons consulted in this column, and Mark with an X where those who must be consulted were in fact consulted	Date Comments Received	Issues Raised	EAPs response to issues as mandated by the applicant	Section and paragraph reference in this report where the issues and or response were incorporated
 <p>public works Department: Public Works REPUBLIC OF SOUTH AFRICA</p>		No issue raised	An email of consultation was sent to Department of Labour on the 12/11/2021.	
 <p>water & sanitation Department: Water and Sanitation REPUBLIC OF SOUTH AFRICA</p>		No issue raised	An email of consultation was sent to Department of Water and Sanitation on the 12/11/2021.	

<p>Interested and Affected Parties</p> <p>List the names of persons consulted in this column, and</p> <p>Mark with an X where those who must be consulted were in fact consulted</p>	<p>Date Comments Received</p>	<p>Issues Raised</p>	<p>EAPs response to issues as mandated by the applicant</p>	<p>Section and paragraph reference in this report where the issues and or response were incorporated</p>
		<p>Find the attachment.</p>	<p>Note that we are applying for prospecting right not for fibre.</p>	
		<p>No issues raised</p>	<p>An email of consultation was sent to Transnet on the 12/11/2021.</p>	

<p>Interested and Affected Parties</p> <p>List the names of persons consulted in this column, and</p> <p>Mark with an X where those who must be consulted were in fact consulted</p>	<p>Date Comments Received</p>	<p>Issues Raised</p>	<p>EAPs response to issues as mandated by the applicant</p>	<p>Section and paragraph reference in this report where the issues and or response were incorporated</p>
		<p>No issue raised</p>	<p>An email of consultation was sent to SANPARKS on the 12/11/2021.</p>	
		<p>No issue raised</p>	<p>An email of consultation was sent to SANRAL on the 12/11/2021.</p>	

Interested and Affected Parties		Date Comments Received	Issues Raised	EAPs response to issues as mandated by the applicant	Section and paragraph reference in this report where the issues and or response were incorporated
List the names of persons consulted in this column, and					
Mark with an X where those who must be consulted were in fact consulted					
INTERESTED AND AFFECTED PARTIES					
Department of Rural Development and Land Reform (DRDLR)					
			No issue raised	On 2021/11/12 An email of consultation was sent to Department of Rural Development and Land Reform (DRDLR).	
Traditional Leaders					
Community					

Interested and Affected Parties		Date Comments Received	Issues Raised	EAPs response to issues as mandated by the applicant	Section and paragraph reference in this report where the issues and or response were incorporated
List the names of persons consulted in this column, and					
Mark with an X where those who must be consulted were in fact consulted					
OTHER AFFECTED PARTIES					

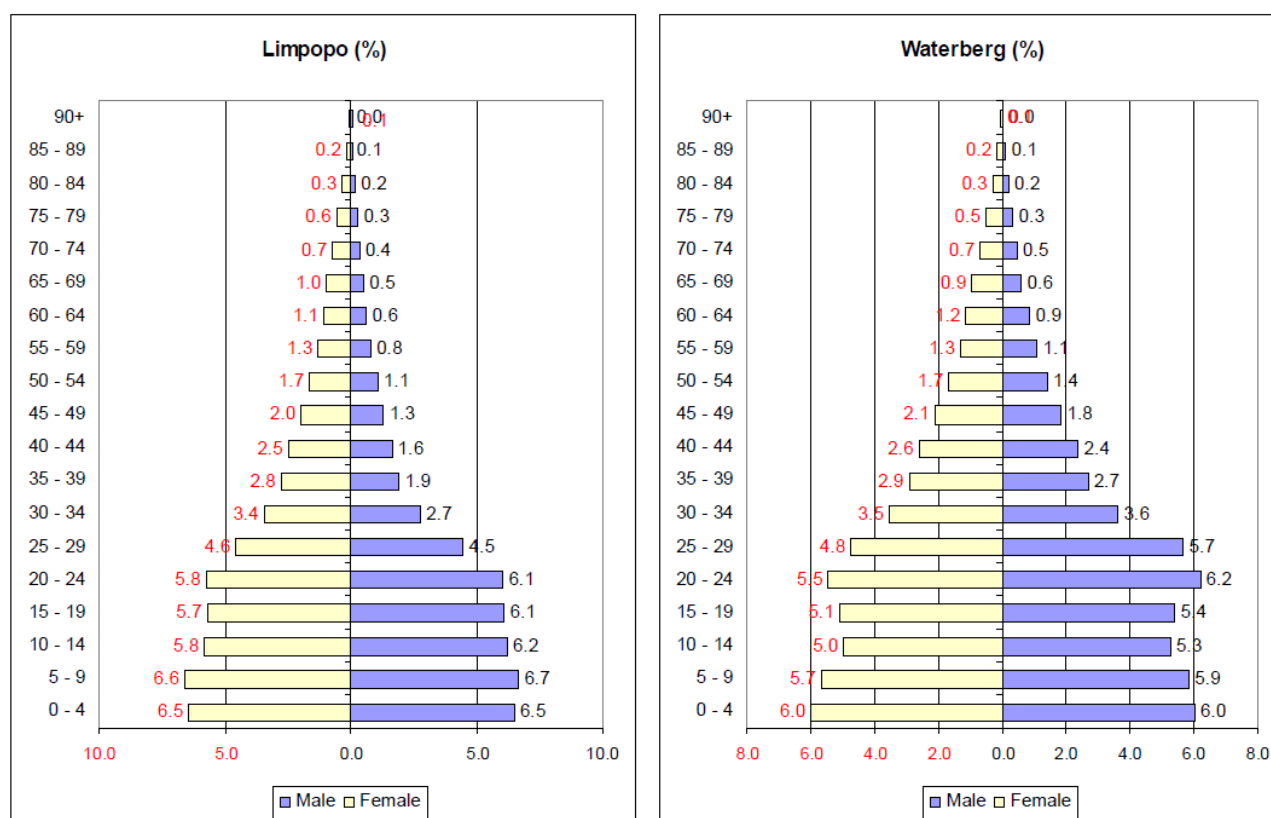
9 THE ENVIRONMENTAL ATTRIBUTES ASSOCIATED WITH THE ALTERNATIVES

(The environmental attributes described must include socio-economic, social, heritage, cultural, geographical, physical and biological aspects)

9.1 BASELINE ENVIRONMENT

Socio Economic Context

The population of Limpopo Province was estimated at 5.5 million in 2004 growing at a rate of about 1.3% per annum. This growth rate is marginally lower than the national average of 2.1% . one the reason the average growth rate has been the out-migration of the people especially to gauteng. Sepedi is the predominately language (52.2%), followed by Xitsonga (22.4%) Tshivenda(15.9%) and Afrikaans (2.3%).



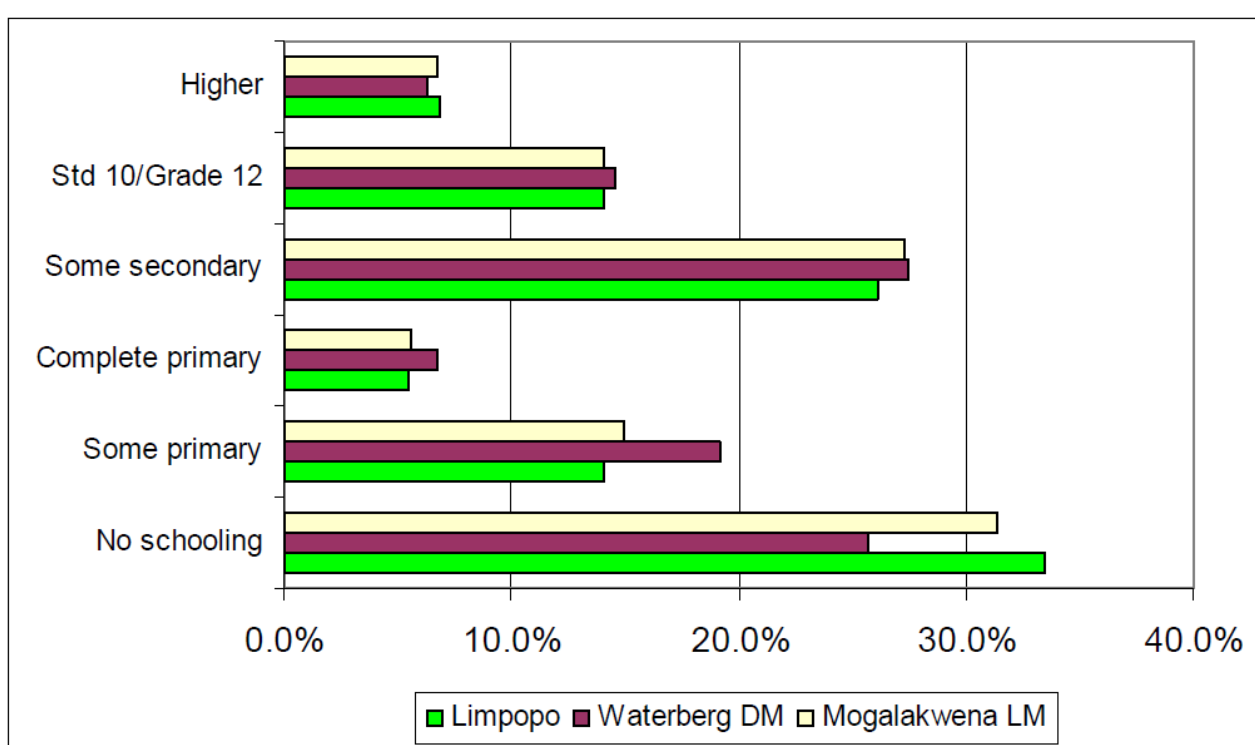
Source: Quantec Research, 2006

Figure 11: Age & Gender of profile of Limpopo

Education

The 2001 education profiles of Limpopo, Water DM and Mogalakwena is about 21% of the adult population in these regions has at least a grade 12 qualification. It is also observed that Mogalakwena (31.4%) and Limpopo (33.4%) has much larger group of adults than the Waterberg (25.8%) that did not have a formal education.

Compared to the province in which Mogalakwena is located, it can be concluded that the adult population is less well in terms of education about 68% of the adult population in Mogalakwena has some primary education and can be regarded as literate.



Source: Statistics South Africa, (Census 2001)

Figure 12: Adult Education, 2001

Geology of the Project Area

9.2 Regional Geology

Mogalakwena Magisterial district is dominated by sediments of the Bushveld Igneous complex and Waterberg Supergroup.

Waterberg Supergroup

The Waterberg supergroup unconformably overlies the Rooiberg group and it is underlain by rock formation derived from the Kaapvaal Craton, which formed as a precursor island roughly 2.7 billion years ago. This crustal formation became the base of the Waterberg, which was further transformed by upward extrusion of igneous rocks. These extruded rocks, containing minerals such as vanadium and platinum, are called the Bushveld Igneous Complex. The Waterberg is subdivided into 3 subgroups namely: Nylstroom, Matlabas and Kransberg Subgroups. The succession in the early Waterberg basin (the Nylstroom protobasin and Alma trough) comprises the Swaershoek sandstone and Alma graywacke Formations. The Swaershoek Formation extends over the entire Nylstroom syncline and the northern slopes of the Swaershoekberge and the Hoekberge.

Bushveld Igneous Complex

The Bushveld Igneous Complex (or BIC) is a large layered igneous intrusion within the Earth's crust which has been tilted and eroded and now outcrops around what appears to be the edge of a great geological basin. Located in South Africa, the BIC contains some of the richest ore deposits on Earth. The reserves of platinum group metals (PGMs), platinum, palladium, osmium, iridium, rhodium, and ruthenium are the world's largest, and there are vast quantities of iron, tin, chromium, titanium and vanadium. Gabbro or norite is also quarried from parts of the Complex.

The complex varies in thickness, sometimes reaching 9 km thick. Lithologies vary from largely ultramafic peridotite, chromitite, harzburgite, and bronzitite in the lower sections to mafic norite, anorthosite, and gabbro toward the top, and the mafic Rustenburg Layered Suite is followed by a felsic phase (the Lebowa Granite Suite). The orebodies within the complex include the UG2 reef containing up to 43.5% chromite, and the platinum-bearing horizons Merensky Reef and Plat Reef. The Merensky Reef varies from 30 to 90 cm in thickness. It is a norite with extensive chromitite and sulfide layers or zones containing the ore. The Reef contains an average of 10 ppm platinum group metals in pyrrhotite, pentlandite, and pyrite as well as in rare platinum group minerals and alloys.

The Project Area is located on the Northern Limb of the Bushveld Igneous Complex (BIC) under Rustenburg Layered Suite (RLS) in a structurally complex in the Northern Limb of the Bushveld Complex. With a strike length of 120km. The BIC is known for its platinum group metal (PG) / platinum

group elements (PGE) content. The ore body of interest at Breda 373 LR, Duren 387 LR and Polen 389 LR farm is the UG2 Chromitite Layer (UG2 CL), Cobalt, Copper, Gold, Phosphate, Iron Ore, Lead, Molybdenum, Nickel, Platinum Group Metals, Rare Earths, Silver, Vanadium and Zinc. The host rocks to the chromitite seams are mostly orthopyroxenite (LG1–3–5–6–7, MG2–4) or harzburgite in LG2 and LG4 (Teigler and Eales, 1996), but in the UCZ, the chromitite seams normally overlie anorthosite. Platinum-group elements tend to be concentrated at the margins, at least in the case of the well-studied UG1 and UG2 (von Gruenewaldt et al., 1986; Hiemstra 1986; Maier and Barnes, 2008). Cobalt, Nickel, Gold and Copper occurs as by-products of PGMs processing. Vanadium & Iron ore occur in the titaniferous magnetite seams in the upper portion of the Rustenburg Layered Suit. The Rustenburg layered suites is subdivided into five number of zones namely: Marginal, Lower Zone (LZ), Critical (CZ) Main (MZ) and Upper Zones (UZ).

Marginal Zone

This zone has a thickness ranging from zero to several hundreds of metres and consists largely of quenched to fine grained norites in contact with the Lower Zone (B-1 suite) or very fine grained to fine-grained gabbro-norite in contact with Critical Zone (the B-2 suite) and Main Zone (B-3 suite) (Sharpe, 1981). Xenoliths of quartzite (e.g., on the Clapham farm) and dolomite (e.g. on Hendriksplaas) locally attest to interaction with the floor rocks. Less common are anorthosite xenoliths (Bristow et al., 1993). Quartzite is known to have approximately 99% of silicon dioxide (SiO_2), hence it is considered as a host rock of silicon (Si).

Lower Zone (LZ)

The LZ on the western limb of the complex consists predominantly of harzburgite and dunite (Teigler and Eales, 1996) as well as orthopyroxenite. Plagioclase is not present as a cumulate phase, with the exception of a ~90-cm norite layer midway up the sequence that has been delineated in both the western and eastern limbs of the complex (Teigler, 1990; Lee and Tredoux, 1986). Amongst other LZ rocks, the dunites are closest to monomineralic compositions, forming olivine adcumulates with only minor orthopyroxene oikocrysts. Plagioclase, clinopyroxene and other minor minerals comprise up to approximately 10 % of most other LZ samples, apart from the basal 50 m of the intrusion where these components reach approximately 30%. Chromite makes up <1 modal% in most LZ rocks, irrespective of lithology. Notably, the LZ shows more pronounced lateral variation in thickness and lithology than the overlying stratigraphic intervals. In some trough structures, it reaches a thickness of >1 km, for example, in the Olifants River trough at Cameron Section or near Burgersfort in the eastern lobe (Button, 1976; Wilson and Chunnett, 2010), but it is thinner or absent above swells between the troughs. Facies changes of the LZ across the swells indicate that compartmentalization was effective during crystallization (Scoon and Teigler, 1994). This is also expressed in the lithological and compositional variation of the LZ between limbs.

Lower Critical Zone (LCZ)

This zone is approximately 700–800 m in thickness and consists predominantly of orthopyroxenite (Teigler and Eales, 1996). Harzburgitic rocks occur within two intervals, including the C1 unit of Cameron (1982) where harzburgite is finely interlayered with orthopyroxenite. There are nine major chromitite seams (Lower Group or LG seams 1–7 and Middle Group or MG seams 1–2), of which LG6 hosts the largest chromite reserve on Earth (Crowson 2001). The seams have been correlated, albeit at variable thickness, across much of the complex (Cousins and Feringa, 1964; Teigler et al., 1992; Teigler and Eales, 1996), highlighting that the LCZ shows less pronounced lateral variation than the LZ. The base of the LCZ has been defined as the level where there is a significant increase in intercumulus plagioclase (Cameron, 1978).

Upper Critical Zone (UCZ)

UCZ is defined by a laterally continuous, 1–3 m thick anorthosite layer that overlies orthopyroxenite with a sharp but undulating contact marked by a 1–2-mm chromitite stringer and, in places, an overlying 1–2 cm selvage of anorthosite accumulate. In the northern limb, fine-grained UCZ rocks overlie thick harzburgites which is believed to be the LZ, implying that the LCZ could be absent (Hulbert, 1983; Maier et al., 2008). In addition, the contact sequence between the LZ and the UCZ locally contains large xenoliths or rafts of quartzite and dolomite (Hulbert 1983; Maier et al., 2008; Yudovskaya et al., 2012). These field relationships suggest that, along the northern limb, the LZ and UCZ may form distinct sill-like intrusive bodies. Chromite is a trace component in most UCZ rocks, but the mineral may be locally concentrated to form bedding-parallel schlieren. In addition to disseminated chromite, the UCZ contains four to five major chromitite seams, including Middle Group (MG) seams 3 to 4 and Upper Group (UG) seams 1 to 2 in the eastern lobe as well as dozens of minor seams and stringers, including those below the UG1 chromitite, above the UG2 and bracketing the Merensky Reef pegmatoid. The Bushveld chromitites contain variable gangue contents that progressively increase with height (de Waal, 1975; Maier and Barnes, 1999), with the UG seams having up to 40 % gangue component.

A feature that is particularly characteristic of the UCZ is the occurrence of cyclic units (Cameron, 1982; Eales et al., 1986; 1988; 1990). The base of the units typically consists of ultramafic rocks (i.e. chromitite and/or harzburgite and/or pyroxenite) that are overlain by progressively more feldspathic rocks (i.e. first norite and then anorthosite). The units have thicknesses between a few millimetres to several tens of metres, exceptionally reaching several hundreds of metres (in the cyclic unit overlying the MG4 chromitite; Eales et al., 1990). Platinum-group element mineralization tends to be concentrated in the basal ultramafic portions of the larger units, particularly in the case of the economically important Merensky Reef and UG2 chromitite, as well as the sub-economic Pseudo Reef harzburgite and Bastard Reef pyroxenite.

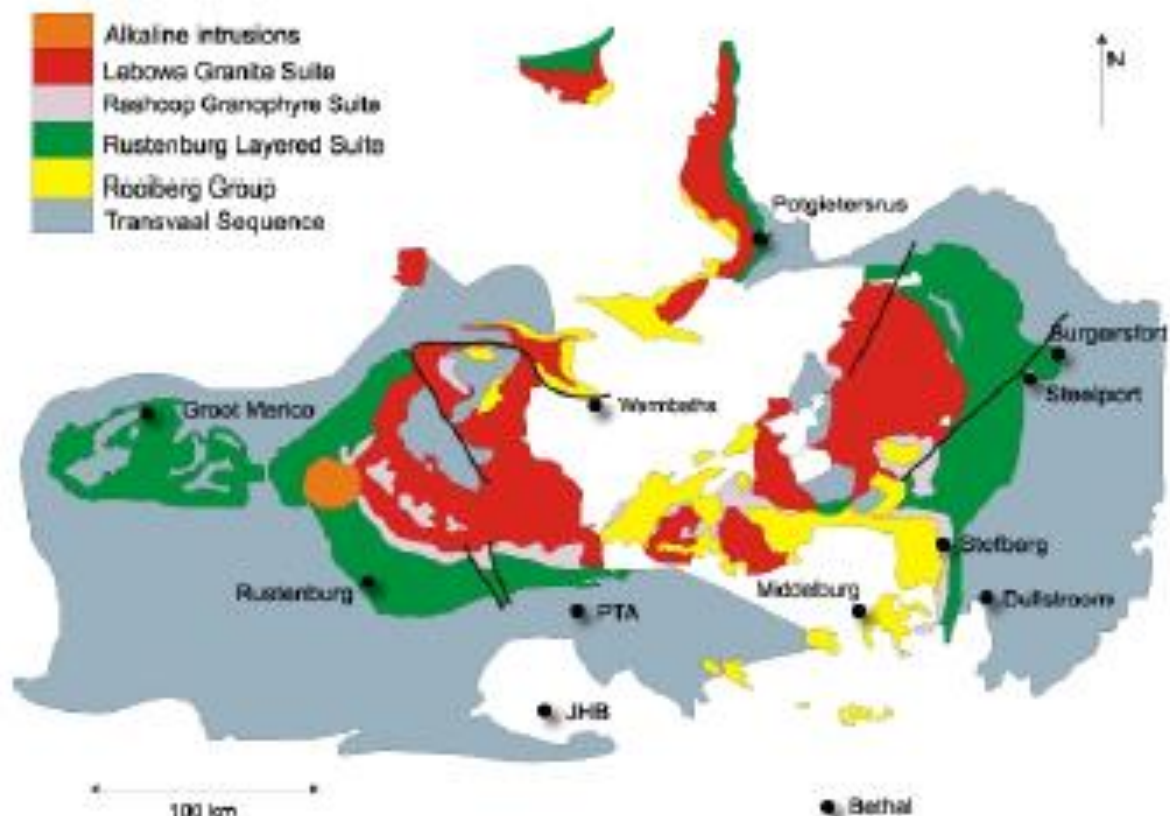


Figure 13: Simplified geological map of the Bushveld Large Igneous Province, which includes the Rustenburg Layered Suite, the Rooiberg Volcanics and the Lebowa Granite Suite Upper Zone (UZ).

The UZ is approximately 1–2-km-thick and has traditionally been sub-divided into three subzones based on cumulate mineralogy. Sub-zone A contains cumulus plagioclase, low-Ca pyroxene and magnetite. In sub-zone B, olivine becomes an additional cumulus phase. Sub-zone C is defined by the appearance of apatite and is also characterized by the occurrence of numerous large country rock xenoliths. Subzones A and B consist of cyclic units of magnetite, gabbro-norite and anorthosite. In sub-zone C, granular ilmenite is present in the oxide layers, and the cyclic units consist of Fe oxide layers overlain by ferro-diorites (Molyneux 1970; von Gruenewaldt 1971). If Kruger's proposal is accepted, i.e. to place the base of the UZ at the level of the Pyroxenite Marker, the nomenclature for the subzones has to be revised, with the interval above the Pyroxenite Marker constituting sub-zone A and the overlying rocks forming subzones B to D. The number of magnetite layers varies between localities. In the northern limb of the complex, 16 layers have been recorded (Barnes et al. 2004), whereas up to 26 layers are known from the eastern and western limbs (Cawthorn and Molyneux 1986; Tegner et al. 2006). The oxide layers are between a few centimetres to >10 m in thickness (magnetite layer 21) and many contain abundant anorthosite xenoliths. Most layers have sharp lower contacts, but the upper contacts may be gradational.

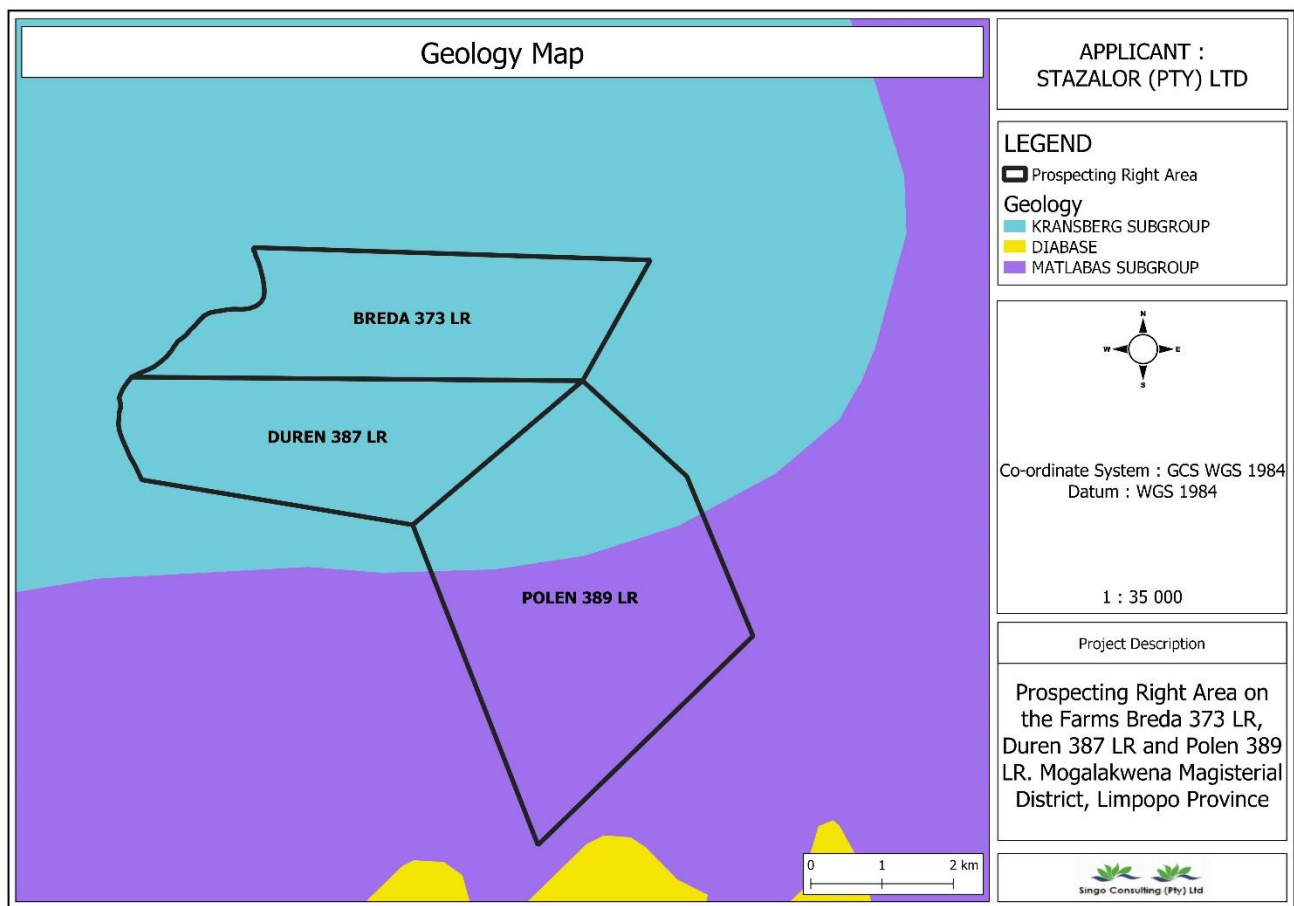


Figure 14: Geological map of the project area.

SOILS

The project area is covered with covered with freely drained structureless soils and Undifferentiated structureless soil. freely drained structureless soil commonly are coarse textured and have very high permeability or are very shallow. Diagnostic zone is entirely brownish, with few or no grey mottles or grey clay films. Some soils have silt coats in the upper B horizon.

Important characteristics of the freely drained structureless soils are:

- Free-draining soil
- Gritty when touching
- Dries out quickly
- May lack nutrients Easy to cultivate Warms up quickly in spring
- Chemically inert
- Contains Sharp, angular and durable grains

Red apedal soils

These soils have a structure that is weaker than moderate blocky or prismatic in the moist state, if structure is borderline, CEC (NH₄OAc, pH7) per kg soil is less than 11cmol (+)/kg soil. These soils are non-calcareous in any part of the horizon which occurs within 1500mm of the soil sur-face but may contain infrequent, discrete, relict lime nodules in a non-calcareous soil matrix. It does not have alluvial or aeolian stratifications. The B horizons that have uniform colours, falling within the range defined as red and that in the moist state, lack well-formed peds other than porous micro-aggregates, qualify as red apedal. The concept of these macroscopically weakly structured or structureless materials embraces that kind of weathering that takes place in a well-drained oxidizing environment to produce coatings of iron oxides on individual soil particles (hence the diagnostic red colours) and clay minerals dominated by non-swelling 1:1 type.

Yellow apedal soil

This horizon does not have grey colours in the dry state as defined for the E horizon. Although colour must be substantially uniform, some variability is permitted, for example mottles or concretions which are insufficient to qualify the horizon as a diagnostic plinthic B, faunal reworking may also result in acceptable colour variegations. It is non-calcareous within any part of the horizon which occurs within 1500mm of the surface but may contain

infrequent, discrete, relict lime nodules in a non-calcareous soil matrix. Does not have alluvial or aeolian stratifications., directly underlies a diagnostic topsoil horizon or an E horizon. Yellow- brown apedal B horizons occur over approximately the same climatic spread as their red counterparts and so are also very widely distributed throughout the country. They may be found on all types of parent material.

The other part of the Prospecting Right area is covered with Association of Classes 1 to 4: Undifferentiated structureless soils and freely drained, structureless soils, the soil classes in the proposed area can be described based on high swell-shrink potential, plastic and sticky, restricted effective depth, wetness, and natural fertility.

Association of Classes 1 to 4: Undifferentiated structureless soils and freely drained, structureless soils.

The Association of Classes 1 to 4: Undifferentiated structureless soils can be defined based on their soil depth, Soil Drainage, erodibility, and natural fertility.

Soil depth

Depth of the soil profile is from the top to the parent material or bedrock. This type of soil can be classified as a restricted soil depth. A restricted soil depth is a nearly continuous layer that has one or more physical, chemical, or thermal properties.

Soil Drainage

Soil drainage is a natural process by which water moves across, through, and out of the soil because of the force of gravity. The soils in the proposed area have an excessive drainage due to the soils having very coarse texture. Their typical water table is less than 150.

Erodibility

Erodibility is the inherent yielding or non-resistance of soils and rocks to erosion. The freely drained structureless soils have high erodibility. A high erodibility implies that the same amount of work exerted by the erosion processes lead to a larger removal of material.

Natural Fertility

Soil fertility refers to the ability of soil to sustain agricultural plant growth, i.e., to provide plant habitat and result in sustained and consistent yields of high quality. The soil, as a nature of

them, contains some nutrients which is known as 'inherent fertility'. Among the plant nutrients, nitrogen, phosphorus, and potassium is essential for the normal growth and yield of crop. The proposed area has a low natural fertility soil.

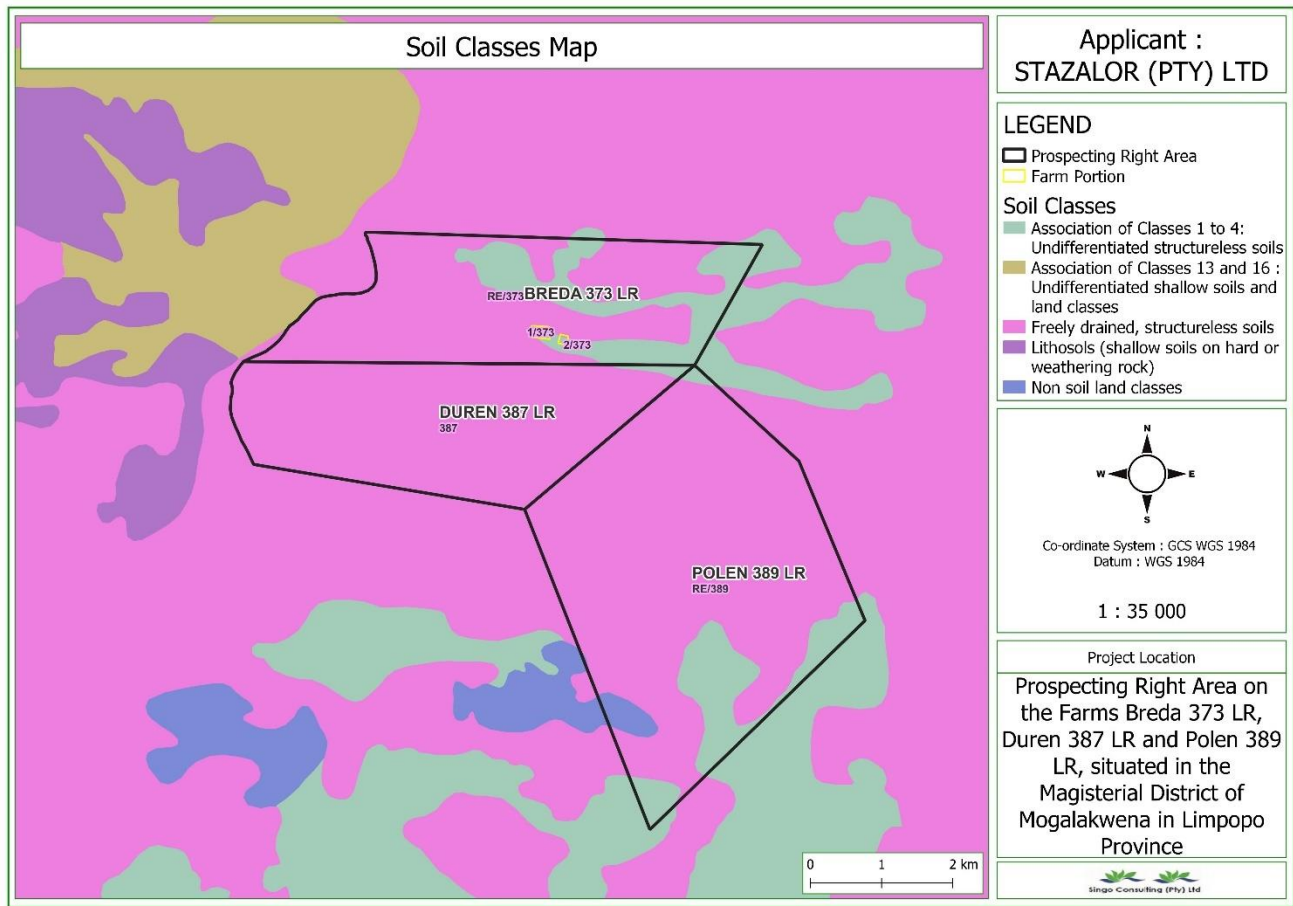


Figure 15: Soil classes map within the study area



Figure 16: Variable soil types observed within and around the project area

Land Capability

The land capability of the area shown by below Figure 18 correlates to the current landuse on site. The said current landuse includes natural vegetation, cultivated land and build-up area. Farming on arable land, farming utilising natural veld grazing and wilderness.

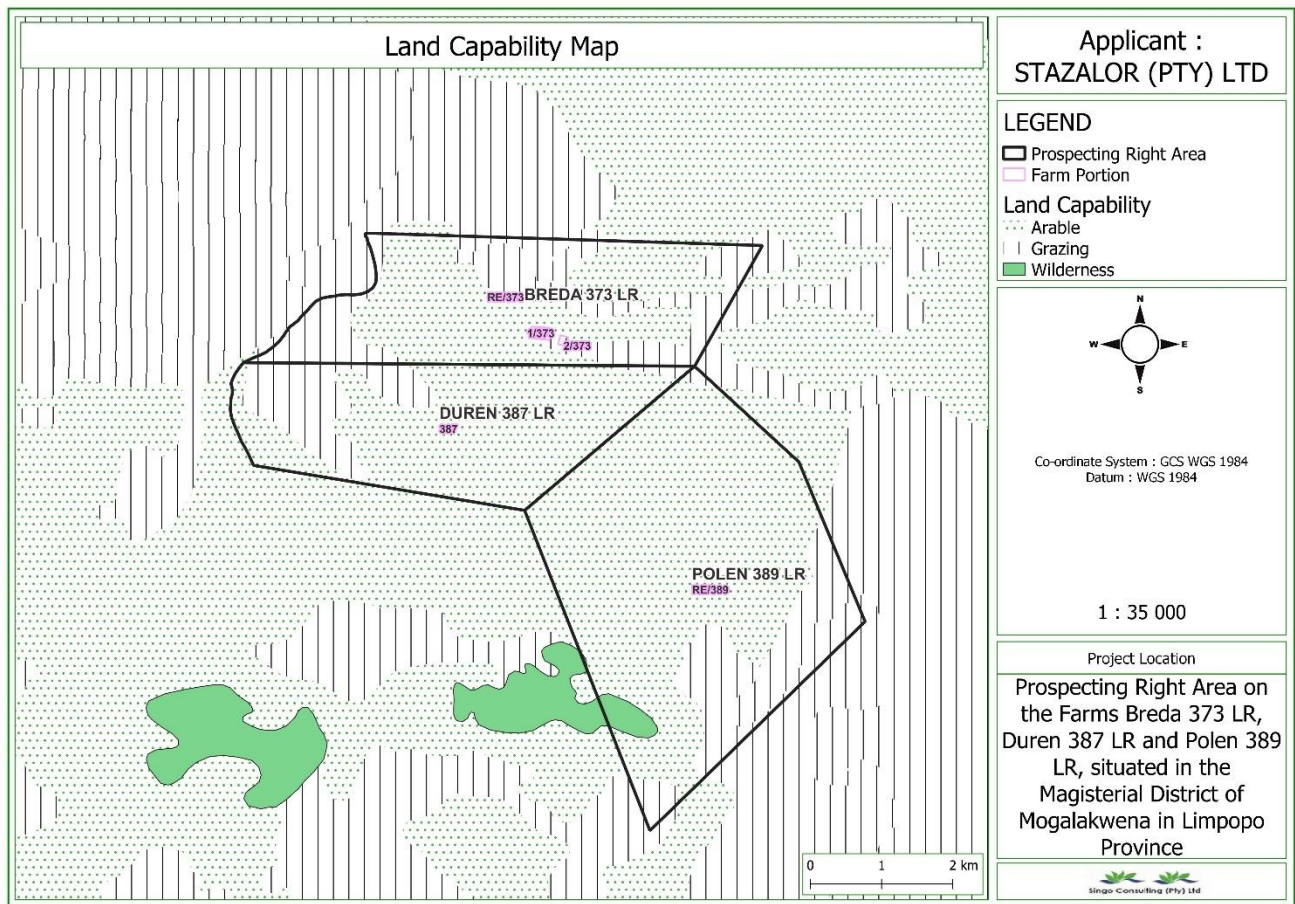


Figure 17: Land capability map.

CLIMATE

In the proposed area, July and June are the coldest months with temperature at around 8°C, January and December receive most rainfall with precipitation count of 178.26mm. Figure 2 the mean annual temperature 4.1 - 6 Degree Celsius and 6.1 - 8 Degree Celsius. Figure 3 shows that the mean annual rainfall is 401 - 600 mm.

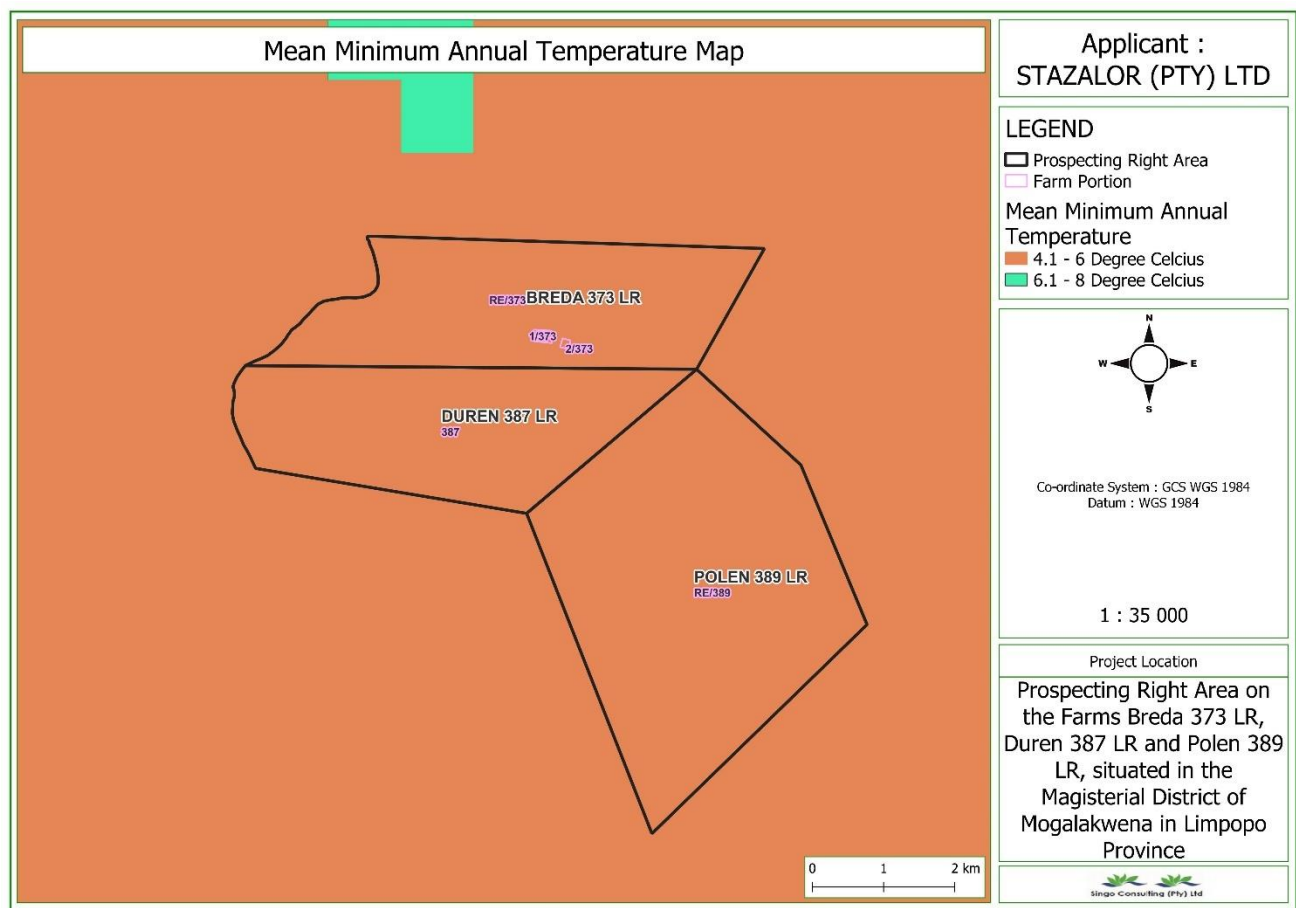


Figure 18: Mean annual temperature of the project area.

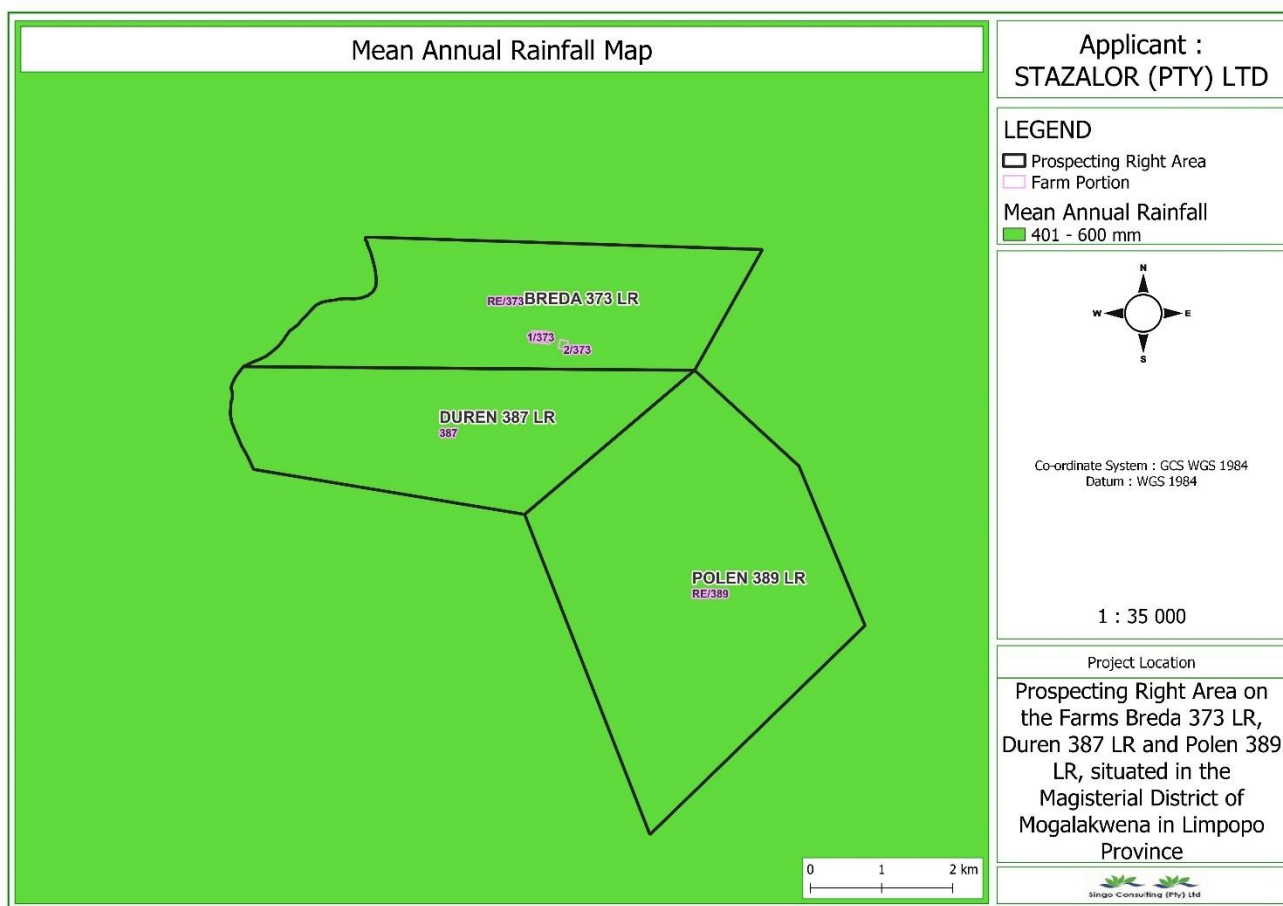


Figure 19: Mean annual rainfall of the project area.

Topography

The prospecting characterised by gentle slope indicating flat surface, within the project area there are contour lines closer to each other and they indicate the presence of a hill.

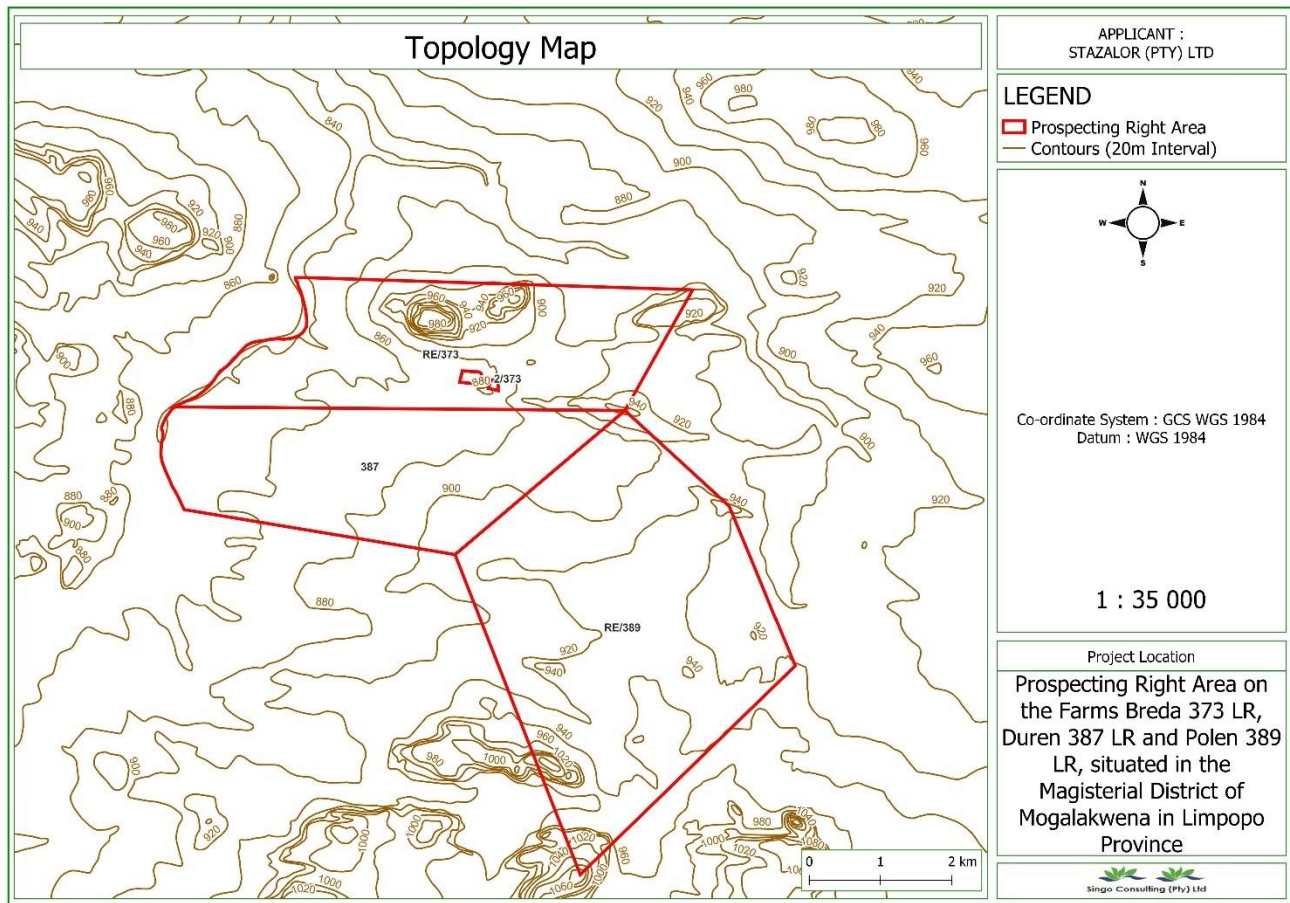


Figure 20: Topology of the application area

Surface Water

The regional hydrological setting of the project site is indicated in Figure 23. The project area is in the Limpopo Quaternary Management Area (WMA). The quaternary catchment is A62G, A62H & A62J. The WR2012 study, presents hydrological parameters for each quaternary catchment including area, mean annual precipitation (MAP) and mean annual runoff (MAR). Based on the WR2012 study, the project area falls within the quaternary catchment A62G, A62H & A62 J. The total catchment area of A62G is 627 km² with MAP of 437 millimetre (mm). The total catchment area of A62H is 871 km² with MAP of 439

millimetre (mm). The total catchment area of A62J is 930 km² with MAP of 450 millimetre (mm).

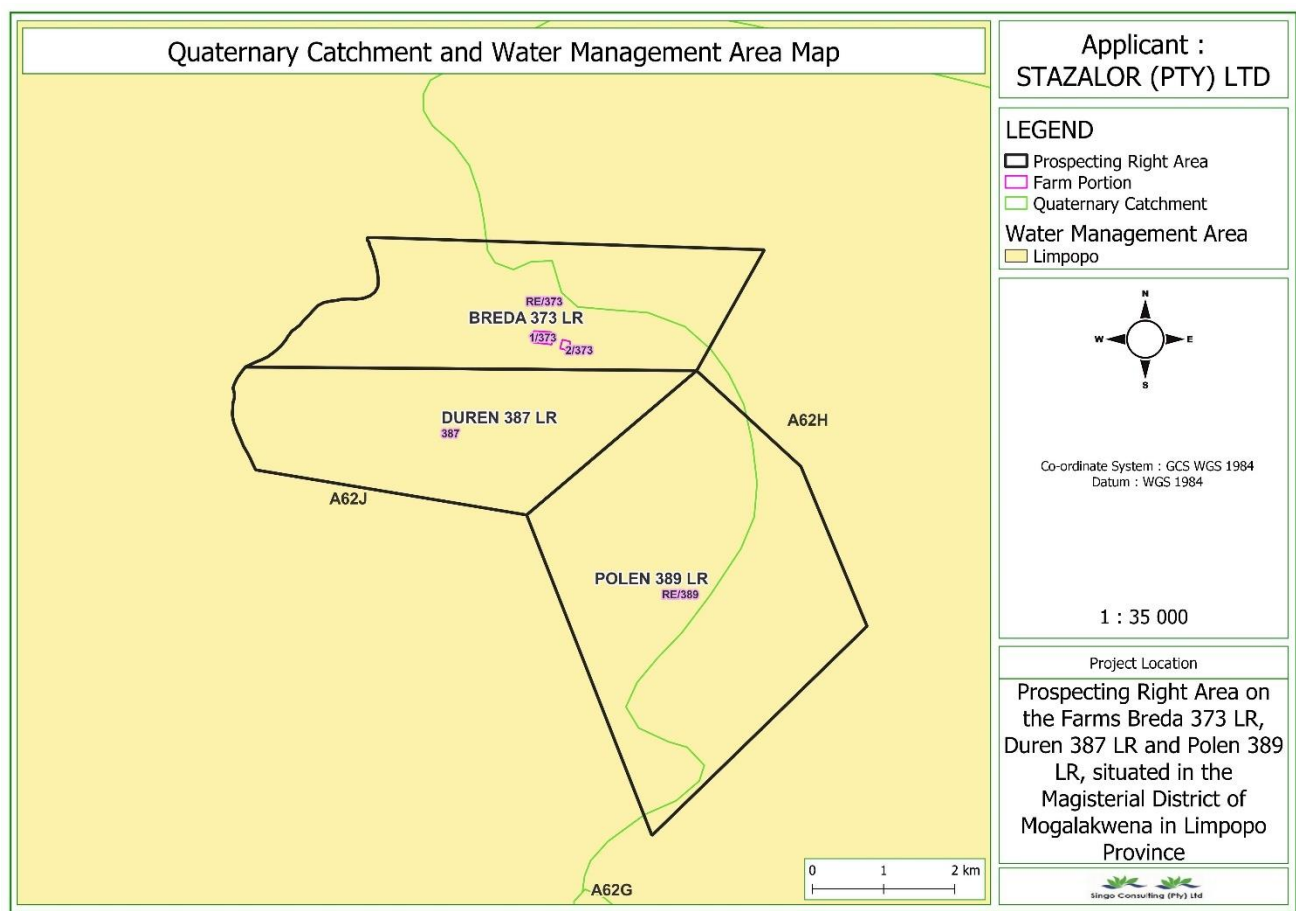


Figure 21: Quaternary Catchment

The project area consists of non-perennial and perennial river. Monitoring of the water bodies will take as to minimize the impact caused by the mining activities

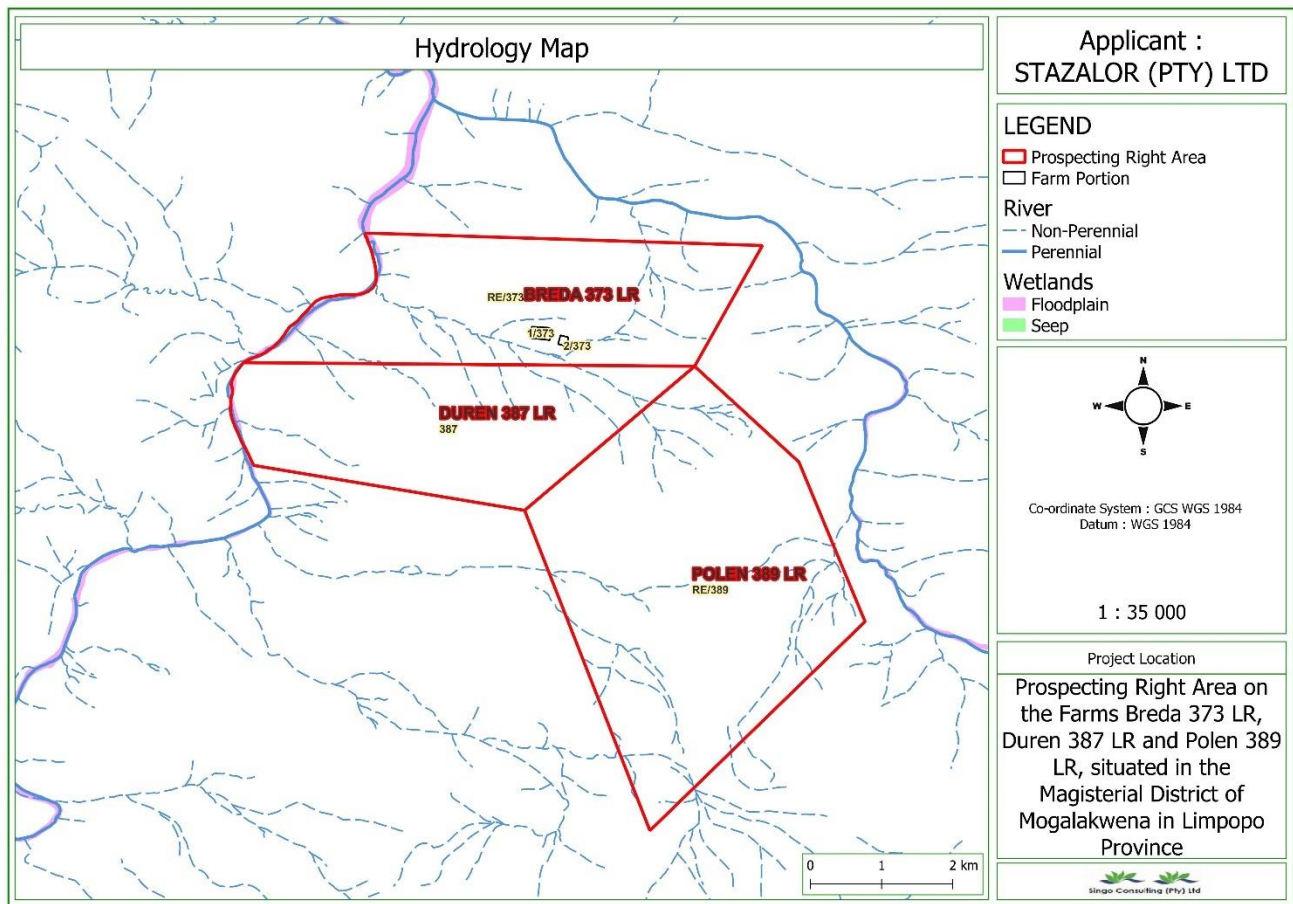


Figure 22: Hydrology Map

Drilling and sitting of boreholes.

The exploration boreholes will be drilled one at a time at various locations within the proposed project area. The depths of the drill holes will average to 100 m and will be confirmed onsite whilst the drilling programme is underway as influenced by the depths and dips measured in other holes. A buffer of 100m will be kept from identified rivers subject to Regulation 48 (2) of MPRDA, NWA (1998), NEMA (1998) (2000) and Regulation 17 of Mine Health & Safety Act (1996).

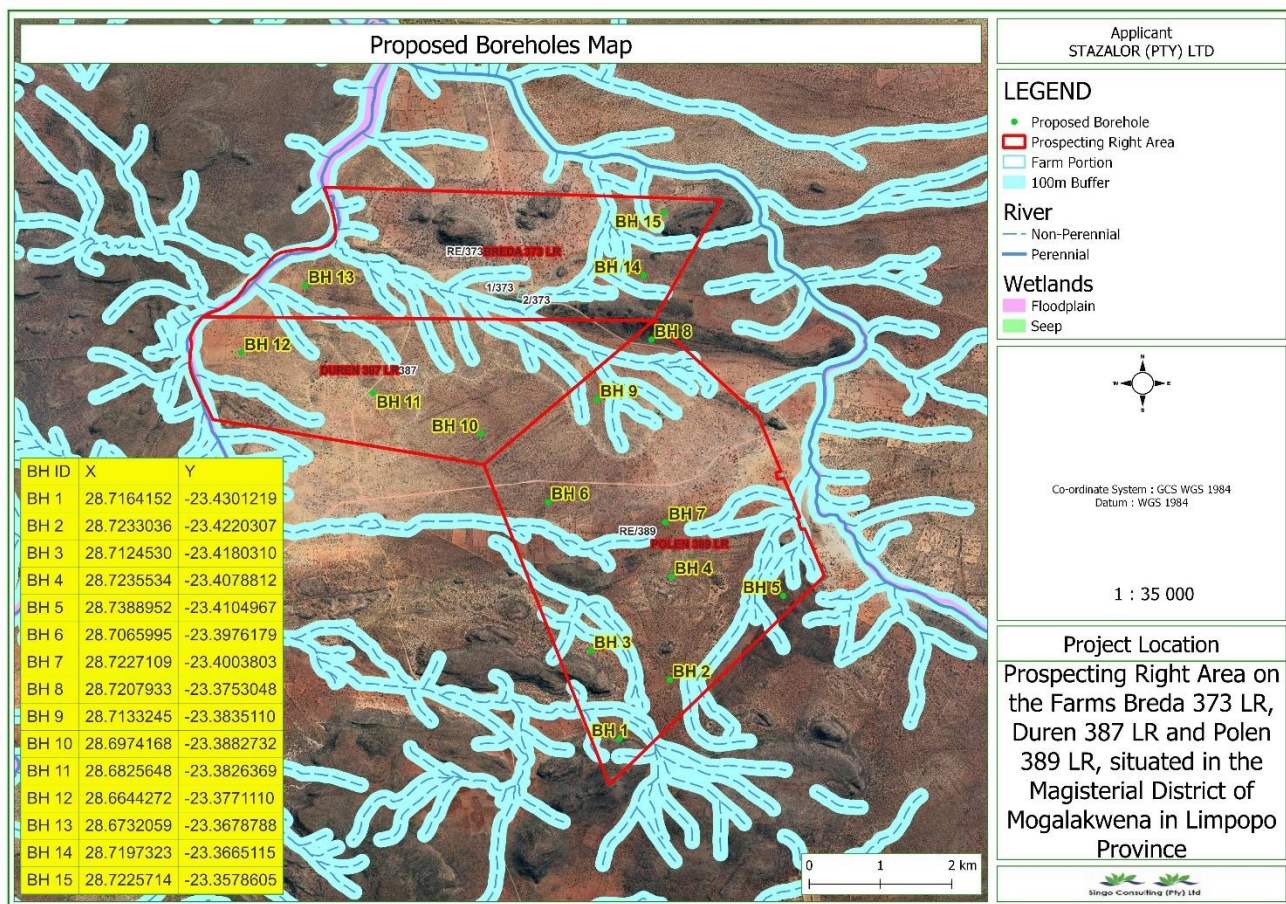


Figure 23: Hydrological buffer

Biodiversity

Biodiversity defines the variety of life in a region, including the number of different species, the genetic richness within each species, their interrelationships with the natural areas in which they occur.

The proposed prospecting site falls within Critical Biodiversity Area 1, Critical Biodiversity Area 2, Ecological Support Area 1, Ecological Support Area 2 & No Natural Remaining (in figure 24 below).

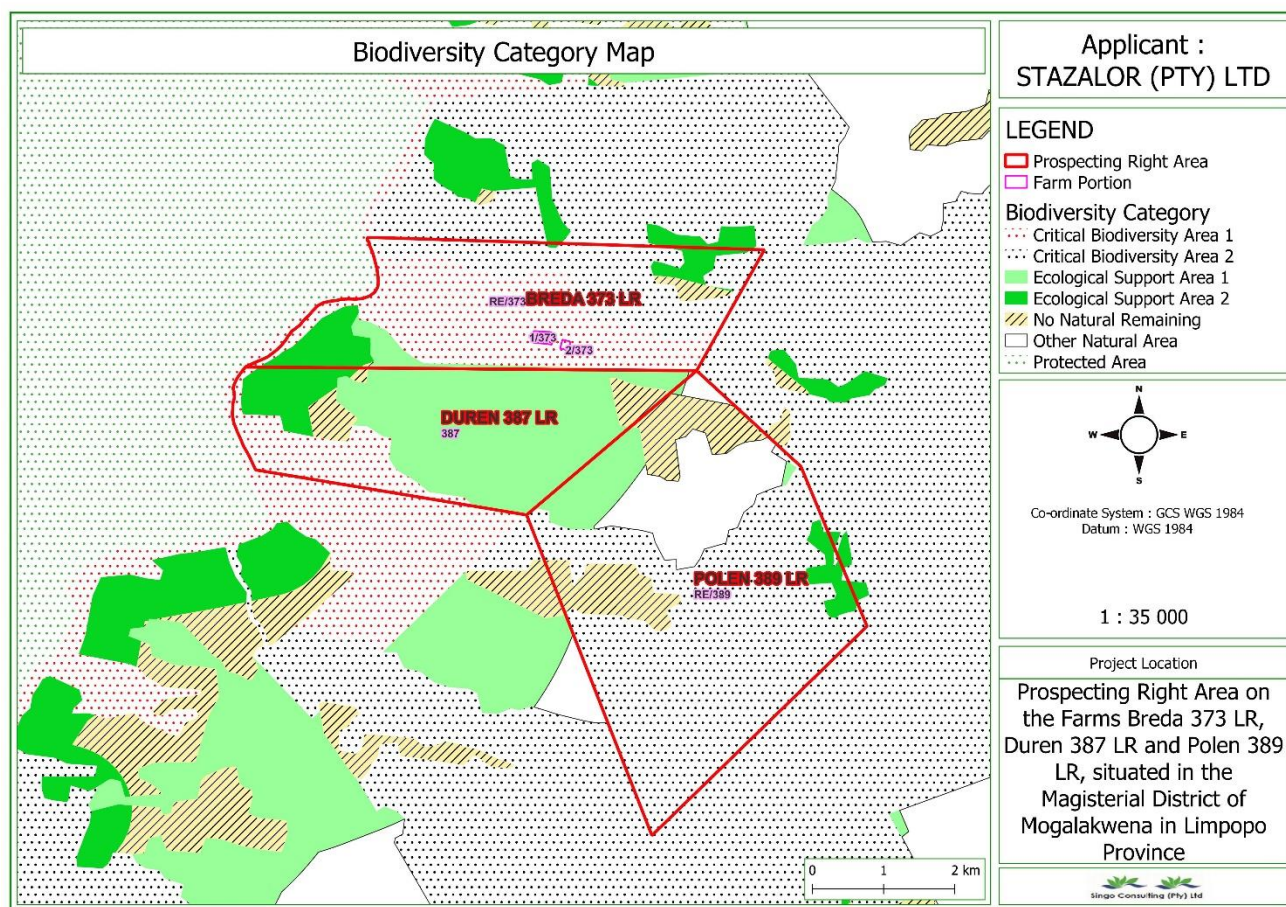


Figure 24: Biodiversity Map

Vegetation

The proposed project area is located within the grassland biome. The grassland biome is one of the nine biomes in Southern Africa and is the largest biome after the Savanna Biome accounting to 28% of the terrestrial surface area of Southern Africa (Mucina and Rutherford 2006).

(Low & Rebelo 1996) further classifies the project area as characterised by the Wet Cold Highveld Grassland of the Wakkerstroom Montane Grassland; The vegetation comprises

predominantly short montane grasslands on the plateaus and the relatively flat areas, with short forest and Leucosidea thickets occurring along steep, mainly east facing slopes and drainage areas. *L. sericea* is the dominant woody pioneer species that invades areas as a result of grazing mismanagement. (Source: Mucina & Rutherford 2006)

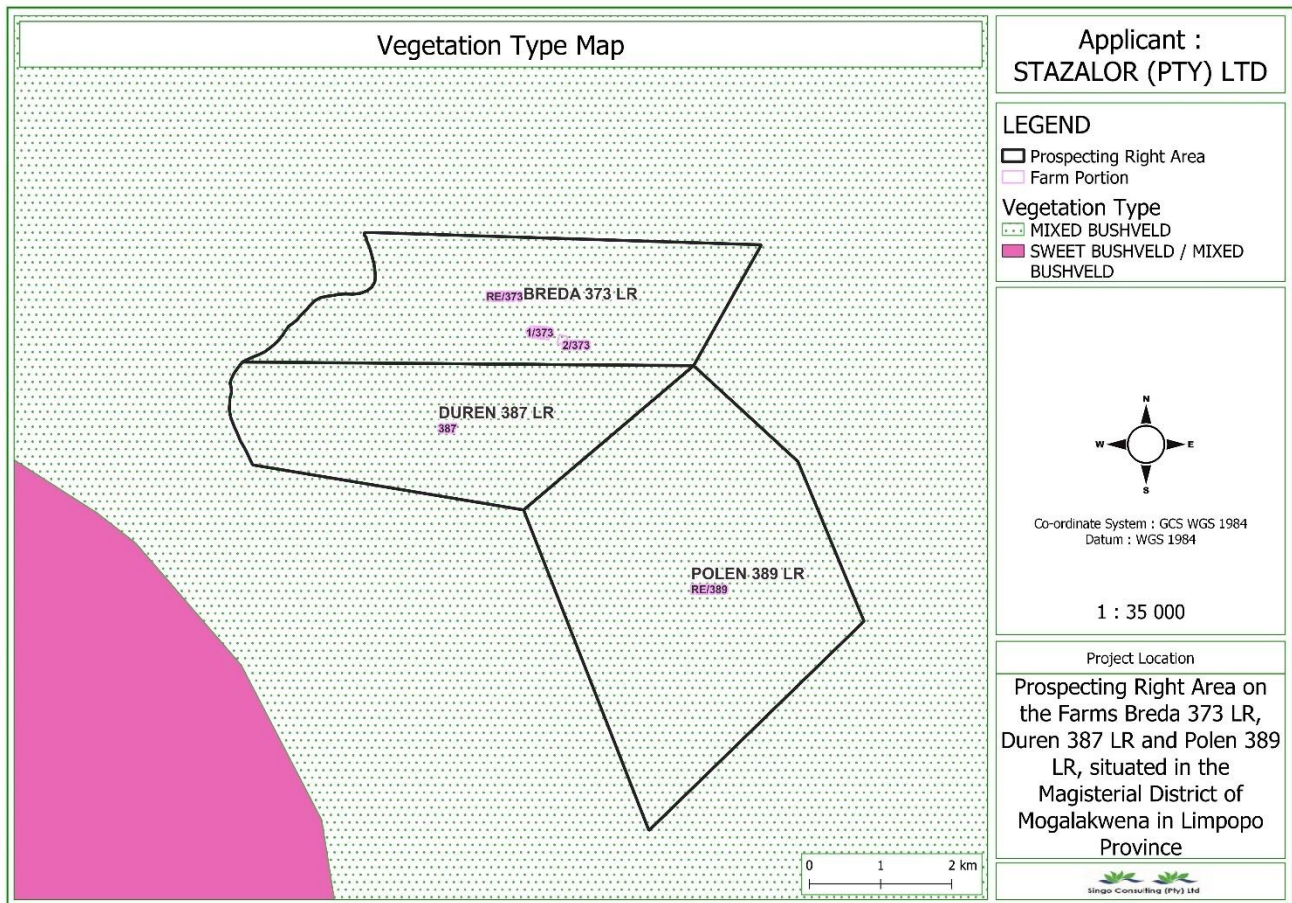


Figure 25: Vegetation type map

The study area consists largely of woodland which is widely distributed in the region and often dominated by near-monotonous stands of *Colophospermum mopane*. Therefore, the threatened and near-threatened taxa, in contrast to the Grassland Biome, is poorly represented on the study area as evidenced by the low richness of confirmed taxa at a quarter-degree level. However, a preliminary analysis of the typical habitat requirements of these taxa show that moderate to high probabilities of occurrence is expected on the various ridges and hills (broken terrain) and deciduous riverine woodland (along the Limpopo and Sand River).

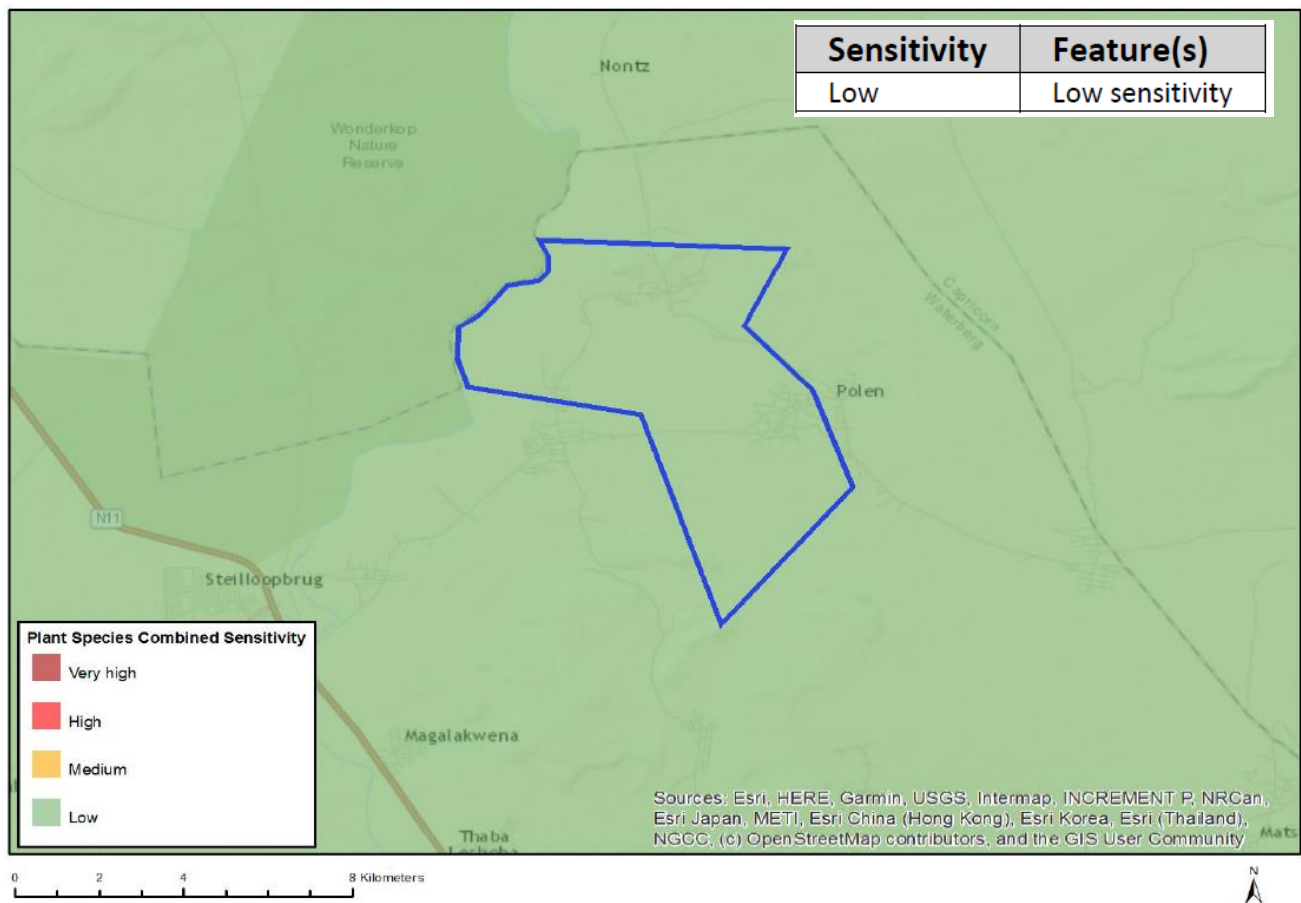


Figure 26: Map of plant species (Source: screening report)





Figure 27: Type of Plants found on site during assessment.

Fauna

No domestic fauna was observed during site assessment although no wild fauna was observed at the time of the site inspection. Should any wild fauna enter the mining area there will be no impact on the proposed mining activity as they will be able to move away or through the site, without being harmed.

The fauna at the site will not be impacted by the proposed processing activity, as they will be able to move away from or through the site unharmed. Workers must be educated and managed to ensure that no fauna at the site is harmed. Upon commencement of the proposed processing activities, the processing area will be fenced off to prevent livestock, such as cattle from wandering into the work areas.

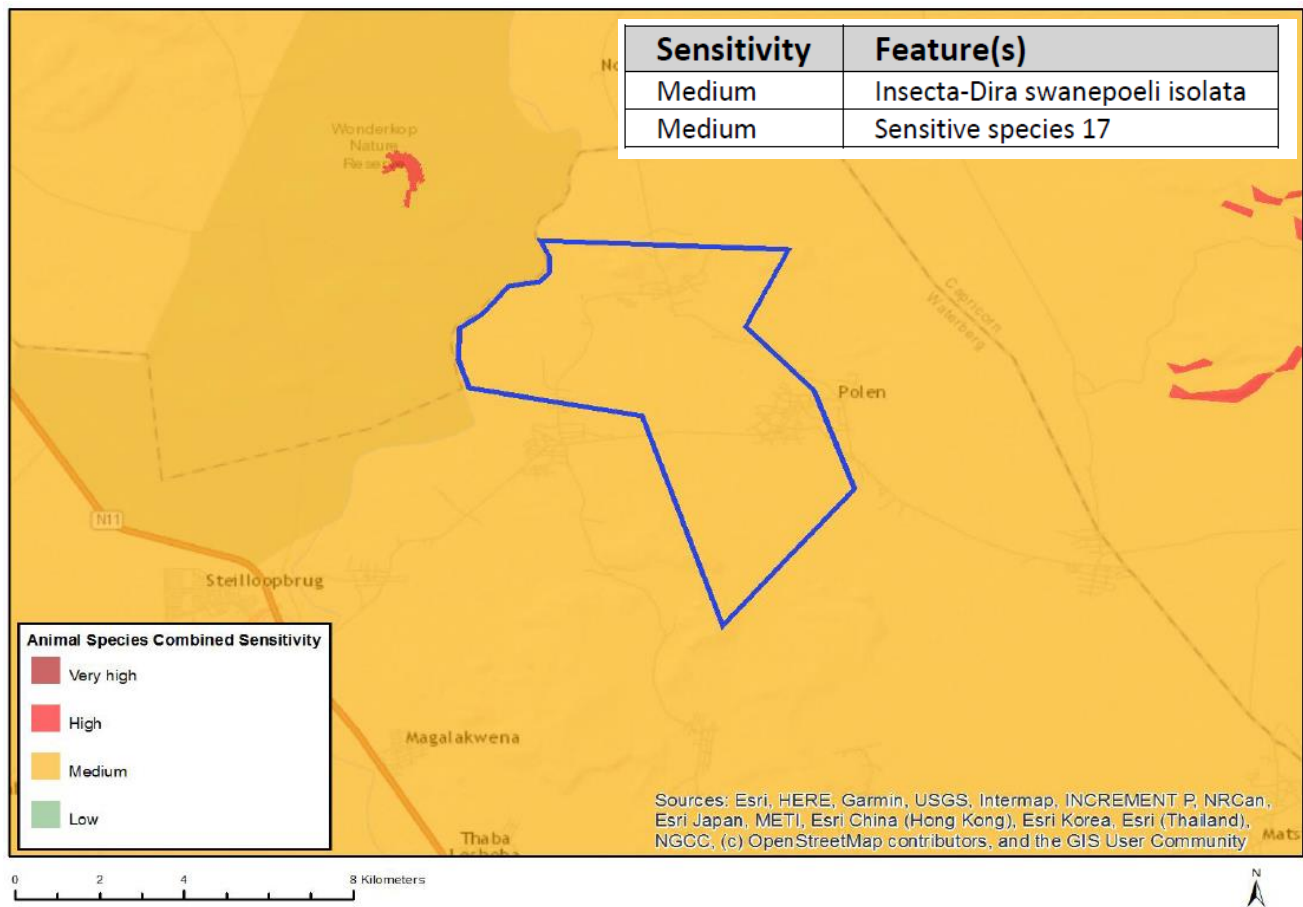


Figure 28: Map of animal species (Source: screening report)



Figure 29: Type of animals found on site during assessment.

Cultural and Heritage

The proposed mine is located within the cultivated area and there are no archaeological or heritage resources identified at the surface on site. Site visit did not reveal any critical feature which can be declared as heritage. Consultation with stakeholders more especially landowner and SAHRA will allude to the presence of any heritage feature.

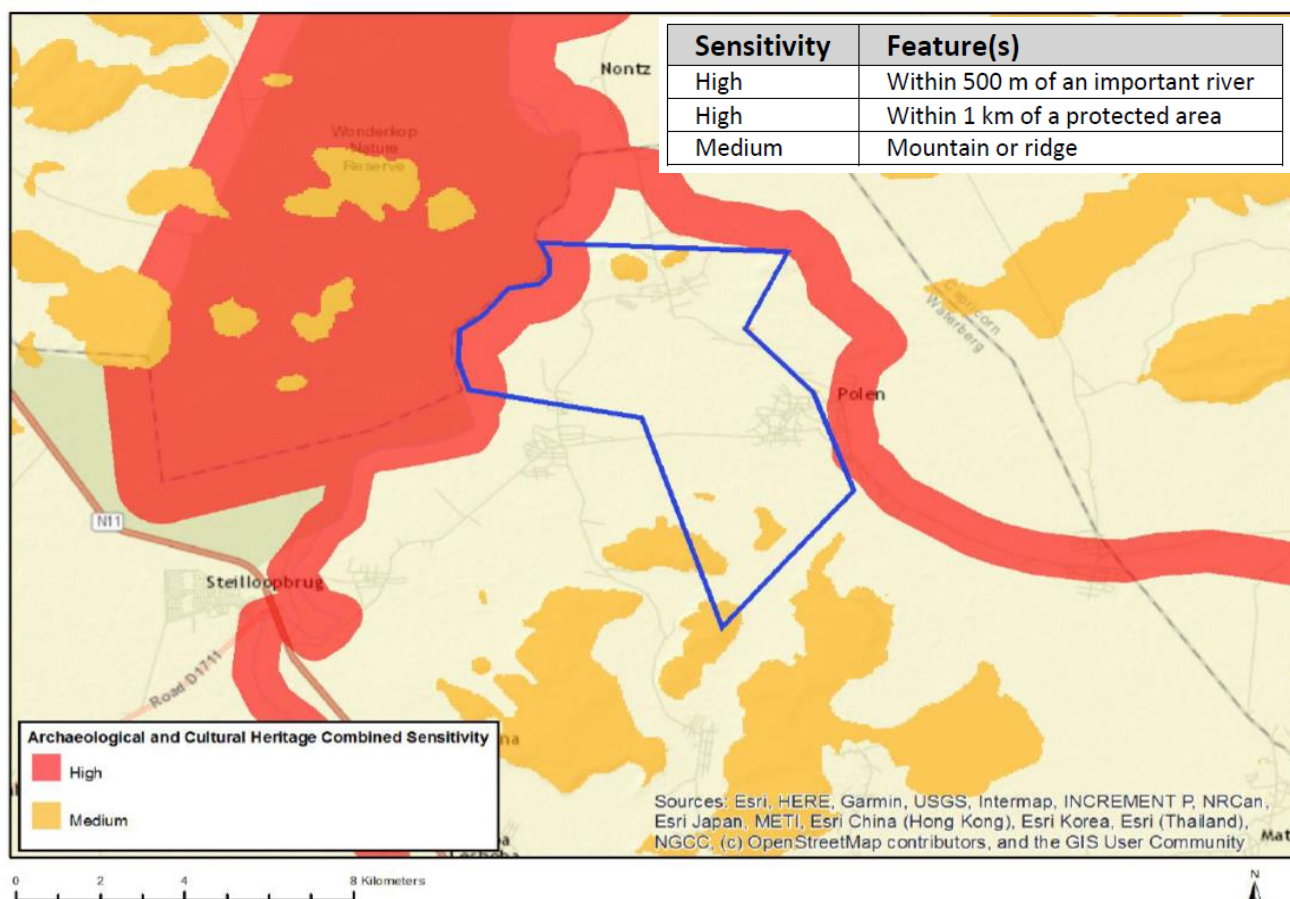


Figure 30: Archaeological theme sensitivity(screening report)

Noise

Prospecting and related activities frequently produce high levels of noise, which can become a nuisance or a health hazard if not adequately controlled. This has the potential to affect not just the prospecting area, but also the nearby land users and occupiers. The landowners and lawful occupiers of the study area, as well as neighbouring communities including land users.

Noise generation can be expected on the proposed site as a result of a variety of activities & actions, such as loading and off-loading of moveable infrastructure during the rather operational phase and vehicles moving in and out of the project area. The homesteads on and directly next to the research area are the closest sensitive receptors. The closest sensitive receptors are the homesteads on and adjacent to the research area. Because of the homesteads' proximity to prospecting activities, mitigation measures must be implemented. Mitigation techniques may include limiting noisy operations to typical

working hours rather than weekends or holidays, as well as maintaining machinery and vehicles to prevent excessive noise. It is also recommended that consultations be held with affected parties to establish an acceptable schedule of noisy activities.

9.3 Environmental aspects which may require protection and/or remediation

Within and around the application area, various existing water bodies have been identified. No drill site will be positioned within any of these watercourses. Furthermore, no drill site will be located within 100 meters of any properties, buildings, or homes located within the project area's boundaries. Existing access roads will be utilised to access the drill sites. Agriculture is practiced in the project area. Drilling is proposed to take place along the access roads (of agricultural fields) and in the event that the agricultural fields cannot be avoided, this information must be duly communicated to the affected parties. Drill sites will overall be aimed at avoiding sensitive areas.

9.4 Description of the current land uses

The surrounding land use on the proposed project area are associated with natural vegetation, cultivated land & build-up area. This was confirmed by GIS Specialist see the map below figure 29.

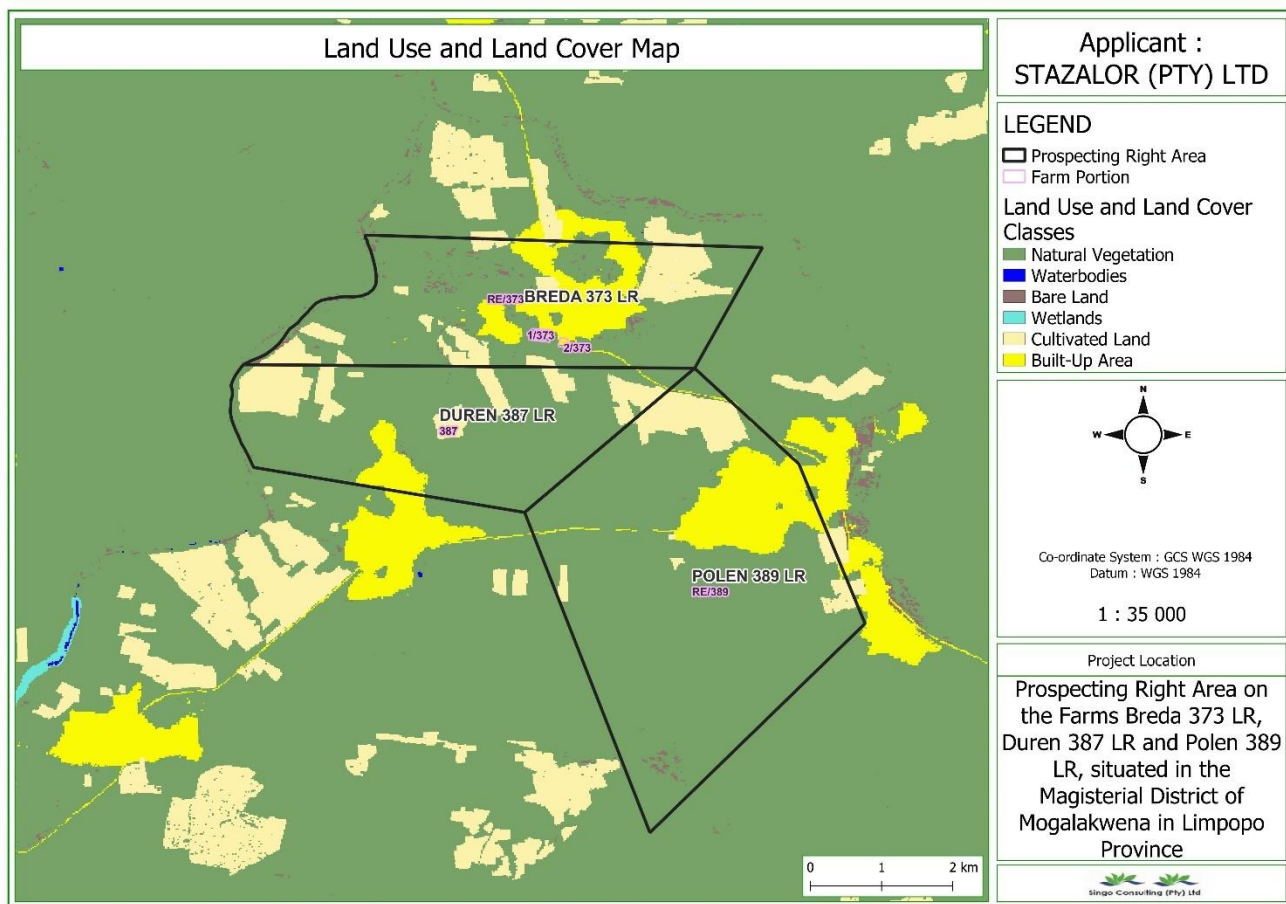


Figure 31: Landuse Map

10 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).

Table 8: Impact Significance Calculation – Construction, Operational and Rehabilitation Phase

Activity	Affected environment	Nature of Impact (Positive/Negative)	Spatial Scale (7)	Duration (7)	Severity (7)	Consequence	Probability (7)	Significance (147)	Nature of Impact (Positive/Negative)	Spatial Scale (7)	Duration (7)	Severity (7)	Consequence	Probability (7)	Significance (147)
		Before mitigation							After mitigation						
Construction of access roads	Soil	N	2	2	2	6	4	24	N	2	2	2	6	4	24
	Natural vegetation	N	2	2	3	7	4	28	N	2	2	2	6	4	24
	Surface water	N	4	4	4	12	4	48	N	2	3	4	9	3	27
	Air quality	N	2	2	2	6	4	24	N	2	2	2	6	4	24
Transportation of equipment	Soil	N	2	2	4	8	4	32	N	2	2	2	6	4	24
	Air quality	N	3	3	3	9	4	36	N	3	1	2	6	4	24
	Interested and Affected Parties	N	3	3	3	9	4	36	N	2	1	2	5	3	15
Construction of associated infrastructure	Topography	N	2	3	4	9	4	36	N	1	2	3	6	3	18
	Visual	N	3	3	4	10	4	40	N	3	3	4	10	4	40
	Soil	N	3	3	3	9	5	45	N	3	3	3	9	5	45
	Land capability	N	2	3	3	8	5	40	N	3	3	3	9	5	45
	Natural vegetation	N	3	3	3	9	5	45	N	3	3	3	9	5	45
	Animal life	N	3	3	3	9	5	45	N	3	3	2	8	4	32
	Surface water	N	4	3	4	11	5	55	N	4	2	3	9	4	36
	Groundwater	N	4	4	4	12	5	60	N	4	2	3	9	4	36
	Air quality	N	3	3	4	10	5	50	N	3	3	3	9	5	45

Activity	Affected environment	Nature of Impact (Positive/Negative)	Spatial Scale (7)	Duration (7)	Severity (7)	Consequence	Probability (7)	Significance (147)	Nature of Impact (Positive/Negative)	Spatial Scale (7)	Duration (7)	Severity (7)	Consequence	Probability (7)	Significance (147)
		Before mitigation							After mitigation						
Temporal fence	Noise	N	3	3	4	10	5	50	N	3	3	3	9	5	45
	Interested and Affected Parties	N	3	3	4	10	5	50	N	3	3	3	9	5	45
	Visual	N	3	4	3	10	5	50	N	2	4	2	8	4	32
	Animal life	N	2	3	3	8	4	32	p	2	3	3	8	4	32
Removal and storage of topsoil	Soil	N	2	6	4	12	4	48	N	1	2	3	6	3	18
	Land capability	N	2	6	4	12	4	48	N	1	2	3	6	3	18
	Visual	N	3	4	3	10	5	50	N	2	4	2	8	4	32
	Topography	N	2	5	3	10	4	40	N	2	5	3	10	6	60
	Surface water	N	4	5	5	14	4	56	N	3	3	1	7	3	21
	Air quality	N	2	3	4	9	5	45	N	1	2	2	5	3	15
	Natural vegetation	N	2	6	4	12	3	36	N	1	2	3	6	3	18
	Noise	N	3	2	3	8	6	48	N	2	2	2	6	3	18
Transport of equipment	Soil	N	2	6	4	12	5	60	N	1	2	3	6	3	18
	Land capability	N	2	6	4	12	5	60	N	1	2	3	6	3	18
	Surface water	N	4	5	5	14	4	56	N	3	3	1	7	3	21
	Groundwater	N	4	5	5	14	4	56	N	3	3	1	7	3	21
	Air quality	N	2	3	4	9	5	45	N	1	2	2	5	3	15
	Natural vegetation	N	2	6	4	12	5	60	N	1	2	3	6	3	18
	Animal life	N	2	4	6	12	4	48	N	1	3	2	6	3	18
Construction of surface infrastructure	Soil	N	2	6	4	12	5	60	N	1	2	3	6	3	18
	Land capability	N	2	6	4	12	5	60	N	1	2	3	6	3	18
	Surface water	N	4	5	5	14	4	56	N	3	3	1	7	3	21
	Groundwater	N	4	5	5	14	4	56	N	3	3	1	7	3	21
	Air quality	N	2	3	4	9	5	45	N	1	2	2	5	3	15
	Natural vegetation	N	2	6	4	12	5	60	N	1	2	3	6	3	18
	Animal life	N	2	4	6	12	4	48	N	1	3	2	6	3	18

Activity	Affected environment	Nature of Impact (Positive/Negative)	Spatial Scale (7)	Duration (7)	Severity (7)	Consequence	Probability (7)	Significance (147)	Nature of Impact (Positive/Negative)	Spatial Scale (7)	Duration (7)	Severity (7)	Consequence	Probability (7)	Significance (147)
		Before mitigation							After mitigation						
	Noise	N	3	2	3	8	6	48	N	2	2	2	6	3	18
Waste generation, disposal and sewage handling	Soil	N	2	6	4	12	4	48	N	1	2	3	6	3	18
	Land capability	N	2	6	4	12	4	48	N	1	2	3	6	3	18
	Surface water	N	4	5	5	14	4	56	N	3	3	1	7	3	21
	Groundwater	N	4	5	5	14	4	56	N	3	3	1	7	3	21
Toilets	Soil	N	2	6	4	12	5	60	N	1	2	3	6	3	18
	Land capability	N	2	6	4	12	5	60	N	1	2	3	6	3	18
	Surface water	N	4	5	5	14	4	56	N	3	3	1	7	3	21
	Groundwater	N	4	5	5	14	4	56	N	3	3	1	7	3	21
Domestic waste	Soil	N	2	6	4	12	4	48	N	1	2	3	6	3	18
	Visual	N	2	4	4	10	4	40	N	1	2	3	6	3	18
	Land capability	N	2	6	4	12	5	60	N	1	2	1	4	3	12
	Surface water	N	4	5	5	14	4	56	N	3	3	1	7	3	21
	Groundwater	N	4	5	5	14	4	56	N	3	3	1	7	3	21
	Natural vegetation	N	2	6	4	12	4	48	N	1	2	3	6	3	18
	Animal life	N	2	4	6	12	3	36	N	1	3	2	6	3	18

11 METHODOLOGY USED IN DETERMINING AND RANKING THE NATURE, SIGNIFICANCE, CONSEQUENCES, EXTENT, DURATION AND PROBABILITY OF POTENTIAL ENVIRONMENTAL IMPACTS & 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).

Assigning significance to potential impacts requires integration of the severity (magnitude of the potential impacts), type of the impact, extent to which the impact will occur, probability of the impact (the likelihood of the impact occurring) and the duration of the impact. This is the best way to determine whether the impact is important or not, once the mitigation is considered.

Impacts have been assigned a rating of high (H), medium/moderate (M), low (L), very low (VL) or no impact. A significance rating is assigned twice to the impact. Firstly, to indicate significance without mitigation or optimization and secondly, to indicate significance after mitigation or optimisation. This is done to highlight the importance of mitigation or optimisation of potential impacts.

Table 9: Impact Severity rating

Category	Description/definition
High	<p>Impacts will be of high significance if one of the following applies:</p> <ul style="list-style-type: none"> • The extent is national to international • The duration is long term to permanent • The severity will be high • Probability is definite
Moderate	<p>Impacts will be of moderate significance if one of the following applies:</p> <ul style="list-style-type: none"> • The extent is local to regional • The duration is medium to long term • The severity is major • The probability is highly probable
Low	<p>Impacts will be of low significance if one of the following applies:</p> <ul style="list-style-type: none"> • The extent is local • The duration is temporary to permanent • The severity is low • The probability is probable

Very low	Impacts will be of very low significance if one of the following applies: <ul style="list-style-type: none"> • The extent is site-specific • The duration is temporary to permanent • The severity is very low • The probability is improbable
No impacts	A potential concern of impact which, upon evaluation, is found to have no impact.

This section provides a description of the methodology that was applied to assess the significance of environmental and heritage impacts. The significance rating process follows the established impact/risk assessment formula:

- Significance = Consequence x Probability, WHERE.
- Consequence = Severity + Spatial Scale +Duration, AND
- Probability = Likelihood of an impact occurring

The matrix calculates the rating out of 75 then converts this to a percentage. The percentage is the figure quoted in the matrix. The weight assigned to the various parameters for positive and negative impacts is presented in *Table 10*.

Table 10: Impact severity

Rating	Severity		Spatial scale	Duration	Probability
	Environmental	Social/cultural heritage			
7	Very significant impact on the environment. Irreparable damage to highly valued species, habitat or ecosystem. Persistent severe damage.	Irreparable damage to highly valued items of great cultural significance or complete breakdown of social order.	International	Permanent to mitigation	Certain/ definite
6	Significant impact on highly valued species, habitat or ecosystem.	Irreparable damage to highly valued items of cultural significance or breakdown of social order.	National	Permanent mitigated	Almost certain/ high probability

Rating	Severity		Spatial scale	Duration	Probability
	Environmental	Social/cultural heritage			
5	Very serious, long- term environmental impairment of ecosystem function that may take several years to rehabilitate.	Very serious widespread social impacts. Irreparable damage to highly valued items.	Province/ region	Project life (The impact will cease after the operational life span of the project)	Likely
4	Serious medium term environmental effects. Environmental damage can be reversed in less than a year.	On-going serious social issues. Significant damage to structures/ items of cultural significance	Municipal area	Long term (6- 15 years)	Probable
3	Moderate, short-term effects but not affecting ecosystem function. Rehabilitation requires intervention of external specialists and can be done in less than a month.	On-going social issues. Damage to items of cultural significance.	Local	Medium term (1-5 years)	Unlikely/ low probability
2	Minor effects on biological or physical environment. Environmental damage can be rehabilitated internally with/ without help of external consultants.	Minor medium-term social impacts on local population. Mostly repairable. Cultural functions and processes not affected.	Limited	Short term (Less than 1 year)	Rare/ improbable
1	Limited damage to minimal area of low significance, (e.g., ad hoc spills within plant area). Will have no impact on the environment	Low-level repairable damage to commonplace structures	Very limited	Immediate (Less than 1 month)	Highly unlikely/ none

Table 11: Impact significance.

Probability/Likelihood	Consequence (severity + scale + duration)									
		1	3	5	7	9	11	15	18	21
	1	1	3	5	7	9	11	15	18	21
	2	2	6	10	14	18	22	30	36	42
	3	3	9	15	21	27	33	45	54	63
	4	4	12	20	28	36	44	60	72	84
	5	5	15	25	35	45	55	75	90	105
	6	6	18	30	42	54	66	90	108	126
	7	7	21	35	49	63	77	105	126	147

Table 12: Impact significance threshold limit

Significance		
Low	0 - 35	
Medium-Low	36 - 76	
High-Medium	73 - 107	
High	108 - 147	

Activity 1: Construction phase

Impacted environment: Topography, visual, soil, land capability, surface water, groundwater, air quality, natural vegetation, animal life and noise

Description: This activity involves bringing equipment to site as well as establishing structures associated with drilling prior to actual drilling. The significance of the impacts of the construction, operating and decommissioning of the prospecting area on the environment is low. There is a potential for most of the environment to be impacted over a limited spatial extent. Mitigation measures need to be applied to reduce or prevent the physical impacts on the affected environment

Table 13: Impact of construction on project area.

Phase impact occurs (C, O, D)	Affected environment	Nature of Impact (Negative/Positive)	Spatial Scale (7)	Duration (7)	Severity (7)	Consequence	Probability (7)	Significance (147)	Significance rating (pre-mitigation)
C,O,D	Soil	N	2	6	4	12	5	60	Medium-Low
C,O,D	Land capability	N	2	6	4	12	5	60	Medium-Low
C,O,D	Surface water	N	4	5	5	14	4	56	Medium-Low
C,O,D	Ground water	N	4	5	5	14	4	56	Medium-Low
C,O,D	Natural vegetation	N	2	5	4	11	5	55	Medium-Low
C,O,D	Animal life	N	2	4	6	12	4	48	Medium-Low

Activity 2: Storage of hydrocarbons, chemicals, fuel

Impacted environment: Soil, land capability, surface water, groundwater and natural vegetation.

Description: This activity involves the storage of hydrocarbons, chemicals and fuel in the project area. During the drilling activities there will be no storage of diesel fuel, oil and lubricants on site. Significant amount of diesel will be transported to site for the drill rig machine on a daily basis for the duration of the prospecting activities. The potential contaminants for the prospecting of Chrome Ore, Cobalt, Copper Ore, Gold Ore, Phosphate Ore, Iron Ore, Lead, Molybdenum Ore, Nickel Ore, Platinum Group Metals, Rare Earths, Silver Ore, Vanadium Ore and Zinc Ore are minimal and can be controlled easily as this activity will only take place for a short period of time. Fuel and oil handling facilities are likely sources of hydrocarbon related contaminants. Oils, grease, and other hydrocarbon products (such as petrol and diesel) handled in these areas may contaminate the environment by spillages and leakages (e.g., from drill rigs).

Absorbent Spill kits will be made available near the drill rigs during drilling activities; The oil absorbent chemicals will ensure that no oils infiltrate down to the underground to cause any groundwater contamination.

Table 14: Impact of hydrocarbon, chemical and fuel storage.

Phase impact occurs (C, O, D)	Affected environment	Nature of Impact (Negative/Positive)	Spatial Scale (7)	Duration (7)	Severity (7)	Consequence	Probability (7)	Significance (147)	Significance rating (pre-mitigation)
C,O,D	Soil	N	2	5	3	10	5	50	Medium-Low
C,O,D	Land capability	N	2	5	3	10	5	50	Medium-Low
C,O,D	Surface water	N	4	5	5	14	5	56	Medium-Low
C,O,D	Ground water	N	4	5	5	14	5	56	Medium-Low
C,O,D	Natural vegetation	N	2	5	3	10	5	50	Medium-Low
C,O,D	Animal life	N	2	4	6	12	4	48	Medium-Low

Activity 3: Temporal fence

Impacted environment: Visual and animal life

Description: This involves the placement of a fence on the farm. The significance of the impacts of the activity on the affected environment are potentially medium-low, with high probabilities of occurrence. The impact that the fence will have on animal life is potentially positive as animals like livestock will be restricted from grazing in the project area, preventing injury and possible overgrazing. Mitigation measures need to be applied to reduce or prevent physical impacts on the environment.

Table 15: Impact of temporal fence.

Phase impact occurs (C, O, D)	Affected environment	Nature of Impact (Negative/Positive)	Spatial Scale (7)	Duration (7)	Severity (7)	Consequence	Probability (7)	Significance (147)	Significance rating (pre-mitigation)
C,O,D	Visual	N	2	4	3	9	5	45	Medium-Low
C,O,D	Animal life	P	2	3	3	8	4	32	Low

Activity 4: Removal and storage of topsoil (topsoil stockpile)

Impacted environment: Soil, land capability, visual, topography, surface water, air quality, natural vegetation, animal life and noise.

Description: This activity will cause surface disturbance. The significance of the impacts of the activity on the affected environment are potentially medium-low, with high probabilities of occurrence. Most of the environment will be potentially impacted over a limited spatial extent with visual and noise disturbance occurring locally. Surface water and archaeology & cultural heritage is most likely to occur on a municipal scale. Mitigation measures need to be applied to reduce or prevent physical impacts on the environment.

Table 16: Impact of topsoil removal and storage.

Phase impact occurs (C, O, D)	Affected environment	Nature of Impact (Negative/Positive)	Spatial Scale (7)	Duration (7)	Severity (7)	Consequence	Probability (7)	Significance (147)	Significance rating (pre-mitigation)
C,D	Soil	N	2	5	4	11	5	55	Medium-Low
C,O,D	Land capability	N	2	6	4	12	5	60	Medium-Low
C,D	Visual	N	3	4	3	10	5	50	Medium-Low
C,O,D	Topography	N	2	5	3	10	6	60	Medium-Low
C,O,D	Surface water	N	4	5	5	14	4	56	Medium-Low
C,O,D	Air quality	N	2	3	4	9	5	45	Medium-Low
C,O,D	Natural vegetation	N	2	6	4	12	5	60	Medium-Low
C,O,D	Animal life	N	2	4	6	12	4	48	Medium-Low
C,O,D	Cultural heritage/ archaeology	N	4	5	5	14	5	70	Medium-Low
C,O,D	Noise	N	3	2	3	8	6	48	Medium-Low

Activity 5: Transport of equipment

Impacted environment: Soil, land capability, surface water, groundwater, air quality, natural vegetation, animal life, archaeology/cultural heritage and noise.

Description: The significance of the impacts of the activity on the affected environment are potentially medium-low, with high probabilities of occurrence. Most of the environment will be potentially impacted over a limited spatial extent with noise potentially occurring over a local extent. Mitigation measures need to be applied to reduce or prevent physical impacts on the environment.

Table 17: Impact of equipment transport.

Phase impact occurs (C, O, D)	Affected environment	Nature of Impact (Negative/Positive)	Spatial Scale (7)	Duration (7)	Severity (7)	Consequence	Probability (7)	Significance (147)	Significance rating (pre-mitigation)
C,O,D	Soil	N	2	6	4	12	5	60	Medium-Low
C,O,D	Land capability	N	2	6	4	12	5	60	Medium-Low
C,O,D	Surface water	N	4	5	5	14	4	56	Medium-Low
C,O,D	Ground water	N	4	5	5	14	4	56	Medium-Low
C,O,D	Air quality	N	2	3	4	9	5	45	Medium-Low
C,O,D	Natural vegetation	N	2	5	4	11	5	55	Medium-Low
C,O,D	Animal life	N	2	4	6	12	4	48	Medium-Low
C,O,D	Cultural heritage/ archaeology	N	4	5	5	14	5	70	Medium-Low
C,O,D	Noise	N	3	2	3	8	6	48	Medium-Low

Activity 6: Ablutions

Impacted environment: Soil, land capability, surface water and groundwater

Description: The significance of the impacts of the activity on the affected environment are potentially medium-low, with high probabilities of occurrence. Most of the environment will be potentially impacted over a limited spatial extent, except for surface and groundwater which is most likely to occur over a limited extent. Mitigation measures need to be applied to reduce or prevent physical impacts on the environment.

Table 18: Impact of ablutions.

Phase impact occurs (C, O, D)	Affected environment	Nature of Impact (Negative/Positive)	Spatial Scale (7)	Duration (7)	Severity (7)	Consequence	Probability (7)	Significance (147)	Significance rating (pre-mitigation)
C,O,D	Soil	N	2	6	4	12	5	60	Medium-Low
C,O,D	Land capability	N	2	6	4	12	5	60	Medium-Low
C,O,D	Surface water	N	4	5	5	14	4	56	Medium-Low
C,O,D	Ground water	N	4	5	5	14	4	56	Medium-Low

Activity 7: Domestic waste

Impacted environment: Soil, visual, land capability, surface water, groundwater, natural vegetation and animal life.

Description: The significance of the impacts of the activity on the affected environment are potentially medium-low, with high probabilities of occurrence. Most of the environment will be potentially impacted over a limited spatial extent, except for surface and groundwater which is most likely to occur on a limited spatial extent. Mitigation measures need to be applied to reduce or prevent physical impacts on the environment.

Table 19: Impact of domestic waste.

Phase impact occurs (C, O, D)	Affected environment	Nature of Impact (Negative/Positive)	Spatial Scale (7)	Duration (7)	Severity (7)	Consequence	Probability (7)	Significance (147)	Significance rating (pre-mitigation)
C,O,D	Soil	N	2	6	4	12	5	60	Medium-Low
C,O,D	Visual	N	2	4	4	10	5	50	Medium-Low
C,O,D	Land capability	N	2	6	4	12	5	60	Medium-Low
C,O,D	Surface water	N	4	5	5	14	4	56	Medium-Low
C,O,D	Groundwater	N	4	5	5	14	4	56	Medium-Low
C,O,D	Natural vegetation	N	2	6	4	12	5	60	Medium-Low
C,O,D	Animal life	N	2	4	6	12	4	48	Medium-Low

Activity 8: Access roads

Impacted environment: Soil, land capability, surface water, air quality, natural vegetation, animal life, wetlands, archaeology/cultural heritage and noise.

Description: The significance of the impacts of the activity on the affected environment are potentially medium-low, with high probabilities of occurrence. Most of the environment will be potentially impacted over a limited spatial extent, except for noise which probably occur on a local scale and surface and groundwater as well as archaeology/cultural heritage

which will occur on a municipal extent. Mitigation measures need to be applied to reduce or prevent physical impacts on the environment.

Table 20: Impact of access roads.

Phase impact occurs (C, O, D)	Affected environment	Nature of Impact (Negative/Positive)	Spatial Scale (7)	Duration (7)	Severity (7)	Consequence	Probability (7)	Significance (147)	Significance rating (pre-mitigation)
C,O,D	Soil	N	2	6	4	12	5	60	Medium-Low
C,O,D	Land capability	N	2	6	4	12	5	60	Medium-Low
C,O,D	Surface water	N	4	5	5	14	4	56	Medium-Low
C,O,D	Ground water	N	4	5	5	14	4	56	Medium-Low
C,O,D	Air quality	N	2	3	4	9	5	45	Medium-Low
C,O,D	Natural vegetation	N	2	6	4	12	5	60	Medium-Low
C,O,D	Animal life	N	2	4	6	12	4	48	Medium-Low
C,O,D	Cultural heritage/ archaeology	N	4	5	5	14	5	70	Medium-Low
C,O,D	Noise	N	3	2	3	8	6	48	Medium-Low

Soils, land capability and land use

Prospecting activities involve drilling, but may affect land available for grazing and will increase the potential for soil erosion (which is currently minimal). Fencing off the project area will prevent animals from grazing, thus improving vegetation growth in the area. Soil pollution from domestic waste and hydrocarbon spillages may occur, potentially increasing soil contamination. Soils that have been stripped can never be replaced in their original state due to the alteration of physical, chemical and biological soil properties during removal and stockpiling. Stockpiling influences soil properties negatively and may cause soil deterioration, especially in terms of biological quality. The cumulative impact on regional land capability and land use is low due to the land use being predominately for agriculture which is dominated by grazing and housing. Thus, the activities will result in a low significance cumulative impact only being limited to the site and its immediate surroundings.

Surface water

There are non-perennial and perennial rivers traversing the project area. Considerable care must be taken to ensure that these water courses are not disturbed and contaminated by the proposed activities.

Groundwater

Hydrocarbon spills from trucks and machinery, ablutions and domestic waste may contribute to groundwater contamination. The total cumulative impact is low as these activities will be limited to the site.

Noise

Cumulative impacts are expected to be significant due to drilling machines and trucks. Surrounding farmers will also contribute to noise levels in the area with agricultural activities. Prospecting operations will take place between 07:00 and 17:30 to limit noise to office hours. The total cumulative impacts are expected to be low-medium.

Flora

The natural flora of the surrounding areas is rarely disturbed due to lack of mining activities. It is, however, disturbed by livestock grazing. Vegetation destruction will only occur during the construction phase in a potentially disturbed area. The cumulative impacts will be more severe if endemic and Red Data plants are encountered on site, but mitigation measures, like the protection and removal of Red Data plants and the rehabilitation and re-introduction of animals currently present after closure should reduce the significance of the negative cumulative impact.

Fauna

Regionally, agriculture, plantations, sheep and Livestock farming take place. Towns and communities are developing, resulting in a less significant cumulative impact on the fauna. The cumulative impacts will be more severe if endemic and Red Data animals occur in the area, but mitigation measures, like the protection and removal of Red Data animals and the rehabilitation and re-introduction of animals currently present after closure should reduce the significance of the negative cumulative impact.

Visual aspects

Drilling will have a slight impact on the visual aspects. There are, however, already existing impacts on the visual aspects of the area due to the agricultural activities and presence of other infrastructure. The cumulative impacts can be summarised in Table 21.

Table 21: Impact of visual aspects.

Impacted environment	Nature of Impact (Negative/Positive)	Spatial Scale (7)	Duration (7)	Severity (7)	Consequence	Probability (7)	Significance (147)
Geology	N	1	3	1	5	2	10
Soils, land capability and land use	N	3	4	3	10	5	50
Surface water	N	3	3	2	8	4	32
Groundwater	N	3	3	2	8	4	32
Air quality	N	2	3	2	7	4	28
Noise	N	2	2	2	6	4	24
Flora	N	1	3	2	6	4	24
Fauna	N	1	3	2	6	4	24
Site of archaeological and cultural interest	N	2	3	2	7	4	28
Visual impacts	N	1	3	2	6	4	24

12 POSITIVE AND NEGATIVE IMPACTS OF THE PROPOSED ACTIVITY (IN TERMS OF THE INITIAL SITE LAYOUT) AND ALTERNATIVES ON THE ENVIRONMENT AND COMMUNITY

(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)

Potential impacts that were identified during the Basic Assessment Process are discussed under environmental component headings in this section. The project will not cause adverse surface disturbances as the planned prospecting activities will be managed and rehabilitation will occur progressively per drill hole. A 100m buffer zone will be established around all rivers and water features.

Advantages & Disadvantages

The geology of the area is largely characterised by Vryheid formation which is known to host mineral (Chrome Ore, Cobalt, Copper Ore, Gold Ore, Phosphate Ore, Iron Ore, Lead, Molybdenum Ore, Nickel Ore, Platinum Group Metals, Rare Earths, Silver Ore, Vanadium Ore and Zinc Ore) sought for. Since the area is presumed to not being prospected on, it is an added advantage for this project.

There are no known disadvantages of the selected site in terms of the mineral to be prospected for or the location and environmental issues/concerns (Except for the fact that the topology of might pose accessibility challenges for the drill rig in some instances). No alternative site is considered as the application area has the potential to host the minerals sought for.

13 POSSIBLE MITIGATION MEASURES THAT COULD BE APPLIED AND THE LEVEL OF RISK

(With regard to the issues and concerns raised by affected parties provide a list of the issues raised and an assessment/ discussion of the mitigations or site layout alternatives available to accommodate or address their concerns, together with an assessment of the impacts or risks associated with the mitigation or alternatives considered)

A description and assessment of the mitigation measures for each potential impact identified in the impact assessment process is provided by the following sections.

Possible mitigation measures include:

- Avoid and control through implementation of EMPr mitigation measures (e.g. speed limit enforcement & vehicle maintenance);
- Avoidance and control through preventative measures (e.g. site security, code of conduct);
- Avoid and control through implementation of preventative measures (e.g. monitoring, communication with landowners, emergency response procedures);
- Avoid through implementation of suitable progressive rehabilitation and soil management;
- Avoid and control through implementation of EMPr mitigation measures (e.g. Spill prevention, Hydrocarbon Storage);
- No invasive prospecting activities to be undertaken within 100m of a watercourse.
- Avoiding ground water pollution
- Where drinking water/ livestock watering boreholes are to be affected then the advice of a geohydrologist should be sought with regards to the need for plugging and casing of the prospecting boreholes.
- Remedy through clean-up and waste disposal; and
- Avoid and control through implementation of preventative measures (e.g. location of toilets, spill prevention, waste management).

14 STATEMENT MOTIVATING THE ALTERNATIVE DEVELOPMENT LOCATION WITHIN THE OVERALL SITE

(Provide a statement motivating the final site layout that is proposed)

The specific locations of intrusive drilling activities will be confirmed during Phase 1 of the Prospecting Work Programme. All infrastructure to be developed will be mobile and temporary. It is recommended that all activities take place away from the waterbodies, ESA 30m buffer to be maintained and there should be no clearing of sensitive vegetation. Negotiations and agreements will be made with the respective landowners to use any existing infrastructure like access roads. Negative impacts identified above will be mitigated through implementation of the proposed mitigation measures as detailed in the EMPr. Where negative impacts cannot be avoided, rehabilitation will be undertaken.

The impacts of the development alternative are considered of medium to low significance and would be further reduced to low should the implementation of the proposed mitigation measures be done accordingly.

15 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 were identified during the environmental impact assessment process and (ii) an assessment of the significance of each issue and risk and an indication of the extent to which the issue and risk could be avoided or addressed by the adoption of mitigation measures).

Approach to the EIA

An Environmental Impact Assessment (EIA) is a good planning tool. It identifies the environmental impacts of a proposed development and assists in ensuring that a project will be environmentally acceptable and integrated into the surrounding environment in a sustainable way.

The Basic Impact Assessment for this project complies with the National Environmental Management Act (1998) (as amended) and the NEMA EIA Regulations (2014) and guidelines of the Department of Environmental Affairs (DEA). The guiding principles of an EIA are listed below.

Guiding principles for an EIA

The EIA must take an open participatory approach throughout. This means that there should be no hidden agendas, no restrictions on the information collected during the process and an open-door policy by the proponent. Technical information must be communicated to stakeholders in a way that is understood by them and that enables them to meaningfully comment on the project.

There should be ongoing consultation with interested and affected parties representing all walks of life. Sufficient time for comment must be allowed. The opportunity for comment should be announced on an on-going basis. There should be opportunities for input by specialists and members of the public. Their contributions and issues should be considered when technical specialist studies are conducted and when decisions are made.

Information gathering

Early in the Basic Assessment process, the Environmental Assessment Practitioner (EAP) identified the information that would be required for the impact assessment and the relevant data were obtained. In addition, available information about the receiving environment was gathered from reliable sources, interested and affected parties, previous documented studies in the area and previous EIA Reports. The project team visited the site to gain first-hand information and an understanding of the existing operations and the proposed project.

Baseline Specialist Assessments

The following baseline studies have been conducted:

- Hydrogeology study
- Soil study

The findings and recommendations identified by the various specialist studies undertaken, were incorporated into the Basic Impact Assessment.

Legislative Framework

The legal requirements were described and assessed in detail.

Alternatives

Prospecting is conducted in phases, where the activities and location of drilling are dependent on the previous phase. Therefore, the specific locations and extent of soil sampling and core drilling cannot be as yet confirmed.

Description and assessment of impacts identified

A comprehensive list of all potential impacts of the prospecting as identified by the EAP and the specialists, are provided and are assessed.

Environmental Management Programme

An Environmental Management Programme containing mitigation, management and monitoring measures and specifying roles and responsibilities was compiled with specialist input and are included in this report.

Stakeholder engagement

Registered interested and affected parties including relevant organs of state, are consulted with during the process. All their comments will be formally responded to and incorporated into the Final Basic Assessment Report and Environmental Management Programme that will be submitted to the competent authority.

16 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)

Potential impacts that may be caused by the proposed development will be identified using input from the following:

- Views of I&APs;
- Existing information;
- Baseline Specialist investigations;
- Site visit with the project team; and
- Legislation.

The following potential major direct, indirect and cumulative impacts were identified:

- Air pollution (dust, gaseous emissions), Land pollution;
- Water pollution (surface water, groundwater and wetlands);
- Land degradation, land-use and capability impacts;
- Ecological degradation;
- Land pollution;
- Aesthetic, pollution;
- Increased noise levels;

Table 22: Potential environmental impacts and mitigation measures.

Potential environmental impacts and sources	Measures to prevent, mitigate, minimise or manage the impacts
Impact: Air pollution (dust, gaseous emissions) Source: Establishment of camp site, movement of vehicles and drill rigs,	<ul style="list-style-type: none"> Dust suppression measures will be implemented and the area will be sprayed with water. A low-speed limit (30 km/h) will be imposed to reduce dust generation. All equipment and vehicles will be equipped with the manufacturers' standard exhaust systems which will reduce emissions. Waste burning will not be allowed on site.
Impact: Water pollution (surface water, groundwater and wetlands) Source: Spillages from machines on site	<p>Prospecting activities will not be conducted within a 100 m radius from a dam, river, stream, wetland or any water body and the following will be ensured:</p> <ul style="list-style-type: none"> Control and manage storm water Prevent soil erosion and keep the water channel clean Monitor the ground water
Impact: Land degradation, land-use and capability Source: Poor waste management	<ul style="list-style-type: none"> Completed boreholes will be rehabilitated and re-vegetated. Areas which do not form part of drilling site will not be disturbed Prospecting will be conducted in an environmentally sustainable manner. One of the prospecting objectives is to turn the area into other land use/s after closure. Waste material will be properly managed
Impact: Ecological degradation Source: Uncontrolled vehicle movement and poor rehabilitation	<ul style="list-style-type: none"> Disturbed biodiversity will be restored after closure. Indigenous species will be used to re-vegetate the area. No animals will be killed and collection of firewood will not be allowed. Movement of vehicles will be restricted to designated area only.
Impact: Land pollution Source: Lack of proper waste management	<ul style="list-style-type: none"> It is anticipated that a small amount of domestic waste will be generated by workers. Such waste materials will be kept in waste bins which will be disposed of on a regular basis at the registered waste disposal site. The same will apply to office waste. Any spillages which may occur will be investigated and immediate action will be taken. Significant spills (>35

	<p>l) of any hazardous substance will be recorded and reported to the environmental personnel, DWA, DMRE and any other relevant authorities.</p> <ul style="list-style-type: none"> • Scraps will be kept in designated areas prior delivery to the scrap yard. • All machinery will be serviced off site and also inspected for any leaks.
<p>Impact: Aesthetic, pollution</p> <p>Source: Machinery</p>	<ul style="list-style-type: none"> • The visual impact will be of temporary nature. • The surrounding trees and dense vegetation will also serve as the screen to the prospecting area.
<p>Impact: Noise</p> <p>Source: Vehicle movements and drill rigs</p>	<ul style="list-style-type: none"> • The operation will comply with the provisions of the Mine Health and Safety Act, 1996 (Act 29 of 1996) and its regulation as well as other applicable legislations regarding noise control. • Employees will be supplied with ear plugs. All prospecting vehicles are equipped with silencers and maintained in a road worthy condition. • All work will be carried out between 06:00 and 18:00. This will allow landowners and occupiers to have some respite from noise.

Table 23: Activity and potential impact in each phase.

Activity	Description	Affected environment	Potential impact
Prospecting phase			
Uploading of access roads	Access roads that already exist will be upgraded.	Soil	Increased erosion of soils due to the removal of vegetation.
		Natural vegetation	Destruction and removal of natural vegetation during site clearance.
		Surface water	Siltation of surface run-off due to soil erosion.
		Air quality	Dust emission due to wind erosion.
Transportation of equipment	The drilling operation will involve transportation of equipment to the project area.	Soil	Soil compaction due to the repetitive movement on gravel roads.
		Interested and Affected Parties	Damage to roads caused by movement of heavy vehicles and continual use of vehicles moving to and from the site.
		Air quality	Increased dust emissions due to entrainment of dust particles by the movement and operation of construction equipment.
Construction of surface infrastructure.	This will involve vegetation clearing and topsoil removal to construct a site offices, a change house, toilet, etc.	Soil	Permanent compaction of soil in areas of infrastructure construction
		Land capability	Decreased land capability due to damage to the natural soil structure, soil loss through wind and water erosion and leaching of soil nutrients.
		Natural vegetation	Disturbance of vegetation could result in soil erosion due to exposed soils.
		Surface water	Altered surface flow dynamics around surface infrastructure and potential contamination of surface water due to fluid spillage.
		Groundwater	Groundwater contamination due to infiltration of contaminated water.
		Air quality	Dust from construction vehicles on gravel and secondary roads.
Soil Removal and Stockpile	It is assumed that the topsoil thickness averages 0.5 m over the disturbed area.	Topography	Alteration of local topography and disturbance of natural drainage lines.
		Visual	Creation of stockpiles alters the visual quality of the landscape.
		Soil	Damage to the natural soil structure due to soil handling, removal and mixing of soil

	Approximately 93 000 m ³ of topsoil will be removed.		types and horizons. Removal of vegetation causes a change in the water runoff characteristics of the site and increases probability of soil erosion. This leads to the loss of topsoil and an increase of siltation in the streams and rivers with the runoff carrying sediment. Leaching of soil nutrients during long-term stockpiling.
		Land capability	Decreased land capability due to damage to the natural soil structure, soil loss through wind and water erosion and leaching of soil nutrients.
		Natural vegetation	Damage to natural vegetation due to deposition of dust emitted during the tipping and stockpiling, restricting photosynthesis.
		Animal life	Direct impacts on threatened fauna species, habitat disturbance and destruction, and disruption of birds nesting, foraging or roosting in the area.
		Surface water	Altered surface flow dynamics due to alterations in the onsite topography and increase of siltation in the streams and rivers with the runoff carrying sediment.
		Air quality	Dust emissions due to wind erosion during tipping of soil onto trucks and stockpiles, and exposure of stockpiles to wind erosion, and increased dust generation.
		Noise	Increase of noise of hauling trucks to topsoil stockpile site.
Placement of a fence	A temporary perimeter fence will be constructed around the exploration site which will be limited to the demarcated area to protect operations and prevent people and domestic animals from harm.	Animal life	Limitation of movement for domestic animals to grazing areas. This will prevent movement of domestic animals to demarcated areas, preventing injury.
		Interested and Affected Parties	The temporary fence could prevent access to communal agricultural fields. The fence will also serve as a safety measure, preventing access to possibly hazardous areas.
Storage of fuel	Diesel fuel use for drilling will be determined and the storage capacity will not be triggered	Soil	Soil contamination.
		Land capability	Decreased land capability due to contaminated soil.
		Natural vegetation	Damage to natural vegetation and loss due to hydrocarbon and chemicals spills.

	by the NEMA list of activities.	Animal life	Injury or loss of animals due to spillages of hydrocarbons, chemicals.
		Surface water	Contamination of surface water due to the spillage of hydrocarbons, chemicals or contaminated run-off sourced from contaminated soil.
		Groundwater	Groundwater contamination due to the infiltration of surface water contaminated with spilled hydrocarbons, chemicals.
Use of hydrocarbons, chemicals	The use of hydrocarbons, chemicals will take place and these will be stored on site in designated storage areas.	Soil	Soil contamination.
		Land capability	Decreased land capability due to contaminated soil.
		Natural vegetation	Damage due to natural vegetation and loss due to hydrocarbon and chemical spills.
		Animal life	Injury or loss of animals due to spillages of hydrocarbons, chemicals.
		Surface water	Contamination of surface water due to the spillage of hydrocarbons, chemicals or contaminated run-off sourced from contaminated soil.
		Groundwater	Groundwater contamination due to the infiltration of surface water contaminated with spilled hydrocarbons, chemicals.
Access roads	Existing access roads will be used to access the site and transport equipment onto and off-site. If need be, they will be upgraded.	Soil	Upgrading of existing roads to processing plant may result in soil erosion and loss.
		Land capability	Decreased agricultural and grazing potential of surrounding land due to deposition of dust emitted by vehicle entrainment on haul roads
		Natural vegetation	Decreased agricultural and grazing potential of surrounding land due to deposition of dust emitted by vehicle entrainment on haul roads. Site clearing and removal of topsoil could lead to soil erosion and soil loss.
		Surface water	Altered surface flow dynamics due to topsoil removal, topographical alterations and increased surface runoff from cleared areas. Surface water runoff overhaul roads will cause erosion and siltation of surface water resources. Surface water runoff contamination due to hydrocarbon spills from vehicles travelling on haul roads.
		Air quality	Dust pollution caused by construction vehicles

		Noise	Elevated noise levels due to continuous vehicular movement on haul roads.
		Interested and Affected Parties	Damage to roads could impact safety of people and animals.
Decommissioning and closure			
Rehabilitation	All areas disturbed will be rehabilitated to its original state with the waste rock and topsoil stockpiles. Roads should be ripped or ploughed and fertilised if necessary, to promote re-growth of vegetation.	Soil and vegetation	Positive impact as topsoil will be replaced to enhance vegetation growth.
		Animal life	Positive impact as vegetation will re-establish itself and the natural Fauna will gradually return to the rehabilitated sites.

17 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): -

No Special Studies

18 ENVIRONMENTAL IMPACT STATEMENT

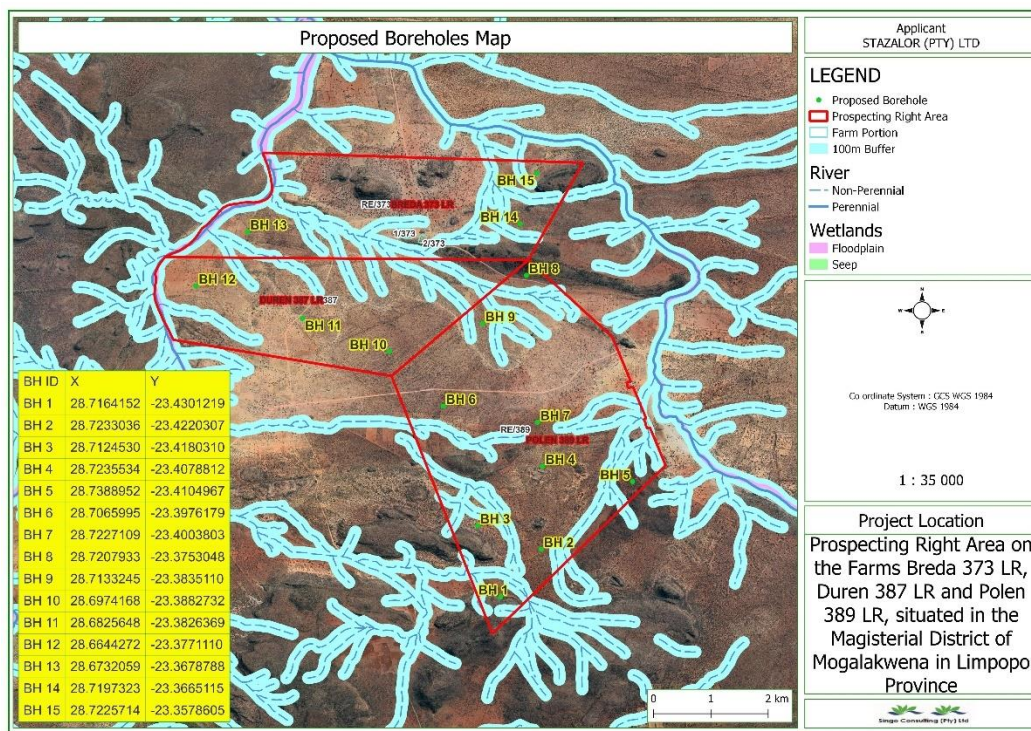
a) Summary of the key findings of the environmental impact assessment.

Key findings for the Basic Assessment

- The possible environmental impacts associated with the proposed prospecting are considered insignificant. A diamond core drill rig will be used for drilling.
- The main impacts are associated with the waterbodies particularly the perennial & non perennial rivers traversing the project area. The affected areas will be buffered to prevent any activities from taking place that may result in detrimental effects upon these denoted sensitive areas.
- The Ecological Support areas (ESAs) will be avoided

b) 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)



c) SUMMARY OF THE POSITIVE AND NEGATIVE IMPACTS AND RISKS OF THE PROPOSED ACTIVITY AND IDENTIFIED ALTERNATIVES;

Table 24: Summary of positive and negative impacts

Negative	<p>No concerns in terms of community health as all possible traces of waste and ore will be disposed of appropriately during prospecting. The following negative impacts may occur:</p> <ul style="list-style-type: none"> Noise: State-of-the-art drilling equipment will be used to minimise noise. Drilling will be conducted during office hours to limit disturbance of nearby residences. Invasion of privacy: Land access agreements will be signed before prospecting commences. This will limit unnecessary invasion.
Positive	<ul style="list-style-type: none"> Discovery of an economically viable mineral resources Employment contributing to the economy Positive contribution to the South African Gross Domestic Product Concurrent rehabilitation during Prospecting Activities

19 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 objective of the EMPr include:

- Providing enough information for the prospecting activities to prevent and avoid unnecessary social and environmental impact.
- Providing a prospecting plan, guidance and guidelines to conduct prospecting with little to no impact on the environment.
- Reducing impacts by implementing realistic operational management measures like imposing restrictions on the time of day when drilling can take place.

 The desired outcomes of the aforementioned objectives include:

- Implementing a drilling programme that does not impact sensitive environmental feature
- Implementing a drilling programme with the consent of the landowner

- Ensuring that all temporary impacts are reduced.
- Rehabilitating the area after drilling to its original (or better) state.
- Reducing noise by operating during office hours and giving the nearby residence peace and quiet.
- Managing water and soil pollution through containment.
- Managing ecological degradation by implementing pollution prevention measures, minimising land clearing and restricting working hours.
- Identifying impacts to inform planning, execution and rehabilitation. During the planning phase, identifying of such impacts is vital to implement and mitigate during construction of the site office and accommodation, as well as during drilling, rehabilitation and closure.

Impact management objectives

Soils: Prevent soil degradation by establishing effective rehabilitation measures.

Dust: Establish cost-effective measures like spraying of working areas to reduce dust.

Vegetation: Limit flora removal to the footprint area and mitigate against it as far as possible.

Animal life: Limit fauna removal to the footprint area and mitigated against it as far as possible.

Visual impacts: Limit the visual impact of the proposed activity and mitigate against it as far as possible.

20 ASPECTS FOR INCLUSION AS CONDITIONS OF AUTHORISATION

(Any aspects which must be made conditions of the Environmental Authorisation)

The following aspects are recommended to be included as conditions in the Environmental Authorisation:

- The EMPR is a contractual document and must be implemented at all times during the prospecting phase;
- An independent environmental control officer (ECO) must be appointed to monitor the implementation of the EMPR and audit reports to be kept by the applicant;
 - All contractors and employees of Stazalor (Pty) Ltd must be made aware of the EMPR and its requirements as well as the impact of not implementing the measures of the EMPR;

- Copies of the EMPR, Integrated Environmental Authorisation and any emergency procedures and method statements, must be kept on site and be available on request of the Competent Authority.

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

(Which relate to the assessment and mitigation measures proposed)

- All information provided to the environmental team, by the applicant and I&APs was correct and valid at the time that it was provided;
- The investigations undertaken by specialists during the BA process, indicate the development site as suitable and technically acceptable, except for the western portion, which is sensitive and recommended that prospecting not take place
- It is not always possible to involve all I&APs individually, however, every effort has been made to involve as many affected stakeholders as possible;
- The information provided by the applicant and specialists was accurate and unbiased; and
- The scope of this investigation is limited to assessing the environmental impacts associated with the prospecting activity.

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

a) Reasons why the activity should be authorised or not

In general, it is recognised that the proposed prospecting activities have the potential to pose various risks to the environment as well as to the residents or businesses in the surrounding area. However, based on the findings of this BA documented in this report, all impacts can be mitigated to insignificant levels.

This report shows that the proposed development has the potential to provide socio-economic benefits to the local and regional communities. The EAP therefore recommends that the proposed activities be approved on condition that the EMPR is strictly implemented and monitored for compliance and that the northern portions of the study area are excluded from prospecting.

Not implementing the prospecting activities will result in a loss of information on mineral reserves present on the study area. Should economically feasible reserves exist on the study area and the applicant cannot prospect, the opportunity to utilise the reserves for future mining and the minerals will be sterilised and resultant socio-economic benefits will be lost.

The proposed prospecting activities have the potential to have a negative impact on the ecological environment as well as the social environment of the area. These impacts, however, can potentially be prevented, minimised, mitigated and managed to low and very low levels, as shown through the impact assessment.

b) Conditions that must be included in the authorisation

- The EMPr is a contractual document and must be implemented at all times during the prospecting phase;
- An independent environmental control officer (ECO) must be appointed to monitor the implementation of the EMPr and audit reports to be kept by the applicant;
- All contractors and employees of Stazalor (Pty) Ltd must be made aware of the EMPr and its requirements as well as the impact of not implementing the measures of the EMPr;
- Copies of the EMPr, Environmental Authorisation and any emergency procedures and method statements, must be kept on site and be available on request of the Competent Authority.

23 PERIOD FOR WHICH THE ENVIRONMENTAL AUTHORISATION IS REQUIRED

This Environmental Authorisation is required for a period of 5 years

24 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).

Please refer to the EMPr in Part B of this document.

25 FINANCIAL PROVISION

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

CALCULATION OF THE QUANTUM							
Applicant: Evaluator:		Stazalor (Pty) Ltd Takalani Rakuambo		Ref No.: Date:		DMRE REF: LP 30/5/11/2/ (13837) PR Jan-22	
No.	Description	Unit	A Quantity	B Master Rate	C Multiplication factor	D Weighting factor 1	E=A*B*C*D Amount (Rands)
1	Dismantling of processing plant and related structures (including overland conveyors and powerlines)	m3	0	17,4	1	1	0
2 (A)	Demolition of steel buildings and structures	m2	0	238,71	1	1	0
2(B)	Demolition of reinforced concrete buildings and structures	m2	0	351,79	1	1	0
3	Rehabilitation of access roads	m2	300	42,72	1	1	12816
4 (A)	Demolition and rehabilitation of electrified railway lines	m	0	414,61	1	1	0
4 (A)	Demolition and rehabilitation of non-electrified railway lines	m	0	226,15	1	1	0
5	Demolition of housing and/or administration facilities	m2	0	477,42	1	1	0
6	Opencast rehabilitation including final voids and ramps	ha	0	242984,15	1	1	0
7	Sealing of shafts adits and inclines	m3	0	128,15	1	1	0
8 (A)	Rehabilitation of overburden and spoils	ha	0	166847,44	1	1	0
8 (B)	Rehabilitation of processing waste deposits and evaporation ponds (non-polluting potential)	ha	0	207805,47	1	1	0
8 (C)	Rehabilitation of processing waste deposits and evaporation ponds (polluting potential)	ha	0	603565,59	1	1	0
9	Rehabilitation of subsided areas	ha	0	139709,6	1	1	0
10	General surface rehabilitation	ha	0,9	132171,31	0,01	1	1189,54179
11	River diversions	ha	0	132171,3	1	1	0
12	Fencing	m	0	150,77	1	1	0
13	Water management	ha	0	50255,25	1	1	0
14	2 to 3 years of maintenance and aftercare	ha	0	17589,34	1	1	0
15 (A)	Specialist study	Sum	0	0	1	1	0
15 (B)	Specialist study	Sum	0	0	1	1	0
						Sub Total 1	14005,54179
1	Preliminary and General		1680,665015	weighting factor 2 1			1680,665015
2	Contingencies			1400,554179			1400,554179
						Subtotal 2	17086,76
SIGN DATE						VAT (15%)	2563,01
Takalani Rakuambo 2022/01/12						Grand Total	19650

25.1 Explain how the aforesaid amount was derived

An amount of R19 650.00 is required to manage and rehabilitate the environment. The financial provision amount was calculated utilising the methodology as prescribed by the Guideline Documents for the Evaluation of the Quantum of Closure Related Financial Provision Provided by a Mine issued by the DMRE.

25.2 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).

Stazalor (Pty) Ltd herewith confirms both its capacity and willingness to make the financial provision required should the prospecting right be granted. Work will be approved on a phase-by-phase basis, dependent on the results obtained in the previous phase i.e. although prospecting work may be provided for financially in the budget for a specific year, it will only take place if justified.

26 SPECIFIC INFORMATION REQUIRED BY THE COMPETENT AUTHORITY

- a) 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: -**

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

(Provide the results of Investigation, assessment, and evaluation of the impact of the mining, bulk sampling or alluvial diamond prospecting on any directly affected person including the landowner, lawful occupier, or, where applicable, potential beneficiaries of any land restitution claim, attach the investigation report as an Appendix).

Potential impacts on landowners, land occupiers, communities or individuals or competing land uses in the area include:

- Potential soil pollution which may result from any hydrocarbon spills where heavy machinery and vehicles are parked such as the hard park area because they contain large volumes of lubricating oils, hydraulic oils, and diesel to run. There is always a chance of these breaking down and/or leaking;
- Contamination of stormwater runoff and groundwater, caused by chemicals such as hydrocarbon-based fuels and oils or lubricants spilled from heavy vehicles and machinery and fuel storage area.
- Visual impacts: Visibility from sensitive receptors / visual scarring of the landscape as a result of the prospecting activities.
- Nuisance and health risks caused by an increase in the ambient noise level as a result of noise and vibration impacts associated with the operation of vehicles, machinery and equipment.
- Increased dust pollution due to vegetation clearance and vehicles driving on gravel roads and drilling.
- Gaseous emissions from vehicles and machinery may cause an impact on ambient air quality.
- Generation of additional general waste, litter and building rubble and hazardous waste.
- Minor impact caused by need for services i.e. water, electricity and sewerage systems during the prospecting phase causing additional strain on natural resources and service infrastructure.

- Minor change in traffic patterns as a result of traffic entering and exiting the site on the surrounding road infrastructure and existing traffic.
- Nuisance, health and safety risks caused by increased traffic on and adjacent to the study area including cars, and heavy vehicles.
- Possibility of prospecting activities and workers causing veld fires, which can potentially cause injury and or loss of life to workers and surrounding landowners, visitors and workers.
- Increased risk to public and worker safety: If not fenced off, the public and workers may fall into excavated areas and trenches.
- Potential creation of very limited extent short term employment opportunities for the local community, during the prospecting phase.
- Multiplier effects on local economy will be positive, but very limited in extent and only short term.

Mitigation measures are included in this report, as well as the EMPR.

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

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

Whilst there is no knowledge of heritage resources within the proposed prospecting area care will be taken to avoid any sensitive heritage resources that may otherwise be identified during Prospecting. Where graves or fossils are identified proposed boreholes will be moved to avoid features of this type. If fossils or graves are discovered, the relevant authorities will be immediately notified and drilling will be stopped in this area.

27 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 subregulation 22(2)(h), exist. The EAP must attach such motivation as Appendix 4).

The proposed drilling activities requested as part of this authorization authorisation is the only current viable manner in which a mineral resource can be identified and used to generate a SAMREC and/or JORC- compliant resource which is a minimum requirement to determine whether it is viable to invest in a future mine.

PART B:

ENVIRONMENTAL MANAGEMENT PROGRAMME

28 DRAFT ENVIRONMENTAL MANAGEMENT PROGRAMME

28.1 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).

Herewith, it is confirmed that the requirement for the provision of the details and expertise of the EAP are already included in PART A, Section 1(a) of this report.

28.2 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).

Herewith, it is confirmed 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.

28.3 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 should be avoided, including buffers).

Refer to section 18 above

28.4 Description of Impact management objectives including management statements

28.4.1 Determination of closure objectives

(Ensure that the closure objectives are informed by the type of environment described).

The prospecting activities are dependent on the preceding phase (non-invasive). Prospecting is conducted in phases, where the activities and location of drilling are

dependent on the previous phase. Therefore, the specific locations and extent of soil sampling and diamond core drilling cannot as yet be confirmed. Mapping of prospecting activities can also not be conducted.

The closure objectives include:

- Ensure that there are no safety risks associated with the drill boreholes through drill hole capping and backfilling;
- Rehabilitate any pollution that occurred through hazardous spills or waste materials and remove the source of the pollution;
- Establish an area that is not susceptible to soil erosion;
- Re-vegetate disturbed areas with endemic plant species that occur naturally within the area.

28.4.2 Volumes and rate of water use required for the operation

A total of 1000L of water will be used per day on maximum drilling production day and a total of approximately R20 000 L will be used for all the proposed 10 boreholes.

28.4.3 Has a water use licence been applied for?

No Water Use Licence has been applied for, since no water extraction and diversion will be done from any water source. All water used on site will be transported to site by a water tank for the sole purpose of this project. This water will be bought from the municipality or licenced water supplier that sells potable water or treated industrial water for which a water sale agreement will be provided before work commences and is submitted to the DMRE.

28.5 Impacts to be mitigated in their respective phases

Table 25: Impacts to be mitigated

Activities	Phase	Scale of Disturbance	Mitigation Measures	Compliance with Standards	Time Period for Implementation
Site clearance	Construction Operation	0.6 ha, short term and localized	<ul style="list-style-type: none"> • Demarcation of sensitive areas in consultation with relevant specialists and ECO; • Utilise local labour if possible; • Minimise removal of vegetation as far as possible; • Identification and relocation of protected species by a qualified ecologist (and application of the relevant biodiversity permits where required); • Minimize dust generation; • Limit vehicle access; • Implement alien vegetation management; • Ongoing identification of risks and impacts; • Emergency preparedness; • Monitoring and review; and • Avoid disturbance of fauna as much as possible, especially bird nesting sites. 	NEMA MPRDA NEMBA NEMAQA Dust regulations NWA DWAF Best Practice Guidelines	Throughout Construction and operation

Site access	Construction Operation	478,018 ha, short term and localized	<ul style="list-style-type: none"> • All employees and visitors to the site must undergo a site induction which shall include basic environmental awareness and site-specific environmental requirements (e.g. site sensitivities and relevant protocols/procedures). This induction should be presented or otherwise facilitated by the Contractors EO/Mine EO wherever possible. • Landowners/lawful occupiers must be notified prior to accessing properties. A date and time that is suitable to landowners/lawful occupiers and is reasonable to the applicant should be negotiated and agreed upon. • The number, identity of workers, work location and work to be done must be provided to the landowner/lawful occupier prior to going on site. • Consideration must be taken by the applicant and/or contractors when on site not to interfere with the existing land uses and practices. 	NEMA OHS & MHSA	Throughout Construction and operation
Establishment of site infrastructure	Construction	short term and localized	<ul style="list-style-type: none"> • Minimise physical footprint of construction; • Ensure construction is consistent with occupational health and safety requirements; • Minimise vegetation clearance; • Ensure proper and adequate drainage; • Minimise waste and control waste disposal; • Fencing of all drill sites with security access control and warning signs; • Establish waste storage areas for recycling; • Ensure adequate containment of waste to prevent pollution; • Minimise dust generation; • Limit vehicle access to approved access roads; • Prepare contingency plans for spillage 	NEMA MPRDA NEMBA NEMAQA Dust regulations NWA DWAF Best Practice Guidelines NHRA	Throughout Construction and operation

Activities	Phase	Size and Scale of Disturbance	Mitigation Measures	Compliance with Standards	Time Period for Implementation
Storage of construction vehicles	Construction and Operation	short term and localized	<ul style="list-style-type: none"> Any equipment that may leak, and does not have to be transported regularly, must be placed on watertight drip trays to catch any potential spillages of pollutants. The drip trays must be of a size that the equipment can be placed inside it; Drip trays must be cleaned regularly and shall not be allowed to overflow. All spilled hazardous substances must be collected and adequately disposed of at a suitably licensed facility; and Compacting of soil must be avoided as far as possible, and the use of heavy machinery must be restricted in areas outside of the proposed exploration sites to reduce the compaction of soils. 	NWA DWAf BPG	Throughout Construction and operation
Transportation/ access to and from drill sites	Construction and Operation	short term and localized	<ul style="list-style-type: none"> Where possible, drill sites should be located along existing access roads to reduce the requirement for additional access roads; Any new temporary access routes to a drill site should result in minimal disturbance to existing vegetation; Prior to accessing any portion of land, the Applicant must enter into formal written agreements with the affected landowner. This formal agreement should additionally stipulate landowners special conditions which would form a legally binding agreement; 	NEMA NEMBA CARA NEMAQA Dust Regulations Road Traffic Act	Throughout Construction and operation

Activities	Phase	Size and Scale of Disturbance	Mitigation Measures	Compliance with Standards	Time Period for Implementation
Activities	Phase	Size and Scale of Disturbance	Mitigation Measures	Compliance with Standards	Time Period for Implementation
			<ul style="list-style-type: none"> Under no circumstances may the contractor damage any farm gates, fences, etc.; On-site vehicles must be limited to approved access routes and areas on the site so as to minimize excessive environmental disturbance to the soil and vegetation on site, and to minimize disruption of traffic (where relevant); Adequate spill prevention and clean-up procedures should be developed and implemented during the prospecting activities. Should any major spills of hazardous materials take place, such should be reported in terms of the Section 30 of the NEMA. All construction and vehicles using public roads must be in a roadworthy condition and their loads secured. They must adhere to the speed limits and all local, provincial and national regulations with regards to road safety and transport; Waste generated on site must be recycled as far as possible. Recyclable waste must not be stored on site for excessive periods to reduce risk of environmental contamination; Damage caused to public roads as a result of the construction activities must be repaired in drill muds, formation water (if encountered), etc., would constitute waste and must be classified and ranked in terms of relevant legislation for correct disposal; and All measures should be implemented to minimize the potential of dust generation. 		
Waste management	Construction and Operation	Short-medium term, localized	<ul style="list-style-type: none"> A Waste Management System must be implemented, and provide for adequate waste storage (in the form of enclosed containers) and disposed of in a safe and responsible manner so as to prevent pollution of the environment or harm to people or animals. Appropriate measures must be implemented to prevent spillage and appropriate steps must be taken to prevent pollution in the event of a spill; 	DWAF Minimum requirements for waste disposal NEMWA	Throughout Construction and operation
Storage of hazardous substances	Construction and Operation	short term and localized	<ul style="list-style-type: none"> All hazardous substances (e.g. fuel, grease, oil, brake fluid, hydraulic fluid) must be handled, stored and disposed of in a safe and responsible manner so as to prevent pollution of the environment or harm to people or animals. Appropriate measures must be implemented to prevent spillage and appropriate steps must be taken to prevent pollution in the event of a spill; 	NWA NEMWA DWAF BPG NEMA	Throughout Construction and operation
			and way that does not pose any danger of pollution even during times of high rainfall.		

Activities	Phase	Size and Scale of Disturbance	Mitigation Measures	Compliance with Standards	Time Period for Implementation
Prospecting boreholes: 10 sites ,with a footprint of 600 m² each	Construction and Operation Decommissioning	0,9 ha, short term	<ul style="list-style-type: none"> • Vegetation clearing for prospecting sites should be kept to a minimum in order to reduce the disturbance footprint; • Compaction of soil must be avoided as far as possible, and the use of heavy machinery must be restricted in areas outside of the proposed prospecting sites to reduce the compaction of soils; • All measures should be implemented to minimize the potential of dust generation; • Noise attenuation on engines must be adequate, and the noisy activities must be restricted as far as is possible to times and locations whereby the potential for noise nuisance is reduced; • When working near to a potential sensitive area, the contractor must limit the number of simultaneous activities to the minimum; • Ensure proper storage of fuels; • On-site vehicles must be limited to approved access routes and areas on the site so as to minimize excessive environmental disturbance to the soil and vegetation on site, and to minimize disruption of traffic; • Workforce should be kept within defined boundaries and to agreed access routes. • No invasive prospecting activities to be undertaken within 100m of a watercourse. • Should any watercourse be affected, then the necessary water use licences should be 	SANS 10103 ECA Noise Regulations NEMAQA Dust Regulations NWA	Throughout Construction and operation and decommissioning

Activities	Phase	Size and Scale of Disturbance	Mitigation Measures	Compliance with Standards	Time Period for Implementation
			<ul style="list-style-type: none"> obtained from the Department of Water and Sanitation. No ablution of site laydown areas is to be located within 100m of a watercourse. Where drinking water/ livestock watering boreholes are to be affected, and where a pollution event occurs at a particular borehole, then the advice of a geohydrologist should be sought with regards to the need for plugging and casing of the prospecting boreholes. 		
Prospecting	Construction and Operation	0,6 ha, short term	Workers must be easily identifiable by clothing and ID badges. Workers should carry with them, at all times a letter from the applicant stating their employment, title, role and manager contact details.	OHS and MHSA	Throughout Construction and operation
Resource definition drilling	Planning Phase Construction and Operation	short term	Local residents (landowners and directly adjacent landowners) should be notified of any potentially noisy activities or work and these activities should be undertaken at reasonable times of the day. This work should not take place at night or on weekends;	MPRDA Regulations GN R527 SANS 10103	Planning Phase Throughout Construction and operation

Activities	Phase	Size and Scale of Disturbance	Mitigation Measures	Compliance with Standards	Time Period for Implementation
			<ul style="list-style-type: none"> minimize excessive environmental disturbance The contractor must attempt to restrict noisy activities as far as is possible to times and locations where it is less likely to cause disturbance The design and construction of the DMR must be completed prior to the start of the Applicant, appoint an independent and competent person to undertake borehole examination Dust suppression methods must be applied when necessary to restrict the visual impact of dust emissions Should any fugitive emissions be detected, then the recommendations of the must be undertaken throughout the drilling activity up to the decommissioning of the well Any spills of hydrocarbons or fluids used during operation must be cleaned up immediately; Airborne chance drilling sums over bedrock to the construction phase, these sums must be handled in accordance with the requirements of the National Heritage Resources Act, 1999 (Act 25 of 1999) (NHRA); and No prospecting boreholes should be drilled in the immediate vicinity of existing private boreholes; If a possible heritage site (including graves) or artefact is discovered during construction, all operations in the vicinity of the discovery (at least 30 m) must be stopped and a qualified specialist must be engaged to assess the site and recommend appropriate actions. Depending on the type of site that can include initiating a grave relocation process, documentation of structures or archaeological excavations. Topsoil must be adequately stripped to the correct depth and stored separately from subsoils; Should fossil remains be discovered in the during any phase of construction, either on the surface or exposed by the excavations, the EGO must be used in all areas where such occurrences are identified. Such occurrences must be handled immediately. Such occurrences must be handled immediately. discovery must be reported to the relevant authorities (e.g. SAHRA) and the EGO should alert SAHRA so that appropriate mitigation (e.g. 	ECA Noise Regulations NEMAQA Dust Regulations NWA DWAF BPG NHRA	

Activities	Phase	Size and Scale of Disturbance	Mitigation Measures	Compliance with Standards	Time Period for Implementation
			<ul style="list-style-type: none"> recording, sampling or collection) can be taken by a professional palaeontologist. The Final BAR and appendices must be submitted to SAHRA for record purposes; If any evidence of archaeological sites or remains (e.g. remnants of stone-made structures, indigenous ceramics, bones, stone artefacts, ostrich eggshell fragments, charcoal, Chrome Ore, Cobalt, Copper Ore, Gold Ore, Phosphate Ore, Iron Ore, Lead, Molybdenum Ore, Nickel Ore, Platinum Group Metals, Rare Earths, Silver Ore, Vanadium Ore and Zinc Ore and ash concentrations), fossils or other categories of heritage resources are found during the proposed development, SAHRA must be alerted. If unmarked human burials are uncovered, the SAHRA Burial Grounds and Graves (BGG) Unit, must be alerted immediately. A professional archaeologist or palaeontologist, depending on the nature of the finds, must be contracted as soon as possible to inspect the findings. If the newly discovered heritage resources prove to be of archaeological or palaeontological significance, a Phase 2 rescue operation may be required subject to permits issued by SAHRA; and If the development receives an Environmental Authorisation (EA), SAHRA must be informed and all documents 		

			<p>pertaining to the EA must be uploaded to the SAHRIS Case file.</p>		
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Activities	Phase	Size and Scale of Disturbance	Mitigation Measures	Compliance with Standards	Time Period for Implementation
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Refuelling	Construction and Operation	Short term and localized	<ul style="list-style-type: none"> • Refuelling may only take place within demarcated areas that is subject to appropriate spill prevention and containment measures refuelling and transfer of hazardous chemicals and other potentially hazardous substances must be carried out so as to minimize the potential for leakage and to prevent spillage onto the soil; • Drip trays should be utilized in relevant locations during transfer so as to prevent such spillage or leakage. Any accidental spillages must be contained and cleaned up promptly. 	NWA DWAF BPG	Throughout Construction and operation
Maintenance and repair	Construction and Operation	Short term and localized	<ul style="list-style-type: none"> • Trucks, machinery and equipment must be regularly serviced to ensure they are in proper working condition and to reduce risk of leaks. All leaks must be cleaned up immediately using spill kits or as per the emergency response plan. For large spills a hazardous materials specialist shall be utilized; • Accidental hydrocarbon spillages must be reported immediately, and the affected soil should be removed, and rehabilitated or if this is not possible, disposed of at a suitably licenced waste disposal facility. 	NWA DWAF BPG NEMA	Throughout Construction and operation
Borehole Closure	Decommissioning and Closure	Short term and localized	<ul style="list-style-type: none"> • Where groundwater is encountered during drilling, all affected prospecting boreholes that will not be required for later monitoring or other useful purposes should be plugged and sealed with cement to prevent possible cross flow and contamination between aquifers; • Cement and liquid concrete are hazardous to the natural environment on account of the very high pH of the material, chemicals contained. 	NWA DWAF BPG	Throughout Decommissioning and Closure

Activities	Phase	Size and Scale of Disturbance	Mitigation Measures	Compliance with Standards	Time Period for Implementation
			<p>therein. As a result, the contractor shall ensure that:</p> <ul style="list-style-type: none"> • Concrete shall not be mixed directly on the ground; • The visible remains of concrete, either solid, or from washings, shall be physically removed immediately and disposed of as waste, (Washing of visible signs into the ground is not acceptable); and o All excess aggregate shall also be removed. 		
Removal of surface infrastructure	Decommissioning	Short term and localized	<ul style="list-style-type: none"> • All infrastructure, equipment, and other items used during prospecting will be removed from the site. • Compaction of soil must be avoided as far as possible. The use of heavy machinery must be restricted in areas outside of the proposed prospecting sites to reduce the compaction of soils. 	MPRDA Rehab Plan	Decommissioning
Removal of waste	Decommissioning	Small scale and localized	<ul style="list-style-type: none"> • Any excess or waste material or chemicals, including drilling muds etc. must be removed from the site and must preferably be recycled (e.g. oil and other hydrocarbon waste products). Any waste materials or chemicals that cannot be recycled must be disposed of at a suitably licensed waste facility. 	NWA DWAF BPG	Decommissioning

Activities	Phase	Size and Scale of Disturbance	Mitigation Measures	Compliance with Standards	Time Period for Implementation
Rehabilitation	Rehabilitation	All disturbed areas	<ul style="list-style-type: none"> • Restoration and rehabilitation of disturbed areas must be implemented as soon as prospecting activities are completed; • Sites must be restored to the original condition with vegetation cover (where applicable) equalling the surrounding vegetation cover; • All debris and contaminated soils must be removed and suitably disposed of; • Contours and natural surrounding must be reformed; • Natural drainage patterns must be restored; • All surface infrastructure on site must be removed; • Temporary access routes/roads must be suitably rehabilitated; and • Sites must be monitored by the ECO (including relevant specialist's inputs if, necessary) for adequate rehabilitation until the desired rehabilitation objectives have been achieved. 	MPRDA Rehab Plan NEMA	Rehabilitation
Consultation	Planning Phase Construction and Operation	Medium term, local	<ul style="list-style-type: none"> • Stakeholder engagement will continue throughout the prospecting activities to ensure the community and landowners are kept informed and allowed to raise issues. 	NEMA OHS and MHSA	Planning Phase Throughout Construction and Operation

Monitoring	Post-Operational	All rehabilitated areas	<p>The post-operational monitoring and management period following decommissioning of prospecting activities must be implemented by a suitable qualified independent party for a minimum of one (1) year unless otherwise specified by the competent authority.</p> <p>The monitoring activities during this period will include but not be limited to:</p> <ul style="list-style-type: none"> • Biodiversity monitoring; and • Re-vegetation of disturbed areas where required. <p>Provision must be made to monitor any unforeseen impact that may arise as a result of the proposed prospecting activities and incorporated into post closure monitoring and management.</p>	MPRDA Rehab Plan	Post-operation
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28.6 IMPACT MANAGEMENT ACTIONS AND OUTCOMES

Table 26: Summary of impact management actions and outcomes

Activity	Potential Impact	Aspects Affected	Phase	Mitigation Type	Standard to be Achieved
Site clearance	<ul style="list-style-type: none"> • Deterioration and damage to existing access roads and tracks; • Dust generation; • Clearance of vegetation; • Invasion by alien species; • Sedimentation • Erosion 	<p>Topography;</p> <p>Soil;</p> <p>Air Quality;</p> <p>Surface Water;</p> <p>Groundwater;</p> <p>Transportation</p>	<p>Construction</p> <p>Operation</p>	Avoid and control through implementation of EMP mitigation measures (e.g. speed limit enforcement, vehicle maintenance)	<p>NEMA</p> <p>NEMBA</p> <p>CARA</p> <p>Threatened or Protected Species (TOPS) regulations</p> <p>NEMAQA</p> <p>Dust regulations</p> <p>NWA</p> <p>DWAF best Practice Guidelines</p>

Activity	Potential Impact	Aspects Affected	Phase	Mitigation Type	Standard to be Achieved
Establishment of base camps and access	<ul style="list-style-type: none"> • Interference with existing land uses • Safety and security risks to landowners and lawful occupiers; • Deterioration and damage to existing access roads and tracks; • Dust generation; • Clearance of vegetation; • Pollution of soils • Contamination on surface and ground 	<p>Topography;</p> <p>Landform;</p> <p>Soil disturbance;</p> <p>Fauna and</p> <p>Flora;</p> <p>Air Quality;</p> <p>Surface Water;</p> <p>Groundwater;</p> <p>Socioeconomics</p>	<p>Construction</p> <p>Operation</p>	<p>Avoidance and control through preventative measures (e.g. communication with landowners, site access control)</p> <p>Remedy through application of mitigation measures in EMP</p>	<p>NEMA</p> <p>MPRDA</p> <p>NEMBA</p> <p>CARA</p> <p>Threatened or Protected</p> <p>Species (TOPS) regulations</p> <p>NEMAQA</p> <p>Dust regulations</p> <p>NWA</p> <p>DWAF best Practice Guidelines</p>

Activity	Potential Impact	Aspects Affected	Phase	Mitigation Type	Standard to be Achieved
Storage of construction vehicles	<ul style="list-style-type: none"> • Pollution of surface and groundwater resources from potential hydrocarbon spills; and • Compaction of soils 	Surface water; Groundwater; Soils.	Construction Operation	Avoid through implementation of EMP mitigation measures (e.g. communication with landowners) Control through implementation of ESMS	Protected Species (TOPS) regulations NEMAQA Dust regulations NWA DWAF best Practice Guidelines
Transportation to and from drill sites	<ul style="list-style-type: none"> • Soil compaction; • Disturbance and loss of fauna and flora, Wearing and tearing of existing roads and Dust generation from increased traffic. 	Soil disturbance; Fauna and Flora; Air quality.	Construction Operation	Avoid and control through implementation of EMP mitigation measures (e.g. speed limit enforcement, vehicle maintenance)	NEMA NEMBA CARA Threatened or Protected Species (TOPS) regulations NEMAQA

Activity	Potential Impact	Aspects Affected	Phase	Mitigation Type	Standard to be Achieved
Storage of hazardous substances	Potential hydrocarbon spills that could pollute surface and ground water resources.	Surface water; Groundwater.	Construction Operation	Avoid and control through implementation of EMP mitigation measures (e.g. speed limit enforcement, vehicle maintenance)	NEMA NEMBA NWA DWAf best Practice Guidelines
Waste management	Pollution of habitats and surrounding areas.	Pollution	Construction Operation	Avoid and control through implementation of EMP mitigation measures (e.g. speed limit enforcement, vehicle maintenance)	DWAf minimum requirement for waste disposal

Activity	Potential Impact	Aspects Affected	Phase	Mitigation Type	Standard to be Achieved
Prospecting boreholes	<ul style="list-style-type: none"> • Vegetation clearance; • Possible erosion; • Changes in drainage and surface hydrology; • Soil disturbance and compaction; • Emissions from vehicles; • Land use conflict; • Noise disturbance due to acoustic sources; • Dust generation; • Disturbance or damage of palaeontological resources; • Potential spills of hydrocarbons; • Influx of people; • Impact on groundwater 	Ecology; Topography; Access/footprint; Soil disturbance; Noise; Air Quality; Socio-economics; Groundwater	Construction Operation Decommissioning	Control through implementation of EMPR mitigation measures	SANS10103 ECA Noise Regulations NEMAQA Dust regulations NWA
Resource definition drilling	<ul style="list-style-type: none"> • Vegetation clearance • Removal of topsoil; • Changes in drainage and surface hydrology; • Drainage and soil contamination; • Land use conflict; • Dust generation; 	Air Quality; Noise; Surface water; Groundwater,	Operation	Control through implementation of EMPR mitigation measures	SANS10103 ECA Noise Regulations NEMAQA Dust regulations

Activity	Potential Impact	Aspects Affected	Phase	Mitigation Type	Standard to be Achieved	
	<ul style="list-style-type: none"> Disturbance of wildlife and communities in close vicinity; New access roads; Increased transportation; Damage to local infrastructures; Disturbance or damage of palaeontological resources; Influx of people; Waste water discharge; Spillage and leaks of hydrocarbons; Pollution or interplay between groundwater aquifers; Waste disposal. 				NWA DWAf best Practice Guidelines	
Refuelling	Potential hydrocarbon spills that could pollute soil or surface and/or groundwater resources.	Pollution; Surface water; Groundwater	Construction Operation	Control through implementation of EMP mitigation measures	NWA DWAf best Practice Guidelines	
Maintenance and repair	Potential hydrocarbon spills that could pollute surface and groundwater resources.	Pollution; Surface water; Groundwater	Construction Operation	Control through implementation of EMP mitigation measures	NWA	

Activity	Potential Impact	Aspects Affected	Phase	Mitigation Type	Standard to be Achieved
Borehole closure	<ul style="list-style-type: none"> • Pollution of groundwater resources; • Potential pollution of habitats with cement residue that may be exposed to runoff etc. 	Pollution; Groundwater	Decommissioning	Control through implementation of EMPr mitigation measures	NWA
Removal of surface infrastructure	<ul style="list-style-type: none"> • Soil compaction; • Pollution of soil and surrounding vegetation. 	Landform; Topography; Soils.	Decommissioning	Control through implementation of EMPr mitigation measures	MPRDA In accordance with Rehab plan
Rehabilitation	<ul style="list-style-type: none"> • Soil compaction; • Soil and Water contamination; • Erosion; • Change in drainage and surface hydrology; • Loss of habitat; and • Disturbance to wildlife and communities in close vicinity 	Topography Land use Soil disturbance Ecology Surface water Groundwater	Rehabilitation	Control through implementation of EMPr mitigation measures	MPRDA In accordance with Rehabilitation plan
Monitoring of rehabilitated sites	<ul style="list-style-type: none"> • Soil compaction; • Soil and Water contamination; • Erosion; • Disturbance to wildlife; and communities in close vicinity. 	Topography Land use Soil disturbance Ecology Surface water Groundwater	Post-operation	Control through adhering to monitoring requirements	MPRDA and regulations

29 FINANCIAL PROVISION

Determination of the amount of Financial Provision

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

The closure objectives include:

- Ensure that there are no safety risks associated with the drill boreholes through drill hole capping and backfilling;
- Rehabilitate any pollution that occurred through hazardous spills or waste materials and remove the source of the pollution;
- Establish an area that is not susceptible to soil erosion;
- Re-vegetate disturbed areas with endemic plant species that occur naturally within the area.

29.1 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 Programme will be subjected to a public consultation period, whereby I&APs are given 30 days to comment.

29.2 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 prospecting activities are dependent on the preceding phase (non-invasive). Prospecting is conducted in phases, where the activities and location of drilling are dependent on the previous phase. Therefore, the specific locations remains proposed. Mapping of prospecting activities can also not be conducted.

Due to the small extent and fairly short-term period of the prospecting activities and as shown in the Environmental Impact Assessment, the impacts will be of a low or very low significance. Rehabilitation will be conducted progressively and will include borehole capping and re-vegetation.

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

Due to the small extent and fairly short-term period of the prospecting activities and as shown in the Environmental Impact Assessment, the impacts will be of a low or very low significance. Rehabilitation will be conducted progressively and will include borehole capping and re-vegetation. Detailed mitigation measures are provided in the EMPR to ensure the closure objectives are met.

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

CALCULATION OF THE QUANTUM							
Applicant: Evaluator:		Stazalor (Pty) Ltd Takalani Rakuambo		Ref No.: Date:		DMRE REF: LP 30/5/1/1/2/ (13837) PR Jan-22	
No.	Description	Unit	A Quantity	B Master Rate	C Multiplication factor	D Weighting factor 1	E=A*B*C*D Amount (Rands)
1	Dismantling of processing plant and related structures (including overland conveyors and powerlines)	m3	0	17,4	1	1	0
2 (A)	Demolition of steel buildings and structures	m2	0	238,71	1	1	0
2(B)	Demolition of reinforced concrete buildings and structures	m2	0	351,79	1	1	0
3	Rehabilitation of access roads	m2	300	42,72	1	1	12816
4 (A)	Demolition and rehabilitation of electrified railway lines	m	0	414,61	1	1	0
4 (A)	Demolition and rehabilitation of non-electrified railway lines	m	0	226,15	1	1	0
5	Demolition of housing and/or administration facilities	m2	0	477,42	1	1	0
6	Opencast rehabilitation including final voids and ramps	ha	0	242984,15	1	1	0
7	Sealing of shafts adits and inclines	m3	0	128,15	1	1	0
8 (A)	Rehabilitation of overburden and spoils	ha	0	166847,44	1	1	0
8 (B)	Rehabilitation of processing waste deposits and evaporation ponds (non-polluting potential)	ha	0	207805,47	1	1	0
8 (C)	Rehabilitation of processing waste deposits and evaporation ponds (polluting potential)	ha	0	603565,59	1	1	0
9	Rehabilitation of subsided areas	ha	0	139709,6	1	1	0
10	General surface rehabilitation	ha	0,9	132171,31	0,01	1	1189,54179
11	River diversions	ha	0	132171,3	1	1	0
12	Fencing	m	0	150,77	1	1	0
13	Water management	ha	0	50255,25	1	1	0
14	2 to 3 years of maintenance and aftercare	ha	0	17589,34	1	1	0
15 (A)	Specialist study	Sum	0	0	1	1	0
15 (B)	Specialist study	Sum	0	0	1	1	0
Sub Total 1							14005,54179
1	Preliminary and General		1680,665015	weighting factor 2 1			1680,665015
2	Contingencies			1400,554179			1400,554179
Subtotal 2							17086,76
SIGN DATE						VAT (15%)	2563,01
Takalani Rakuambo 2022/01/12						Grand Total	19650

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

Stazalor (Pty) Ltd herewith confirms both its capacity and willingness to make the financial provision required should the prospecting right be granted. Work will be approved on a phase-by-phase basis, dependent on the results obtained in the previous phase i.e. although prospecting work may be provided for financially in the budget for a specific year, it will only take place if justified.

30 MECHANISMS FOR MONITORING COMPLIANCE WITH AND PERFORMANCE ASSESSMENT AGAINST THE ENVIRONMENTAL MANAGEMENT PROGRAMME AND REPORTING THEREON, INCLUDING H) MONITORING OF IMPACT MANAGEMENT ACTIONS

- Monitoring of Impact Management Actions
- Monitoring and reporting frequency
- Responsible persons
- Time period for implementing impact management actions
- 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
Desktop studies	N/A	N/A	N/A	N/A
Geophysics	N/A	N/A	N/A	N/A
Mapping	N/A	N/A	N/A	N/A
Site establishment and drilling	Visual impact	All areas exposed will be monitored for erosion	Project Manager	Weekly and after heavy winds and rain
	Dust generated	All areas exposed will be monitored for erosion	Project Manager	Weekly and after heavy winds and rain
	Noise	All areas where machinery will be operating	Operators and Project Manager	Daily
	Water and environmental pollution	All areas of operation	Operators and Project Manager	Daily
Post closure and rehabilitation	Rehabilitated areas	All rehabilitated areas	Environmentalist	Weekly, monthly and after heavy rain

31 INDICATE THE FREQUENCY OF THE SUBMISSION OF THE PERFORMANCE ASSESSMENT/ ENVIRONMENTAL AUDIT REPORT.

A Performance Assessment Review of the EMPr should be conducted annually and the environmental audit report will be submitted annually.

32 ENVIRONMENTAL AWARENESS PLAN

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

The environmental awareness plan will include the following:

- Induction of all staff and workers;
- Monthly 'toolbox' talks (awareness talks);
- Risk assessments for specific tasks with supervisors and staff involved in the task on a daily basis, or as often as the task is taking place.

The following principles and training will apply to the Environmental Awareness Plan (safety, health and environmental (SHE) training and the Environmental Management System (EMS) training):

- All personnel, including contactors, will as a minimum undergo general SHE induction and awareness training;
- The Safety, Health, Environmental and Quality (SHEQ) Manager will identify the SHE training requirements for all personnel and contractors. The training requirements will be recorded in a training needs matrix indicating particular training that must be undertaken by identified personnel and contractors. The training matrix will be administered by the Training Department; and Development of the Training Programme, which will include:
 - Job specific training – training for personnel performing tasks which could cause potentially significant environmental impacts;
 - Assessment of extent to which personnel are equipped to manage environmental impacts;
 - Basic environmental training;

- EMS training;
- Comprehensive training – on emergency response, spill management, etc;
- Specialised skills;
- Training verification and record keeping; and
- Periodic re-assessment of training needs, with specific reference to new developments, newly identified issues and impacts and associated mitigation measures.

32.2 General Awareness Training

- The HR Manager, together with the SHEQ Manager, will be responsible for the development of, or facilitating the development of, the required general SHE induction and awareness training. A general environmental awareness training module will be developed and integrated into the general induction programme. The general awareness
- training must include the Environmental Policy, a description of the environmental impacts and aspects and the importance of conformance to requirements, general responsibilities of personnel and contractors with regard to the environmental requirements and a review of the emergency procedures and corrective actions; and
- A Training Practitioner will conduct the general awareness training. The training presenter will keep a record of the details of all persons attending general awareness training. Such attendance registers shall indicate the names of attendants and their organisations, the date and the type of training received.

32.3 Specific Environmental Training

- Specific environmental training will be in line with the requirements identified in the training matrix; and
- Personnel whose work tasks can impact on the environment will be made aware of the requirements of appropriate procedures/work instructions. The SHEQ Manager will communicate training requirements to responsible supervisors to ensure that personnel and contractors are trained accordingly.

32.4 Training Evaluation and Re-training

- Effectiveness of the environmental training will be reflected by the degree of conformance to EMPR requirements, the result of internal audits and the general environmental performance achieved;
- Incidents and non-conformances will be assessed through the Internal Incident Investigation and Reporting System, to determine the root cause, including the possible lack of awareness/training;
- Should it be evident that re-training is required, the SHEQ Manager will inform the managers of the need and take the appropriate actions;
- General awareness training of all personnel shall be repeated every year; and
- The re-induction shall take into consideration changes made in the EMPR, changes in legislation, current levels of environmental performance and areas of improvement.

32.5 Emergency Procedures

- Emergency procedures, as relevant to this project, shall be implemented;
- The SHEQ Manager shall define emergency reporting procedures for the project;
- All personnel shall be made aware of emergency reporting procedures and their responsibilities;
- Any spills will be cleaned up immediately in accordance with relevant legislation; and
- Telephone numbers of emergency services, including the local firefighting service, shall be conspicuously displayed.

33 MANNER IN WHICH RISKS WILL BE DEALT WITH IN ORDER TO AVOID POLLUTION OR THE DEGRADATION OF THE ENVIRONMENT

There are several ways to avoid and minimise pollution, including environmental awareness, training, dust suppression, buffer zones, hunting avoidance and veld fire prevention.

Environmental awareness and training	Drilling teams must be trained and any other person who will be based on-site or come to site for the prospecting project must be briefed and inducted on site regulations, especially with regard to health, safety and environmental aspects.
Dust suppression	During construction, preparation and drilling, dust suppression must be exercised on the roads, drill holes and areas being excavated. The right amount of water must be applied to get the desired results.
Buffer zone	Roads, railway lines, water ways, ponds, rivers and wetlands must be avoided to minimise negative impact. Establishing a minimum buffer zone of 100 m around such a feature will reduce pollution and destruction thereof.
Avoid hunting	Hunting of any animals on site will be strictly prohibited
Avoid veld fires	Veld fires will not be permitted, as they easily get out of control and can destroy vegetation, livestock and property.

34 SPECIFIC INFORMATION REQUIRED BY THE COMPETENT AUTHORITY

(Among others, confirm that the financial provision will be reviewed annually)

No specific information has been required by the Competent Authority at this point in time.

35 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. ☒

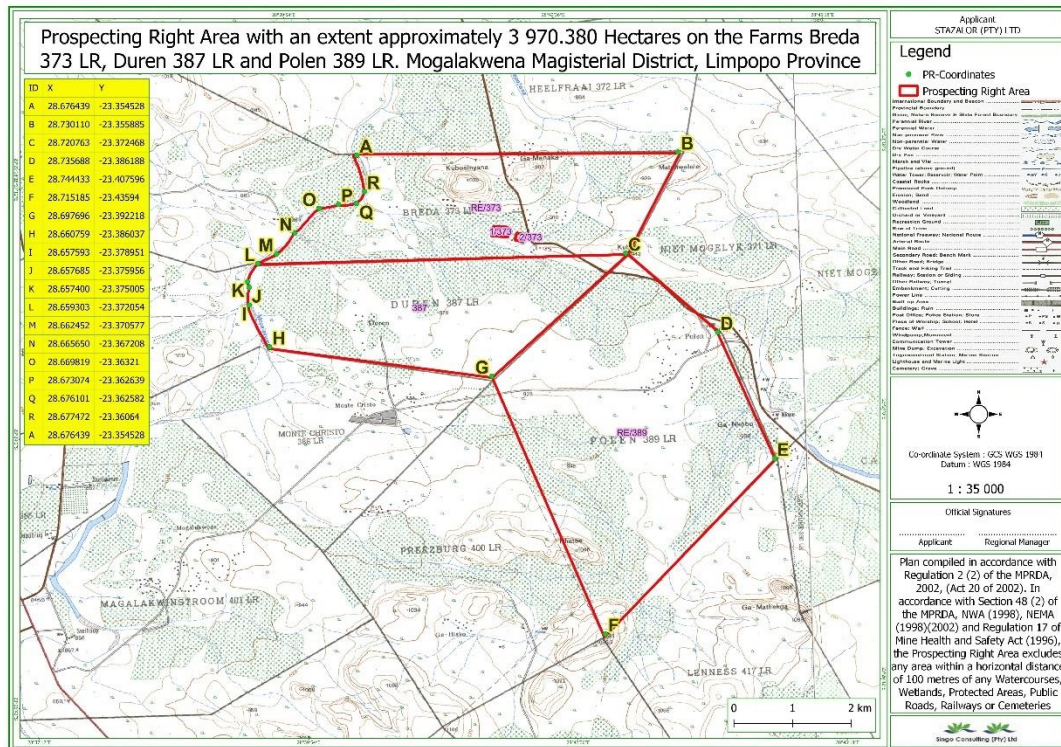
Signature of the environmental assessment practitioner:

Name of company:

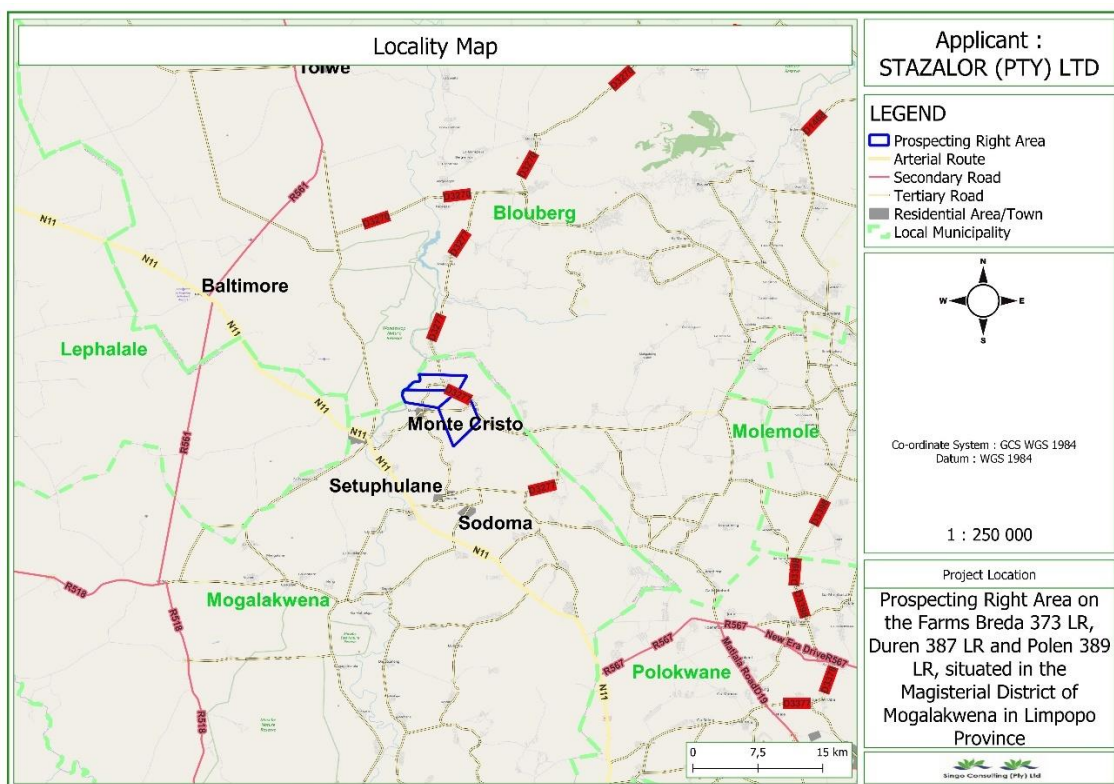
Date: January 2022

APPENDICES

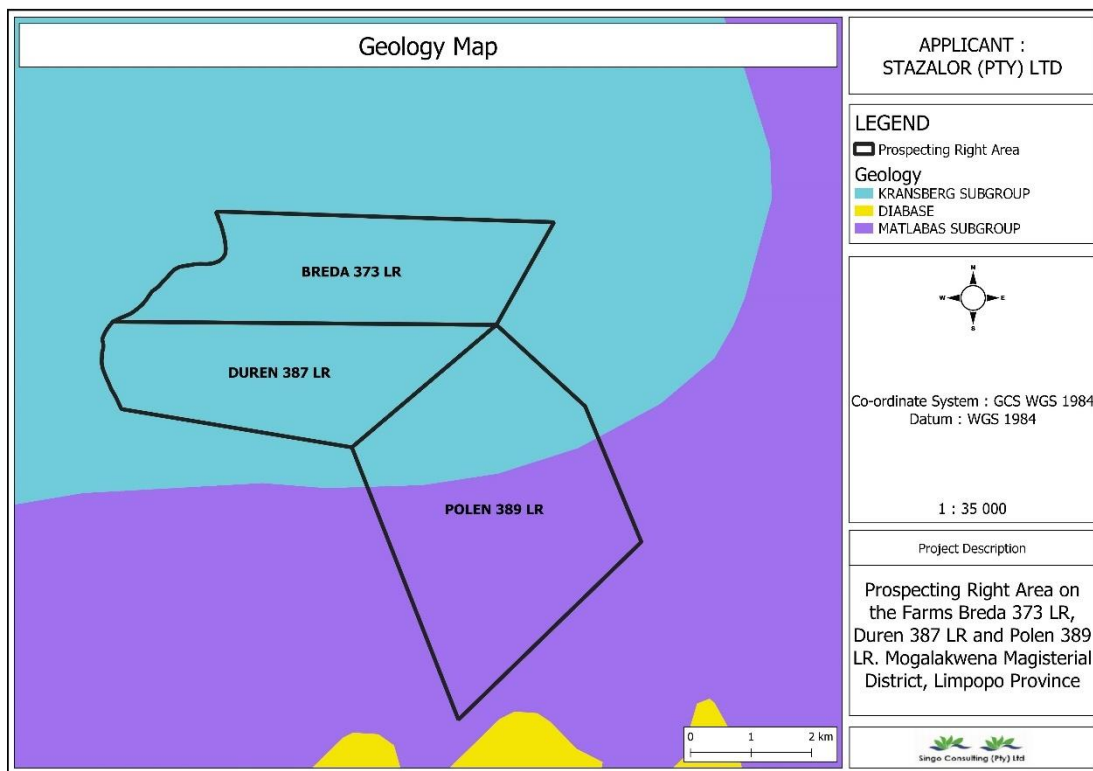
Appendix 1: Project Maps



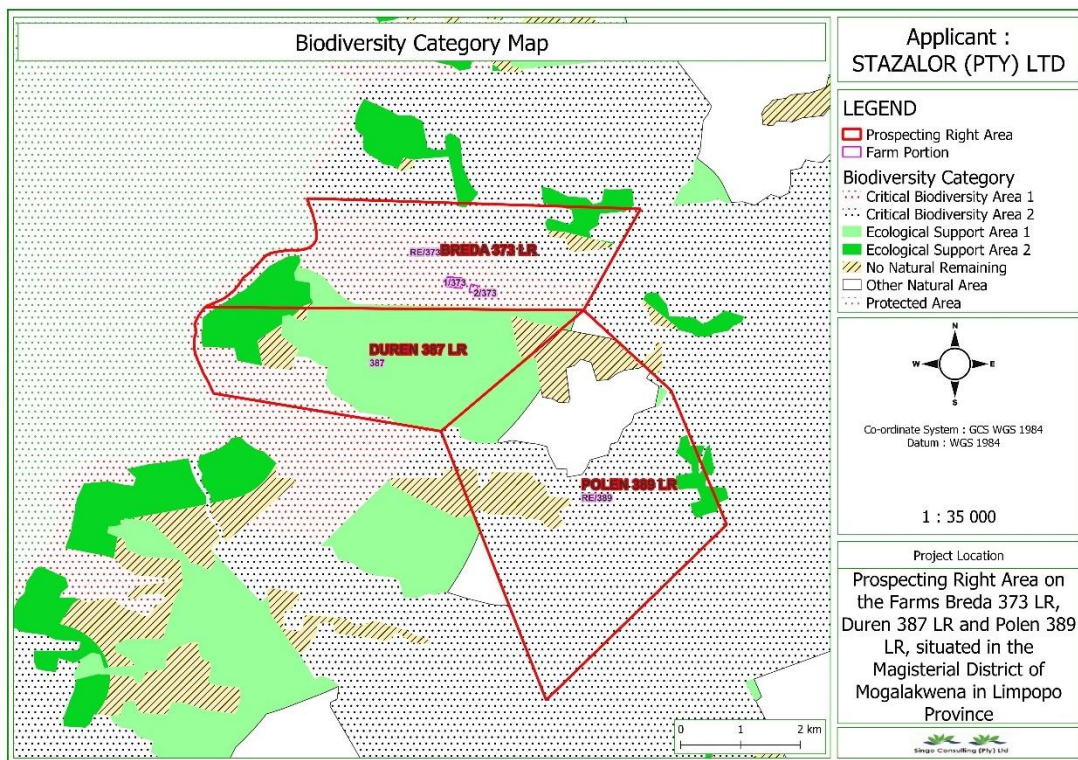
Regulation map



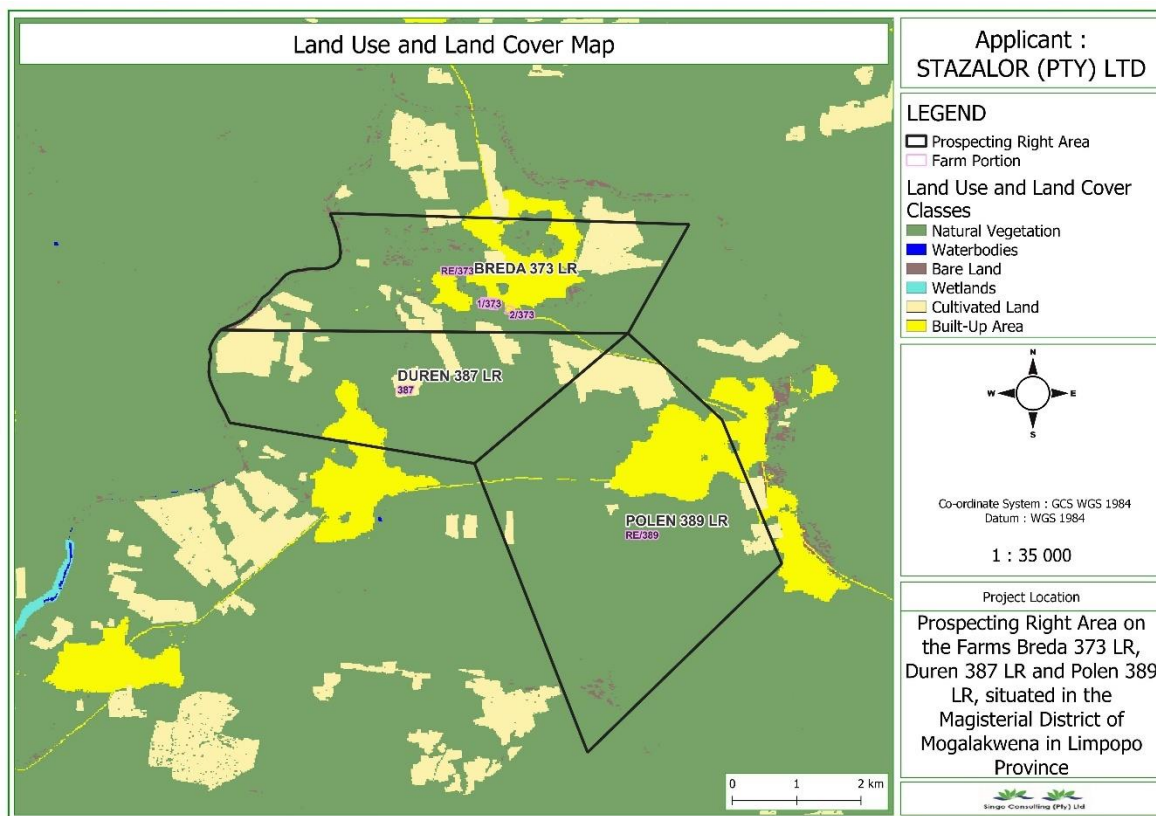
Locality map



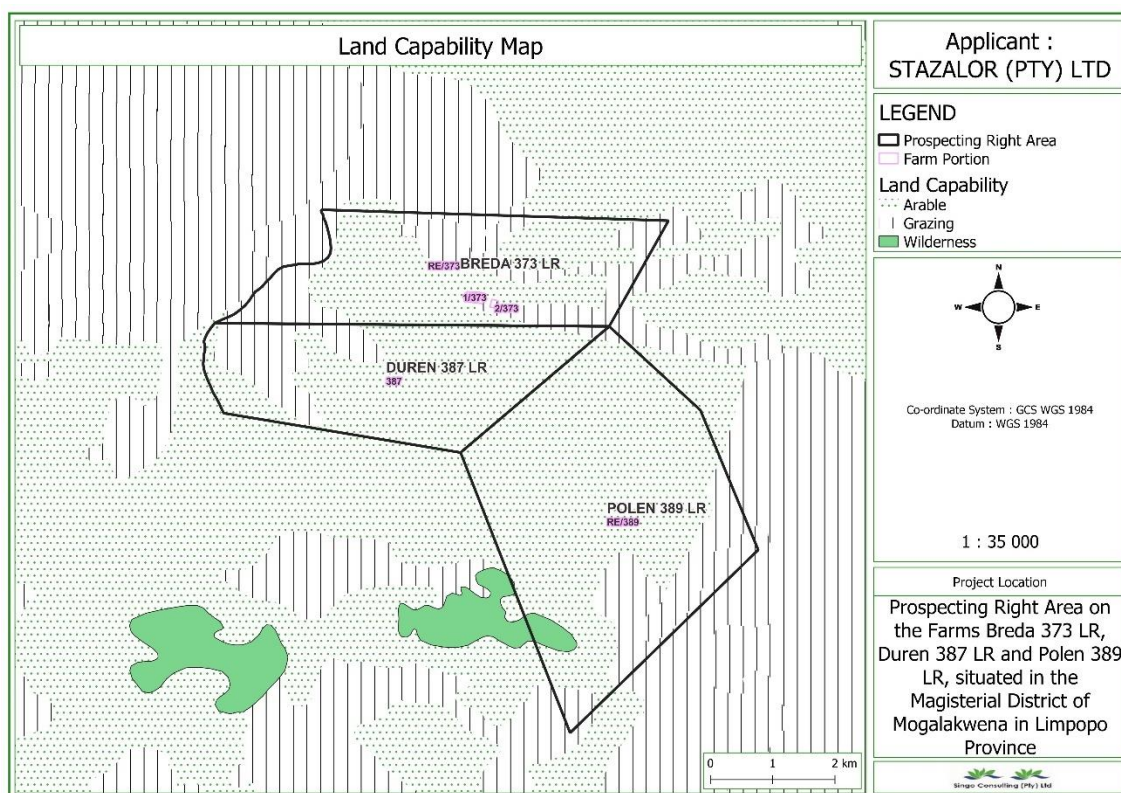
Geology Map



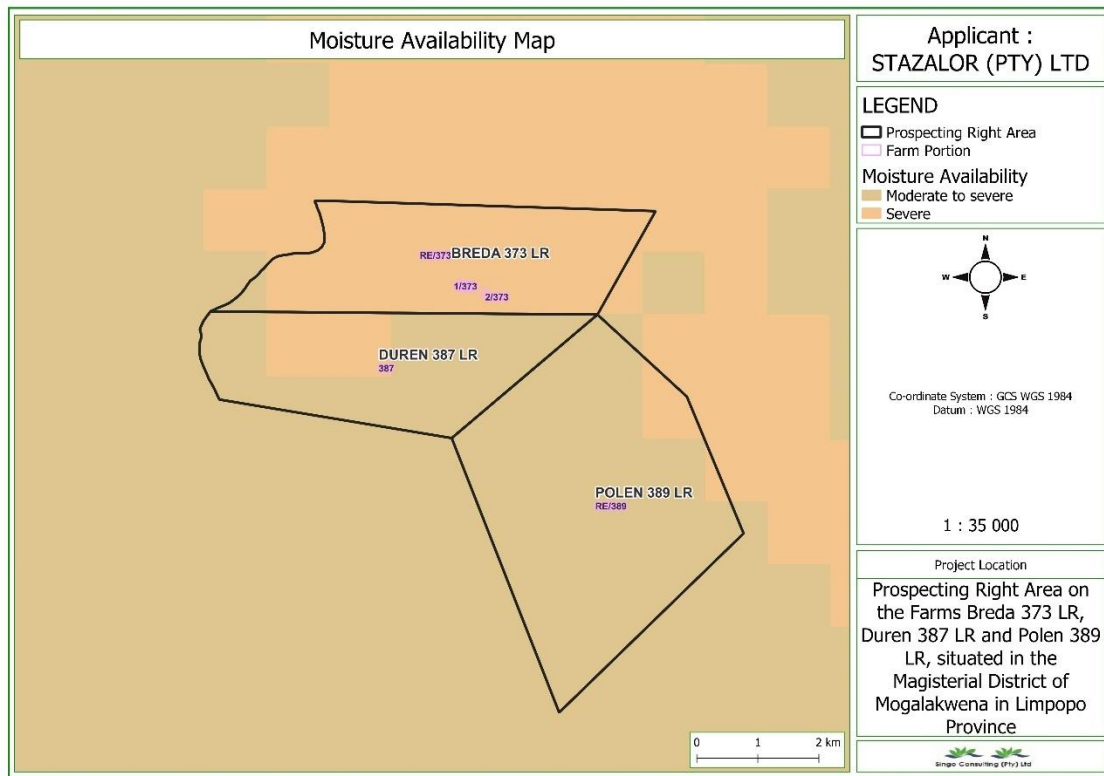
Biodiversity Map



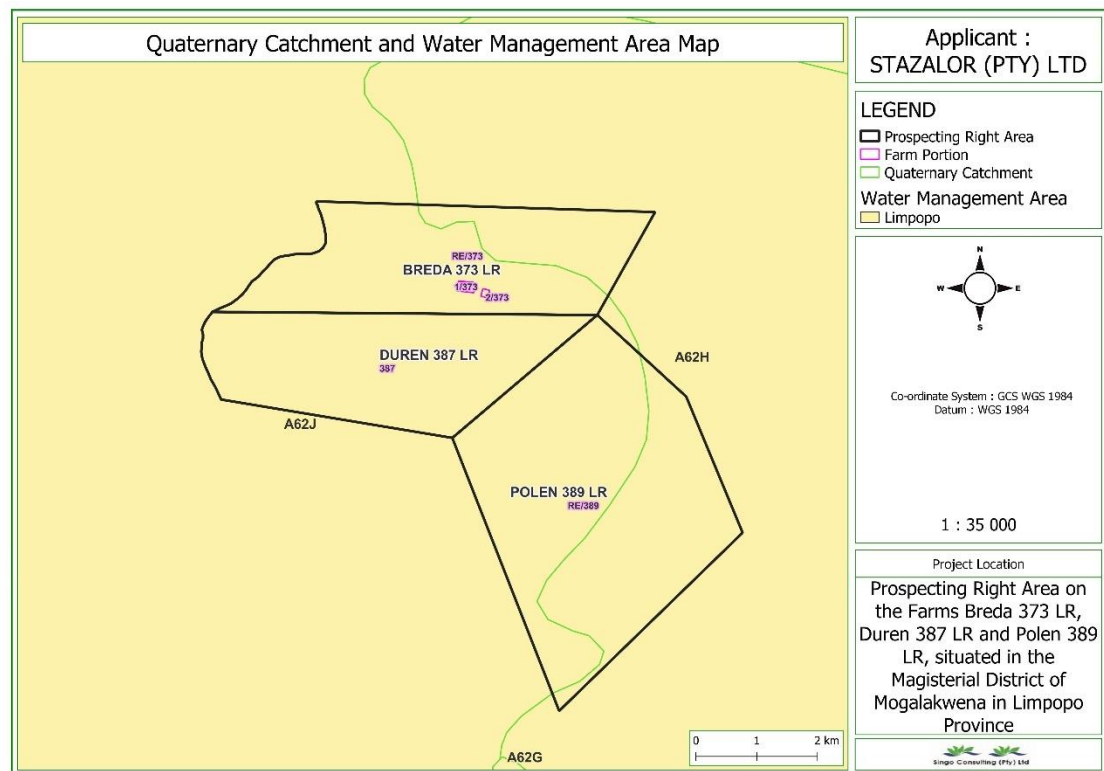
Land Use and Land Cover Classes



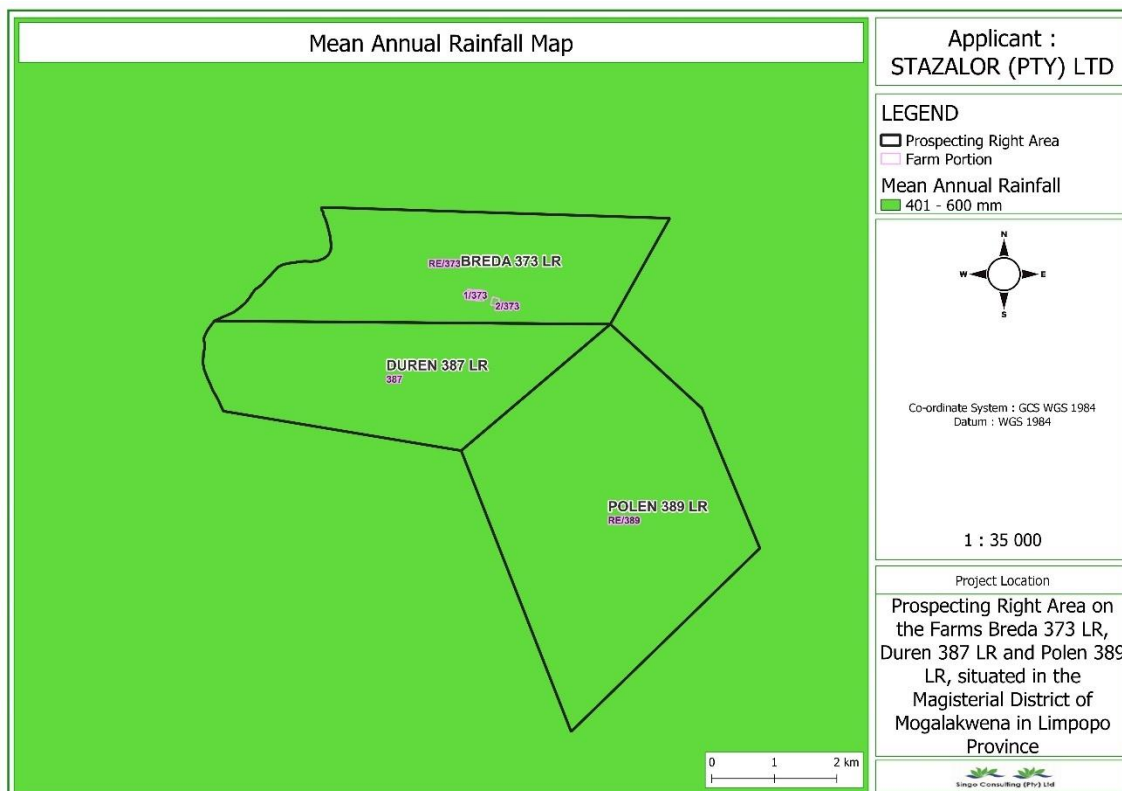
Land Capability



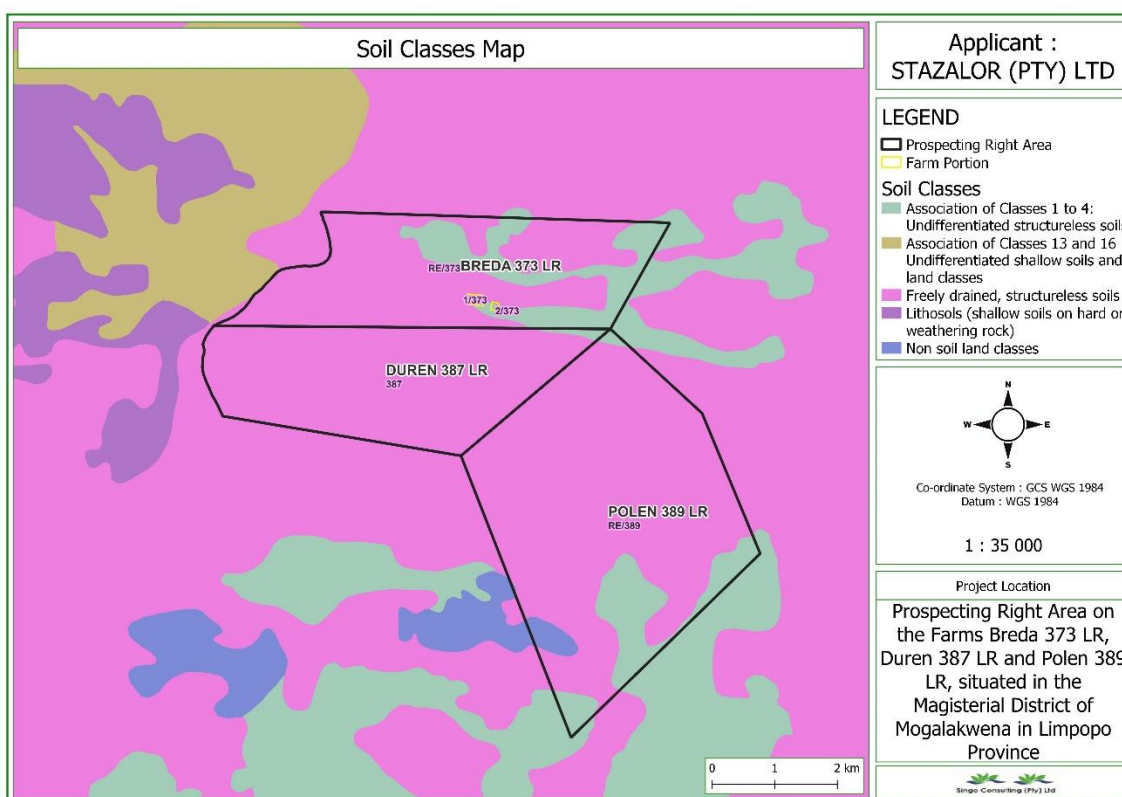
Moisture Availability



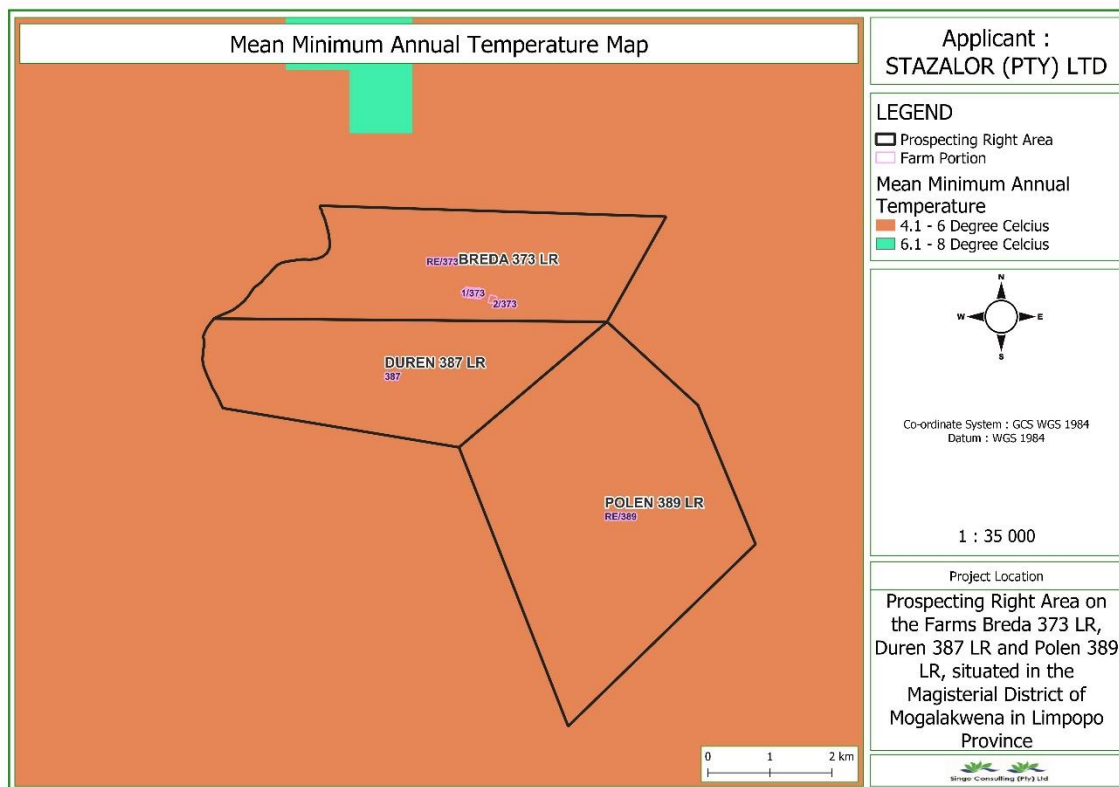
Quaternary Catchment Map



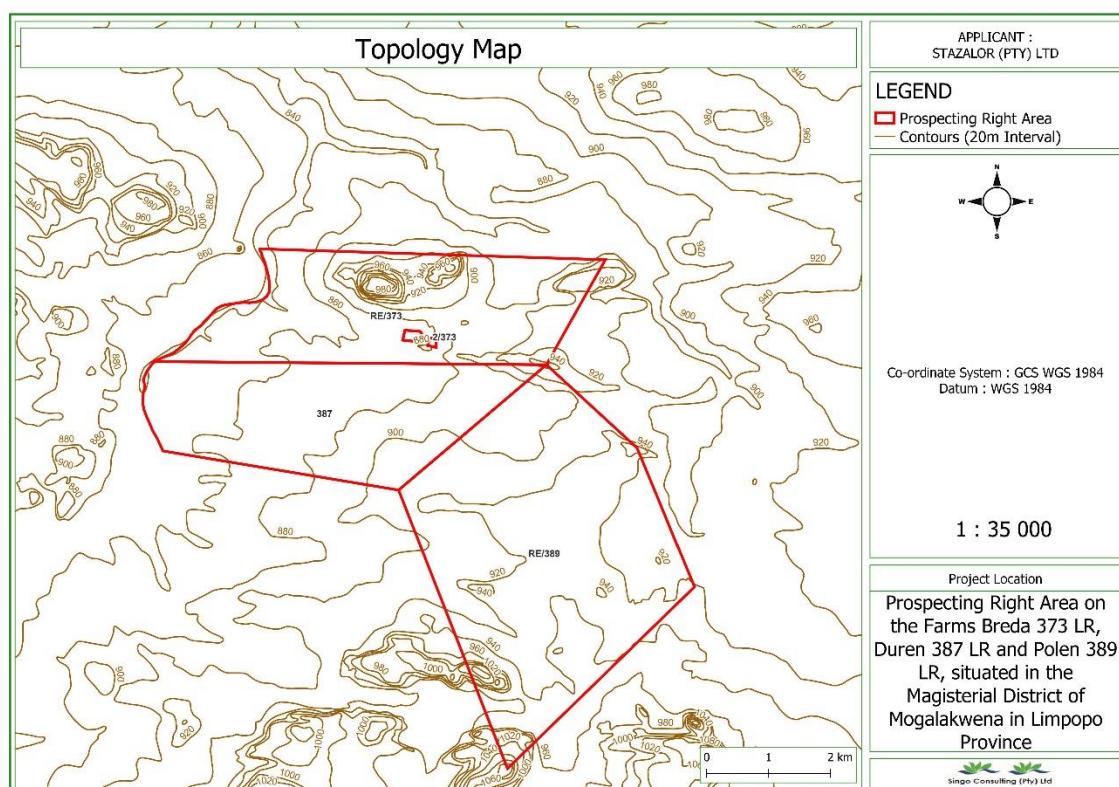
Rainfall Map



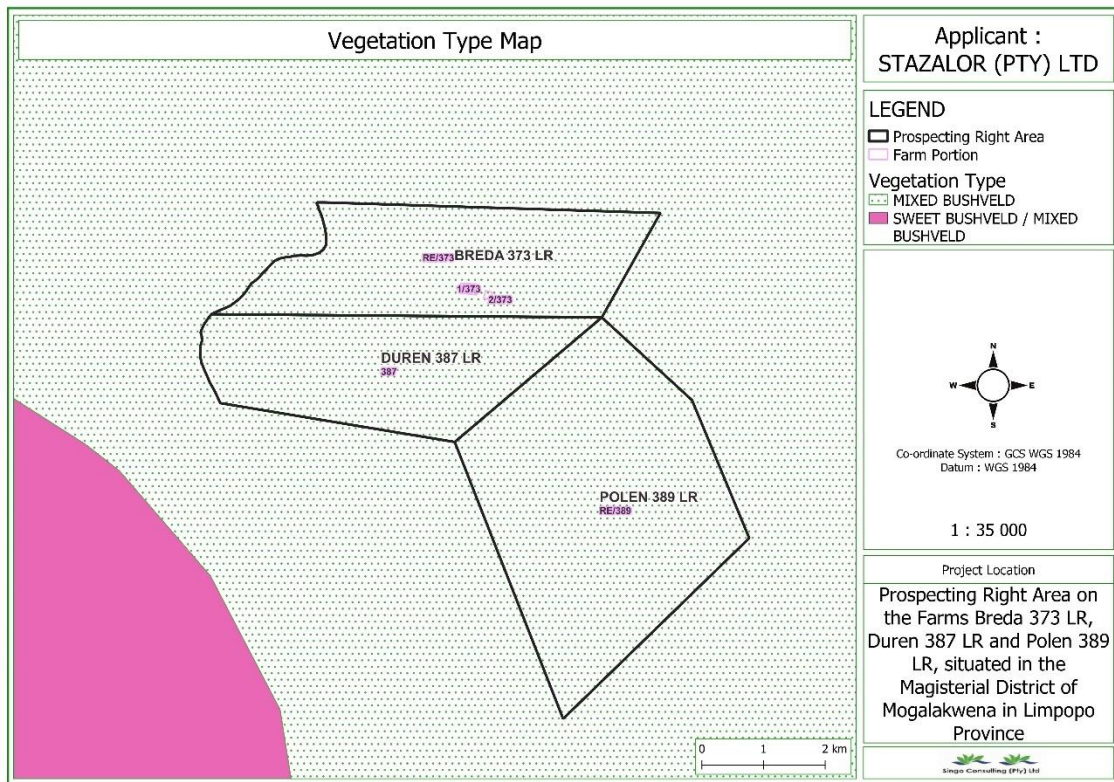
Soil Classes



Mean Minimum Annual Temperature



Topology Map



Vegetation Type Map

Appendix 2: Background Information Document (BID).

BACKGROUND INFORMATION DOCUMENT

Prepared by:

Proposed Prospecting Right Application for Chrome Ore, Cobalt, Copper Ore, Gold Ore, Phosphate Ore, Iron Ore, Lead, Molybdenum Ore, Nickel Ore, Platinum Group Metals, Rare Earths, Silver Ore, Vanadium Ore and Zinc Ore on Portion 1, Portion 2 and Remaining Extent of the Farm Breda 373 LR, of the Farm Duren 387 LR and on Remaining Extent of the Farm Polen 389 LR.



Sinao Consulting (Pty) Ltd

Prepared for:

STAZALOR (PTY)
LTD

MOGALAKWENA LOCAL MUNICIPALITIES, LIMPOPO PROVINCE.

INTRODUCTION AND THE PURPOSE OF THIS DOCUMENT

Singo Consulting (Pty) Ltd has been appointed as an independent Environmental Consultant by **Stazalor (Pty) Ltd** to conduct Environmental Impact Assessment (EIA), Compile Basic Assessment Report (BAR) & Environmental Management Programme report (EMPr) and to undertake Public Participation Process (PPP). This is done for processes of acquiring Environmental Authorization for the proposed Prospecting Right application on Portion 1, Portion 2 and Remaining Extent of the Farm Breda 373 LR, of the Farm Duren 387 LR and on Remaining Extent of the Farm Polen 389 LR, Situated within the Local Municipalities of Mogalakwena under Magisterial District of **Mogalakwena**, in Limpopo Province
DMRE Ref: LP 30/5/1/1/2/ 13837 PR.

The Purpose of this Background Information Document (BID) is to provide a perfunctory description of the project and outline EIA processes through BAR & EMPr to be followed and contributions from Stakeholders, Interested and Affected Parties (I&APs) on the issues related to the project in question, allowing comments and concerns to be raised.

Results of the EIA (BAR & EMPr), both negative and positive will be submitted and made available to the relevant Departments such as the Department of Mineral Resources & Energy and if requested, Environmental Affairs, Water and Sanitation, Landowners, and other interested stakeholders.

This Background Information Document therefore requests and invite I&APs to comment on the environmental, physical, social, and economic impacts associated with the proposed Prospecting Activities. Be assured that your comments are of great value as they ensure that relevant issues are taken into consideration.

Attached at the end of this document is a registration form, kindly complete it and send it back to **Ms Takalani Rakuambo** through given means of communication also attached there.

PROJECT DESCRIPTION

Prospecting Right Application has been submitted for the Purpose of prospecting Chrome Ore, Cobalt, Copper Ore, Gold Ore, Phosphate Ore, Iron Ore, Lead, Molybdenum Ore, Nickel Ore, Platinum Group Metals, Rare Earths, Silver Ore, Vanadium Ore and Zinc Ore on the properties mentioned above. This Proposed Prospecting Area, as seen in figure 1 and 2 below, is situated approximately 113 km North of Mokopane, approximately 116 km West of Dendron, approximately 70 km North-west of Tibane.

Prospecting activities will be undertaken over a period of five (5) years and are designed in phases, each phase conditional on the success of the previous phase. Both invasive and non-invasive methods will be implemented. Invasive are those activities which have footprint or cause harm (if not mitigated or managed properly) or those that have a physical impact on the environment, while non-invasive do not cause any harm or effects on the environment.

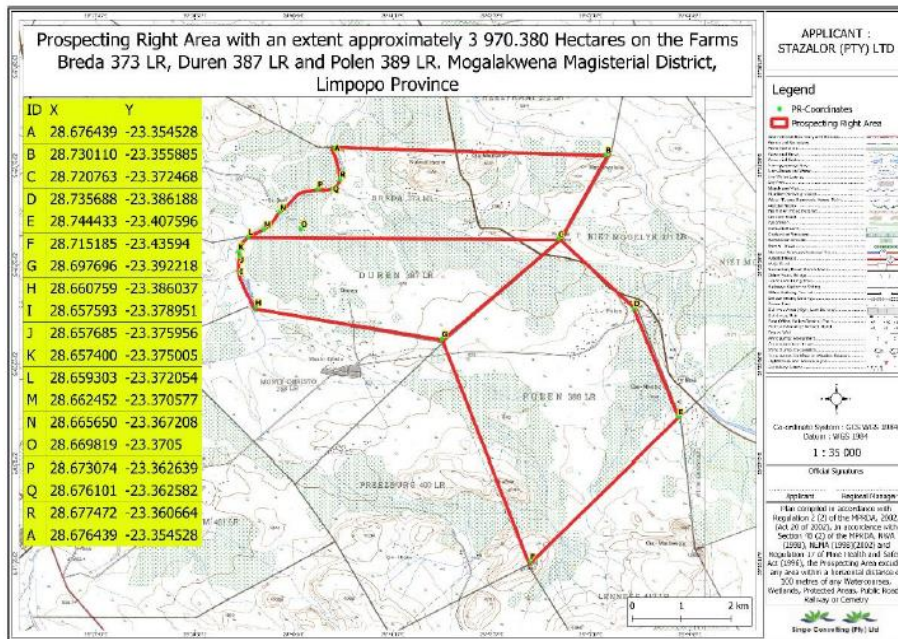


Figure 1: Regulation 2(2) Map of the Proposed Project Area.

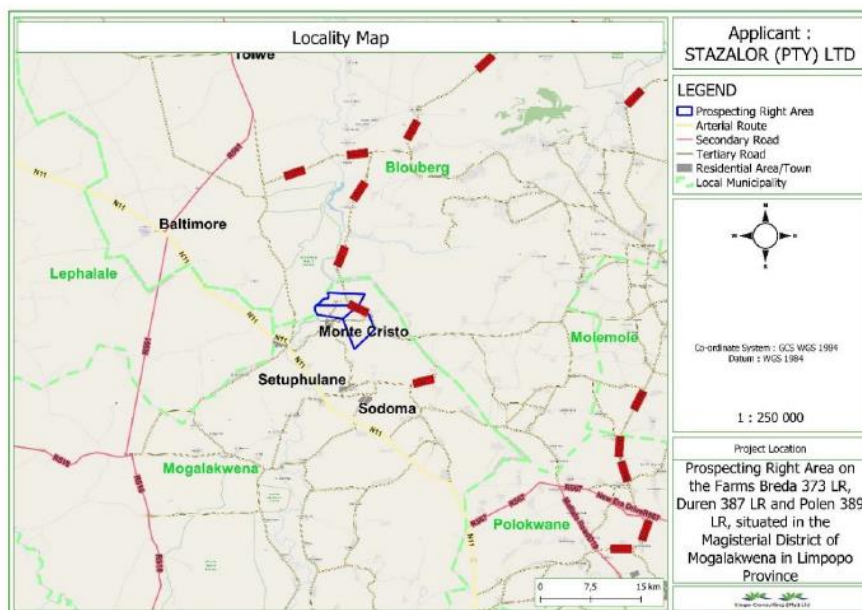


Figure 2: Locality Map of the Proposed prospecting Project Area.

Non-invasive: Desktop study of the area has commenced, and this incorporates desktop geographical and geological mapping. This will be followed by detailed geochemical and geotechnical surveys. In turn, this is followed by detailed geophysical studies.

Invasive: A detailed drilling, sampling, assaying and mineralogical study will be carried out. Diamond method will be utilised to prospect in situ of Chrome, Cobalt, Copper, Gold, Phosphate, Iron, Lead, Molybdenum, Nickel, PGM, Rare Earths, Silver, Vanadium and Zinc deposits. To ensure or minimise impacts on the receiving environment, All the activities will be guided by the project's BAR & EMPr.

REGULATORY FRAMEWORK

Therefore, EIA (BAR & EMPr) process to be undertaken will be conducted in accordance with the National Environmental Management Act (Act 107 of 1998) and Environmental Impact Assessment regulations as amended (April 2017).

The activity is to prospect the existence and occurrence of Chrome Ore, Cobalt, Copper Ore, Gold Ore, Phosphate Ore, Iron Ore, Lead, Molybdenum Ore, Nickel Ore, Platinum Group Metals, Rare Earths, Silver Ore, Vanadium Ore and Zinc Ore therefore, this will be conducted in accordance with Mineral and Petroleum Resources Development Act, (Act 28 of 2002). Other regulatory guidelines to be followed include: National Water Act, 1998 (Act 36 of 1998), National Air Quality Standards (GN 1210: 2009) and National Dust Control Regulations (GN 275: 2017). These all will accurately be followed to ensure that identified impacts are assessed and mitigated according to their significance so that the protection of the receiving environment and populations is met.

BASIC AND ENVIRONMENTAL IMPACT ASSESSMENT PROCESSES

These are planning and decision-making tools used in identifying potential environmental, economic, and social consequences of a proposed activity prior the commencement of the activity. These together with the public issues and concerns are to be identified sufficiently early so that they can be assessed and incorporated into the final reports when/if necessary.

These tools are regarded crucial because they are utilized to demonstrate to the relevant stakeholders about the potential impacts, which in turn leads to the Mining application process being a success or declined.

PUBLIC PARTICIPATION PROCESS

Public Participation remains a cornerstone of the Environmental Impact Assessment process. It ensures provision of relevant and enough information with openness and transparency. Public Participation process presents to I&APs, an opportunity to understand what the project is about, and affords them an opportunity to make valuable contributions towards the EIA (BAR & EMPr) process.

I&AP can be any person, group of persons or organization interested in or affected by the proposed activity, and any organ of state that may have jurisdiction over any aspect of the activity. The key objective of PPP is to afford the I&APs with an opportunity to comment and provide valuable inputs during the planning phase of the project.

For this specific proposed project, IAPs will be given a period of 30 days to comment and raise issues/concerns with regards to the proposed project.

Kindly keep the following dates:

- ❖ Announcement of the Prospecting Right Application: **Friday the 12th of November 2021**
- ❖ Stakeholder engagement and consultation: **Friday the 12th of November 2021 – Saturday the 11th of December 2021**
- ❖ Review of draft Basic Assessment Report (BAR) and Environmental Management Programme report (EMPr): **Monday the 13th of December 2021 until Tuesday the 1st of February 2022 (exclusion period from the 15th of December until the 5th of January as per Regulation 3 contained in PPP Guidelines of NEMA, EIA Regulations).**
- ❖ Submission of the Final BAR & EMPr: **Friday the 4th of February 2022.**



Attention: **Takalani Rakuambo** Email: takalani@singoconsulting.co.za

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Appendix 3: Proof of Newspaper Publication.

Line dancers win gold

Lizette Conradie

THE Rope & Ride Line Dancers smiled broadly last week at the South African Country Music Artist Foundation awards. The awards were held at the Castle da Angelo wedding venue in Pretoria, and the line dancers' moves to their three songs won them a first place finish. They received a golden trophy and certificate.

Lizelle Senekal said she was encouraged to take part in line dancing in 2017. In the same year, she received her teacher's certificates with a 98% pass rate. Another accolade, the Boots and Fire Certificate, followed in 2019. Lizelle said their group has

performed with various artists such as Sean Miles, Duan Coetzee, Hartkloof Duet and the Rodeo Girls of South Africa. "We danced when singers such as Lance James and Barbara Ray performed."

The group recently participated in the American Dancing awards where they took home the ultimate silver trophy. The victory secured them a place in the South African line dance team, and the group were to participate in Orlando, Florida.

"Due to the Covid-19 pandemic, the possibilities of participating at the competition have been jeopardised," added Lizelle.

To find out more about their performances, contact Lizelle on 079 983 2658.



Shaunice and Lina Lancaster, Lizelle and Lene Senekal and Stacey Lee Swart with their golden trophy.

NOTICE OF PUBLIC PARTICIPATION FOR PROSPECTING RIGHT AND ENVIRONMENTAL AUTHORIZATION APPLICATION

Application for Prospecting Right: **Stazalor (Pty) Ltd** has received an acceptance letter, with **DMRE Ref: LP 30/5/1/12/13836 PR** for the purpose of prospecting for **Chromite, Cobalt, Copper, Gold, Phosphate, Iron, Lead, Molybdenum, Nickel, PGM, Rare Earths, Silver, Vanadium and Zinc, on RE & Portion 1 of the farm Mors 348 LR and DE of the farm Heedraal 372 LR, situated in Bloubaai and Mogalakwena Local Municipalities under Capricorn and Waterberg District Municipalities, in Limpopo Province.** Prospecting (searching of commodity) procedure takes a period of 5 years. Moresaid minerals are prospecting in a relatively simple sequence of activities which includes site preparation, drilling, and rehabilitation of the drilled holes.

Notice is hereby given in terms of the Mineral and Petroleum Development Act (MPDRA) (Act 28 of 2002) and EIA regulations 2014, published under Government Notice No. 982 in Gazette No. 3822 of 8 December 2014, amended on 7 April 2017, that **Stazalor (Pty) Ltd** has applied for a Prospecting Right for the above-mentioned minerals.

INVITATION TO COMMENT

Registration as Interested & Affected Party: As part of the EIA process, more especially the Public Participation Process (PPP) for this proposed prospecting project, Interested and Affected Parties (I&APs) are invited to register and kindly submit any comments or concerns to reach **Ms Masindi Nefale**. The public is also invited to review and comment on the draft Basic Assessment Report (BAR) and Environmental Management Programme report (EMPR). The draft BAR & EMPR will be available for review for 30 days' calendar period from **Monday the 13th of December 2021 to Tuesday the 1st of February 2022 (exclusion period from the 15th of December 2021 to the 5th of January 2022 as per Regulation 3 contained in PPP Guidelines of NEMA, EIA Regulations)**. The Draft BAR & EMPR will be available at the Mahwelereng Public Library, (1830 Rufus Seakamele St, Mahwelereng-A, Mokopane, 0626), and a soft copy upon request from **Singo Consulting (Pty) Ltd** using the detailed EAP's contact's below, via email; Dropbox link; Google drive; WeTransfer, etc.

Singo Consulting (Pty) Ltd
Office No. 16, Corridor Hill Crossing
09 Langa Crescent, Corridor Hill
eMalaheni, 1035.
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Fax No: +27 86 514 4103
Cell No: +27 76 324 5499
Email: masindi@singoconsulting.co.za

Stazalor (Pty) Ltd

PO Box 1038
River Crescent
Die Heuwel
1042
Contact person: Mr Sonwabo Sellwa
Debedu
Tel No: 013 692 4378
Fax No: 086 515 3178
Email: sonwabo@tomowize.co.za

Swemmers blink uit in die water

TUKS Mokopane se swemmers het verlede Saterdag laat spaander in die water. Die swemmers het in die Polokwane munisipale swembad aan 'n klubkompetisie deelgeneem.

Daar was onder meer geswem teen die swemmers van klubs in Lephalale, Tzaneen, Musina en Polokwane. Die swemmers het almal goeie tye behaal en hoop om aanstaande jaar te kwalifiseer om aan die Limpopo kampioenskappe deel te neem.



Keanke Nel is een van die uitblinkers in die water.



Luan Venter wys sy vernuf.



Voor is Hanno le Roux, Marné Truter, Luan Venter en Ruan Turvey. In die middel is Petri Grobler, Mamus Truter en Keanke Nel. Agter is Gustav Klingbiel, Michael Alberts, Jeska Tiersma en Carmi Schoeman.

NOTICE OF PUBLIC PARTICIPATION FOR PROSPECTING RIGHT AND ENVIRONMENTAL AUTHORIZATION APPLICATION

Application for Prospecting Right: **Stazalor (Pty) Ltd** has received an acceptance letter, with **DMRE Ref: LP 30/5/1/12/13836 PR** for the purpose of prospecting for **Chromite, Cobalt, Copper, Gold, Phosphate, Iron, Lead, Molybdenum, Nickel, Ore, Platinum Group Metals, Rare Earths, Silver, Vanadium and Zinc Ore, on farms Mattanas 398 LR and Emigration 419 LR, situated within the Magisterial District of Mogalakwena under Waterberg District Municipality, in Limpopo Province.**

Notice is hereby given in terms of the Mineral and Petroleum Resource Development Act (MPRDA) (Act 28 of 2002) and EIA regulations 2014, published under Government Notice No. 982 in Gazette No. 3822 of 8 December 2014, amended on 7 April 2017, that **Stazalor (Pty) Ltd** has applied for a Prospecting Right for the above-mentioned minerals.

INVITATION TO COMMENT

Registration as Interested & Affected Party: As part of the EIA process, more especially the Public Participation Process (PPP) for this proposed prospecting project, Interested and Affected Parties (I&APs) are invited to register and kindly submit any comments or concerns to reach **Ms Vhumatshelo Jessika Phosa**. The public is also invited to review and comment on the draft Basic Assessment Report (BAR) and Environmental Management Programme report (EMPR). The draft BAR & EMPR will be available for review for 30 days' calendar period from **Monday the 13th of December 2021 to Tuesday the 1st of February 2022 (exclusion period from the 15th of December 2021 until the 5th of January 2022 as per Regulation 3 contained in PPP Guidelines of NEMA, EIA Regulations)**. The Draft BAR & EMPR will be available at the Mahwelereng Public Library, (1830 Rufus Seakamele St, Mahwelereng-A, Mokopane, 0626), Local Municipality office (Environmental Department) and a soft copy upon request from **Singo Consulting (Pty) Ltd** using the detailed EAP's contact's below, via email; Dropbox link; Google drive; WeTransfer, etc.

ENVIRONMENTAL ASSESSMENT PRACTITIONER AND CLIENT DETAILS:

Singo Consulting (Pty) Ltd

Office No. 16, Corridor Hill Crossing
09 Langa Crescent,
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eMalaheni, 1035.
Contact person: Ms Vhumatshelo Phosa
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Email: vhumatshelo@singoconsulting.co.za

Stazalor (Pty) Ltd

P.O. Box 1038
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Die Heuwel
1042
Contact person: Mr Sonwabo Sellwa
Debedu
Tel No: 013 692 4378
Fax No: 086 515 3178
Email: sonwabo@tomowize.co.za

NOTICE OF PUBLIC PARTICIPATION FOR PROSPECTING RIGHT AND ENVIRONMENTAL AUTHORIZATION APPLICATION

Application for Prospecting Right: **Stazalor (Pty) Ltd** has received an acceptance letter, with **DMRE Ref: LP 30/5/1/12/13837 PR** for the purpose of prospecting for **Chromite, Cobalt, Copper, Gold, Ore, Phosphate, Iron, Lead, Molybdenum, Nickel, Ore, Platinum Group Metals, Rare Earths, Silver, Vanadium and Zinc Ore on Portion 1, Portion 2 and Remaining Extent of the Farm Breda 373 LR, of the Farm Duren 387 LR and on Remaining Extent of the Farm Polen 389 LR situated within the Magisterial District of Mogalakwena Province.**

Notice is hereby given in terms of the Mineral and Petroleum Resource Development Act (MPRDA) (Act 28 of 2002) and EIA regulations 2014, published under Government Notice No. 982 in Gazette No. 3822 of 8 December 2014, amended on 7 April 2017, that **Stazalor (Pty) Ltd** has applied for **Prospecting Right Application** for the above-mentioned minerals.

INVITATION TO COMMENT

Registration as Interested & Affected Party: As part of the EIA process, more especially the Public Participation Process (PPP) for this proposed prospecting project, Interested and Affected Parties (I&APs) are invited to register and kindly submit any comments or concerns to reach **Ms Takalani Rakuambo**. The public is also invited to review and comment on the draft Basic Assessment Report (BAR) and Environmental Management Programme report (EMPR). The draft BAR & EMPR will be available for review for 30 days' calendar period from **Monday the 13th of December 2021 to Tuesday the 1st of February 2022 (exclusion period from the 15th of December 2021 until the 5th of January 2022 as per Regulation 3 contained in PPP Guidelines of NEMA, EIA Regulations)**. The Draft BAR & EMPR will be available at the Mahwelereng Public Library, (1830 Rufus Seakamele St, Mahwelereng-A, Mokopane, 0626), and a soft copy upon request from **Singo Consulting (Pty) Ltd** using the detailed EAP's contact's below, via email; Dropbox link; Google drive; WeTransfer, etc.

ENVIRONMENTAL ASSESSMENT PRACTITIONER AND CLIENT DETAILS:

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Stazalor (Pty) Ltd

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Die Heuwel
1042
Contact person: Mr Sonwabo Sellwa
Debedu
Tel No: +27 13 692 4378
Fax No: +27 86 515 3178
Email: sonwabo@tomowize.co.za



KEANU GAAN MIK VIR KOLHOUE

Keanu Potgieter (13) van Laerskool Krugerpark het onlangs sy Limpoppokleure in gholf verwerf. Hy gaan in Desember sy slag op die Silver Lakes Gholfbaan in Pretoria wys teen die spanne van Gauteng en die Kaap.

Appendix 4: Calculation of a Quantum

CALCULATION OF THE QUANTUM							
				DMRE REF: LP 30/5/1/1/2/ (13837)			
				PR			
Applicant:		Stazalor (Pty) Ltd		Ref No.:			
Evaluator:		Takalani Rakuambo		Date:		Jan-22	
No.	Description	Unit	A Quantity	B Master Rate	C Multiplication factor	D Weighting factor 1	E=A*B*C*D Amount (Rands)
1	Dismantling of processing plant and related structures (including overland conveyors and powerlines)	m3	0	17,4	1	1	0
2 (A)	Demolition of steel buildings and structures	m2	0	238,71	1	1	0
2(B)	Demolition of reinforced concrete buildings and structures	m2	0	351,79	1	1	0
3	Rehabilitation of access roads	m2	300	42,72	1	1	12816
4 (A)	Demolition and rehabilitation of electrified railway lines	m	0	414,61	1	1	0
4 (A)	Demolition and rehabilitation of non-electrified railway lines	m	0	226,15	1	1	0
5	Demolition of housing and/or administration facilities	m2	0	477,42	1	1	0
6	Opencast rehabilitation including final voids and ramps	ha	0	242984,15	1	1	0
7	Sealing of shafts adits and inclines	m3	0	128,15	1	1	0
8 (A)	Rehabilitation of overburden and spoils	ha	0	166847,44	1	1	0
8 (B)	Rehabilitation of processing waste deposits and evaporation ponds (non-polluting potential)	ha	0	207805,47	1	1	0
8 (C)	Rehabilitation of processing waste deposits and evaporation ponds (polluting potential)	ha	0	603565,59	1	1	0
9	Rehabilitation of subsided areas	ha	0	139709,6	1	1	0
10	General surface rehabilitation	ha	0,9	132171,31	0,01	1	1189,54179
11	River diversions	ha	0	132171,3	1	1	0
12	Fencing	m	0	150,77	1	1	0
13	Water management	ha	0	50255,25	1	1	0
14	2 to 3 years of maintenance and aftercare	ha	0	17589,34	1	1	0
15 (A)	Specialist study	Sum	0	0	1	1	0
15 (B)	Specialist study	Sum	0	0	1	1	0
					Sub Total 1		14005,54179
1	Preliminary and General	1680,665015		weighting factor 2 1		1680,665015	
2	Contingencies			1400,554179		1400,554179	
					Subtotal 2		17086,76
SIGN		Takalani Rakuambo		VAT (15%)		2563,01	
DATE		2022/01/12		Grand Total		19650	

Appendix 5: Impact Management Outcomes

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.).	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.)	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.) (E.g. Modify through alternative method. Control through noise control. Control through management and monitoring through rehabilitation)	STANDARD TO BE ACHIEVED (Impact avoided, noise levels, dust levels, rehabilitation standards, end use objectives) etc.
Planning and Project Management	EMP	Project Management	Planning	<ul style="list-style-type: none"> A finalized EMP must address all authorization conditions stipulated by the DEA (and other commenting authorities). The EMP should also encompass all environmental impact mitigation measures as identified in the final BAR. 	MPRDA & NEMA

	Appointment of Environmental Officer	Project Management	Planning	<input type="checkbox"/> Vhalinawe Masakona (Pty) Ltd environmental geologist will serve as the Environmental Officer (EO) during construction, given the short duration of construction and the low significance impacts which are envisaged. Vhalinawe Masakona (Pty) Ltd environmental geologist will be responsible for monitoring the compliance of the construction workers and employees on site with the EMP and ensure their co-operation.	MPRDA & NEMA
	Permits and Permissions		Planning	<input type="checkbox"/> The Mogalakwena Local Municipality must ensure that all licensing, permits or certificates required for the project are obtained and in place prior to the commencing of any construction activities on site.	
	Emergency	Safety and health	Planning	<input type="checkbox"/> Plan all emergency responses including:	MPRDA & NEMA

Appendix 6: Proof of Site Pictures



