

BASIC ASSESSMENT REPORT & ENVIRONMENTAL MANAGEMENT PROGRAMME REPORT

Prospecting Right Application for Chrome Ore, Manganese Ore and Iron Ore portions 121, 198, 224, 225, RE/19 and RE/20 of the farm Kroondal 304 JQ situated under the Magisterial District of Rustenburg, Northwest Province.

Prepared By



Singo Consulting (Pty) Ltd

Physical address: Office 870, 5 Balalaika Street, Tasbet Park Ext 2, Witbank, 1040

Cell No.: +27 72 832 1117

Fax No.: +27 86 514 4103

E-mail: kenneth@singoconsulting.co.za

Prepared for:



Competent Authority:



**mineral resources
& energy**

Department:
Mineral Resources and Energy
REPUBLIC OF SOUTH AFRICA

Regional office
Cnr Margaretha Prinsloo & Voortrekker
Street,
Vaal University of Technology Building,
Klerksdorp, 2574
North West

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).

APPLICANT

Name of Applicant:	 Legare Mining Services (Pty) Ltd
Registration no (if any):	2011/106668/07
Telephone:	+27 13 6560 180
Contact Person:	Mr Ngwediotswele P Mabilo
Email:	info@legare.co.za / lehlogonolo@legare.co.za
Physical address:	Smokey Mountain Office Park Unit 201, Route N4, eMalahleni, 1035
Postal address:	Private Bag X 297, Postnet Suite 282 eMalahleni, 1035
File Reference Number:	DMRE REF: NW 30/5/1/1/2/13353 PR

IMPORTANT NOTICE

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

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

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

It is therefore the instruction that the prescribed reports required in respect of application 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 requested 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 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 activity is located and document how the proposed 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 the 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 –
 - i. Identify and motivate a preferred site, activity and technology alternative;
 - ii. Identify suitable measures to manage, avoid or mitigate identified impacts and;
 - iii. Identify residual risks that need to be managed and monitored.

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Disclaimer

The opinion expressed in this, and associated reports are based on the information provided by Legare Mining Services to Singo Consulting (Pty) Ltd and is specific to the scope of work agreed with Legare Mining Services (Pty) Ltd. Singo Consulting acts as an advisor to the Legare Mining Services (Pty) Ltd and exercises all reasonable skill and care in the provision of its professional services in a manner consistent with the level of care and expertise exercised by members of the environmental profession. Where site inspections, testing or fieldwork have taken place, the report is based on the information made available by Singo Consulting during the visit, visual observations and any subsequent discussions with regulatory authorities. The data and information used in this report were provided to Singo Consulting by the client and also referred to other outside sources (includes historical site investigation information and third-party expert research). Singo Consulting (Pty) Ltd takes reasonable care and diligence when providing services and preparing documents, but it has been assumed that the information provided to Singo Consulting (Pty) Ltd ("Singo Consulting") is accurate. These views do not generally refer to circumstances and features that may occur after the date of this study, which were not previously known to Singo Consulting (Pty) Ltd or had the opportunity to assess.

ABBREVIATIONS

BAR	: Basic Assessment Report
BID	: Background Information Document
DMRE	: Department of Mineral Resources & Energy
DWS	: Department of Water and Sanitation
EA	: Environmental Authorisation
EAP	: Environmental Assessment Practitioner
EIA	: Environmental Impact Assessment
EIMS	: Environmental Impact Management Services
EMPr	: Environmental Management Programme report
GIS	: Geographic Information System
I&AP	: Interest and Affected Party
MPRDA	: Mineral and Petroleum Resources Development Act
NEMA	: National Environmental Management Act
NEMWA	: National Environmental Management Waste Act
NWA	: National Water Act
PPP	: Public Participation Process
PRA	: Prospecting Right Application
PWP	: Prospecting Works Programme
IDP	: Integrated Development Plan
SDF	: Spatial Development Framework
NWPSDF	: North West Provincial Spatial Development Framework

PART A:

SCOPE OF ASSESSMENT AND BASIC ASSESSMENT REPORT

1. INTRODUCTION

Singo Consulting (Pty) Ltd on behalf of Legare Mining Services (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, Manganese Ore and Iron 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, Legare Mining Services (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 Legare Mining Services (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.

The proposed Prospecting Right Application covers portions 121, 198, 224, 225, RE/19 and RE/20 of the farm Kroondal 304 JQ situated under the Magisterial District of Rustenburg,

located at approximately 9.37 km South-East of Rustenburg Northwest Province. Portions 121, 198, RE/19 AND RE/20 it is owned by the Deutsche Evangelische and Portions 224 and 225 it is owned by SANRAL, all the mentioned landowners they have been consulted through e-mails. All feedback received during the period of the Public Participation Process (PPP) will be included in the report to be submitted for adjudication by the DMRE. Singo consulting has carried Environmental Impact Assessment for Jaments (Pty) for the project close to the proposed area by Legare Mining Services (Pty) Ltd, the EIA for Jaments (Pty) Ltd was carried out in 2021 on portions of portions 12,27, 28, remaining extent of portions 3,7,11,163 and portion 280 of the farm kroondal 304 JQ the project was granted on the 27th of May 2022 by the Department of Mineral Resources and Energy.

1.1 DETAILS OF THE EAP

Table 1: Details of the EAP that prepared the Report:

Name of the Practitioner	Simangaliso Jiyane
Designation	Candidate EAP
Tel No.	(013) 692 0041
Cell No.	+27 72 832 1117
Fax No.	+27 86 515 4103
Email	simangaliso@singoconsulting.co.za

Table 2: Details of the EAP Manager who reviewed the Report

Name of the Practitioner	Rudzani Radebe Shonisani
Designation	EAP Manager
Tel No.	(013) 69+27 13 692 0041
Cell No.	+27 78 548 1244
Fax No.	+27 86 515 4103
Email	rudzani@singoconsulting.co.za

Table 3: Details of the EAP who reviewed the Report

Name of the Practitioner	NK Singo
Designation	Principal EAP
Tel No.	(013) 692 0041

Cell No.	+27 78 2727 839
Fax No.	+27 86 515 4103
Email	Kenneth@singoconsulting.co.za

1.2 EXPERTISE OF THE EAP

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.

Due to POPIA Qualifications and curriculum Vitae of the EAP will be made for final submission to the DMRE for adjudication.

1.3 LOCATION OF THE OVERALL ACTIVITY

Table 4: The table below indicates the farm portions that fall within the Prospecting Right Application Area.

Farm Name (s) & Subdivisions	Portions 121, 198, 224, 225, RE/19 and RE/20 of the farm Kroondal 304 JQ.
Type of mineral	Chrome Ore, Manganese, Ore and Iron Ore
Application Area (Ha)	9.12 hectares
Magisterial District	Magisterial District of Rustenburg.
Distance and direction from nearest town	located at approximately 9.37 km South-East of Rustenburg.
21-digit Surveyor General Code for each Portion	T0JQ0000000030400121 T0JQ0000000030400020 T0JQ0000000030400224 T0JQ0000000030400225

	TOJQ00000000030400019 TOJQ00000000030400198
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1.4 Locality map

The Legare Mining Services (Pty) Ltd proposed mine is situated in the Rustenburg, Northwest province located along the N4 that runs from Pretoria to the town of Rustenburg, the area is across the road of Hexrivier lifestyle Estate, 800m South of the Kroondal Spar shop. The Regulation 2.2 map, locality map and adjacent farms map are depicted in respectively.

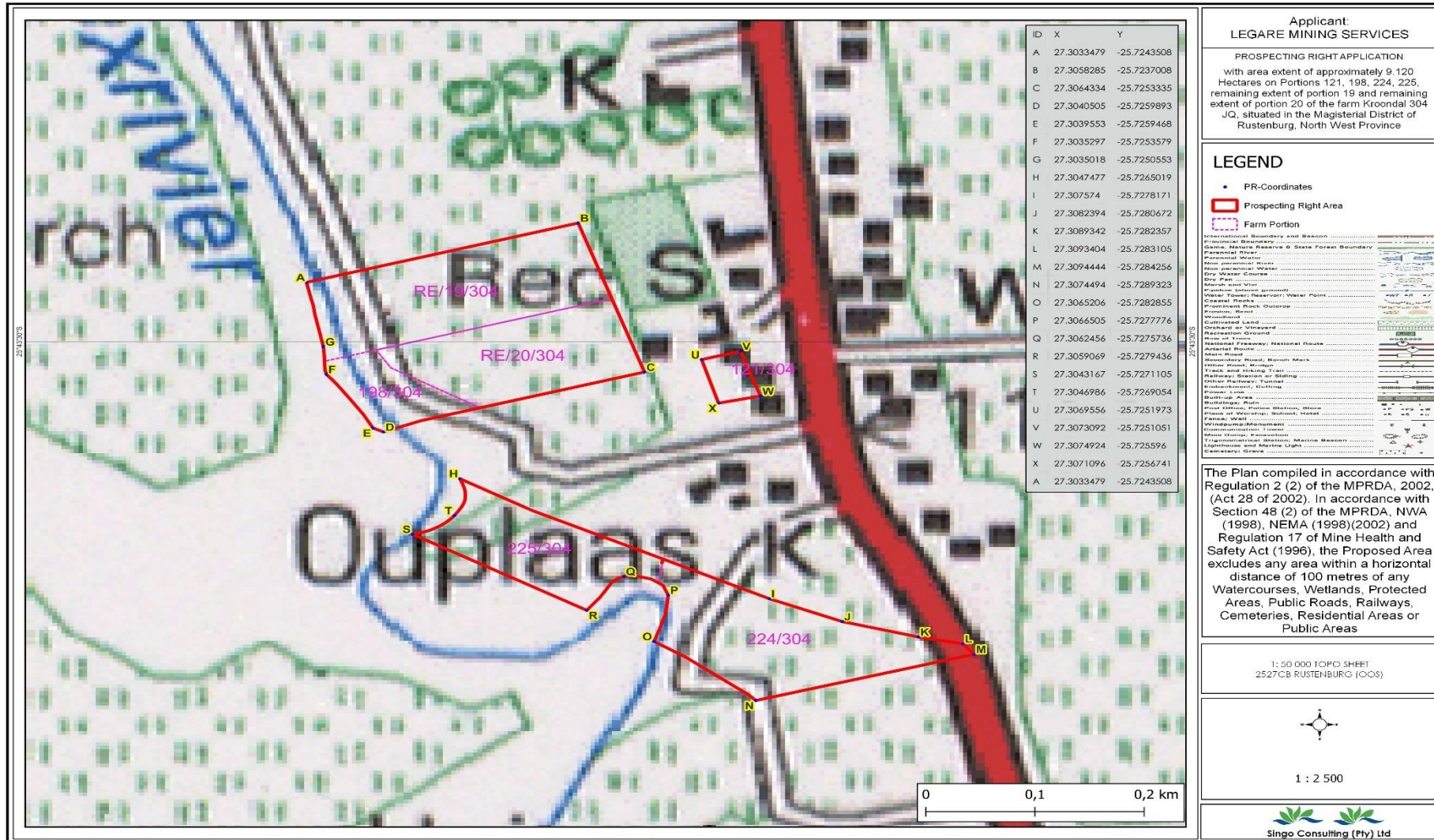


Figure 1: Reg 2.2 Map

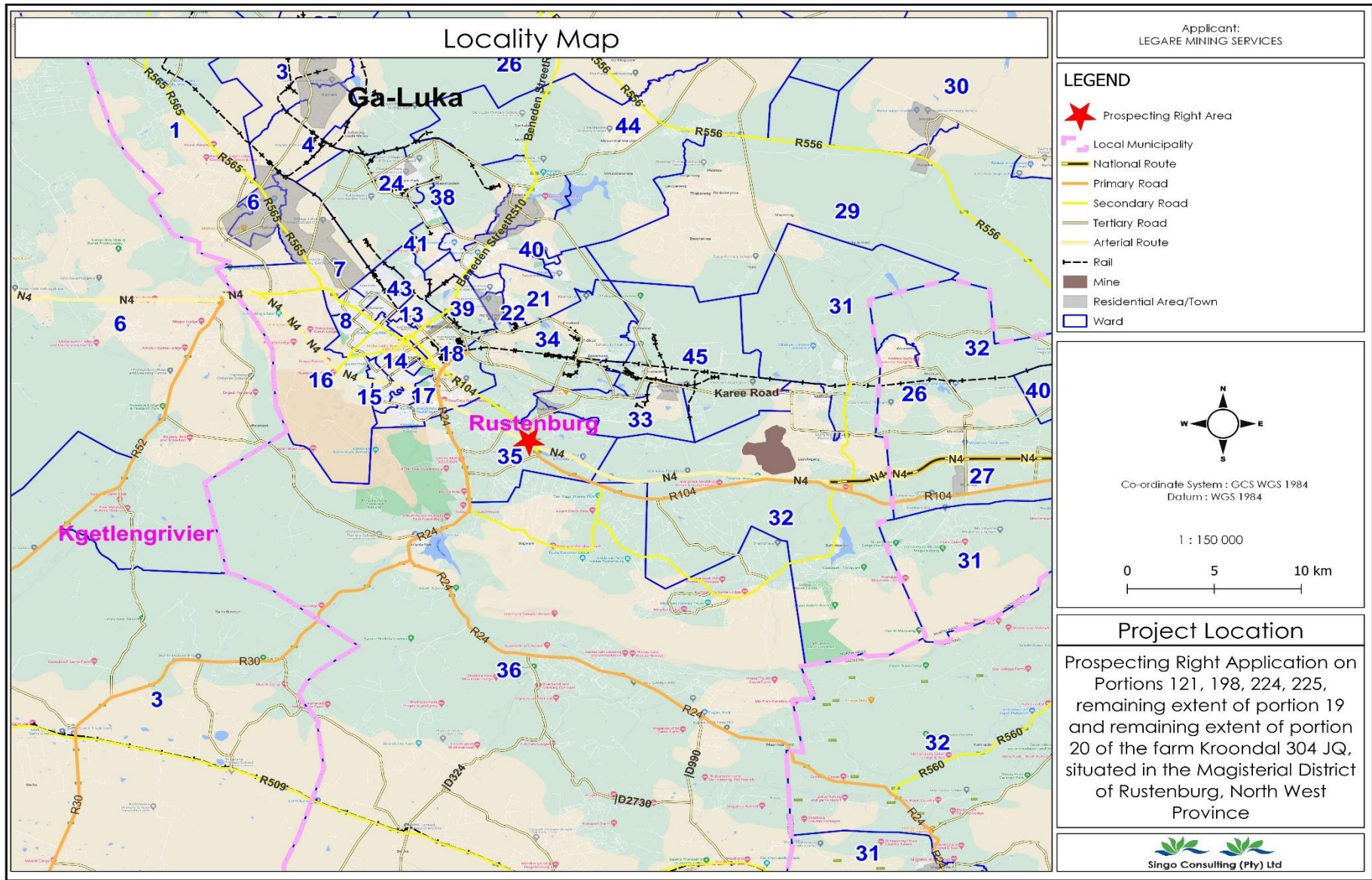


Figure 2: Locality map

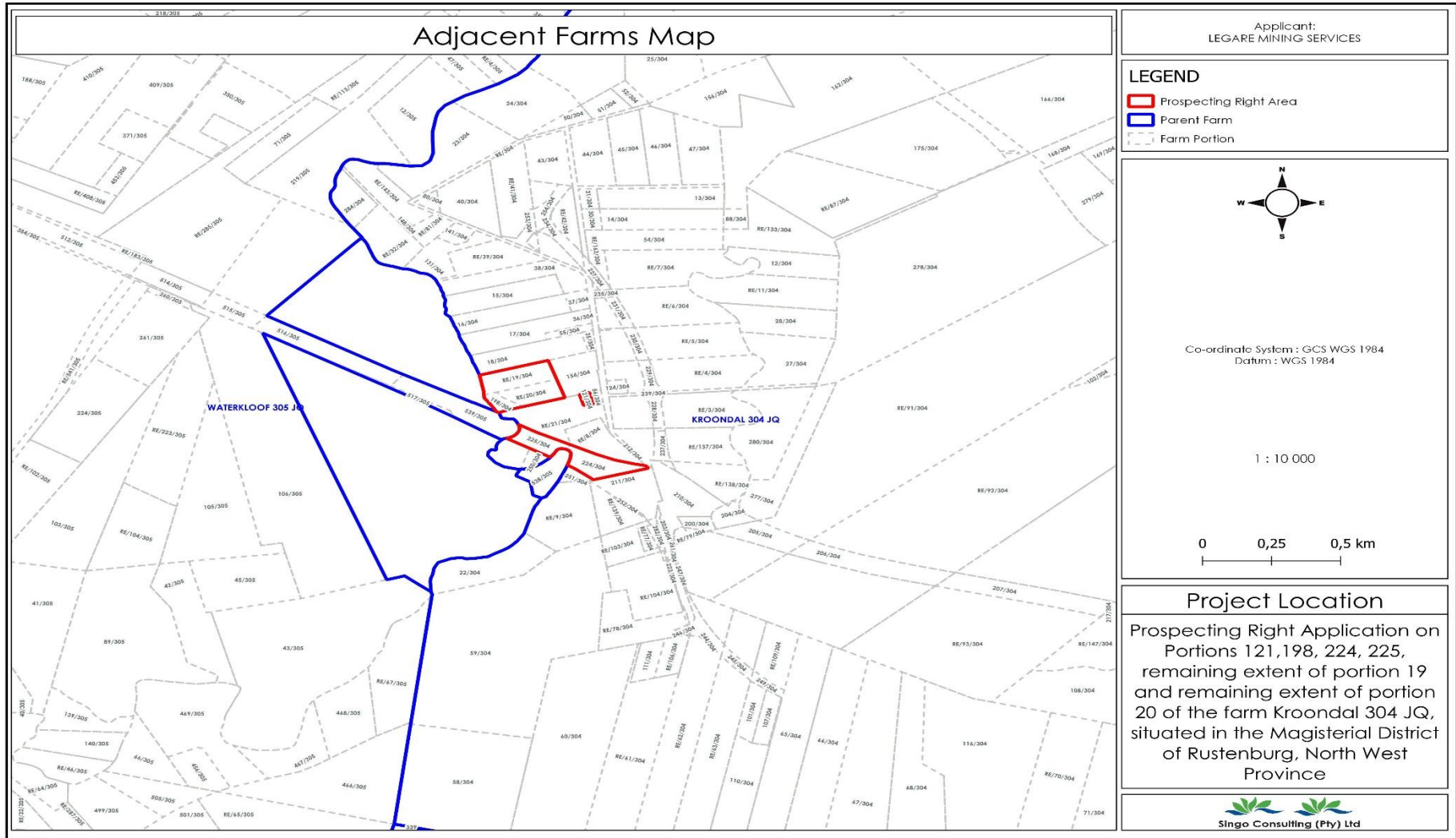


Figure 3: Adjacent farm Map

2. DESCRIPTION OF THE SCOPE OF THE PROPOSED OVERALL ACTIVITY

The Proposed Prospecting area is depicted by Figure 1, Figure 2 and Figure 3 above clearly showing the areas of interest. The total number of proposed boreholes to be drilled for the operation is six (6). No borehole is proposed to be drilled on portion 121 of the farm Kroondal 304, the EAP realised through desktop and site assessment, therefore no disturbance will take place. Other proposed portions for drilling are cultivated lands and used to grow crops the proposed invasive process for the PR would set take place after harvest and concurrent rehabilitation will take place after each drill site. The total vegetation clearing for the for the overall activities is 0.36 ha. The Proposed project area will be accessed through the current existing roads thus no new access roads will be created. Access within the Farm will be communicated with the 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.

2.1 DESCRIPTION OF PLANNED NON-INVASIVE ACTIVITIES

2.1.1 Desktop study

The term 'desk study' or 'desktop study' refers to a study that is carried out purely through research, rather than physical investigations, that is, it can be done sitting at a desk. This may be a preliminary study carried out before more detailed physical investigations are carried out, or it may be a standalone study carried out instead of a physical investigation. In very general terms, a desktop study is likely to be less time consuming and less expensive than a physical investigation. Desktop studies can provide an initial understanding of a subject or

situation, identify potential risks and inform the detail, scope and methodology of subsequent investigations'.

According to Clayton (1989), a satisfactory site investigation necessitates a desktop study prior to the actual groundwork. It is important to note that the desktop study was undertaken prior to fieldwork (intrusive exploratory work) activities. All available historical geological data will be collected and assessed including the assessments of any information of existing mining operations in the area.

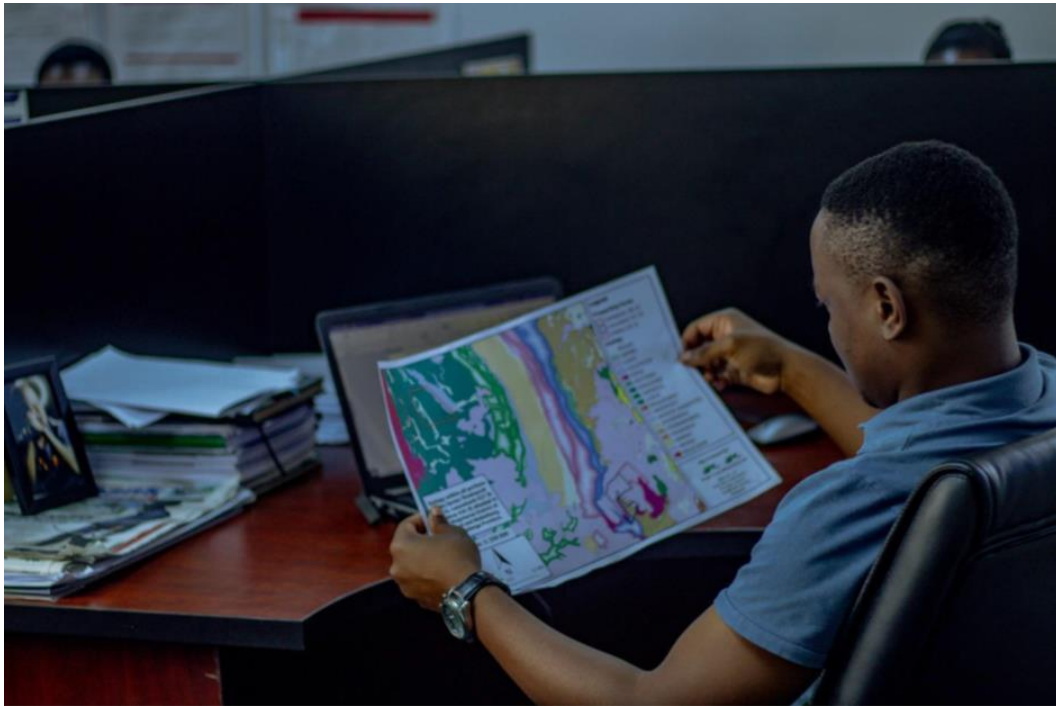


Figure 4: Typical Example of Desktop studies

2.1.2 Field Mapping

Geological mapping involves plotting the longitude and attitude of the various rock units, faults, and folds on a base map. Geological maps are used to investigate geological hazards, mineral resources, groundwater aquifers, and just plain science. This method includes ground mapping of geological features including rock outcrops, lithological contact zones, any geological structural features, surface depressions and vegetation types.



Figure 5: Geological Mapping

Directional drilling

Diamond Drilling – Core drilling (NQ size) will be conducted to delineate the strike length and thicknesses of the mineralized layers.

2.1.3 Geochemical work to be performed.

No geochemical work will be performed.

2.1.4 Geophysical survey work to be undertaken.

Ground magnetic and probably electro-magnetic surveys will be undertaken to define the contacts of the layers with the host rocks. A consideration to conduct air-borne geophysical surveys will be made once preliminary investigations have been completed.

2.1.5 Geohydrological survey

Diamond drilling (open hole) boreholes may be drilled to gather geohydrological information with specific reference to aquifer yield testing and gathering of water samples for analytical purposes.

2.1.6 Bulk sampling

Bulk sampling, Excavation, Trenching and Pitting – None of the listed will be conducted during the prospecting phase.



Figure 6: Typical example of core logging.

2.2 Mineral distribution and reserve estimation

Mineral distribution and reserve estimation relate to computerized desk studies which encompass the following main actions:

2.2.1 Data processing and validation

Data obtained during the drilling project needs to be processed and validated versus stratigraphic, structural and analytical data received and correlated with surrounding boreholes in the reserve area.

2.2.2 Lithofacies and Iron ore, Manganese ore & Chrome quality modelling.

Variations in a stratigraphic unit across the reserve area are illustrated by contoured maps showing lateral trends of most significant properties. This is done by the utilization of computerized geological software. Detailed in situ reserve and quality determinations will then be possible through computer based modelling, and qualitative and quantitative calculations.

6 REGULATION 7(1)(h): ALL PLANNED PROSPECTING ACTIVITIES MUST BE CONDUCTED IN PHASES AND WITHIN SPECIFIC TIMEFRAMES.

Please refer to Table 5 for a breakdown of proposed prospecting activities.

7 REGULATION 7(1)(i): TECHNICAL DATA DETAILING THE PROSPECTING METHOD OR METHODS TO BE IMPLEMENTED AND THE TIME REQUIRED FOR EACH PHASE OF THE PROPOSED PROSPECTING OPERATION.

7.1 Prospecting phases and time frames.

The prospecting right is required for a period of five years. Prospecting will take place according to the timeframe presented in Table 5 below and incorporates the information required in respect of Regulations 7(1)(f), 7(1)(h) and 7(1)(i) of the MPRDA

Table 5: Proposed Prospecting Phases and Time Frames

Phase	Activity	Skill(s) required	Timeframe	Outcome	Timeframe for outcome	What technical expert will sign off on the outcome?
Phase 1: Invasive Prospecting						
	Diamond drilling (2 boreholes)	Exploration Geologist	Month 1 (30 days)	Borehole core data Iron ore, Manganese ore, Chrome, Limestone & Platinum group metals core samples	Month 1	Exploration Geologist
	Sampling	Exploration Geologist		Rock core samples Core analyses Rock core analyses	Month 2 – 3	Laboratory analyst
Phase 1: Non-invasive Prospecting						
	Consultations with landowners	Land Tenure Specialist	Month 1	Legal Access Agreement	Month 1	Land Tenure Specialist

	Data processing and validation	Exploration Geologist	Month 7-8	Stratigraphic correct borehole data Analytical correct borehole data	Month 8 – 10 Month 8 - 10	Exploration Geologist /Database administrator Exploration Geologist /Database administrator
	Lithofacies and Iron ore, Manganese ore & Chrome quality modelling	Exploration Geologist	Month 10-12	Contour maps Reserve breakdown	Month 10-12	Exploration Geologist /Modeller
	Inspection/Consultation with landowners	Land Tenure Specialist /Drilling contractor	Month 5-6	Rehabilitation clearance certificate	Month 5 - 6	Land Tenure Specialist / Environmental officer
Phase 2: Invasive Prospecting						
	Diamond drilling (2 borehole)	Exploration Geologist	Month 13	Borehole core data Iron ore, Manganese ore & Chrome core samples Rock core samples Core analyses	Month 13 Month 13-14	Exploration Geologist Laboratory analyst

				Rock core analyses		
	Geophysical survey (Optional)	Geophysicist Exploration Geologist	Month 13-15	Lithology data Structural data	Month 13-14	Geophysicist
	Geohydrological survey (Optional)	Geohydrologist Exploration Geologist	Month 13-14	Borehole water yield samples Water	Month 17-20	Geohydrologist
Phase 2: Non-invasive Prospecting						
	Consultation with landowners	Mining Rights officer	Month 12	Legal Access Agreement	Month 12	Land Tenure Specialist
Phase	Activity	Skill(s) required	Timeframe	Outcome	Timeframe for outcome	What technical expert will sign off on the outcome?
	Data processing and validation	Exploration Geologist	Month 17-18	Stratigraphic correct borehole data Analytical correct borehole data	Month 20 – 22 Month 20 - 22	Exploration Geologist /Database administrator Exploration Geologist /Database administrator

	Lithofacies and Iron ore, Manganese ore & Chrome mineral grade quality modelling	Exploration Geologist	Month 22-24	Contour maps Reserve breakdown	Month 22-24	Exploration Geologist /Modeler
	Inspection/Consultation with landowners	Mining Rights officer	Month 16-17	Rehabilitation clearance certificate	Month 16 - 17	Land Tenure Specialist / Environmental officer
Phase 3: Invasive Prospecting						
	Diamond drilling (2 borehole)	Exploration Geologist	Month 25	Borehole core data Iron ore, Manganese ore & Chrome core samples Rock core samples Iron ore, Manganese ore & Chrome core analyses	Month 25 Month 25-60	Exploration Geologist Laboratory analyst

				Rock core analyses		
	Directional drilling (Optional)	Exploration Geologist	Month 24-30	Lithological data	Month 24-60	Exploration Geologist
	Geophysical survey (Optional)	Geophysicist Exploration Geologist	Month 25-27	Lithology data Structural data	Month 25-60	Geophysicist
	Geohydrological survey (Optional)	Geohydrologist Exploration Geologist	Month 25-26	Borehole water yield Water samples	Month 29-60	Geohydrologist
Phase 3: Non-invasive Prospecting						
	Consultation with landowners	Mining Rights officer	Month 24	Legal agreement	Month 24	Land Tenure Specialist
	Data processing and validation	Exploration Geologist	Month 29-30	Stratigraphic correct borehole data Analytical correct borehole data	Month 32 – 60 Month 32 - 60	Exploration Geologist /Database administrator Exploration Geologist /Database administrator

	Lithofacies and Iron ore, Manganese ore & Chrome /mineral quality modelling	Exploration Geologist	Month 34-36	Contour maps Reserve breakdown	Month 34-60	Exploration Geologist /Modeler
	Inspection/consultation with landowners	Land Tenure Specialist	Month 28-29	Rehabilitation clearance certificate	Month 28 - 60	Land Tenure Specialist / Environmental officer

The drilling activity will use the layout below (Figure 7) to execute the recovery of Iron ore, Manganese ore & Chrome mineral. Only six boreholes have been proposed for this project it should be noted that no borehole will be drilled on portion 121 of the farm see the attached proposed borehole map on Figure 8.

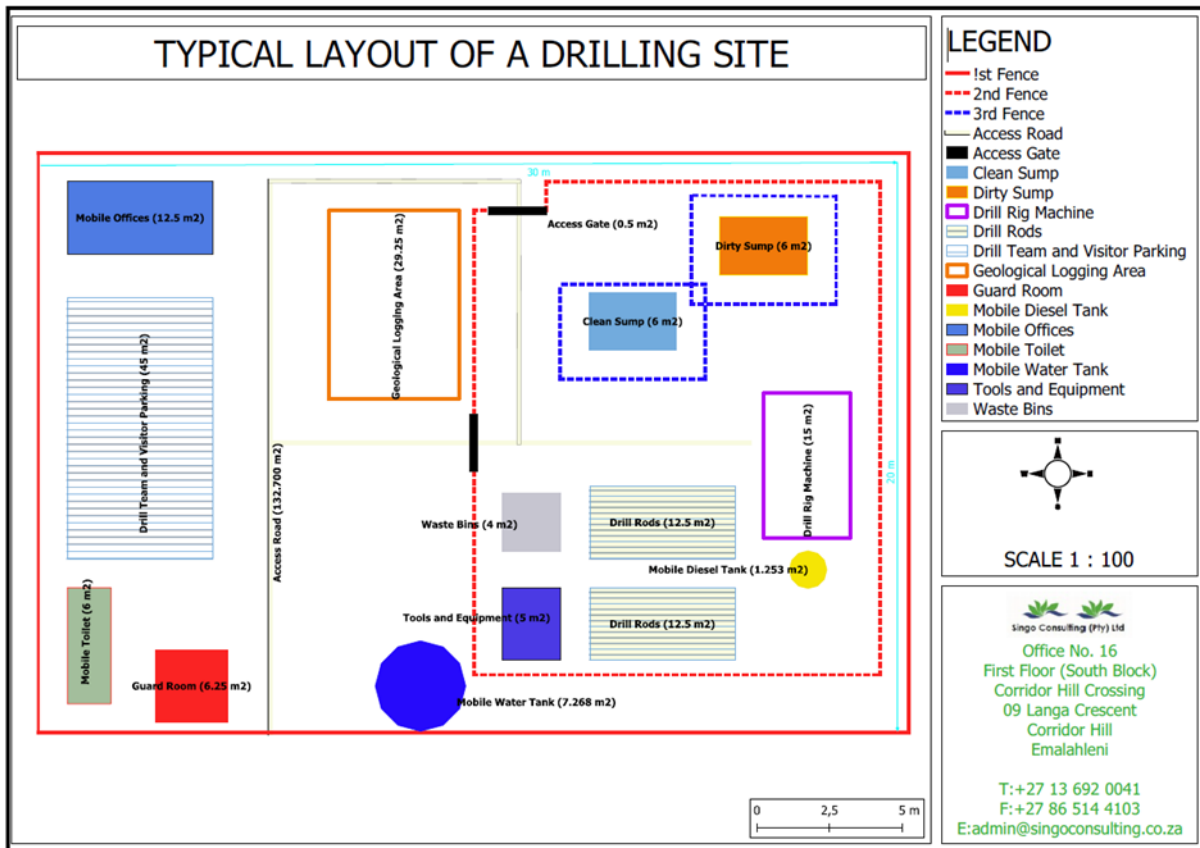


Figure 7: Layout of the map (Source: Singo consulting (pty) Ltd)

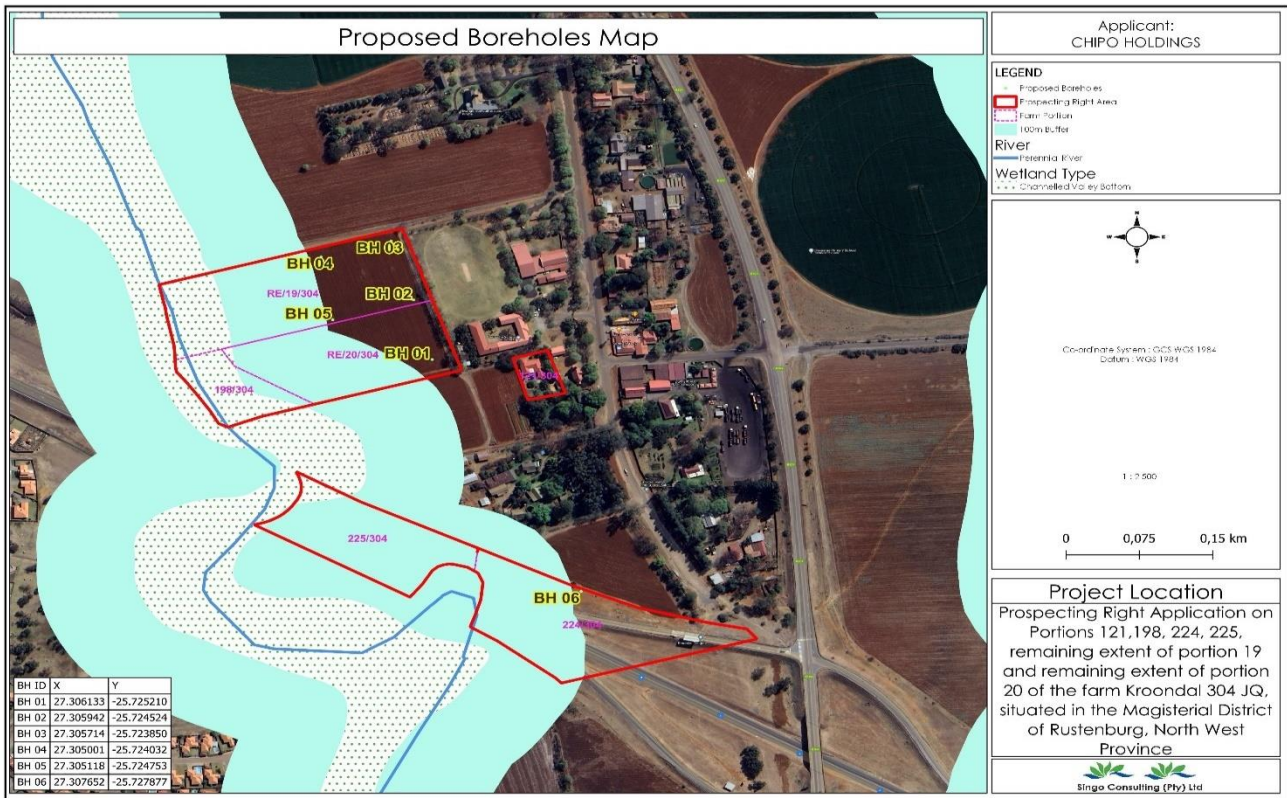


Figure 8: Proposed borehole map (Source: Singo consulting (pty) Ltd)

Below is the typical set of the drill site, this was once established by Singo consulting and it is proven to be effective and poses less environmental impact.



Figure 9: Typical layout of the drill site

2.3 LISTED AND SPECIFIED ACTIVITIES

Table 6: 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	0.36 ha / 9.12 Ha	X	GNR 327 Listing Notice 1, Activity 20.	Not required
Vegetation clearing	0.36 ha		Not Listed	
Drilling	0.36 ha		Not Listed	

Drilling method	Diamond core drilling
Number of boreholes	6
Depth of boreholes	110 m.
Duration of drilling	A borehole takes roughly about 2 days to complete; 6 will take at least 12 days.
Demarcated working area	0.36 ha for all 0.36 drilling sites
Total area to be disturbed	20*30=600m ² *6 boreholes=6000m ² 6000m ² ÷10000= 0.36 ha

3. POLICY AND LEGISLATIVE CONTEXT

Table 7: Policy and Legislative Context

Applicable legislation and guidelines used to compile the report	Reference where applied	How does this development comply with and respond to the policy and legislative context
<p>A description of the policy and legislative context within which the development is proposed, including an identification of all legislation, policies, plans, guidelines, spatial tools, municipal development planning frameworks and instruments that are applicable to this activity and are to be considered in the assessment process.</p>		<p>E.g. In terms of the National Water Act a Water Use License has/ has not been applied for.</p>
Legislation		
<p>As per the Constitution of South Africa, specifically, everyone has a right to: an environment that is not harmful to their health or wellbeing; and have the environment protected, for the benefit of present and future generations, through reasonable legislative and other measures that: prevent pollution and ecological degradation promote conservation secure ecologically sustainable development and use of natural resources while promoting justifiable economic and social development.</p>	<p>Prospecting activities</p>	<p>An EMPr for proposed prospecting activities has been drafted to ensure that prospecting activities are conducted in such a manner that significant environmental impacts are avoided. Where significant impacts cannot be avoided, they will be minimized and mitigated to protect the environmental right of South Africans.</p>
<p>MPRDA, No. 28 of 2002 Section 16 (as amended)</p>	<p>Prospecting activities</p>	<p>The applicant submitted a Prospecting Right Application to the DMRE, which the DMRE accepted REF: (NW 30/5/1/1/2/13353 PR. The conditions and requirements attached to the granting of the prospecting right will apply to the prospecting activities</p>
<p>NEMA Biodiversity Act, 2004</p>		<p>The EMPr will regulate the applicant's implementation of biodiversity management</p>

		measures. This is particularly relevant to all Critical Biodiversity Areas and unclassified.
National Water Act (NWA), Act 36 of 1998	N/A	As far as the project is concern no water use license is applied for this project. Water required for drilling activities will be obtained from a legal source in the area or brought in via a mobile water tanker. Appropriate dust extraction/ suppression equipment will be a condition imposed on the drill contractor for drill rigs.
National Environmental Management: Waste Act, Act 59 of 2008 (NEMWA) (as amended)	Management measures environmental awareness plan	Waste generation will be minimized by ensuring employees of the drilling contractor are subjected to the appropriate environmental awareness campaign before drilling commences. All waste generated during the drilling activities will be disposed of in a responsible legal manner. Proof of legal disposal will be maintained on site.
National Heritage Resources Act (NHRA), 25 of 1999	Management measures	Should archaeological artefacts or skeletal material be discovered in the area during development activities, activities will be stopped, and the South African Heritage Resource Agency (SAHRA) will be notified for an investigation and evaluation of the discoveries.
The Occupational Health and Safety Act (Act No. 9 of 1997)	Management measures	The Occupational Health and Safety Act, 1993 (No.85 of 1993) provides for the health and safety of people at work as well as the health and safety of individuals who use plants and machinery. During the construction and operating phases of the proposed project, the applicant would be expected to fulfil the specifications of the OHS Act.
National Environmental Management Air Quality Act NEM: (AQA), 39 of 2004)	Prospecting activities	The proposed prospecting activities will not trigger any of the activities listed under the above-mentioned Regulations, however, Legare Mining Services (Pty) Ltd will ensure that emissions from their activities complies with the standards as set in the abovementioned regulations. Dust Control Regulations describe the measures for control and monitoring of dust, including penalties. These regulations will be

		applicable during the Prospecting phase.
National Forest Act (Act No. 84 of 1998)	Prospecting activities	No vegetation clearance of will be made on this proposed project. The invasive process of this project is set to take place after harvest since the proposed area is used for growing crops.
Municipal plans and policies		
Local Municipality Integrated Development Plan (IDP)	Socio-Economic	Shortage of water in ward 35 is identified key, the drilled boreholes could be used to source water to the communities facing water supply.
Municipality By- Laws: Environment Conservation Act, 1989 (Act No. 73 of 1989); Spatial Planning and Land Use Management Act, 2013 (Act No. 16 of 2013); Air Quality Management Bylaw	Environmental Management measures awareness plan	Best practice guidelines will be followed for the proposed activities as per the municipal bylaws.
Standards, guidance and spatial tools		
South African National Biodiversity Institute (SANBI) Biodiversity GIS (bgis.sanbi.org)	Baseline environmental description.	Used during desktop research to identify sensitive environments in the prospecting rights area.
QGIS Desktop: Version 2.18.10.	Baseline environmental description and mapping.	Used during desktop research to map the locality and sensitive environments in the prospecting rights area.
Northwest Provincial Spatial Development Framework	Baseline environmental description	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 province development frameworks
Northwest Province Biodiversity Sector Plan	Baseline environmental description	Used during desktop research to investigate the Project area's biodiversity.

4. NEED AND DESIRABILITY OF THE PROPOSED ACTIVITIES

The proposed Project falls within the Rustenburg Local Municipality which has the highest population in the Bojanala District Municipality, the Municipality is under strain with the population growth. More people come to settle in this local municipality for job opportunities. Mining industry is the highest contributor of job opportunities in this municipality, more opportunities for mining would reduce stress of employment to the existing Prospecting activities do not provide many tangible benefits because they are the first stage of mining. Prospecting comes before mining, but it is during the prospecting phase that conclusions are made about whether the available reserves can be mined for a profit. Because it is recognized that mining plays an important role in the South African economy and employs many people, a greater emphasis is placed on prospecting for mining benefits.

Although prospecting is not a labor-intensive activity, few people will be hired to assist with general activities. The required services can also be obtained locally, depending on their availability, thereby contributing to the growth of the Rustenburg economy. With the presence of various mines near the prospecting area, as well as geological information, the area has the potential for Chrome Ore, Manganese Ore and Iron Ore resources.

Should prospecting prove successful and a resource quantified, it would indicate a potential viable economic activity in the form of mining. Mining will contribute greatly for local economic stimulation through direct employment, future business. Should economic reserves be present, and the applicant does not have the opportunity to prospect, the opportunity to utilize the said reserves for the future phases will be lost. Loss of potential employment opportunity for the Rustenburg Local Municipality.

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

Non-invasive prospecting and invasive prospecting will be undertaken. The geology is the primary driver in determining the location of prospecting and mining.

There are no technology alternatives considered. The techniques to be employed are detailed above in section 2. The techniques include the non-invasive prospecting activities like the literature survey, field reconnaissance/mapping, and geophysics survey of the geology outcrops. Some of the invasive prospective activities include prospecting boreholes, boreholes to confirm continuity of mineralization & potential deposit size and resource definition drilling.

Conclusively, the activities associated with Prospecting are of low impact to the environment in the proposed area. These includes but not limited to:

- ❖ No clearance of vegetation will be disturbed in order to establish the drill sites.
- ❖ There are access roads to be utilised for the duration of the activities eliminating the need for construction of new access roads.
- ❖ Minimal interference with the current landuse through open communication with the immediate affected landowners
- ❖ Drilled boreholes will be an added advantage to monitor underground water.
- ❖ Drilled boreholes will be used as source of water.

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

6.1 DETAILS OF DEVELOPMENT FOOTPRINT ALTERNATIVES

6.1.1 PROPERTY

The geology is the primary driver in determining the location of prospecting and mining. The development footprint is expected to be a fraction of the application area size, which is approximately 9.12 ha and only 0.36 ha will be tempered with in this process. The proposed site is therefore considered by far the preferred site and alternative sites are not considered by Legare Mining Services (Pty) Ltd.

6.1.2 TYPE OF ACTIVITY

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.

6.1.3 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 6 drill holes.
- ❖ Rehabilitation will be closely controlled and supervision will be focussed.
- ❖ Concurrent Rehabilitation will take place per drill site.
- ❖ The watercourses (river) and the N4 provincial road present on site are regarded as a no-go area and a 100m buffer will apply.

- ❖ No prospecting will take place on portion 121 of the farm Kroondal 304 JQ, since there is a school which has been there for more than 100 years.

6.1.4 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.

6.1.5 OPERATIONAL ASPECTS

Operational aspects that have been considered for the effective implementation of the PWP include financial arrangements, appropriate equipment available, and technical skills available. The proposed work plan finances will be sourced from Legare Mining Services (Pty) Ltd over the next five years. Legare Mining Services (Pty) Ltd has ensured that technical personnel are available to execute the prospecting work program as well as the equipment desired.

6.1.6 OPTION OF NOT IMPLEMENTING

The option of not approving the activities will result in a significant loss to valuable information regarding the mineral status present on portions 121, 198, 224, 225, RE/19 and RE/20 of the farm Kroondal 304 JQ, though no borehole will be drilled on portion 121. The proposed activities have very low significance since these are short term activities. The probability of occurrence of an impact was determined and most of these activities can be controlled and impacts can be reduced or avoided. The probability was also used basing on looking at other prospecting activities of similar nature. Generally prospecting activities have low impact on the environment. The planned activities negative impacts can be controlled and avoided or minimised therefore the layout does not require revision. Changes in plan will be discussed with the farmers and approvals will be signed. In addition to this, should economical reserves be present, and the applicant does not have the opportunity to prospect, the opportunity to utilize the said reserves for future phases will be lost. Loss of potential employment opportunities for the Rustenburg Local Municipality and Northwest as a Province.

6.2 DETAILS OF THE PUBLIC PARTICIPATION PROCESS TO BE FOLLOWED

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. The Public Participation Process was undertaken in accordance with the requirements of the EIA Regulations, 2014 (as amended, 07 April 2017) particularly Chapter 6 of this Regulation. All Comments received during the Public Participation Process will be incorporated into the Final BAR & EMPr to be submitted to the competent Authority being the Department of Mineral Resources & Energy for Adjudication.

Notification of Interested & Affected Parties

Newspaper advertisement

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 was published on the Brits newspaper on page 5, Friday the 3rd of February 2023 to invite all the Interested & Affected Parties for registration as Interested & Affected Parties for the Prospecting Right Application on the Farm Kroondal 304 JQ. Link to Figure 10 Below for the Proof of Advertisement.

Landowner Notification

The respective landowners were identified through Windeed Search and were consulted by means of emails which contained the Background Information Document (BID), Reg 2.2 map and Landowner notification letter. Refer to the Windeed Search Results attached for identified landowner list on Figure 11.

Site Notice Placement

On the 09th of February 2023, site notices were plugged around the farm Boundaries, Library, and Local Municipality as well as in the neighbouring community as another form of notifying any person/s who might be Interested & Affected by the proposed development.

Organs of State

Engagements with the Government/ Local Municipality Officials/Local Organizations

Government Departments includes.

- ❖ Department of Water and Sanitation
- ❖ Rustenburg Local Municipality
- ❖ Department of Land Restitution Commission
- ❖ Department of Rural Development and Land Reform
- ❖ Department of Agriculture, Forestry and Fisheries
- ❖ Department of Environmental Affairs
- ❖ Eskom
- ❖ SANRAL
- ❖ Transnet

Draft BAR & EMPr

- ❖ The Draft BAR & EMPr will be shared with all the Interested & Affected Parties for the review and comment period.
- ❖ All comments received during the review period of the draft Basic Assessment as well as responses provided will be captured and recorded within the Comments and Response section (Table 8).

AfriForum se Brits-tak reorganiseer



Die nuwe takbestuur van AfriForum se Brits-tak is: Armand Viljoen, Joseph Renaud, dr Natasja Fourie, Dirk de Bruin, Stephan Roos, Marius Kearns, Jaco Grobbelaar, Isabel Kirchner, Crista van Zyl, Jean Claud Naude, Marjonel Scheepers en Johan de Klerk. (Foto verskaf)

'n Gemeenskap staan saam

Laerskool Olienpark het onlangs 'n suksesvolle skoonmaak-projek geloods met die doel om 'n verskil in die onmiddellike omgewing van die skool te maak. Personeel, leerlinge, ouers, besighede se personeel en ook verskeie lede van die gemeenskap het Saterdag, 28 Januarie ingesprong en die hele area rondom Laerskool Olienpark, vanaf Carel de Wetrylaan, Anitastraat en Vleilaan tot by die kanaal skoonmaak en volgens die skool se beplanning gaan dié area op 'n gereelde basis skoonmaak word. Hier is twee van Olienpark se geesdriftige onderwysers, JJ van Deventer en Janco Searle in aksie.

BRITS POS – BRITS - AfriForum se Brits-tak in het op 25 Januarie 2025 'n gemeenskapsvergadering gehou waartydens die tak se bestuur gereorganiseer is.

Gemeenskapslede kon hul insette lewer en het tussen 17 en 22 Januarie lede genomineer wat die tak op die bestuur sal verteenwoordig. Verskeie veiligheidskwessies in die gebied is ook tydens die vergadering bespreek waaraan aandag gegee gaan word. Die nuwe takbestuur is: Stephan Roos (voorsitter), Johan de Klerk (ondervoorsitter), Marius Kearns (tesourier), Crista van Zyl (sekretaris), Johan de Klerk (gemeenskapsveiligheid), Dirk de Bruin (plaaslikeregeringsake), Marjonel Scheepers (omgewingsake), Jean Claud Naude (jeug), dr Natasja Fourie (gesondheid) en Isabel Kirchner (werwing en veldtogte).

Jaco Grobbelaar, AfriForum se hoof vir die sentraalstreek, het die gemeenskap bedank vir hul insette tydens die reorganisasie, asook die bestuurslede vir hul bereidwilligheid om op die takbestuur te dien. "Die gevoel oor die nuutverkose bestuur is baie positief en ek glo dat die tak oor die nodige leierskap beskik om na die gemeenskap se belange om te sien." "Die Brits-tak het tans 288 buurtwagiede en ry daaglikse patrollies. Hulle is ook tans besig om 'n hommeltuig aan te skaf wat 'n groot bydrae gaan lewer tot die veiligheid van Brits-inwoners," sê Armand Viljoen, distrikskoördineerder vir Marico.

Die takbestuur moedig die gemeenskap aan om vandag nog by dié tak betrokke te raak en deel van die oplossing te word: SMS "Brits" na 43350. (Koste beloop R1).

INVITATION OF THE PUBLIC TO PARTICIPATE IN THE PROPOSED PROSPECTING RIGHT AND ENVIRONMENTAL AUTHORIZATION APPLICATIONS

TSWANA/SESOTHO	ENGLISH
<p>Kopo ea Tokelo ea ho Lebela: Singo Consulting (Pty) Ltd molemong oa Legare Mining Services (Pty) Ltd, e kopoe ea Tokelo ea ho nyakisa Chrome Ore, Manganese Ore and Iron Ore mo dikarolong 121, 198, 224, 225, RE/19 and RE/20 polaseng ya Kroondal 304 JQ, mo tlasa ga magestrata wa Rustenburg, Northwest Profense ka, DMRE REF: NW 30/5/1/1/2/13353 PR.</p> <p>Tsebiso e fanoe ho latela Molao oa Ntlafatso ea Mehloli ea Limerale le Petroleum (MPRDA) (Molao oa 28 oa 2002) le melaoana ea EIA 2014, e phatlalalitsong tlasa Tsebiso ea Mmuso No. 982 Koranteng ea No. 3822 ea la 8 Tšitso 2014, e fetotsoeng ka la 7 Mmesa 2017, hore Legare Mining Services (Pty) Ltd e kente kopo ea Prospecting Right bakeng sa lirafshoa tse boletsoeng ka holimo.</p>	<p>Application for Prospecting Right: Singo Consulting (Pty) Ltd on behalf of Legare Mining Services (Pty) Ltd, has lodged an Application for Prospecting Right with Chrome Ore, Manganese Ore and Iron Ore on portions 121, 198, 224, 225, RE/19 and RE/20 of the farm Kroondal 304 JQ situated under the Magisterial District of Rustenburg, Northwest Province with DMRE REF: NW 30/5/1/1/2/13353 PR.</p> <p>Notice is hereby given in terms of the Mineral and Petroleum Resources 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 Legare Mining Services (Pty) Ltd has applied for Prospecting Right for the above-mentioned minerals.</p>
TAMO E HLALELE	INVITATION TO COMMENT
<p>Ho Ingolisa Joalo ka Mokha o Thahasellang le o Amehang: Joalo ka karolo ea Tšebetso ea EIA, haholoholo Public Participation process (PPP) bakeng sa projeke ena e sisintsoeng ea tokelo ea ho ba le tokelo, Me-kha e Thahasellang le e Anehileng (I&APs) e memela ho ingolisa le ho fana ka maikutlo afe kapa afe kapa mathata ao ho ka fihleloang ho Rre Simangaliso Jiyane ka go berekisa dintlha tse di leng kafo tlasa. Sechaba se boete se memela ho hlaloba le ho fana ka maikutlo holim'a Tlaleho ea Moralo oa Tekolo ea Motheo (DBAR) le tlaleho ea Lenaneo la Taolo ea Tikoloho (EMPR). Moralo oa BAR & EMPr o tla fumaneha bakeng sa tlhahlobo bakeng sa nako ea khalendara ea matsatsi a 30 ho tloha ka ka 3 Labotlhano 2023 go fitlha ka Mosupulogo la 3 Moranang 2023. Moralo oa BAR & EMPr o tla fumaneha Laeboraring ea Brits Public Library le Masepaleng oa Lehale oa Rustenburg Local Municipality (159 Nelson Mandela Dve, Rustenburg, 0299) le kopi e bonolo ha e kaptoja ho tsoa ho Singo Consulting (Pty) Ltd ka ho sebelisa mabito sa candidate EAP a ka tlase kapa ka kotloloho ho tsoa ofising ea rona.</p>	<p>Registration as Interested & Affected Party: As part of the EIA process, more especially the Public Participation Process (PPP) for this proposed prospecting right project, Interested and Affected Parties (I&APs) are invited to register and kindly submit any comments or concerns to reach Mr Simangaliso Jiyane using the contact details provided below. The public is also invited to review and comment on the Draft Basic Assessment Report (DBAR) and Environmental Management Programme report (EMPR). The Draft BAR & EMPr will be available for review for 30 days' calendar period from Friday the 3rd of March 2023 to Monday 3rd of April 2023. The Draft BAR & EMPr will be available at Brits Public Library and at Rustenburg Local Municipality (159 Nelson Mandela Dve, Rustenburg, 0299) and a soft copy upon request from Singo Consulting (Pty) Ltd using the contact details of the candidate EAP below or directly from our office.</p>

Singo Consulting (Pty) Ltd
Physical Address: Office 870, 5 Balalaika Street, Tshabot Park Ext2 Witbank 1040
Contact person: Mr Simangaliso Jiyane
Tel No.: +27 13 692 0041
Cell No.: +27 72 832 1117
Fax No.: +27 86 514 4103
Email: simangaliso@singoconsulting.co.za

LEGARE LMS MINING
Physical Address: Smokey Mountain Office Park Unit 201 Route N4, eMalahleni 1035
Contact Person: Mr Ngweditswele P Mabilo
Cell: +27 87 150 7131
Tell: +27 13 6560 180
Email: info@legare.co.za / lehlogonolo@legare.co.za

ON AIR Brits Pos
Waterberg Stereo
104.9 FM 91.6FM 90.2FM
die stasie wat nog omgoue

{luistervink} kom, praat jou taal

Every Thursday morning just past 08:00

Figure 10: Proof of newspaper Publication

Windeed Search

PORTION LIST				
Portion	Owner	Title Deed	Registration Date	Purchase Price (R)
	KROONDAL			
15	ROTHOF EIENDOMME PTY LTD	T108436/1999	-	-
16	LANGE VICTOR HERMANN	T45671/1989	-	-
17	DEUTSCHE EVANGELISCH LUTHERISCHE GEMEINDE-KROONDAL	T8395/1955	-	-
18	DEUTSCHE EVANGELISCH-LUTHERISCHE GEMEINDE VON KROONDAL	T55107/2021	-	-
19	DEUTSCHE EVANGELISCH-LUTHERISCHE GEMEINDE VON KROONDAL	T13185/2017	-	-
20	DEUTSCHE EVANGELISCH LUTHERISCHE GEMEINDE VON KROONDAL	T13185/2017	-	-
21	LANGE HEINRICH FRIEDRICH KARL	T17087/1956	-	-
22	JORDT SIEGFRIED	T51192/1987	-	-
23	HARMS REIMER OTTO	T37367/1977	-	-
24	MAHNECKE WAYNE HANS	T14670/2005	-	-
25	WENTROLL BELEGGINGS CC	T80300/1990	-	-
26	MUHL MARK ERNST	T58593/1981	-	-
27	OTTO & JULIA WENHOLD TESTAMENTERE TRUST	T17431/2021	-	-
28	OTTO & JULIA WENHOLD TESTAMENTERE TRUST	T17431/2021	-	-
29	REPUBLIEK VAN SUID-AFRIKA	T37733/1965	-	-
30	DEUTSCHE EVANGELISCHE-LUTHERISCHE GEMEINDE VON KROONDAL	T22551/2015	-	-
31	SWART LYDIA MARGARETE	T22025/2006	-	-
32	DEUTSCHE EVANGELISCH LUTHERISCHE GEMEINDE VON KROONDAL	T8795/1925	-	-
33	*** NO LONGER EXISTS - SEE ENDORSEMENTS ***	-	-	-

DISCLAIMER

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PORTION LIST				
Portion	Owner	Title Deed	Registration Date	Purchase Price (R)
	LTD			
103	ANTON OTTERMANN TRUST	T66169/2017	-	-
104	WEHRMANN BODO HEINRICH	T111962/2002	-	-
105	*** NO LONGER EXISTS - SEE ENDORSEMENTS ***	-	-	-
106	SCHULENBURG ANTON CLAUS	T12793/1984	-	-
107	WEHRMANN LINDA MARIE	T59022/2018	-	-
108	PILOBUZZ PTY LTD	T101010/2015	-	-
109	RUDOLF OTTERMANN FAMILY TRUST	T89671/1999	-	-
110	RUDOLF OTTERMANN FAMILY TRUST	T89671/1999	-	-
111	PAUL EGMONT OTTERMANN TRUST	T87343/1993	-	-
112	*** NO LONGER EXISTS - SEE ENDORSEMENTS ***	-	-	-
113	*** NO LONGER EXISTS - SEE ENDORSEMENTS ***	-	-	-
114	SOUTH AFRICAN NATIONAL ROADS AGENCY LTD	T162307/2003	-	-
116	MUHL MARK ERNST	T58593/1981	-	-
117	*** NO LONGER EXISTS - SEE ENDORSEMENTS ***	-	-	-
118	*** NO LONGER EXISTS - SEE ENDORSEMENTS ***	-	-	-
119	*** NO LONGER EXISTS - SEE ENDORSEMENTS ***	-	-	-
120	*** NO LONGER EXISTS - SEE ENDORSEMENTS ***	-	-	-
121	DEUTSCHE EVANGELISCH LUTHERISCHE GEMEINDE-KROONDAL	T35266/1970	-	-
122	SIBANYE RUSTENBURG PLATINUM MINES PTY LTD	T83242/2018	-	-
123	*** NO LONGER EXISTS - SEE ENDORSEMENTS ***	-	-	-
124	BEHRENS BERND DIETER	T31357/1988	-	-

PORTION LIST				
Portion	Owner	Title Deed	Registration Date	Purchase Price (R)
209	SOUTH AFRICAN NATIONAL ROADS AGENCY LTD	T28303/2010	-	-
210	SOUTH AFRICAN NATIONAL ROADS AGENCY LTD	T28303/2010	-	-
211	SOUTH AFRICAN NATIONAL ROADS AGENCY LTD	T32266/2005	-	-
213	SUID-AFRIKAANSE NASIONALE PADAGENTSKAP LTD	T77896/2003	-	-
214	SUID-AFRIKAANSE NASIONALE PADAGENTSKAP LTD	T140466/2003	-	-
215	SUID-AFRIKAANSE NASIONALE PADAGENTSKAP LTD	T173912/2003	-	-
216	SUID-AFRIKAANSE NASIONALE PADAGENTSKAP LTD	T973/2003	-	-
217	SOUTH AFRICAN NATIONAL ROADS AGENCY SOC LTD	T86936/2021	-	-
220	BAHLALOGA PROP MANAGEMENT PTY LTD	T80722/2022	-	-
221	KROONDAL OPERATIONS PTY LTD	T61896/2005	-	-
222	RUSTENBURG PLATINUM MINES LTD	T74446/2003	-	-
224	SOUTH AFRICAN NATIONAL ROADS AGENCY LTD	T34523/2008	-	-
225	SOUTH AFRICAN NATIONAL ROADS AGENCY LTD	T34523/2008	-	-
226	DIE SUID-AFRIKAANSE NASIONALE PADAGENTSKAP LTD	T143869/2004	-	-
227	SUID-AFRIKAANSE NASIONALE PADAGENTSKAP LTD	T57447/2005	-	-
230	SUID-AFRIKAANSE NASIONALE	T22024/2006	-	-

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Figure 11: Windeed search results

Site Notice Placement

English site notice:

NOTICE OF PUBLIC PARTICIPATION FOR PROSPECTING RIGHT AND ENVIRONMENTAL AUTHORISATION APPLICATION

Notice of the Prospecting Right Application Process as per the Mineral and Petroleum Resources Development Act (MPRDA) (Act 28 of 2002) for the Prospecting of **Chrome Ore, Manganese Ore and Iron Ore** on portions 121, 198, 224, 225, RE/19 and RE/20 of the farm Kroondal 304 JQ situated under the Magisterial District of Rustenburg, Northwest Province with DMRE REF: NW 30/5/1/1/2/13353 PR.

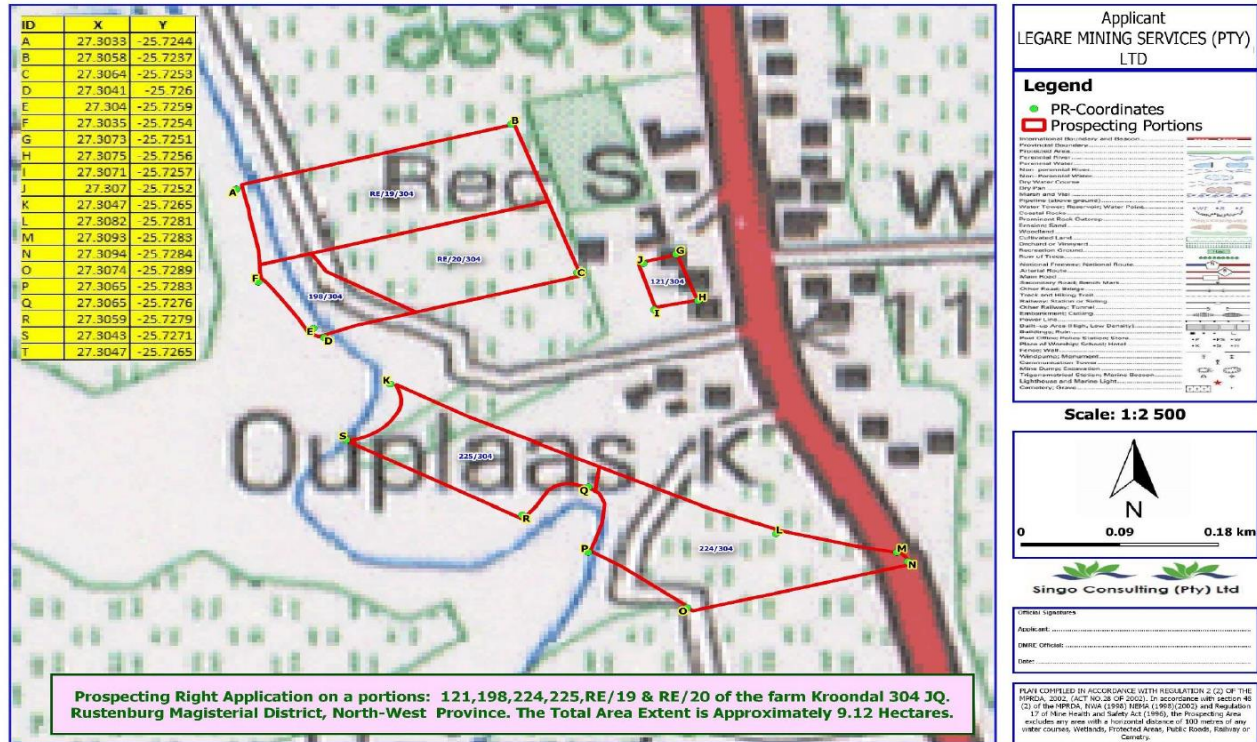


Figure 1: Regulation 2(2) Map (coordinate N: -25.7284, 27.3094)

INVITATION TO COMMENT

Notice is hereby given in terms of the Mineral and Petroleum Resources 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 **Legare Mining Services (Pty) Ltd** has applied for Prospecting Right for the above-mentioned minerals.

As part of the EIA process, more especially the Public Participation Process (PPP) for this proposed prospecting right project, Interested and Affected Parties (I&APs) are invited to register and kindly submit any comments or concerns to reach **Mr Simangaliso Jiyane** using the contact details provided below. The public is also invited to review and comment on the Draft Basic Assessment Report (DBAR) and Environmental Management Programme report (EMPr). The Draft BAR & EMPr will be available for review for 30 days' calendar period from **Friday the 3rd of March 2023** to **Monday 3rd of April 2023**, the comments should reach the Candidate EAP before or no later than the end of the review period. The Draft BAR & EMPr will be available at **Brits Public Library** and at **Rustenburg Local Municipality** (159 Nelson Mandela Dve, Rustenburg, 0299) and a soft copy upon request from **Singo Consulting (Pty) Ltd** using the contact details of the candidate EAP below or directly from our office.

<p style="text-align: center;">CANDIDATE EAP:</p> <div style="text-align: center;"> <p>Singo Consulting (Pty) Ltd</p> </div> <p>Physical Address: Office 870, 5 Balaalaika Street, Tasbet Park Ext 2, Witbank, 1040</p> <p>Contact person: Mr Simangaliso Jiyane</p> <p>Tel No.: +27 13 692 0041</p> <p>Cell No.: +27 72 832 1117</p> <p>Fax No.: +27 86 514 4103</p> <p>Email: simangaliso@singoconsulting.co.za</p>	<p style="text-align: center;">APPLICANT:</p> <div style="text-align: center;"> <p>LEGARE MINING SERVICES (PTY) LTD</p> </div> <p>Physical Address: Smokey Mountain Office Park Unit 201, Route N4, eMalaheni, 1035</p> <p>Contact Person: Mr Ngwediotswelle P Mabilo</p> <p>Cell: +27 87 150 7131</p> <p>Tell: +27 13 6560 180</p> <p>Email: info@legare.co.za / lehlogonolo@legare.co.za</p>
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SeTswana site notice:

KITSISO YA GO NNA LE SEABE GA SETŠHABA MO GO BATLENG TSHWANELO LE KOPO YA TETLA YA TIKOLOGO.

Tsebiso e fanoe ho latela Molao oa Ntlatfiso ea Mehlohi ea Liminerale le Petroleum (MPRDA) (Molao oa 28 oa 2002) ho nyakisa Chrome Ore, Manganese Ore and Iron Ore mo dikarolong 121, 198, 224, 225, RE/19 and RE/20 polaseng ya **Kroondal 304 JQ**, mo tlase ga **magestrata wa Rustenburg, Northwest Profense** ka, DMRE REF: **NW 30/5/1/2/13353 PR.**

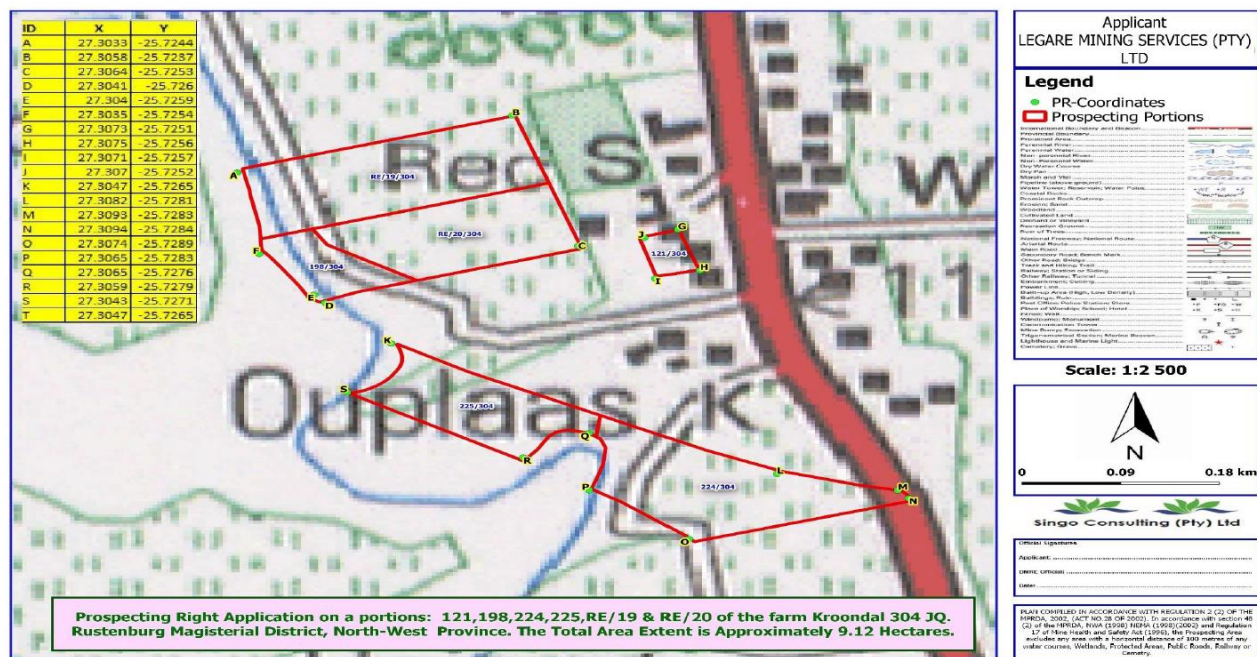


Figure 1: Regulation 2(2) Mmapa (go rulaganya N: -25.7284, 27.3094)

KOPELO YA GO AKARETSA

Go itsiwe ka Molao wa Tlhabololo ya Didiriswa tsa Diminerale le Petroleum (MPRDA) (Molao wa bo28 wa 2002) le melawana ya EIA ya 2014, e e phasaladitsweng go ya ka Kitsiso ya Mmuso ya bo982 mo Kaseteng ya Mmuso ya bo3822 ya 8 Sedimonthole 2014, e e fetotsweng ka di 7 Moranang 2017, gore **Legare Mining Services (Pty) Ltd** e dirle kopo ya tshwanelo ya go batla diminerale tse di umakilweng fa godimo. Jaaka karolo ya thulaganyo ya EIA, segolobogolo thulaganyo ya go tsaya karolo ga setšhaba (PPP) ya porojeke eno ya di tshwanelo tsa go batla, ba ba nang le kgatlhego le ba ba amilweng (I&APs) ba lalediwa go ikwadisa le go romela dikakgelo dipe kana matshwenyego go ikgolaganya le **Re Simangaliso Jiyane** ka go dirisa dintlha tsa go ikgolaganya tse di neetsweng fa tlase. Setšhaba gape se lalediwa go sekaseka le go akgela ka Leano la Pegelo ya Tshekatshoko ya Motheo (DBAR) le Pego ya Lenaneo la Tsamaiso ya Tikologo (EMPr). Thulaganyo ya go dira dipatlisiso e tla nna teng ka malatsi a le 30 go simolola ka **Labotlhano, Mopitlwe 3, 2023** go fitlha ka **Mantaga, Moranang 3, 2023**, mme dikakgelo di tshwanetse go fitlha kwa Mokwadising wa EAP pele kgotsa morago ga bokhutlo jwa paka ya go dira dipatlisiso. Molaothomo wa BAR & EMPr o tla nna teng kwa **Brits Public Library** le kwa **Rustenburg Local Municipality** (159 Nelson Mandela Dve, Rustenburg, 0299) le khopi ya one fa o e kopa kwa Singo Consulting (Pty) Ltd o dirisa dintlha tsa go ikgolaganya le mokopi wa EAP fa tlase kgotsa ka tlhamalalo go tswa kwa ofising ya rona.

CANDIDATE EAP:



Aterese: Office 870, 5 Balalaika Street, Tasbet Park Ext 2,

Witbank, 1040

Motho yo o ka ikgolaganyang le ene: Mr Simangaliso Jiyane

Tel Nnyaa.: +27 13 692 0041

Nomoro ya Sele.: +27 72 832 1117

Nomoro ya fekese.: +27 86 514 4103

Email: simangaliso@singoconsulting.co.za

APPLICANT:



Aterese: Smokey Mountain Office Park Unit 201, Route N4, eMalaheni, 1035

Motho yo o ka ikgolaganyang le ene: Mr Ngwediotswela P Mabilo

Tel Nnyaa: +27 87 150 7131

Nomoro ya Sele: +27 13 6560 180

Email: info@legare.co.za / lehlogonolo@legare.co.za

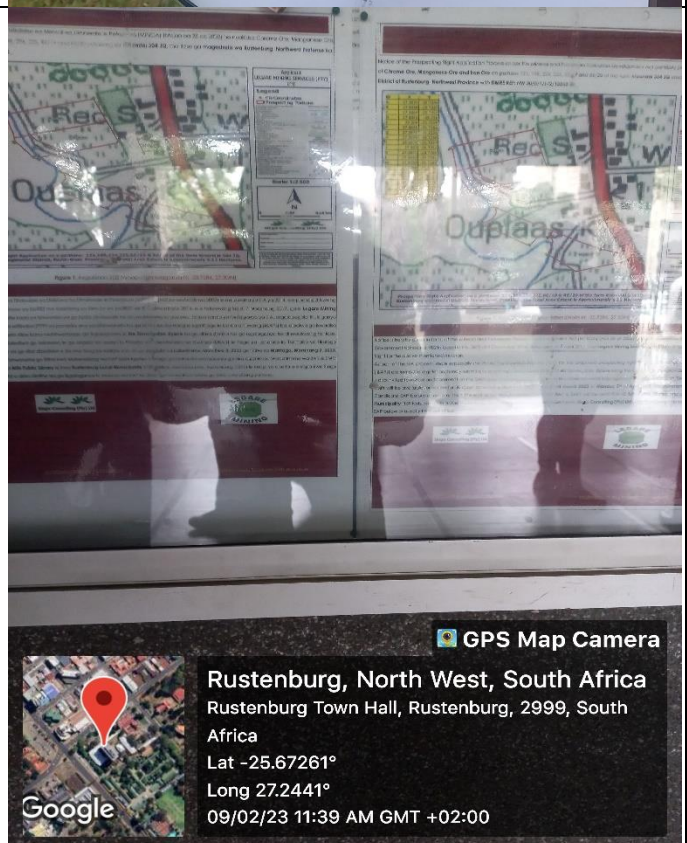
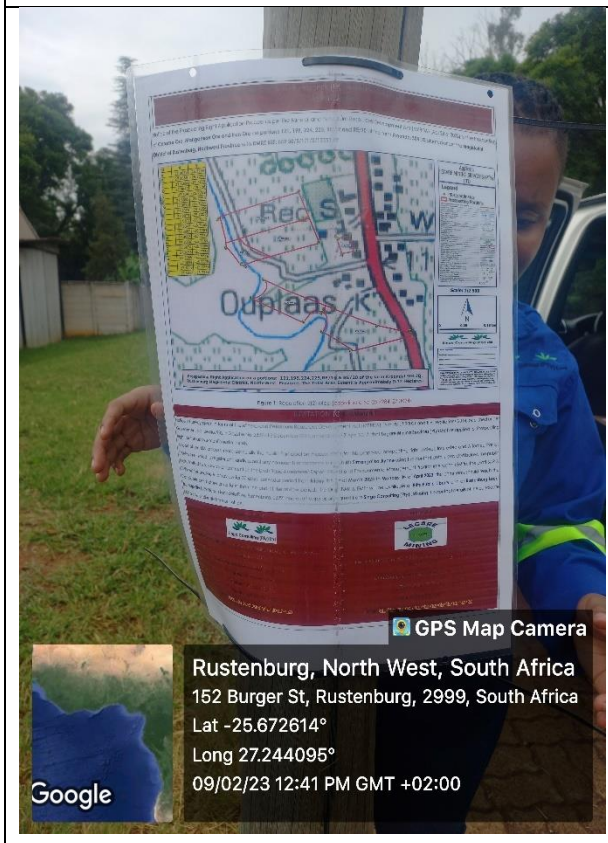
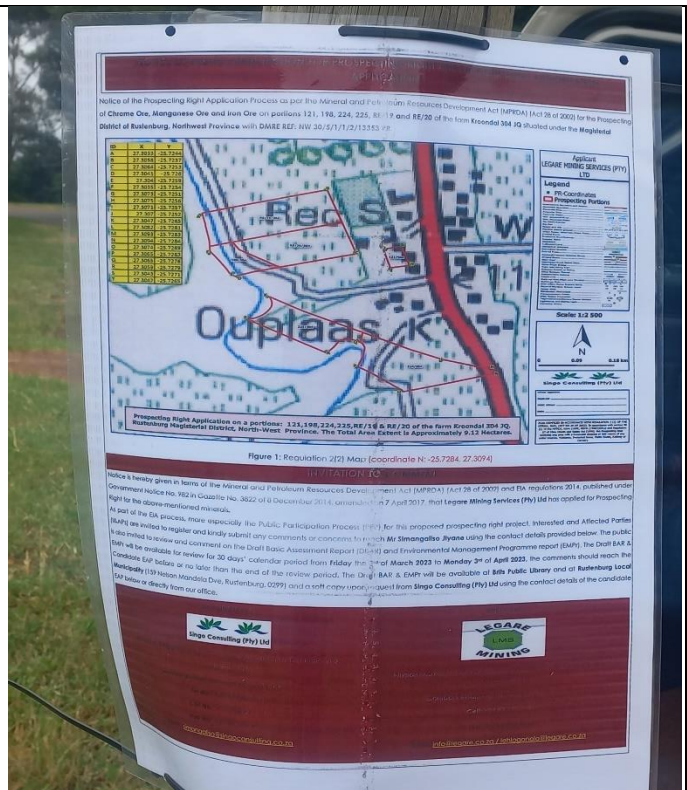
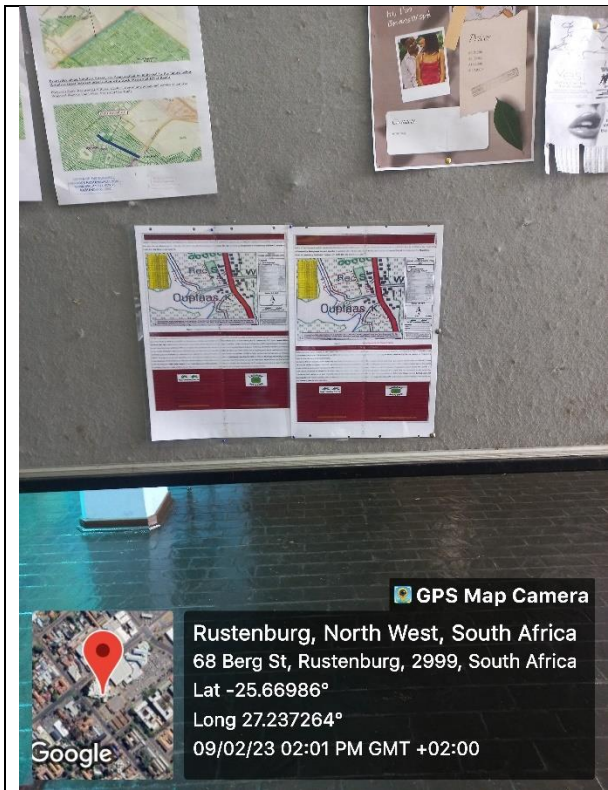


Figure 12: Placement of site notices



6.3 SUMMARY OF ISSUES RAISED BY I&AP'S

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

Table 8: Summary of issues raised by I&AP's

Interested and Affected Parties List the names of persons consulted in this column, and Mark with an X where those who must be consulted were in fact consulted.	Date Comments Received	Issues raised	EAPs response to issues as mandated by the applicant	Section and paragraph reference in this report where the issues and or response were incorporated.
<u>AFFECTED PARTIES</u>				
Landowner/s				
Municipal councillor				
Municipality				
Organs of state (Responsible for infrastructure that may be affected Roads Department, Eskom, Telkom, DWA)				

TO BE COMPLETED AFTER THE REVIEW OF THE DRAFT BAR AND EMPR COMMENT PERIOD

Communities				
Dept. Land Affairs				
				
Traditional Leaders				
Dept. Environmental Affairs				
 environmental affairs Department: Environmental Affairs REPUBLIC OF SOUTH AFRICA				
Other Competent Authorities affected				
<u>INTERESTED PARTIES</u>				

TO BE COMPLETED AFTER THE REVIEW OF THE DRAFT BAR AND EMPR COMMENT PERIOD

6.4 THE ENVIRONMENTAL ATTRIBUTES ASSOCIATED WITH THE ALTERNATIVES

6.4.1 Socio-Economic Context

The Proposed Prospecting Right area is on portions 121, 198, 224, 225, RE/19 and RE/20 of the farm Kroondal 304 JQ situated under the Magisterial District of Rustenburg, the Rustenburg Local Municipality is located in Bojanala District Municipality. The total geographical area is 3,423 km².

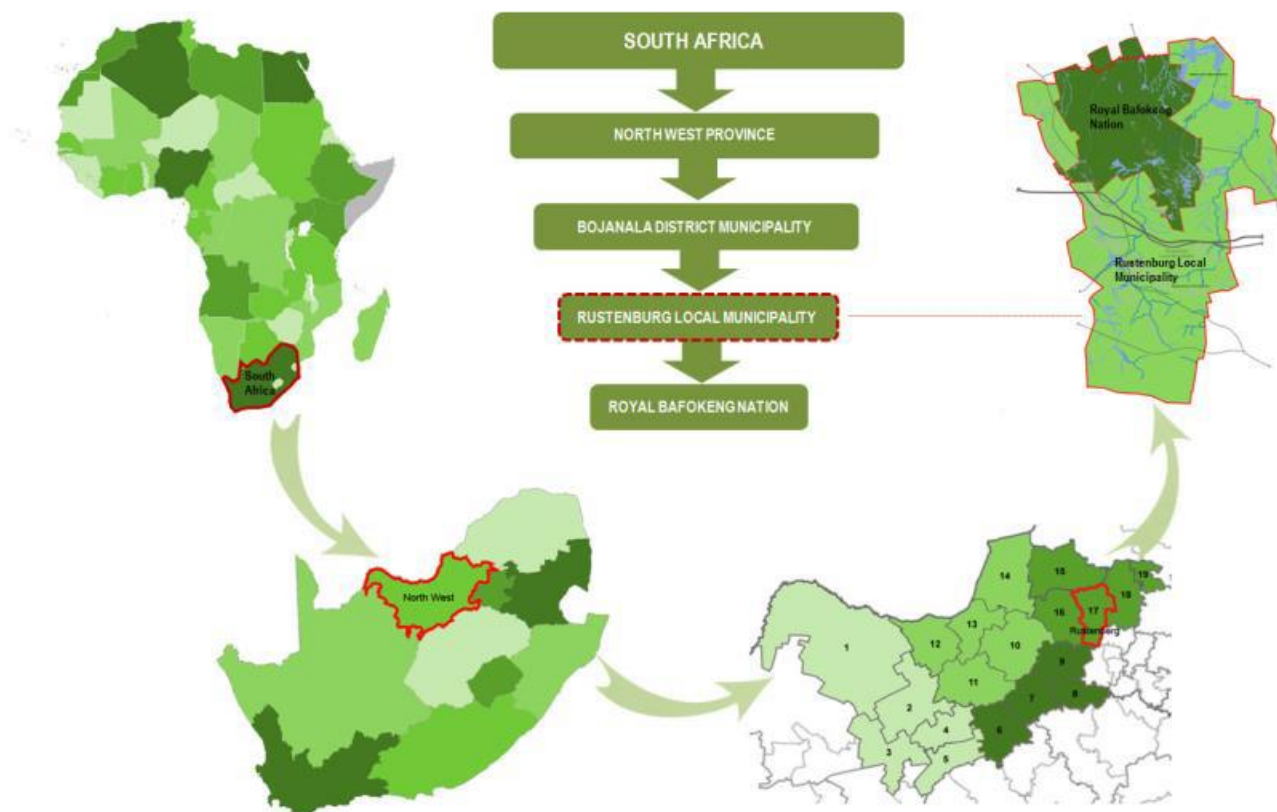


Figure 13: Location hierarchy of RLM within the context of South Africa.

The information contained in this section is thereof based on the most recent revised edition of the Rustenburg Local Municipality's Integrated Development Plan of 2022/2027. The Rustenburg Local Municipality is located in the eastern parts of the North-West Province and is accessible to a number of major South African urban centres. These centres include Johannesburg and Tshwane, which are located approximately 120km from Rustenburg. Smaller centres surrounding Rustenburg are Madibeng, Mogale City, Brits, Lichtenburg and Zeerust in the Ramotshere Moilwa Local Municipality. Rustenburg is linked to the above urban centres through an extensive regional road network. The most notable of these are the N4 Freeway or Platinum Corridor, which links Rustenburg to Tshwane in the east and Zeerust to the west.

Demographic Profile

Demographics", or "population characteristics", includes analysis of the population of a region. Distributions of values within a demographic variable, and across households, as well as trends over time are of interest. In this section, an overview is provided of the demography of the Rustenburg Local Municipality and all its neighbouring regions, Bojanala Platinum District Municipality, North-West Province and South Africa as a whole.

Total Population

Population statistics is important when analysing an economy, as the population growth directly and indirectly impacts employment and unemployment, as well as other economic indicators such as economic growth and per capita income.

Total population - Rustenburg, Bojanala Platinum, North-West and National Total, 2010-2020
[Numbers percentage]

	Rustenburg	Bojanala Platinum	North-West	National Total	Rustenburg as % of district municipality	Rustenburg as % of province	Rustenburg as % of national
2010	534,000	1,480,000	3,480,000	51,100,000	36.0%	15.3%	1.04%
2011	556,000	1,530,000	3,560,000	52,000,000	36.4%	15.6%	1.07%
2012	578,000	1,570,000	3,630,000	52,900,000	36.7%	15.9%	1.09%
2013	599,000	1,620,000	3,710,000	53,700,000	37.0%	16.1%	1.11%
2014	618,000	1,660,000	3,780,000	54,600,000	37.3%	16.4%	1.13%
2015	637,000	1,700,000	3,850,000	55,500,000	37.5%	16.5%	1.15%
2016	655,000	1,740,000	3,930,000	56,400,000	37.7%	16.7%	1.16%
2017	673,000	1,780,000	4,000,000	57,200,000	37.9%	16.8%	1.18%
2018	689,000	1,810,000	4,070,000	58,100,000	38.0%	16.9%	1.19%
2019	705,000	1,850,000	4,140,000	59,000,000	38.1%	17.0%	1.19%
2020	719,000	1,880,000	4,210,000	59,800,000	38.2%	17.1%	1.20%
Average Annual growth							
2010-2020	3.03%	2.42%	1.92%	1.59%			

Source: IHS Markit Regional eXplorer version 2112

Economic analysis:

For the period 2020 and 2010, the GVA in the community services sector had the highest average annual growth rate in Rustenburg at 2.13%. The industry with the second highest average annual growth rate is the trade sector averaging at 0.68% per year. The construction sector had an average annual growth rate of -1.18%, while the mining sector had the lowest average annual growth of -1.29%. Overall a negative growth existed for all the industries in 2020 with an annual growth rate of -10.16% since 2019.

Gross Value Added (GVA) by broad economic sector - Rustenburg Local Municipality, 2010, 2015 and 2020 [R billions, 2010 constant prices]

	2010	2015	2020	Average Annual growth
Agriculture	0.18	0.22	0.18	-0.11%
Mining	26.47	30.62	23.25	-1.29%
Manufacturing	0.89	1.18	0.88	-0.15%
Electricity	0.37	0.38	0.34	-0.99%

	2010	2015	2020	Average Annual growth
Construction	0.37	0.53	0.32	-1.18%
Trade	1.76	2.59	1.89	0.68%
Transport	0.72	1.07	0.73	0.10%
Finance	2.19	2.78	2.27	0.36%
Community services	2.04	3.13	2.52	2.13%
Total Industries	34.99	42.51	32.36	-0.78%

Source: IHS Markit Regional eXplorer version 2112

The primary sector contributes the most to the Gross Value Added within the Rustenburg Local Municipality at 77.2%. This is significantly higher than the national economy (11.1%). The tertiary sector contributed a total of 18.4% (ranking second), while the secondary sector contributed the least at 4.5%.

7. TYPE OF ENVIRONMENT AFFECTED BY THE PROPOSED ACTIVITY

7.1 GEOLOGY

Bushveld Igneous Complex

The Bushveld Complex is early Proterozoic in age and consists of three large suites of intrusive rocks, occupying a total surface area of approximately 65,000km². The Complex is known for its enormous concentrations of magmatic ores, a variety of pegmatitic and hydrothermal deposits, as well as industrial mineral deposits formed by the metamorphism of the floor rocks of the Complex (Caimcross and Dixon, 1995). the Bushveld Complex (Schweitzer et al., 1995a, b).

The geological terrain in which the Bushveld Complex is located is known as the Kaapvaal Craton. This Archaean cratonic nucleus, represented by basement granitic rocks and greenstone belts, developed between 3700 and 2650 Ma ago (Eglington and Armstrong, 2004), by which time it had largely stabilized. During this period, and subsequently, relatively undeformed stratified basins formed on the craton. The oldest, the Witwatersrand Basin, hosts the largely volcanic Dominion Group (ca. 3100 Ma) (Marsh, 2007), overlain by the largely sedimentary Witwatersrand Supergroup (3000–2700 Ma) (McCarthy, 2007), and followed by the largely volcanic Ventersdorp Supergroup (2700 Ma) (van der Westhuizen, de Bruijn, and Meintjies, 2007).

Subsequent deposition of platform strata of the Transvaal Supergroup (2650–2200 Ma) (Eriksson, Altermann and Hartzler, 2007) occurred in the Transvaal Basin, which overlies the Witwatersrand Basin and an extensive area of Archaean basement rocks further north.

The Palaeoproterozoic Bushveld Igneous Province in South Africa is comprised of:

- a suite of mafic sills which intruded the floor rocks of Transvaal Supergroup
- the bimodal but predominantly Rooiberg Group volcanic province: one of the largest pyroclastic provinces on Earth covering at least 50 000 km² and up to 3 km thick
- the Rustenburg Layered Suite, the largest and oldest mafic layered complex on Earth which covers an area of approximately 65,000 km² and comprises anorthosites, mafic and ultramafic cumulates
- the Lebowa Granite Suite
- the Rashedoop Granophyre Suite developed at the contacts between the granites and Rustenburg Layered Suite which is comprised of metamorphosed sediments and intrusive acidic rocks.
- Various satellite intrusions of similar age including the Molopo Farms and Nkomati – Uitkomst

The Bushveld Igneous Complex contains important minerals such as large quantities of platinum, Chrome, Iron ore & Manganese.

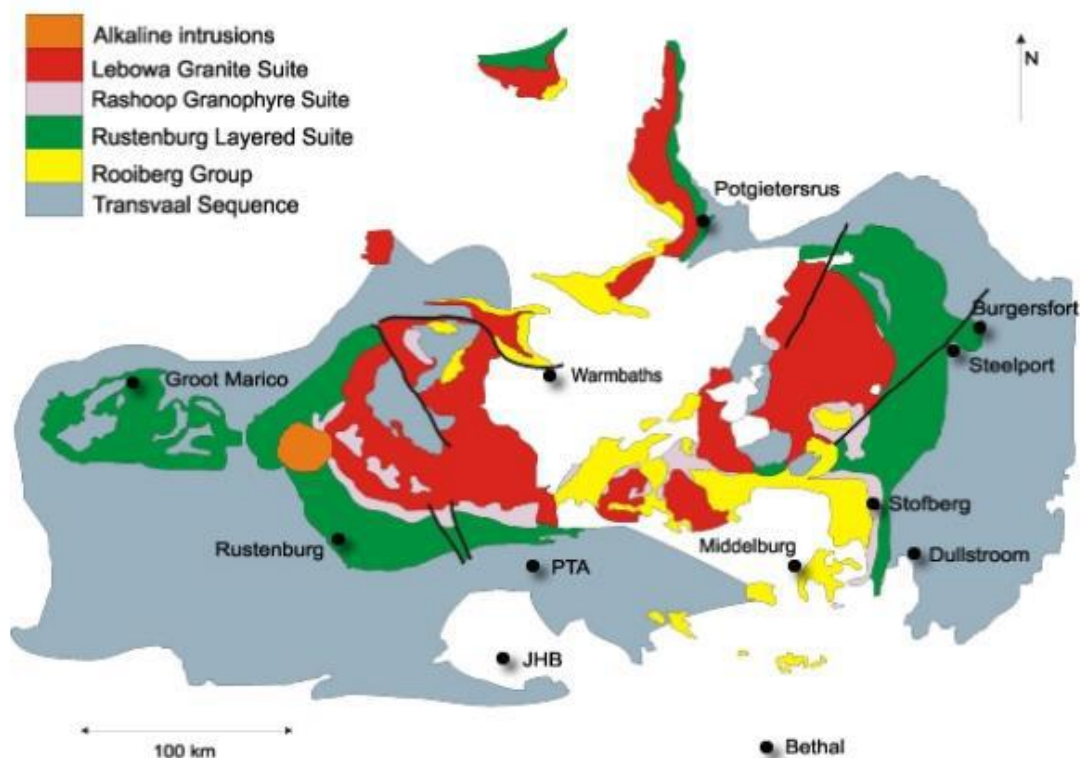


Figure 14: Simplified geological map of the Bushveld Large Igneous Province, which includes the Rustenburg Layered Suite, the Rooiberg Volcanics and the Lebowa Granite Suite

Rustenburg Layered Suite

The Rustenburg Layered Suite (RLS) was emplaced at shallow crustal levels beneath the volcanic pile of Rooiberg felsites and Rashoop granophyres as sills in the Transvaal Supergroup. North of Burgersfort, emplacement occurred at the level of the Magelliesberg quartzite, but to the south it transgressed upwards through more than 2 km of sediments so that near Stoffberg basaltic rocks of the Dullstroom Formation (at the base of Rooiberg Group) are preserved in the floor. The crescentic outcrop pattern of the RLS is comprised of four exposed sectors, the eastern limb, the western limb, the far western limb and the northern limb, with a fifth limb, the south-eastern Bethal limb, obscured by younger sediments.

The RLS has been subdivided into a number of zones, the Marginal, Lower Zone (LZ), Critical (CZ) Main (MZ) and Upper Zones (UZ), although their exact boundaries have been the subject of much debate (e.g. Kruger 1990). Lateral facies variations within the sequence are common. The Marginal Zone consists mainly of norite with some pyroxenite. The Lower Zone is ultramafic, dominated by pyroxenite, harzburgite, and dunite. The lower part of the Critical

Zone is essentially pyroxenite, whereas the upper part is represented by cyclic layers of pyroxenite, norite and anorthosite. The Main Zone is predominantly norite and gabbro, with some layers of anorthosite and pyroxenite. The Upper Zone shows more variation in rock type and includes diorite, anorthosite, norite, gabbro and pyroxenite.

The Marginal Zone

The Marginal Zone is not always present. Where it occurs, it ranges in thickness from zero to hundreds of metres along the basal contact of the Complex. The rocks are most commonly norites with variable proportions of accessory clinopyroxene, quartz, biotite and hornblende, which reflect varying degrees of contamination from the underlying sediments. Generally, it is related to the immediately adjacent cumulate rocks but in places it has been disrupted and has been partly digested by later magma injections (see Eales, 2003 for an overview). However, where Marginal Zone occurs beneath the Lower Zone, it may represent an early magma which in the east occurs as the Shelter norite (SACS, 1980), a succession up to 400m thick around Burgersfort. For a discussion on magma lineages see Kruger, (2004).

The Lower Zone

The Lower Zone has the most limited lateral extent and is best developed in the northern parts of both eastern and western limbs and in the southernmost part of the northern limb. The thickness of the Lower Zone has been influenced by floor topography and structure and is 1300 m at maximum (Cawthorn et al 2002). In the Oliphants River Trough, in the eastern limb (Figure 12) Cameron, 1978, subdivided the Lower Zone into 3 zones, a central harzburgite between an upper and lower pyroxenite. The lower pyroxenite is extremely uniform in composition, containing on average 98% and never less than 95% orthopyroxene with minor interstitial plagioclase and clinopyroxene. The harzburgite unit consists of cyclic units of dunite, harzburgite and pyroxenite varying in thickness from a few to tens of metres. Dunite layers are distinctive, they weather more easily than pyroxenite to a dull greasy brown, they usually contain magnesite veins, and are covered in magnesite float. Little serpentinization is apparent.

Up sequence the orthopyroxene occurs as small oikocrysts, increasing in size up to 1-2 cm. As the modal proportion of orthopyroxene increases the texture changes, with harzburgites containing sub-equant grains of both minerals. In the olivine pyroxenites the olivine appears anhedral against pyroxene. However, in view of the extreme textural recrystallisation in these rocks the inference that the olivine is post-cumulus should be viewed with caution. Scattered

chromite grains are present, green clinopyroxene and plagioclase are rare. The orthopyroxene changes in habit from granular to elongate with a range of grain sizes.

The Critical Zone

The Critical Zone, which is characterised by spectacular layering (Figure 13), hosts world-class chromite and platinum deposits in several different layers (termed reefs). The Critical Zone, which is up to 1500 m thick, is divided into a lower sub-zone (CLZ) which is entirely ultramafic and is characterised by a thick succession of orthopyroxenitic cumulates and an upper sub-zone (CUZ) that comprises packages of chromitite, harzburgite, pyroxenite, through norite to anorthosite. Subdivision into magmatic cycles is somewhat subjective but nine cycles have been recognised in the CLZ and eight cycles in the CUZ consisting of partial or complete sequences from a base of ultramafic cumulates through norite to anorthosite.

The base of the upper Critical Zone is defined as the first appearance of cumulus plagioclase and is drawn at the base of the lowermost anorthositic layer of the RLS between two chromitite layers. Two distinctive cyclic units, the Merensky and Bastard units were included within the CZ of the original classification, however a significant break in the initial Sr isotope ratio, and a major unconformity at the base of the Merensky Unit, led Kruger (1992), to draw the boundary between the CZ and MZ at the base of the Merensky Unit, where the major magma influx occurs, rather than at the top of the Giant Mottled Anorthosite, a distinctive layer characterised by large oikocrysts of pyroxene at the top of the Bastard Unit.

The Main Zone

The Main Zone, which is >3000 m in thickness, forms almost half the thickness of the entire RLS. It comprises a succession of gabbronorites with infrequent anorthosite and pyroxenite bands while olivine and chromite are absent. In addition to the Merensky Reef at its base it is economically important for numerous dimension stone quarries which exploit the Pyramid Gabbronorite a dark-coloured inverted pigeonite bearing gabbronorite. Although not as spectacularly layered as the Critical Zone discrete packages of modally layered rocks can be identified (Molyneux, 1974; Mitchell, 1990; Nex et al., 1998, 2002), possibly associated with the influx of new magma. In the eastern Bushveld a modally layered succession of gabbronorites 10-20 m thick occurs some 60-70 m below the Pyroxenite Marker (Quadling and Cawthorn, 1994). This layered package is continuous for 80 km along strike. It has also been identified in the western Bushveld with a 20 km strike extent (Nex et al, 1998).

All the layers have sharp bases and planar tops and are composed of orthopyroxene (inverted pigeonite) + clinopyroxene + plagioclase but the proportions vary so that the lighter

layers are typically 70% plagioclase, whereas the darker layers are 30-40% plagioclase. Darker layers vary from 2-10 cm in thickness. The layering is considered to be due to mechanical re-distribution of crystals since none of the layers has typical cotectic proportions. In the eastern Bushveld geochemical studies suggest that compositional reversals in orthopyroxene and plagioclase occur slightly above this layered package reflecting the influx of new magma to form the Upper Zone (Nex et al., 2002).

Upper Zone

The Upper Zone is characterized by sequences which are intensely banded with gabbros as the dominant rock type, there is no chill at the top contact with the metamorphosed felsite or granophyre, and the most differentiated rocks occur towards the top. The most striking feature of the Upper Zone is the presence of some 25 magnetite layers in the eastern limb (Molyneux, 1974) that cluster into four groups, each with up to seven layers. Magnetite layers typically have sharp bases, but gradational tops. The thickest is 6 m, while the Main Magnetite layer, near the base of the Upper Zone is 2 m thick and is mined for its vanadium content. The titaniferous magnetite layers comprise a vast source of vanadium ore and hosts almost half of the world's vanadium reserves.

Lebowa Granite Suite

The Bushveld granites form a 2-3 km thick sheet-like sill of batholithic proportions, which gently dips centripetally towards the centre of the Complex, although it is gently folded locally to expose inliers of the underlying sedimentary rocks, such as the Marble Hall and Crocodile River fragments (Kleeman & Twist, 1989). The main granites the Lebowa Granite Suite, or Nebo granite (SACS, 1980), are highly potassic, magnetite-bearing, A-type* granites. Straus (1954) noted several variations within the Nebo granite such as an upwardly decrease in hornblende contents and a gradual colour change from grey at its base to a distinctive deepening red colour towards the upper parts, caused by the trapping of hematite in the feldspar lattices during deuteric alteration of the feldspar. The Nebo granites are by and large the most common variety and occupy most of the central core of the Complex.

Rashoop Granophyre Suite

According to Walraven, (1987), the Stavoren granophyre, which is the predominant type, is shallow intrusive facies of a magma which intruded below the rhyolite roof of the Rooiberg Group or Pretoria Group sediments and extruded to form the volcanic pile. In contrast, other granophyres formed by the melting of the overlying volcanic roof rocks by the underlying RLS, by recrystallisation of Rooiberg volcanic rocks, or by metamorphism of sedimentary roof rocks.

Rooiberg Group volcanics

The Rooiberg Group volcanics, which are up to 3.5 km thick in the Loskop area, are preserved over an area of > 50,000 km² (Schweitzer et al, 1995) and may even have exceeded 300 000 km³ (Twist and French, 1983) although in many areas the succession is extensively thinned or removed by erosion (Buchanan et al, 2002). The Rooiberg Group, unconformably overlies the Transvaal Supergroup (Cheney and Twist, 1991) and the Rustenburg Layered Suite of the Bushveld Complex was generally emplaced along or above the unconformity between the volcanics forming the roof of the Complex and the underlying Pretoria Group of the Transvaal Supergroup with volcanics preserved in the floor and roof of the Rustenburg Layered Suite (RLS) of the Bushveld Complex Extrusion of the upper units of the Rooiberg Group may have been synchronous with late RLS or granite emplacement (Schweitzer et al.,1995) If so, then felsic units added to the top of the volcanic pile while sills intruded below. Isotopic ages for these extrusive units fall within the age range of 2061 +/- 2 and 2052 +/- 48 (Walraven 1987).

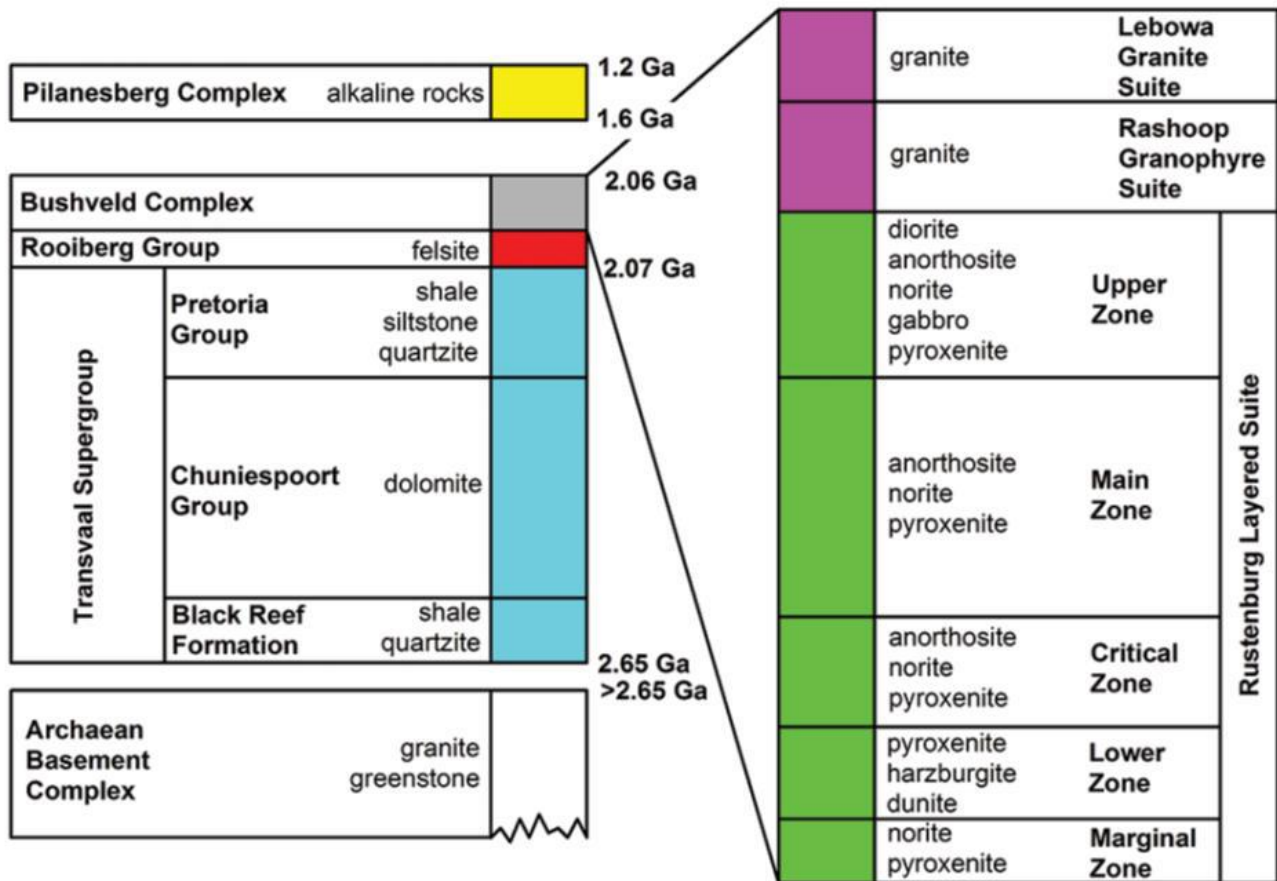


Figure 15: Simplified stratigraphic column of the central part of the Kapvaal craton (left) and a more detailed subdivision of the Bushveld Complex (right) Jones (2017).

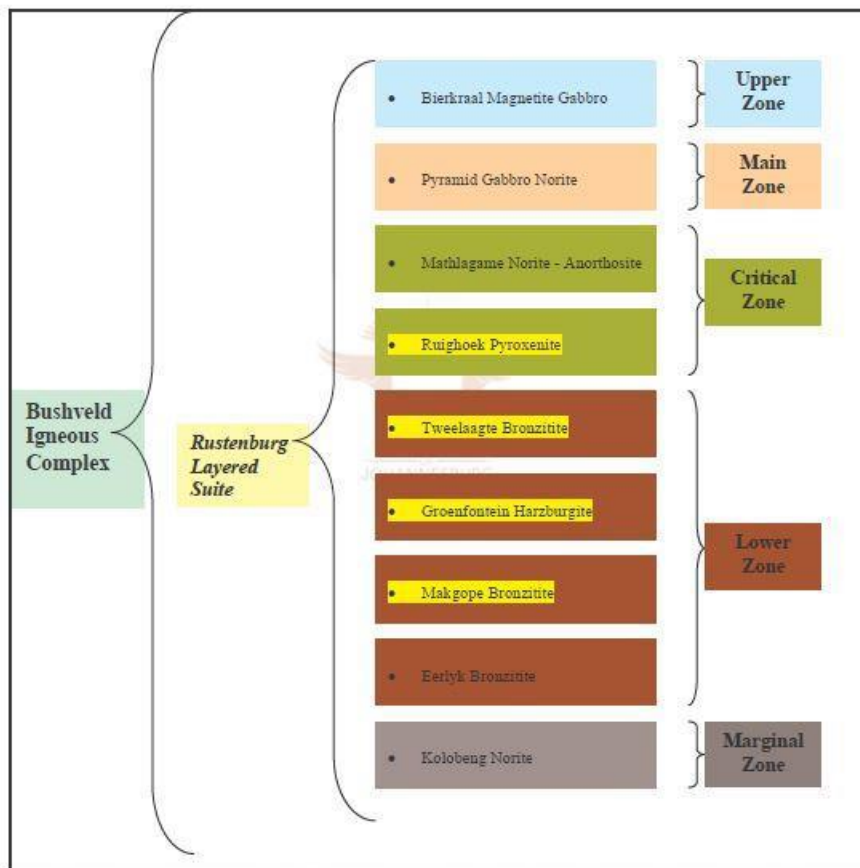


Figure 16: Lithostratigraphic subdivision of the Rustenburg layered suite, Western Bushveld

The groups/formation that are observed in the geological map of the project area falls under the Western limb of the Rustenburg Layered Suite and they host platinum Group Metals, Manganese, Chrome, Iron Ore and Limestone. The below Attached geological map justifies the description why there is a possibility that the minerals applied for could occur on the land concerned.



Figure 17: Geology map

7.2 CLIMATE

Rustenburg lies 1156 m above sea level. The climate of Rustenburg is a local steppe climate with little rainfall throughout the year. The Köppen-Geiger climate classification is BSh. The average annual temperature is 18.9 °C in Rustenburg. According to **Figure 18** the mean annual rainfall is between 601 – 800 mm. The driest month is July with precipitation of 3 mm. Most precipitation falls in December, with an average of 117 mm. January is the warmest month with an average of 23 °C. According to **Figure 19**, the mean annual temperature of Rustenburg is between 0.1 to 2 °C. The average temperature is in July is 9.5 °C which is the lowest temperature of the year. The precipitation of 149 mm varies between the driest and the wettest.

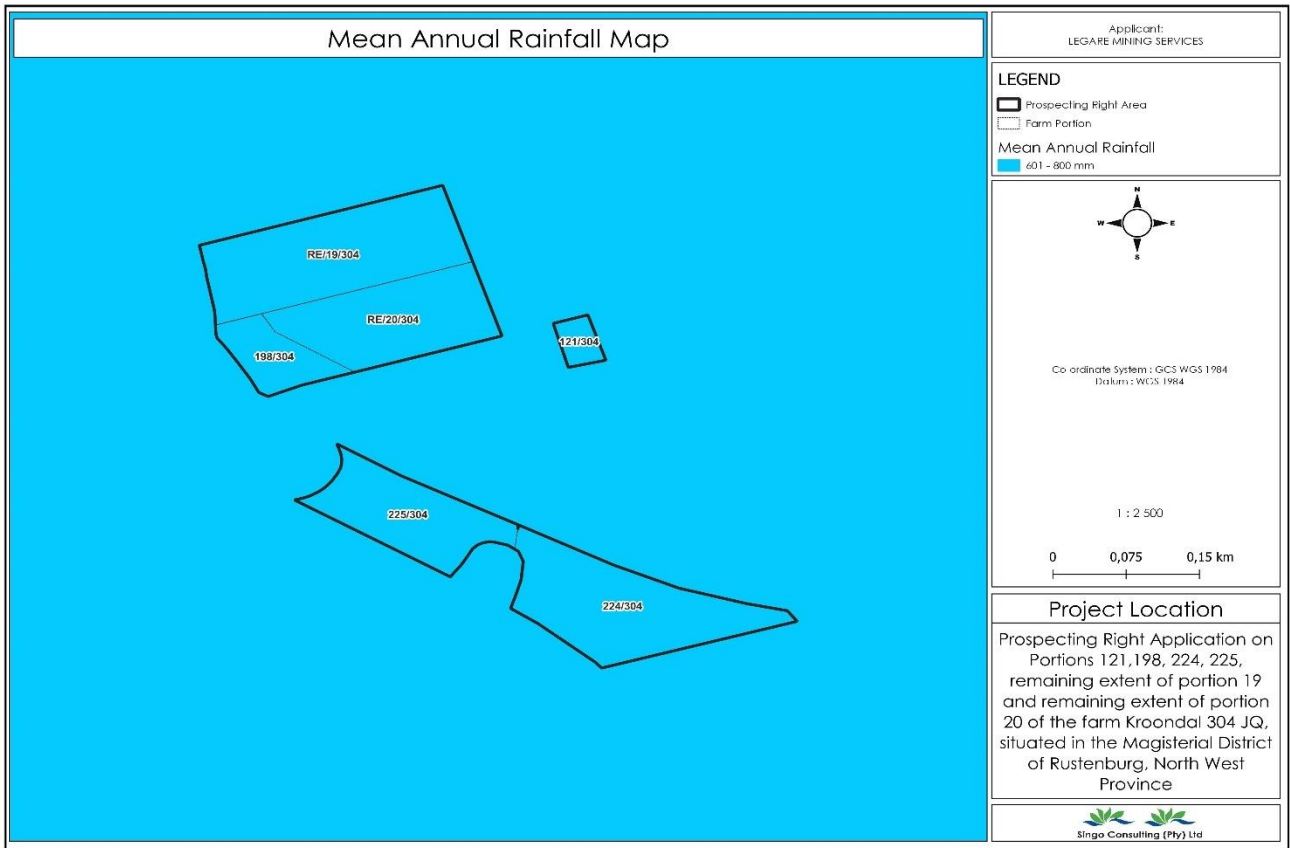


Figure 18: Mean Annual Rainfall Map (source: Singo consulting (Pty) Ltd)

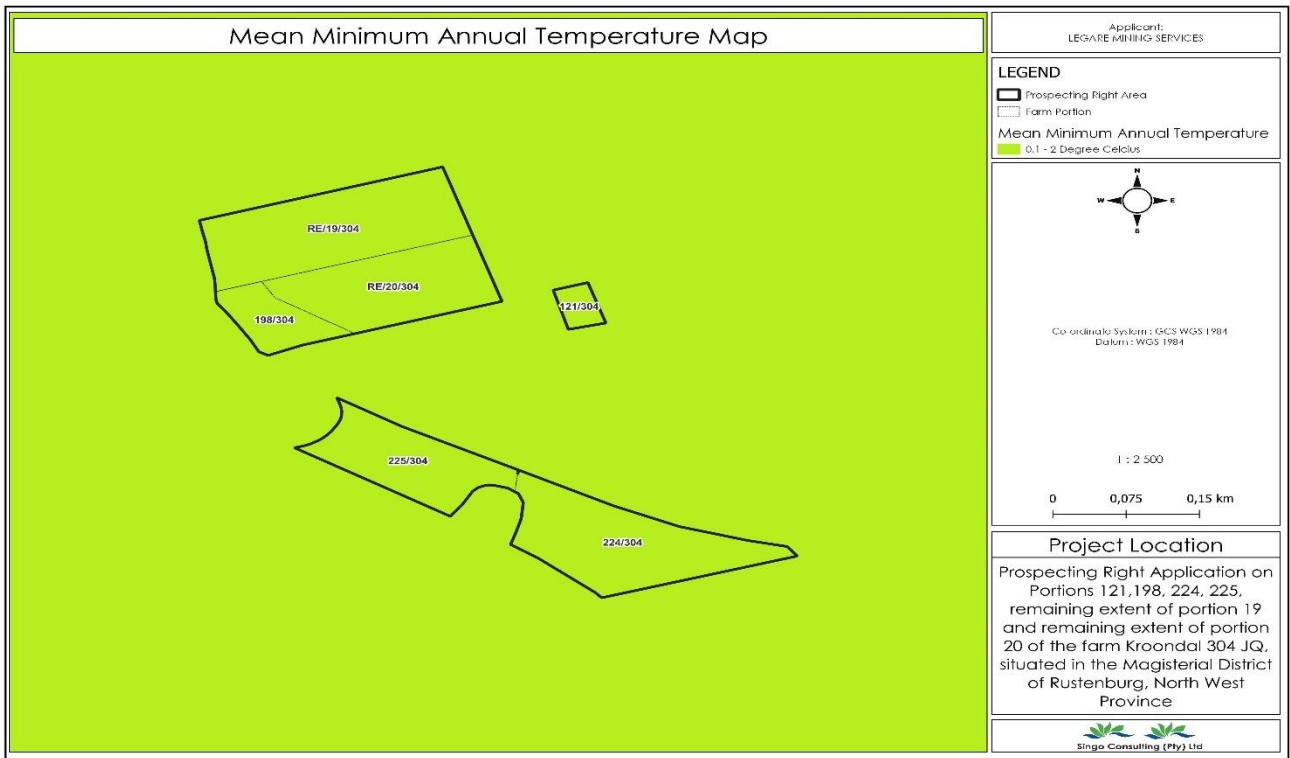


Figure 19: Mean Minimum Annual Temperature Map (Source: Singo consulting (Pty) Ltd)

7.3 TOPOGRAPHY

The landscape of the project area is generally flat to gently rolling. The elevation of the high-lying area, the project area lies between 1145m and 1150m above mean sea level. The proposed prospecting area is characterized by gentle slopes surfaces and the map shows no signs of mountains or hills near or within the project area. This can be observed on the topography map attached below. The flow of water during rainy seasons flows from the area of high elevation to the area of low elevation as it is indicated by contour lines. In this environmental project, topography is used to determine how soil can be conserved and how water will flow over the land. Data from topography can help to conserve the environment. By understanding the contour of the land. See the attached Figure 20.

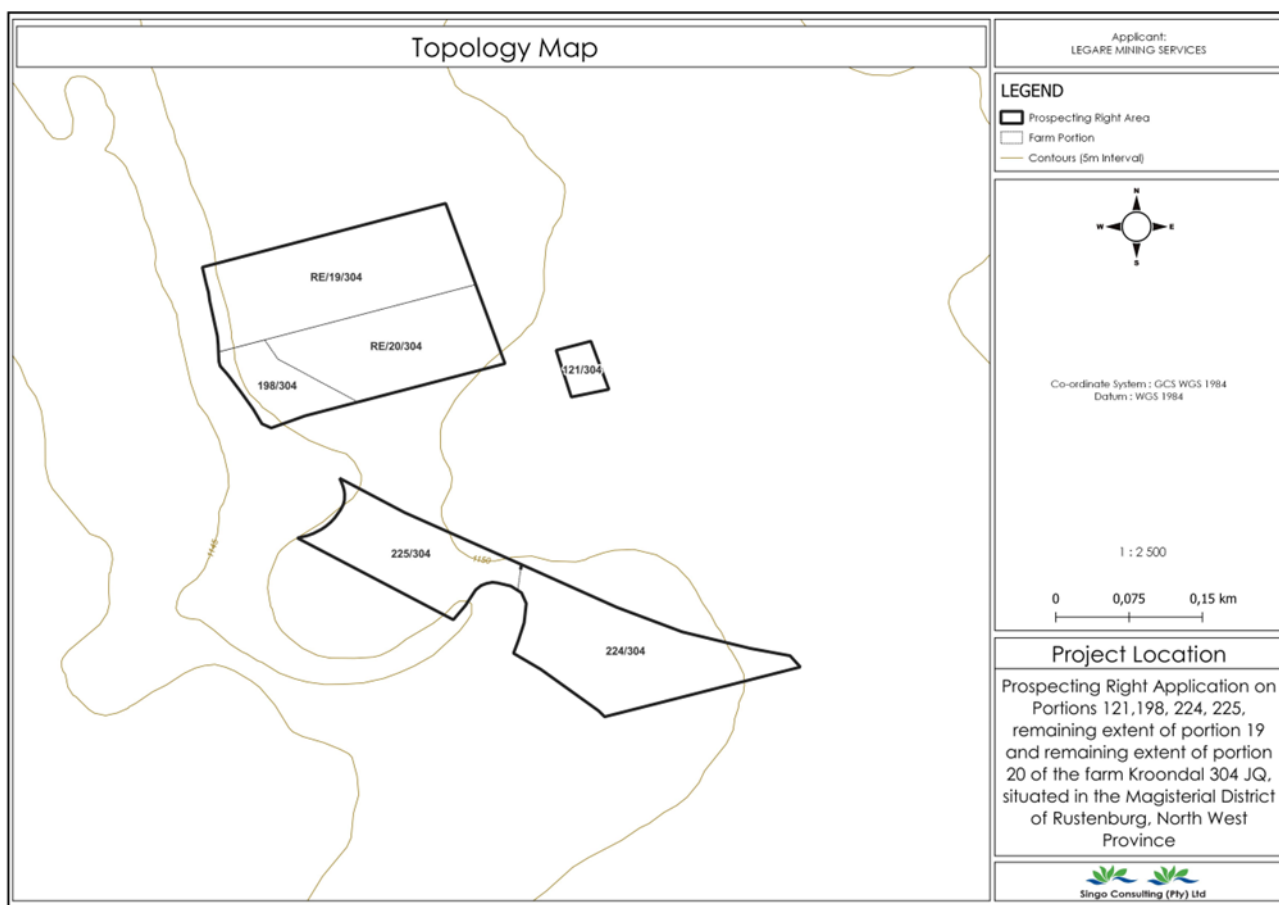


Figure 20: Topology map (Source: Singo consulting (Pty) Ltd)

7.4 HYDROLOGY

Topography is a field of geoscience and planetary science and is concerned with local detail in general, including not only relief but also natural and artificial features, and even local history and culture. The flow of water during rainy seasons flows from the area of high elevation to the area of low elevation.

The proposed prospecting right area is situated on a flat topography, and during rainy seasons high rate of infiltration can be expected in the area. The Figure 21 illustrates that contour lines are decreasing from the east towards the west, this shows that the landscape is slightly sloping to the western direction. A 5m contour line was used on the topography map.

There are two waterbodies identified within the project area, namely the perennial river and the channelled valley wetland. This water bodies are flowing from the south towards the northwest direction of our area of interest. The prospecting activities will be a 100m away from the perennial river and 500m away from the channelled valley wetland.

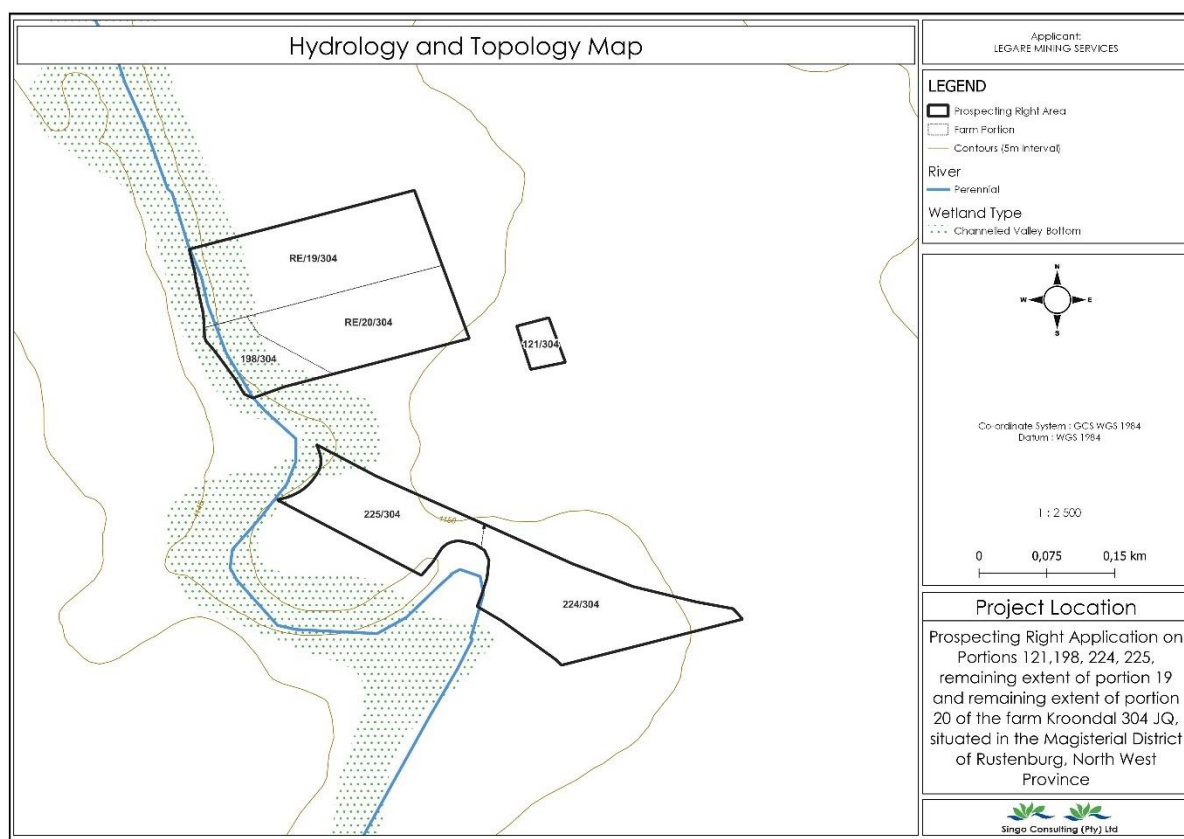


Figure 21: Hydrology and Topology Map (source: Singo consulting (Pty) Ltd)

7.4.1 Catchment Description

South Africa's water resources are divided into quaternary catchments, which are the country's primary water management units (DWAf 2011). In a hierarchical classification system, a quaternary catchment is a fourth order catchment below the primary catchments. The primary drainages are further classified as Water Management Areas (WMA) and Catchment Management Agencies (CMA). In accordance with Section 5 subsection 5(1) of the National Water Act, 1998, the Department of Water and Sanitation (DWS) has established

nine WMAs and nine CMAs as outlined in the National Water Resource Strategy 2 (2013). (Act No. 36 of 1998). The purpose of establishing these WMAs and CMAs is to improve water governance in various regions of the country, ensuring a fair and equal distribution of the Nation's water resources while ensuring resource quality is maintained.

The prospecting area falls within the Limpopo Water Management Area (WMA). The quaternary catchment is A22H. The WRC 2012 study, presents hydrological parameters for each quaternary catchment including area, mean annual precipitation (MAP) and mean annual runoff (MAR).

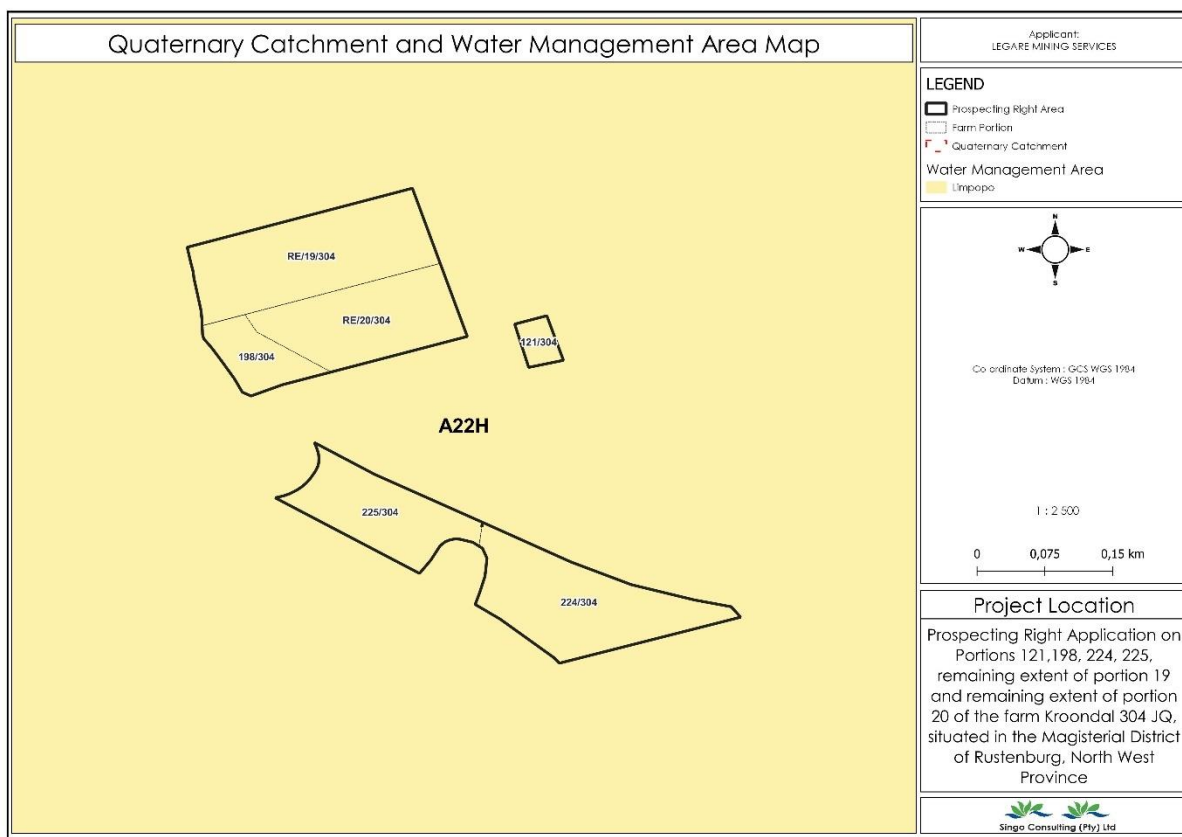


Figure 22: Quaternary Catchment and Water Management Area

7.4.2 Wetlands Delineation

According to National water Act 36 of 1998, a wetland is defined as Land which is transitional between terrestrial and aquatic systems where the water table is usually at or near the surface, or the land is periodically covered with shallow water, and which land in normal circumstances supports or would support vegetation typically adapted to life in saturated soil. Wetland delineation is the process of identifying outer edge of the temporary zone of the wetland.

Whilst the identification of a wetland is useful, normally the requirement (specifically for EIA and WULA applications) is for the wetland to be delineated – for its boundaries to be precisely determined so that it can be mapped out and indicated as a sensitive area. This edge marks the boundary between the wetland (water resource) and the adjacent terrestrial areas. This process is aided by using the various indicators which are used to identify a wetland, the indicators are as follows:

- The position in the landscape, which will help identify those parts of the landscape where wetlands are more likely to occur.
- The type of soil form (i.e., the type of soil according to a standard soil classification system), since wetlands are associated with certain soil types.
- The presence of wetland vegetation species.
- The presence of redoxymorphic soil features, which are morphological signatures that appear in soils with prolonged periods of saturation (due to the anaerobic conditions which result).
- To this study, redoxymorphic indicator will be used to delineate a wetland, this is because it is the most reliable, diagnostic indicator of wetland. These features develop due to prolonged saturation (and associated anaerobic conditions) and can be used to indicate zones of a permanently, seasonally, or temporarily high-water table, as described in the characteristics of the permanent, seasonal, and temporary wetland zones in the national water Act 36 of 1998.

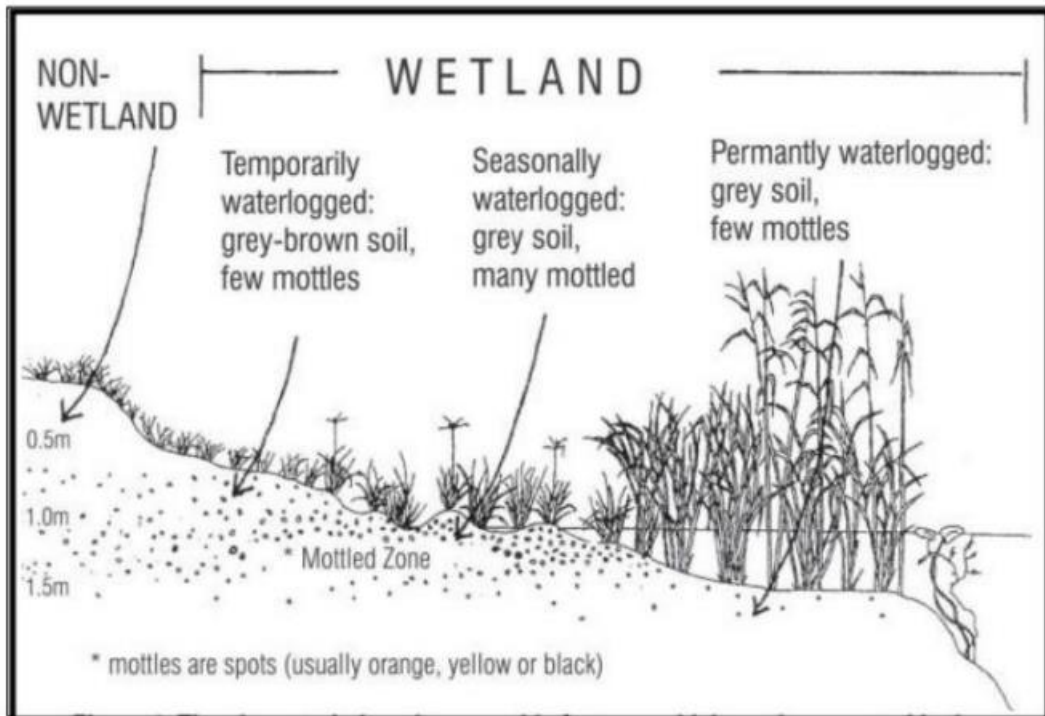


Figure 23: The characteristics of redoxymorphic indicator (DWAF, 2008)

Redoxymorphic features as an indicator of a wetland presence.

Water is the most important criterion for defining land as a wetland, with "the water table at or near the surface, or the ground is occasionally covered with shallow water" being the most important. Unfortunately, due to southern Africa's very fluctuating climate, the water table may not always remain at or near the surface in a consistent, predictable manner year after year, or even seasonally predictable. The existence of the water table (or the extent of flooding) will not always be a highly useful criteria for detecting wetlands due to intra- and inter-annual fluctuations in the extent of saturation/inundation of wetlands. As a result, the fundamental wetlands classification criterion – a high water table and/or frequent flooding – cannot be accurately measured.



Roots and microorganisms eventually deplete the oxygen contained in pore spaces in soil that has been saturated for an extended period. The oxygen consumed in this fashion would be replaced by diffusion from the air at the soil surface in an unsaturated soil. However, because oxygen diffuses 10 000 times slower via water than it does through air, restoring depleted soil oxygen in a saturated soil takes much longer. As a result, once the oxygen in a saturated soil is gone, the soil becomes practically anaerobic. Long-term anaerobic soil conditions cause changes in the chemical properties of the soil's mineral constituents, which are visible as colour changes in the soil. As a result, even a high-water table. Although the frequency of flooding cannot be directly assessed, it is possible to analyse soil parameters for signs of saturation by looking for redoxymorphic traits that come from prolonged anaerobic conditions. The two important redoxymorphic features are mottling and gleying Figure 9; both features caused by prolonged saturated conditions in the soil and the subsequent development of anaerobic conditions.

Gleying: is characterised by the development of grey or blueish-grey colours in the mineral soil component. Certain soil components, such as iron and manganese, are insoluble under aerobic conditions. Iron is one of the most abundant elements in soils, and the iron oxide (rust) coatings over soil particles is responsible for the red and brown colours of many soils. However, under prolonged anaerobic conditions iron becomes soluble and can thus be dissolved out of the soil profile. Once most of the iron has been dissolved out of a soil, the soil matrix is left a greyish, greenish, or bluish colour, and is said to be Gleyed.

Mottling: follows the same initial process as gleying, in that the iron becomes soluble and dissolved under anaerobic conditions. A fluctuating water table, common in wetlands that are seasonally or temporarily saturated, results in alternation between aerobic and anaerobic conditions in the soil. Lowering of the water table results in a switch from anaerobic to aerobic soil conditions, causing dissolved iron to return to an insoluble state

and be deposited in the form of patches, or mottles, in the soil. Recurrence of this cycle of wetting and drying over many decades concentrates these bright (orange or red) insoluble iron compounds. Thus, soil that is Gleyed but has many mottles may be interpreted as indicating a zone that is seasonally or temporarily saturated.

Table 9: Greying and Mottling (Site taken by Singo Consulting, site-Boschmansfontein, 2022)

<p>Red colour spots indicate mottles on the soil</p>	
<p>Greying</p>	

Using redoxymorphic features to identify a wetland.

The outer edge of the temporary zone of the wetland should be determined. This should be done using a transect-based approach in the field. Starting from the wettest (central or lowest lying) part of the wetland, move perpendicularly upslope towards the surrounding terrestrial areas, sampling (with the aid of an auger or through other excavation means) the soil to a depth of at least 50cm. Note the presence of any gleying or mottling (Rountree et

al., 2008). Ensure that the indicators observed meet the requirements prescribed for the redoxymorphic indicators of wetland soils. Continue moving outwards from the wetland until the redoxymorphic indicators of wetland soils can no longer be found within the top 50cm of the soil. This will be the outer edge of the temporary wetland zone. At this stage the boundary indicated by redoxymorphic features should be verified using the vegetation indicators.

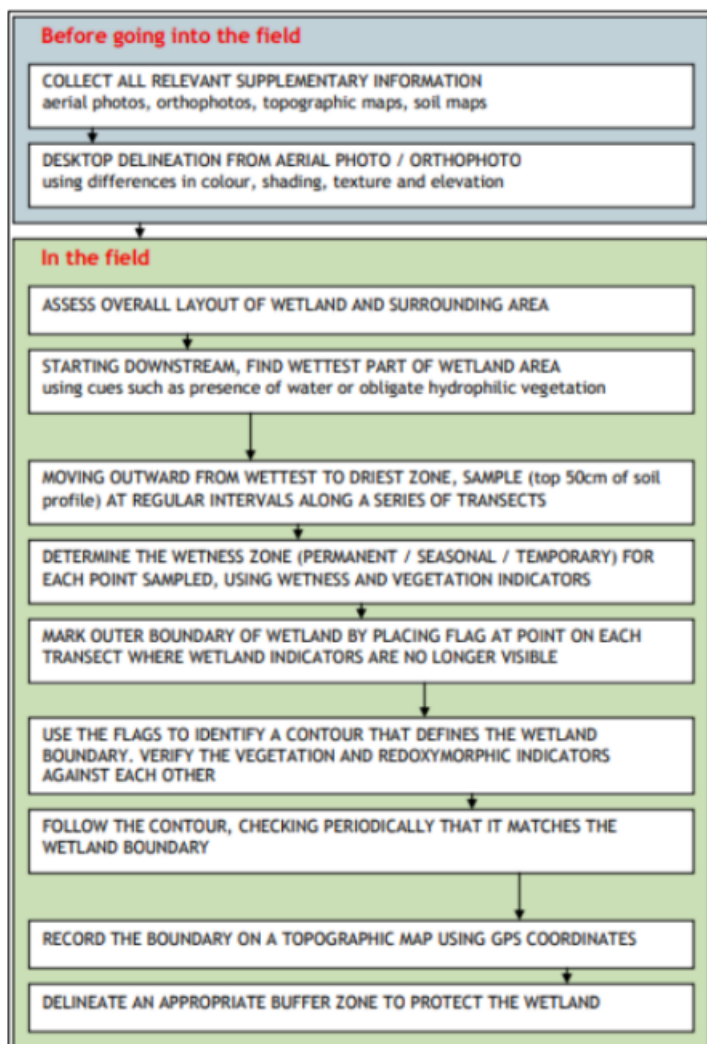


Figure 24: Wetland delineation process (DAAF, 2008)

7.4.3 Buffer Zones

During the prospecting right activities which will include, logging, sampling, mapping, and drilling. Caution must be taken with regards to the water bodies existing within and surrounding the proposed project area. This includes the implementation of buffer zones. Buffer zones as depicted by the map will be the areas where the prospecting team will be notified not to conduct any activities within the depicted 100m or 500m radius from the water

bodies. No washing of any mechanical equipment's or vehicles will be allowed near the water resources, and all the water bodies will be buffered.

A 100m buffer will be applied for the following waterbodies:

Non-perennial river.

However, a 500m buffer will be applied for all the identified wetland within and near the prospecting right area:

Channelled valley bottom wetland

Table 10: Impact Assessment Table

Prospecting right impact assessment table						
Name of Company: Singo Consulting (Pty) Ltd			Sector: Environmental Consulting firm			
Department: Land and water division						
Risk Assessment						
Potential environmental impact	Cause of the impact	Recommended measures/remarks for mitigation	Impact risk before mitigation	Impact risk after mitigation	Responsible person(s)	When mitigation should be implemented
Fuel & hydrocarbon spills	Drill rig, trucks, and cars	<p>Clean up immediately after accidental spills & Divert run-off from highways that may contain hydrocarbons into pollution control dams to regulate the pollution.</p> <p>Providing spill absorbing material All equipment utilizing hydrocarbons will be stored on a hard-standing surface.</p> <p>Vehicles and machinery will need to be maintained in good order to minimize leakages.</p>			The project management team	During the prospecting activities
Aquifer contamination	During drilling exploration boreholes	<ul style="list-style-type: none"> Install casing and rehabilitate the exploration boreholes Take water samples from the drilled boreholes 			The project management team	After drilling
Clearing of vegetation leading to increased runoff and less infiltration	During pegging, and preparation of the drilling yard	<ul style="list-style-type: none"> Rehabilitate the site by using a hoe to dug the compacted soil or a tractor. 			The project management team	After pegging and drilling
Surface water contamination	<ul style="list-style-type: none"> Washing of working equipments machinery Using water from the river to operate the drill rig 	<ul style="list-style-type: none"> Avoid drilling near surface water Do not wash equipments and vehicles at or near water bodies Conduct prospecting during dry seasons when the water percentages in wetlands and rivers are very low All the wetlands and rivers will need to be buffered as no go area 			The project management team	During prospecting period

Erosion of stream banks as a result of crossings and diversions leading to siltation of the streams	During prospecting activities like logging and sampling	Do desktop study and avoid working near the water bodies			Prospecting team	During the prospecting phase
Soil compaction	During constructing gravel roads to access the site	Rehabilitate these roads by digging with tractors and ploughing vegetation			The project management team	After the prospecting phase
Water and soil contamination	Core logging	The core logs of boreholes with mineral of interest should be cleared from the ground immediately after logging by the geologists to prevent washing and leaching to the water resources during rainfall			The project management team	After the prospecting phase
Impact Classification						
Low environmental Impact.		Medium environmental Impact		High environmental impact	Very High environmental impact	

7.5 SOIL

The proposed project area consists of the swelling clay soils and can be defined by its High natural fertility, High swell-shrink potential, very plastic and sticky. Clay soil has a high shrink-swell capacity. As the particles shrink, they separate and cause cracks, from a very thin thickness to an inch or more. In dry weather, the clay particles shrink and come closer together. the cracks in the ground are caused by shrinking.

Clay floors are very sticky to the touch and roll like play dough when wet. They can hold more water than most other types of soil, and although only half is available to plants, plants rarely suffer from drought. They swell when wet and shrink when dry, so some restructuring can occur in these soils, depending on the weather. They remain wet in winter and must therefore be removed from the ground to avoid poaching (compaction of the soil by the hooves of animals). They heat up very late in the spring because water heats up slower than minerals. See the attached figures for the soil type map and actual picture.

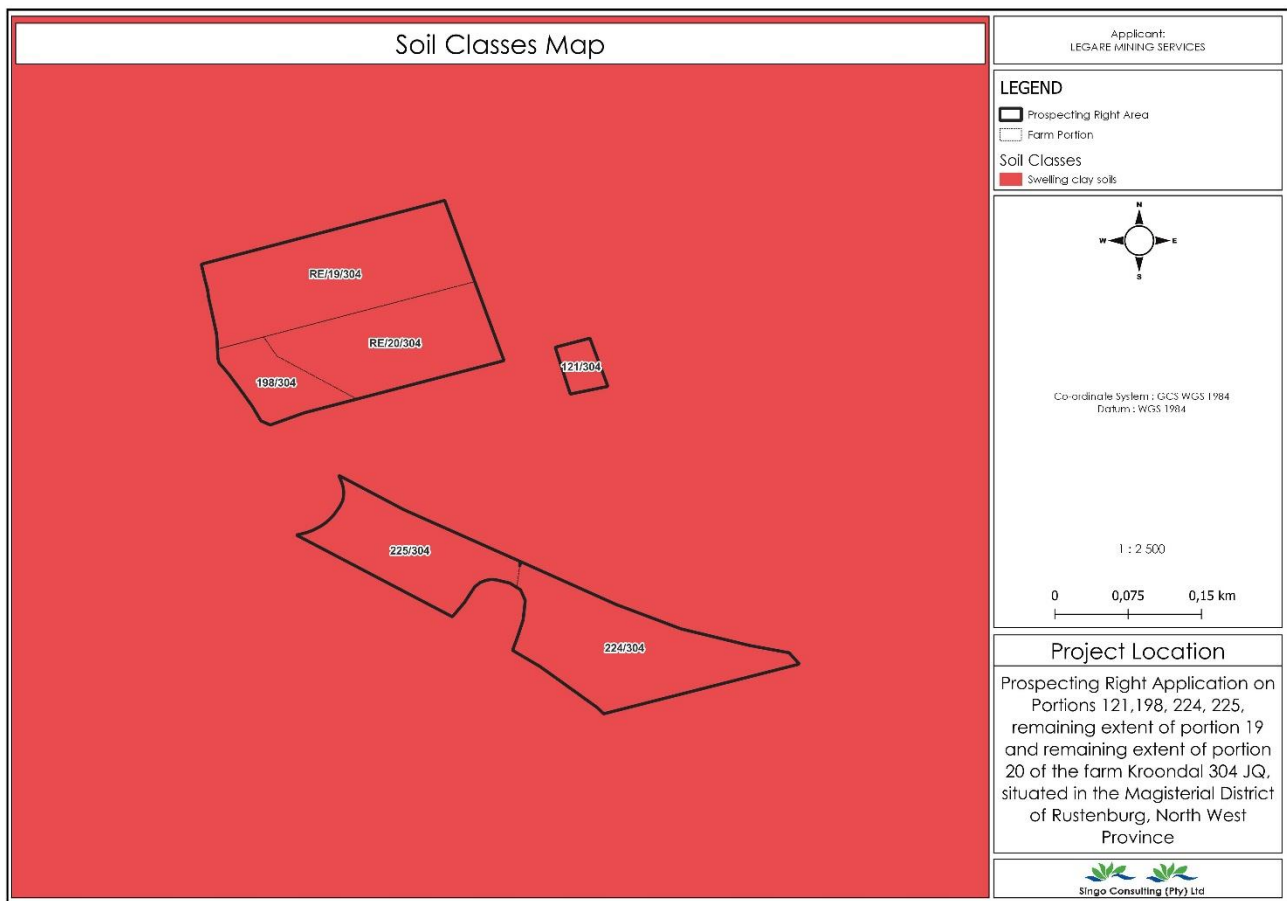


Figure 25: Soil type map (Source: Soil Classes)



Figure 26: soil within the area

7.6 Land capability

The land capability is classified into grazing, arable and wilderness. In this classification the arable soils are grouped according to their potentialities and limitations for sustained production of the common cultivated crops that do not require specialized site conditioning or site treatment. Nonarable soils (soils unsuitable for long time sustained use for cultivated crops) are grouped according to their potentialities and limitations to produce permanent vegetation and according to their risks of soil damage if mismanaged. The land capability of the proposed area is classified as Arable. Arable land is any land capable of being ploughed and used to grow crops. Arable land is the land that is being worked regularly, generally under a system of crop rotation, the figure 25 shows that the proposed area has no grazing potential.

The capability grouping of soils is designed:

0. to help landowners and others use and interpret the soil maps,
1. to introduce users to the detail of the soil map itself, and
2. to make possible broad generalizations based on soil potentialities, limitations in use, and management problems.

The capability classification provides three major categories of soil groupings:

0. Capability unit,
1. capability subclass, and
2. capability class.

The first category, capability unit, is a grouping of soils that have about the same responses to systems of management of common cultivated crops and pasture plants. Soils in any one capability unit are adapted to the same kinds of common cultivated and pasture plants and require similar alternative systems of management for these crops. Long-time estimated yields of adapted crops for individual soils within the unit under comparable management do not vary more than about 25 percent.

The second category, the subclass, is a grouping of capability units having similar kinds of limitations and hazards. Four general kinds of limitations or hazards are recognized: (1) Erosion hazard, (2) wetness, (3) rooting zone limitations, and (4) climate.

The third and broadest category in the capability classification places all the soils in eight capability classes. The risks of soil damage or limitations in use become progressively greater from class I to class VIII. Soils in the first four classes under good management can produce adapted plants, such as forest trees or range plants, and the common cultivated field crops and pasture plants. Soils in classes V, VI, and VII are suited to the use of adapted native plants. Some soils in classes V and VI are also capable of producing specialized crops, such as certain fruits and ornamentals, and even field and vegetable crops under highly intensive management involving elaborate practices for soil and water conservation. Soils in class VIII do not return on-site benefits for inputs of management for crops, grasses, or trees without major reclamation.

The grouping of soils into capability units, subclasses, and classes is done primarily based on their capability to produce common cultivated crops and pasture plants without deterioration over a long period of time. To express suitability of the soils for range and woodland use, the soil mapping units are grouped into range sites and woodland-suitability group.

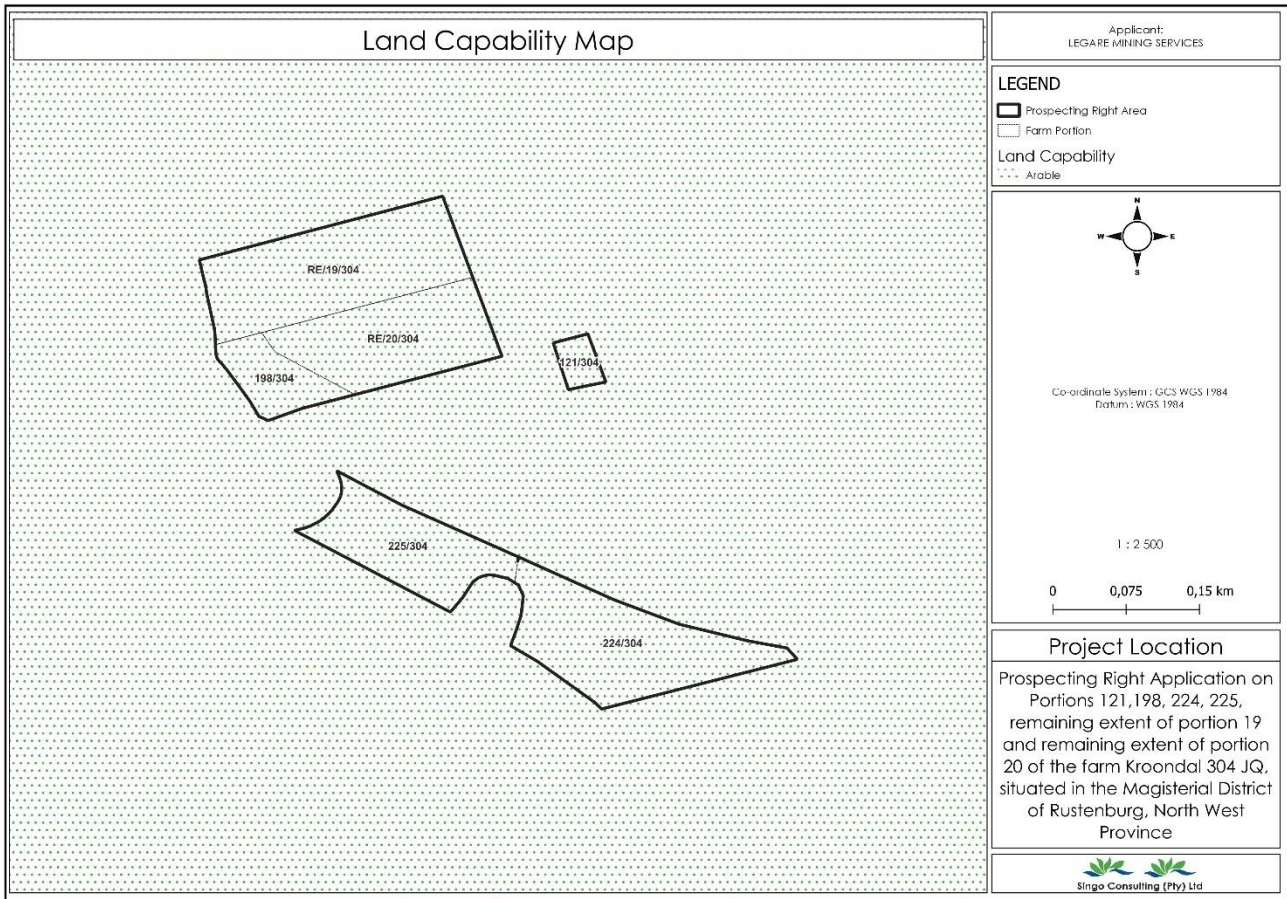
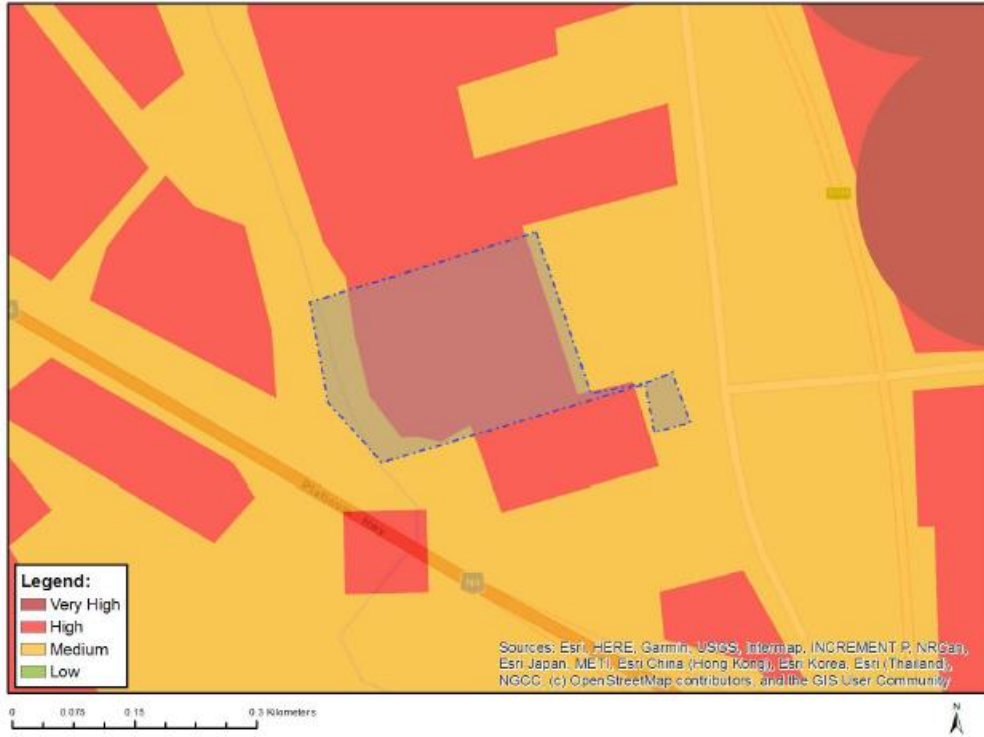


Figure 27: Land capability map (Source: Singo consulting (Pty) Ltd)

The development footprint of the project area as per the screening tool report shows that the project has an overall high theme agricultural sensitivity.

MAP OF RELATIVE AGRICULTURE THEME SENSITIVITY



Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
	X		

Sensitivity Features:

Sensitivity	Feature(s)
High	Annual Crop Cultivation / Planted Pastures Rotation; Land capability; 06. Low-Moderate/07. Low-Moderate/08. Moderate
Medium	Land capability; 06. Low-Moderate/07. Low-Moderate/08. Moderate

MAP OF RELATIVE AGRICULTURE THEME SENSITIVITY



Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
	X		

Sensitivity Features:

Sensitivity	Feature(s)
High	Land capability;09. Moderate-High/10. Moderate-High
High	Annual Crop Cultivation / Planted Pastures Rotation;Land capability;06. Low-Moderate/07. Low-Moderate/08. Moderate
Medium	Land capability;06. Low-Moderate/07. Low-Moderate/08. Moderate

7.7 BIODIVERSITY

FLORA

The project area is comprised of mixed bushveld vegetation as shown in the map below, Almost all of South Africa's 472 000 square miles lie below the Tropic of Capricorn, and the country is geographically composed of 3 primary regions: an expansive central plateau, a nearly continuous escarpment of mountain ranges that ring the plateau on the west, south, and east, and a narrow strip of low-lying land along the coast. Most of the central plateau consists of high, rolling grassland known as highveld. The highest points of the mountainous escarpment are found in the stunning Drakensberg Mountains, where the tips of dragon's back can exceed heights of 10 000 feet. In the northwest, Kgalagadi Transfrontier Park, one

of the continent's largest game reserves, extends into the red sands and scrub grasslands of the great Kalahari Desert. In the northeast, the highveld plateau descends to the Bushveld and Limpopo River basins. Bushveld is a rather loose term and refers to the areas of mixed woodland between 1 000m and 1 500m above sea level. It is the main vegetation type in Mpumalanga and extends into Gauteng, the Northwest Province, Limpopo, parts of KwaZulu-Natal and the Eastern Cape. It is the biome, or vegetation type, most commonly associated with wildlife and where you will find most of the game viewing destinations. It is this area that South Africans have in mind when they dream of heading off 'into the bush'. The major activities here are all game related although there are a number of cultural destinations and, of course, many of the more adventurous activities, such as hiking, river rafting and climbing can be done here.

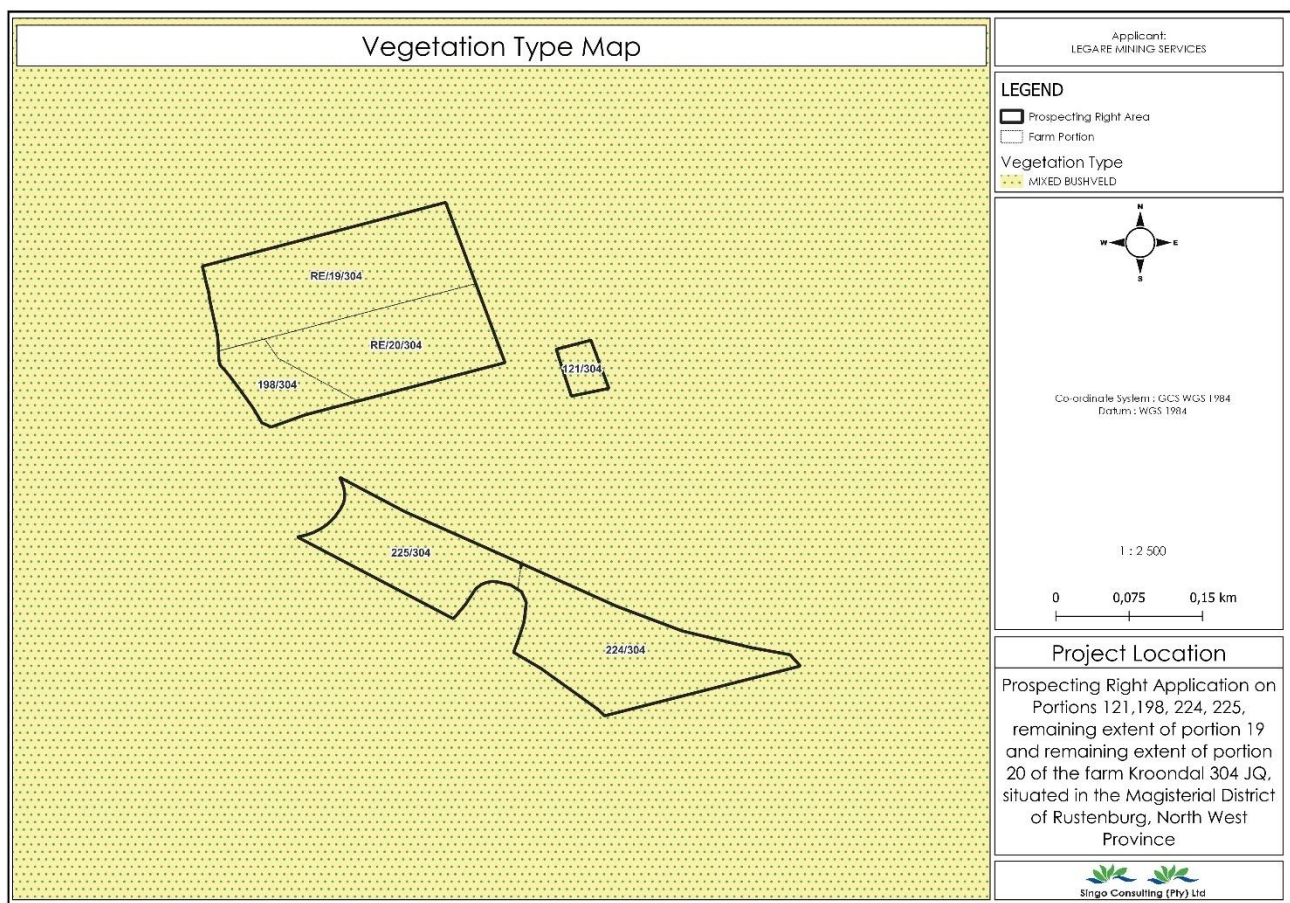


Figure 28: Vegetation Map

Dolomite Bushveld

North-West Dolomite Bushveld vegetation and landscape include gentle ridge and low hills up to about 100 to 150m above the surrounding plains. This veld type is very variable depending on soil type, soil depth and aspect, and is represented by many different plant communities and habitat types. The vegetation may vary from short, dense, sometimes

shrubby bushveld to tall, open tree savanna. Tree and shrub layers often not clearly distinct, especially on steeper slopes; they are dominated by deciduous trees, particularly *Combretum apiculatum* and *kirkia wilmsii*. Herbaceous layer continuous, dominated by grasses (Mucina & Rutherford ,2006).

Table 11: Dominant and typical floristic species of Madikwe Dolomite Bushveld (Mucina & Rutherford, 2006)

Tree/Shrub species	Conservation status
Tall trees	
<i>Sclerocarya birrea</i> subsp <i>caffra</i>	Least Concern
Small trees	
<i>Combretum apiculatum</i>	Listed in the 2009 Red Data Listing (Raimondo et al. 2009) but has no threat status
<i>Kirkia wimsii</i>	
<i>Ozoroa paniculosa</i>	Least concern on the Red data list
<i>Rhus leptodictya</i>	
<i>Ximenia americana</i>	Least concern
<i>Ziziphus mucronata</i>	Red data status
Tall shrubs	
<i>Grewia Flava</i>	Least Concern
<i>Tarchonantuhus camphratus</i>	Least concern
<i>Vitex zeyheri</i>	Least concern
<i>Grewia bicolor</i>	Least Concern
<i>Grewia monticola</i>	Least Concern
Grasses	
<i>Enneapogon scoparius</i>	Least Concern
<i>Heteropogon contortus</i>	Least Concern
<i>Aristida congetsta</i> <i>Panicum coloratum</i>	Least Concern
<i>Panicum maximum</i>	Least Concern

Zeerust Mountain Bushveld

This open to dense growing thorny woodland occurs predominantly on red apedal high base status soils of the plains amidst the rocky ridges of the Groot Marico. *Acacia* alongside *Peltophorum africanum* and *Terminalia sericea* are the most dominant species in the tree-shrub layer whereas the herbaceous layer is dominated by grasses such as *Cymbopogon pospischilii*, *Eragrostis lehmannia* and *Panicum maximum*. The forbs that are commonly found are the *Blepharis integrifolia*, *Chamaecrista mimosoides*, *Dicoma anomala* and *Kyphocarpa angustifolia*. The shrub species *Searsia maricoana* is endemic to this vegetation unit. Conservation status is low, with only 4% officially conserved in the Pienaar and Marico Bushveld Reserve, and with 16% affected by cultivation and urbanisation accompanied with the invasion of several alien plant species.

Western Sandy Bushveld

The Western Sandy Bushveld occurs on flat and undulating plains of the Marico Rivers to the west mostly at altitudes of 900 – 1200m. The 'Western Sandy Bushveld' is distinguished from the 'Central Sandy Bushveld' by a drier climate that results in the presence of the more xeric species *Acacia erubescens*, *A. nigrescens* and *Combretum imberbe*, and the lack of the mesic species *Burkea africana* and *Ochna pulchra*. Vegetation varies from tall to low woodland dominated either by mesophyllous or microphyllous trees depending on relief and substrate. For instance, flat areas are generally dominated by *Acacia* species, whereas *Combretum apiculatum* is found on shallow and gravelly soils of upland locations. The herbaceous layer is mainly composed of grasses of which *Antephora pubescens*, *Digitaria eriantha*, *Eragrostis pallens*, *E. rigidior* and *Schmidtia pappophoroides* can be named as the most prevalent. Yet, characteristic herbs of this vegetation unit comprise *Blepharis integrifolia*, *Limeum fenestratum* and *Monsonia angustifolia*. The conservation concern of the 'Western Sandy Bushveld' is rather low with 6% officially conserved and 4% transformed mainly by cultivation.



Figure 29: Vegetation type

As per the development footprint of the Project area sourced from the screening tool report, the proposed project shows relatively low plant sensitivity. Minimal vegetation clearance will be ensured.

MAP OF RELATIVE PLANT SPECIES THEME SENSITIVITY



Where only a sensitive plant unique number or sensitive animal unique number is provided in the screening report and an assessment is required, the environmental assessment practitioner (EAP) or specialist is required to email SANBI at eiadatarequests@sanbi.org.za listing all sensitive species with their unique identifiers for which information is required. The name has been withheld as the species may be prone to illegal harvesting and must be protected. SANBI will release the actual species name after the details of the EAP or specialist have been documented.

Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
			X

Sensitivity Features:

Sensitivity	Feature(s)
Low	Low Sensitivity

MAP OF RELATIVE PLANT SPECIES THEME SENSITIVITY



Where only a sensitive plant unique number or sensitive animal unique number is provided in the screening report and an assessment is required, the environmental assessment practitioner (EAP) or specialist is required to email SANBI at eiadatarequests@sanbi.org.za listing all sensitive species with their unique identifiers for which information is required. The name has been withheld as the species may be prone to illegal harvesting and must be protected. SANBI will release the actual species name after the details of the EAP or specialist have been documented.

Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
			X

Sensitivity Features:

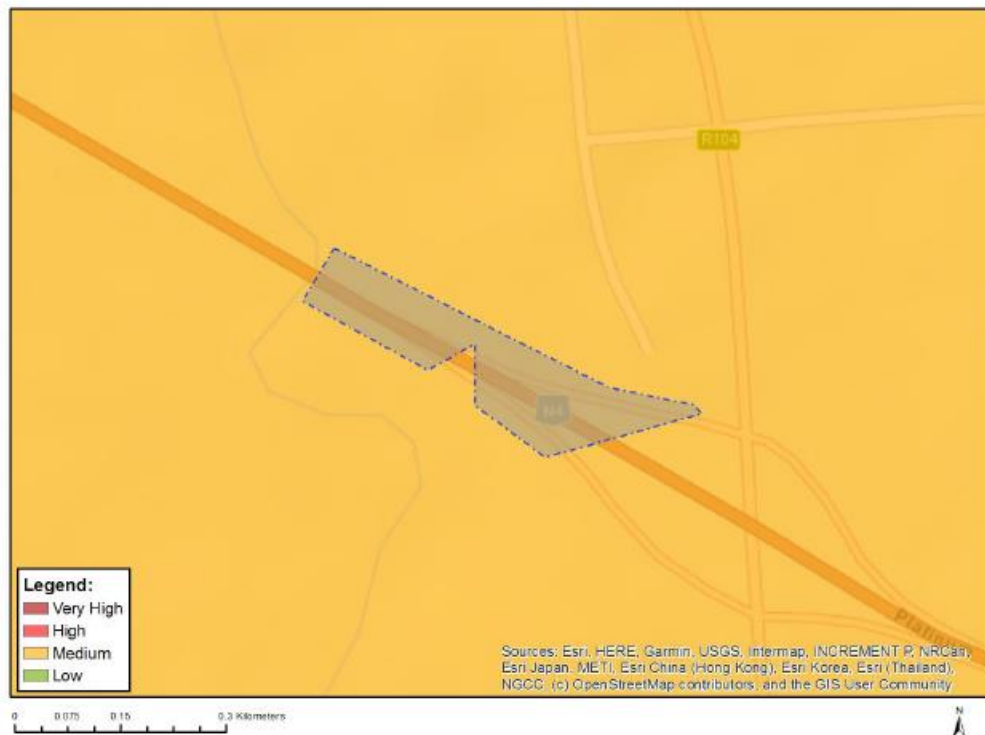
Sensitivity	Feature(s)
Low	Low Sensitivity

Figure 30: Plant theme sensitivity (source: Screening tool)

FAUNA

The Prospecting Right area is disturbed by land uses such as built-up area and natural vegetation, we observed a few species few horses on-site, according to the screening tool report shows the medium sensitivity, the identified species is *Crocidura maquassiensis* and *Dasymys robertsii*, see the examples of the identified species.

MAP OF RELATIVE ANIMAL SPECIES THEME SENSITIVITY



Where only a sensitive plant unique number or sensitive animal unique number is provided in the screening report and an assessment is required, the environmental assessment practitioner (EAP) or specialist is required to email SANBI at eiadatarequests@sanbi.org.za listing all sensitive species with their unique identifiers for which information is required. The name has been withheld as the species may be prone to illegal harvesting and must be protected. SANBI will release the actual species name after the details of the EAP or specialist have been documented.

Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
		X	

Sensitivity Features:

Sensitivity	Feature(s)
Medium	Mammalia-Crocidura maquassiensis
Medium	Mammalia-Dasymys robertsii

MAP OF RELATIVE ANIMAL SPECIES THEME SENSITIVITY



Where only a sensitive plant unique number or sensitive animal unique number is provided in the screening report and an assessment is required, the environmental assessment practitioner (EAP) or specialist is required to email SANBI at eiadatarequests@sanbi.org.za listing all sensitive species with their unique identifiers for which information is required. The name has been withheld as the species may be prone to illegal harvesting and must be protected. SANBI will release the actual species name after the details of the EAP or specialist have been documented.

Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
		X	

Sensitivity Features:

Sensitivity	Feature(s)
Medium	Mammalia-Crocidura maquassiensis
Medium	Mammalia-Dasymys robertsii

Figure 31: Animal species theme sensitivity (Source: Screening tool report)



Figure 32: Typical example of Crocidura Maquassiensis



Figure 33: Typical example of *Dasymys robertsii*

SENSITIVITY

As notable on below, that the project area falls under Critical Biodiversity Area Type 1 (Aquatic) as a result of the pristine river flowing making its way through. The CBA will therefore be regarded as a no-go area. The preferred borehole sites will be on the already altered/disturbed land as a result of agricultural activities as well as the natural areas in north part of the Project area which happens to be out of the Biosphere Boundaries. If any conservation important plants are found, they will be avoided or rescued before destruction of their habitat takes place. Total area to be disturbed is 0.36 hectares with concurrent rehabilitation to take place per drill site.

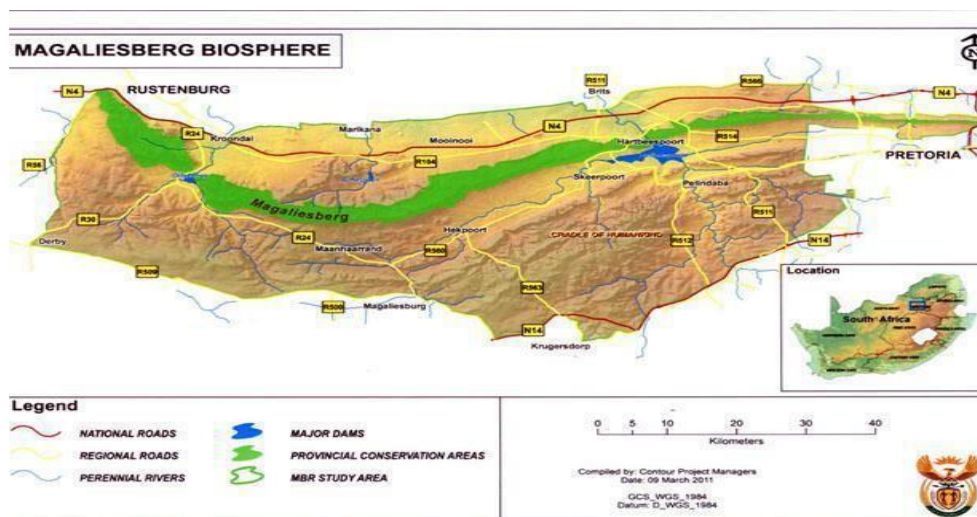


Figure 34: CBA's and ESA's in Magaliesberg Biosphere (Source: maricobiosreserve.org/maps)

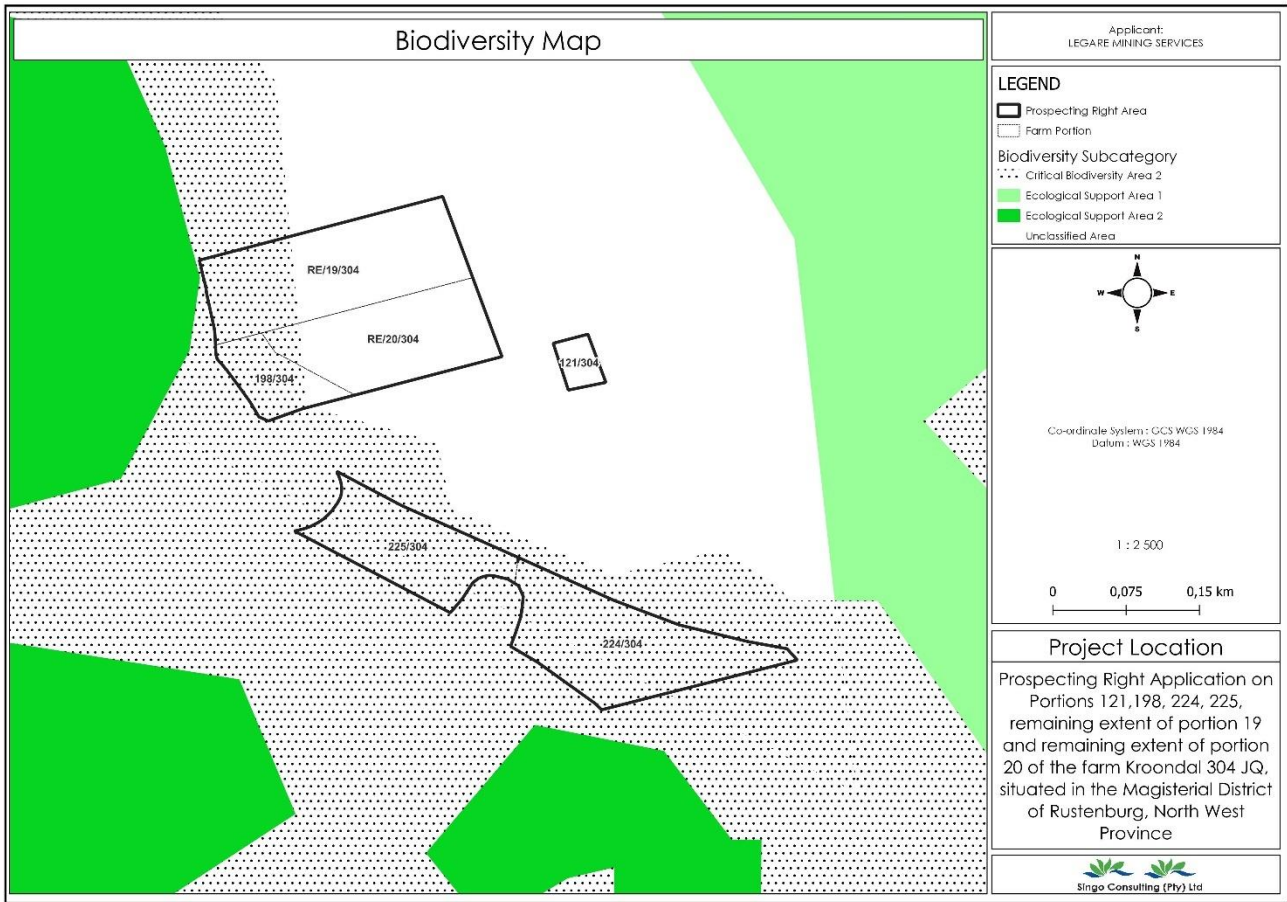


Figure 35: CBA's and ESA's in the Marico Biosphere

7.8 CULTURAL AND HERITAGE

Heritage resources are, according to the National Heritage Resources Act 25 of 1999, any place or object of cultural significance. In one familiar aspect, heritage resources refer to buildings, monuments, landscapes, and artefacts. These resources are relatively permanent, though somewhat very tenuous, environmental features; if they are present, their integrity is highly susceptible to construction and ground disturbance activities like prospecting related activities and mining activities.

Notice of the proposed Prospecting Right Application will be uploaded onto the South African Heritage Resources Agency's (SAHRA) website, South African Heritage Information System (SAHRIS) as part of public participation. There are graves within 200m of the proposed area see the attached below.



Figure 36: Graves within 200m of the proposed area.

Heritage Impact Assessment (HIA) refers to the process of identifying, predicting and assessing the potential positive and negative cultural, social, economic and biophysical impacts of any proposed project, which requires authorisation of permission by law and which may significantly affect the cultural and natural heritage resources. Accordingly, an HIA must include recommendations for appropriate mitigation measures for minimising or circumventing negative impacts, measures enhancing the positive aspects of the proposal and heritage management and monitoring measures.

The fundamental basis of the study is to identify and document any significant archaeological or cultural physical property or site locations, as well as to assess the significance and to assess the nature and extent of potential impacts from the proposed prospecting. The assessment includes recommendations to manage the expected impact of the prospecting right application site. The report includes recommendations to guide heritage authorities in making appropriate decision in respect of the Prospecting Right Application. The Northwest Province generally has a rich heritage that includes relics from South Africa's prehistoric, historical, and colonial times. The Heritage Impact Assessment (HIA) will form basis of this report once concluded.

With reference to the screening tool of the project's development footprint, the Relative Archaeological and Cultural Heritage Theme Sensitivity remains low.

MAP OF RELATIVE ARCHAEOLOGICAL AND CULTURAL HERITAGE THEME SENSITIVITY



Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
			X

Sensitivity Features:

Sensitivity	Feature(s)
Low	Low sensitivity

7.9 ENVIRONMENTAL ASPECTS WHICH MAY REQUIRE PROTECTION AND/OR REMEDIATION

There is a stream that passes through the N4 national road and buffers have been placed on the road and the river. Our attention is drawn to Section 48 (2) of MPRDA, NWA (1998), NEMA (1998) (2002) and Regulation 17 of the Mine Health and Safety Act (1996), clearly stating that the Prospecting Area excludes any area within a horizontal distance of 100m of any Water Courses, Wetlands, Public Roads or cemetery. Considering the sensitivity of the area, all the water resources will be considered a no-go area and no drill site will be positioned within 500m of a water course or wetland and this buffer is considered adequate from a water quality perspective in providing functional filtering capacity to the river and the identified wetlands. In addition, no drill site will be positioned within at least 100m from the properties/buildings or houses found within the boundaries of the project area. The existing

roads (National N4 Platinum Corridor) will be used as entry points as well as Farm access roads into the Farm thus there will be no construction of new roads.

7.10 DESCRIPTION OF SPECIFIC ENVIRONMENTAL FEATURES AND INFRASTRUCTURE ON SITE

The South African National Roads Agency has been consulted considering that some of the portions are under its jurisdiction as a result of the N4 national road cutting through the project area and no drilling will take place inside the road, SANRAL has been consulted as the landowners. The N4 will be used as our access road for the site substantiated with the unpaved Farm roads. Compatibly, Eskom has been engaged on the transmission lines found on the Farm and strict adherence will be ensured on the stipulated conditions. Portion 121 is within Deutsche Schule Kroondal Privaateskool no borehole is proposed to be drilled there. See the attached infrastructure map below.



Figure 37: Infrastructure map



Photo 1: N4 National on portion 224 and 225

7.11 DESCRIPTION OF CURRENT LAND USES

Landuse within 3km Radius

- ❖ Residential
- ❖ Agricultural activities
- ❖ School and church
- ❖ Graves
- ❖ Kroondal Mine
- ❖ Samancor Waterkloof
- ❖ Natural land
- ❖ National Road N4

See the attached pictures that were taken during site assessment with the landuse map produced by Singo consulting.

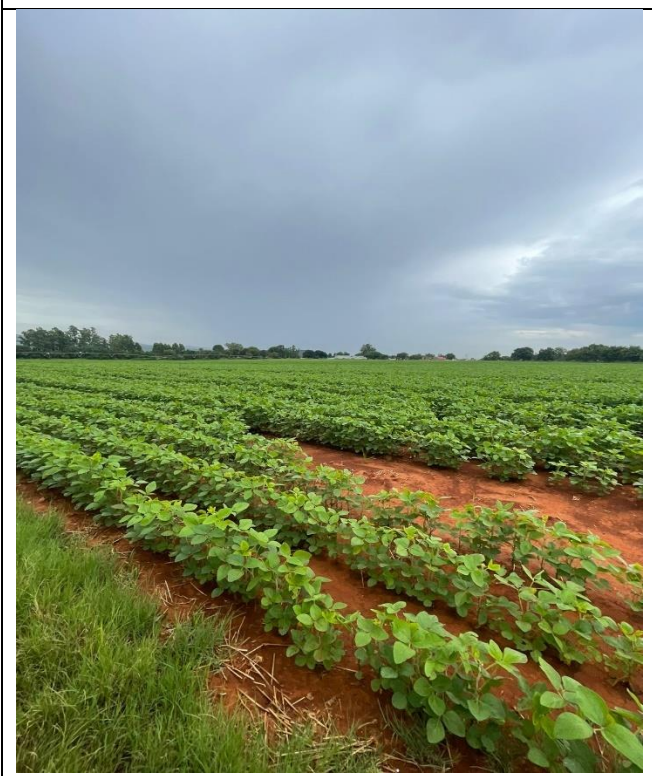




Figure 38: Current land uses close to the project area

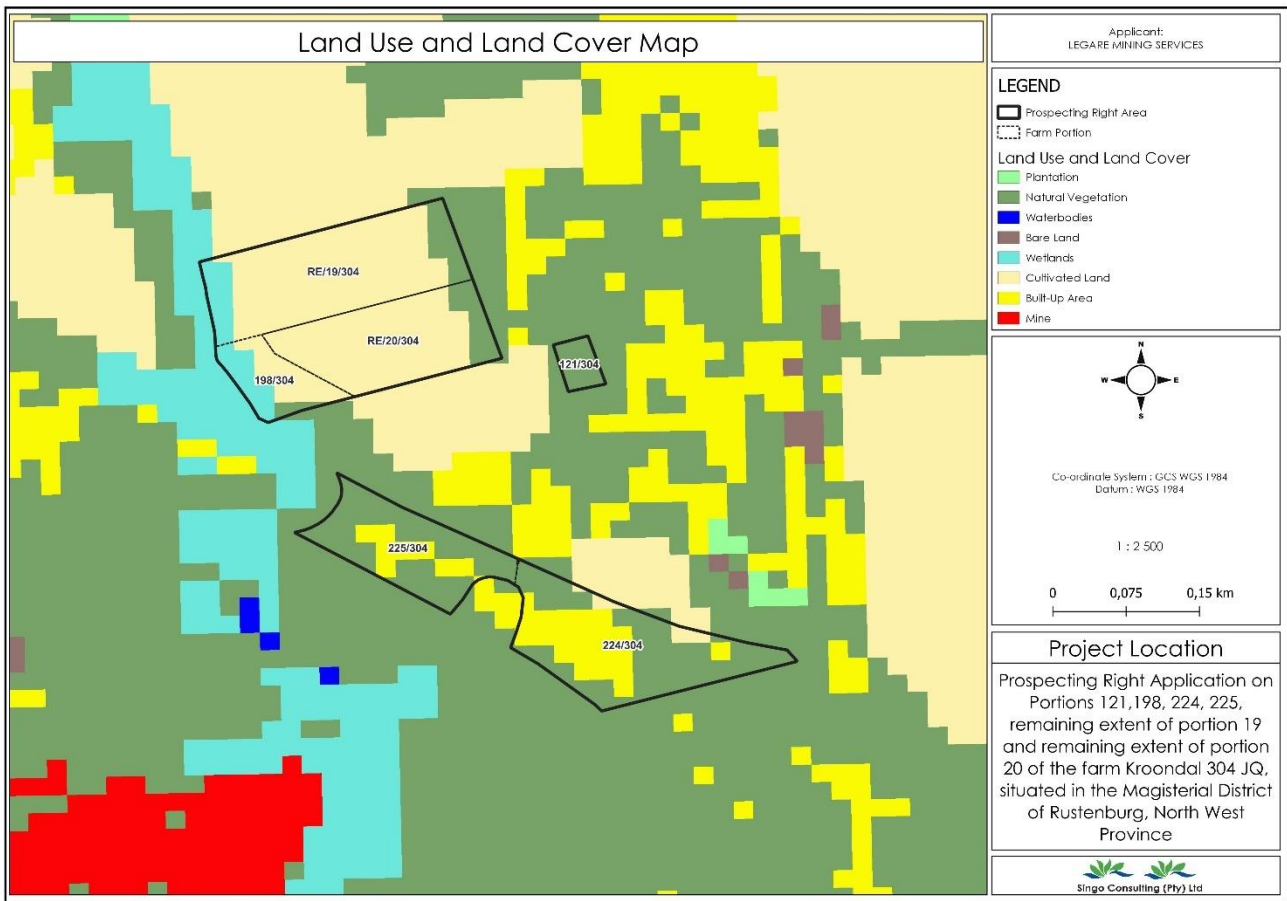


Figure 39: Land Use and Land Cover Map (Source: Singo consulting (Pty) Ltd)

7.12 IMPACTS AND RISKS IDENTIFIED

Probability, length, size, and magnitude will be used to calculate the significance of an impact. The pre- and post-mitigation scores should provide an indication of how mitigable an effect can be.

Since historical geological records are unavailable, both invasive and non-invasive prospecting techniques will be applied. Activities requiring access to the site include Geological Field Mapping Semi-Regional Geophysical Survey, Comprehensive Field and Aerial Geophysical Survey, Prospecting Boreholes, Boreholes to confirm mineralization continuity & possible deposit size and Resource Definition Drilling.

The potential impacts that may result from the proposed prospecting activities are as follows:

Potential impacts

- ❖ Job Creation;
- ❖ Clearance/Disturbance of vegetation;
- ❖ Compacting of Soils;
- ❖ Deterioration and damage to existing access roads and tracks;
- ❖ Safety and security risks to landowners and lawful occupiers;
- ❖ Generation and disposal of waste;
- ❖ Contamination of surface and ground water;
- ❖ Introduction/invasion by alien species;
- ❖ Noise;
- ❖ Impact on wildlife;
- ❖ Pollution of Soils;
- ❖ Dust;
- ❖ Erosion due to vegetation clearance;
- ❖ Impact on surface water features (Marico River system)
- ❖ Impact on groundwater;
- ❖ Impact on Agricultural land

7.13 THE IMPACT ASSESSMENT METHODOLOGY

The criteria for impact significance assessment is driven by the specifications of the NEMA EIA Regulations. The specific approach to the significance rating technique is to assess the environmental risk (ER) by considering the consequences (C) of each impact (including nature, extent, duration, magnitude, and reversibility) and relate this to the likelihood / likely (P) of impact occurrence.

The environmental risk is determined by this. Certain considerations, including cumulative effects, public concern, and potential for irreplaceable resource loss, are often used to determine a priority factor (PF) that is applied to the ER to determine the overall significance (S).

The significance (S) of an impact is determined by applying an Environmental Risk priority factor. The environmental risk depends on the consequence (C) of the particular impact and

the probability of the impact that arises. Consequence (C) is determined by taking into account Nature (N), Extent (E), Duration (D), Magnitude (M), and Reversibility (R) applicable to the particular impact.

The consequence of the impact for the purpose of this methodology is represented by:

$$\mathbf{C = (E+D+M+R) \times N}$$

4

In the determination of the consequence each individual aspect is represented by a rating scale as described in the table below:

Table 12: Criteria for Determination of Impact Consequence

Aspect	Score	Definition
Nature	- 1	Likely to result in a negative/ detrimental impact
	+1	Likely to result in a positive/ beneficial impact
Extent	1	Activity (i.e. limited to the area applicable to the specific activity)
	2	Site (i.e. within the development property boundary),
	3	Local (i.e. the area within 5 km of the site),
	4	Regional (i.e. extends between 5 and 50 km from the site
	5	Provincial / National (i.e. extends beyond 50 km from the site)
Duration	1	Immediate (<1 year)
	2	Short term (1-5 years),
	3	Medium term (6-15 years),
	4	Long term (the impact will cease after the operational life span of the project),
	5	Permanent (no mitigation measure of natural process will reduce the impact after construction).

Magnitude/ Intensity	1	Minor (where the impact affects the environment in such a way that natural, cultural and social functions and processes are not affected),
	2	Low (where the impact affects the environment in such a way that natural, cultural and social functions and processes are slightly affected),
	3	Moderate (where the affected environment is altered but natural, cultural and social functions and processes continue albeit in a modified way),
	4	High (where natural, cultural or social functions or processes are altered to the extent that it will temporarily cease), or
	5	Very high / don't know (where natural, cultural or social functions or processes are altered to the extent that it will permanently cease).
Reversibility	1	Impact is reversible without any time and cost.
	2	Impact is reversible without incurring significant time and cost.
	3	Impact is reversible only by incurring significant time and cost.
	4	Impact is reversible only by incurring prohibitively high time and cost.
	5	Irreversible Impact

When the C is determined the ER is calculated by multiplying the C and the P according to the standard risk assessment relationship. Probability is rated / ranked according to Table 17.

Table 13: Probability Scoring

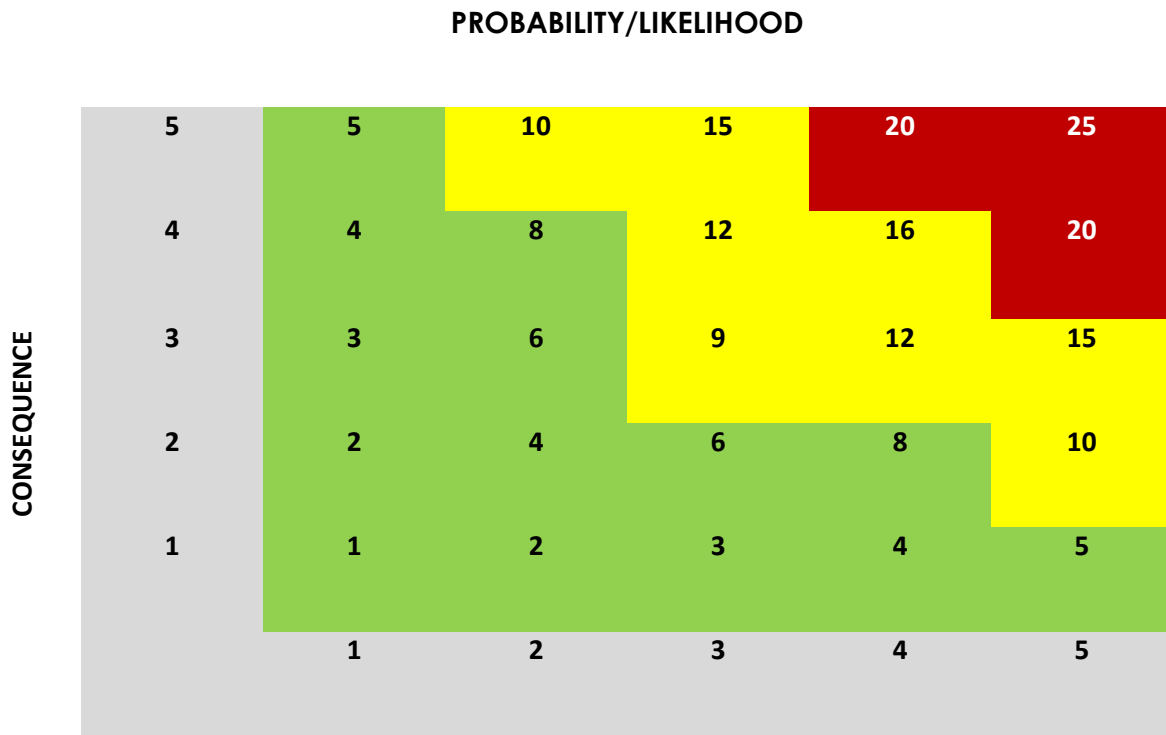
Probability	1	Improbable (the possibility of the impact materialising is very low as a result of design, historic experience, or implementation of adequate corrective actions; <25%),
	2	Low probability (there is a possibility that the impact will occur; >25% and <50%),
	3	Medium probability (the impact may occur; >50% and <75%),

	4	High probability (it is most likely that the impact will occur- > 75% probability), or
	5	Definite (the impact will occur),

The result is a qualitative representation of relative ER associated with the impact. Therefore, ER is calculated as follows:

$$ER = C \times P$$

Table 14: Determination of Environmental Risk



The Environmental Risk Assessment outcome will result in a set of ratings, from 1 to 25. Then, these ER scores are grouped into respective classes as illustrated in *Table 19*.

Table 15: Significance Classes

Environmental Risk Score	
Value	Description
< 10	Low (i.e. where this impact is unlikely to be a significant environmental risk),
≥ 10; < 20	Medium (i.e. where the impact could have a significant environmental risk),
≥ 20	High (i.e. where the impact will have a significant environmental risk).

For each impact, the ER impact will be determined without relevant management and mitigation (pre-mitigation) measures, as well as post implementation of relevant management and mitigation measures (post-mitigation). This allows for an estimate in the degree to which the impact can be managed/ mitigated.

In accordance with the requirements of Regulation 31 (2)(l) of the EIA Regulations (GNR 543), and in addition to the assessment criteria set out above, it is essential to assess each potential significant impact in terms of:

- Cumulative impacts; and
- The degree to which the impact may cause irreplaceable loss of resources.

Furthermore, it is critical that public opinion and sentiment regarding a future development and consequent potential impacts are taken into account in the decision-making process. An impact priority factor (PF) will be applied to each impact ER (post-mitigation) in an attempt to ensure these factors are considered. This priority factor is not intended to distract from risk ratings, but rather to concentrate on the decision-making authority's attention on the concerns and impacts of higher priority / significance. The PF will be applied to the ER score based on the assumption that relevant suggested management/ mitigation impacts are implemented.

Table 16: Criteria for the Determination of Prioritisation

Public response (PR)	Low (1)	Issue not raised in public response.
	Medium (2)	Issue has received a meaningful and justifiable public response.
	High (3)	Issue has received an intense meaningful and justifiable public response.
Cumulative Impact (CI)	Low (1)	Considering the potential incremental, interactive, sequential, and synergistic cumulative impacts, it is unlikely that the impact will result in spatial and temporal cumulative change.
	Medium (2)	Considering the potential incremental, interactive, sequential, and synergistic cumulative impacts, it is probable that the impact will result in spatial and temporal cumulative change.
	High (3)	Considering the potential incremental, interactive, sequential, and synergistic cumulative impacts, it is highly probable/definite that the impact will result in spatial and temporal cumulative change.
	Low (1)	Where the impact is unlikely to result in irreplaceable loss of resources.

Irreplaceable loss of resources (LR)	Medium (2)	Where the impact may result in the irreplaceable loss (cannot be replaced or substituted) of resources but the value (services and/or functions) of these resources is limited.
	High (3)	Where the impact may result in the irreplaceable loss of resources of high value (services and/or functions).

The value for the final priority of impact is expressed as a single consolidated priority, as the sum of each individual requirement listed in Table 20. Consequently, the priority for effect is set as follows:

$$\text{Priority} = \text{PR} + \text{CI} + \text{LR}$$

The result is a priority score which ranges from 3 to 9 and a consequent PF ranging from 1 to 2 (refer to Table 21).

Table 17: Determination of Prioritisation factor

Priority	Ranking	Prioritisation Factor
3	Low	1
4	Medium	1.17
5	Medium	1.33
6	Medium	1.5
7	Medium	1.67
8	Medium	1.83
9	High	2

The PF is multiplied by the Post Mitigation scoring ER to determine the final impact significance. The ultimate goal of the PF is to be able to increase the environmental risk level after mitigation by a maximum ranking class, if all the priority attributes are high (i.e. if an impact comes out with a medium environmental risk after the conventional impact rating, but there is significant cumulative impact potential, significant public response, and significant potential for irreplaceable loss of resources, then the net result would be to upscale the impact to a high significance).

Table 18: Environmental Significance Rating

Environmental Significance Rating	
Value	Description

< -10	Low negative (i.e. where this impact would not have a direct influence on the decision to develop in the area).
$\geq -10 < -20$	Medium negative (i.e. where the impact could influence the decision to develop in the area).
≥ -20	High negative (i.e. where the impact must have an influence on the decision process to develop in the area).
0	No impact
< 10	Low positive (i.e. where this impact would not have a direct influence on the decision to develop in the area).
$\geq 10 < 20$	Medium positive (i.e. where the impact could influence the decision to develop in the area).
≥ 20	High positive (i.e. where the impact must have an influence on the decision process to develop in the area).

7.14 THE POSITIVE AND NEGATIVE IMPACTS THAT THE PROPOSED ACTIVITY AND ALTERNATIVES WILL HAVE ON THE ENVIRONMENT AND THE COMMUNITY THAT MAY BE AFFECTED

The proposed prospecting activities to be undertaken includes the use of both invasive and non-invasive prospecting techniques. There will therefore be physical disturbance to the application area although this disturbance will be limited to the identified borehole sites and not the entire application area. Another negative impact of the proposed activity would be the interference with landowners or communities and the existing land uses. The actual invasive work only covers a few properties within the application area itself and therefore the disturbance due to invasive work will be minimal. The positive impact of the proposed activity is the discovery of an economically viable mineral resource within the Rustenburg Local Municipality.

It should be noted that this report will be made available to I&AP's for review and comment and their comments and concerns will be taken into account in this BAR & EMP. Furthermore, it should be noted that the impact scores themselves will include the results of the public response and comment.

The following section provides a description and assessment of the potential impacts identified in the impact assessment process. The topographical and geophysical surveys will see an increase in the use of access tracks by vehicles driving around the site. The access roads may over time and continuous use deteriorate and become damaged. The potential exists for a group of unfamiliar workers to enter the project area during the prospecting activities. This impact could potentially affect the local communities; however the impact will be minimal as people on site will be limited to five people being the Applicant, contractor and geologists for the topographical and geophysical surveys.

Access to the application area for the topographical and geophysical survey, prospecting drilling and resource definition drilling will be required which may interrupt the existing land uses, such as farming activities and residential developments. However, this impact will be minimal as it is of short duration. Approximately 0.36 ha of vegetation will be cleared during prospecting, however, care will be taken to be ensure that any protected species identified are avoided or relocated outside the footprint of the prospecting activities. Provisions have been made for the rehabilitation of all areas disturbed during prospecting, including access tracks. The prospecting activities will generate general waste during the construction/operational phase. This waste must be collected during site visits to be disposed of at appropriate landfill sites.

Potential impact on heritage resources

Potential impacts on the heritage resources will be concluded on the Heritage Impact Assessment report since it has already been established that there are cultural/heritage resources of importance. Currently the observation made based on the screening tool report, the heritage sensitivity of the area tends to be low although there graves close to the project area.

Table 19: Ranks of the potential environmental impacts and risks

Impact	Pre-Mitigation Score
Job Creation	+5.25

Impact	Pre-Mitigation Score
Clearance/Disturbance of vegetation	-8.00
Compacting of Soils	-5.25
Drilling impact on identified lithic scatters	-8.00
Impact on the Farm	-2.00
Deterioration and damage to existing access roads and tracks	-8.00
Safety and security risks to landowners and lawful occupiers	-6.00
Interference with existing land uses	-7.00
Generation and disposal of waste	-6.00
Contamination of surface and ground water	-8.25
Introduction/invasion by alien species	-6.00
Noise	-4.50
Impact on fauna	-6.75
Pollution of Soils	-4.50
Dust	-4.50
Erosion due to vegetation clearance	-5.25
Impact on surface water features	-6.00
Impact on groundwater	-6.00
Loss of fossil heritage	-3.50

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

A description and assessment of the mitigation measures for each potential impact identified in the impact assessment process is provided by the following sections. The impact scores below are contemplative of the impacts post the implementation of mitigation measures. The final significance of each potential impact is also reflected below indicated by a second score. The second score indicates the degree of potential loss of irreplaceable resources, the cumulative nature of the impact, as well as the degree of public concern regarding the impact. The results of the public consultation will be used to update the impact scores upon completion of the public review period, where after the finalised report will be submitted to the DMRE for adjudication.

The mitigation types below have been associated with the potential impacts identified:

Mitigation types	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);
	Remedy through application of mitigation measures in EMPr;
	Avoid and control through implementation of preventative measures (e.g. monitoring, communication with landowners, emergency response procedures);
	Avoid through implementation of preventative measures (e.g. consultation and communication);
	Avoid through implementation of suitable progressive rehabilitation and soil management;
	Game farm where the wildlife is hosted will be buffered.
	Avoid and control through implementation of EMPr mitigation measures (e.g. Spill prevention, Hydrocarbon Storage);
	No invasive prospecting activities to be undertaken within 500m of a watercourse.
	Should any watercourse be affected, then the necessary water use licences should be obtained from the Department of Water and Sanitation.
	Where shallow aquifers are encountered, a survey of the drinking water/ livestock watering boreholes should be undertaken (within 5km of the prospecting borehole sites). A detailed groundwater monitoring programme should be developed for these drinking water/ livestock watering boreholes and pre- and post-prospecting water quality samples should be taken.
	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).

Impact	Post-Mitigation Score	Final Significance
Job Creation	+5.25	+5.25
Clearance of vegetation	-7.00	-7.00
Compacting of Soils	-3.75	-3.75
Drilling impact on identified lithic scatters	+3.75	+4.38

Impact on the Farm	+1.75	+1.75
Deterioration and damage to existing access roads and tracks	-5.00	-5.00
Safety and security risks to landowners and lawful occupiers	-4.00	-4.00
Interference with existing land uses	-5.00	-5.83
Generation and disposal of waste	-4.50	-4.50
Contamination of surface and ground water	-3.50	-4.08
Introduction/invasion by alien species	-3.00	-3.00
Noise	-2.50	-2.50
Impact on fauna	-6.00	-7.00
Pollution of Soils	-2.50	-2.50
Dust	-2.50	-2.50
Erosion due to vegetation clearance	-2.50	-2.50
Impact on surface water features	-3.50	-3.50
Impact on groundwater	-3.50	-3.50
Loss of fossil heritage	-3.25	-3.25

7.16 MOTIVATION WHERE NO ALTERNATIVE SITES WERE CONSIDERED

Since exploration is temporary in nature, no permanent structures will be constructed. Negotiations and agreements will be made with the respective landowners to use any existing infrastructure like access roads. The location of the property is in an area where the geological formation that is known to host the desired mineralisation.

7.17 STATEMENT MOTIVATING THE ALTERNATIVE DEVELOPMENT LOCATION WITHIN THE OVERALL SITE

The proposed project area as discussed above, has been selected due to the geology of the site and the anticipated favourable tectono-stratigraphic setting of the proposed prospecting area. No prospecting will occur within 100m of any watercourse and houses, and roads. Negotiations and agreements will be made with the respective landowners to use any existing infrastructure like access roads and other things like coreshed. Negative

impacts identified above will be mitigated through implementation of the proposed mitigation measures as detailed in the EMP. 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.

8. 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

The impact assessment process may be summarised as follows:

- ❖ The Public Participation Process is currently being undertaken for engagement with the respective landowners, stakeholders and all I&APs to register their comments and concerns as well as providing answers to questions that they may have regarding the project area.
- ❖ A detailed desktop investigation was undertaken to determine the environmental setting in which the project is located. Based on the desktop investigations various resources were used to determine the significance and sensitivity of the various environmental considerations. The desktop investigation involved the use of:
 - ❖ South African National Biodiversity Institute (SANBI) Biodiversity
 - ❖ Geographic Database LUDS system
 - ❖ Geographic Information System base maps
 - ❖ Municipal Integrated Development Plan and Spatial Development Framework.
- ❖ The rating of the identified impacts was undertaken in a quantitative manner as provided in this document. The ratings are undertaken in a manner to calculate the significance of each of the impacts. The EAP also assesses the outcomes of the calculation to determine whether the outcome reflects the perceived and actual views.
- ❖ The identification of management measures is done based on the significance of the impacts and measures that have considered appropriate and successful, specifically as Best Practical and Economical Options.

9. IMPACT ASSESSMENT OF EACH IDENTIFIED POTENTIALLY SIGNIFICANT IMPACT AND RISK

Table 20: Impact Assessment Summary

Element	Aspects and Impacts	Mitigation	Impact (post-mitigation)			
			Extent	Duration	Probability	Level of Significance
Soils	There will be minor disturbance of the soil at the proposed drill sites.	Concurrent rehabilitation to take place per drill site	Low	Short Term	Definite	Low
Vegetation (Mixed Bushveld)	The potential impact of the proposed prospecting on the vegetation would occur at proposed drilling sites and the access routes used to get to these sites. Other parts of the area have been disturbed by agricultural activities. Vegetation clearing could be major in the game farm as the area is has sections with dense vegetation where the wildlife feeds off from.	Environmental awareness training. Drillers to comply with all EMPr procedures. Drilling sites to be located in disturbed areas wherever possible. The prospecting area including drill sites and access routes are to be rehabilitated to as near original condition as possible. No fires to be made in the prospecting area. Sections which have dense vegetation must be avoided during drilling process.	Low	Short Term	Definite	Low
Birdlife	Collisions with the drilling machine	-Scarecrows and balloons will be placed around the fenced drill site for the duration of the drilling activities.	Low	Short term	Possible	Low
Aquatic Component	Disturbance of aquatic Life	All water courses regarded as a no go zone	Low	Short term	Possible	Low
Surface Water	There is a Hex river system which can be impacted negatively should water machines be used.	River regarded as a no-go area and a 100m buffered will apply. Water from the river will not be used for any of the drilling activities.	Low	Short term	Possible	Low
Ground water	No groundwater will be used or abstracted during the prospecting operations.	Boreholes will be cased during drilling and capped afterwards to avoid crossflow between aquifers.	Low	Short Term	Possible	Low
Air Quality	Dust creation during drilling operations due to car speed.	Establish EMPr procedures to minimise the generation of dust. Ensure vehicles drive slowly and	Low	Short Term	Probable	Low

		air flush drilling method is used with a compressor to minimize dust				
Noise	Noise will be created by the drilling rig and vehicles. However, this is a sparsely populated agricultural area.	Ensure vehicles and equipment are maintained. Silencers should be fitted on all engines should be need arise to ensure game farm experience minimal noise.	Low	Short Term	Definite	Low
Terrestrial Biology	Direct vegetation (and wildlife habitat) loss, alteration, and fragmentation from the physical footprint of the Projects.	Limit the area of Project footprint and limit disturbance from employees and prospecting activities and conduct concurrent rehabilitation with follow-up inspections to decide effectiveness of rehabilitation steps undertaken. Avoid vegetation removal during sensitive wildlife breeding seasons such as the migratory bird nesting season. -Apply and enforce speed limits along all Project access roads	Low	Short Term	Definite	Low
Cultural Heritage	There is presence of heritage resources like graves close to the application area	Heritage Impact Assessment to be conducted & recommendations to be made.	Low	Short Term	Definite	Low
Visual	The prospecting activity will not change the visual character of the property.	Rehabilitate drill sites and access tracks.	Low	Short Term	Definite	Low
Social Neighbours	The prospecting operations should not impact on the neighbours due to the distance and low intensity of the prospecting operation.	Ensure compliance with the EMPr. Ensure workers do not trespass onto neighbours' property. Maintain communications and keep a "Complaints Register" on site.	Low	Short Term	Possible	Low
Solid Waste	All solid waste will be transported to the nearest municipal waste site. Any industrial (hazardous) waste will be transported to a suitable waste disposal facility.	Ensure compliance with the EMPr. Include in environmental awareness training. Workers will not stay overnight at the site and waste bins must be placed on site.	Low	Short Term	Definite	Low
Traffic and access	Prospecting activities will generate very limited additional traffic. Prospecting vehicles are to access the property via existing roads, extension routes and tracks only.	Comply with traffic regulations. Keep to speed limits. Ensure compliance with the EMPr.	Low	Short Term	Definite	Low

	Speeding within the farm					
Cumulative Impacts	There are no significant cumulative impacts associated with this prospecting programme.	No mitigation required for prospecting.	N/A	N/A	N/A	N/A

10. ENVIRONMENTAL IMPACT STATEMENT

10.1 SUMMARY OF KEY FINDINGS

Below is the outlined summary of the key findings of the Environmental Impact Assessment

Key findings for the Basic Assessment

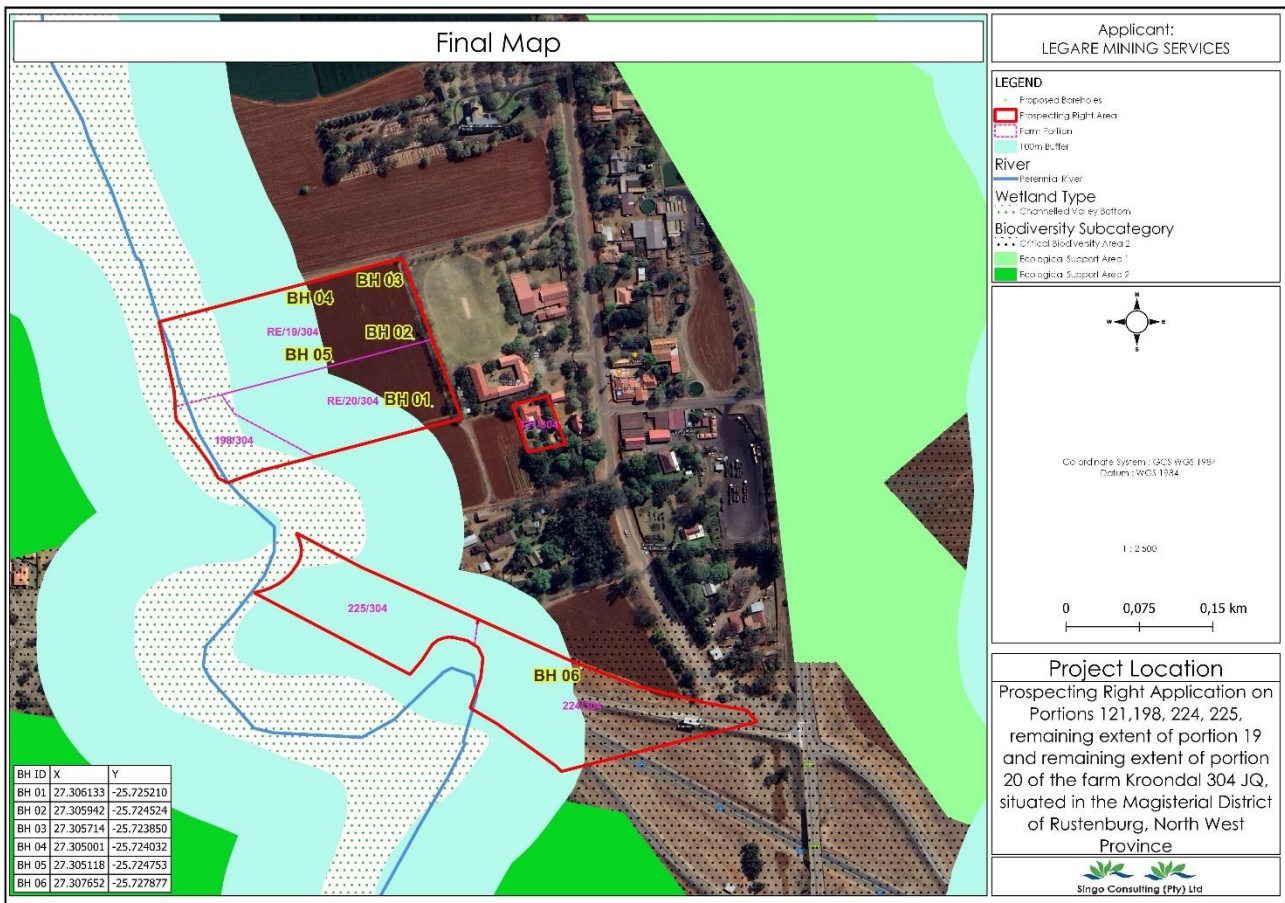
- ❖ The project area covers a school on portion 121 of the farm Kroondal, therefore no borehole will be drilled on that portion.
- ❖ There is a river that cuts through the project area, therefore a 100m buffer has been proposed.
- ❖ The area covers a portion owned by SANRAL and no borehole will be drilled on the national road (N4)
- ❖ The area according to the screening report is:

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

Key findings for the socio-economic environment

- ❖ The principal of the school is concerned about noise and what will happen to the school should the proposed project area be rich in minerals to be prospected.
- ❖ Relevant stakeholders, I&APs as well as the respective landowners' engagements and Public Participation Meeting will be done in order to capture any comments or concerns regarding the proposed activities following an unbiased approach, to ensure that all parties are part of the decision making. The concerns raised will be included in the Final BAR & EMPr.

10.2 FINAL SITE MAP



10.3 SUMMARY OF POSITIVE AND NEGATIVE IMPLICATIONS AND RISKS

The positive implication of the Prospecting Right is the discovery of an economically viable mineral resource. Invasive and non-invasive study will be conducted for this proposed project. The implementation of the proposed mitigation measure will ensure that the negative implications and risks of the project are minimal.

Positive

- ❖ 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

Negative

- ❖ Compacting of Soils; Deterioration and damage to existing access roads and tracks;
- ❖ Safety and security risks to landowners and lawful occupiers;
- ❖ Generation and disposal of waste;

- ❖ Contamination of surface and ground water; o Introduction/invasion by alien species;
- ❖ Noise;
- ❖ Pollution of Soils;
- ❖ Dust;
- ❖ Erosion due to vegetation clearance;
- ❖ Impact on surface water features
- ❖ Interference with current landuse

11. PROPOSED IMPACT MANAGEMENT OBJECTIVES AND OUTCOMES

The objectives of the EMPr will be to provide sufficient information to strategically plan the prospecting activities as to avoid unnecessary social and environmental impact. The above mentioned to be achieved can be through the measures below:

- ❖ Sufficient information and guidance must be provided to plan prospecting activities in a manner that would reduce impacts (both social and environmental) as far as practically possible.
- ❖ Ensure the Adherence to an open and transparent communication procedure with all stakeholders at all times and that information is communicated in a manner which is understandable and accessible to I&APs;
- ❖ Manage any social friction with landowners by regular engagement with the landowner and the entering into an access agreement with the landowner.
- ❖ Minimise negative impacts through consultation with stakeholders and through local knowledge;
- ❖ To have little to no impact to the current existing land uses as far as possible during prospecting;
- ❖ Limit the impact on the groundwater and surface water features through the implementation of the EMPr impact mitigation measures, and recommendations provided on specialist studies performed for this proposed prospecting application.
- ❖ To avoid damage to existing road infrastructure; and
- ❖ Boreholes and access tracks will be located in areas that will result in minimal ground disturbance.

12. ASPECTS FOR INCLUSION AS CONDITIONS OF AUTHORISATION

- ❖ The Landowner should be engaged at least 1 month prior to any site activities being undertaken once drill sites are known; and a map detailing the drilling locations should be provided to the landowner as well as the DMRE prior to commencement of prospecting activities.
- ❖ No activities shall take place within 100m of the waterbodies
- ❖ Recommendations made on the specialist studies undertaken will be taken into consideration.
- ❖ Should any heritage resources be stumbled upon that were not jotted down in this EMPr nor HIA prospecting activities should be placed on hold and SAHRA must be notified immediately.

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

The location of drill sites remains proposed until confirmed through the phased approach of the prospecting programme. This assessment is therefore based on a desktop approach at a broad scale and assuming that drilling could occur anywhere within the proposed prospecting license. Once drill sites have been identified, then it is recommended that focus should be given to these sites in order to identify any cultural or heritage resources of significance, any ecologically significant areas that may occur as well as re-engaging land owners regarding the intention to access and conduct drilling activities on their property.

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

14.1 REASONS WHY THE ACTIVITY SHOULD BE AUTHORISED OR NOT

The proposed project aims to establish whether the area indeed hosts the applied for commodities. The realisation of such leads to prospects of a mining right/permit application. Although with prospecting activities, no local job opportunities are expected during the prospecting phase however, confirmation of a viable mineral resource and possible establishment of a mine may help address the unemployed with the Municipality. Moreover, the impacts on the environment can be mitigated through open communication and transparency with the community, landowners, implementation of the proposed EMPr provisions including the decommissioning, closure and rehabilitation plans, and limiting site access requirements.

14.2 CONDITIONS THAT MUST BE INCLUDED IN THE AUTHORISATION

- ❖ The 100 m buffer applies to all water bodies.
- ❖ The 100m buffer applies to all infrastructure including the national road the N4
- ❖ Areas of high sensitivity should be avoided.
- ❖ There will be Stakeholder Engagement continuation throughout the prospecting activities to ensure the community and landowners are kept informed and allowed to raise issues. These issues will then be addressed through a grievance mechanism.
- ❖ Arrangements for financial provisions for the decommissioning, closure and rehabilitation must be made.
- ❖ The applicant should adhere to the conditions of the EA, EMPr and the Specialist reports for this project.

15. PERIOD FOR WHICH THE ENVIRONMENTAL AUTHORISATION IS REQUIRED

The Environmental Authorisation is required for the duration of the Prospecting Right of five (5) years. The authorisation is required for the duration of the prospecting right which is an initial 5 years and the Application should be given an opportunity for possible withdrawals.

16. UNDERTAKING

It is confirmed 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.

17. FINANCIAL PROVISION

A financial provision of approximately **R2 295 796.00** has been budgeted for the prospecting activities. In addition, **R 41 884.00** will be made available by Legare Mining Services (Pty) Ltd for rehabilitation purposes.

Table 21: Financial Quantum

CALCULATION OF THE QUANTUM							
Applicant: Legare Mining Services (Pty) Ltd				DMRE Ref No.: NW 30/5/1/1/2/13353 PR.			
Evaluator: Simangaliso Jiyane				Date: Feb-2023			
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	19	1	1	0
2 (A)	Demolition of steel buildings and structures	m2	0	271	1	1	0
2(B)	Demolition of reinforced concrete buildings and structures	m2	0	400	1	1	0
3	Rehabilitation of access roads	m2	0.00	49	0.01	1	0
4 (A)	Demolition and rehabilitation of electrified railway lines	m	0	471	1	1	0
4 (A)	Demolition and rehabilitation of non-electrified railway lines	m	0	257	1	1	0
5	Demolition of housing and/or administration facilities	m2	0	542	1	1	0
6	Opencast rehabilitation including final voids and ramps	ha	0	284292	1	1	0
7	Sealing of shafts adits and inclines	m3	0	146	1	1	0
8 (A)	Rehabilitation of overburden and spoils	ha	0	189528	1	1	0
8 (B)	Rehabilitation of processing waste deposits and evaporation ponds (non-polluting potential)	ha	0	236054	1	1	0
8 (C)	Rehabilitation of processing waste deposits and evaporation ponds (polluting potential)	ha	0	685612	1	1	0
9	Rehabilitation of subsided areas	ha	0	158701	1	1	0
10	General surface rehabilitation	ha	0.36	150138	0.2	1	10809.936
11	River diversions	ha	0	150138	1	1	0
12	Fencing	m	0	171	1	1	0
13	Water management	ha	0.36	57087	1	1	20551.32
14	2 to 3 years of maintenance and aftercare	ha	0	19980	1	1	0
15 (A)	Specialist study	Sum	0			1	0
15 (B)	Specialist study	Sum				1	0
						Sub Total 1	31361.256
1	Preliminary and General		3763.35072		weighting factor 2 1		3763.35072
2	Contingencies			3136.1256			3136.1256
						Subtotal 2	38260.73
						VAT (15%)	3623.34
						Grand Total	41884

25/02/2022

17.1 EXPLAIN HOW THE AFORESAID AMOUNT WAS DERIVED

This information has been provided in the Prospecting Work Programme that was submitted to the DMRE. The drilling contractor will be responsible for rehabilitating the drill pad once the drilling activities have been completed at each exploration hole. The financial guarantee was calculated using the DMRE official financial quantum calculator.

17.2 CONFIRM THAT THIS AMOUNT CAN BE PROVIDED FOR FROM OPERATING EXPENDITURE

Legare Mining Services (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.

18. SPECIFIC INFORMATION REQUIRED BY THE COMPETENT AUTHORITY

No additional information other than the appendices of this report has been included.

18.1 COMPLIANCE WITH THE PROVISIONS OF SECTIONS 24(4)(A) AND (B) READ WITH SECTION 24(3)(A) AND (7) OF THE NATIONAL ENVIRONMENTAL MANAGEMENT ACT (ACT 107 OF 1998) THE BAR REPORT MUST INCLUDE THE:

18.1.1 IMPACT ON THE SOCIO-ECONOMIC CONDITIONS OF ANY DIRECTLY AFFECTED PERSON

Potential impacts mentioned below on the socio-economic conditions have the potential to include:

❖ Safety and security risks to landowners and lawful occupiers

This is with reference to the unfamiliar workers to enter the project area during the prospecting activities. This impact could potentially affect the landowners, however the impact will be minimal as people on site will be limited to the Applicant, contractor and geologists for the topographical and geophysical surveys and no prospecting activities shall take place at night.

❖ Interference with existing land uses

Land use is agricultural purposes, school that provides education, resident house and national road.

Consultations will have to be done with all these Affected Parties. Impact will be kept as minimal as possible since the activities are of short duration which do not involve heavy equipment.

18.1.2 IMPACT ON ANY NATIONAL ESTATE REFERRED TO IN SECTION 3(2) OF THE NATIONAL HERITAGE RESOURCES ACT

HIA will be conducted and report will be updated based on the conclusions, findings as well the recommendations provided thereof.

19. OTHER MATTERS REQUIRED IN TERMS OF SECTIONS 24(4)(A) AND (B) OF THE ACT

The proposed site was selected based on extensive research and also on the Geological formation. The area is underlain by geological formations known to host the minerals sought

for (Chrome Ore, Manganese Ore, and Iron Ore). In terms of the technologies proposed, the proposed prospecting has been chosen based on the history and current state of the minerals sought for in the area. The prospecting activities proposed in the Prospecting Works Programme (PWP) is dependent on the preceding phase as previously discussed, therefore no alternatives are indicated, but rather a phased approach of trusted prospecting techniques.

PART B

ENVIRONMENTAL MANAGEMENT PROGRAMME

20. INTRODUCTION

20.1 DETAILS OF THE EAP

Details of EAP are included in PART A section 1 (a).

20.2 DESCRIPTION OF THE ASPECTS OF THE ACTIVITY

The description of the aspects of the activity that are covered by the Draft Environmental Management Programme report is already included in PART A SECTION 2 above.

20.3 COMPOSITE MAP

Refer to SECTION 11.2 above. Exploration is a temporal activity thus no permanent structures will be erected.

21. DESCRIPTION OF IMPACT MANAGEMENT OBJECTIVES INCLUDING MANAGEMENT STATEMENTS

21.1 DETERMINATION OF CLOSURE OBJECTIVES

The following section details the goals and objectives that **Legare Mining Services (Pty) Ltd** will aim to achieve. It includes both a commitment to ensure legal compliance and then highlights the goals and objective for those impacts which are deemed most significant for exploration. The vision, and consequent objective and targets for rehabilitation, decommissioning and closure, aim to reflect the local environmental and socio-economic context of the project, and to represent both the corporate requirements and the stakeholder expectations.

The overall aim of the rehabilitation plan is to rehabilitate the environment to a condition as close as possible to that which existed prior to prospecting. This shall be achieved with a number of specific objectives.

- ❖ **Creating a safe environment** i.e. Decommission prospecting activities so as to ensure that the environment is safe for people and animals. This entails refilling excavations, sealing boreholes, etc.

- ❖ **Recreating a free draining landform.** This entails earthworks infilling, reshaping, levelling, etc. to recreate as close as possible the original topography and to ensure a free draining landscape.
- ❖ **Re-vegetation.** This involves either reseeded or allowing natural succession depending on the area, climate etc.
- ❖ **Storm water management and erosion control.** Management of stormwater and prevention of erosion during rehabilitation. E.g. cut off drains, berms etc. and erosion control where required.
- ❖ **Successful closure.** Obtain closure certificate.
- ❖ **Verification of rehabilitation success.** Entails monitoring of rehabilitation.

21.2 VOLUMES AND RATE OF WATER USE REQUIRED FOR THE OPERATION

2 000litres per day and 24 000 litres required for drilling purposes for the entire operation.

21.3 HAS A WATER USE LICENCE BEEN APPLIED FOR?

No water Use License has been applied. Since no boreholes have yet been established or located on site, water is anticipated to be brought on site on the Applicants capacity or it will be sourced from the Local Municipality.

21.4 IMPACTS TO BE MITIGATED IN THEIR RESPECTIVE PHASES

Table 22: Impacts to be mitigated

Activities	Phase	Scale of Disturbance	Mitigation Measures	Compliance with Standards	Time Period for Implementation
Site clearance	Construction Operation	0.36 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 or 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	9.120.33 ha, short term and localized	<p>□ 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.</p> <ul style="list-style-type: none"> • 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. <p>Consideration must be taken by the applicant and/or contractors when on site not to interfere with the existing land uses and practices.</p>	NEMA OHS MHSA and	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 and fire risks. 	NEMA MPRDA NEMBA NEMAQA Dust regulations NWA DWAFF 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
			<ul style="list-style-type: none"> • All farm gates must be closed immediately upon entry/exit; • 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); • 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; • Damage caused to public roads as a result of the construction activities must be repaired in consultation with the relevant municipal authorities; and • All measures should be implemented to minimize the potential of dust generation. 		
Storage of hazardous substances	Construction and Operation	short term and localized	<p>☐ 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; and way that does not pose any danger of pollution even during times of high rainfall.</p>	NWA NEMWA DWAF BPG NEMA	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"> • Hazardous substances must be confined to specific and secured areas, and stored at all-time within bunded areas; • 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. 		
Waste management	Construction and Operation	Short-medium term, localized	<ul style="list-style-type: none"> • 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; • 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 • A Waste Management System must be implemented, and provide for adequate waste storage (in the form of enclosed containers) waste separation for recycling, and frequent removal of non-recyclable waste for permanent disposal at an appropriately licensed waste disposal facility. No waste material is to be disposed of on site. 	DWAFF Minimum requirements for waste disposal NEMWA	Throughout Construction and operation

Activities	Phase	Size and Scale of Disturbance	Mitigation Measures	Compliance with Standards	Time Period for Implementation
<p>Prospecting boreholes: 6 sites , with a footprint of 600 m² each</p>	<p>Construction and Operation Decommissioning</p>	<p>0,36 ha, short term</p>	<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 500m of a watercourse. • Should any watercourse be affected, then the necessary water use licences should be 	<p>SANS 10103 ECA Noise Regulations NEMAQA Dust Regulations NWA</p>	<p>Throughout Construction and operation and decommissioning</p>

Activities	Phase	Size and Scale of Disturbance	Mitigation Measures	Compliance with Standards	Time Period for Implementation
			<p>obtained from the Department of Water and Sanitation.</p> <ul style="list-style-type: none"> No ablution of site laydown areas is to be located within 500m 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	0,36 ha, short term	<input type="checkbox"/> 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	<input type="checkbox"/> 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	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
			<p>times of the day. This work should not take place at night or on weekends;</p> <ul style="list-style-type: none"> • The contractor must attempt to restrict noisy activities as far as is possible to times and locations whereby the potential for noise nuisance is reduced; • Dust suppression methods must be applied when necessary to restrict the visual impact of dust emissions. • Any spills of hydrocarbons or fluids used during operation, must be cleaned up immediately; • An above ground drilling sump must be used to contain drilling mud in order to reduce surface and groundwater contamination. No earthen mud sumps are to be constructed and utilized; • No prospecting boreholes should be drilled in the immediate vicinity of existing private boreholes; • Soils in drilling areas where disturbances will be encountered must be stripped and stockpiled outside affected areas for use after completion of the drilling program. • Topsoil must be adequately stripped to the correct depth and stored separately from subsoils; • A liner should be placed over the drill pad and drip trays must be used in all areas where hydrocarbons are handled; • On-site vehicles must be limited to approved access routes and areas on the site so as to 	<p>ECA Noise Regulations NEMAQA Dust Regulations NWA DWAFF BPG NHRA</p>	

Activities	Phase	Size and Scale of Disturbance	Mitigation Measures	Compliance with Standards	Time Period for Implementation
			<p>minimize excessive environmental disturbance to the soil and vegetation on site, and to minimize disruption of traffic;</p> <ul style="list-style-type: none"> • The designated competent authority (DMR) may, at the cost of the Applicant, appoint an independent and competent person to undertake borehole examination. • Should any fugitive emissions be detected, then the recommendations of the must be undertaken throughout the drilling activity up to the decommissioning of the wells. • Should any chance finds be uncovered during the construction phase, these must be handled in accordance with the requirements of the National Heritage Resources Act, 1999 (Act 25 of 1999) (NHRA); and • 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 buffer) should stop and a qualified specialist contracted to evaluate and recommend appropriate actions. Depending on the type of site that can include initiating a grave relocation process, documentation of structures or archaeological excavations. • Should fossil remains be discovered in the during any phase of construction, either on the surface or exposed by fresh excavations, the ECO responsible for these developments should be alerted immediately. Such discoveries ought to be protected (preferably in situ) and the ECO should alert SAHRA so that appropriate mitigation (e.g. 		

Activities	Phase	Size and Scale of Disturbance	Mitigation Measures	Compliance with Standards	Time Period for Implementation
			<p>recording, sampling or collection) can be taken by a professional palaeontologist.</p> <ul style="list-style-type: none"> • 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 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 pertaining to the EA must be uploaded to the SAHRIS Case file. 		

Activities	Phase	Size and Scale of Disturbance	Mitigation Measures	Compliance with Standards	Time Period for Implementation
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
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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 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	<input type="checkbox"/> 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
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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	<input type="checkbox"/> 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

21.5 IMPACT MANAGEMENT ACTIONS AND OUTCOMES

Table 23: 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 	Topography; Soil; Air Quality; Surface Water; Groundwater; Transportation	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 Dust regulations NWA DWAF best Practice Guidelines

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 	Topography; Landform; Soil disturbance; Fauna and Flora; Air Quality; Surface Water; Groundwater; Socioeconomics	Construction Operation	Avoidance and control through preventative measures (e.g. communication with landowners, site access control) Remedy through application of mitigation measures in EMP	NEMA MPRDA NEMBA CARA Threatened or Protected Species (TOPS) regulations NEMAQA Dust regulations NWA DWAF best Practice Guidelines

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	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	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	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	
	Disturbance of wildlife and communities in close vicinity; New access roads; Increased transportation; Damage to local infrastructure; 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 EMPr 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 EMPr 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 Rehabilitation plan
Rehabilitation	<ul style="list-style-type: none"> • Soil compaction; • Soil and Water contamination; • Erosion; • Change is 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
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22. FINANCIAL PROVISION

The following regulations, Regulation 6, 10 and 11 of the Financial Provisioning Regulations aims to regulate the determination and making of financial provision as contemplated in the NEMA under the NEMA regulations for the costs associated with the undertaking of management, rehabilitation and remediation of environmental impacts from prospecting, mining or production operations through the lifespan of such operations and latent or residual environmental impacts that may become known in the future.

22.1 DESCRIBE THE CLOSURE OBJECTIVES AND THE EXTENT TO WHICH THEY HAVE BEEN ALIGNED TO THE BASELINE ENVIRONMENT DESCRIBED UNDER THE REGULATION

The overall aim of the rehabilitation plan is to rehabilitate the environment to a condition as close as possible to that which existed prior to prospecting. This shall be achieved with a number of specific objectives.

- ❖ **Creating a safe environment** i.e. Decommission prospecting activities so as to ensure that the environment is safe for people and animals. This entails refilling excavations, sealing boreholes, etc.
- ❖ **Recreating a free draining landform.** This entails earthworks infilling, reshaping, levelling, etc. to recreate as close as possible the original topography and to ensure a free draining landscape.
- ❖ **Re-vegetation.** This involves either reseeding or allowing natural succession depending on the area, climate etc.
- ❖ **Storm water management and erosion control. Management of stormwater and prevention of erosion during rehabilitation.** E.g. cut off drains, berms etc. and erosion control where required.
- ❖ **Verification of rehabilitation success.** Entails monitoring of rehabilitation.
- ❖ **Successful closure.** Obtain closure certificate.

22.2 CONFIRM SPECIFICALLY THAT THE ENVIRONMENTAL OBJECTIVES IN RELATION TO CLOSURE HAVE BEEN CONSULTED WITH LANDOWNER AND INTERESTED AND AFFECTED PARTIES

The environmental objectives in relation to closure were consulted with affected parties. The end use for area will revert to its pre-prospecting land use after the prospecting operations. However, should the prospecting operation yield positive results, then the farm could be subject to a mining rights application and another more comprehensive Public Participation, Scoping, EIA and EMPr process. If a mining right is granted, then the area will be rehabilitated

according to the requirements of the approved Environmental Management Programme that would apply throughout the life of the mine.

22.3 REHABILITATION PLAN

22.3.1 INTEGRATED REHABILITATION AND CLOSURE PLAN

The main aim of the rehabilitation plan development is to mitigate the impacts caused by the prospecting activities and to restore land back to a satisfactory standard. It is best practice to develop the rehabilitation plan as early as possible so as to ensure the optimal management of rehabilitation issues that may arise. It is important that the closure plan of the project is defined and understood beforehand the process and is complementary to the rehabilitation goals. Rehabilitation and closure objectives need to be site specific and be well aligned with the EMPr.

Phase 1: Making Safe

All 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. In line with the DWAF (2008). Best Practice Guideline A6: Water Management for Underground Mines. The contractor shall ensure that the concrete is not mixed directly on the ground and visible remains of concrete, either solid or from washings should physically be removed immediately and disposed as waste since cement and liquid concrete are hazardous to the natural environment with regards to the high pH of the material, and the chemicals contained therein.

Phase 2: Landform Design, Erosion Control and Revegetation

Landform, erosion control and re-vegetation form an important part of the rehabilitation process. The landform should be rehabilitated to a condition as close as possible to that which existed prior to prospecting. This can be achieved by the following:

- Shaping, levelling and de-compacting the final landscape after removing all the project infrastructure, dress with topsoil.
- Removing access roads with no beneficial re-use potential by deep ripping, shaping and levelling after the removal and disposal of any culverts, drains, ditches and/or other infrastructure. Natural drainage patterns are to be reinstated as closely as possible.
- Constructing contour banks and energy dissipating structures as necessary to protect disturbed areas from erosion prior to stabilisation.

- Promoting re-vegetation through the encouragement of the natural process of secondary succession.
- Natural re-vegetation is dependent on de-compaction of subsoils and adequate replacement of the accumulated reserves of topsoil (for example, over the borehole sites), so as to encourage the establishment of pioneer vegetation.
- Remove alien and/or exotic vegetation.

Phase 3: Monitoring and Maintenance

Following decommissioning, the post-operational monitoring and management period of prospecting activities must be implemented by a suitable qualified independent party for a minimum of one year unless otherwise specified by the competent authority. Monitoring of any unforeseen impact will be provisioned should there be a need as a result of the proposed prospecting activities and incorporated into post closure monitoring and management. The monitoring activities during this period will include but not be limited to re-vegetation of disturbed areas where required and biodiversity monitoring.

22.3.2 POST-CLOSURE MONITORING AND MAINTENANCE

A monitoring programme shall be developed and submitted to the relevant authority for approval, as a part of the Final Rehabilitation Plan prior to decommissioning and rehabilitation activities. The programme should include proposed monitoring during and after the closure of the prospecting borehole sites and related activities. The plan will act as a confirmation that any waste, wastewater or other pollutants that is generated as a result of decommissioning will be managed appropriately, as per the detailed requirements set out in the Final Rehabilitation Plan, acceptable cover has been achieved in areas where natural vegetation is being re-established and that the prospecting drill sites are safe- not a resultant to pollution. Environmental report will be submitted annually.

22.4 EXPLAIN WHY IT CAN BE CONFIRMED THAT THE REHABILITATION PLAN IS COMPATIBLE WITH THE CLOSURE OBJECTIVES

The rehabilitation plan seeks to ensure that negative impacts on the receiving environment that could not be prevented or mitigated during the prospecting activities are rehabilitated. The use of indigenous species during re-vegetation will ensure that ecosystem restoration is initiated and prevent invasion by alien species, the capping of boreholes will prevent future environmental issues related to fluid leakage or lateral movement through the borehole, as well as protect water resources. The appropriate disposal of waste will ensure that land is

usable, in alignment with surrounding land uses and that no hazardous materials are left on site post-prospecting.

22.5 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: Legare Mining Services (Pty) Ltd
 Evaluator: Simangaliso Jiyane

DMRE Ref No.: NW 30/5/1/1/2/13353 PR.
 Date: Feb-2023

No.	Description	Unit	A	B	C	D	E=A*B*C*D
			Quantity	Master Rate	Multiplication factor	Weighting factor 1	Amount (Rands)
1	Dismantling of processing plant and related structures (including overland conveyors and powerlines)	m3	0	19	1	1	0
2 (A)	Demolition of steel buildings and structures	m2	0	271	1	1	0
2(B)	Demolition of reinforced concrete buildings and structures	m2	0	400	1	1	0
3	Rehabilitation of access roads	m2	0.00	49	0.01	1	0
4 (A)	Demolition and rehabilitation of electrified railway lines	m	0	471	1	1	0
4 (A)	Demolition and rehabilitation of non-electrified railway lines	m	0	257	1	1	0
5	Demolition of housing and/or administration facilities	m2	0	542	1	1	0
6	Opencast rehabilitation including final voids and ramps	ha	0	284292	1	1	0
7	Sealing of shafts adits and inclines	m3	0	146	1	1	0
8 (A)	Rehabilitation of overburden and spoils	ha	0	189528	1	1	0
8 (B)	Rehabilitation of processing waste deposits and evaporation ponds (non-polluting potential)	ha	0	236054	1	1	0
8 (C)	Rehabilitation of processing waste deposits and evaporation ponds (polluting potential)	ha	0	685612	1	1	0
9	Rehabilitation of subsided areas	ha	0	158701	1	1	0
10	General surface rehabilitation	ha	0.36	150138	0.2	1	10809.936
11	River diversions	ha	0	150138	1	1	0
12	Fencing	m	0	171	1	1	0
13	Water management	ha	0.36	57087	1	1	20551.32
14	2 to 3 years of maintenance and aftercare	ha	0	19980	1	1	0
15 (A)	Specialist study	Sum	0			1	0
15 (B)	Specialist study	Sum				1	0
Sub Total 1							3136.1256
1	Preliminary and General		3763.35072		weighting factor 2 1		3763.35072
2	Contingencies			3136.1256			3136.1256
Subtotal 2							38260.73
VAT (15%)							3623.34
Grand Total							41884

25/02/2022

22.6 CONFIRM THAT THE FINANCIAL PROVISION WILL BE PROVIDED AS DETERMINED

Legare Mining Services (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. The amount is also reflected in the Prospecting Work Programme submitted to the DMRE.

23. MECHANISMS FOR MONITORING COMPLIANCE

Table 24: Mechanisms for monitoring compliance

Source Activity	Impacts Requiring Monitoring Programme	Functional Requirements for Monitoring	Roles and Responsibilities	Monitoring and Reporting Frequency and Time Periods for Implementation
Desktop Study: Literature Survey / Review / acquisition of data	None	None	None	None
Geological field mapping	<input type="checkbox"/> All Impacts Identified in the EMPr	<ul style="list-style-type: none"> • Site inspections and checklists; • Complaints register 	<input type="checkbox"/> Contractors Environmental Representative; ECO	<input type="checkbox"/> Daily inspections and checklists
Regional Ground Geophysical Surveys	<input type="checkbox"/> All Impacts Identified in the EMP	<input type="checkbox"/> Site Inspections and checklists	<input type="checkbox"/> Contractors Environmental Representative	<input type="checkbox"/> Daily inspections and checklists
Site Clearance:	<ul style="list-style-type: none"> • Possession of permits for protected species • Relocation of protected species • Alien vegetation management 	<ul style="list-style-type: none"> • Document Control • Site Inspections and checklists • Report review and • Development of actions plans 	<ul style="list-style-type: none"> • Contractors Environmental Representative; • Environmental specialist, ECO 	<ul style="list-style-type: none"> • Once-off control of documents, site visit and reporting; • Monthly site visits; • Monthly Reports Annual Performance Assessment

Source Activity	Impacts Requiring Monitoring Programme	Functional Requirements for Monitoring	Roles and Responsibilities	Monitoring and Reporting Frequency and Time Periods for Implementation
Target Prospecting Boreholes: 8 drill sites	<ul style="list-style-type: none"> • Alien vegetation management • Noise (if any complaints are registered by residents) • Air quality (if complaints are registered) • Surface and groundwater management • Impacts on heritage features 	<ul style="list-style-type: none"> • Site Inspections and checklists; • Report review and development of corrective action plans • Inspection of surface water features • Survey of groundwater users and use within 5km of the invasive prospecting sites. • Demarcation of sensitive areas 	<ul style="list-style-type: none"> • Contractors Environmental Representative; • Environmental specialist, ECO • Senior Environmental Management; • Geohydrologist (if required) 	<ul style="list-style-type: none"> • Once-off control of documents, site visit and reporting; • Monthly site visits; • Monthly Reports Annual Performance • Prior to invasive prospecting activities and monitoring post-prospecting.
Data Compilation	None	None	None	None

Source Activity	Impacts Requiring Monitoring Programme	Functional Requirements for Monitoring	Roles and Responsibilities	Monitoring and Reporting Frequency and Time Periods for Implementation
Detailed Ground geophysical Surveys	<input type="checkbox"/> All Impacts Identified in the EMPr	<input type="checkbox"/> Site Inspections and checklists	<input type="checkbox"/> Contractors Environmental Representative	<input type="checkbox"/> Daily inspections and checklists
Widely Spaced Prospecting Boreholes: 8 sites	<input type="checkbox"/> All Impacts Identified in the EMPr	<input type="checkbox"/> Site Inspections and checklists	<input type="checkbox"/> Contractors Environmental Representative; ECO	<input type="checkbox"/> Daily inspections and checklists
Closely Spaced Prospecting Boreholes	<ul style="list-style-type: none"> • Alien vegetation management • Noise (if any complaints are registered by residents) • Air quality (if complaints are registered) 	<ul style="list-style-type: none"> • Site Inspections and checklists; • Report review and development of corrective action plans 	<ul style="list-style-type: none"> • Contractors Environmental Representative; • Environmental specialist, ECO • Senior Environmental Management. 	control of documents, site visit and site visits; reports Annual Performance
Environmental Screening by ECO	<input type="checkbox"/> All Impacts Identified in the EMPr	<input type="checkbox"/> Site Inspections and checklists	<input type="checkbox"/> Contractors Environmental Representative	<input type="checkbox"/> Daily inspections and checklists

Source Activity	Impacts Requiring Monitoring Programme	Functional Requirements for Monitoring	Roles and Responsibilities	Monitoring and Reporting Frequency and Time Periods for Implementation
Ablutions - Chemical Toilets	<input type="checkbox"/> All Impacts Identified in the EMPr	<input type="checkbox"/> Site Inspections and checklists	<input type="checkbox"/> Contractors Environmental Representative	<input type="checkbox"/> Daily inspections and checklists
Sample storage (Existing BMM prospecting office. No new infrastructure to be constructed)	<input type="checkbox"/> All Impacts Identified in the EMPr	<input type="checkbox"/> Site Inspections and checklists	<input type="checkbox"/> Contractors Environmental Representative	<input type="checkbox"/> Daily inspections and checklists
Access Route (Mostly existing roads to be utilised. Access tracks will be made where there are no existing routes.)	<input type="checkbox"/> All Impacts Identified in the EMPr	<input type="checkbox"/> Site Inspections and checklists	<input type="checkbox"/> Contractors Environmental Representative	<input type="checkbox"/> Daily inspections and checklists
Temporary general waste storage (General/domestic waste - Wheelie bin)	<input type="checkbox"/> All Impacts Identified in the EMPr	<input type="checkbox"/> Site Inspections and checklists	<input type="checkbox"/> Contractors Environmental Representative	<input type="checkbox"/> Daily inspections and checklists

Source Activity	Impacts Requiring Monitoring Programme	Functional Requirements for Monitoring	Roles and Responsibilities	Monitoring and Reporting Frequency and Time Periods for Implementation
Temporary hazardous waste storage (Hazardous waste – Sealed Container)	☐ All Impacts Identified in the EMPr	☐ Site Inspections and checklists	☐ Contractors Environmental Representative	☐ Daily inspections and checklists
Compilation of geological plans	None	None	None	None
Undertake decommissioning and rehabilitation as per the rehabilitation plan (Drill sites + Access tracks)	<ul style="list-style-type: none"> • Alien vegetation management • Noise (if any complaints are registered by residents) • Air quality (if complaints are registered) 	<ul style="list-style-type: none"> • Site Inspections and checklists; • Report review and development of corrective action plans 	<ul style="list-style-type: none"> • Contractors Environmental Representative; • Environmental specialist, ECO • Senior Environmental Management • Surface water specialist 	<ul style="list-style-type: none"> • Monthly site visits; • Monthly Reports and Annual Performance Assessments
Monitoring of rehabilitation efforts	☐ All Impacts Identified in the EMPr	☐ Site Inspections and checklists	<ul style="list-style-type: none"> • ECO; • Independent Environmental Auditor 	☐ Monthly reports

Surface Water	<input type="checkbox"/> All Impacts Identified in the EMPr	<input type="checkbox"/> Site Inspections and checklists;	<input type="checkbox"/> ECO;	<input type="checkbox"/> Monthly Reports
		<input type="checkbox"/> Report review and development of corrective action plans	<ul style="list-style-type: none"> • Contractors Environmental Representative; • Senior Environmental Management 	
Groundwater	<input type="checkbox"/> All Impacts Identified in the EMPr	<ul style="list-style-type: none"> • Site Inspections and checklists; • Report review and development of corrective action plans 	<ul style="list-style-type: none"> • Environmental specialist, ECO • Senior Environmental Management 	<ul style="list-style-type: none"> • Monthly; • If pollution event occurs at boreholes.

24. INDICATE THE FREQUENCY OF THE SUBMISSION OF THE PERFORMANCE ASSESSMENT/ ENVIRONMENTAL AUDIT

The Performance Assessment report will be submitted to the DMRE annually. Should there be any emergencies or unforeseen impacts, the DMRE officials or any other relevant government departments will be notified immediately.

25. ENVIRONMENTAL AWARENESS PLAN AND TRAINING

Environmental awareness Plan and Training form a basic part of a complete EMPr. The overall aim of the training will be to ensure that all site staff are informed of their relevant requirements and obligations pertaining to the relevant authorisations, licences, permits and the approved EMPr and conservation of the environment. The applicant and contractor must ensure that all relevant employees are trained and capable of carrying out their duties in an environmentally responsible and compliant manner and are capable of complying with the relevant environmental requirements.

25.1 MANNER IN WHICH EMPLOYEES WILL BE INFORMED OF ENVIRONMENTAL RISKS

Environmental awareness will be manifested and promoted by induction course for all personnel on site, before commencing site visits. Personnel should also be alerted to particular environmental concerns associated with their tasks for the area in which they are working and the manner in which the risks must be dealt with in order to avoid pollution or the degradation of the environment. Courses will be given by a reputable personnel and in a language and medium understood by workforces. Tool box talk sessions can also be held prior to site access as a form of environmental awareness.

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

The risks measures to control or mitigate any causes of pollution or degradation of the environment as a result of the proposed prospecting activities taking place include the containment of the potential pollutants and contaminants at source and handling which must be conducted in bunded areas. Implementation of a waste management system for all waste stream present on site as well as the implementation of the impact management objectives, outcomes and actions, as described above in the Environmental Management Programme report. It is of great importance to ensure extensive environmental training for personnel on-site to avoid any pollution or environment degradation.

26. SPECIFIC INFORMATION REQUIRED BY THE COMPETENT AUTHORITY

No additional information was requested or is deemed necessary.

27. 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

APPENDICES

Appendix 1: DMRE LETTER

Acceptance letter:



mineral resources & energy

Department
Minerals Resources and Energy
REPUBLIC OF SOUTH AFRICA

Private Bag A1, KLERKSDORP 2570
Fax No: (018) 487 4350 / Tel No.: (018) 487 4300
Enquiries: S.S. Mabasa: Reference No. NW 30/5/1/1/2/13353 PR

Langare Mining (Pty) Ltd

Private Bag X7297

Highveld

Witbank

1035

Email: kenneth@singoconsulting.co.za

Attention: Ndinanyi Kenneth Singo

APPLICATION FOR A PROSPECTING RIGHT AND PERMISSION TO REMOVE AND DISPOSE OF MINERALS IN TERMS OF SECTIONS 16 AND 20 OF THE MINERAL AND PETROLEUM RESOURCES DEVELOPMENT ACT, (ACT 28 OF 2002) AS AMENDED BY SECTION 12 OF THE MINERAL AND PETROLEUM RESOURCES DEVELOPMENT AMENDMENT ACT, (ACT 49 OF 2008): PORTIONS 121, 198, 224, 225, REMAINING EXTENT OF PORTION 19 AND REMAINING EXTENT OF PORTION 20 OF THE FARM KROONDAL 304 JQ , SITUATED IN THE MAGISTERIAL DISTRICT OF RUSTENBURG.

I hereby confirm that your application for a prospecting right and permission to remove and dispose of **chrome ore, iron ore and manganese ore** in terms of sections 16 of the Mineral and Petroleum Resources Development Act, 2002 (Act 28 of 2002) (as amended) has been accepted.

In light of the minimum requirements as stipulated on Regulation 16(1) and 16(2) of the EIA Regulations, your application for an Environmental

Authorisation was incomplete as it was not accompanied by this acceptance letter as per Sub Regulation 16(1)(ix) and considering that it is now completed by this acceptance letter, you are hereby required to submit the documents as stipulated on Regulation 19(1) to 19(8) of the EIA Regulations (Only in cases where Basic Assessment Report is applicable) or Regulation 21 (Scoping Report) and Regulation 23 (EIR and EMPR) (In case of Scoping and Environmental Impact Report). **Please ignore the submission of this report in case you have already submitted.** All timeframes are effective from the date of this letter.

Kindly take note that you are required to consult with the Department of Land Affairs if the land is state owned and in the event that the land is subject to land restitution, to consult the office of the Commission on Restitution of Land Rights and submit online and hard copy to this Regional office the results of such consultation on or before the 23rd of March 2023 (30 days).

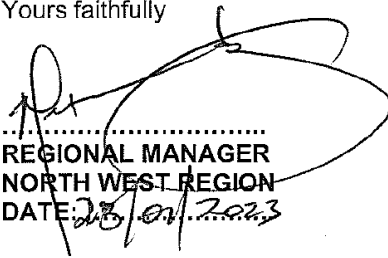
You are requested in terms of section 17(4) of the Act to give effect to the object referred in section 2 (d) of the Act. In this regard you are required to submit online by no later than 19th of April 2023 (60 days), the following documents:

- Joint Venture Agreement
- Duly signed shareholders agreements
- Shares certificate and shareholders registers
- Details relating to funding, and any other agreement or documents relating to the agreement.

Acceptance of your application does not grant you the right to commence with prospecting operations. Your application will be evaluated/processed and a recommendation on the granting/refusal of the right will be forwarded to the Minister or her delegate. Any person operating without a prospecting/mining right or mining permit will be in contravention of Section 5(4) of the MPRDA and would be guilty of an offence in terms of the relevant Act.

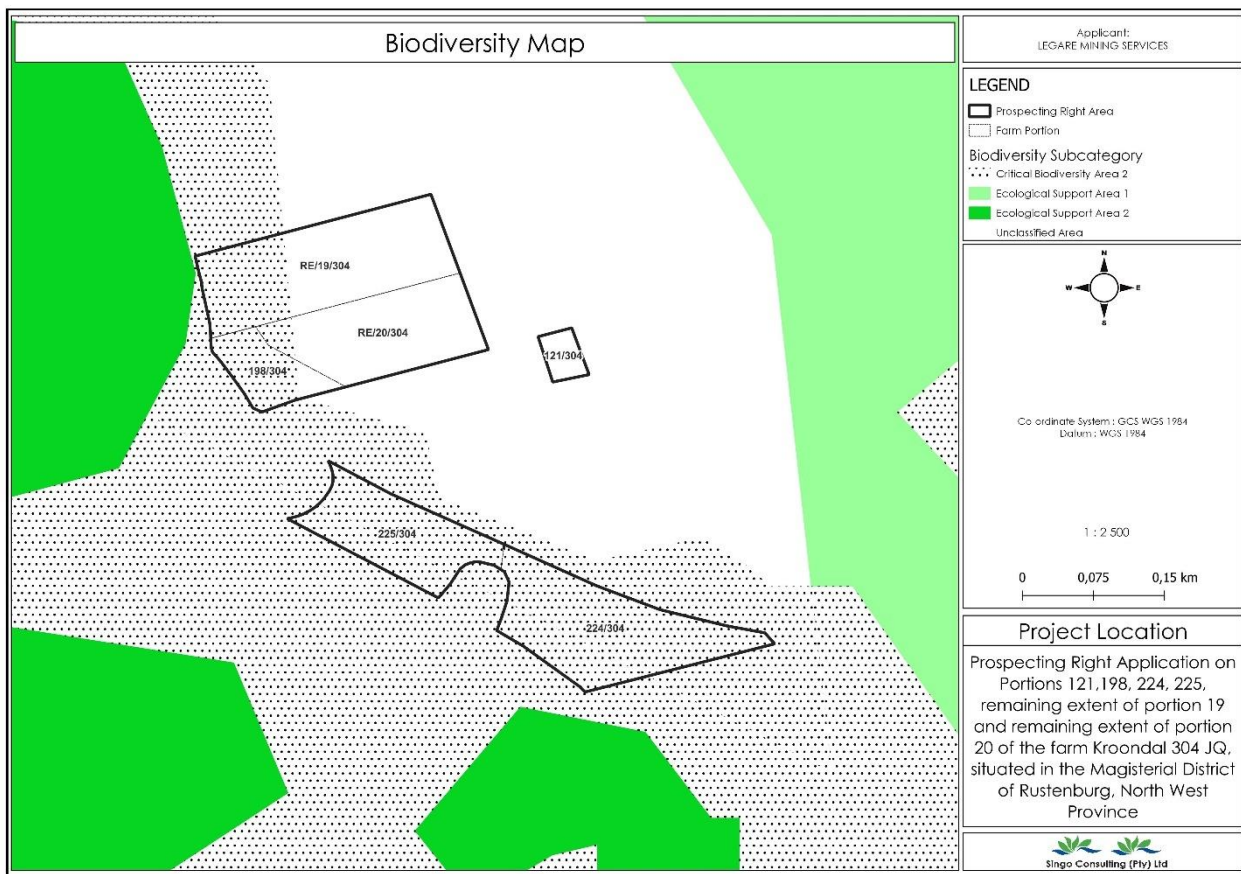
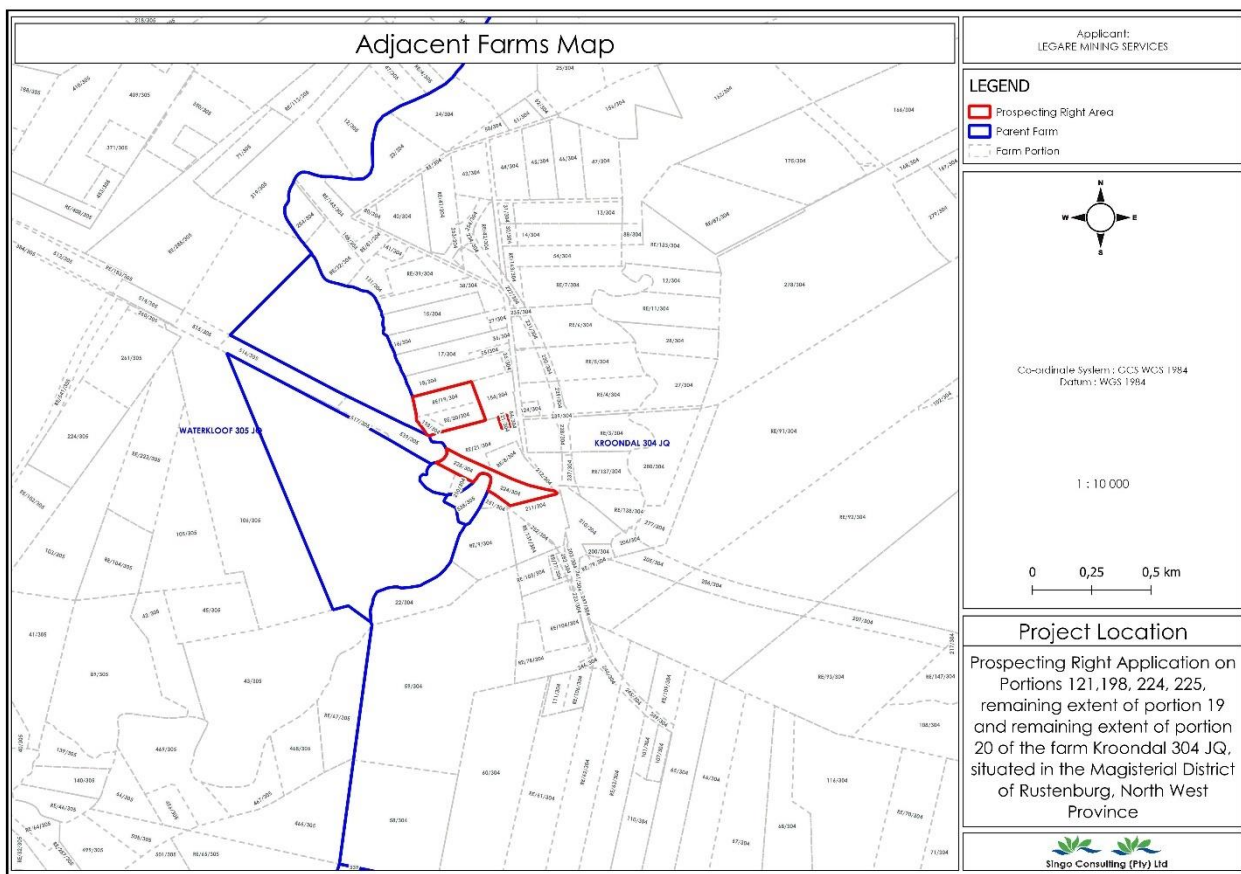
Take note further that failure to submit the documents as requested and failure to adhere to the timeframes as stipulated above amounts to non-compliance with the provision of the Act and will therefore lead to your application being recommended for refusal without further notification to you.

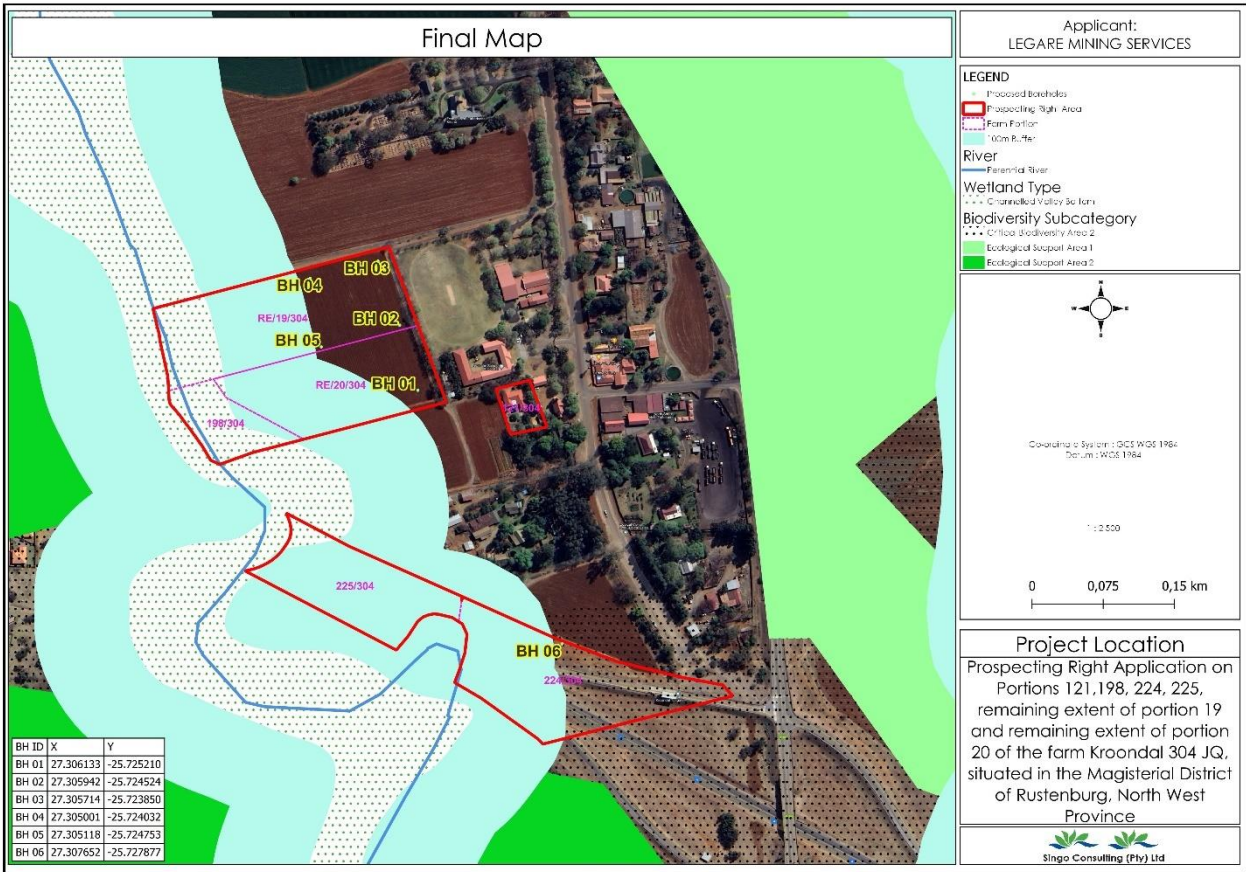
Yours faithfully

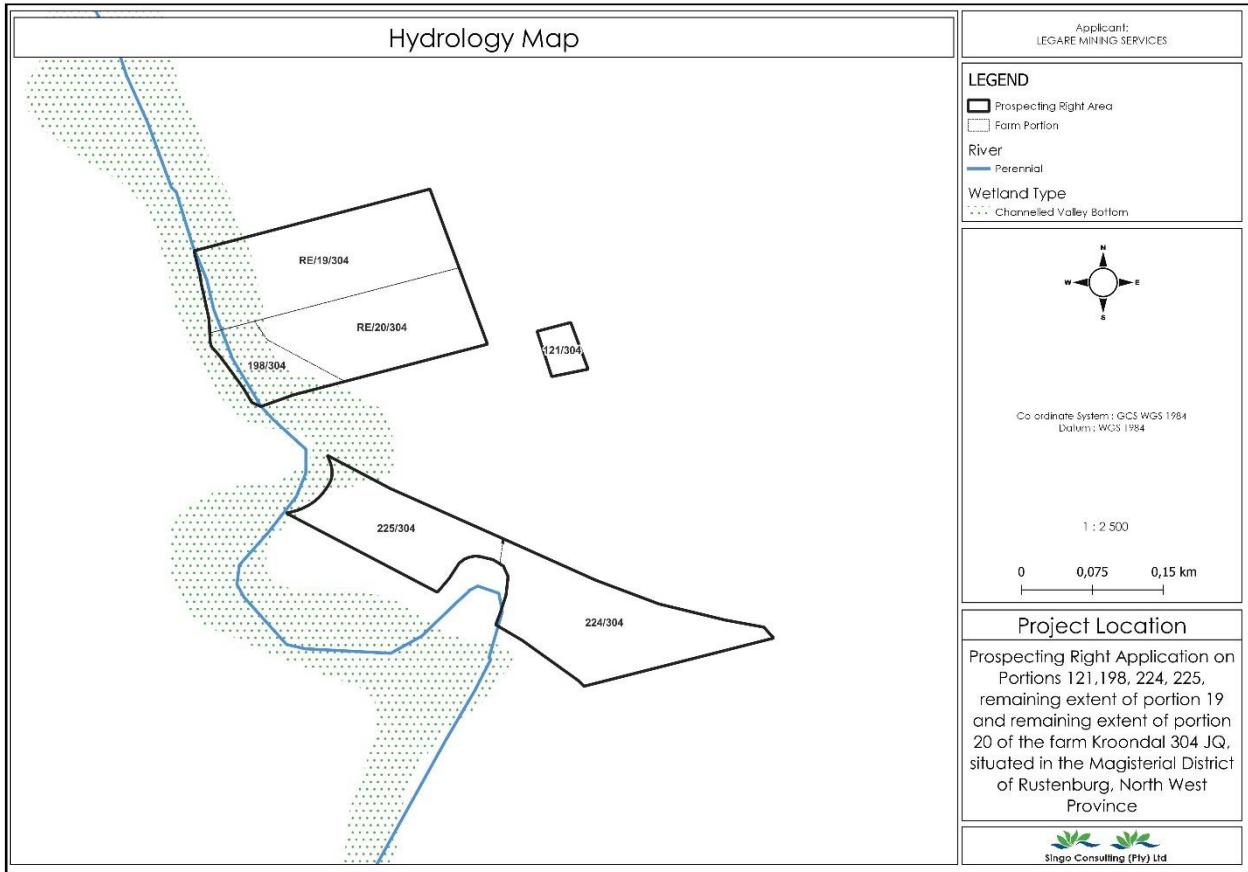


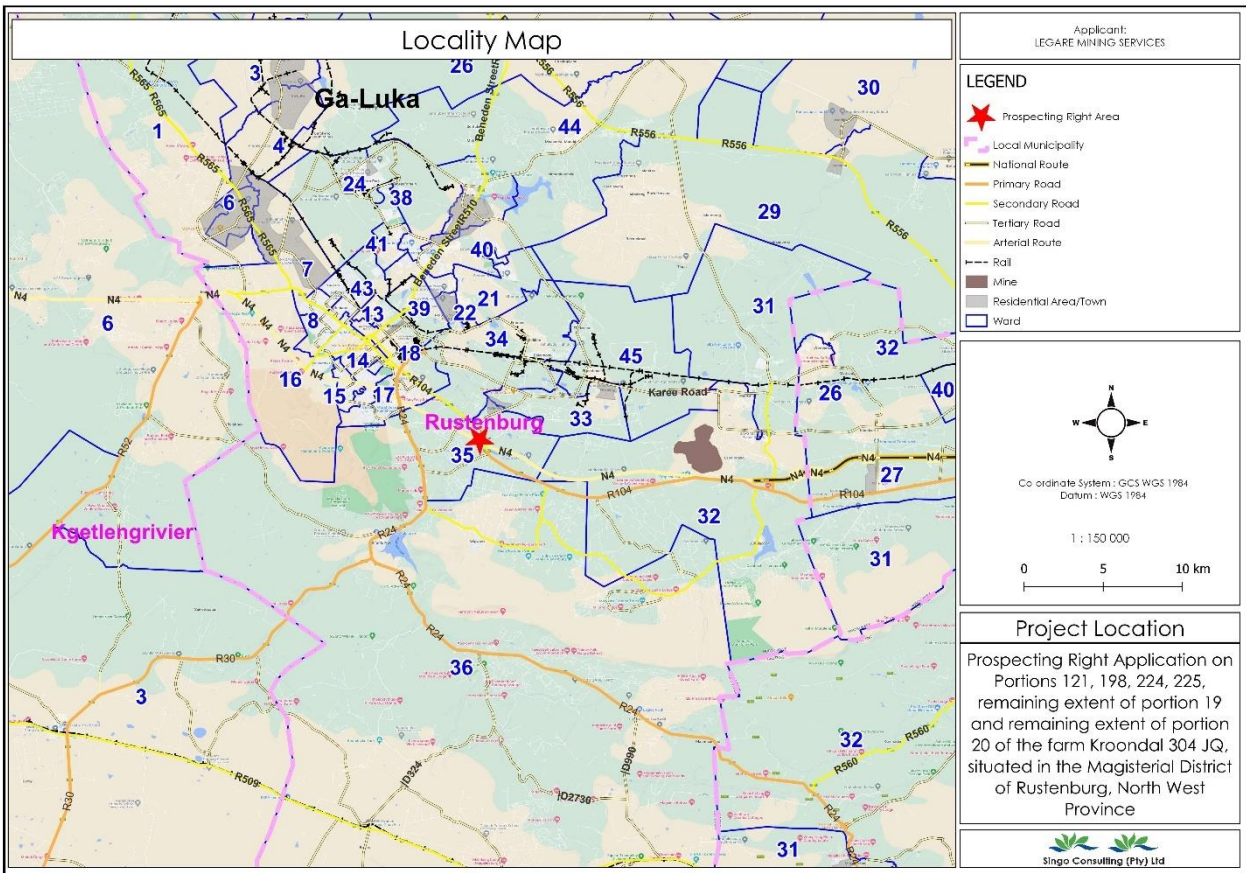
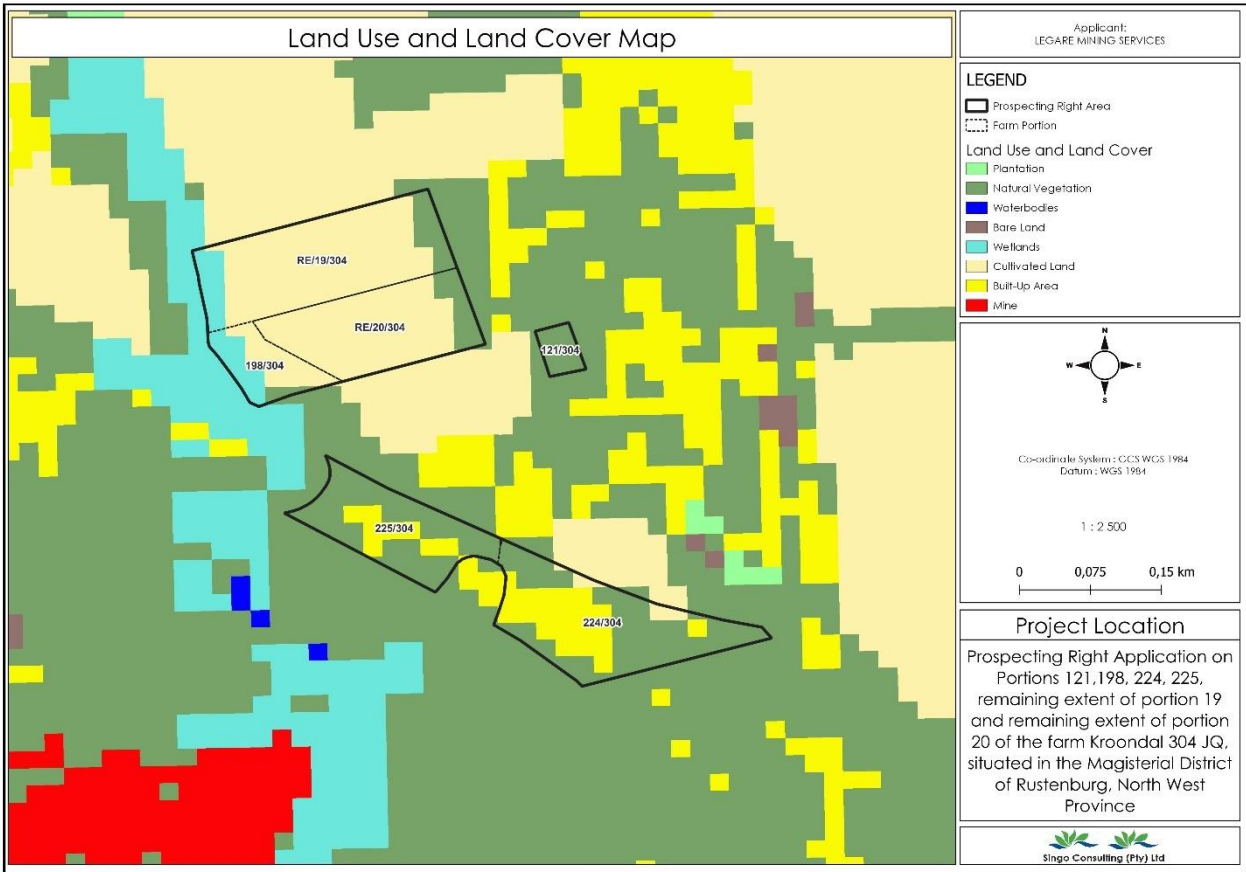
.....
REGIONAL MANAGER
NORTH WEST REGION
DATE: 28/01/2023

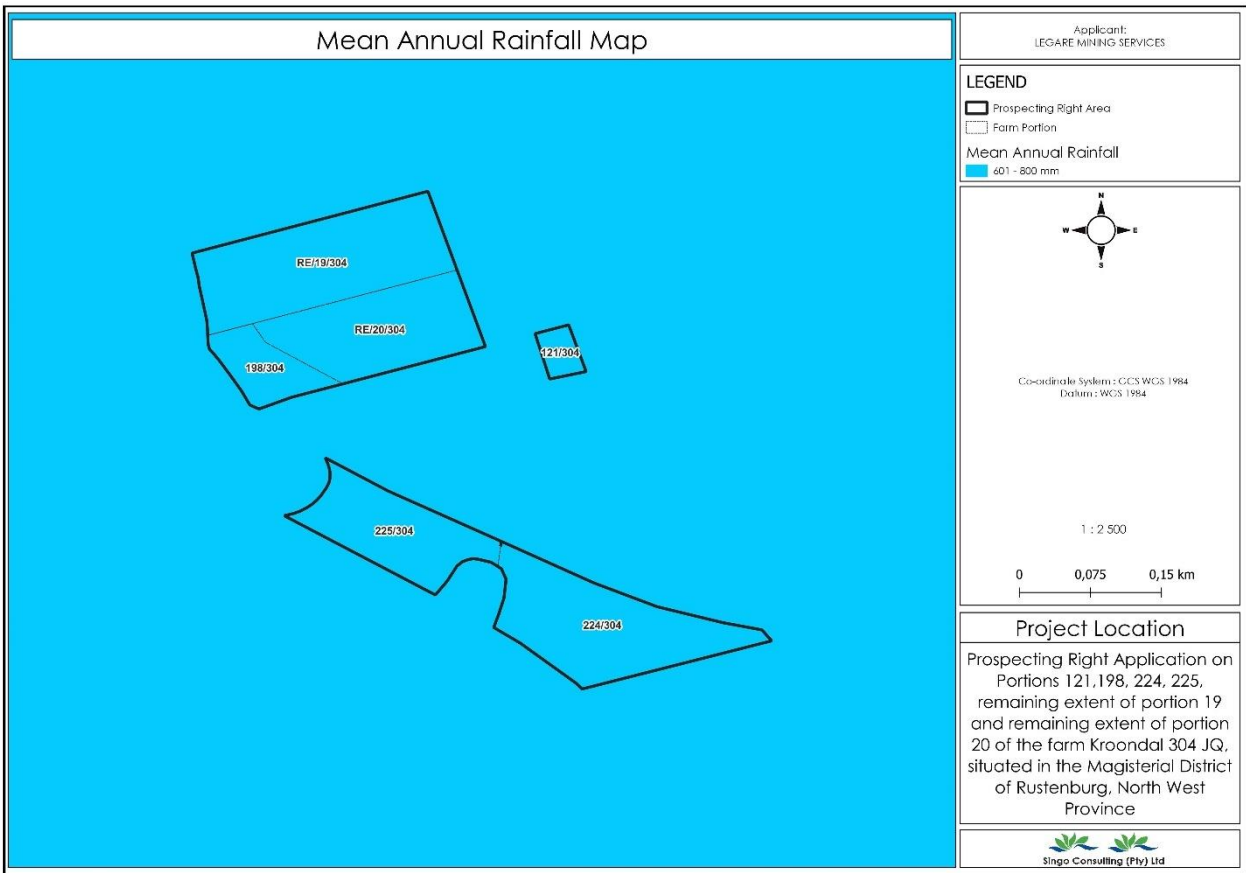
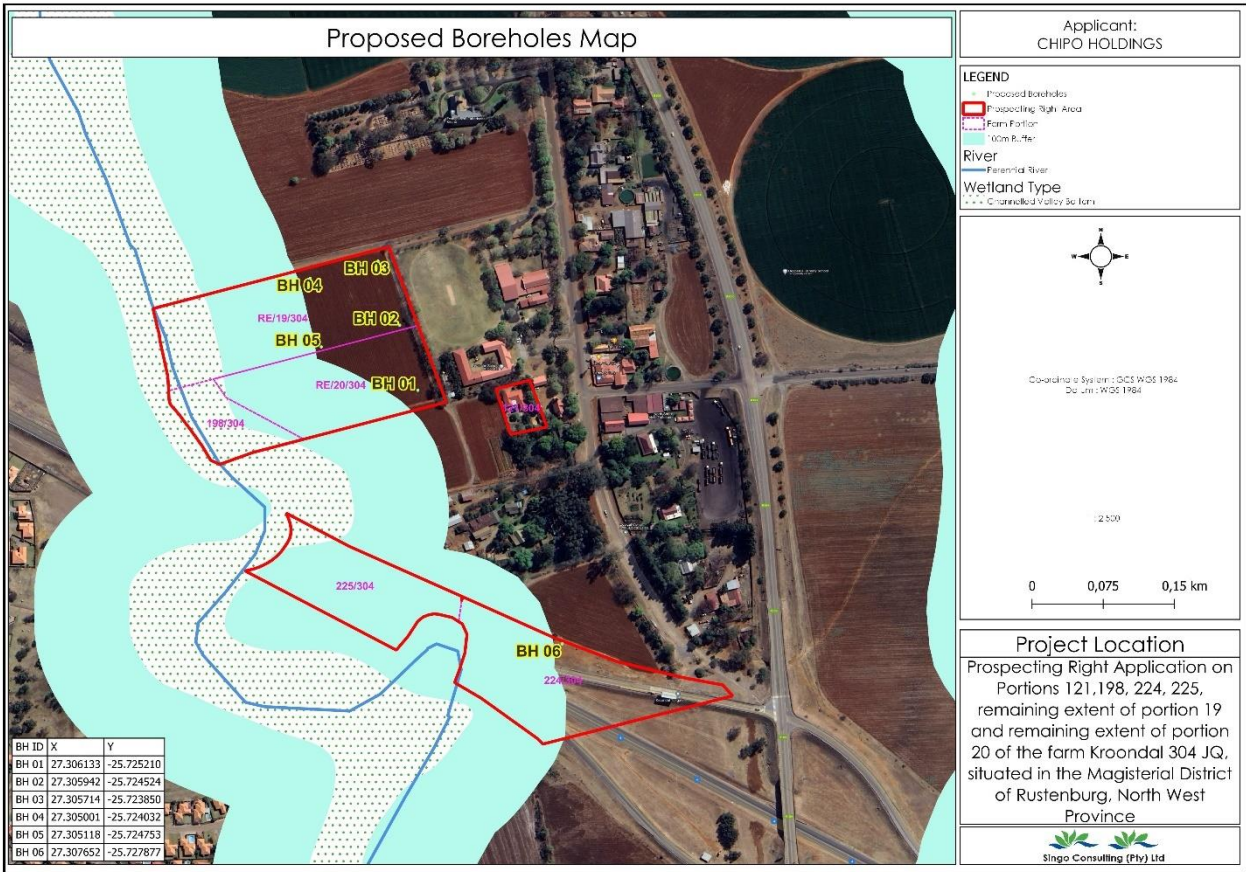
Appendix 2: Project maps

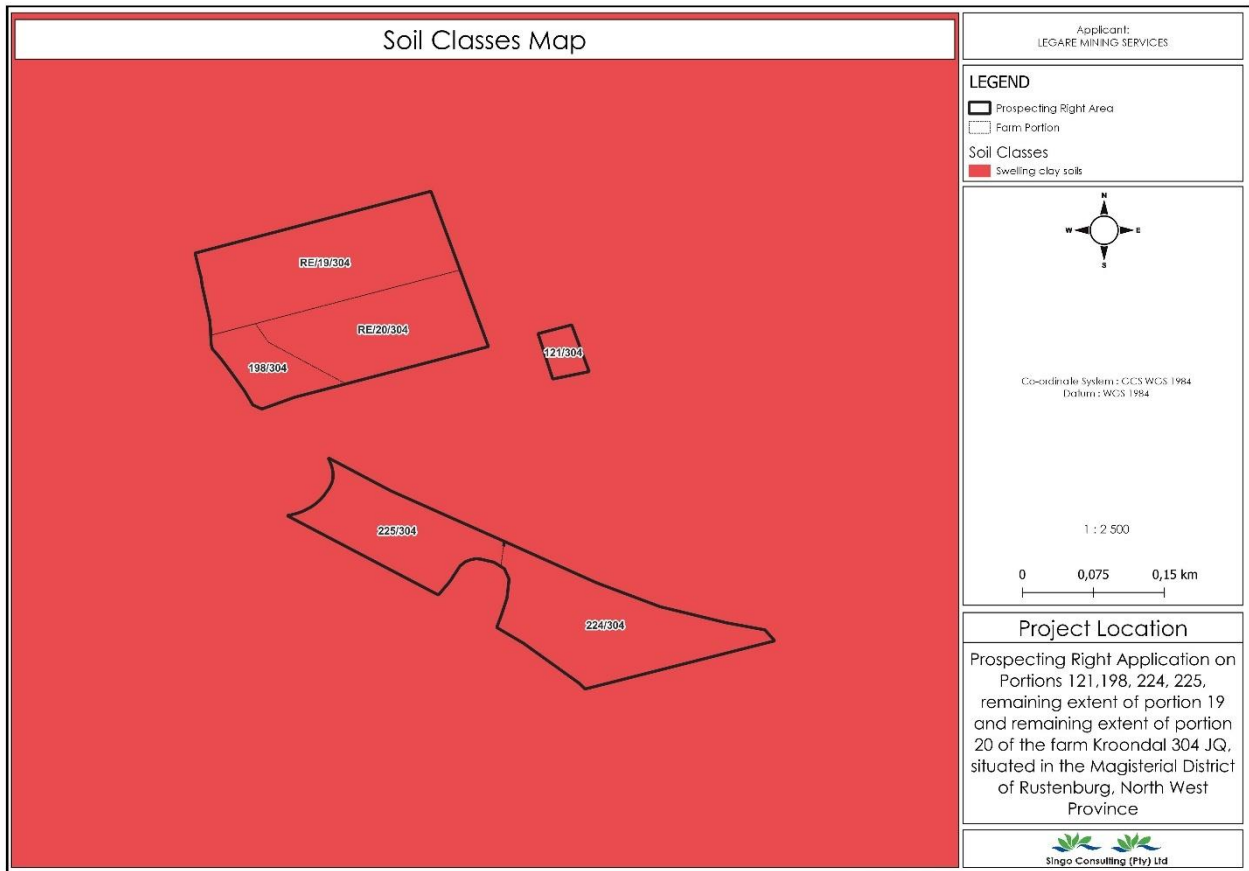
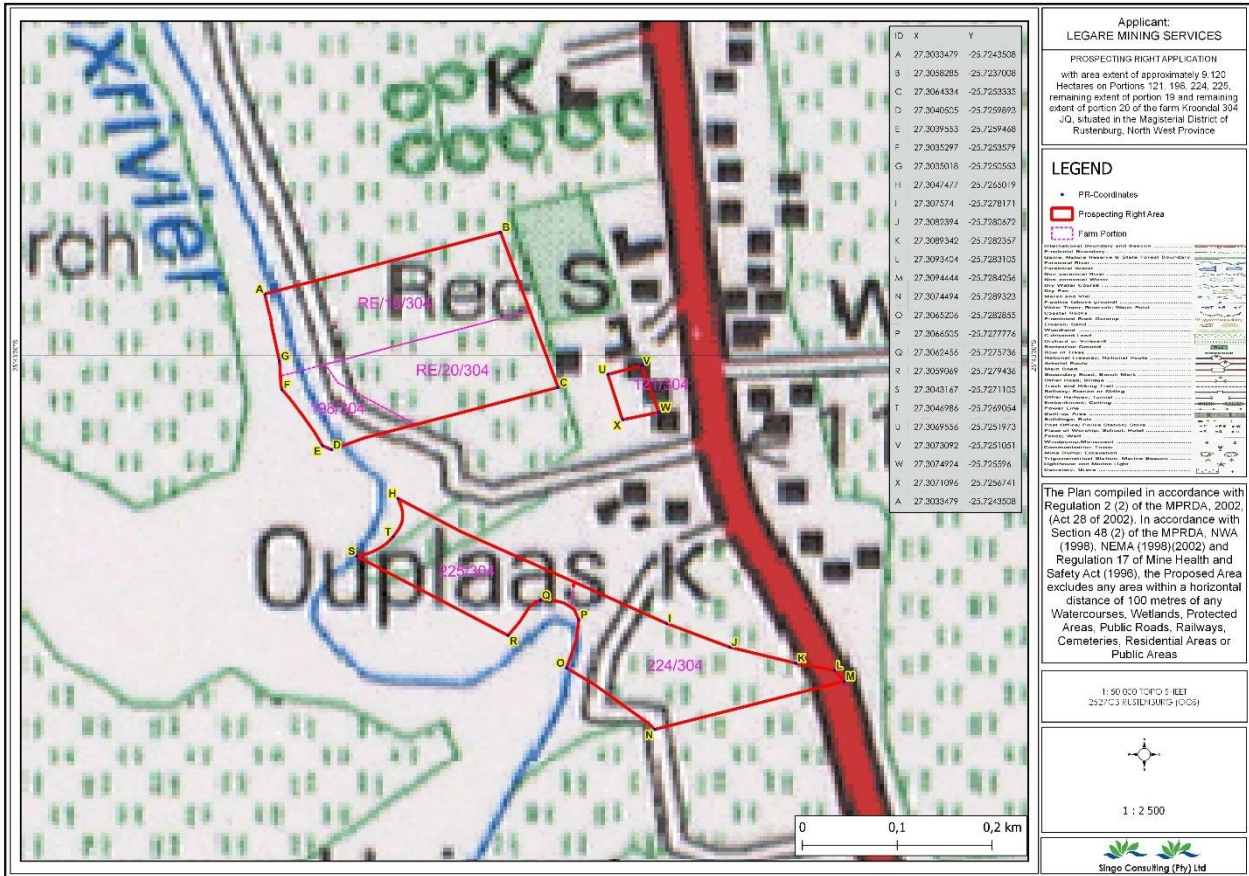


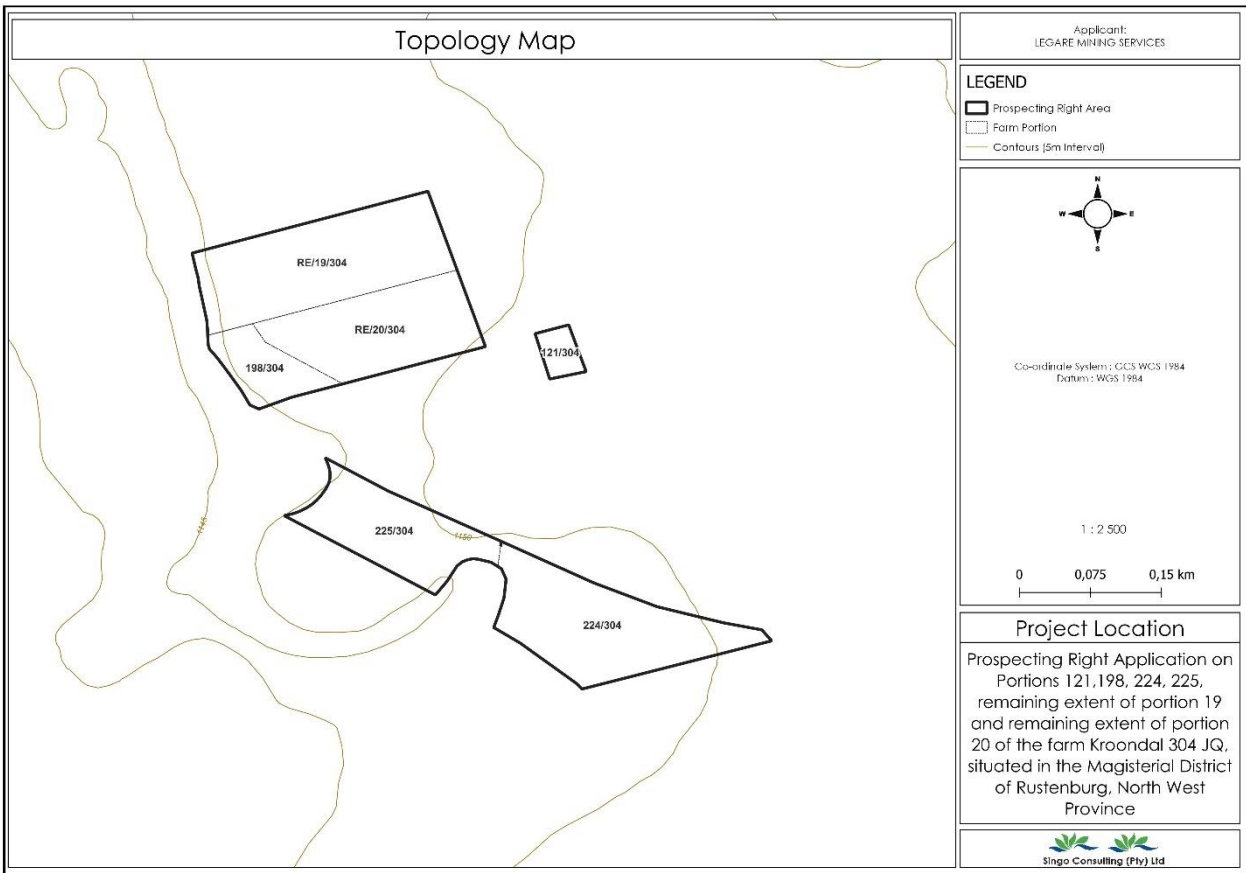
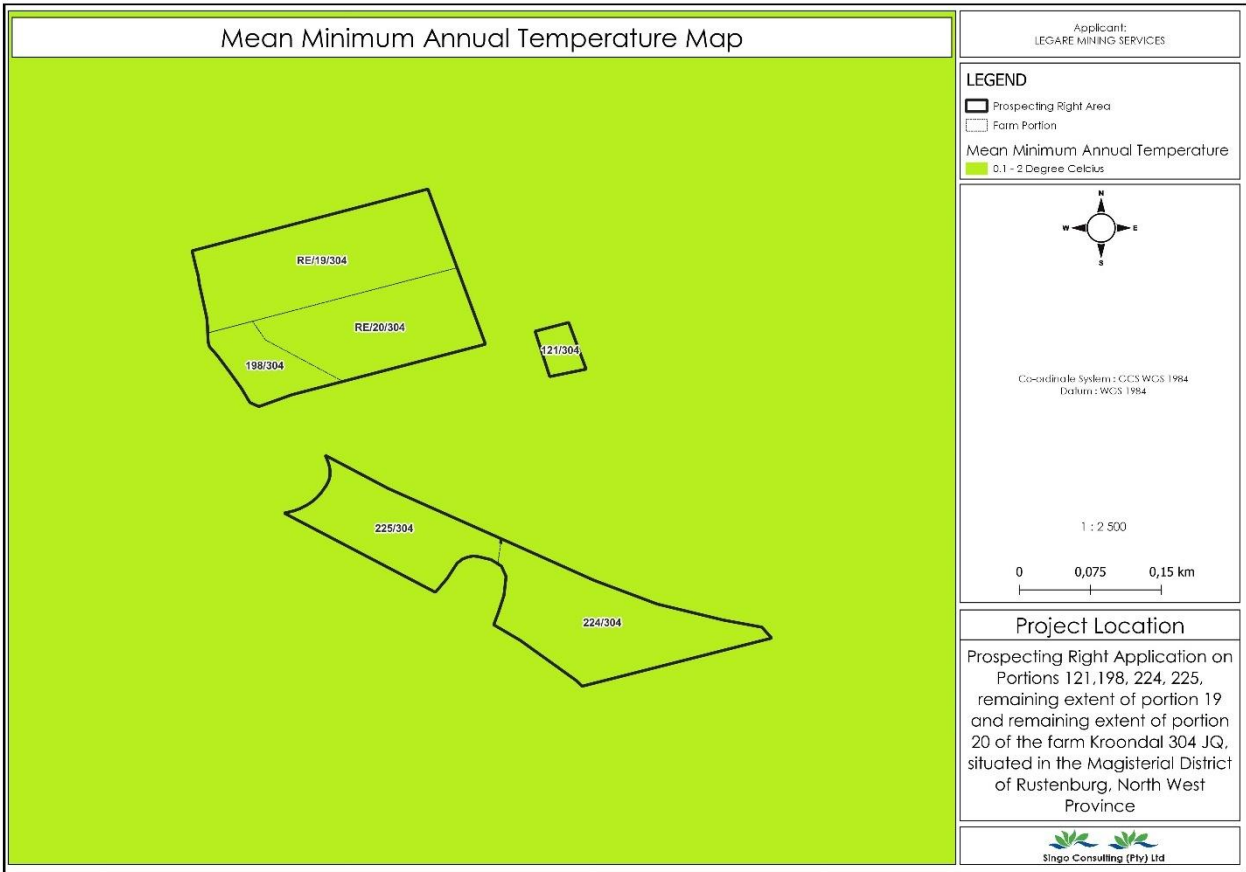












Vegetation Type Map

Applicant:
LEGARE MINING SERVICES

LEGEND

- Prospecting Right Area
- Farm Portion

Vegetation Type

- MIXED BUSHVELD



Co-ordinate System : GCS WGS 1984
Datum : WGS 1984

1 : 2 500

0 0,075 0,15 km

Project Location

Prospecting Right Application on Portions 121, 198, 224, 225, remaining extent of portion 19 and remaining extent of portion 20 of the farm Kroondal 304 JQ, situated in the Magisterial District of Rustenburg, North West Province



Singo Consulting (Pty) Ltd

