2023

BASIC ASSESMENT REPORT & ENVIRONMENTAL MANAGEMENT PROGRAMME REPORT

PROSPECTING RIGHTS AND ENVIRONMENTAL AUTHORISATION APPLICATION FOR COAL ON PORTION 28, 64, 72 & 73 OF THE FARM ELANDSPRUIT 291JS, UNDER THE MAGISTERIAL DISTRICT OF MIDDELBURG, MPUMALANGA PROVINCE.

Prepared by:

Singo Consulting (Pty) Ltd

Physical Address: Office 870,
5 Balalaika Street, Tasbet Park Ext 2, eMalahleni,1040
Tel No.: +27 13 6920 041
Fax No.: +27 86 5144 103
E-mail: admin@singoconsulting.co.za

On behalf of:

JAMENTS
HOME OF THE FUTURE

Physical Address: 5 Neven Street,
Pentagon House, Model Park, eMalahleni,
Mpumalanga, 1035
Contact person: Mr. Bongani Given Simelane
Tel No.: +27 13 5912120
Email.: admin@jaments.co.za

Prepared for:

mineral resources & energy
Department:
Mineral Resources and Energy
REPUBLIC OF SOUTH AFRICA

Physical Address: Saveways Crescent Centre,
Mandela Drive,
EMalahleni, 1035

DMRE Ref: MP 30/5/1/1/2/16326 PR

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).

NAME OF APPLICANT	**:** Jaments (Pty) Ltd
Contact Person	**:** Mr. Bongani Given Simelane
Tel.	**:** +27 13 5912120
Email	**:** admin@jaments.co.za
Physical Address	**:** 5 Neven Street, Pentagon House, Model Park,
.	: Steve Tshwete, Mpumalanga, 1035

FILE REFERENCE NUMBER SAMRAD: MP 30/5/1/1/2/16326 PR

DOCUMENT CONTROL	
Project Title:	Prospecting Rights and Environmental Authorisation Application for Coal on portion 28, 64, 72 & 73 of the Farm Elandspruit 291JS.
Mineral (s):	Coal
Compiled on behalf of:	Jaments (Pty) Ltd
Public Participation Officer	Ms Innocent Monama
Compiled By:	Mr Abel Mojapelo
EAP:	Mrs Rudzani Radebe
EAP Principal:	Dr Kenneth Singo
Version 2:	BAR & EMPR
Submission for:	Department of Mineral Resources and Energy(DMRE)
Date:	2023

IMPORTANT NOTICE

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

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

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

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

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

Objective of the basic assessment process

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

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

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

2) describe the need and desirability of the proposed alternatives,

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

i. can be reversed;

ii. may cause irreplaceable loss of resources; and

iii. can be managed, avoided or mitigated;

4) 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—

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

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

identify residual risks that need to be managed and monitored.

ABBREVIATIONS

BAR	Basic Assessment Report
BID	Background Information Document
CBA	Critical Biodiversity Area
DWS	Department of Water and Sanitation
DMRE	Department of Mineral Resources and Energy
EIA	Environmental Impact Assessment
EMPr	Environmental Management Programme
ZFMDM	ZF Mgcawu District Municipality
GDP	Gross Domestic Product
I&APs	Interested And Affected parties
IDP	Integrated Development Plan
NDP	National Development Plan
PPP	Public Participation Process
PWP	Prospecting Works Programme
SAHRA	South African Heritage Resource Agency
SANAS	South African National Accreditation System
SANS	South African National Standards
WMA	Water Management Area

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PART A:

SCOPE OF ASSESSMENT AND BASIC ASSESSMENT REPORT

1 INTRODUCTION

Jaments (Pty) Ltd (the Applicant) has submitted an application for a Prospecting Right in terms of Section16 of the Mineral and Petroleum Resources Development Act, 2002 (Act 28 of 2002) (MPRDA) and an Application for Environmental Authorization in terms of Chapter 6 of GNR 982 promulgated under the National Environmental Management Act (Act 107 of 1998) (NEMA) to prospect for Coal mineral.

The proposed project will aim to ascertain if economically viable mineral deposits exist within the application area. In order to undertake prospecting activities, Jaments (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. (BAR). Singo Consulting (Pty) Ltd has been appointed by Jaments (Pty) Ltd to compile the BAR (this report) in support of the Prospecting Right application submitted by Singo Consulting (Pty) Ltd on behalf of Jaments (Pty) Ltd, which in turn will be submitted to the DMRE for adjudication.

This BAR has been designed to meet the requirements for a BAR and Environmental Management Programme report (EMPr) as stipulated in the 2014 EIA Regulations promulgated under the NEMA. The adjudicating authority for this Application will be the Department of Mineral Resources and Energy (DMRE), and this report has been compiled in accordance with the applicable DMRE guidelines and reporting template.

Portions 28, 64, 72 & 73 of the Farm Elandspruit 291 JS with DMRE Ref: MP 30/5/1/1/2/ 16326 PR are the proposed project area. Stakeholders were consulted through Middelburg Observer Newspaper, which was published on the 20 of August 2021, emails were sent on the 21st of August 2021 and face to face consultation was conducted on the 8th of August 2021.

Locality Description: The proposed Prospecting Right Application covers Portions 28, 64, 72 & 73 of the Farm Elandspruit 291 JS, encircling a total of 143. 52 Ha. The proposed project area is situated under the jurisdiction of the Steve Tshwete Local Municipality. The proposed project area is located approximately 1,67km North-East of Elandspruit Mine, approximately 14.07 km west of Middleburg and approximately 11.04 km North-East of Witbank. The farms can be accessed via R555 from Middleburg town that extends to unnamed gravel road.

A Prospecting Work Programme (PWP) has been developed by the applicant to include both non-invasive and invasive prospecting activities. The target geological formation of the PWP is the Vryheid formation of the Karoo Super Group. The project area is currently dominantly covered by Built-up areas (Scattered few houses of the landowners), natural vegetation, cultivated area, Plantation, and waterbodies.100m buffer will be applied around the water bodies present within the prospecting right area. There are no heritage resources identified on the site during site assessment, however, if other heritage resources are identified during any stage of prospecting, then SAHRA will be informed immediately.

On the 8th of August 2021, an initial stakeholder consultation was conducted to engage with various landowners concerning the ground truthing process. During this consultation, several landowners were consulted, and their comments on the proposed project were incorporated in the draft BAR. A draft BAR & EMPR was therefore shared for 30 days review at Gerard Sekoto Library and Steve Tshwete Local Municipality, which is situated at Middelburg Magisterial District, Mpumalanga Province. Also, through email to all the stakeholder for review. Furthermore, at that time, it is worth mentioning that several other stakeholders have not yet provided any commentary or raised concerns regarding the project. This indicated a need for further engagement and outreach to ensure that all relevant parties are informed and involved in the decision-making process. Landowners who were initially unreachable during the first consultation process were subsequently engaged between the 7th of September 2023 to the 28th of October 2023. Their valuable comments and input were collected and thoughtfully integrated into a summary table, which served to comprehensively address the concerns and issues raised by Interested and Affected Parties (I&APs).

The acceptance letter for Prospecting Rights and Environmental Authorization (EA) was received on the 28th of August 2023 from DMRE. Subsequently, the BAR (referred to as "this report") was made available for comments to registered Interested and Affected Parties (I&AP's) starting from September 20, 2021, and concluding on October 20, 2021. Now, a revised draft related to the project is being released for a 30-day period. This revised draft comprehensively incorporates all the feedback received during the earlier comment period and were integrated into the final BAR and EMPr. These final documents will be submitted to the DMRE for their evaluation.

The rationale behind this resubmission to the stakeholders was because of the discovery that the proposed boreholes are situated within a critical biodiversity area, as determined by biodiversity classification. This determination is also supported by the Protected Areas Register (PAR) Interactive Map provided by the Department of Forestry, Fisheries, and the Environment (DFFE). Consequently, adjustments have been made to the proposed borehole locations, which can be referenced in the provided figure 6.

The new revised draft of the BAR was presented to stakeholders for their review. Stakeholders were given a 30-day window period, excluding public holidays, to provide their input, which was open from September 29, 2023, to October 28, 2023. Reminder emails were sent to all stakeholders who had not submitted their comments on the 26th of October 2023. Subsequently, the finalised Basic Assessment Report will be resubmitted to the DMRE for their evaluation.

Singo Consulting (Pty) Ltd was appointed by the Applicant (Jaments (Pty) Ltd) as an Environmental Assessment Practitioner (EAP) to compile this report. The contact details of the consultant who compiled the report and those of the EAP who reviewed it are as follows:

2 CONTACT PERSON AND CORRESPONDENCE ADDRESS

a) Details of applicant

APPLICANT CONTACT DETAILS

NAME OF APPLICANT	**:** Jaments (Pty) Ltd
Contact Person	: Mr. Bongani Given Simelane
Email	: admin@jaments.co.za
Physical Address	: 5 Neven Street, Pentagon House, Model Park, 1035
DMRE Reference No.	: DMRE Ref: **MP 30/5/1/1/2/16326 PR**

B) The EAP of who Prepared the Report

EAP CONTACT DETAILS

Environmental assessment practitioner	**Singo Consulting (Pty) Ltd**
Contact person(s)	Ms. Innocent Monama (PPP Officer) Mrs. Rudzani Radebe (Programme Manager) 1st Reviewer Dr. Kenneth Singo (EAP Principal) 2nd Reviewer
Physical address	5 Balalaika, Tasbet Ext 2, Witbank, 1040
Postal address	Private Bag X7214, Postnet Suite 126, Witbank, 1035
Fax	086 5144 103
Email(s)	Abel Mojapelo: abel@singoconsulting.co.za Rudzani Radebe: rudzani@singoconsulting.co.za Kenneth Singo: kenneth@singoconsulting.co.za

1.1. EXPERTISE OF THE EAP

In carrying out the Environmental Impact Assessment Procedure: See attached CV annexure

3 LOCATION OF THE OVERALL ACTIVITY

Farm name	Elandspruit 291 JS	
Farm Portions	28, 64, 72, & 73	
Application area (Ha)	143.52 ha	
Magisterial district	Middelburg	
Distance and direction from nearest town	Approximately 22.4 km west of Middleburg town along the R555 and approximately 25.8 km north-east of Emalahleni.	
21-digit Surveyor General Code for each farm portion	**Farm Portion**	**SG Code**
	28	T0JS00000000029100028
	64	T0JS00000000029100064
	72	T0JS00000000029100072
	73	T0JS00000000029100073
Geological formation	Karoo supergroup	
Locality map	See **Figure 2**.	

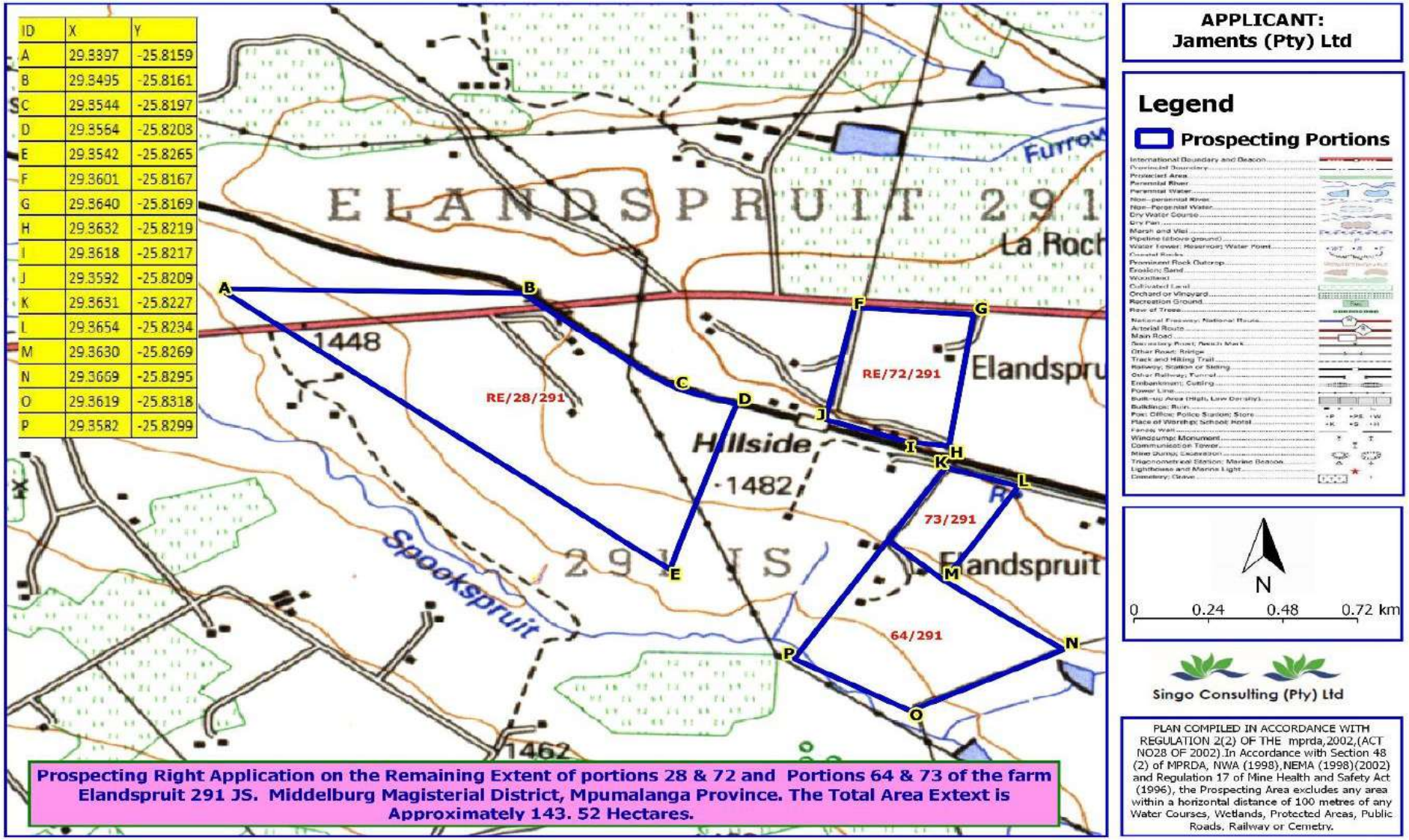


Figure 1: Regulation 2.2 map of proposed prospecting site (Singo GIS, 2021)

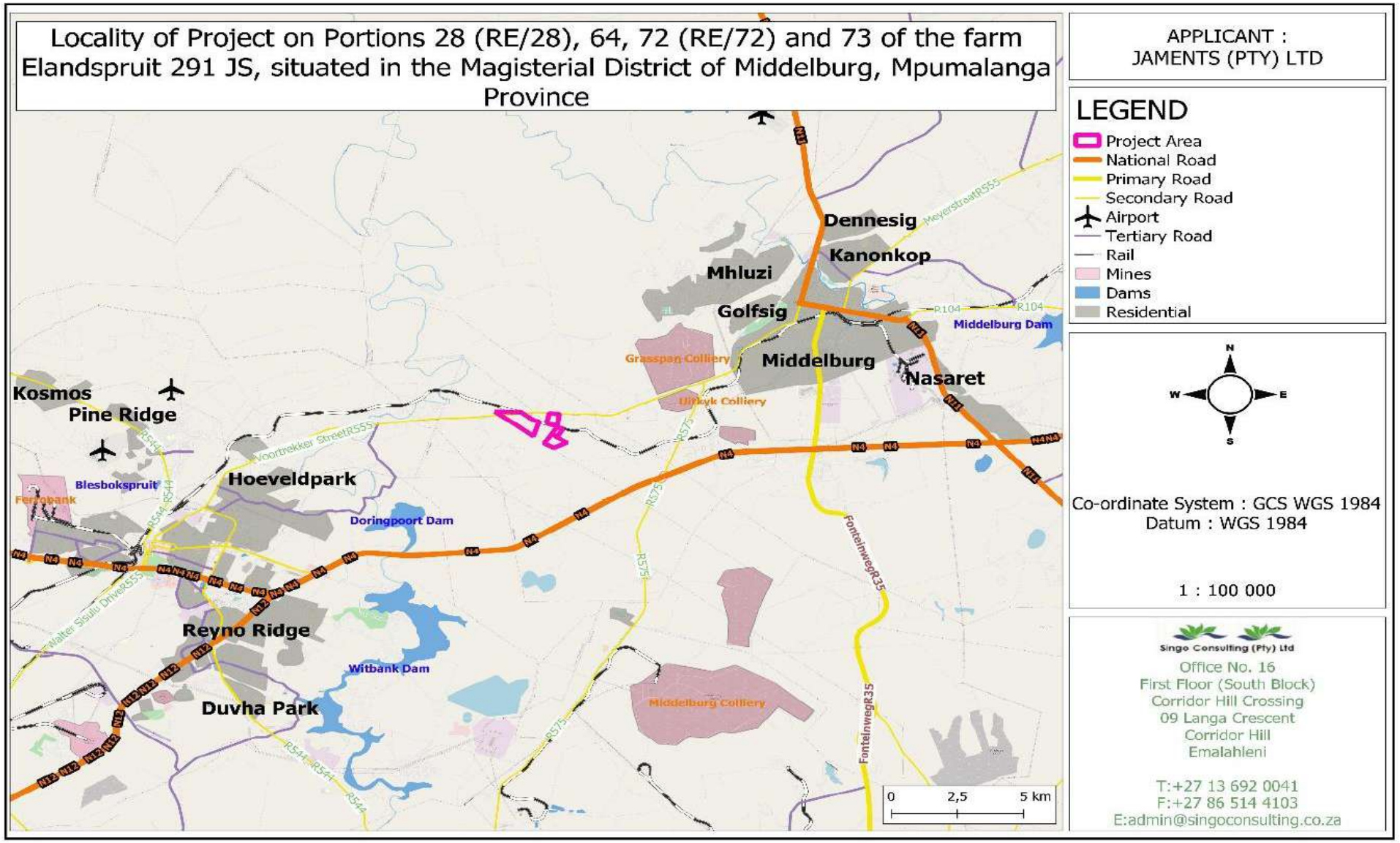


Figure 2: Locality map of proposed prospecting site (Singo GIS, 2021)

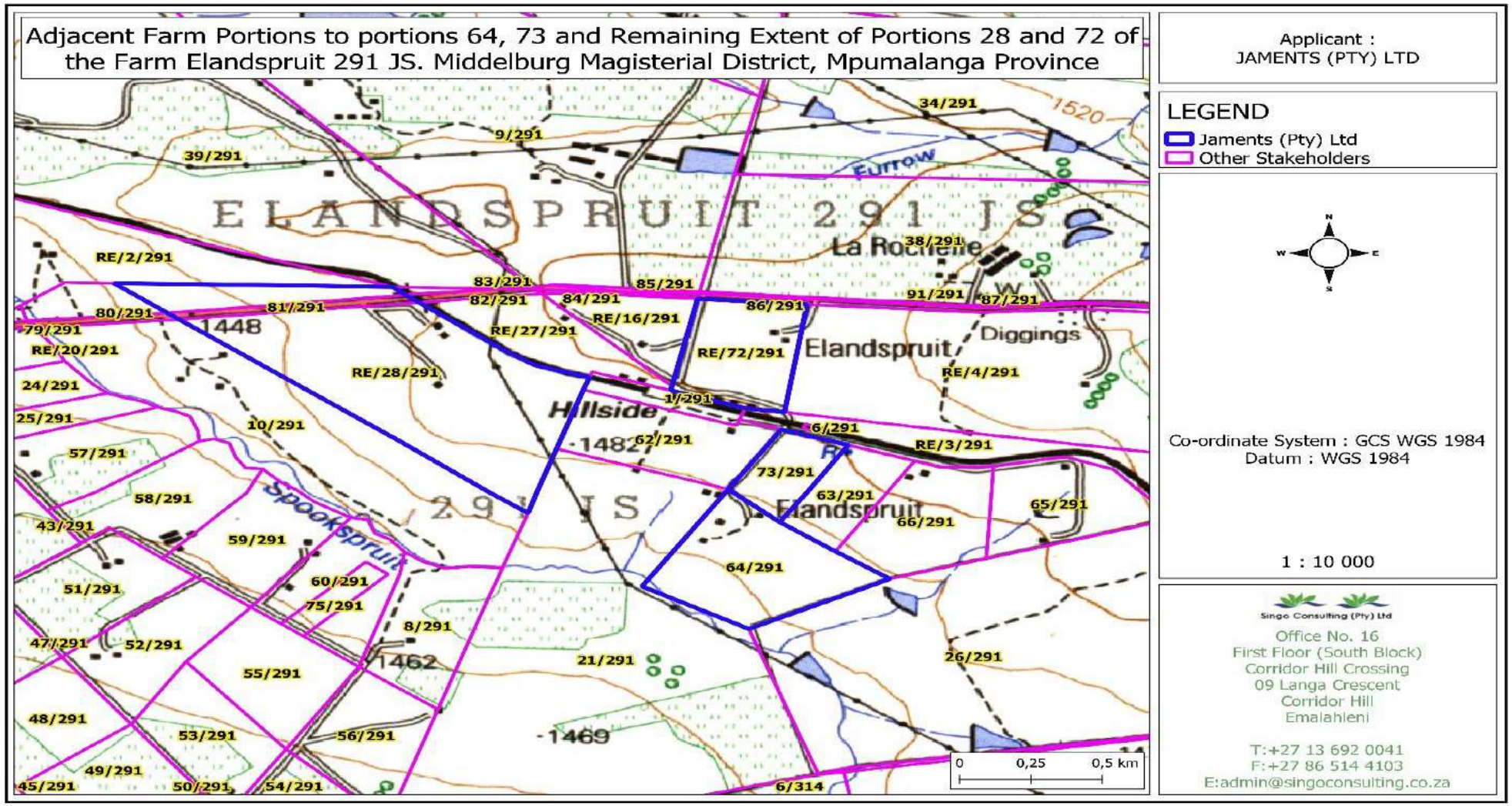


Figure 3: Adjacent Farms (Singo GIS, 2021)

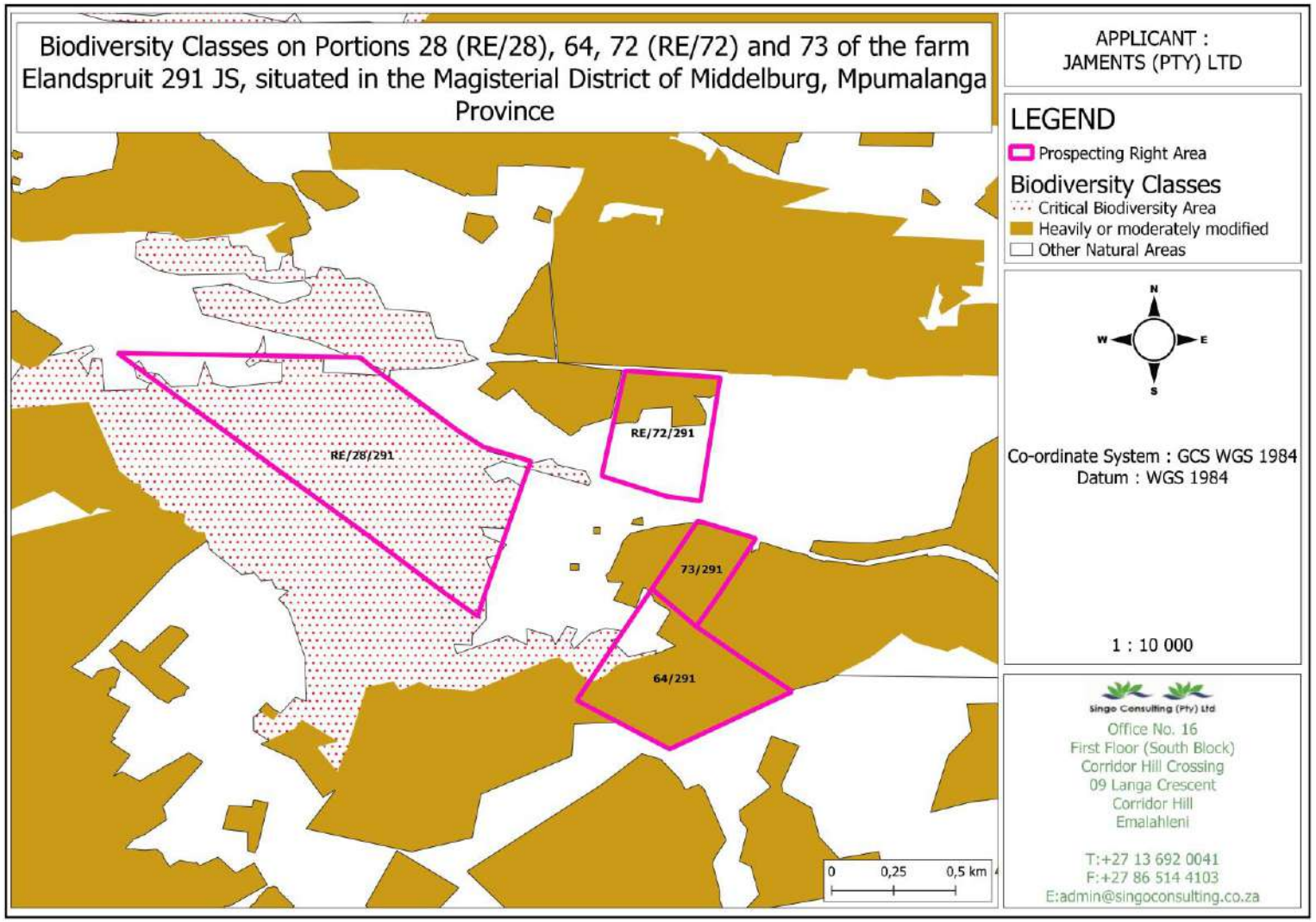


Figure 4: Biodiversity Classes (Singo GIS, 2021)

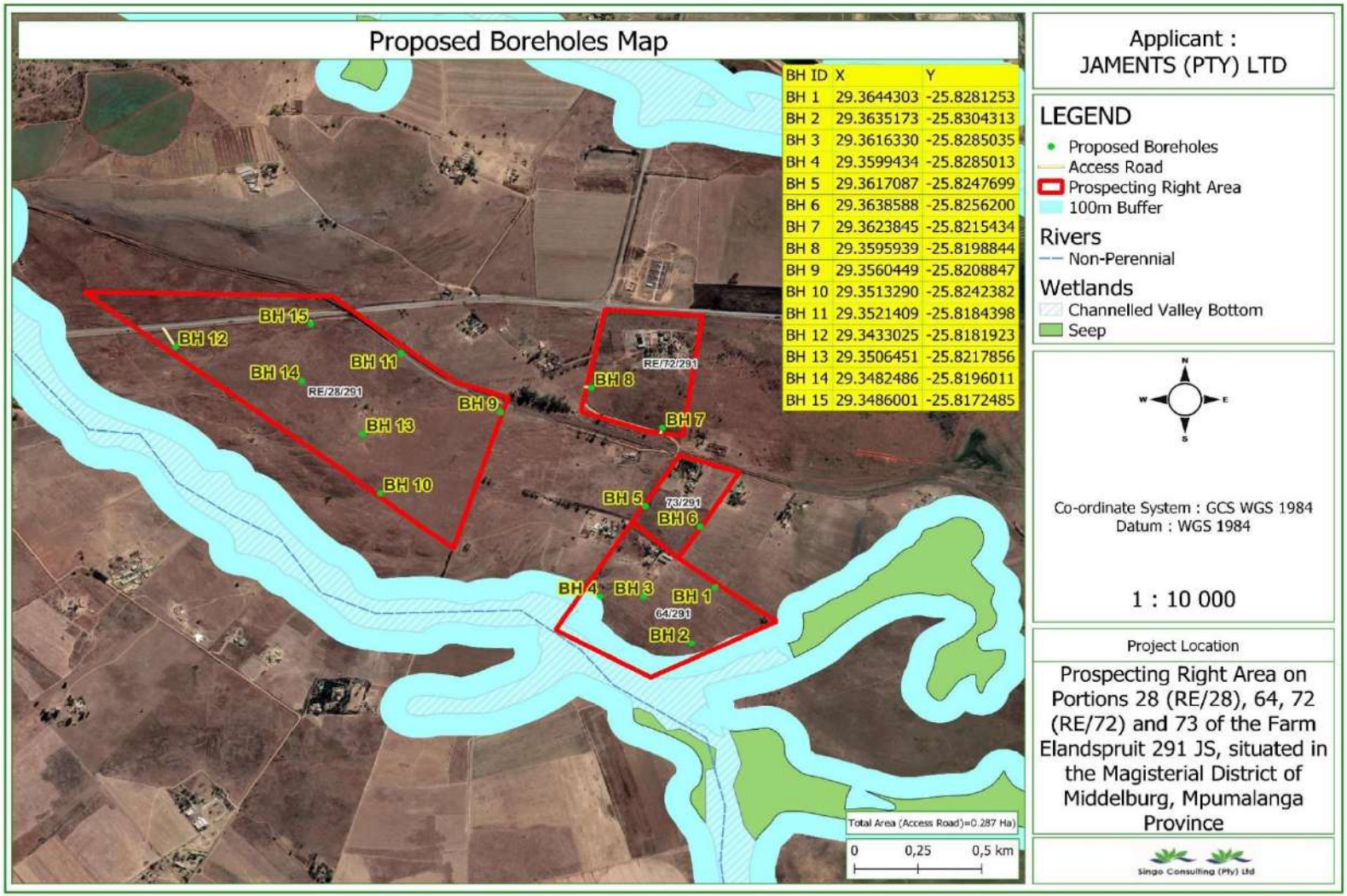


Figure 5: Proposed Boreholes Map (Singo GIS, 2021)

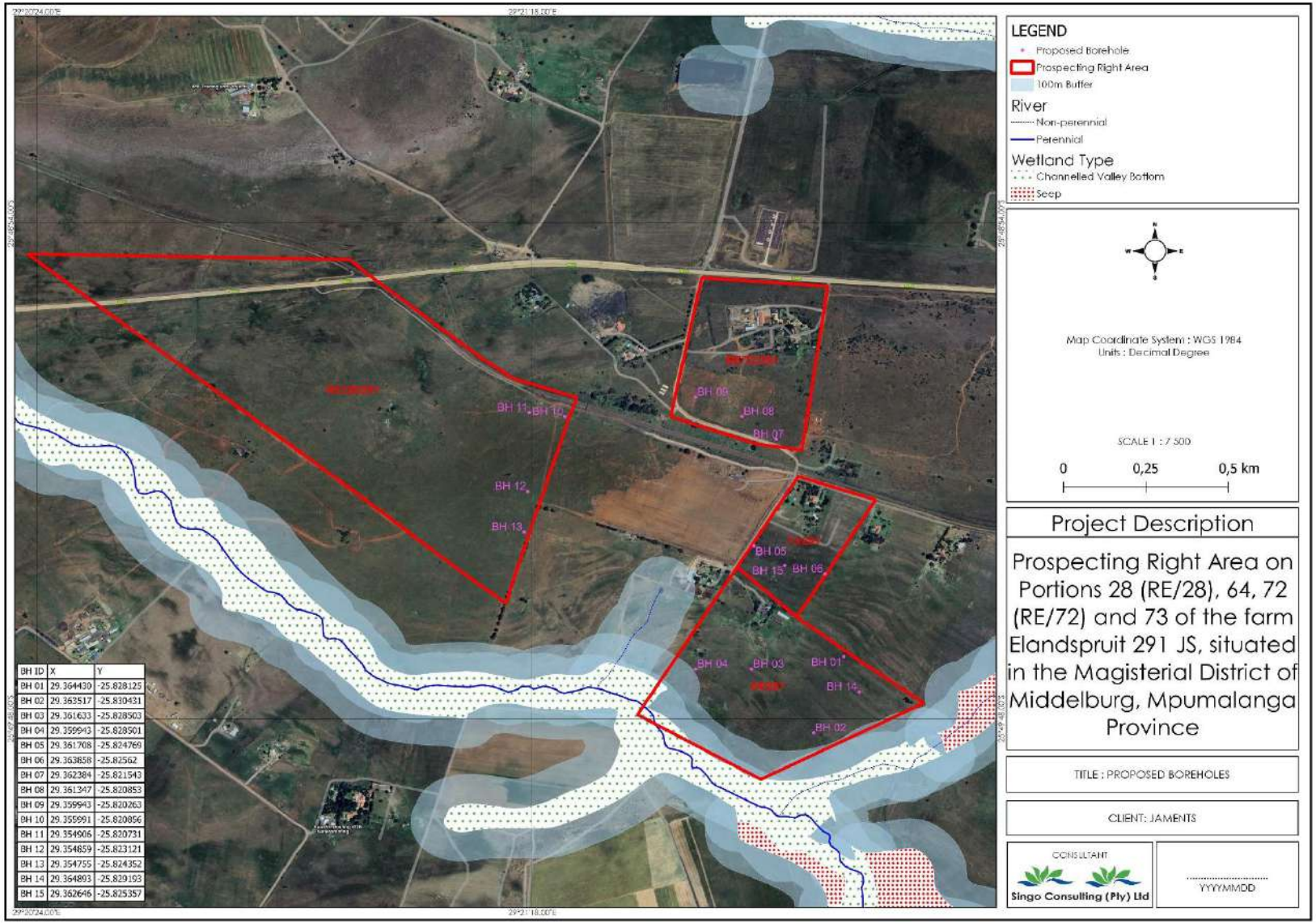


Figure 6: Amended Proposed Boreholes Map (Singo GIS, 2023)

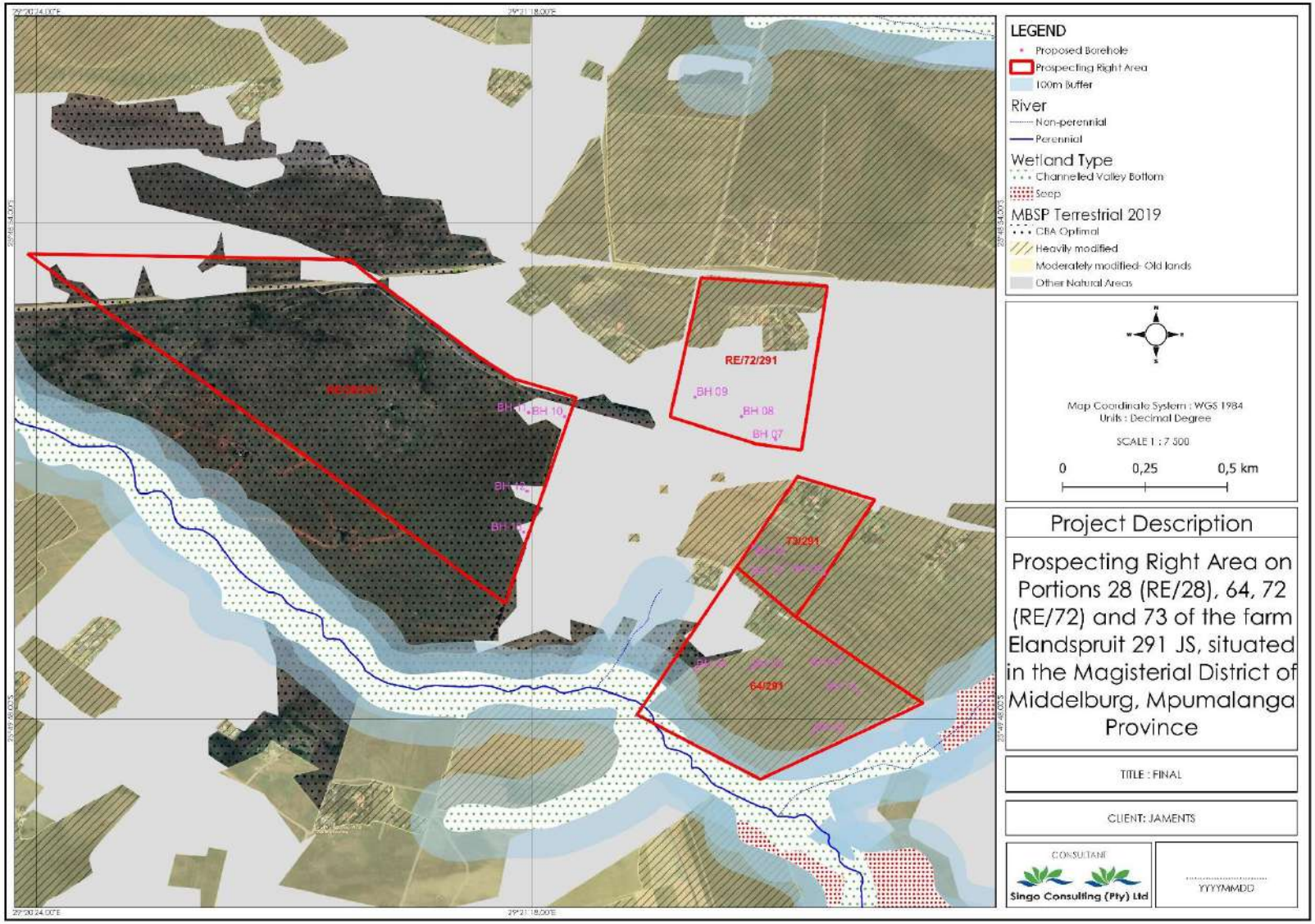


Figure 7: Layout plan of the proposed project area (Singo GIS, 2023)

4 DESCRIPTION OF THE SCOPE OF THE PROPOSED OVERALL ACTIVITY

As part of the prospecting phase, physical prospecting is planned to be conducted on site and will involve the use of diamond core drilling to investigate the existence of the expected mineralization, the thickness of the orebodies and its distribution. Core logs will be taken off-site to be sampled and analysed. An estimated 15 boreholes will be drilled one at a time at various locations within the proposed project area. The depths of the drill holes will average 200 m and will be determined onsite whilst the drilling programme is underway as influenced by the depths and dips measured in other holes. A buffer of 500 m will be kept from identified wetlands. A buffer of 100 meters will be kept from public roads.

The drill site will be fenced off, cleared and drilled. Rehabilitation will occur immediately after drilling. As a site is drilled, it will be rehabilitated, and the drilling crew will move onto the next planned hole. This procedure will be followed until all the holes are drilled. Drilling will be conducted in consultation with the landowners.

Bulk sampling, Excavation, Trenching and Pitting – None of the listed will be conducted during the prospecting phase. Figure 4 above depicts the proposed prospecting area and the proposed borehole sites of interest within the application area. Vegetation will be cleared at the borehole locations; the area is expected to be approximately 0.6 ha per borehole. There will be fifteen (15) boreholes situated in the proposed prospecting rightareas. Minor access tracks will be created to access the proposed borehole sites where there are no existing roads, the total length of the access routes is anticipated to the 200 m and the approximate width is 3m.

At the end of each phase there will be a brief period of compiling and evaluating results. The results will not only determine whether prospecting proceeds, but also the manner in which it will go forward. The applicant will only action the next phase of prospecting, once satisfied with the results obtained in the previous phases. In addition, smaller, non-core parts of the prospecting work program will be undertaken, if warranted. Adescription of the planned invasive and non-invasive activities is detailed below.

5 DESCRIPTION OF PLANNED NON-INVASIVE ACTIVITIES

Non – invasive activities which relate to the various prospecting methods can be briefly described as follows:

5.1 Consultation with landowners:

Land Tenure Specialist will visit the respective landowners prior to the proposed prospecting and

arrange all issues relating to the envisaged prospecting programme such as dates, access routes, availability of water, and rehabilitation of the drill sites and any other items of mutual concern. Official permission together with all agreed requirements will be in writing.

5.2 Data processing and validation:

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

- Electronic procession of borehole data
- Validation of lithological data versus analytical data.
- Stratigraphic correlation of Coal and dolerite horizons.
- Editing and correction of data on database.

5.3 Lithofacies and Coal quality modelling:

Variations in a stratigraphic unit across the reserve area are generated and 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. –

5.4 Compilation of geology report:

Information obtained during the exploration phase together with computer generated information is compiled into a geological report.

5.5 Inspection/Consultation with landowner:

Land Tenure Specialist will visit the boreholes during and after prospecting has been completed. Once confirmation has been obtained that the area had been properly rehabilitated, sign off will be obtained from the landowners and compensation paid for any damages caused as a result of the prospecting.

6 DESCRIPTION OF PLANNED INVASIVE ACTIVITIES:

The drilling activity will use the layout below to execute the recovery of coal mineral.

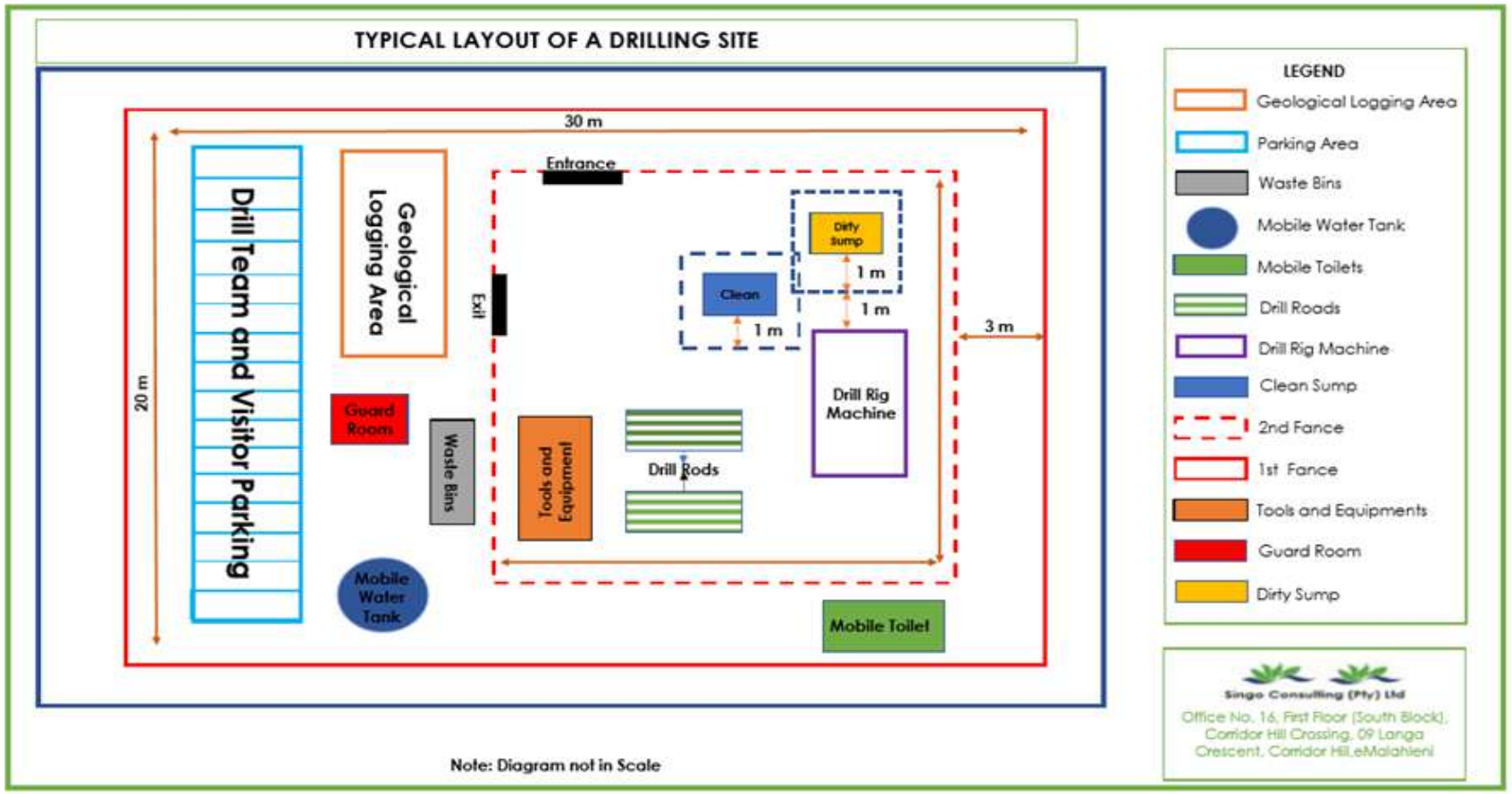


Figure 8: Drilling layout that will be utilized (Singo GIS, 2021)

- **Diamond Drilling: Core Diamond Drilling Method**

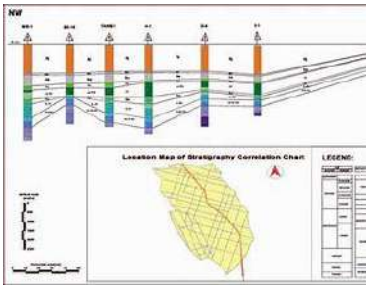
The drill rigs are truck-mounted and equipped with diesel driven engines to provide power to the drill. A truck fitted with a water tank is used to provide the water supply for the drilling process. The drill site is not larger than 30m x 20m (600m²) and consists of a drill rig, water pump, caravan and portable chemical toilet.

Figure 9: Example of drilling equipment and site setting (Songo Consulting, 2021)

Except for the sump required by the drill rig, no excavations will be required. The sumps are normally 1 m² and 50 cm (0.5 m) deep. It is always necessary to separate topsoil from the subsoils. This will be given in details on the EMPR. The dimension of the borehole is NQ (±76 mm) and the average depth of the coal, graphite and copper reserve is estimated to be 110 m. On completion of the borehole, it is cemented from the bottom up. The only rehabilitation that will specifically be required is borehole capping and revegetation: Drill holes must be permanently capped as soon as is practicable.

Table 1: Drilling method, depth and number of boreholes to be drilled.

Drilling Method	Depth	No. of Boreholes
Core Diamond Drilling	>110m	15

		
Percussion drilling	N/A	N/A

- **Percussion drilling:**

The drill site is not larger than 30m x 20m (600m²) and consists of a diesel-powered truck mounted drill rig, a truck transporting drill rods and other equipment, a compressor and portable chemical toilet.

Rock fragments are blown out the top of the hole and are collected at 1m depth intervals and arranged on the ground to enable continuous detailed lithological descriptions of the stratigraphic horizons to be made.

Percussion holes will either be cemented if not further utilized or will be fitted with a cap and be used for water levels and water quality monitoring.

- **Directional drilling:**

The drill site is not larger than 120m x 120m (14400m²) and consists of a sump, a diesel-powered drill rig, a truck transporting drill rods and other equipment, a compressor, portable offices and chemical toilet.

Rock fragments are blown out the top of the hole and are sampled at 10m depth intervals and collected on small bottles and sent to the laboratory for Coal analysis. All percussion holes are sealed with cement up to the depth of start of coal.

- **Geophysical down-hole surveys**

The down-hole geophysical survey is done at the borehole site after the hole has been completed. A range of specialized geophysical tools are lowered into the open borehole and a range of physical lithological characteristics of the rock mass or Coal are gathered and sent digitally along the cable to a computer on surface. This data is used to produce

several profiles reflecting rock strength Coal qualities and structural features for the total length of the borehole. A single truck is used which contains all equipment including a mobile generator.

Figure 10: Directional drilling and Geophysical down-hole survey

Geophysics is a subject of natural science concerned with the physical processes and physical properties of the Earth and its surrounding space environment, and the use of quantitative methods for their analysis. The term geophysics sometimes refers only to the geological applications: see below are examples where is applied:

Table 2: Borehole Geophysical Logging applications

LOG	**PARAMETERS MEASURED**	**APPLICATIONS**
CALIPER	Borehole or casing diameter.	Fracture identification, lithologic changes, and well construction.
NATURAL GAMMA	Natural gamma radioactivity.	Lithology and estimation of clay content in overburden.
FLUID TEMPERATURE	Temperature of borehole fluid.	Indicates geothermal gradient, and water flow in borehole or between borehole and fractures.
FLUID RESISTIVITY	Resistivity of borehole fluid.	Indicates water flow within borehole, or between borehole and fractures; and water quality.
SINGLE POINT RESISTANCE	Resistance of materials between probe and ground surface electrode.	Lithology, fracture identification, and location of well screens.
NORMAL RESISTIVITY	Apparent resistivity of material.	Lithology, and water quality.
SPONTANEOUS POTENTIAL (SELF POTENTIAL or SP)	Electrical potentials between probe and surface electrodes.	Lithology, water quality, and in some cases, fractures in resistive crystalline rock.

EM CONDUCTIVITY (INDUCTION)	Electrical conductivity in medium surrounding borehole.	Location of contaminant plumes, conductive clay units, or bedrock fractures. Monitor water quality changes over time.
FLOWMETER: IMPELLER or HEAT-PULSE	Continuous or point measurements of water flow in borehole.	Identification of permeable zones and apparent vertical hydraulic conductivity and flow direction.
BOREHOLE VIDEO	Provides visual record of lithology, fractures, well construction.	Lithologic logging; identification of fractures; examination of casing or well construction.

Geohydrological survey

Percussion (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.

Baseline preliminary conceptual groundwater flow model to estimate inflow rates into a probable underground mining operation using hydraulic aquifer parameters obtained during aquifer yield-testing. A single truck is used which contains all equipment including a mobile generator.

7 DESCRIPTION OF PRE-/FEASIBILITY STUDIES

The Coal seam thickness distribution, lateral extent and quality will be determined through detailed borehole measurement and laboratory core analysis. Detailed in situ reserve and quality determinations will then be possible through computer based modelling, and qualitative and quantitative calculations.

A geological report (or Competent Person Report) will be compiled which entails all results obtained during the exploration phase. This will be done by Exploration Geologist, see attached CV for the company that will be responsible for exploration activities.

Commitment to provide addendums in respect of additional prospecting activities

I herewith commit to provide the Department of Mineral Resources with an addendum in respect of both the EM Plan and Prospecting Work Programme regarding any future in-fill prospecting required, but not described above, prior to undertaking such activities. The addendum will cover all the Regulations as per the Prospecting Work Programme.

I agree that the addendums will provide for similar activities only and if the scope changes, I would be required to apply in terms of Section 102 of the MPRDA for an amendment of the Prospecting Work Programme.

ACCEPT Mark with X	X

Table 3: Timeframes for each of the proposed prospecting activities.

Phase	Activity	Skill(s) required	Timeframe	Outcome	Timeframe for outcome	What technical expert will sign off on the outcome?
Phase1: Invasive Prospecting						
	Diamond drilling (5 boreholes) Sampling	Exploration Geologist Exploration Geologist	Month 1 (30 days)	Borehole core data coal samples Rock core samples Core analyses Rock core analyses	Month 1 Month 2 – 3	Exploration Geologist 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 Coal 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 (5 borehole)	Exploration Geologist	Month 13	Borehole core data Coal core samples Rock core samples Core analyses Rock core analyses	Month 13 Month 13-14	Exploration Geologist Laboratory analyst
	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 Water samples	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 coal 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 (5 borehole)	Exploration Geologist	Month 25	Borehole core data Coal core samples Rock core samples Coal core analyses Rock core analyses	Month 25 Month 25-60	Exploration Geologist Laboratory analyst
	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 Coal	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

7.1 LISTED AND SPECIFIED ACTIVITIES

Section 16 of the Mineral and Petroleum Resources Development Act (MPRDA) (No. 28 of 2002) requires, upon request by the Minister, that an Environmental Management Programme should be submitted, and that the applicant notifies and consults with Interested and Affected Parties (I&APs). Section 24 of the National Environmental Management Act (NEMA) requires that activities which may impact the environment be authorized by the relevant authority before commencing with that activity. Such activities are listed under Regulations Listing Notice 1 Government Notice (GN) 327 of the NEMA. See Table 6 for details of the listed activities.

Table 4: NEMA-Triggered 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 ActivityHa or m²**	**LISTED ACTIVITY (Mark with an X where applicable or affected).**	**APPLICABLE LISTING NOTICE GNR 517, June 2021**	**WASTE MANAGEMENT AUTHORISATION (Indicate whether an authorisation is required in terms of the Waste Management Act). (Mark with an X)**
Prospecting Area	143. 52 ha	X	GNR 327 Listing Notice 1, Activity 20.	Not required
Vegetation clearing	0.9 ha / 143.52 ha 20*30=600m²*15 boreholes=9000m² 9000m²÷10000=0.9 ha		Not Listed	
Drilling	0.9 ha			
Site Camp	600m²			
Desktop studies	143.52 ha			
Mapping	143.52 ha			

Geophysics	143.52 ha		Not Listed	
Geochemistry	143.52 ha			
Ablution facilities	30 m^2			
Sample storage	40 m^2			
Site offices	9 m^2			

Total area to be disturbed 9 000 m^2÷10000=0.9ha

30*20=600m^2

15 boreholes* 600m^2=9000 m^2

Table 5: Summary of the drilling activities

Drilling method	Diamond core drilling
Number of boreholes	15
Depth of boreholes	150m
Duration of drilling	A borehole takes about 2 days to complete; 15 will take at least 30 days.
Demarcated working area	0.6 ha for all 15 drilling sites
Total area to be disturbed	30×20=600m^2 15 boreholes × 600m^2=9000 m^2 9000 m^2÷10000=0.9 ha of 158.45 ha

8 LEGAL FRAMEWORK

The following context includes the legislations that are associated with prospecting processes.

Table 6: Policy and legislative context

guidelines used to compile the report Policy and legislative context in which the development is proposed, including an identification of all legislation, policies, plans, guidelines, spatial tools, municipal development planning frameworks and instruments applicable to this activity and to be considered in the assessment process.	**Reference where applied**	**How does this development comply with and respond to the legislation and policy context** E.g. in terms of the National Water Act a Water Use License has/has not been applied for.
NEMA, No. 107 of 1998 (as amended) Listing Activity 20 of Listing Notice 1 in terms of Regulation 983 of 2014	Prospecting activities	In terms of the NEMA, No. 107 of 1998 (as amended), an application for Environmental Authorization was submitted to the DMRE. Jaments (Pty) Ltd appointed Singo Consulting as an independent EAP to undertake the Basic Assessment Process associated with the Prospecting Right Application. All potential impacts of the proposed prospecting activities have been assessed. The EMPr includes mitigation measure implementation, which will apply throughout prospecting.

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.	Prospecting activities	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.
Mineral & Petroleum Resource Development Act, 2002 (MPRDA) No. 28 of 2002 Section 16 (as amended)	Application for prospecting in terms of Section 16	The applicant submitted a Prospecting Right Application to the DMRE, which the DMRE accepted Ref: (MP 30/5/1/1/ 2/16326 PR) on the 25th August 2023. The conditions and requirements attached to the granting of the prospecting right will apply to the prospecting activities.
NEMA Biodiversity Act, 2004		The EMPr will regulate the applicant's implementation of biodiversity management measures.

		This is particularly relevant to all species of the Grasslands in which the project area falls.
National Water Act (NWA), Act 36 of 1998	N/A	No water use license is required for this application. 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.
	Management measures	No drilling activities will take place within 100 m of a recognised water course or wetland. No new access tracks will be created to cross a water course (existing roads/tracks will be used).
National Environmental Management: Air Quality Act, Act 39 of 2004 (NEM:AQA)	Management measures	Appropriate dust extraction/ suppression equipment will be required from the drill contractor for their drill rigs.

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.
SANS 1929:2005 Edition 1.1 – Ambient Air Quality Limits for Common Pollutants	Management measures	Used to set the standard for dust generation during drilling.
Municipal plans and policies		
Steve Tshwete Local Municipality Integrated Development Plan (IDP) 2020-2021	Socio-economic	The prospecting and mining of key minerals like coal are highlighted in the IDP. It also highlights the need to preserve the natural environment in the area by conducting mineral exploration that is minimally invasive to the environment.
Nkangala District Municipality 2014-2034 Spatial Development Framework (SDF)		The applicant acknowledges the need to maximize economic benefit from mining, industrial, business, agricultural and tourism development in the area and promote a climate for economic development in line with the municipal development frameworks
Standards, guidance, and spatial tools		
BGIS (www.bgis.sanbi.org)		Used during desktop research to identify sensitive environments in the

		prospecting right area, specifically the proposed drill sites.
QGIS Desktop: Version 3.18	QGIS Desktop: Version 3.18	QGIS Desktop: Version 3.18

9 NEED AND DESIRABILITY OF THE PROPOSED ACTIVITIES

Motivate the need and desirability of the proposed development including the need and desirability of the activity in the context of the preferred location.

The mining sector in South Africa has traditionally occupied a principal role in the generation of economic output. It provides employment and reduces poverty. The mining companies have an obligation to improve and develop the state of the communities in which they operate through infrastructure, education, and skills development. The mining activities bring different kinds of business, which has significant economic benefits for communities. And in most cases, the jobs created by the mines pay more than the average salary. The mining industry makes a big contribution to South Africa's export market. It generates significant gains from the foreign exchange rate differences. Mining contributions to the total government revenue are directed to the national and sub-national levels. The profits of mining companies and taxes generated by companies, in addition, contribute to the Gross Domestic Product (GDP) of the country.

It might come as a surprise to many that coal is now more important to the South African economy than gold. The coal mining industry contributed R51 billion to South Africa's economy, compared with gold's R31 billion. South Africa is the fourth largest coal producer in the world, according to the South Africa Yearbook 2013/14, published by Government Communications. 28% of South African coal production is exported. With an estimated 116 years of proven coal reserves remaining, the mineral is set to remain a valuable resource for South Africa's economy for as long as demand remains. The coal mining industry is an important employer. The mining industry as a whole employed a total of 535 457 individuals at the end of June 2012. The coal mining industry was the third largest employer, employing 91 605 individuals (17% of the total mining workforce).

South Africa's indigenous energy resource base is dominated by coal. Internationally, coal is the most widely used primary fuel, accounting for about 36 percent of the total fuel consumption of the world's electricity production. About 77 percent of South Africa's primary energy needs are provided by coal. This is unlikely to change significantly in the next two decades owing to the relative lack of suitable alternatives to coal as an energy source. Many of the deposits can be exploited at extremely favourable costs and, as a result, a large coal-mining industry has developed. The key role played by our coal reserves in the economy is illustrated by the fact that Eskom is the 7th largest electricity generator in the world, and Sasol the largest coal-to-chemicals producer.

The coal mines in the area are the main employers of local labour. The mining operations supply coal to Eskom for power generation. It is forecast that these mines have a lifespan of 25-35 years. Thus, mining will continue to dominate the local economy. The Mpumalanga province is rich in coal resources, which provides many employment opportunities in the area. Most of the coal is mined in the Witbank Coalfield in South Africa, the seams of which have diverse characteristics, resulting in a range of potential markets/utilisation in power generation, export, domestic, metallurgical, liquefaction and chemical sectors.

NEED AND DESIRABILITY OF THE PROPOSED PROJECT		
PART I: NEED		
Questions (Notice 792, NEMA, 2012)		Answers
1.	Is the land use associated with the activity being applied for considered within the timeframe intended by the existing approved SDF agreed to be the relevant environmental authority?	Prospecting is an integral part of its rationale to make use of the abundant natural resources in the area to create strong, resilient, and prosperous district. The land use is not associated with prospecting.

2.	Should the development, or if applicable, expansion of the town/area concerned in terms of this land use occurs here at this point in time?	Should a mining right be applied for and be approved in future, the integrity of the existing environmental management priorities of the area may be compromised, and a full Environmental Impact Assessment must then be conducted to determine the sustainability of the prospecting activities. The proposed project will have a positive impact on the socio-economic conditions of the local communities involved, should the results of the prospecting show that feasible reserves are present to mine and a mining right is approved.
3.	Does the community/area need the activity and the associated land use concerned? This refers to the strategic as well as local level.	The Mpumalanga province is rich in coal resources, which provides many employment opportunities in the area. Most of the coal is mined in the Witbank Coalfield in South Africa, the seams of which have diverse characteristics, resulting in a range of potential markets/utilisation in power generation, export, domestic, metallurgical, liquefaction and chemical sector
4.	Are the necessary services with adequate capacity currently available (at the time of application) or must additional capacity be created to cater for the development?	All service and capacity infrastructure will be temporary and provided for the proposed prospecting/drilling activities. Mobile toilets and temporary shaded areas (in the form of gazebos) are examples of temporary infrastructure. The drilling mechanisms used will be diamond core drilling. The road networks are completely intact, and the project will have no significant impact on traffic congestion. Existing routes will be used and maintained, as will the structures in the areas, for the duration of the drilling project.
5.	Is this development provided for in the infrastructure planning of the municipality, and if not what will the implication be on the infrastructure	The development is not provided for in the infrastructure planning of the municipality as it is a small development of local importance. Thus, the proposed

	planning of the municipality (priority and placement of the services and opportunity cost)?	project will not have any implications for the infrastructure planning, as no services and/or infrastructure needs to be upgraded or created to cater for this project. The proposed project will be making use of mobile structures.
6.	Is the project part of a national programme to address an issue of national concern or importance?	The mining sector is a significant contributor to the National GDP as well as a massive employer of people. This project will contribute to the National Development Plan of eradicating poverty/unemployment. Chapter 6 of the National Development Plan highlights an "inclusive rural economy" and the objectives of this plan are to create jobs in mining and industry and activating rural economies through service to small and micro mining.
PART II: DESIRABILITY		
7.	Is the development the best practicable environmental option for this land/site?	The project area lies on unclassified areas. The activities currently dominated by natural vegetation and little of plantation and cultivation. The disturbed areas (drill sites) will be rehabilitated after prospecting activities.
8.	Would the approval of this application compromise the integrity of the existing approved and credible IDP, and SDF as agreed to by the relevant authorities?	The approval of this prospecting application will not compromise the integrity of the existing environmental management priorities of the area provided that sensitive areas are avoided, and the mitigation measures as recommended in this report and in the EMPr are implemented.

9.	Would the approval of this application compromise the integrity of the existing environmental management priorities for the area (e.g. as defined in EMFs), and if so, can it be justified in terms of sustainability considerations?	The integrity of the existing environmental management priorities for the area will not be compromised by this development.
10.	Do location factors favour this land use at this place? (this relates to the contextualization of the proposed land use on this site within its broader context).	Coal is formed by the accumulation of plant debris, which typically occurs in a swamp environment. The rate of plant debris accumulation must be greater than the rate of decay in order to form the thick layer of plant debris required to produce a coal seam. When a thick layer of plant debris forms, it must be buried by sediments like mud or sand. Typically, these are washed into the swamp by a raging river. The weight of these materials compacts plant debris, assisting in its conversion to coal. One foot of coal is equivalent to about ten feet of plant debris.
11.	How will the activity of the land use associate with the activity being applied for, impact on sensitive natural and cultural areas (built and rural/natural environment)?	As far as the Basic Assessment on the area of question, there is known heritage or cultural significance as numerous graves were confirmed on site and Heritage study will be conducted with recommendations to the applicant.
12.	How will the development impact on people's health and well-being? (E.g. In terms of noise, odours, visual character and sense of place, etc.)?	In summary, due to the fact that this area has a low density of residents (Community but has farmers, the impacts on well-being, following mitigation, will be as follows: • Visual: Medium to low • Dust: Low • Noise: Low • Vibrations: Low

		Strict adherence to the recommendations & mitigation measures identified will be ensured.
13.	Will the proposed activity or the land use associated with the activity being applied for, result in unacceptable opportunity costs?	For a long time, the mining industry in Mpumalanga has been a pillar of the economy. South Africa continues to demonstrate that mineral revenues can generate significant economic benefits in the countries where they are extracted. In order to maintain the need for electricity in the Steve Tshwete Local Municipality, the applied commodity contributes significantly to the Municipal GDP.
14.	Will the proposed land use result in unacceptable cumulative impacts?	The proposed project only has minimal cumulative impacts that can be mitigated to an acceptable level. The measures outlined in the attached EMP will be used to keep the proposed project from having any significant long-term cumulative impacts on the receiving environment.

Although prospecting is not a labor-intensive activity, few employees will be employed to assist with general duties. The essential services can also be obtained locally, depending on their availability, thereby expanding Steve Tshwete economy.

9.1 Motivation for the overall preferred site, activities, and technology alternative

The proposed site earmarked for the winning of the coal through open cast mining. The proposed site was identified as the preferred alternative due to the following reasons:

- Although the area is virgin ground and has vegetation cover, it is approximately 2km away from a coal mining operation, the Elandspruit Colliery.
- The site offers the sought-after resource.
- The prospecting impacts can be contained to one area.
- Minimal natural vegetation needs to be disturbed to establish the prospecting right area (0.9ha) as most of the area is bare land without residents and some agricultural activities.
- The prospecting of the coal through drilling has been identified as the most effective method. Due to the remote location of the drilling, the potential impact on the surrounding environment is deemed to be of low significance.
- The general waste produced on-site will be contained in sealed refuse bins to be transported to the local municipal landfill site.
- State-of-the-art drilling machines and geophysical instruments will be used. These have a reduced noise level and are serviced regularly to minimise hydrocarbon spillage on site and avoid pollution.
- As equipment maintenance and servicing will be done at an off-site workshop, the amount of hazardous waste to be produced at the site will be minimal and mainly as a result of accidental oil or diesel spillages.
- Contaminated soil will be removed to the depth of the spillage and contained in sealed bins until removed from site by a hazardous waste-handling contractor to be disposed of at a registered hazardous waste handling site.

10 FULL DESCRIPTION OF THE PROCESS FOLLOWED TO REACH THE PROPOSEDPREFERRED ALTERNATIVES WITHIN THE SITE

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

10.1 DETAILS OF DEVELOPMENT FOOTPRINT ALTERNATIVES

(With reference to the site plan provided as Appendix 4 and the location of the individual activities on site, provide details of the alternatives considered with respect to:

The development footprint is expected to be a fraction of the application area size, which is estimated to be 143.52 hectares. The geology is the primary driver in determining the location of prospecting and mining. The area to be prospected is within the ore trucking distance of Jaments (Pty) Ltd. drilling concentrator. The inferred tectono-stratigraphic setting of the proposed prospecting area is considered favourable for hosting Coal mineralization. As such no assessment of alternative development scenarios were conducted.

10.1.1 Location of the proposed activity

Jaments (Pty) Ltd is applying for Coal Prospecting Right on Portions 28, 64, 72 and 73 of the farms Elandspruit 291 JS, based on existing knowledge of the geological information of that area and the proximity to Elandspruit Colliery. The distance between the proposed project area and Elandspruit Colliery is approximately 2km. The site was identified based on knowledge of coal deposits and as such, no site alternatives have been considered for the proposed activities. The following buffers will be applied to the final site selection: • No drill site will be positioned within 100m of a structure.

• No drill site will be positioned within 500m of a water course or wetland.

• Where possible existing access roads will be utilized to access the drill sites.

The prospecting right area has grassland type vegetation. Therefore, on the proposed applied prospecting area there are no environmental sensitive areas, there are no major infrastructures, and the site has been chosen in proximity to the coal mining area of Elandspruit Colliery.

Figure 11: Proximity of proposed prospecting site to Elandspruit Colliery

10.1.1 Type of activity to be undertaken

The Prospecting activities are a two staged process; it entails invasive activities and non-invasive activities. Non-invasive activities do not have footprints because they do not include land disturbance, while invasive activities cause land disturbance hence, they have footprints. In prospecting activities, footprints are caused by drilling. To mitigate the footprints of drilling activities on alternative sites identified, buffers have been developed (seen in the Figure below) to ensure protection of existing water resources, infrastructures, and ecosystems on site. Techniques were chosen based on the long-term success of the selected drilling method and prospecting process.

- A total number of 15 drill holes are planned for the site.
- It will be possible to drill 40-70m per day, covering about 1-2 days to drill one hole.
- All holes will be drilled by means of a diamond drill rig.
- The holes will be drilled to an average of 150 m and broadness (diameter) may vary between 60 mm - 75.7 mm. This will allow establishment of the thickness of the overburden.

- Holes will not be drilled closer than 500 m from any stream/river and not within 500 m from a natural wetland.
- Identified heritage sites during drilling process will be marked and avoided and a 200m buffer zone will be maintained.
- Hindrance to any animals in the process of activities will be avoided.
- Overburden will be recorded, and the holes filled back simultaneously.
- Drilling will take place one hole at a time. The drill site will be cleared of obstructions and debris and then drilled. Rehabilitation will occur concurrently with drilling.

10.1.2 Design or layout of the activity

Since prospecting activities are temporary in negotiations and agreements will be made with the landowners to use any existing infrastructure, like boreholes and access roads.

- No permanent infrastructure will be developed on site; portable ablution facilities will be used.
- Activities will be limited to the drilling of 15 boreholes to be determined by the geological formations found during prospecting.
- It is planned to use one rig for all drill holes. Rehabilitation will be tightly controlled, and supervision will be focused.
- No changes to the layout are considered but with the geophysical survey information, the holes can be orientated to match the shape of the orebody.

10.1.3 Technology to be used in the activity

The biggest technology intervention is the use of geophysical surveys, which makes the requirement for less holes apparent. Geophysical surveys also provide an added advantage of being done quickly and so execution can commence early. The safety factor of utilizing geophysical surveys is also apparent, as there is less time to keep people exposed to moving machinery. Drilling will be performed on a closed radius which will be fenced, and safety signs will be plugged as per the requirement of Mine Health & Safety (MHS) compliances. The targeted areas for operation will be near the existing roads and modified areas. Geophysical

instruments (handheld and airborne), sampling tools, bags, and tags, drilling machines, compass and GPS devices will be used to identify ore targets.

10.1.4 Operational aspects of the activity

An application has been made for a prospecting period ranging from a minimum of three years to a maximum of five years. The assumption is that all processes (including rehabilitation) will be completed in this period. The project will use existing access roads as much as possible. If there is a need to establish access roads, they will be constructed in such a way that minimal vegetation is removed and existing structures like fence lines are followed as far as possible. If required, topsoil will be removed, protected, and used during rehabilitation. If there is a need to erect a gate in fence lines, the applicant will consult and reach an agreement with the landowner/s and other affected parties before installing a gate. The opening and closing status of gates will be clarified with the landowner and other affected parties. The applicant will also negotiate with the landowner/s to use existing toilet facilities. Where this is not possible, chemical toilet facilities will be provided on site. Drilling will be limited to fenced-off areas. Rehabilitation will be conducted as soon as drilling is completed. Samples will be taken, and geophysical survey will be undertaken.

Drilling will be done over a period of 30 days, during daylight hours to minimize risk exposure. Due to nature of the prospecting activities no permanent infrastructures will be erected on site such as water supply, electricity, or sewer facilities. The prospecting will commence with non-invasive prospecting for 1 month which will entail Multi-Spectral and Aerial Surveys providing digital raster data of the area of interest delineating the Paleo channel on a map. Thereafter, a further literature survey will be conducted for 1 month, combining the results from phase 1 with interpreted geological report. Only then will the applicant commence with invasive prospecting with the drilling and sampling program continuing for approximately 1 month, which will culminate in a report on the drill results. This will again be followed with further non-Invasive prospecting through GIS & analytical desktop studies for 1 month, producing Pre-Feasibility reports, resource statements and 3D mapping.

A decision will be made whether further drilling or sampling is required in specific areas of interest, prior to finalizing the Feasibility Report. The applicant shall ensure that this Environmental Management Programme Report is provided to the Project Manager and any other person or organization who may work on the site.

10.1.5 The option of not implementing the activity

Drilling is required to investigate the potential and feasibility of a resource. It also serves as a DMRE-compliant mineral resource statement. There is no potential for any future investment in a mine without the confirmation of the mineral resources, which can only be obtained by drilling. Should the prospecting right be refused, a potential mineral resource development will be sterilized. The socio-economic benefit and future employment potential of mine development will also be lost if the prospecting activities are not implemented to determine the feasibility of mineral deposit that occurs within the area.

11 DETAILS OF THE PUBLIC PARTICIPATION PROCESS TO BE FOLLOWED

11.1 PUBLIC PARTICIPATION METHODOLOGY

Describe the process undertaken to consult interested and affected parties including public meetings and one on one consultation. The affected parties must be specifically consulted regardless of whether or not they attended public meetings. (Information to be provided to affected parties must include sufficient detail of the intended operation to enable them to assess what impact the activities will have on them or on the use of their land.

The Public Participation Process (PPP) mainly comprises the communications and discussions with Interested and Affected Parties (I&APs) and is of utmost importance in any assessment process. The PPP provides people who may be interested in or affected by the proposed development, with an opportunity to provide comments and to raise issues or concerns, or to make suggestions that may result in enhanced benefits for the project. The PPP, inter alia, involves the following:

The main aspect around public participation is finding the relevant I&APs, in this study the relevant I&APs were:

- Landowners
- Adjacent Landowners
- Local Municipality

- Government Departments
- Community

11.2 Notification of potentially interested and affected parties

The PPP commenced on Friday the 20th of August 2021. Potentially Interested and Affected Parties were notified of the proposed application by: -

- A Background Information Document which was prepared and sent via email to all possible I&APs from the 20th of August 2021.
- A Background Information Document was sent to the Local Municipalities of Steve Tshwete.
- A Background Information Document was sent to the Nkangala District Municipality and other stakeholders.
- Newspaper Advertisement which was placed in the Middelburg Observer (in English) and was published on 20th of August 2021 Please refer to Figure 8.
- Site notices (A2) were placed to be accessible by the public on Thursday the 09th of September 2021. Please refer to Figure 8 below.
- Written notice to the Landowner and lawful occupiers were provided in respect of the proposed activity was sent via emails.

All pre-identified and registered I&APs were notified about the availability of the DBAR & EMPr for review and comment which was available for 30 calendar days. All comments received during this period are included in this BAR & EMPr and will be submitted tothe Commenting Authority. Further consultation was done through the visitation of the Steve Tshwete Local Municipality and plugging of the site notices on various portions of the farm as well as the neighbouring areas to the project area.

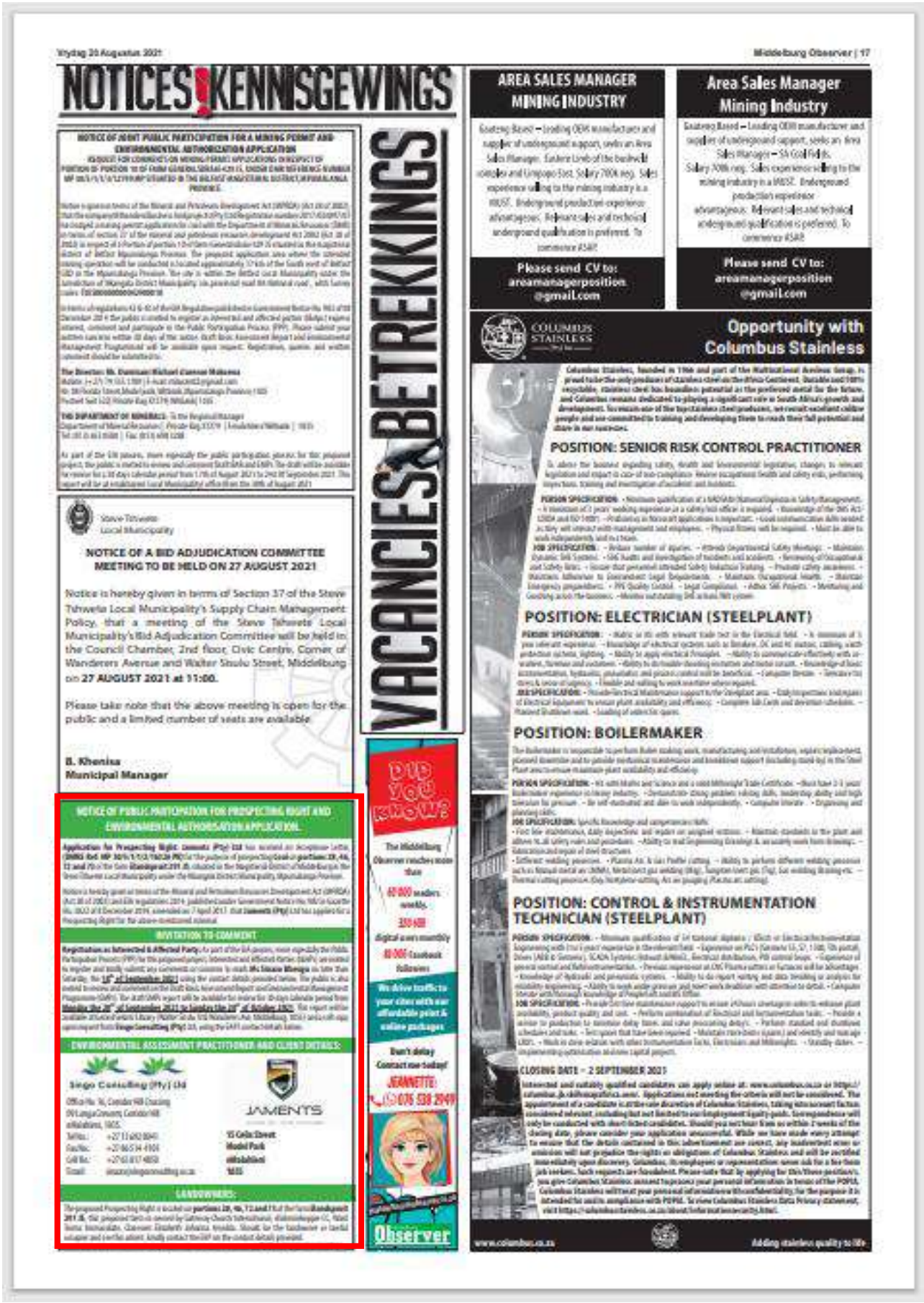


Figure 12: Newspaper advertisement of the proposed project

Figure 13: Proof of site notices (Location: -25.851197, 29.290628 (left) and -25.86821°, 29.27427° (right))

12 SUMMARY OF ISSUES RAISED BY I&APS

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

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	Issued Raised	EAPs response to issues as mandated by the applicant	Section and paragraph reference in this report where the issues and or response were incorporated
AFFECTED PARTIES				
Landowners/s				

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	Issued 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
Portion 64 Landowner: Name: Marlize Venter Email: mgrobler2014@gmail.com		09/09/2021 (Phone call) 7/09/2023 (Email)	❖ I am the owner of Portion 64. I would like to find out more about the notice regarding the Application for Prospecting Rights? Will there be meetings? And when will we know if the application is approved and so on? ❖ Thank You. The documents have been received.	❖ Background information document and landowner notification letter were supplied. ❖ No, our focus is on prospecting coal in the area, ensuring environmental and safety standards are	See Appendix

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	Issued 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
		08/09/2023 (Email)	❖ Is this for mining coal on 64/291 or is this only for the impact that the Washing bay will have on us? ❖ Please find attached my Letter of Intent for prospecting right application. ❖ We have a lot of concerns (Air quality, noise, soil, Security, Visual, Quality of life, Property value, Nuisance,	upheld. We are committed to community and regulatory compliance, ensuring responsible and sustainable exploration activities in line with stakeholder expectations and concerns raised during the prospecting process.	

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	Issued 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
			Land use planning and waste management, Ecology, Ground and surface water) at the moment. We already saw how the washing plant affected us in a very bad way! ❖ All of the above qualities are extremely important and need to be considered for all residential persons.	❖ Draft BAR and EMPr was send via email on the 29th of September 2023 for review and comments.	

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	Issued 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
			❖ We already have all kind of sinuses due to mining activity close to us. Animals get sick and we loss income, if we don't have clean water, we cannot do anything.		
Portion 28 Landowner:		07/09/2023 (Phone call)	❖ Please send all the information to the following email address: 'admin@gwci.co.za'.	❖ Landowner Invitation email with BID, REG 2.2 and KML for comments will be sent minerals with many thanks.	See Appendix

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	Issued 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
GATEWAY CHURCH INTERNATIONL **Portion 28: Letter Gateway Church** **Email:** admin@gwci.co.za		13/09/2023 (Email) 03/10/2023 (Email)	❖ Please kindly send this email directly to stella.phetla@gwci.org.za ❖ I hope this mail finds you well. I tried calling your number a couple of time to schedule a sit down	❖ Draft BAR and EMPr was send via email on the 29th of September 2023 for review and comments. ❖ I appreciate your prompt response. I'm confirming my availability for Friday (06/10/2023) at 09:00 a.m., as discussed during our phone call. I have received	

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	Issued 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
info@gwci.org.za stella.phetla@gwci.org.za finance@gwci.org.za **Contacts:** 083 270 6568		06/10/2023 (Face to Face)	with you regarding the document we received, ❖ We would appreciate a meeting with you for you to explain the document you send before going further. ❖ As landowner representative, I want to understand the process of prospecting so that I can explain it more easily to the church board. The	the location details. Thank you! ❖ Singo Consultants described the steps involved in prospecting and the process itself. Also explained what the procedure for public engagement comprises.	

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	Issued 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
			land doesn't belong to me; it belongs to the church. ❖ Now that you have described the project and its procedure to me as a landowner representative, I will sit down with the church board and discuss the project, the landowner invitation letter, and the	❖ We, as Singo Consultants, representing the applicant, Jaments (Pty) Ltd, are also pleased that you have obtained all the necessary clarifications.	

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	Issued 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
			DBAR. After our meeting, you will then receive comments from the board. ❖ We need some time to set up a meeting with the church board. After that, we promise to provide our input for your upcoming meeting. You suggested that we should have this meeting within 30 days of receiving the DBAR so	❖ We have duly acknowledged your request, and we'll await your call concerning the details of the upcoming meeting.	

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	Issued 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
			that you can include our feedback in the final BAR.	❖ The closure email was sent on October 25, 2023, and as of today, no response has been received as yet.	
Portion 72 Landowner:		Phone call (07/09/2023)	❖ The lady that you wrote on the landowner notification letter I don't know her, because I am	❖ Kindly note that we use Windeed search to identify the landowners, and according to it, Ward	

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	Issued 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
Name: Ivan Albert **Contacts:** 082 256 3114 **Email:** albertantonie@gmail.com		15/09/2023 (Email)	the landowner of portion 72. ❖ You can send the information on my email address, and I will respond on it. ❖ Good day please accept the returned docs from Ivan ward.	Terma is the landowner. ❖ Kindly note that your comments has been well received and will be incorporated into the final BAR and EMPr. ❖ Draft BAR and EMPr was send via email	

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	Issued 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
				on the 29th of September 2023 for review and comments. ❖ The closure email was sent on October 25, 2023,	
Portion 73 Landowner:	**x**	10/09/2023 (face to face)	❖ There was a team that once came here, I think two years ago, doing the very thing that you are	❖ The comments were not written in the BAR. Please resend those comments so that I can incorporate them	

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	Issued 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
Name: Nolda & Ronnie Claassens **Email:** nolda49@gmail.com **Contacts:** 084 207 1538		11/09/2023 (Email0	doing now. I even sent them my comments. ❖ Hereby our submitted application of the Prospecting Right Application by Singo Consulting (PTY) Ltd. ❖ No issues raised.	into the BAR and EMPR. ❖ Thank you for responding. Please note that your comments below are well received and will be integrated into BAR and EMPR. ❖ Draft BAR and EMPr was send via email on the 29th of September 2023 for	

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	Issued 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
				review and comments. ❖ The closure email was sent on October 25, 2023.	
Adjacent Landowners					
		09/09/2021 (Email)	❖ Long term rental basis a portion Elandspruit Farm 291, JS Portion 9. Information received is very basic not clearly indicating the proposed		

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	Issued 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
			mining operations, further, ❖ there was no consultation with us, we have been renting for over 8 Years now, this is the first we get notified of these activities. ❖ Your presentation also doesn't include project programs, EIA, impact to grazing as you want to conduct opencast mining.		

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	Issued 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
			❖ The consultation process was also not up to standard, as the photos you placed in the presentation of where the notifications was setup, is not close to one of our main gates or entrances. ❖ To avoid any confusion, please indicate the exact GPS co-ordinated of the proposed mining area. We further want to put it on record that we		

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	Issued 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
			strongly object until further notice.		
Land Claim					
agriculture, land reform & rural development Department: Agriculture, Land Reform and Rural Development REPUBLIC OF SOUTH AFRICA **Name:** Thandeka Dhlamini Email: Thandeka.Dhlamini@dalrrd.gov.za	**x**		❖ No issues raised yet.	❖ Land claim enquiry email was sent on the 6th of August 2023, to Department of Agriculture, Land Reform and Rural Development. Still waiting for their response.	See Appendix

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	Issued 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
				❖ Draft BAR and EMPr was send via email on the 29th of September 2023 for review and comments. ❖ The closure email was sent on October 25, 2023.	
Municipality					

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	Issued 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
STEVE TSHWETE LOCAL MUNICIPALITY **Environmental Officer** **Contact Person:** Pearl Masumbuko Email:pearlm@stlm.gov.za **LED Officer** **Name:** Mr Michael Nkosi	**x**		❖ No issues raised yet.	❖ BID, regulation 2.2 map and a KML of the application area were shared through email on the on 20/08/2021. ❖ Draft BAR and EMPr was send via email on the 29th of September 2023 for review and comments.	

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	Issued 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
Email: michaeln@stlm.gov.za **Town Planner** **Name:** Sinethemba Bashele **Email:** sinethembab@stlm.gov.za				❖ The closure email was sent on October 25, 2023.	
District Municipality					

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	Issued 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
NKANGALA DISTRICT MUNICIPALITY **Contact Person :** Skosana Maggie Millicent **Email:** skosanamm@nkangaladm.gov.za	**x**		❖ No issues raised.	❖ BID, regulation 2.2 map and a KML of the application area were shared through email on 20/08/2021. ❖ Draft BAR and EMPr was send via email on the 29th of September 2023 for review and comments.	

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	Issued 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
				❖ The closure email was sent on October 25, 2023.	
Organs of state (Responsible for infrastructure that may be affected Roads Department, Eskom, Telkom, DWA					
Phumla Nkosi	**x**		❖ No issues raised.	❖ BID, regulation 2.2 map and a KML of the application area were shared through email on 20/08/2021. ❖ Draft BAR and EMPr was send via email	

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	Issued 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
phumla.nkosi@mtpa.co.za				on the 29th of September 2023 for review and comments. ❖ The closure email was sent on October 25, 2023.	
water & sanitation Department: Water and Sanitation REPUBLIC OF SOUTH AFRICA	x			❖ BID, regulation 2.2 map and a KML of the application area were shared through email on 20/08/2021.	

Interested and Affected Parties List the names of persons consulted in this column, and Mark with an X where those who must be consulted were in fact consulted		Date Comments Received	Issued 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
Name: Betty Mnguni **Cell Number:** 060 998 9210 **Email:** MnguniB@dws.gov.za		29/03/2023 (Email)	❖ The Department acknowledges receipt of the above-mentioned Report. ❖ No issues raised.	❖ Draft BAR and EMPr was send via email on the 29th of September 2023 for review and comments. ❖ The closure email was sent on October 25, 2023.	

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	Issued Raised	EAPs response to issues as mandated by the applicant	Section and paragraph reference in this report where the issues and or response were incorporated
agriculture, land reform & rural development Department: Agriculture, Land Reform and Rural Development REPUBLIC OF SOUTH AFRICA **Name:** Doreen S & Mary M **Email:** Maureen.nkuna@dalrrd.gov.za	**x**	09/09/2021 (Email)	❖ The dept. requested a detailed soil study, land capability and grazing capacity of the area to be included in the EMPr. Weed and invader management plan must also be included in the EMPr. ❖ No issues raised.	❖ The raised concerns have been addressed accordingly in this BAR & EMPr. ❖ ❖ BID, regulation 2.2 map and a KML of the application area were shared through email on 20/08/2021.	

Interested and Affected Parties List the names of persons consulted in this column, and Mark with an X where those who must be consulted were in fact consulted		Date Comments Received	Issued 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
				❖ Draft BAR and EMPr was send via email on the 29th of September 2023 for review and comments. ❖ The closure email was sent on October 25, 2023.	

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	Issued 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
environmental affairs Department: Environmental Affairs REPUBLIC OF SOUTH AFRICA **Email:** MRABOTHATA@dffe.co.za	**x**		❖ No issues raised.	❖ BID, regulation 2.2 map and a KML of the application area were shared through email on 20/08/2021. ❖ Draft BAR and EMPr was send via email on the 29th of September 2023 for review and comments.	

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	Issued 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
				❖ The closure email was sent on October 25, 2023.	
 **Name:** Oliver J **Email:** OliverJ@nra.co.za	**x**		❖ No issues raised.	❖ BID, regulation 2.2 map and a KML of the application area were shared through email on 20/08/2021. ❖ Draft BAR and EMPr was send via email on the 29th of September 2023 for review and	

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	Issued 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
Name: Ria Barkhuizen (NR) Barkhuizenr@nra.co.za				comments. ❖ The closure email was sent on October 25, 2023.	
 Wayleavesmou Email: Wayleavesmou@eskom.co.za	x		❖ No issues raised.	❖ BID, regulation 2.2 map and a KML of the application area were shared through email on 20/08/2021. ❖ Draft BAR and EMPr was send via email on the 29th of	

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	Issued 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
				September 2023 for review and comments. ❖ The closure email was sent on October 25, 2023.	
agriculture, land reform & rural development Department: Agriculture, Land Reform and Rural Development REPUBLIC OF SOUTH AFRICA **Rhulani Chavalala**	**x**	09/09/2021 (via email)	❖ No issues raised.	❖ Revised Draft BAR and EMPr was send via email on the 29th of September 2023 for review and comments.	

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	Issued 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
				❖ The closure email was sent on October 25, 2023.	
Traditional Leaders					
N/A					
Community					
	x		Please refer to the appendix.		

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	Issued 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
OTHER AFFECTED PARTIES					

13 ENVIRONMENTAL ATTRIBUTES ASSOCIATED WITH THE ALTERNATIVES

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

13.1 Socio-Economic Demographics

Proposed Application for prospecting rights is lodged on a portion of portion 28, 64, 72 and 73 of the Farm Elandspruit 291 JS, situated within the Steve Tshwete Local Municipality (previously Middelburg Local Municipality). It is a Category B municipality located in the Nkangala District of the Mpumalanga Province. It is one of the larger municipalities of the six in the district. Steve Tshwete Local Municipality (STLM) covers an area of about 3 976 km^2 in extent.

The figure below indicates that STLM is increasingly under pressure due to population growth. In 2016, the total population in STLM was 278 749. Population grew by 4.4 %. Over the nine-year period from 2007 to 2016, STLM's population increased by 9.7%. In 2016, the municipality ranked the 7th largest population in the province and 19.3% of total population of Nkangala as per the 2016 community survey. This could be attributed to the number of industries that were opened within the 10 years (2001-2011) that attracted workers into Middelburg.

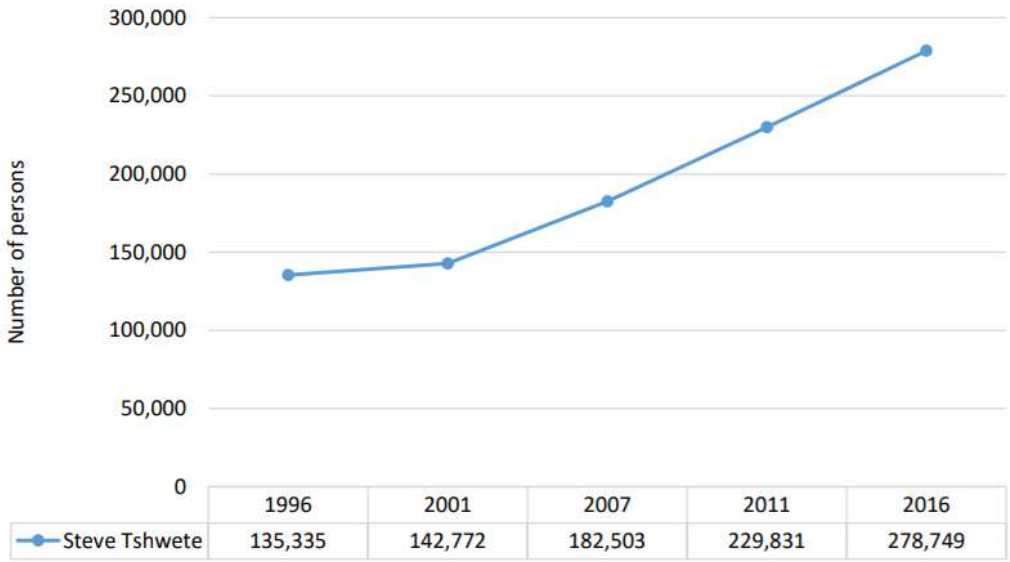


Figure 14: Population size: 1996, 2001, 2007, 2011 and 2016 Community Profile Source: Stats SA

According to the 2016 Community Survey of Stats SA, the poverty headcount of STLM increased from 4.3% in 2011 to 5.1% in 2016 which then made the municipality to be 4th lowest in the province however the poverty intensity decreased slightly from 42.0% to 41.7% in the same period. In 2015, STLM's share of population below the lower-bound poverty line was the 2nd lowest (favourable) among the municipal areas.

13.2 Economy

STLM's economy is one of the biggest economic areas and it is therefore expected that a significant number of employment opportunities are being provided in the area. Mining, trade, and manufacturing are the major leading employment drivers in STLM. The local economy has a high dependence on the coal mining industry with little manufacturing. The closing down and scaling down of some of the power station operations has impacted on the local economy. The coal mines in the area are the main employers of local labour. The mining operations supply coal to Eskom for power generation. It is forecast that these mines have a lifespan of 25-35 years. Thus, mining will continue to dominate the local economy.

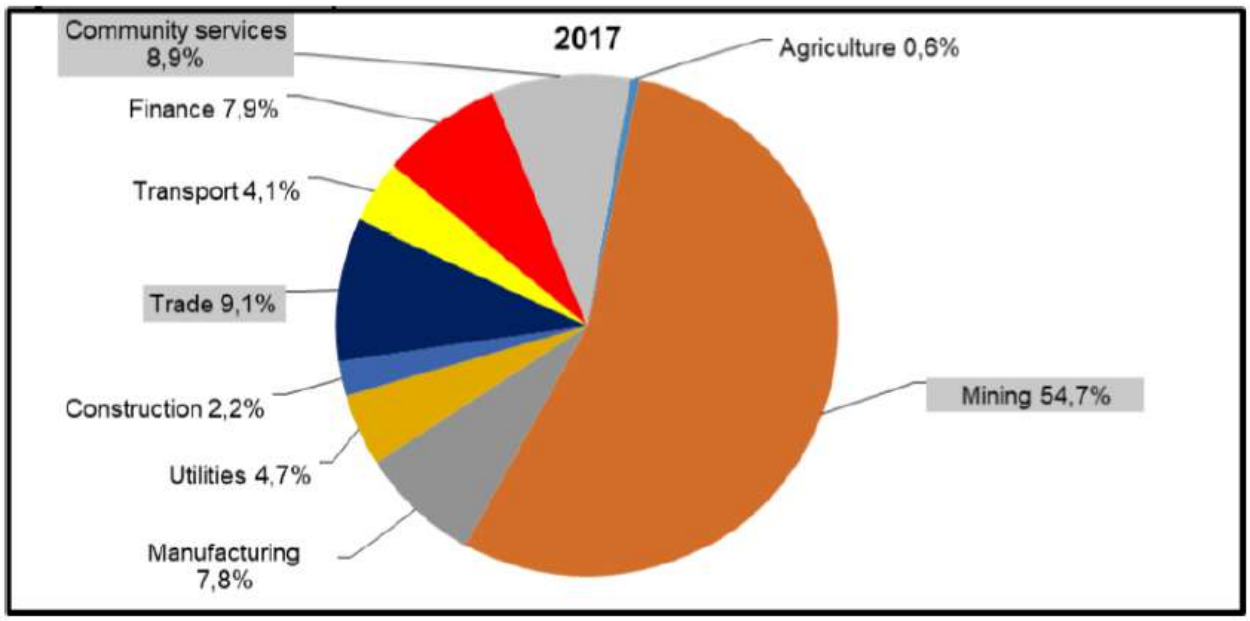


Figure 15:Contribution by industries in 2017 Source: Stats SA 2016

13.3 Employment Sector

There is a high growth rate of unemployment in STLM, yet it still has the lowest percentage in the province The unemployment rate of STLM decreased slightly from 19.7% in 2011 to

16.4% in 2015 and was the lowest among all the municipal areas of Mpumalanga. In 2018, the municipality has recorded a slight increase yet again from 2015 figures to just 17,9%. Unemployment rate for females has increased from 21.8% in 2015 to 23.1% in 2018 and that of males from 12.9% in 2015 to 14.5% in 2018. Youth unemployment rate according to the 2011 Census figures 27.1% - challenge with especially very high youth unemployment rate of females. The largest employing industries in STLM are trade (including industries such as tourism), community/government services and mining. High labour intensity in industries such as agriculture, trade, and construction.

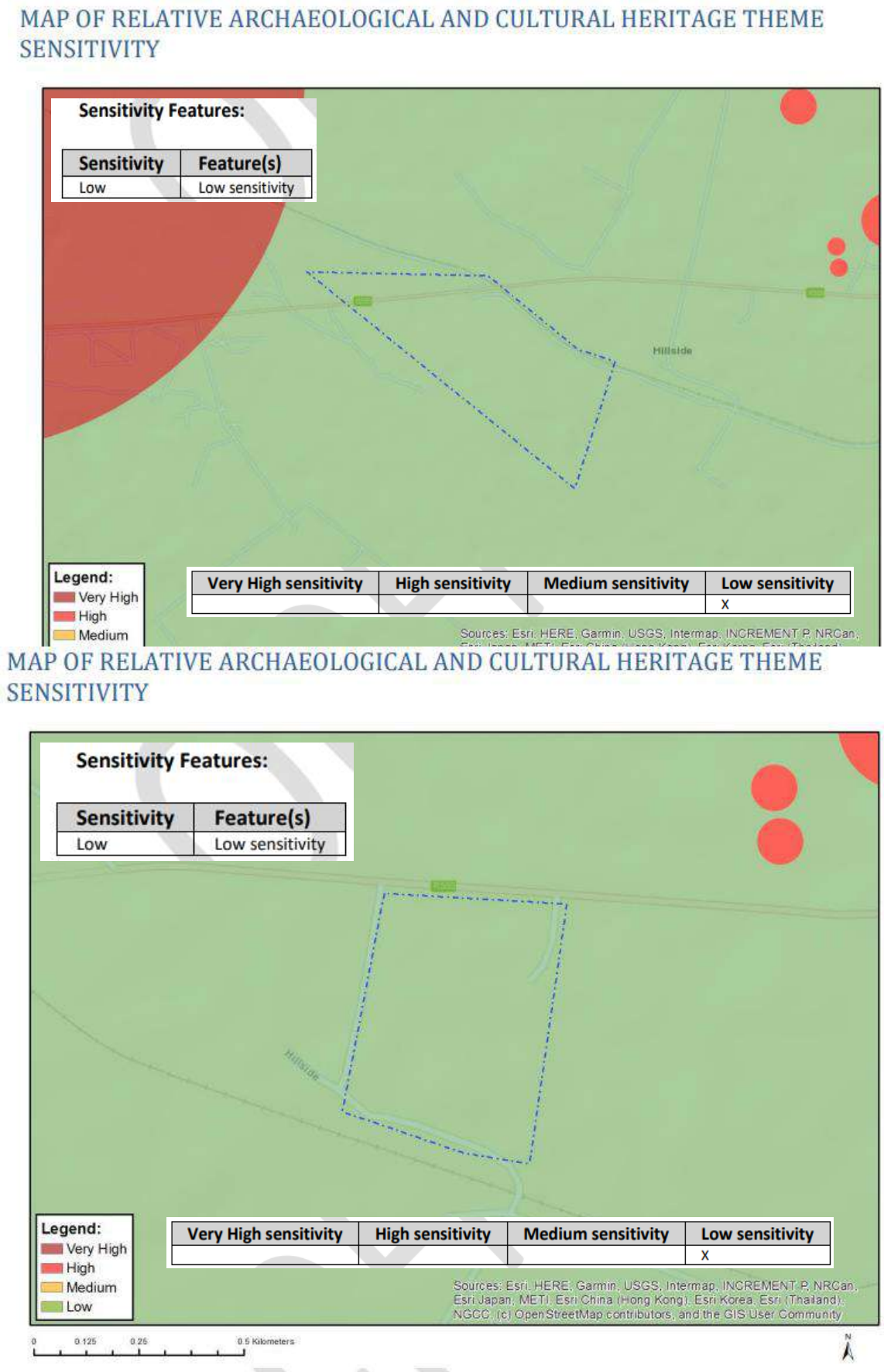
13.4 Heritage Resources

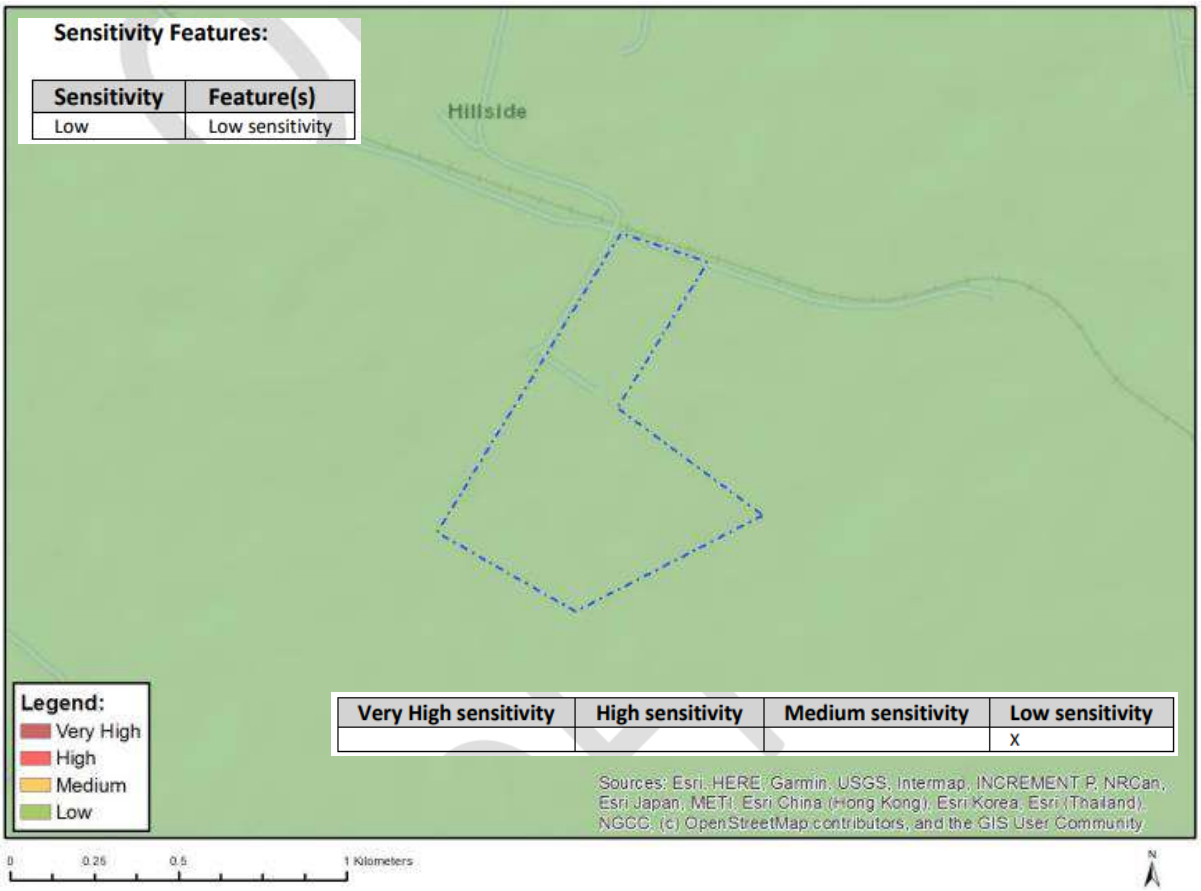
Heritage resources such as Stone Age sites, rock paintings and engravings; stone tools; small, inconspicuous stone walled sites from the Late Iron Age farming communities; formal and informal graveyards, etc. may occur in the project area.

There are no heritage sites or artefacts that were observed within or near the proposed prospecting area during site assessment. However, should any heritage resources of significance be exposed during the operational phase of the project, the South African Heritage Resources Agency (SAHRA) should be notified immediately, all development activities should be stopped, and an archaeologist accredited with the Association for Southern African Professional Archaeologist (ASAPA) should be notified to determine appropriate mitigation measures for the discovered finds. This may include obtaining the necessary authorisation from SAHRA to conduct the required mitigation measures.

According to the Screening Report for the proposed project the Archaeological and Cultural Heritage Theme Sensitivity is low throughout the proposed project area.

Figure 16: Map of relative archaeological and cultural heritage theme sensitivity Source: screening report





13.5 Current land use

According to the map produced by the inhouse GIS specialist at Singo Consulting (Pty) Ltd (Figure 13), the land uses on the proposed prospecting area include natural vegetation, wetlands, barren land, cultivated land and built-up land. During the site assessment it was observed that the area is being used for agriculture, grazing of livestock and residential purposes (see Figure 17). Between *Disawell* and Namaqua Nickel Mining, drilling is being conducted on most of the properties (like Rok Optel and Jacomyns Pan) on the far southern side. No other activities were noted by the landowner.

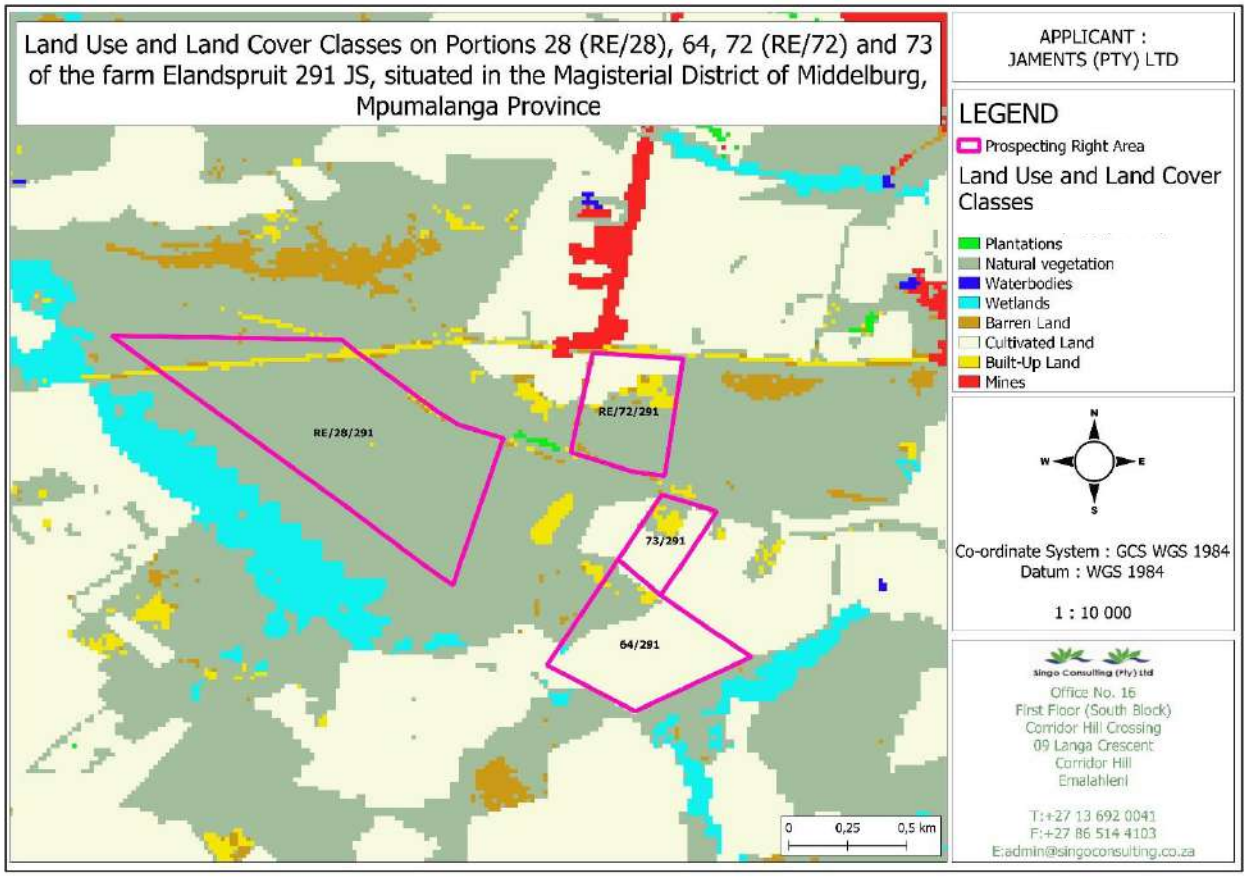


Figure 17: Land use and land cover classes of the proposed prospecting area

Figure 18: Left: Cow dung indicating presence of cattle. Middle: American Brahman on portion 64. Right: Goats grazing

14 ENVIRONMENTAL FEATURES AND INFRASTRUCTURE ON SITE

There are environmental features and infrastructure on these farms, these include residences, Hillside rail station, and stream with a valley channelled wetland. A buffer zone of at least 500m will be applied to any watercourses and 100 m will be applied to the residences before prospecting commences. There were also power lines observed running through the project area, Eskom has been consulted and these will not be disturbed.

Figure 19: Environmental features and infrastructure observed during site assessment.

14.1 Climate

PThe proposed prospecting right area is in the Nkangala District which lies at about 1478 m above sea level, the climate is warm and temperate. The climate is classified as Cwb by the Köppen-Geiger system. Middleburg lies on 1410m above sea level. Middleburg's climate is classified as warm and temperate. In winter, there is much less rainfall than in summer. The average annual temperature is 15.4 °C. About 693 mm of precipitation falls annually. The least amount of rainfall occurs in July. The average in this month is 6 mm. With an average of 119 mm, the most precipitation falls in January. The temperatures are highest on average in January, at around 20.1 °C. June has the lowest average temperature of the year It is 8.7 °C. The variation in the precipitation between the driest and wettest months is 113 mm. During the year, the average temperatures vary by 11.4 °C (meteoblue.com).

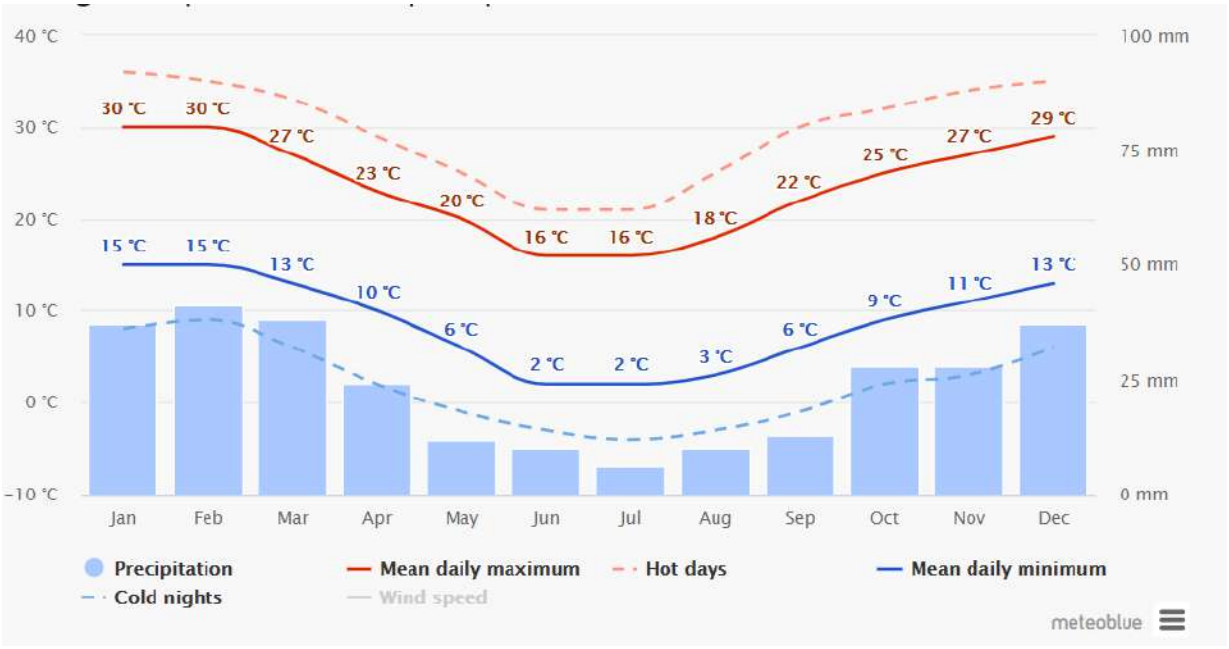


Figure 20: Average temperatures and precipitation of proposed prospecting site.

14.2 Topography

The topography of the region is flat with gentle, open undulations. The proposed prospecting area is characterized by gentle slope 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.

The underlying geology forms part of the Transvaal supergroup and includes the Rooiberg Group-Loskop Formation. Erosion-resistant rocks of this suite form distinctive low rocky hills that are often visible in the distance, although none occur in the study area. Vegetation consists of low shrubs and grassland with bunches of Eucalyptus trees and the occasional Weeping willow (*Salix babylonica*) along the Spookspruit which produces a mottled background.

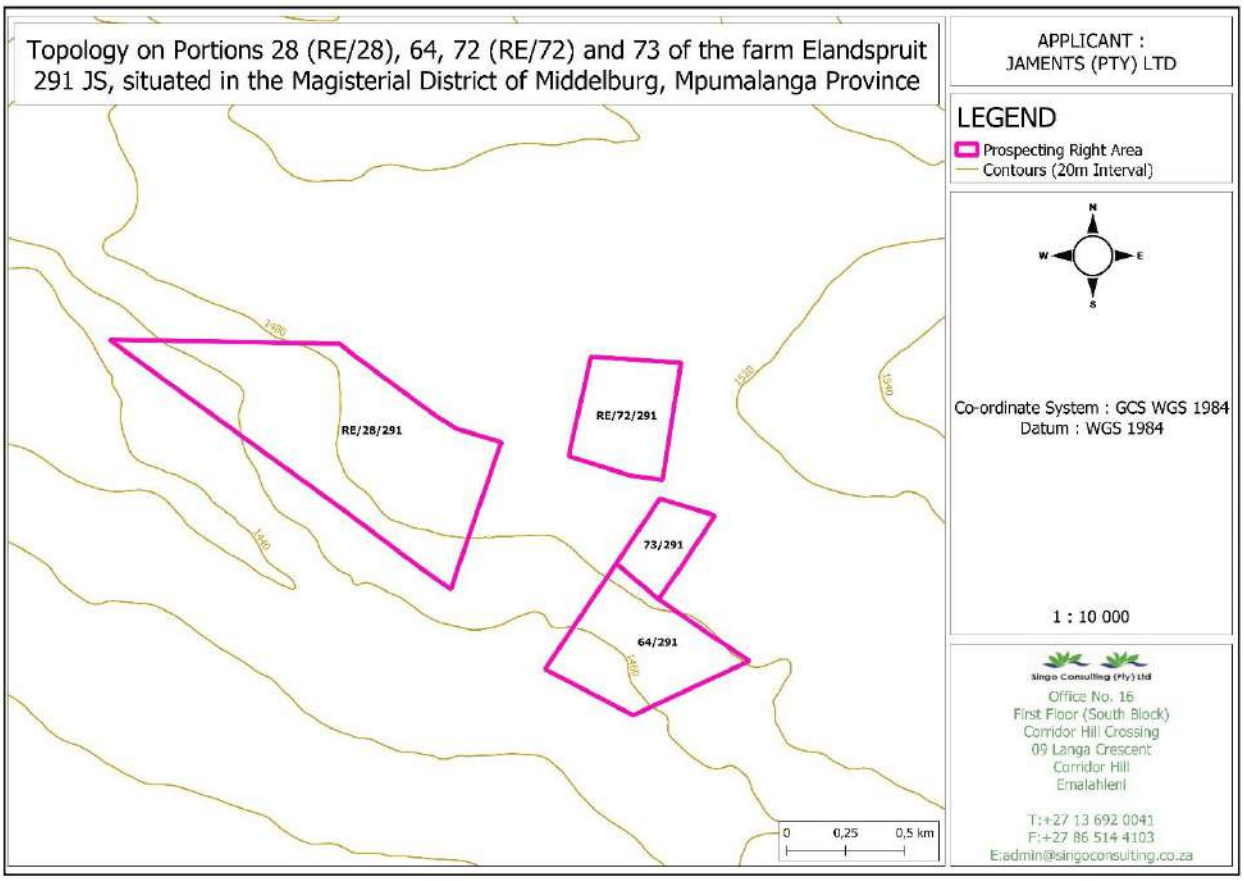


Figure 21: Topology of the proposed prospecting area.

Figure 22: Topology observed during site assessment.

14.3 Soil type

A desktop study was conducted to determine the soil classes present on the proposed prospecting area, the map in the figure below was produced. This map shows that the proposed prospecting right area is covered with freely drained, structureless soils. The soil classes in the proposed area can be described based on their soil depth, soil drainage, erodibility, and natural fertility. This type of soil means that water is removed from the soil very rapidly. Soils commonly are coarse textured and have very high permeability or are very shallow. Diagnostic zone is entirely brownish, with few or no grey mottles or grey clay films. Some soils have silt coats in the upper B horizon.

Important characteristics of the freely drained structureless soils are:

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

During field work red and yellow structureless soils was encountered

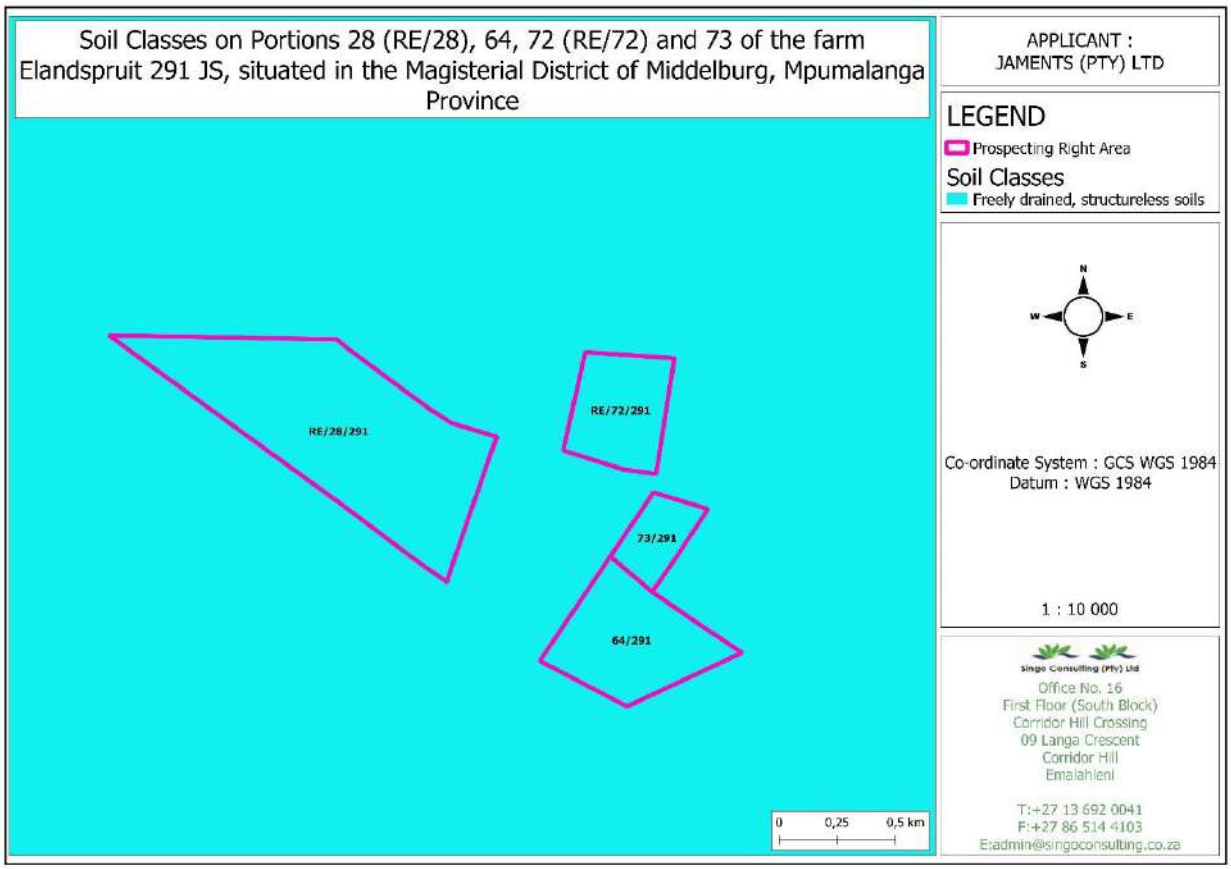


Figure 23: Soil classes on proposed prospecting area

Figure 24: Soil observed on the site assessment

14.4 Agriculture capability

Mpumalanga is one of South Africa's most productive and important agricultural regions and plays a key role in the export profile of South Africa. The agricultural activities in Mpumalanga range from small vegetable gardens to commercial farming, both rain fed and irrigation. Farming activities include wood production, field crops production (summer cereals, winter cereals, oil seeds, legumes, fodder crops) sheep and cattle farming. The proposed prospecting area, as seen in figure 25 below, has a farming type of grains. With the land capability dominated by grazing followed by arable land, which is fit for growing for growing crops, as seen in figure 26.

Land capability is the combination of soil suitability and climate factors. As seen in figure 9 below, the land capability is arable, fit for or used for the growing of crops. The project area has an arable land capability classification of Class 6: Low-Moderate to Class 10: Moderate-High, as indicated by figure 10 from the screening report. During the site assessment small household size agricultural activities that were observed on some portions of the proposed prospecting area.

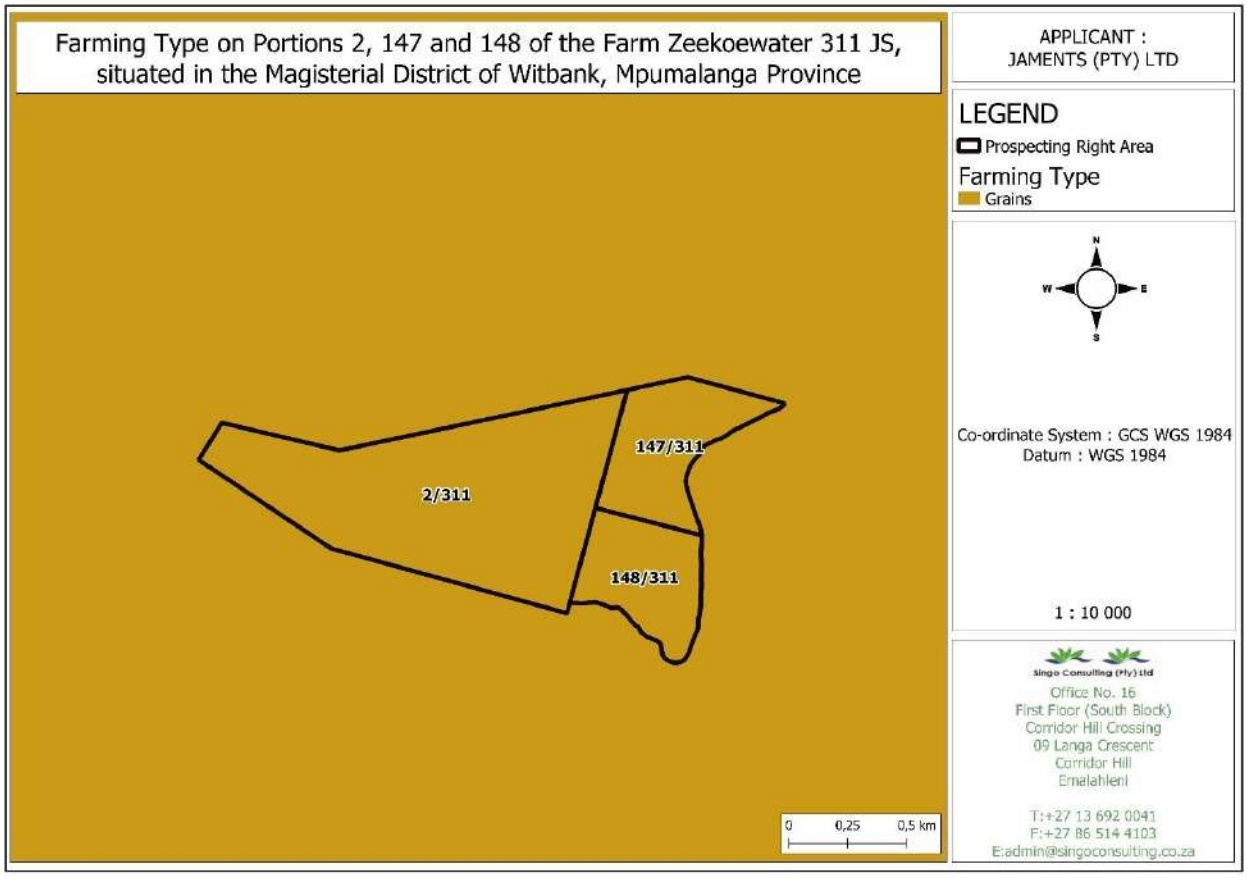


Figure 25: Farming type on the proposed prospecting area

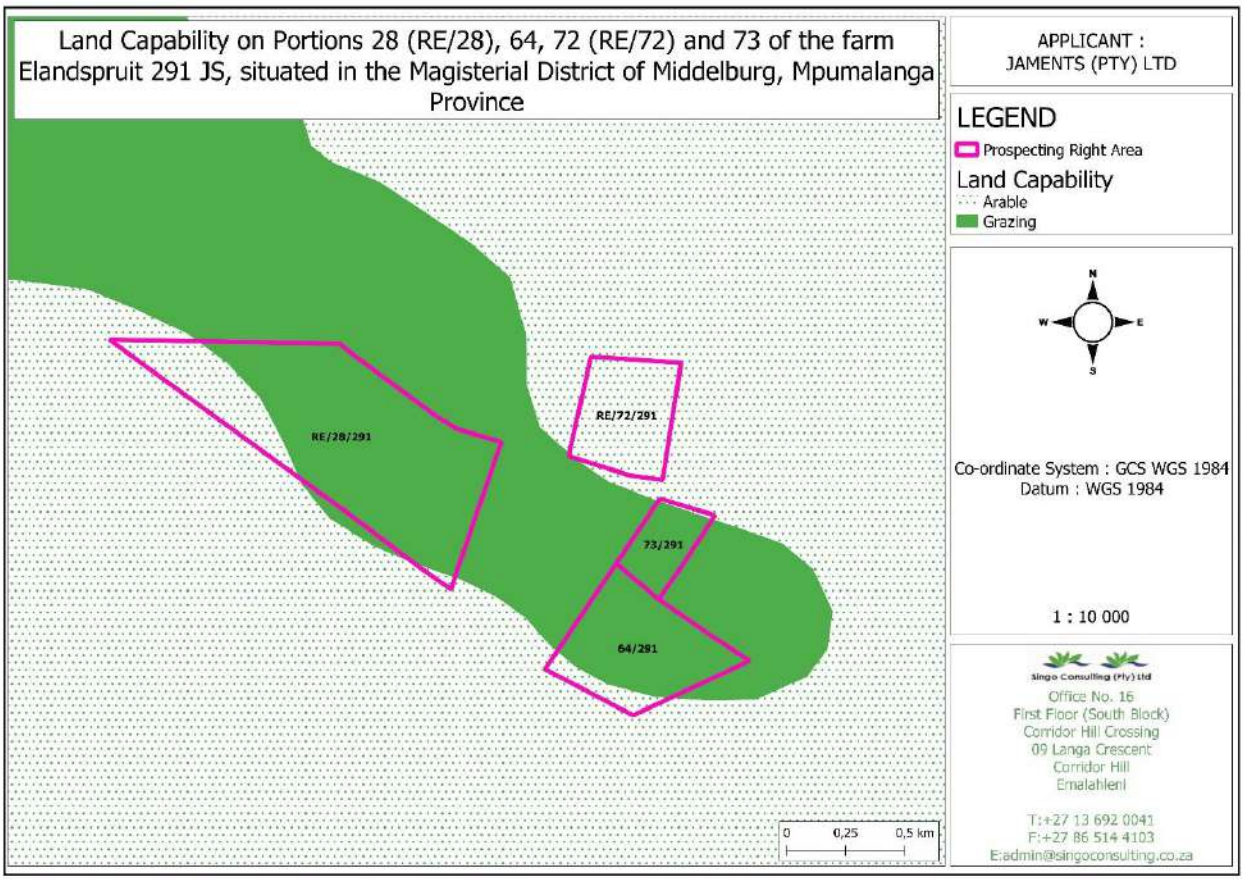


Figure 26: Land capability on the proposed prospecting area

MAP OF RELATIVE AGRICULTURE THEME SENSITIVITY

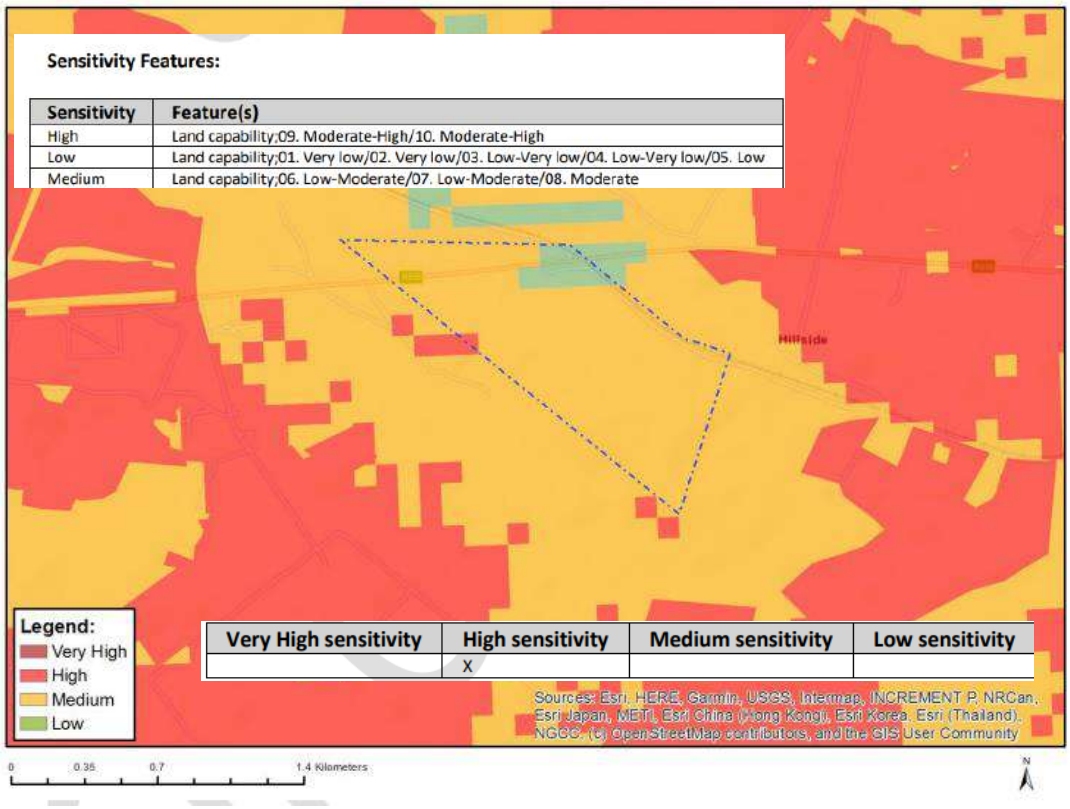


Figure 27: Agriculture theme sensitivity for portion 28 of the farm Elandspruit 291 JS

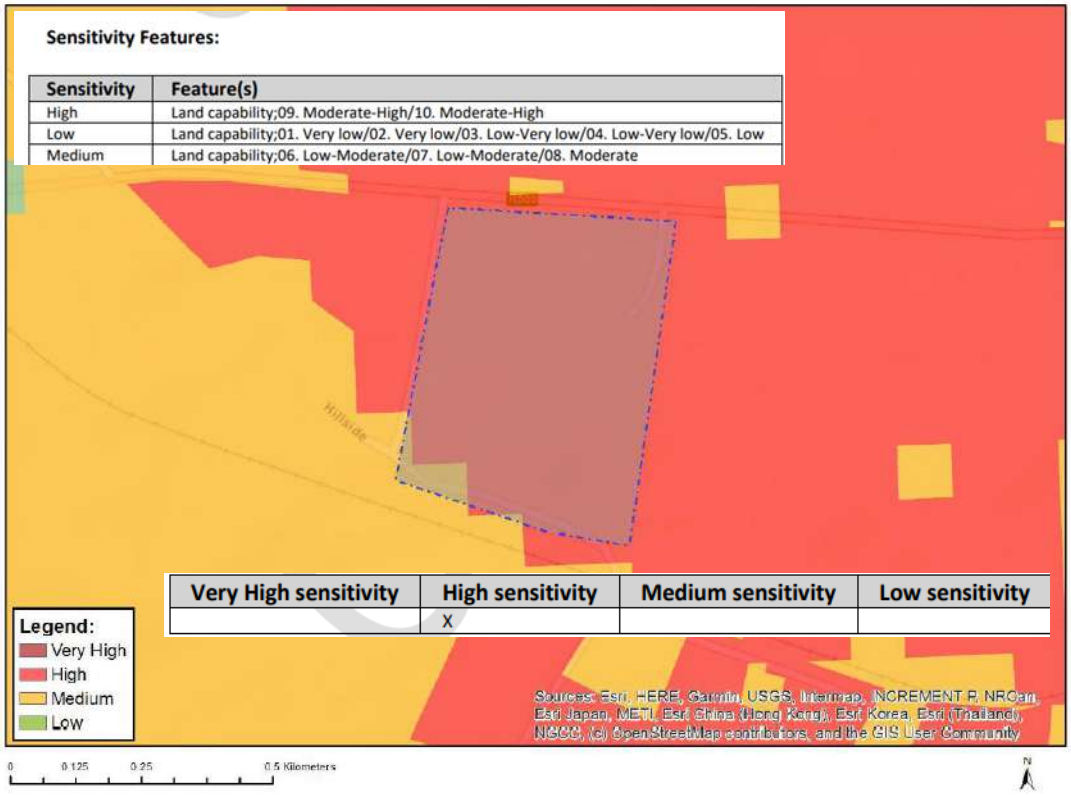


Figure 28: Agriculture theme sensitivity of portion 72 of the farm Elandspruit 291 JS

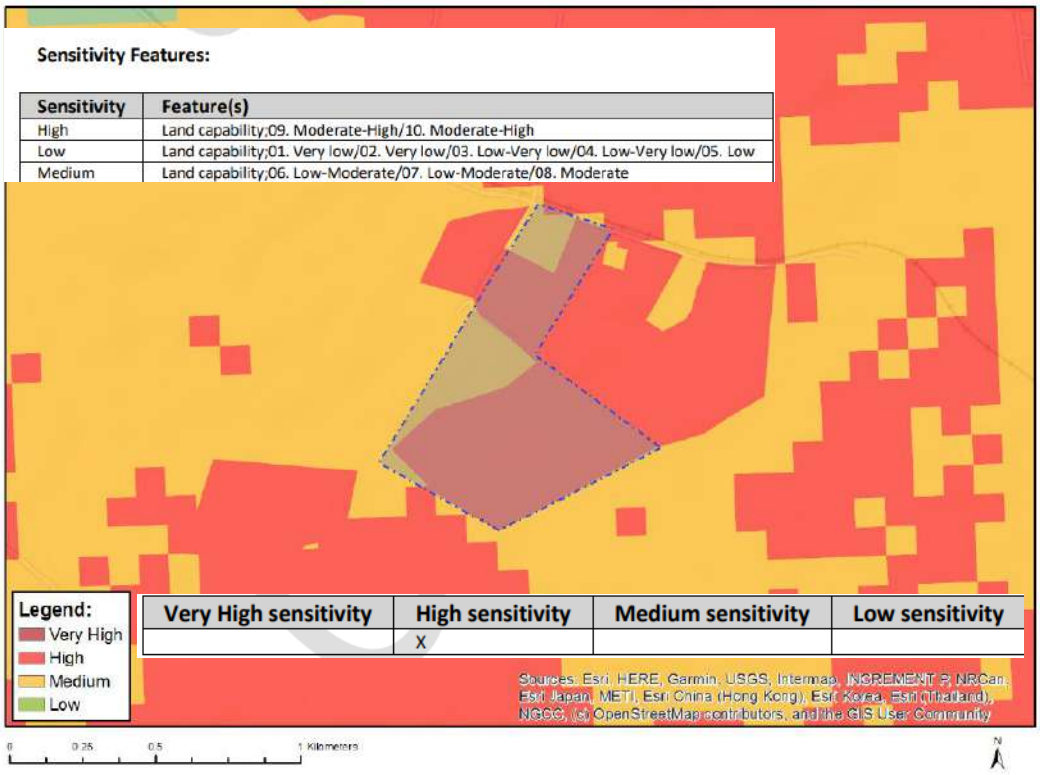


Figure 29: Agriculture theme sensitivity map of portions 64 & 72 of the farm Elandspruit 291 JS

14.5 Surface water

Mpumalanga is divided into the following four Water Management Areas: Olifants, Inkomati-Usuthu, Pongola-Mtamvuna and Vaal.

The hydrological map below illustrates possible surface water bodies that can be found within and or around the project area. As seen in the figure below, the prospecting area has a non-perennial river (Spookspruit), and channelled valley bottom wetland bordering it on the southern boundary. The prospecting area has a seep wetland within 100m of the boundary.

The prospecting area falls within the Olifants Water Management Area (WMA). The farm portions of the prospecting right fall within the quaternary catchment B11J. The WR2012 study, presents hydrological parameters for each quaternary catchment including area, mean annual precipitation (MAP) and mean annual runoff (MAR). Based on the WR2012 study, the project area falls within the quaternary catchment B11J. The total catchment area of B11J is 246 km2 with MAP of 695 millimetre (mm). Figure 31 below illustrates the Quaternary catchment and the Water Management Area (WMA).

According to the screening report generated for the proposed development footprint, the aquatic biodiversity theme sensitivity is low throughout the proposed prospecting area. The boundary of portion 64 is bordered by the Spookspruit, this is where the aquatic biodiversity is observed to be very high. The features include aquatic CBA, wetlands and estuaries.

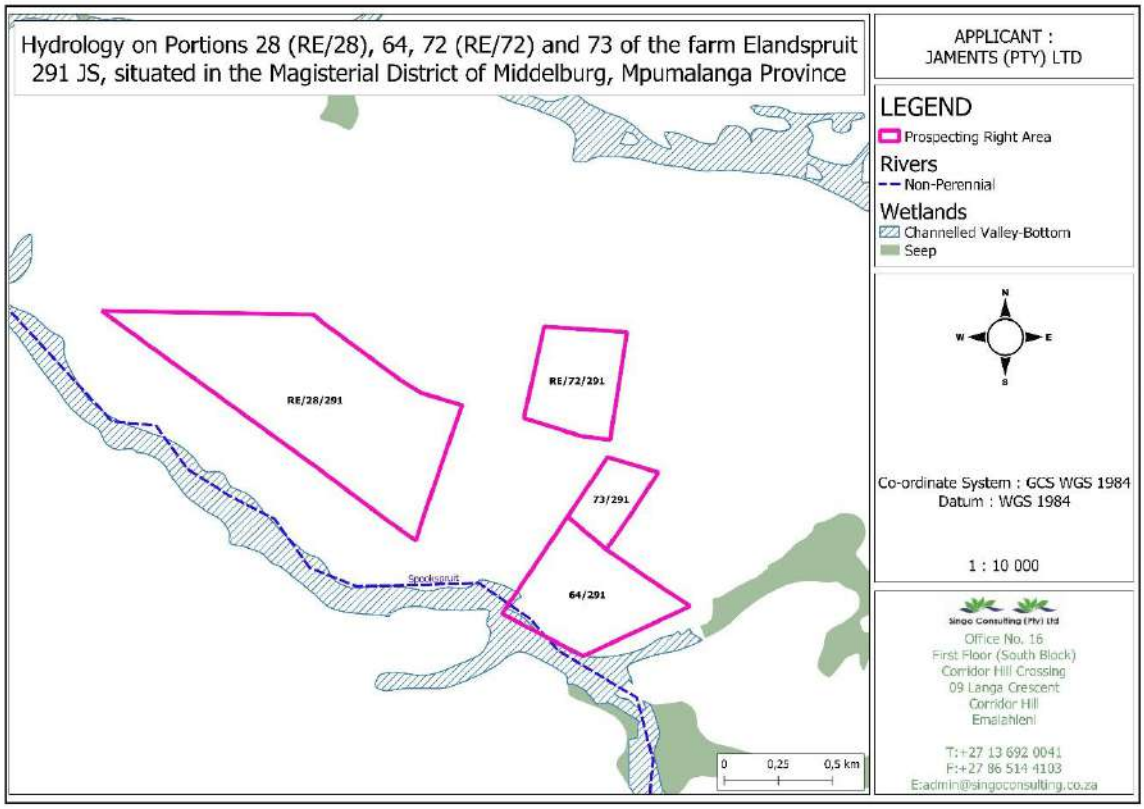


Figure 30: Hydrology on the proposed prospecting area

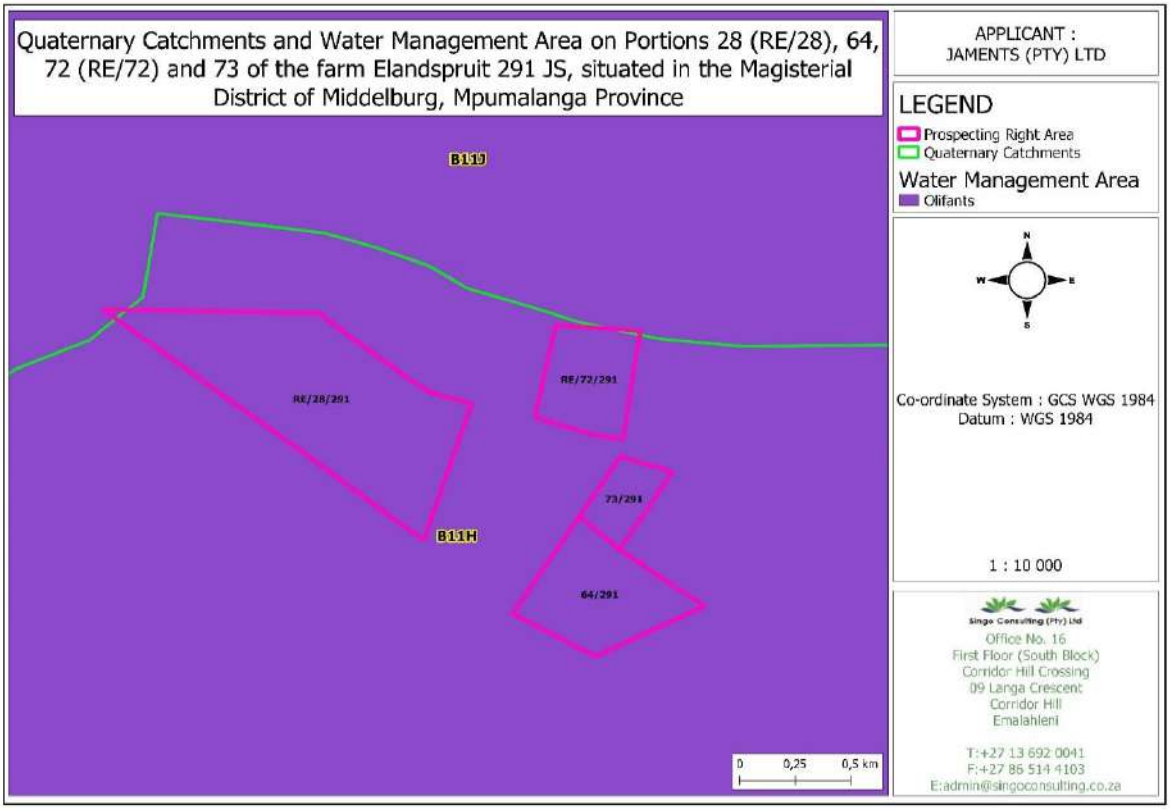


Figure 31: Quaternary catchment and water management area of the proposed prospecting area.

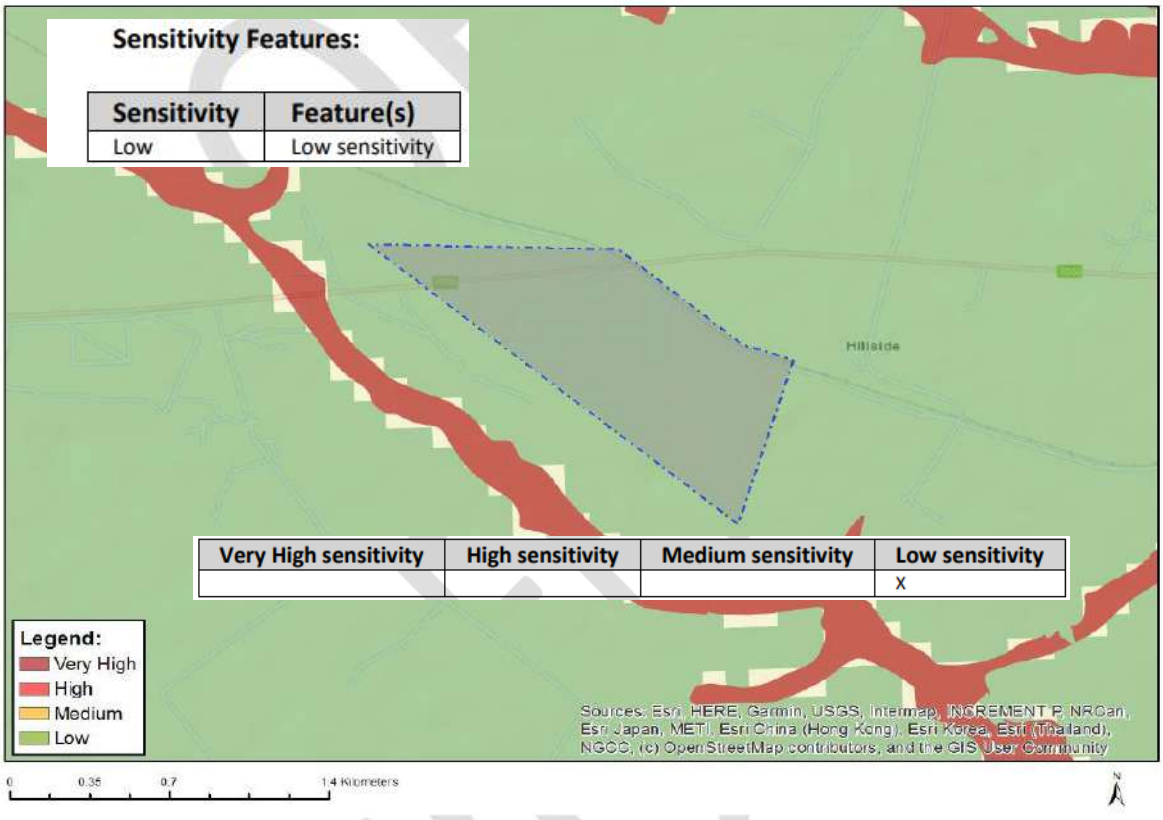


Figure 32: Map of relative aquatic theme sensitivity on portion 28

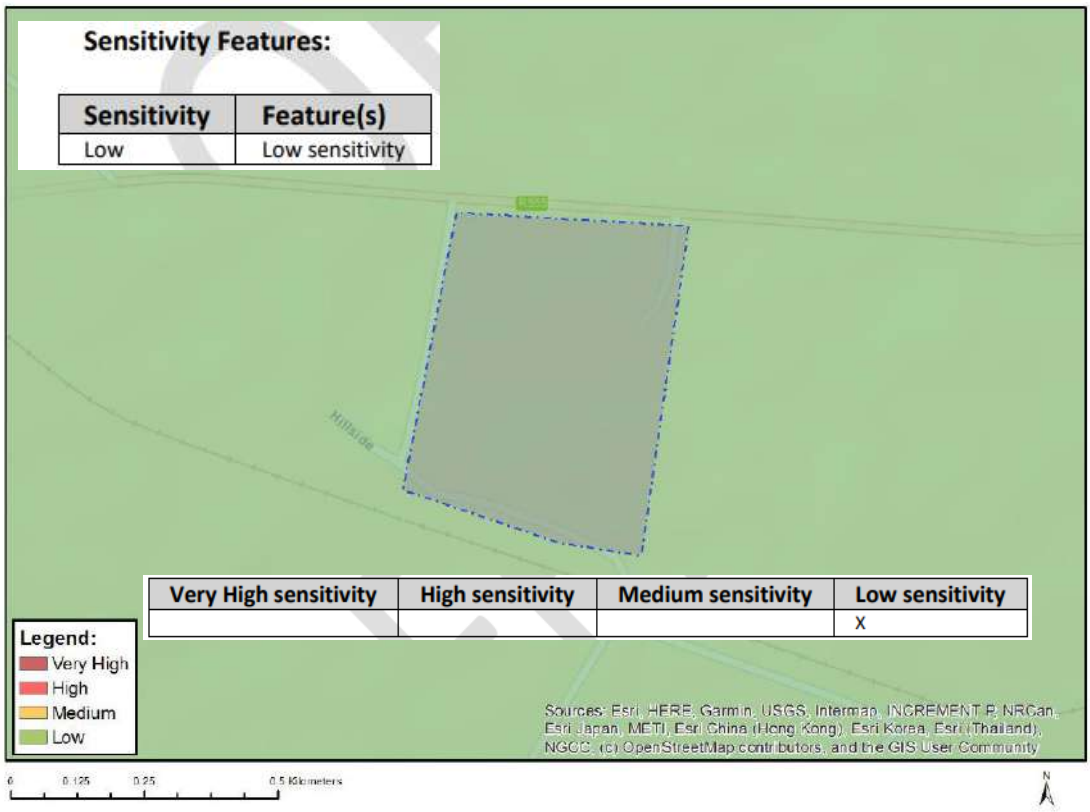


Figure 33:Map of relative aquatic theme sensitivity on portion 72

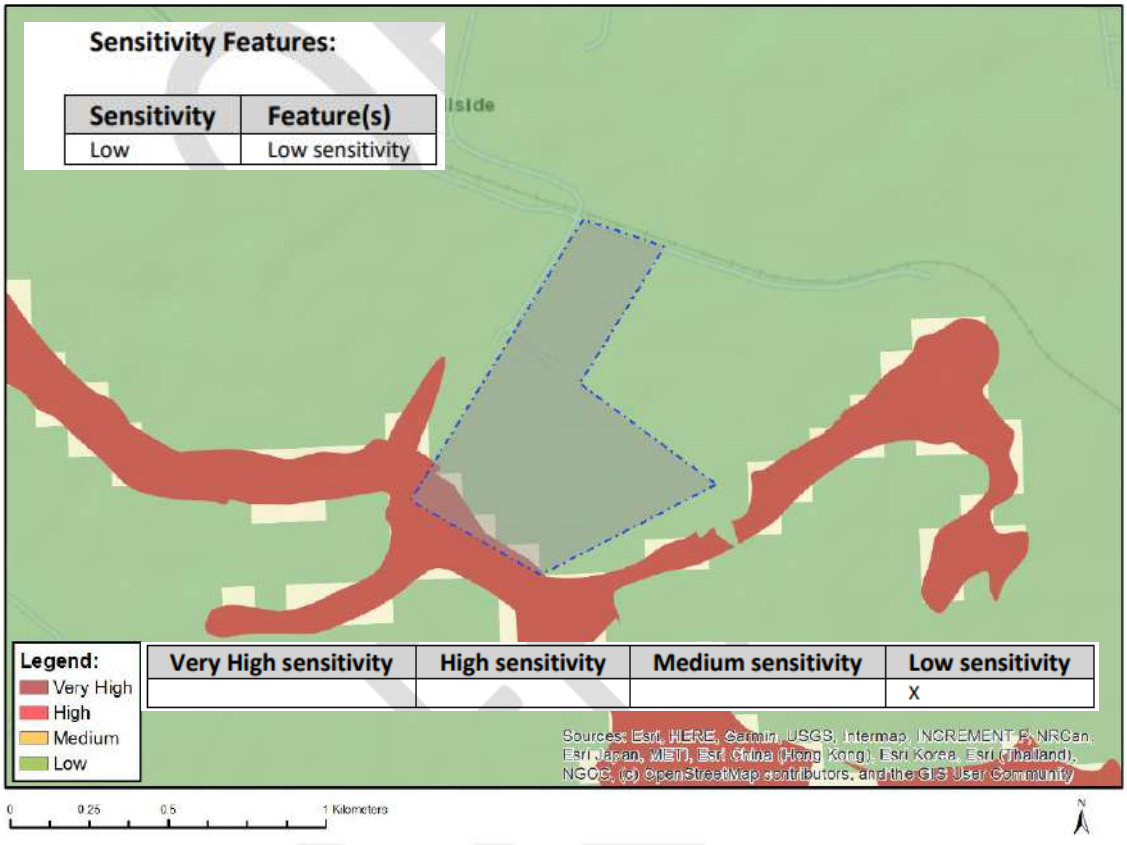


Figure 34:Map of relative aquatic theme sensitivity on portion 64 & 72

14.6 General vegetation

The vegetation type found in the project area is categorized as a Moist-sandy Highveld Grassland and Rocky Highveld Grassland, which is defined by the Grassland Biome, as shown in the figure below.

The Grassland Biome is found mainly on the high central plateau of South Africa, and the inland areas of KwaZulu-Natal and the Eastern Cape. The topography is mainly flat and rolling but includes the escarpment itself. Altitude varies from near sea level to 2 850 m above sea level. Grasslands (also known locally as Grassveld) are dominated by a single layer of grasses. The amount of cover depends on rainfall and the degree of grazing. Trees are absent, except in a few localized habitats. Geophytes (bulbs) are often abundant. Frosts, fire, and grazing maintain the grass dominance and prevent the establishment of trees (SANBI, 2013).

Rocky Highveld grasslands also described by Ackocks (1988) as Bankenveld (veldtype 61) depict a landscape and topography that is dominated by grasslands and interspersed with rocky outcrops. Dry Highveld grasslands are fundamentally different from all the other grassland ecosystems, largely due to their significantly different climate. Even though the winters are cold and frosty, the defining climatic difference is the low and highly variable summer rainfall. In this semi-arid ecosystem, water and not the duration and temperature of the growing season is the limiting factor to growth.

According to the screening report generated for the proposed development footprint, majority of the proposed prospecting area falls within a medium sensitivity for the relative plant species theme sensitivity. The features include the plant species *Pachycarpus suaveolens* and *Brachycorythis conica subsp. Transvaalensis.* These plant species were not observed during the site assessment.

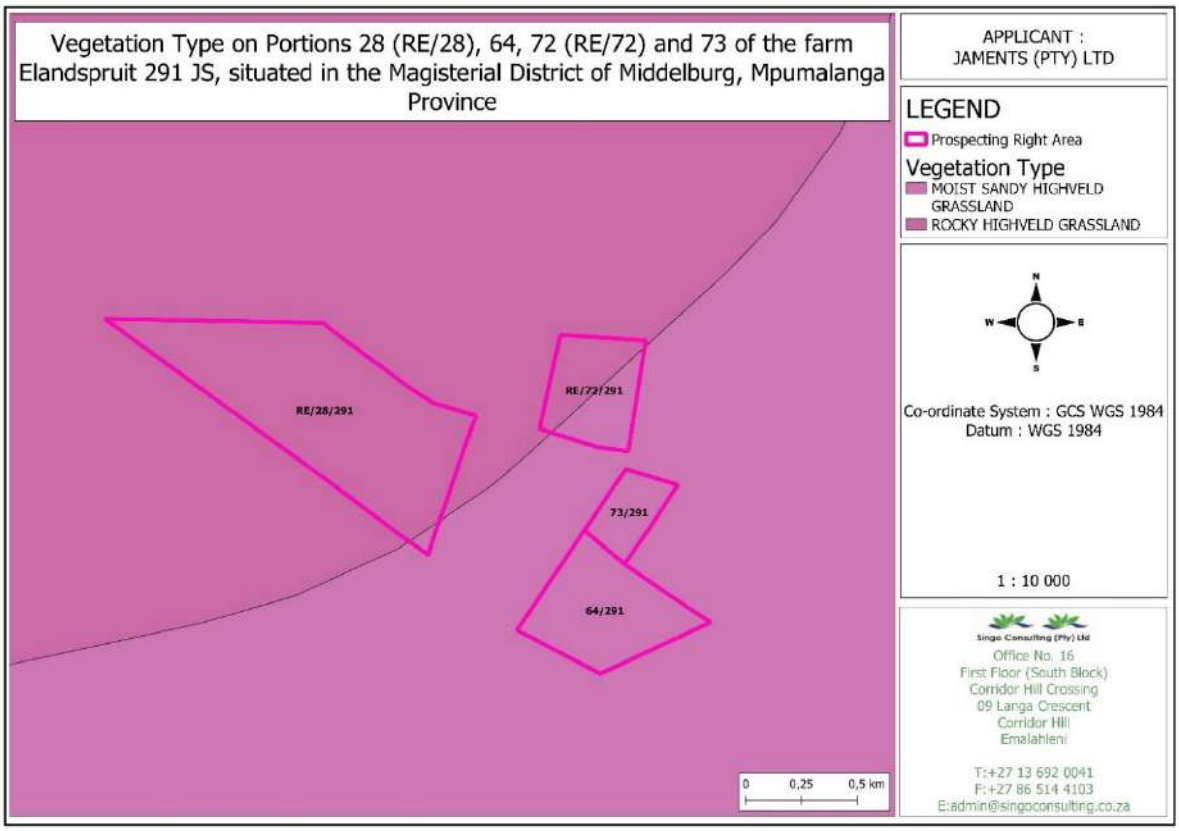


Figure 35: Vegetation type map for proposed prospecting area

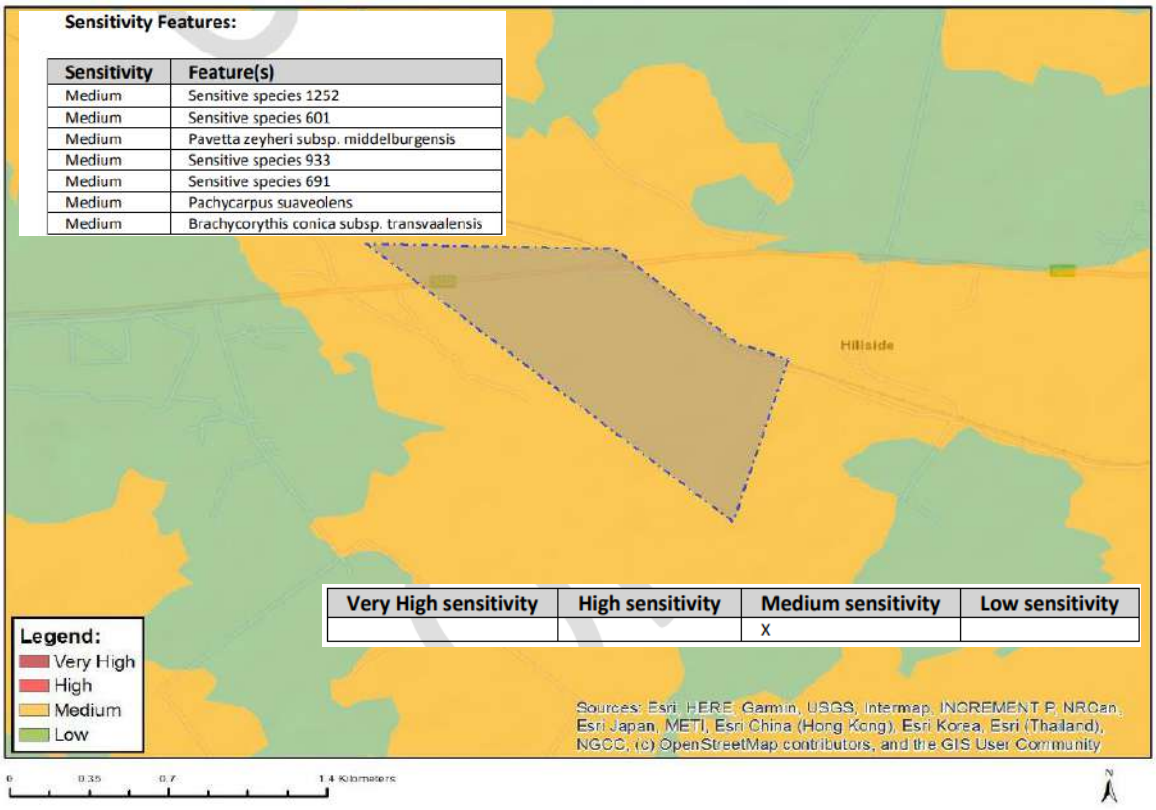


Figure 36: Map of relative plant species theme sensitivity on portion 28

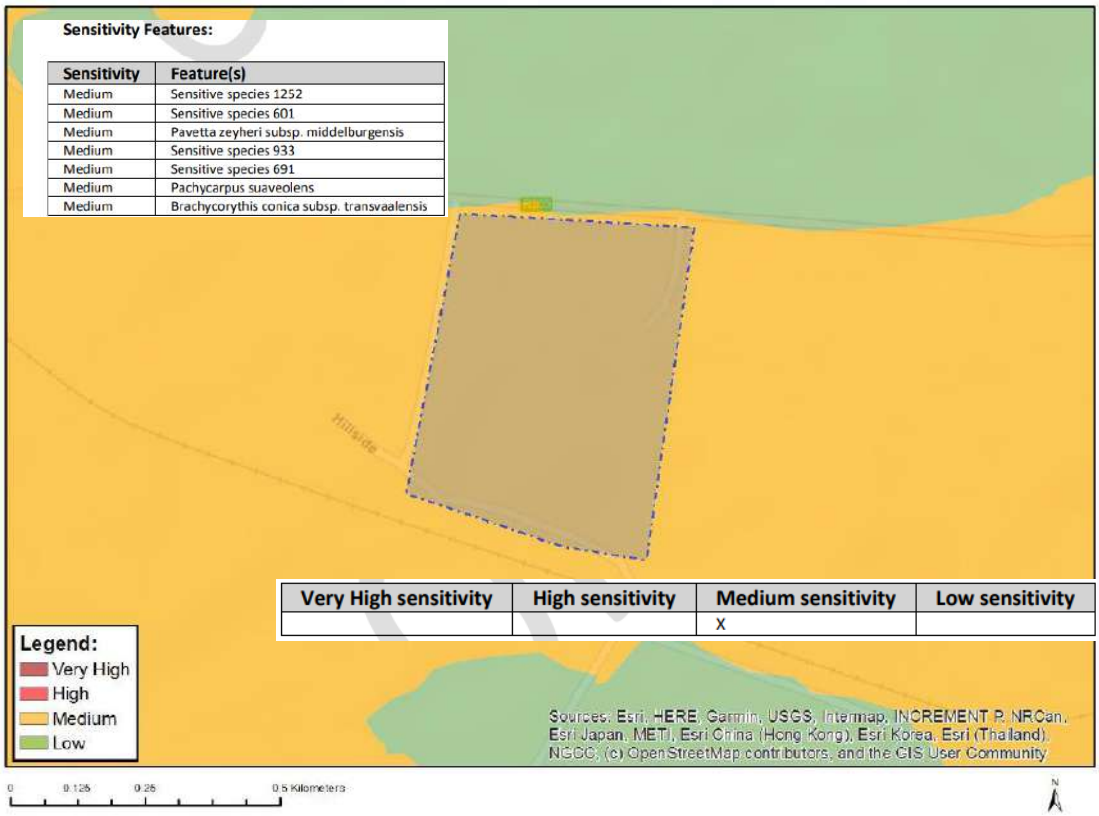


Figure 37: Map of relative plant species theme on portion 73

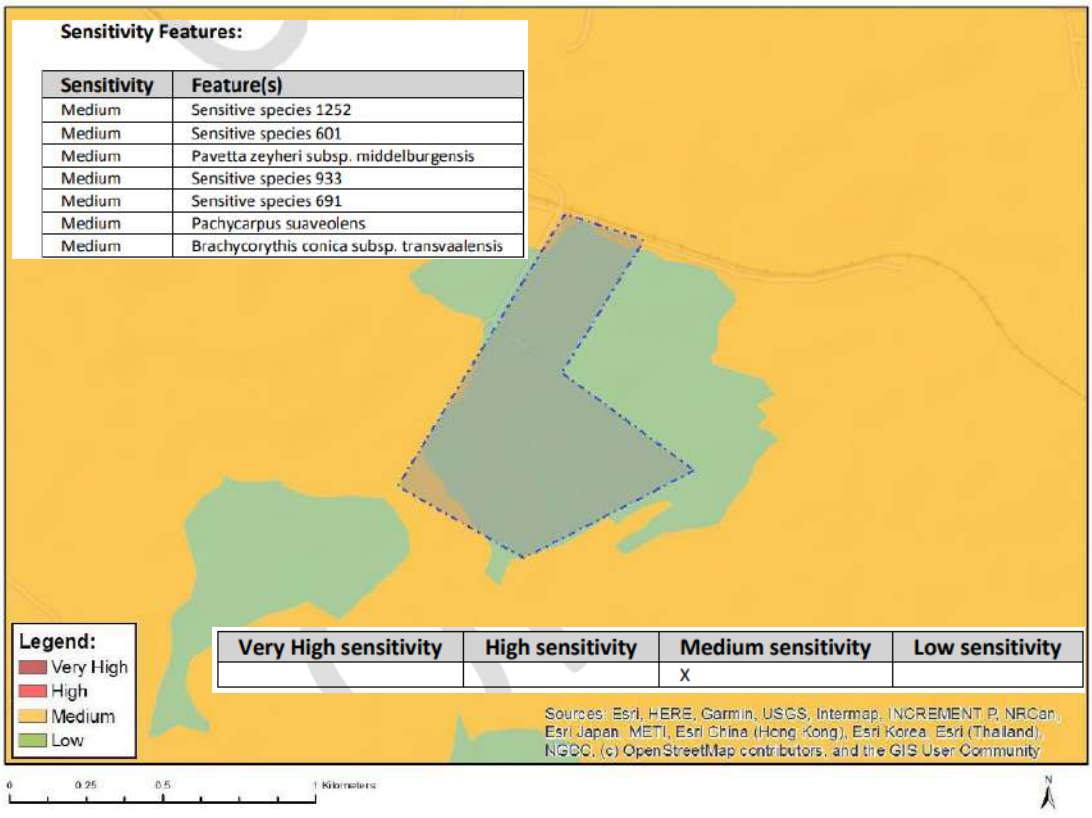


Figure 38: Map of relative plant species theme on portions 64&73

14.7 Biodiversity

Biodiversity defines the variety of life in a region, including the number of different species, the genetic richness within each species, their interrelationships with the natural areas in which they occur. The proposed prospecting are falls within other Natural Area, Critical Biodiversity Area (CBA) and heavily or moderately modified area. This can be seen in the map produced by an inhouse Singo Consulting GIS specialist in figure 35.

A field survey of the proposed prospecting area was conducted on the 09th of September 2021, the site was recorded to have been modified & transformed in some parts, predominantly by agricultural activities (grazing) and residential houses leaving significant amount in its natural state. The plantations surround the farmhouses. As though it might be, the likelihood of occurrence of the sensitive vegetation will not be overlooked. The proposed development will involve the drilling a total of fifteen (15) prospecting boreholes, which will be distributed across the study area in areas where accessibility via a drilling rig will be possible. This includes modified, transformed and less vegetated areas. There will be no removal of protected trees or indigenous trees and if these species are identified within the study area during the construction/prospecting phase of the proposed development, should it be authorised, due care must be taken to not disturb these species, or their habitat.

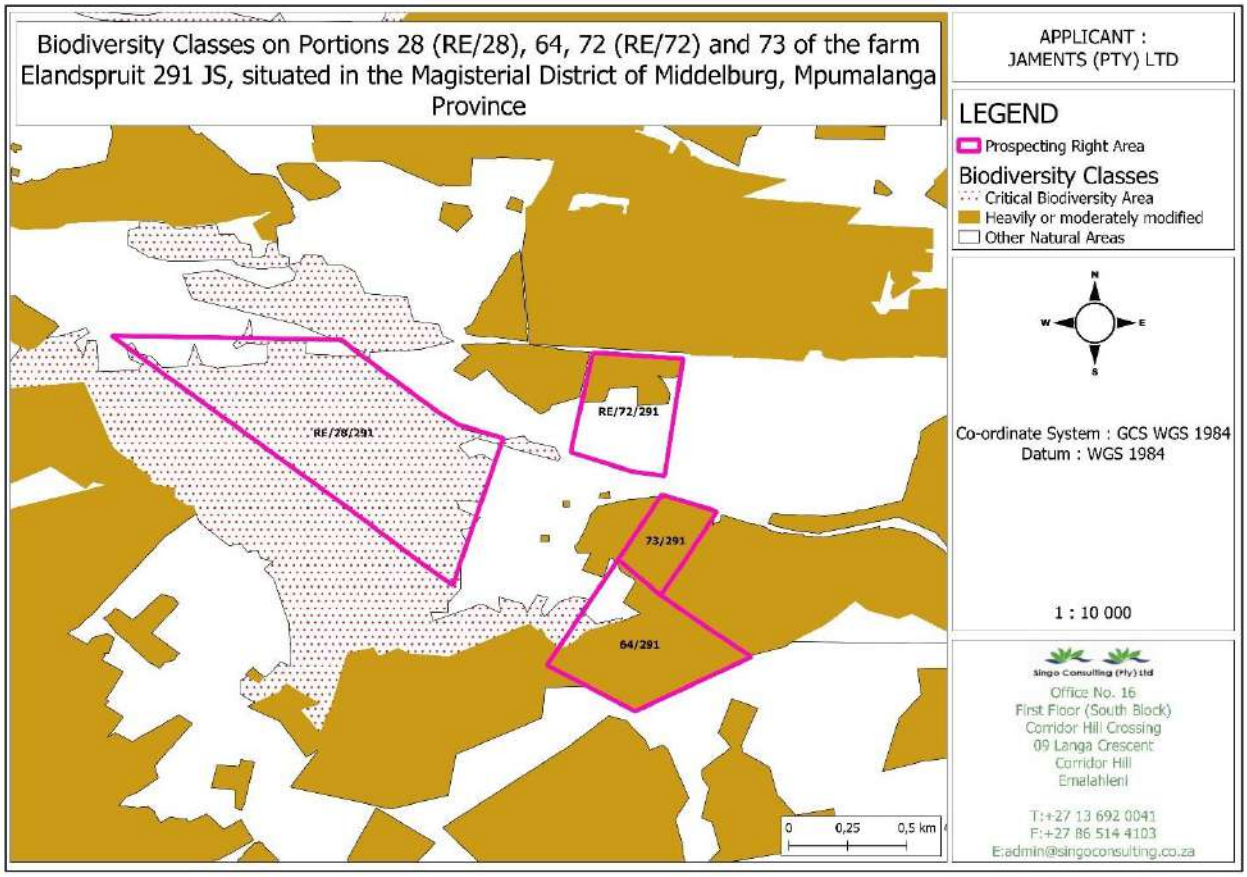


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Figure 39: Biodiversity classes on the proposed prospecting area

Subsequent to the biodiversity map produced in-house, the Mpumalanga Tourism and Parks Agency was consulted, this facilitated the EAP obtaining sensitivity maps. Below, in figures 36, 37 and 38, are the outcomes of this consultation. Figure 40 indicates the Mpumalanga Biodiversity Sector Plan (MBSP) terrestrial landcover which includes heavily modified areas, moderately modified old lands, and CBA optimal. According to the information provided by the Spatial Development Framework, activities such as prospecting are allowed in a CBA, as the associated impacts have a lower significance and rehabilitation will take place concurrently. Figure 41 indicates the Mpumalanga Biodiversity Sector Plan (MBSP) freshwater assessment conducted in 2019 which reveals that there are Ecological Support Area (ESA): Wetland clusters along the watercourse.

The recommendation here will be that the applicant consider this a no-go area with a buffer of 100m.

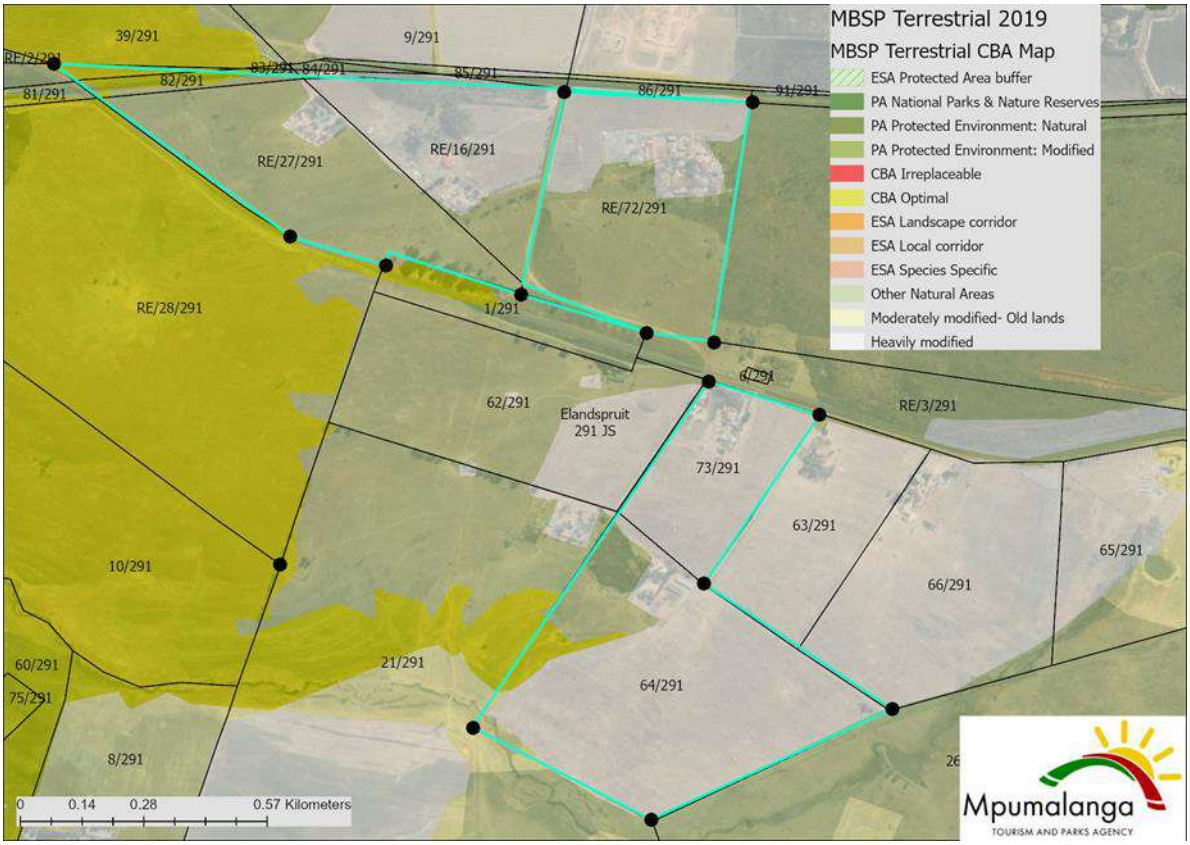


Figure 40: MBSP terrestrial map 2019

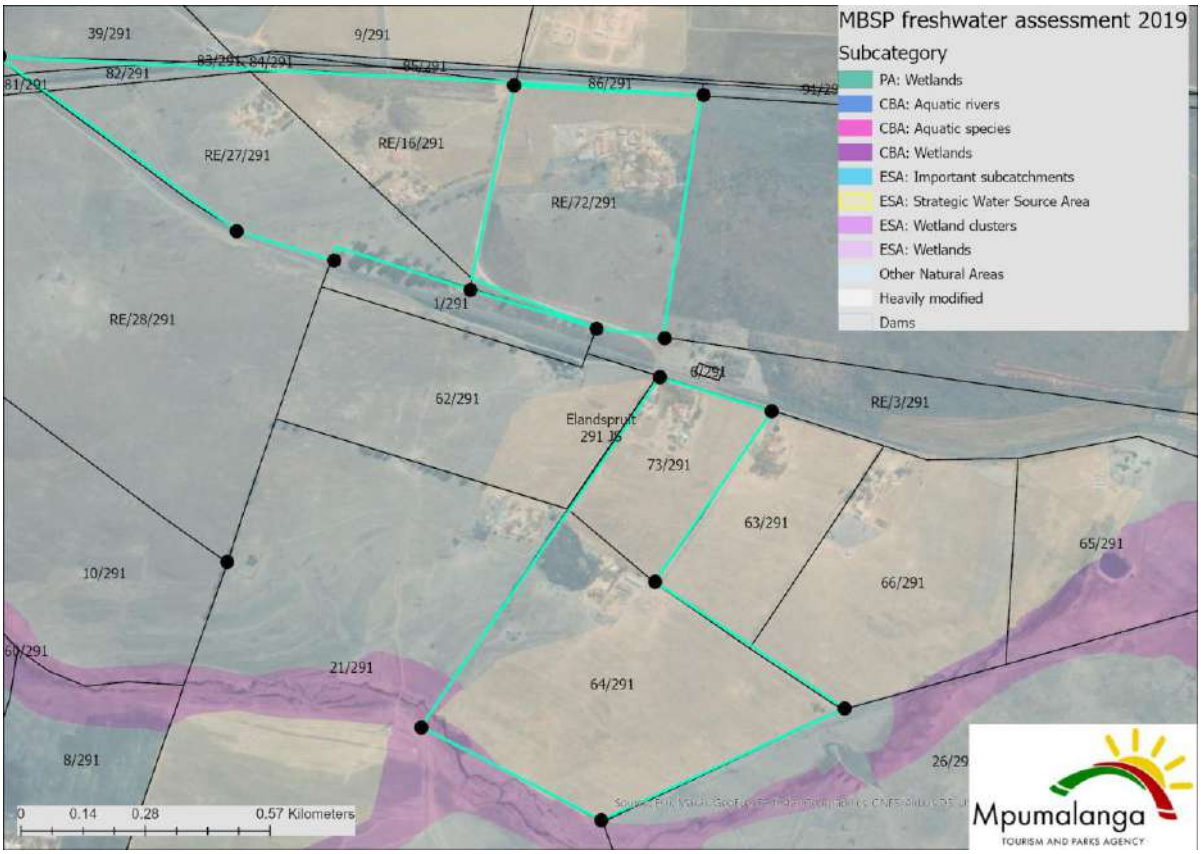


Figure 41: MBSP freshwater assessment 2019

According to the screening report developed for the development footprint of the proposed prospecting right application, the terrestrial biodiversity theme sensitivity is very high. The features reveal that the prospecting right area falls within a vulnerable ecosystem. Refer to the figures below.

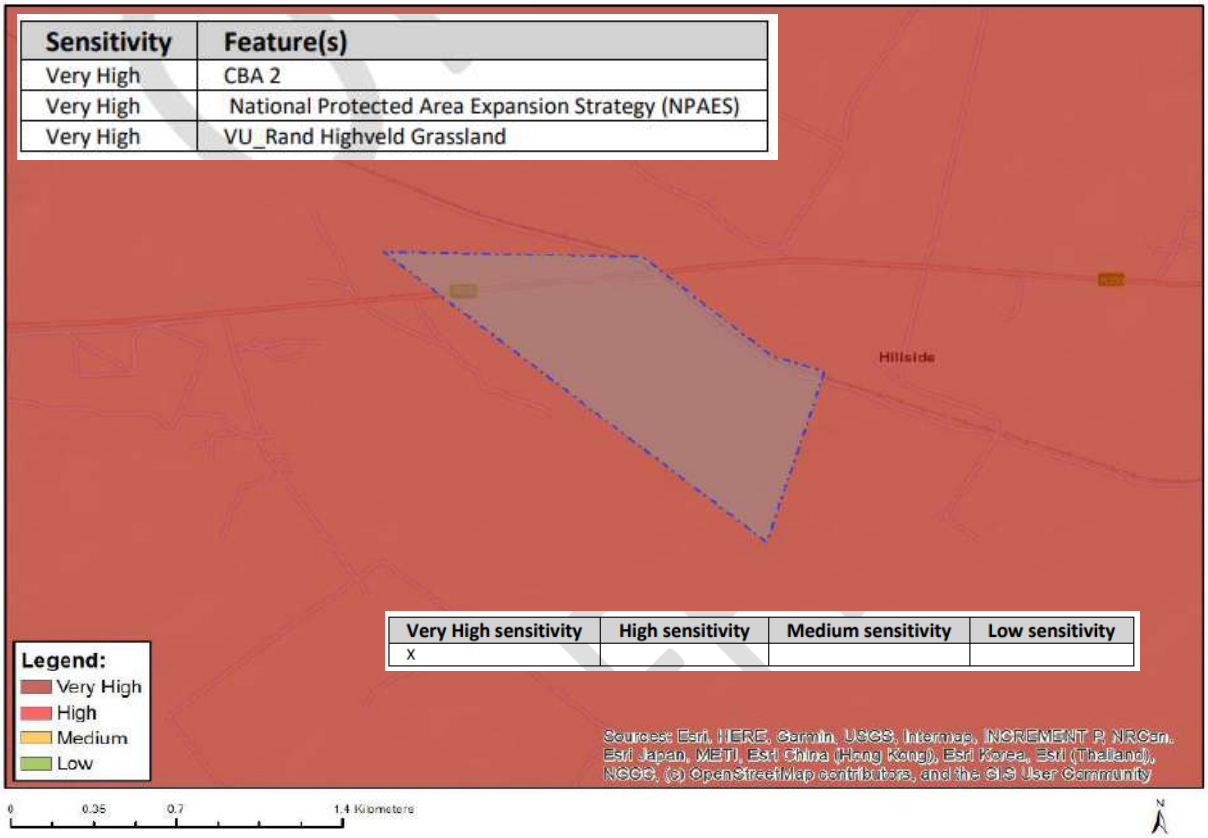


Figure 42: Map of relative terrestrial biodiversity on portion 28

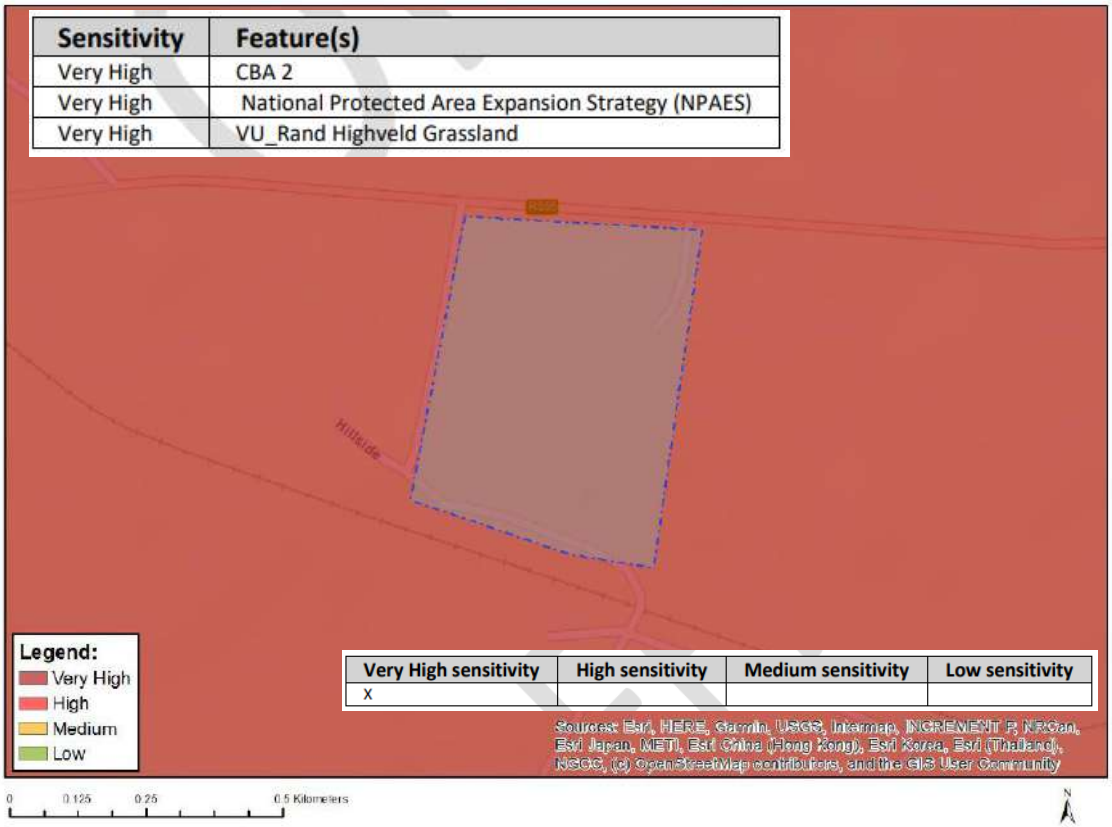


Figure 43: Map of relative terrestrial biodiversity theme sensitivity on portion 72

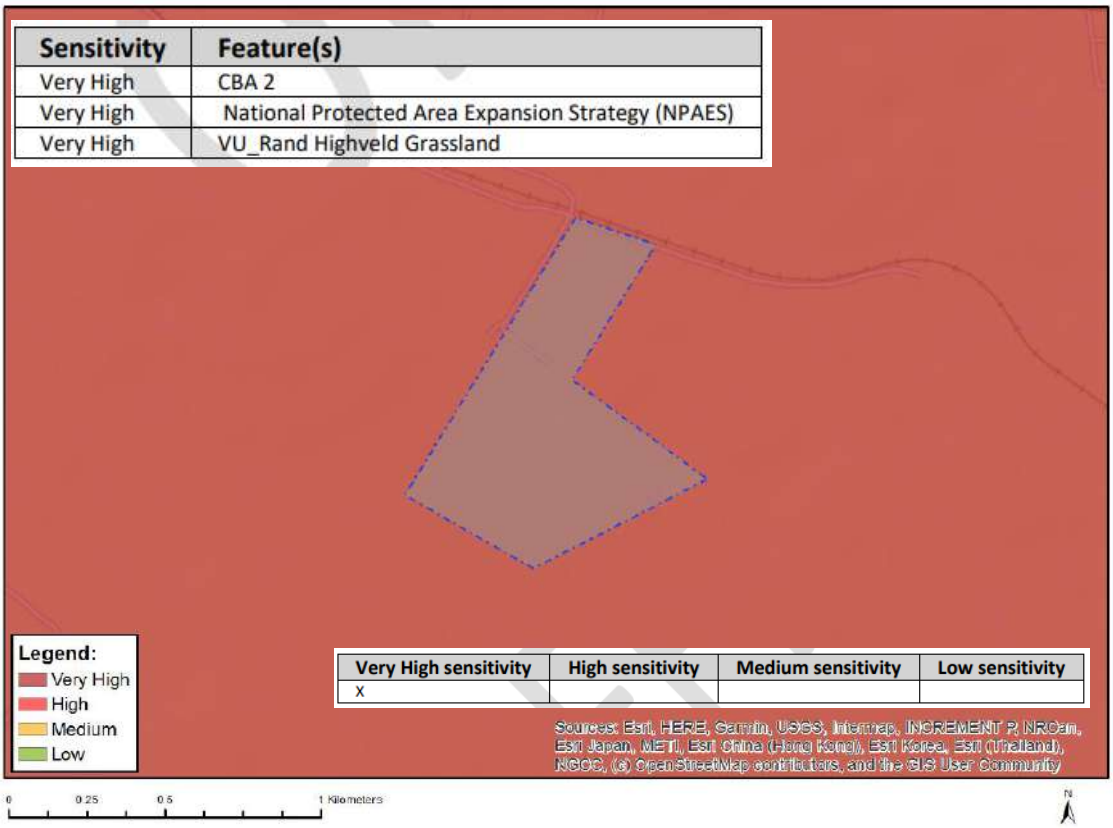


Figure 44: Map of relative terrestrial biodiversity theme sensitivity on portion 64 & 72

14.8 Geology

The proposed project area follows under the main Karoo supergroup. The geology of the study site is characterized by Loskop Formation. Karoo Supergroup. The sedimentary part of the Karoo Supergroup is subdivided into four main lithostratigraphic units, which from the base up are the Dwyka, Ecca, Beaufort and Stormberg (Molteno, Elliot and Clarens formations) groups (Johnson et al., 1996; SACS, 1980;). These are capped by some 1.4 km of basaltic lavas of the Drakensberg Group (Johnson et al., 1996; Veevers et al., 1994), the extrusion of which is related to the break-up of Gondwana (Cox, 1992). The basement to the Karoo Supergroup fills in both the MKB and in the northern basins is heterogeneous (Bordy et al., 2004a; Hancox, 1998; Rutherford, 2009) and this heterogeneity plays a significant control on the nature of the fill, particularly during the early phases of the deposition of the Karoo Supergroup.

In the Middelburg area the Rooiberg Group is overlain by a sedimentary succession which was formerly subdivided into the Loskop and Waterberg Systems (Visser and others, 1961, pp. 11-21) and which is subdivided by the present authors into the Loskop and Wilgerivier Formations respectively. The name "Loskop" is suggested because the succession under

consideration was previously known as the Loskop System in the type of area. The Loskop Formation is only developed in the Middelburg area, whereas the former Loskop System also coincides with several format ions of the Waterberg Group in the Waterberg area.

14.9 Loskop Formation

The Loskop Formation is composed of clastic sediments with minor volcanic intercalations and, in the east, overlies the Rooiberg Group with no discernible unconformity (Harmer and Armstrong, 2000). Detritus derived from the lower portions of the RLS has been identified in the Loskop Formation sediments (Martini, 1998). The fact that the RLS components intrude into the Rooiberg Group and yet RLS-derived detritus is found within sediments of the overlying Loskop Formation argues that the Rooiberg-Bushveld magmatism must have occurred over a short period of geological time (Harmer and Armstrong, 2000).

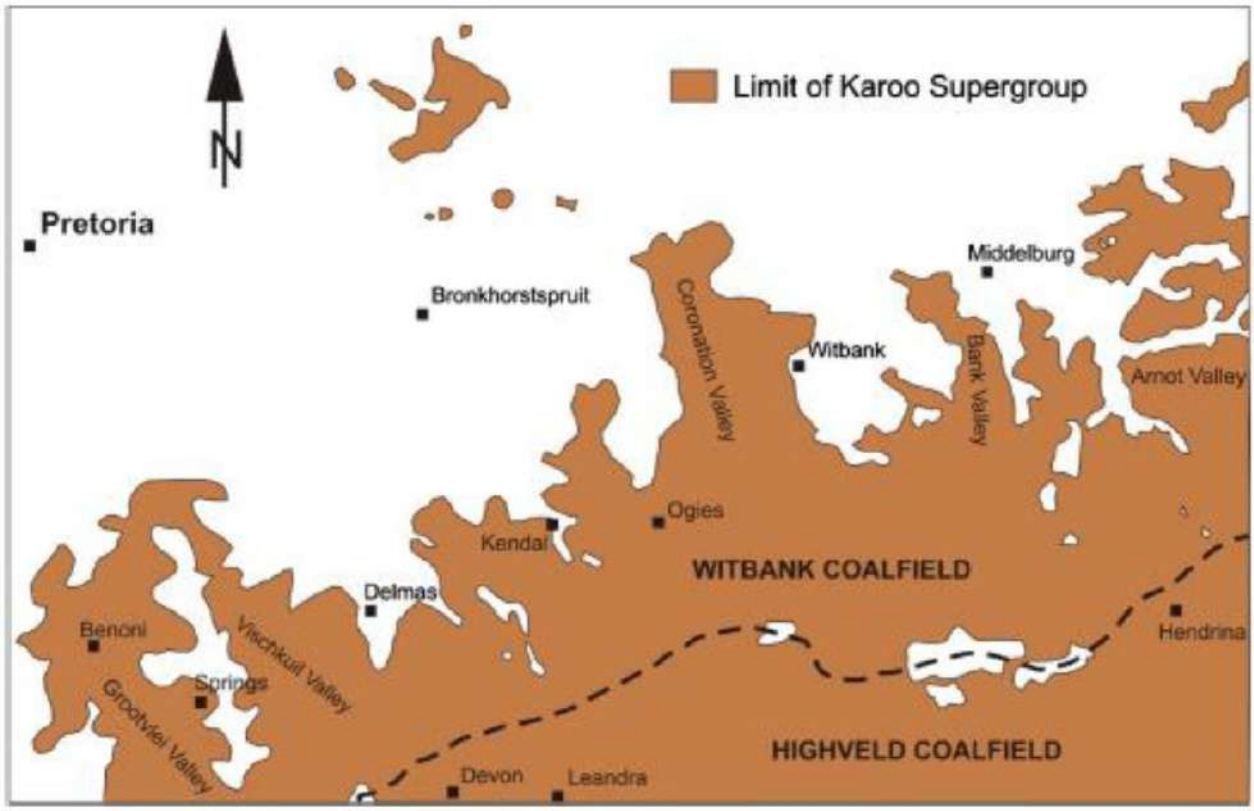


Figure 45:Geographic extent of Witbank Coalfield

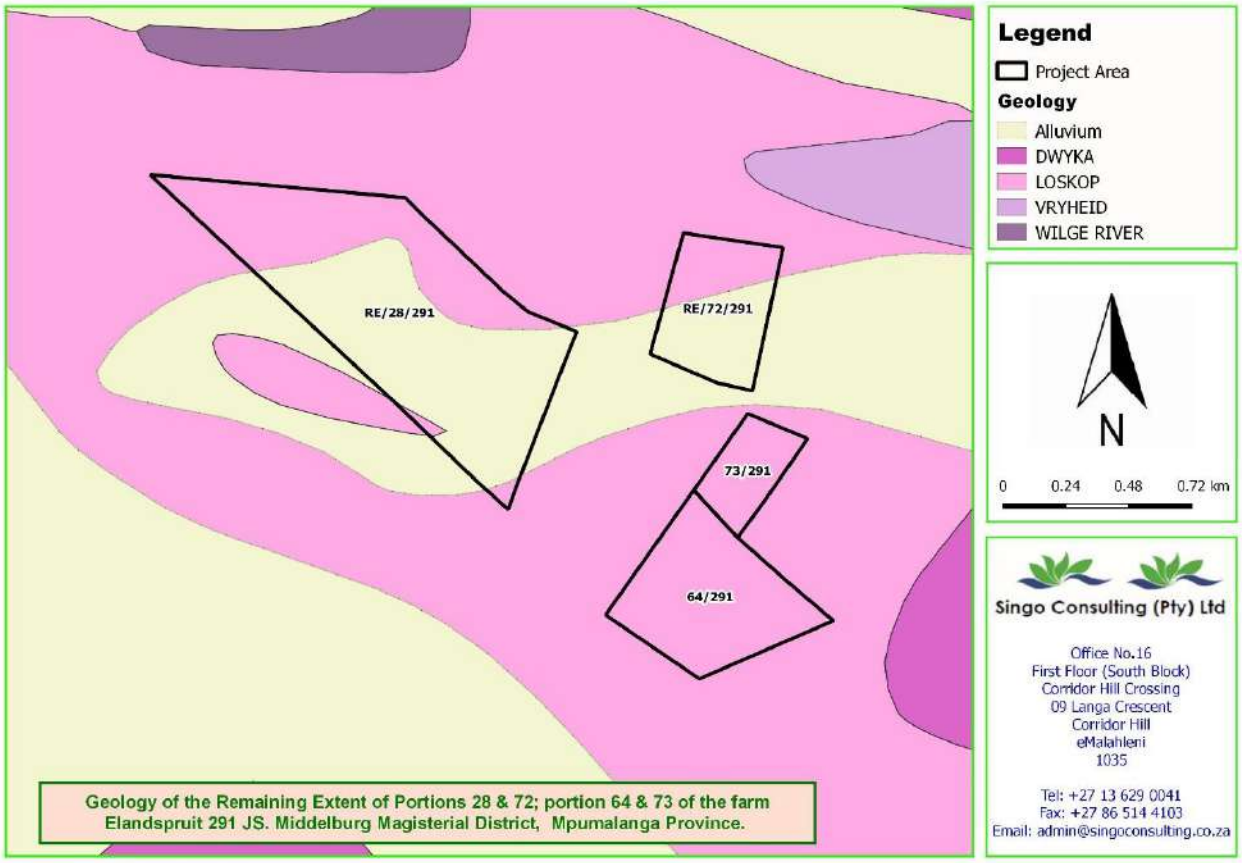


Figure 46: Geology of the area.

14.10 Groundwater

A desktop hydrogeological study was conducted to review available site specific hydrogeological and hydrological information to conceptualize the different aquifer systems and their interaction with surface water features in the area. The fractured aquifer system (~ 15 to 40m) present in the fresh rock below the weathered zone are well cemented, and do not allow significant water flow. All groundwater movement therefore occurs along secondary structures such as fractures, cracks, and joints in the rock. These structures are best developed in sandstone and quartzite; hence the better water yielding properties of the latter rock type.

Dolerite sills and dikes are generally impermeable to water movement, except in the weathered state. In terms of water quality, the fractured aquifer always contains higher salt loads than the upper weathered aquifer. The higher salt concentrations are attributed to a longer contact time between the water and rock (IGS, 2008).

The figure below illustrates aquifer classification of different areas in South Africa. It can be deduced that the project area pointed by the red arrow comprises of minor aquifers and the dominant water source is a surface water.

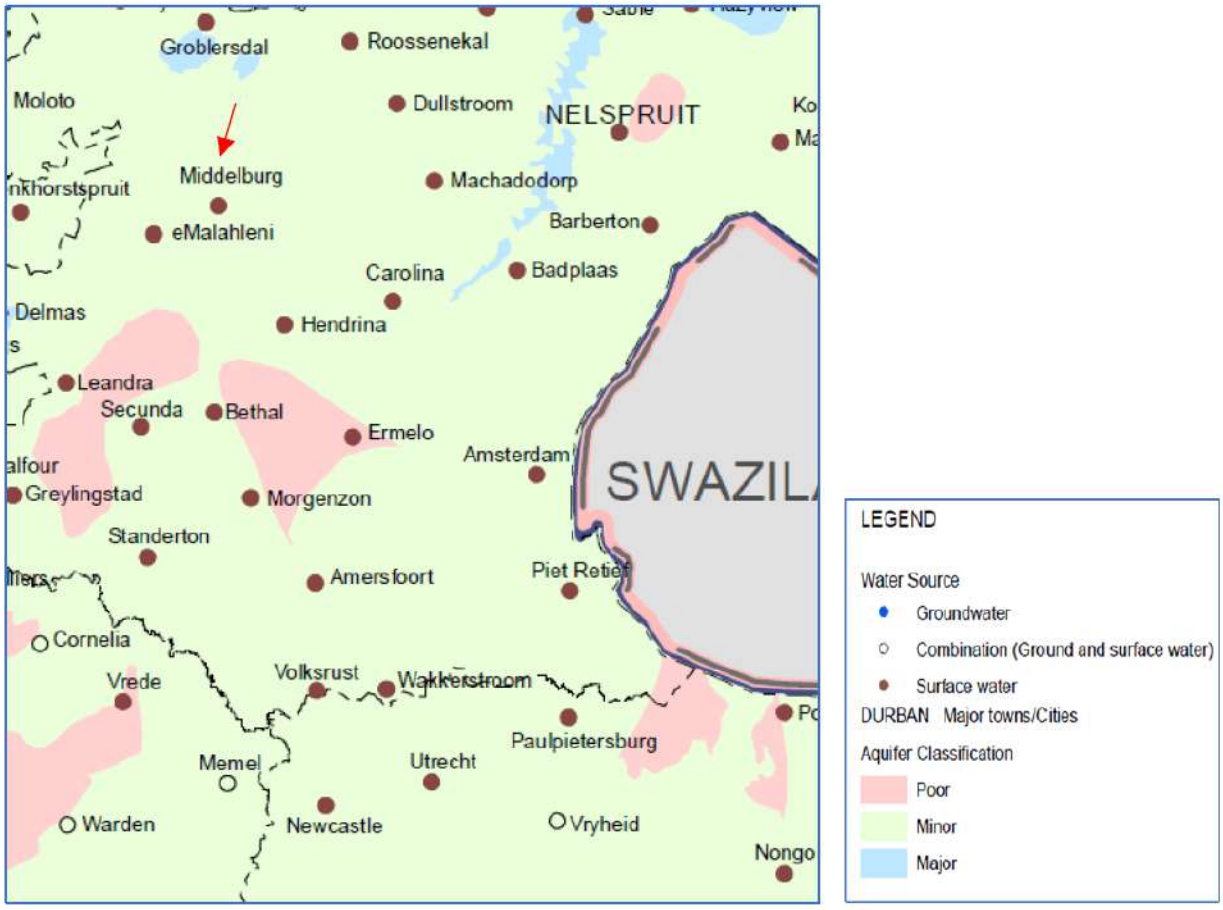


Figure 47: Aquifer classification of South Africa

Regional Groundwater Occurrence and Aquifers

Based on the geology within the study area, the structural geology, and the geomorphology, the following conditions can arise to enhance aquifer development within the study area:

- The fractured transition zone between weathered and fresh bedrock
- Fractures along contact zones between the host rocks due to heating and cooling of rocks involved with the intrusions
- Contact zones between sedimentary rocks of different types

- Interbed or bedding plane fracturing
- Openings on discontinuities formed by fracturing
- Faulting due to tectonic forces
- Stratigraphic unconformities
- Zones of deeper weathering
- Fractures related to tensional and decompressional stresses due to off-loading of overlying material
- Groundwater occurs within the joints, bedding planes and along dolerite contacts. Groundwater potential is generally low in these rocks, with 87% of borehole yields < 3 l/s.

The fractured aquifer system (~ 15 to 40m) present in the fresh rock below the weathered zone are well cemented, and do not allow significant water flow. All groundwater movement therefore occurs along secondary structures such as fractures, cracks, and joints in the rock. These structures are best developed in sandstone and quartzite; hence the better water yielding properties of the latter rock type. Ground water in the area was not analysed to determine water quality, since the prospecting activities will have an insignificant impact on the water quality and quantity.

14.11 Air Quality

Mpumalanga experiences a wide range of both natural and anthropogenic sources of air pollution ranging from veld fires to industrial processes, agriculture, mining activities, power generation, paper and pulp processing, vehicle use and domestic use of fossil fuels. Different pollutants are associated with each of the above activities, varying from volatile organic compounds and heavy metals to dusts and odours. The mining permit area is located within a region of mining activities and these activities result in a significant negative impact on air quality in the area and require specific air quality management actions to rectify the situation.

Ambient air quality in Mpumalanga is strongly influenced by regional atmospheric movements, together with local climatic and meteorological conditions. The most important of these atmospheric movement routes are the direct transport towards the Indian Ocean and the recirculation over the sub-continents (Scholes, 2002). It is these

climatic conditions and circulation movements that are responsible for the distribution and dispersion of air pollutants within Mpumalanga and between neighbouring provinces and countries bordering South Africa.

On 23 November 2007 the Highveld was declared a priority area, referred to as the Highveld Priority Area in terms of section 18(1) of the National Environmental Management: Air Quality Act 2004 (Act No 39 of 2004). This implies that the ambient air quality within the Highveld Priority Area exceeds or may exceed ambient air quality standards, alternatively, that a situation exists within the Highveld Priority Area, which is causing or may cause a significant negative impact on air quality in the area, and that the area requires specific air quality management action to rectify the situation. The area declared such includes the entire area of Victor Khanye, Emalahleni and Steve Tshwete Municipalities in Nkangala.

Existing sources of emissions in the region and the characterization of existing ambient pollution concentrations is fundamental to the assessment of cumulative air impacts. A change in the ambient air quality can result in a variety of impacts which in turn may cause a disturbance to and/or health impacts on nearby receptors. Sensitive receptor sites include residential areas, communities, and natural environments. Mining activities have the potential to result in increased levels of atmospheric dust, increased concentrations of PM10 (Particulate Matter with an aerodynamic diameter of less than 10µm) and increased concentrations of PM2.5 (Particulate Matter with an aerodynamic diameter of less than 2.5µm). Historical evidence indicates that the pollutant of concern associated with open-cast mining operations is particulate matter creating a dust source and resulting in human health concerns and nuisance.

15 IMPACTS AND RISKS IDENTIFIED INCLUDING THE NATURE, SIGNIFICANCE, CONSEQUENCE, EXTENT, DURATION AND PROBABILITY OF THE IMPACTS

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

Table 7: Ratings of significance of potential impacts.

Activity	Affected environment	Nature of Impact	Spatial Scale (7)	Duration (7)	Severity (7)	Consequence	Probability (7)	Significance (147)	Nature of Impact	Spatial Scale (7)	Duration (7)	Severity (7)	Consequence	Probability (7)	Significance (147)
		Before mitigation							After mitigation						
Construction of access roads	Soil	N	2	2	2	6	4	24	N	2	2	2	6	4	24
	Natural vegetation	N	2	2	3	7	4	28	N	2	2	2	6	4	24
	Surface water	N	4	4	4	12	4	48	N	2	3	4	9	3	27
	Air quality	N	2	2	2	6	4	24	N	2	2	2	6	4	24
Transportation of equipment	Soil	N	2	2	4	8	4	32	N	2	2	2	6	4	24
	Air quality	N	3	3	3	9	4	36	N	3	1	2	6	4	24

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

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

Activity	Affected environment	Nature of Impact	Spatial Scale (7)	Duration (7)	Severity (7)	Consequence	Probability (7)	Significance (147)	Nature of Impact	Spatial Scale (7)	Duration (7)	Severity (7)	Consequence	Probability (7)	Significance (147)
		Before mitigation							After mitigation						
	Air quality	N	2	3	4	9	5	45	N	1	2	2	5	3	15
	Natural vegetation	N	2	6	4	12	5	60	N	1	2	3	6	3	18
	Animal life	N	2	4	6	12	4	48	N	1	3	2	6	3	18
Construction of surface infrastructure	Soil	N	2	6	4	12	5	60	N	1	2	3	6	3	18
	Land capability	N	2	6	4	12	5	60	N	1	2	3	6	3	18
	Surface water	N	4	5	5	14	4	56	N	3	3	1	7	3	21
	Groundwater	N	4	5	5	14	4	56	N	3	3	1	7	3	21
	Air quality	N	2	3	4	9	5	45	N	1	2	2	5	3	15
	Natural vegetation	N	2	6	4	12	5	60	N	1	2	3	6	3	18
	Animal life	N	2	4	6	12	4	48	N	1	3	2	6	3	18
	Noise	N	3	2	3	8	6	48	N	2	2	2	6	3	18
Waste generation, disposal and	Soil	N	2	6	4	12	4	48	N	1	2	3	6	3	18
	Land capability	N	2	6	4	12	4	48	N	1	2	3	6	3	18

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

16 METHODOLOGY USED IN DETERMINING AND RANKING THE NATURE, SIGNIFICANCE, CONSEQUENCES, EXTENT, DURATION AND PROBABILITY OF POTENTIAL ENVIRONMENTAL IMPACTS AND RISKS

Describe how the significance, probability, and duration of the aforesaid identified impacts that were identified through the consultation process was determined to decide the extent to which the initial site layout needs revision.

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

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

Table 8: Impact severity rating.

Category	Description/definition
High	Impacts will be of high significance if one of the following applies: ❖ The extent is national to international ❖ The duration is long term to permanent ❖ The severity will be high ❖ Probability is definite
Moderate	Impacts will be of moderate significance if one of the following applies: ❖ The extent is local to regional ❖ The duration is medium to long term ❖ The severity is major

	❖ The probability is highly probable
Low	Impacts will be of low significance if one of the following applies: ❖ The extent is local ❖ The duration is temporary to permanent ❖ The severity is low ❖ The probability is probable
Very low	Impacts will be of very low significance if one of the following applies: ❖ The extent is site-specific ❖ The duration is temporary to permanent ❖ The severity is very low ❖ The probability is improbable
No impacts	A potential concern of impact which, upon evaluation, is found to have no impact.

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

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

The matrix calculates the rating out of 75 then converts it to a percentage. The percentage is the figure quoted in the matrix. The weight assigned to the various parameters for positive and negative impacts is presented in Table 9.

Table 9: Impact severity.

Rating	Severity		Spatial scale	Duration	Probability
	Environmental	Social/cultural heritage			
7	Very significant impact on the environment. Irreparable damage to highly valued species, habitat or ecosystem. Persistent severe damage.	Irreparable damage to highly valued items of great cultural significance or complete breakdown of social order.	International	Permanent to mitigation	Certain/ definite
6	Significant impact on highly valued species, habitat or ecosystem.	Irreparable damage to highly valued items of cultural significance or breakdown of social order.	National	Permanent mitigated	Almost certain/ high probability
5	Very serious, long- term environmental impairment of ecosystem function that may take several years to rehabilitate.	Very serious widespread social impacts. Irreparable damage to highly valued items.	Province/ region	Project life (The impact will cease after the operational life span of the project)	Likely
4	Serious medium term environmental	On-going serious social issues. Significant	Municipal area	Long term (6-15 years)	Probable

Rating	Severity		Spatial scale	Duration	Probability
	Environmental	Social/cultural heritage			
	effects. Environmental damage can be reversed in less than a year.	damage to structures/items of cultural significance			
3	Moderate, short-term effects but not affecting ecosystem function. Rehabilitation requires intervention of external specialists and can be done in less than a month.	On-going social issues. Damage to items of cultural significance.	Local	Medium term (1-5 years)	Unlikely/ low probability
2	Minor effects on biological or physical environment. Environmental damage can be rehabilitated internally with/ without help of external consultants.	Minor medium-term social impacts on local population. Mostly repairable. Cultural functions and processes not affected.	Limited	Short term (Less than 1 year)	Rare/ improbable

Rating	Severity		Spatial scale	Duration	Probability
	Environmental	Social/cultural heritage			
1	Limited damage to minimal area of low significance, (e.g. ad hoc spills within plant area). Will have no impact on the environment.	Low-level repairable damage to commonplace structures.	Very limited	Immediate (Less than 1 month)	Highly unlikely/ none

Table 10: Impact significance.

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

Significance		
High	108-147	
Medium-High	73-107	
Medium-Low	36-72	
Low	0-35	

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

Activity 1: Construction of phase

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

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

Table 11: Impact of construction on project area.

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

Activity 2: Storage of hydrocarbons, chemicals, fuel

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

Description: This activity involves the storage of hydrocarbons, chemicals, and fuel in the project area. There is a potential for leakages from the storage sites if adequate containment measures are not put in place. The significance of the impacts of the activity on the affected environment are potentially medium-low, with high probabilities of occurrence. A plastic container will be placed under the hydrocarbons tank to cap any spillage in the soil. A maximum of 450l of hydrocarbon/petrol/diesel will be stored on site at any given time. This is to minimise any risk or spillage.

Figure 48 : Typical tank with plastic tray to collect spillage.

Table 12: Impact of hydrocarbon, chemical and fuel storage.

Phase impact occurs (C, O, D)	Affected environment	Nature of Impact (Negative/Positiv	Spatial Scale (7)	Duration (7)	Severity (7)	Consequence	Probability (7)	Significance (147)	Significance rating (pre-mitigation)
C,O,D	Soil	N	2	5	3	10	5	50	Medium-Low
C,O,D	Land capability	N	2	5	3	10	5	50	Medium-Low

C,O,D	Surface water	N	4	5	5	14	4	56	Medium-Low
C,O,D	Ground water	N	4	5	5	14	4	56	Medium-Low
C,O,D	Natural vegetation	N	2	5	3	10	5	50	Medium-Low
C,O,D	Animal life	N	2	4	6	12	4	48	Medium-Low

Activity 3: Temporal fence

Impacted environment: Visual and animal life.

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

Table 13: Impact of temporal fence.

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

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

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

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

Table 14: Impact of topsoil removal and storage.

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

C,O,D	Cultural heritage/ archaeology	N	4	5	5	14	5	70	Medium-Low
C,O,D	Noise	N	3	2	3	8	6	48	Medium-Low

Activity 5: Transport of equipment

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

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

Table 15: Impact of equipment transport.

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

C,O,D	Animal life	N	2	4	6	12	4	48	Medium-Low
C,O,D	Cultural heritage/ archaeology	N	4	5	5	14	5	70	Medium-Low
C,O,D	Noise	N	3	2	3	8	6	48	Medium-Low

Activity 6: Ablutions

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

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

Table 16: Impact of ablutions.

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

Activity 7: Domestic waste

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

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

Table 17: Impact of domestic waste.

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

Activity 8: Access roads

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

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

Table 18: Impact of access roads.

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

C,O,D	Noise	N	3	2	3	8	6	48	Medium-Low

Mining

The establishment of a mining activity in the region will permanently alter the geology of the region as more resources are being mined and could be mined in the future. The project is still in the prospecting phase, thus the impact on the geology is insignificant as the activities are site-specific and involve drilling.

Soils, land capability and land use

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

Surface water

There is the Spookspruit stream that runs on the boundaries of the proposed prospecting area. These could be possibly affected if the 500m hydrological buffer is not maintained.

Groundwater

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

Air quality

In future, increased mining activities in the region will contribute to impacts on the ambient air quality. Vehicle movement could cause an increase in dust levels. The cumulative impact of agricultural activities on regional air quality is not considered significant since these impacts occur only at specific times of the year and during the day. Increasing mining activities in the region will be of medium-high significance. The total cumulative impacts are expected to be medium-low.

Noise

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

Flora

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

Fauna

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

Visual aspects

Drilling will have a slight impact on the visual aspects. There are, however, extensive existing impacts on the visual aspects of the area due to the presence of roads, railways and other infrastructure. The cumulative impacts can be summarised in Table 19.

Table 19: Impact of visual aspects.

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

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

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

Potential impacts that were identified during the Basic Assessment process are discussed under environmental component headings in this section. The project will not cause adverse surface disturbances as the planned prospecting activities will be managed and rehabilitation will occur. A 500 m buffer zone will be established around all rivers and water features.

Advantages

The underlying geology forms part of the Karoo supergroup and includes the Dwyka, Kwaggasnek and Loskop Formations which hosts coal. This area is best suited for prospecting of the applied mineral. Since the area was not yet being prospected, it was an added advantage for this project. There will be employment contributing to the economy and concurrent rehabilitation during prospecting activities.

Disadvantages

- Destruction of cultural heritage sites and artefacts
- Loss of soil resources
- Change of current land use
- Removal / damage of natural vegetation
- Damage to sensitive biodiversity areas
- Disturbance of, riparian habitats, wetlands, and non-perennial river.
- Contamination of surface water
- Impact on current land use
- Contamination of soils
- Air Quality Impact (Dust)
- Litter

Currently, there is no alternative layout. Jaments (Pty) Ltd will implement site changes to prevent negative effects. The invasive activities that entail the drilling of at least 15 exploration holes will have a minimal environmental and social impact as the drill site will be confined to an area of approximately 0.9 ha of the approximately 158.43 ha property. This must be viewed in the context of the entire prospecting license area under application, and it must be kept in mind that some of the identified impacts will occur for a limited time and will have localized impacts. The identified impacts can be suitably mitigated with the residual impact ratings being of low significance. After drilling activities have been completed and the drill pads rehabilitated to predrilling status, the impacts will cease to exist.

17.1 Possible mitigation measures and the level of risk

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

Mitigation measures were identified for all possible impacts even though the destruction of heritage resources is considered a high impact, therefore heritage sites will not be drilled if they are found on site. The applicant shall ensure that this Environmental Management Plan is provided to the Project Manager and any other person or organization who may work on the site. Jaments (Pty) Ltd development shall ensure that any person or organization that works on the site complies with the requirements of this Environmental Management Programme report.

ACTIVITIES	POTENTIAL IMPACT	MITIGATION MEASURES
Vegetation clearance for establishment of drill sites	Removal of / damage to natural vegetation	1) Boreholes and access tracks will be in areas that will result in minimal ground disturbance. 2) Permission will be obtained from landowners before trees are felled. 3) Where an access road is needed, the relevant occupant and owner will be consulted prior to the development of that access to ensure that consensus is reached on the matter and the access road will be rehabilitated at the end of the drilling programme. 4) Vegetation clearance will be limited to 0.06 ha per drill hole
Vegetation clearance for establishment of drill sites	Disturbance of riparian habitats or riverbanks	1) During the planning phase for each borehole, wetlands, rivers and/or streams will be identified. The prospecting programme will be designed to avoid these areas by applying a buffer zone of 500 m from wetlands, rivers and streams.

ACTIVITIES	POTENTIAL IMPACT	MITIGATION MEASURES
		2) Wetlands, rivers and streams will not be crossed, accessed, drained, dredged or filled during prospecting. 3) Areas of ecological significance will be avoided and if disturbance is required, it will be undertaken in accordance with legislation.
Vegetation clearance for establishment of drill sites	The stripping of soil, incorrect stockpiling, erosion and storm water run-off can lead to the loss of topsoil	1) Topsoil will be stripped to a depth of 250 mm from all disturbed areas and stored outside the 1:50 year flood levels of rivers and streams, within the firebreak area. 2) Topsoil will be adequately protected from being blown away or being eroded. 3) Boreholes and access tracks will be located in areas that will result in minimal ground disturbance.
Vegetation clearance for establishment of drill sites	Changes to the shape or form of the land	1) During the planning phase for each borehole, specific controls will be identified and implemented, based on site conditions.
Vegetation clearance for establishment of drill sites	Impact on current land use	1) Land disturbed will be rehabilitated to a stable and permanent form suitable for subsequent land use. 2) Exact location of drill holes and new access routes will be determined through communication with landowner
Vegetation clearance, Site establishment, Drilling activities & movement of	Destruction of cultural heritage sites and artefacts	1) Requirements of SAHRA will be adhered to 2) Potential heritage sites will be identified during the planning phase to ensure that such areas are avoided. Each prospecting site will be visited prior to any work starting to identify possible heritage sites. 3) Prospecting activities will be kept away

ACTIVITIES	POTENTIAL IMPACT	MITIGATION MEASURES
people and equipment on site		from excluded and exempted areas. 4) Where boreholes are sited in proximity to heritage sites and depending on the proximity to the drilling site, appropriate measures such as flagging, pegging or installation of temporary fencing will be undertaken to ensure that the site is not impacted on during prospecting.
Vegetation clearance for establishment of drill sites	Dust pollution	1) Dust will be effectively controlled in all areas cleared from vegetation through water spraying.
Vegetation clearance for establishment of drill sites	Storm water run-off from cleared areas could lead to siltation of surface water	1) Controls will be aimed at minimizing erosion and sediment washing from drill pads, access roads and other disturbed areas. 2) Sediment and erosion controls will be designed to prevent runoff from the prospecting site into rivers & streams. 3) Sediment and erosion controls may include cut-off trenches and drains, culverts for tracks, silt fences, rock armouring or mulching.
Workers & material on site	Contamination of soils through spills from sanitation facilities & litter	1) A chemical toilet will be used on site during prospecting and will be used in such a way as to prevent water pollution. The use of a chemical toilet will be undertaken in consultation with the landowner. 2) Full or leaking toilets must be reported to the Supervisor for corrective action or replacement. 3) Prospecting areas will be maintained in a clean and tidy condition at all times.

ACTIVITIES	POTENTIAL IMPACT	MITIGATION MEASURES
		4) All waste will be collected, separated and stored in properly constructed containers with lids and removed to an approved landfill or another site according to local municipal requirements. 5) Full waste bins must be reported to the Supervisor for collection and disposal at an approved landfill.
Workers & material on site	Fire	1) Vegetation around each exploration site within a 5m radius will be kept short to create a fire management zone. 2) Collection of firewood will not be allowed. 3) Open fires will be prohibited to people involved in prospecting. 4) No burning cigarettes or matches may be thrown down within the prospecting area. A bucket with sand will be provided for the disposal of cigarettes and matches. 5) No smoking will be allowed near gas, paints or fuel storage areas. 6) Suitable welding blankets are to be used when welding or operating grinders and this equipment is to be serviced regularly. 7) Rubbish or vegetation may under no circumstances be burnt. All waste will be removed off site and disposed of at an approved landfill.
Workers & material on site	Collection of firewood, damage to property	1) Collection of firewood will not be allowed. 2) Only one drill site at any given time. All employees present at the one drill site with appropriate supervision 3) Complaints and outcomes of subsequent

ACTIVITIES	POTENTIAL IMPACT	MITIGATION MEASURES
		investigations will be recorded in a Complaints Register in the format of a spreadsheet. 4) If damage to private property occurs as a result of prospecting activities, such damage will be repaired, or owners will be compensated as appropriate.
Workers & material on site	Contribution to the economy through employment	1) Due to the nature of prospecting, employment opportunities will be minimal. The prospecting crew is small (10 people) with specialized skills. Were possible, local people will however be employed during the project. 2) Local people and businesses with appropriate skills will be identified and included in the project tender process. The applicant is committed to employ local people and businesses during the project, where possible.
Workers & material on site	Spread of HIV/Aids to farm workers and local community	1) Due to the nature of prospecting, employment opportunities will be minimal. The prospecting crew is small (10 people) with specialized skills. Were possible, local people will however be employed during the project. 2) No employees will be permitted to stay on site. 3) Aids awareness talks
Use of heavy machinery & vehicles on site for drilling	Resource consumption (diesel - non-renewable resource)	1) Vehicles and equipment to be serviced regularly and maintained in good working condition

ACTIVITIES	POTENTIAL IMPACT	MITIGATION MEASURES
Use of heavy machinery & vehicles on site for drilling	Contamination of soils through hydrocarbon leaks and spills from machinery & equipment	1) All chemicals, fuels and oils to be stored on site will be appropriately bunded. 2) Precautions will be taken to prevent spills and soil contamination. 3) Material Safety Data Sheets for the item(s) spilled will be consulted for information concerning clean-up requirements to ensure correct clean-up procedure. 4) Any contaminated soil will be collected into non-permeable bags and disposed of to an approved landfill site.
Use of heavy machinery & vehicles on site for drilling	Use of groundwater for drilling activities	1) Existing water supply locations will be identified for use and agreements will be reached with landowners regarding on-site water use. The drilling rig will require approximately 3,000l/day. However, the air flush method will be proposed instead of using water. Where a suitable water supply is not available, water will be sourced from a commercial supplier and delivered to site by water tanker. 2) If required, a water use license will be applied for to DWS for the abstraction of surface- and/or groundwater during prospecting. 3) Adequate provision will be made for storing drinking water on site in the form of 2500 litre plastic water tanks.
Use of heavy machinery &	Contamination of surface water through	1) The drilling fluid that will be used during prospecting must be biodegradable and not pose a water pollution threat.

ACTIVITIES	POTENTIAL IMPACT	MITIGATION MEASURES
vehicles on site for drilling	hydrocarbon leaks and spills from machinery & equipment	2) Drilling sumps and containment measures will be designed to contain all drilling fluid. 3) Material Safety Data Sheets for the item(s) spilled will be consulted for information concerning clean-up requirements to ensure correct clean-up procedure. 4) Any contaminated soil will be collected into non-permeable bags and disposed of to an approved landfill site. 5) Drill sites to be located 500 m from rivers & stream
Use of heavy machinery & vehicles on site for drilling	Contamination of groundwater through hydrocarbon leaks and spills from machinery & equipment	1) Machinery and equipment will only be maintained over a drip tray, a thin concrete slab or a PVC lining to prevent soil and water contamination. 2) No vehicle will be extensively repaired on site. 3) Material Safety Data Sheets for the item(s) spilled will be consulted for information concerning clean-up requirements to ensure correct clean-up procedure. 4) Any contaminated soil will be collected into non-permeable bags and disposed of to an approved landfill site.
Use of heavy machinery & vehicles on site for drilling	Compaction of soils through movement of heavy vehicles and machinery on site	1) Stay on predefined areas and routes. 2) Scarify access roads and stockpile areas to a depth of 500 mm and restore topsoil cover. 3) Re-seed or plant vegetation indigenous to the area.

ACTIVITIES	POTENTIAL IMPACT	MITIGATION MEASURES
Use of heavy machinery & vehicles on site for drilling	Damage to vegetation	1) Vehicles will only stay on dedicated roads (turning circles). 2) No movement of heavy machinery outside dedicated routes. 3) All routes and turning circles will be scarified and re-seeded with seeds from vegetation indigenous to the area.
Use of heavy machinery & vehicles on site for drilling	Release of gaseous emissions	1) Vehicles and equipment will be maintained in a good working order.
Use of heavy machinery & vehicles on site for drilling	Dust Fallout	1) Speed limits on gravel roads will be 40km/hr to minimise dust and noise generation. 2) Dust will be effectively controlled in all disturbed areas through water spraying.
Use of heavy machinery & vehicles on site for drilling	Increase in ambient noise levels	1) Speed limits on gravel roads will be 40km/hr to minimise dust and noise generation. 2) Prospecting activities will be restricted to daytime hours.
Use of heavy machinery & vehicles on site for drilling	Visual intrusion	1) Only one site to be drilled at any one time 2) Concurrent rehabilitation
Use of heavy machinery & vehicles on site for drilling	Disturbance of fauna species in the vicinity	1) Prospecting activities will be kept away from excluded and exempted areas. 2) A field survey will be undertaken before drilling commences at each drilling site to confirm that no threatened species, ecologically sensitive areas or conservation areas are present in sections to be cleared.

ACTIVITIES	POTENTIAL IMPACT	MITIGATION MEASURES
		4) One site to be drilled at a time. 5) Concurrent rehabilitation.
Use of heavy machinery & vehicles on site for drilling	Release of methane gas from exploration boreholes	1) Exploration boreholes are to be capped when no drilling work is being undertaken. 2) Exploration boreholes which will not be used during production to be sealed with cement once exploration work has been completed.
Use of heavy machinery & vehicles on site for drilling	Cross-contamination of aquifers due to borehole construction	1) For the purpose of future monitoring programmes, impact assessments and concurrent rehabilitation, the depth of water strikes will be recorded during exploration drilling. 2) The static groundwater level will be monitored in prospecting boreholes that intersected water after completion and before concurrent rehabilitation for future monitoring, impact assessment and concurrent rehabilitation purposes. 3) Any completed hole that is not required for groundwater monitoring, will be sealed to prevent groundwater contamination.
Use of heavy machinery & vehicles on site for drilling	Proliferation of invasive plant species	1) Machinery will be cleared of dust/mud and seed prior to relocation to the next site to prevent the spread of alien invasive species.
Closure		
Concurrent rehabilitation	Reducing soil compaction of disturbed area and access roads to improve	1) Remaining refuse, chemicals, fuels and waste materials will be removed from the site following the completion of the prospecting programme. Such waste will be disposed of to an approved landfill.

ACTIVITIES	POTENTIAL IMPACT	MITIGATION MEASURES
	drainage and control erosion	2) Erosion and sediment controls as well as the disturbed area will be rehabilitated 3) An inspection on whether there is evidence of weeds or pest invasion as a result of prospecting activities will be undertaken and appropriate remediation actions will be implemented as required.
Concurrent rehabilitation	Use stockpiled topsoil to close sumps	1) Scarify access roads and stockpile storage areas to a depth of 500 mm. 2) Restore topsoil cover. 3) Re-seed or plant vegetation indigenous to the area.
Close drill hole	Restoration of land use and land capability	1) Exploration boreholes are to be capped when no drilling work is being undertaken. 2) Exploration boreholes which will not be used during production to be sealed with cement once exploration work has been completed.

17.2 Motivation where no alternative sites were considered

The location of the property is in an area where the geological formation that is known to host the desired mineralisation.

17.3 Statement motivating the alternative development location within the overall site

Provide a statement motivating the final site layout that is proposed.

This is an application for prospecting without bulk sampling where a total of 15 holes will be drilled at locations determined by the geology of the site. Drill holes will be located at least 500 meters from any watercourse and 100m away from formal or informal dwelling or building structure. Since exploration is temporary in nature, no permanent structures will be constructed. Negotiations and agreements will be made with the landowner to use any existing infrastructure like access roads.

17.4 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

Include (i) a description of all environmental issues and risks that were identified during the environmental impact assessment process and (ii) an assessment of the significance of each issue and risk and an indication of the extent to which the issue and risk could be avoided or addressed by the adoption of mitigation measures.

In order to identify the potential impacts associated with the proposed prospecting activities the following steps were undertaken:

- Landowner and stakeholder consultation Environmental assessment conducted for proposed projects
- 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:

a) South African National Biodiversity Institute (SANBI) Biodiversity

b) Geographic Database LUDS system

c) Geographic Information System base maps

d) Site visits conducted. The site visit was used to ground truth the desktop information.

- 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.

18 ASSESSMENT OF EACH IDENTIFIED POTENTIALLY SIGNIFICANT IMPACT AND RISK

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

Table 20: Potential environmental impacts and mitigation measures.

Potential environmental impacts and sources	Measures to prevent, mitigate, minimise or manage the impacts
Impact: Air pollution (dust, gaseous emissions) **Source:** Establishment of camp site, movement of vehicles and drill rigs,	❖ Dust suppression measures will be implemented and the area will be sprayed with water. ❖ A low speed limit will be imposed to reduce dust generation. ❖ All equipment and vehicles will be equipped with the manufacturers' standard exhaust systems which will reduce emissions. ❖ Waste burning will not be allowed on site.
Impact: Water pollution (surface water, groundwater and wetlands) **Source:** Spillages from machines on site	Prospecting activities will not be conducted within a 100 m radius from a dam, river, stream, wetland or any water body and the following will be ensured: ❖ Control and manage storm water ❖ Prevent soil erosion and keep the water channel clean ❖ Monitor the ground water

Potential environmental impacts and sources	Measures to prevent, mitigate, minimise or manage the impacts
Impact: Land degradation, land-use and capability **Source:** Poor waste management	❖ Completed boreholes will be rehabilitated and re-vegetated. ❖ Areas which do not form part of drilling site will not be disturbed. ❖ Prospecting will be conducted in an environmentally-sustainable manner. ❖ One of the prospecting objectives is to turn the area into other land use/s after closure. ❖ Waste material will be properly managed.
Impact: Ecological degradation **Source:** Uncontrolled vehicle movement and poor rehabilitation	❖ Disturbed biodiversity will be restored after closure. ❖ Indigenous species will be used to re-vegetate the area. ❖ No animals will be killed and collection of firewood will not be allowed. ❖ Movement of vehicles will be restricted to designated area only.
Impact: Land pollution **Source:** Lack of proper waste management	• It is anticipated that a small amount of domestic waste will be generated by workers. Such waste materials will be kept in waste bins which will be disposed of on a regular basis at the registered waste disposal site. The same will apply to office waste.

Potential environmental impacts and sources	Measures to prevent, mitigate, minimise or manage the impacts
	• Any spillages which may occur will be investigated and immediate action will be taken. Significant spills (>35 l) of any hazardous substance will be recorded and reported to the environmental personnel, DWA, DMR and any other relevant authorities. • Scraps will be kept in designated areas prior delivery to the scrap yard. • All machinery will be serviced off site and also inspected for any leaks.
Impact: Aesthetic, pollution **Source:** Machinery	• The visual impact will be of temporary nature. • The surrounding trees and dense vegetation will also serve as the screen to the prospecting area.
Impact: Noise **Source:** Vehicle movements and drill rigs	• The operation will comply with the provisions of the Mine Health and Safety Act, 1996 (Act 29 of 1996) and its regulation as well as other applicable legislations regarding noise control. • Employees will be supplied with ear plugs. All prospecting vehicles are equipped with silencers and maintained in a road worthy condition. • All work will be carried out between 06:00 and 18:00. This will allow land owners and occupiers to have some respite from noise.

Table 21: Activity and potential impact in each phase.

Activity	Description	Affected environment	Potential impact
Prospecting phase			
Uploading of access roads	Access roads that already exist will be upgraded.	Soil	Increased erosion of soils due to the removal of vegetation.
		Natural vegetation	Destruction and removal of natural vegetation during site clearance.
		Surface water	Siltation of surface run-off due to soil erosion.
		Air quality	Dust emission due to wind erosion.
Transportation of equipment	The drilling operation will involve transportation of equipment to the project area.	Soil	Soil compaction due to the repetitive movement on gravel roads.
		Interested and Affected Parties	Damage to roads caused by movement of heavy vehicles and continual use of vehicles moving to and from the site.
		Air quality	Increased dust emissions due to entrainment of dust particles by the movement and operation of construction equipment.
Construction of surface infrastructure.	This will involve vegetation clearing and topsoil removal to construct a site offices, a change house, toilet, etc.	Soil	Permanent compaction of soil in areas of infrastructure construction
		Land capability	Decreased land capability due to damage to the natural soil structure, soil loss through wind and water erosion and leaching of soil nutrients.
		Natural vegetation	Disturbance of vegetation could result in soil erosion due to exposed soils.

Activity	Description	Affected environment	Potential impact
		Surface water	Altered surface flow dynamics around surface infrastructure and potential contamination of surface water due to fluid spillage.
		Groundwater	Groundwater contamination due to infiltration of contaminated water.
		Air quality	Dust from construction vehicles on gravel and secondary roads.
Soil Removal and Stockpile	It is assumed that the topsoil thickness averages 0.5 m over the disturbed area. Approximately 93 000 m^3 of topsoil will be removed.	Topography	Alteration of local topography and disturbance of natural drainage lines.
		Visual	Creation of stockpiles alters the visual quality of the landscape.
		Soil	Damage to the natural soil structure due to soil handling, removal and mixing of soil types and horizons. Removal of vegetation causes a change in the water runoff characteristics of the site and increases probability of soil erosion. This leads to the loss of topsoil and an increase of siltation in the streams and rivers with the runoff carrying sediment. Leaching of soil nutrients during long-term stockpiling.
		Land capability	Decreased land capability due to damage to the natural soil structure, soil loss through wind and water erosion and leaching of soil nutrients.

Activity	Description	Affected environment	Potential impact
		Natural vegetation	Damage to natural vegetation due to deposition of dust emitted during the tipping and stockpiling, restricting photosynthesis.
		Animal life	Direct impacts on threatened fauna species, habitat disturbance and destruction, and disruption of birds nesting, foraging or roosting in the area.
		Surface water	Altered surface flow dynamics due to alterations in the onsite topography and increase of siltation in the streams and rivers with the runoff carrying sediment.
		Air quality	Dust emissions due to wind erosion during tipping of soil onto trucks and stockpiles, and exposure of stockpiles to wind erosion, and increased dust generation.
		Noise	Increase of noise of hauling trucks to topsoil stockpile site.
Placement of a fence	A temporary perimeter fence will be constructed around the exploration site which will be limited to the demarcated area to protect operations and prevent people and	Animal life	Limitation of movement for domestic animals to grazing areas. This will prevent movement of domestic animals to demarcated areas, preventing injury.
		Interested and Affected Parties	The temporary fence could prevent access to communal agricultural fields. The fence will also serve as a safety measure, preventing access to possibly hazardous areas.

Activity	Description	Affected environment	Potential impact
	domestic animals from harm.		
Storage of fuel	Diesel fuel use for drilling will be determined and the storage capacity will not be triggered by the NEMA list of activities.	Soil	Soil contamination.
		Land capability	Decreased land capability due to contaminated soil.
		Natural vegetation	Damage to natural vegetation and loss due to hydrocarbon and chemicals spills.
		Animal life	Injury or loss of animals due to spillages of hydrocarbons, chemicals.
		Surface water	Contamination of surface water due to the spillage of hydrocarbons, chemicals or contaminated run- off sourced from contaminated soil.
		Groundwater	Groundwater contamination due to the infiltration of surface water contaminated with spilled hydrocarbons, chemicals.
Water settling pond	Water used at the processing plant will be channelled to the settling pond that will be constructed.	Natural vegetation	Disturbance of vegetation could result in soil erosion due to exposed soils.
		Animal life	Disruption of animal habitats such as nests and breeding grounds (potential modification, fragmentation, and reduction of habitat).
		Surface water	Contamination of surface water due to spillage of equipment fluids.
		Groundwater	Groundwater contamination due to contaminated water.
		Air quality	Dust from construction vehicles on gravel and secondary roads.

Activity	Description	Affected environment	Potential impact
		Noise	Elevated noise levels in the surrounding environment.
Use of hydrocarbons, chemicals	The use of hydrocarbons, chemicals will take place and these will be stored on site in designated storage areas.	Soil	Soil contamination.
		Land capability	Decreased land capability due to contaminated soil.
		Natural vegetation	Damage due to natural vegetation and loss due to hydrocarbon and chemical spills.
		Animal life	Injury or loss of animals due to spillages of hydrocarbons, chemicals.
		Surface water	Contamination of surface water due to the spillage of hydrocarbons, chemicals or contaminated run-off sourced from contaminated soil.
		Groundwater	Groundwater contamination due to the infiltration of surface water contaminated with spilled hydrocarbons, chemicals.
Access roads	Existing access roads will be used to access the site and transport equipment onto and off-site. If need be, they will be upgraded.	Soil	Upgrading of existing roads to processing plant may result in soil erosion and loss.
		Land capability	Decreased agricultural and grazing potential of surrounding land due to deposition of dust emitted by vehicle entrainment on haul roads
		Natural vegetation	Decreased agricultural and grazing potential of surrounding land due to deposition of dust emitted by vehicle entrainment on haul roads. Site clearing and removal of topsoil could lead to soil erosion and soil loss.

Activity	Description	Affected environment	Potential impact
		Surface water	Altered surface flow dynamics due to topsoil removal, topographical alterations and increased surface runoff from cleared areas. Surface water runoff over haul roads will cause erosion and siltation of surface water resources. Surface water runoff contamination due to hydrocarbon spills from vehicles travelling on haul roads.
		Air quality	Dust pollution caused by construction vehicles
		Noise	Elevated noise levels due to continuous vehicular movement on haul roads.
		Interested and Affected Parties	Damage to roads could impact safety of people and animals.
Decommissioning and closure			
Rehabilitation	All areas disturbed will be rehabilitated to its original state with the waste rock and topsoil stockpiles. Roads should be ripped or ploughed and fertilised if	Soil and vegetation	Positive impact as topsoil will be replaced to enhance vegetation growth.
		Animal life	Positive impact as vegetation will re-establish itself and the natural Fauna will gradually return to the rehabilitated sites.

Activity	Description	Affected environment	Potential impact
	necessary, to promote re-growth of vegetation.		

The supporting impact assessment conducted by the EAP must be attached as an appendix, marked Appendix.

a) Summary of specialist reports

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

List of studies undertaken	Recommendations for specialist reports	Specialist recommendations that have been included in the EIA report Mark with an X where applicable.	Reference to applicable section of report where specialist recommendations have been included
Hydrogeological study	1.Drilling activity will not be conducted within 500m from watercourses. 2. The exploration boreholes must be cased during	X	Table 14: Potential environmental impacts and mitigation measures.

	drilling and properly rehabilitated by cap sealing the borehole after drilling. 3.No washing of any mechanical equipment or vehicles will be allowed near the water resources. Rivers and wetlands will be buffered as no go area, a 500m buffer will apply. 4.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. 5. Absorbent Spill kits to be made available near the drill rigs during drilling activities		
Hydrological study	1.Drilling activity should not be conducted near water resources 2. No washing of any mechanical equipment's or vehicles will be	X	Table 14: Potential environmental impacts and mitigation measures.

	allowed near the water resources. 3. All the wetlands and non-perennial streams will be buffered as "no go" area a 500m buffer will apply. 4. 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		

	6. Absorbent Spill kits to be made available near the drill rigs during drilling activities 7. To avoid soil erosion and siltation in the watercourse, vegetation will not be cleared		
Soil study	1.The core logs of exploration boreholes should be cleared from the ground immediately after logging by the geologists to prevent washing and leaching to the water	X	Table 14: Potential environmental impacts and mitigation measures.

	resources during rainfall. 2.After prospecting, rehabilitation of the disturbed area should take place.		

19 ENVIRONMENTAL IMPACT STATEMENT

19.1 Key findings of the environmental impact assessment

This needs to be viewed in the context of the entire prospecting right area under the application which it covers, and it needs to be kept in mind that the identified impacts will occur for a limited time and the extent of the impacts will be localized. All the identified impacts can be suitably mitigated with the residual impact ratings being of low significance. After drilling activities have been completed and the drill pads rehabilitated to predrilling status, the impacts will cease to exist. The invasive activities that entail the drilling of at least 15 boreholes will have a minimal environmental and social impact as the drill site will be confined to an area of approximately 0.9 Ha of the 143.52 hectares sized property.

The area under investigation is classified as grazing and arable land with land cover ranging from built-up land for residential purposes, cultivated land, natural vegetation, plantations, barren land, and there are waterbodies including wetlands. It an elevation that is relatively flat with gentle undulations. 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. The site falls within a relative high rainfall which slightly increase the potential impacts associated with soil erosion.

The possible environmental impacts associated with the proposed prospecting are considered insignificant. A diamond core drill rig will be used for drilling. The drill team will not require site infrastructure and will not stay on site. The main impacts are associated with any residential areas, heritage resources, the wetlands and streams located onsite. During the planning phase for each borehole residential areas, heritage sites, wetlands, perennial, and non-perennial rivers will be identified. The prospecting programme will be designed to avoid these areas by creating a buffer zone of 100m from residential areas and 500m from any watercourses. It can be concluded that the prospecting of coal will cause minimal impact on the water resources. The prospecting right activity should take place during dry seasons where the water percentages in the surrounding streams and wetlands are extremely low.

19.2 Positive and negative impacts and risks of the proposed activity and alternatives

While no significant short-term positive impacts are associated with the prospecting activities, in the event that a viable coal reserve is confirmed and pending the outcome of a detailed social and environmental impact assessment process, positive socioeconomic benefits must be investigated and optimized.

Negative	No concerns in terms of community health as all possible traces of waste and ore will be disposed of appropriately during prospecting. The following negative impacts may occur: • Noise: State-of-the-art drilling equipment will be used to minimise noise. Drilling will be conducted during office hours to limit disturbance of nearby residences. • Invasion of privacy: Land access agreements will be signed before prospecting commences. This will limit unnecessary invasion. • Destruction/loss of cultural and heritage resources during the construction/set-up phase (unlikely, as no features of cultural/heritage significance have been identified on site). • Visual intrusion caused by the drilling activities in the largely rural setting. • Increased traffic near the drilling site during site establishment and prospecting. • Dust fall and nuisance from drilling activities: dust suppression to be implemented. • Soil and vegetation disturbance from drill pad preparation during construction/set-up and operations, as contractors rehabilitate one site and move to the next. • Animal life will be affected in the immediate vicinity of the drilling rig. It is expected that the noise and general activity will keep them away from the prospecting site. • Disturbance of riparian habitats & perennial river Litter

Positive	• Employment opportunities: Depending on available local skills, preference will be given to locals. Where necessary skills are not available, they will be outsourced. • Community health: Effects on community health will be minimal. If skills are outsourced, however, diseases may be transferred to the community from outside. • Employment will be created but it will not be guaranteed until prospecting can be conducted to determine the economic value of the commodity in question. • Concurrent rehabilitation during prospecting
Tax	• Tax will be paid by the developing company.

19.3 Proposed impact management objectives and the impact management outcomes for inclusion in the EMPr

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

The objectives of the EMPr include:

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

The desired outcomes of the aforementioned objectives include:

- Implementing a drilling programme that does not impact sensitive environmental features.
- Implementing a drilling programme with the consent of the landowner.
- Ensuring that all temporary impacts are reduced.

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

19.4 Impact management objectives

Vegetation: To ensure that the prospecting activities limit flora removal to the footprint area and mitigate against it as far as possible.

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

Visual impacts: To limit the visual impact of the prospecting activities. Only one drill rig to be used and concurrent rehabilitation to be implemented.

Air Quality: To ensure that the prospecting activities has a minimal adverse impact on air quality, dust limitation and suppression to be applied.

Groundwater: To ensure that the prospecting activities have minimal adverse impact on the surrounding groundwater water quality and prevents pollution of existing groundwater resources.

Surface Water: To ensure that the prospecting activities effectively exploits the consumption of freshwater, have minimal adverse impacts on the surrounding surface water quality and prevent pollution of surrounding surface water resources. A buffer of 500m to be observed from the water course.

Soils: To ensure that the prospecting activities have a positive impact on land and soils by mitigating potential erosion, preventing contamination, pollution and by establishing effective rehabilitation measures.

Biodiversity: To ensure that the prospecting activities do not have an adverse impact on the current biodiversity.

Socio-Economic: To aid in the improvement of the current local economy and improve the social environment of communities affected by the prospecting activities.

Noise: To control noise pollution stemming from the prospecting activities through the restriction of operational hours.

Heritage: To ensure that the prospecting activities avoid adverse impacts on the heritage resources of significance. Interaction with SAHRA and residents to identify and confirm heritage sites. Marking and avoidance of sites if identified.

Waste: To ensure that the proposed prospecting operation adopts and implements waste management principles that are environmentally responsible.

19.5 Aspects for inclusion as conditions of authorisation

Any aspects which must be made conditions of the Environmental Authorisation.

Jaments (Pty) Ltd must apply the following buffer zones to the final positioning of the drill sites:

- 500 m buffer from any water resource
- 100 m buffer from any infrastructure
- 100 m buffer from any identified heritage resource (if any found)
- 100 m from any residential area

2. Assumptions, uncertainties and gaps in knowledge

Which relate to the assessment and mitigation measures proposed.

The location of drill sites refers to Appendix A. 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 area except on human settlement area and within 500 m buffer surrounding watercourses. 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 landowners regarding the intention to access and conduct drilling activities on their property.

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

19.6.1 Reasons why the activity should be authorised

The invasive activities that entail the drilling of at least 15 boreholes will have a minimal environmental and social impact as the drill site will be confined to an area of approximately 0.9 Ha of the 143.52 hectares (Ha) sized property. This needs to be viewed in the context of the entire prospecting license area under application which covers, and it needs to be kept in mind that the identified impacts will occur for a limited time and the extent of the impacts will be localized. All the identified impacts can be suitably mitigated with the residual impact ratings being of low significance. After drilling activities have been completed and the drill pads rehabilitated to predrilling status, the impacts will cease to exist.

According to the impact assessment undertaken for the proposed project, the key impacts of the project are on soils, natural vegetation, commercial farming, game farming and landowners/occupiers. The project will also have positive impacts due to the employment to be created although for a short term.

The public will also be requested for their comments. All comments to be received during Public Participation Process will be included in this BAR and EMPr. These comments will be addressed as far as possible to the satisfaction of the interested and affected parties.

The management of the impacts identified in the impact assessment for all phases of the proposed project will be undertaken through a range of programmes and plans contained in the EMPr. In consideration of the programmes and plans contained within the EMPr, layouts and method statements compiled for the project, which is assumed will be effectively implemented, there will be significant reduction in the significance of potential impacts.

19.6.2 Conditions that must be included in the authorisation

- A field survey must be undertaken before any drilling may commence at each proposed drilling site to confirm that no cultural heritage sites are present in sections demarcated to be cleared.
- No prospecting should occur within 500m from any watercourse.
- The positioning of boreholes and access tracks should be in areas that will result in minimal ground disturbance.
- During the planning phase for each borehole, specific controls must be identified and implemented, based on site conditions.
- No employees will be permitted to stay on the site.
- Collection of firewood will not be allowed.
- Where an access road is needed, the relevant occupant and owner will be consulted prior to the development of that access to ensure that consensus is reached on the matter and the access will be rehabilitated at the end of the drilling programme.

19.7 Period for which the Environmental Authorisation is required

The prospecting activity has been earmarked for a minimum period of three years to a maximum period of five years and includes rehabilitation. It is vital to authorise the environmental authorisation for the same duration.

20 UNDERTAKING

Confirm that the undertaking required to meet the requirements of this section is provided at the end of the EMPr and is applicable to both the Basic assessment report and the Environmental Management Programme report.

The EAP has signed the undertaking at the end of this report.

21 FINANCIAL PROVISION

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

21.1 Explain how the aforesaid amount was derived

A financial provision of approximately R 58 812.00 has been budgeted for the prospecting programme with a minimum period of 3 years to a maximum period of 5 years, which includes rehabilitation activities.

The drilling contractor will be responsible for rehabilitating the drill pad once the drilling activities have been completed at each exploration hole. This is typically a contractual arrangement between Jaments (Pty) Ltd, and the drilling contractor employed to implement drilling activities which include construction / set-up of drill pad, operational drilling activities and the rehabilitation of the drill site after drilling has ceased. The financial guarantee was calculated using the DMRE official financial quantum calculator below.

CALCULATION OF THE QUANTUM

JAMENTS

Applicant: JAMENTS
Evaluator: Sinazo Bhengu
Ref No.: DMRE Ref: MP 30/5/1/1/2/16326 PR
Date: Sep-21

No.	Description	Unit	A Quantity	B Master Rate	C Multiplication factor	D Weighting factor 1	E=A*B*C*D Amount (Rands)
1	Dismantling of processing plant and related structures (including overland conveyors and powerlines)	m3	0	17,14	1	1	0
2 (A)	Demolition of steel buildings and structures	m2	0	238,71	1	1	0
2(B)	Demolition of reinforced concrete buildings and structures	m2	0	351,79	1	1	0
3	Rehabilitation of access roads	m2	300	42,72	1	1	12816
4 (A)	Demolition and rehabilitation of electrified railway lines	m	0	414,61	1	1	0
4 (A)	Demolition and rehabilitation of non-electrified railway lines	m	0	226,15	1	1	0
5	Demolition of housing and/or administration facilities	m2	0	477,42	1	1	0
6	Opencast rehabilitation including final voids and ramps	ha	0	242084,15	1	1	0
7	Sealing of shafts adits and inclines	m3	0	128,15	1	1	0
8 (A)	Rehabilitation of overburden and spoils	ha	0	166847,44	1	1	0
8 (B)	Rehabilitation of processing waste deposits and evaporation ponds (non-polluting potential)	ha	0	207805,47	1	1	0
8 (C)	Rehabilitation of processing waste deposits and evaporation ponds (polluting potential)	ha	0	603565,59	1	1	0
9	Rehabilitation of subsided areas	ha	0	139709,6	1	1	0
10	General surface rehabilitation	ha	0,9	132171,31	0,04	1	4758,16716
11	River diversions	ha	0	132171,31	1	1	0
12	Fencing	m	0	150,77	1	1	0
13	Water management	ha	0	50255,25	1	1	0
14	2 to 3 years of maintenance and aftercare	ha	0	17589,34	1	1	0
15 (A)	Specialist study	Sum	0	0	1	1	0
15 (B)	Specialist study	Sum	0	0	1	1	0
					Sub Total 1		17574,16716

1	Preliminary and General	2108,900059	weighting factor 2 1	2108,900059
2	Contingencies	1757,416716		1757,416716
			Subtotal 2	21440,48
			VAT (15%)	37371,45
			Grand Total	58812

SIGN Sinazo Bhengu
DATE 2021/09/09

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

Confirm that the amount, is anticipated to be an operating cost and is provided for as such in the Mining work programme, Financial and Technical Competence Report or Prospecting Work Programme as the case may be.

The financial support provided by Jaments (Pty) Ltd submitted their financial support demonstrates the availability of funds to undertake prospecting of the desired minerals.

22.1 Specific information required by the Competent Authority

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

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

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

There are no anticipated direct impacts on the socio-economic conditions of the landowners or community. The Private owners of portions that are used for agricultural will be compensated fairly for any loss due to the drilling programme. Drill holes will be immediately closed to avoid any contamination to the groundwater.

As the final positioning of the drill sites cannot be confirmed without completion of phase 1 of the prospecting programme, a recommendation has been made to ensure that the directly affected landowners are re-consulted a minimum of 1 month prior to implementing invasive activities drilling). The purpose of the re-consultation is to ensure that socio-economic impacts on directly affected persons can be raised and where possible addressed.

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

Provide the results of investigation, assessment, and evaluation of the impact of the mining, bulk sampling or alluvial diamond prospecting on any national estate referred to in section 3(2) of the National Heritage Resources Act, 1999 (Act No. 25 of 1999) with the exception of the national estate contemplated in section 3(2)(i)(vi) and (vii) of that Act, attach the investigation report.

Due to the fact that the positioning of the drill sites will only be determined after phase 1 of the prospecting works programme, and in order to ensure that there is no impact on unknown heritage sites, a recommendation has been made to undertake a heritage survey of the drill sites once these are known in order to identify any cultural or heritage resources of significance.

Mitigation measures proposed in this report include that no drill site will be located within 100m of any identified heritage site (which may occur during the prospecting programme). Furthermore, from desktop studies undertaken, no heritage sites have been identified to occur in the area; however, these need to be confirmed by site surveys.

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

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

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

PART B: ENVIRONMENTAL MANAGEMENT PROGRAMME REPORT

24 DRAFT ENVIRONMENTAL MANAGEMENT PROGRAMME

25 DETAILS OF THE EAP

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

Please refer to the Details of the EAP included in Part A, section 1(a)

26 DESCRIPTION OF THE ASPECTS OF THE ACTIVITY

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

The aspects of the activity are described in Part A Section 1(h).

27 COMPOSITE MAP

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

Please refer to Appendix A.

28 DESCRIPTION OF IMPACT MANAGEMENT OBJECTIVES INCLUDING MANAGEMENT STATEMENTS

28.1 Determination of closure objectives

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

- **Physical stability:** To back-fill boreholes and pits on the prospecting site to ensure continuation of the land use after completion of prospecting activities.

- **Environmental quality:** To ensure that local environmental quality is not adversely affected by possible physical effects and chemical contaminants arising from the prospecting site after completion of prospecting activities.

- **Health and safety:** To limit the possible health and safety threats to humans and animals using the rehabilitated prospecting area after completion of prospecting activities.

- **Land capability/land-use:** To ensure continuation or to the re-instate a suitable land capability over as large as possible area affected during prospecting.

- **Aesthetic quality:** To leave behind a rehabilitated prospecting site that is neat and tidy, giving an acceptable overall aesthetic appearance.

- **Biodiversity:** To encourage the re-establishment of indigenous and/ or appropriate vegetation on the rehabilitated prospecting site such that the biodiversity is largely re-instated over time, as well as protect the undisturbed areas to maintain/enhance the biodiversity of these areas. Prospecting area rehabilitated to limit impact on current land use.

29 ENVIRONMENTAL LEGISLATION

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

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

No.	Activity	Closure objectives
1	Desktop studies	No closure objectives as there is no environmental invasion.
2	Geophysics	
3	Mapping	
4	Site establishment	The closure objectives are to leave the site the way it was found (or better) before prospecting.
5	Drilling	
6	Closure and rehabilitation	

29.2 Volumes and rate of water use required for the operation

Water in prospecting activities is required to: reduce the friction between the rock mass and the drill bit hence increasing cutting efficiency of the drill bit, water is also used to cool down the drill bit. Due to the advancement in technology, alternative cutting and cooling mechanisms have been developed whereby air is utilized instead of water. In this project, a drill bit which uses air will be used instead of those that use water. Therefore, water needs only relates to portable drinking water of personnel on site. A total of 1 000l of water will be used per day on maximum drilling production day.

29.3 Has a Water Use Licence has been applied for?

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

Figure 49: Mobile water cart.

30 IMPACTS TO BE MITIGATED IN THEIR RESPECTIVE PHASES

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

Activities E.g. for prospecting: drill site, site camp, ablution facility, accommodation, equipment storage, sample storage, site office, access route, etc. E.g. for mining: excavations, blasting, stockpiles, discard dumps or dams, loading, hauling and transport, water supply dams and boreholes, accommodation, offices, ablution, stores, workshops, processing plant,	Phase of operation in which activity will take place. State, planning and design, pre-construction, construction, operational, rehabilitation, closure, post-closure.	Size and scale of disturbance Volumes, tonnages and ha or m^2.	Mitigation measures Describe how each of the recommendations in herein will remedy the cause of pollution or degradation and migration of pollutants.	Compliance with standards Description of how each recommendation herein will comply with any prescribed environmental management standards or practices identified by Competent Authorities.	Time period for implementation Period when measures in environmental management programme must be implemented. Measures must be implemented when required. Rehabilitation must take place at the earliest opportunity. With regard to rehabilitation, therefore state either upon cessation of the individual activity or upon cessation of mining, bulk sampling or alluvial

storm water control, berms, roads, pipelines, power lines, conveyors, etc.					**diamond prospecting as the case may be.**
Desktop studies	Phase 1	143.52 ha	N/A	N/A	Before drilling
Geophysics		143.52 ha	N/A	N/A	Before drilling
Mapping		143.52 ha	N/A	N/A	Before drilling
Accommodation and ablution	Phase 2	200 m^2	Spray water to reduce dust; use chemical toilets; stockpile top soil during excavations; designate an area for domestic waste; and establish buffer zones for rivers, roads, dams and railway lines.	N/A	Before drilling
Equipment storage		500 m^2	Spray water to reduce dust; use chemical toilets; stockpile top soil during excavations; service equipment off site; provide plastic containers for leaking hydrocarbons; and establish a buffer zone for rivers, roads, dams and railway lines.	N/A	Before drilling
Office and ablution		300 m^2	Spray water to reduce dust; use chemical toilets; stockpile top soil during excavations; designate an area for domestic waste; and establish buffer zones for rivers, roads, dams and railway lines.	N/A	Before drilling
Drilling (the whole area will be drilled,		143.52 ha (900 m^2 a drilling site)	Spray water to reduce dust; use chemical toilets; stockpile top soil during excavations; designate an area for domestic waste; contain spilling waste;	SAMREC/JORC	

but subjected to Phase 1 results)			and establish buffer zones for rivers, roads, dams and railway lines.		
Rehabilitation and closure	Phase 3	143.52 ha	N/A	N/A	After drilling

31 IMPACT MANAGEMENT OUTCOMES

A description of impact management outcomes, identifying the standard of impact management required for the aspects contemplated in paragraph.

Activity Whether listed or not. E.g. excavations, blasting, stockpiles, discard dumps or dams, loading, hauling and transport, water supply dams and boreholes, accommodation, offices, ablution, stores, workshops, processing plant, storm water control, berms, roads, pipelines,	Potential impact E.g. dust, noise, drainage surface disturbance, fly rock, surface water contamination, groundwater contamination, air pollution, etc.	Aspects affected	Phase In which impact is anticipated, e.g. construction, commissioning, operational decommissioning, closure, post-closure.	Mitigation type Modify, remedy, control, or stop through, e.g. noise control measures, storm-water control, dust control, rehabilitation, design measures, blasting controls, avoidance, relocation, alternative activity etc. E.g.: • Modify through alternative method • Control through noise control • Control through management and monitoring • Remedy through rehabilitation	Standard to be achieved Impact avoided, noise levels, dust levels, rehabilitation standards, end use objectives), etc.

power lines, conveyors, etc.					
Desktop studies	None	None	Planning/Phase 1	None	None
Geophysics	None	None	Pre-operational	None	
Mapping	None	None	Pre-operational	None	None
Accommodation and ablution establishment	Minimal impact on dust, noise, surface disturbance, air pollution and environmental degradation.	Environment	Phase 2/Operational	Reduce: Noise, dust, air pollution and land degradation.	Reduce and minimise pollution.
Equipment storage establishment		Environment	Phase 2/Operational	Reduce: Noise, dust, air pollution, land degradation and hydrocarbon spillage.	
Office and ablution establishment		Environment	Phase 2/Operational	Reduce: Noise, dust, air pollution and land degradation.	
Drilling (the whole area will be drilled but subjected to phase 1 results)	Impact on dust, noise, surface disturbances, air pollution, environmental degradation, ground water pollution (dependant on the water table vs drill hole depth) and hydrocarbon spillage.	Environment, surface water and ground water.	Operational	Minimise: Noise, dust, air pollution, land degradation, hydrocarbon spillage, ground water pollution and surface water pollution.	
Rehabilitation and closure	None	Environment	Closure		None

32 IMPACT MANAGEMENT ACTIONS

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

Activity **Whether listed or not. E.g.** excavations, **blasting, stockpiles, discard dumps or dams, loading, hauling and transport, water supply dams and boreholes, accommodation, offices, ablution, stores, workshops, processing plant, storm water control, berms, roads, pipelines, power**	**Potential impact** **E.g. dust, noise, drainage surface disturbance, fly rock, surface water contamination, groundwater contamination, air pollution, etc.**	**Mitigation type** **Modify, remedy, control, or stop through, e.g. noise control measures, storm-water control, dust control, rehabilitation, design measures, blasting controls, avoidance, relocation, alternative activity etc. E.g.** • **Modify through alternative method** • **Control through noise control** • **Control through management and monitoring**	**Time period for implementation** **Describe the period when measures in the environmental management programme must be implemented Measures must be implemented when required. With regard to rehabilitation this must take place at the earliest opportunity. With regard to rehabilitation, state either: Upon cessation of the individual activity or upon cessation of mining, bulk sampling or alluvial**	**Compliance with standards** **A description of how each of the recommendations in 2.11.6 read with 2.12 and 2.15.2 herein will comply with any prescribed environmental management standards or practices that have been identified by Competent Authorities.**

lines, conveyors, etc.		• **Remedy through rehabilitation**	**diamond prospecting as the case may be.**	
Desktop studies	None	None	Planning/Phase 1	N/A
Geophysics	None	None	Pre operational	Aviation Authority
Mapping	None	None	Pre operational	N/A
Accommodation and ablution establishment	Minimal impact on dust, noise, surface disturbances, air pollution and environmental degradation.	Environment	Phase 2/Operational	DWA, DMR, DEA
Equipment storage establishment		Environment	Phase 2/Operational	DWA, DMR, DEA
Office and ablution establishment		Environment	Phase 2/Operational	DWA, DMR, DEA
Drilling (whole area will be drilled but subjected to phase 1 results)	Impact on dust, noise, surface disturbances, air pollution, environmental degradation, ground water pollution (dependant on the water table vs drill hole depth) and hydrocarbon spillage.	Environment, surface water and ground water.	Operational	SAMREC/JORC, DWA, DMR, DEA
Rehabilitation and closure	None	Environment	Closure	DWA, DMR, DEA

33 FINANCIAL PROVISION

3. Determination of the amount of Financial Provision

1. Closure objectives and the extent to which they have been aligned to the baseline environment described under the Regulation

The overall goal for closure of the prospecting site is to re-instate the predetermined land-use of the landowners, neighbours and community, ensuring that the land is stable and safe in the long-term.

The closure objectives apply to the prospecting area in its final closed state and not whilst the site is in transformation towards this state. They nevertheless provide guidance during the operational phase. Closure objectives relate to the following:

- **Physical stability**: To back-fill boreholes and pits on the prospecting site to ensure continuation of the land use after completion of prospecting activities.
- **Environmental quality**: To ensure that local environmental quality is not adversely affected by possible physical effects and chemical contaminants arising from the prospecting site after completion of prospecting activities
- **Health and safety**: To limit the possible health and safety threats to humans and animals using the rehabilitated prospecting area after completion of prospecting activities.
- **Land capability/land-use**: To ensure continuation or to the re-instate a suitable land capability over as large as possible area affected during prospecting.
- **Aesthetic quality**: To leave behind a rehabilitated prospecting site that is neat and tidy, giving an acceptable overall aesthetic appearance.
- **Biodiversity**: To encourage the re-establishment of indigenous and/ or appropriate vegetation on the rehabilitated prospecting site such that the biodiversity is largely re-instated over time, as well as protect the undisturbed areas to maintain/enhance the biodiversity of these areas. Prospecting area rehabilitated to limit impact on current land use.

34 ENVIRONMENTAL LEGISLATION

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

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

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

• That the disturbance of ecosystems and loss of biological diversity are avoided, or, where they cannot be altogether avoided, are minimised and remedied;

• that pollution and degradation of the environment are avoided, or, where they cannot be altogether avoided, minimised and remedied;

• that the disturbance of landscapes and sites that constitute the nations cultural heritage is avoided, or where it cannot be altogether avoided, is minimised and remedied;

• that waste is avoided, or where it cannot be altogether avoided, minimised and reused or recycled where possible and otherwise disposed of in a responsible manner;

• that the use and exploitation of non-renewable natural resources is responsible and equitable, and considers the consequences of the depletion of the resource;

• that a risk averse and cautious approach is applied, which considers the limits of current knowledge about the consequences of decisions and actions; and

• that negative impacts on the environment and on people's environmental rights be anticipated and prevented, and where they cannot be altogether prevented, will be minimised and remedied.

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

No.	Activity	Closure objectives
1	Desktop studies	No closure objectives as there is no environmental invasion.
2	Geophysics	
3	Mapping	
4	Site establishment	The closure objectives are to leave the site the way it was found (or better) before prospecting.
5	Drilling	
6	Closure and rehabilitation	

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

Though consultation by the DMRE is prescribed to a maximum of thirty days, Jaments has started consultation with the landowners which is conducted by Singo Consulting. A Public Participation Process (PPP) meeting will be held. The PPP will continue until submission of the reports and, where possible, beyond.

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

After drilling has been completed in one area, the drilling team will ensure the site is reverted to its original state by implementing the measures listed in the Table below.

Aspect/Impact	Rehabilitation Measure	Monitoring Frequency and Responsibility
Removal of construction structures	Clear and completely remove from site all construction plant equipment, storage containers, signage, temporary fencing, temporary	Once-off, Jaments

	services, fixtures and any other temporary works; and Ensure that all access roads utilized during construction (which are not earmarked for closure and rehabilitation) are returned (as far as possible) to their state prior to construction.	
Vegetation clearing/Replanting	Remove any emerging alien and invasive vegetation to prevent further establishment. All planting work is to be undertaken by suitably qualified personnel making use of the appropriate equipment. Transplant during the winter (between April and September); and Plant indigenous plants to minimise the spread of alien and invasive vegetation.	When revegetation is done and in blooming season,
Topsoil replacement	Replace and redistribute stockpiled topsoil together with herbaceous vegetation, overlying grass and other fine organic matter in all disturbed areas of the prospecting site, including temporary access routes and roads. Replace topsoil to the original depth (i.e., as much as was removed prior to construction).	Once-off, Jaments

	Prohibiting the use of topsoil suspected to be contaminated with the seed of alien vegetation. Alternatively, the soil is to be sprayed with specified herbicides. Backfill planting holes with excavated material / approved topsoil, thoroughly mixed with weed free manure or compost (per volume about one quarter of the plant hole), one cup of 2:3:2 fertilizer and an approved ant and termite poison.	

34.3 Explain why the rehabilitation plan is compatible with the closure objectives

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

Jaments (Pty) Ltd is required to make the prescribed financial provision for the rehabilitation or management of negative environmental impacts. If Jaments (Pty) Ltd fails to rehabilitate or manage any negative impact on the environment, the DMRE may, upon written notice to Jaments (Pty) Ltd, use all or part of the financial provision to rehabilitate or manage the negative environmental impact in question. Jaments (Pty) Ltd will specify that the drilling contractor is required to comply with all the environmental measures specified in the EMP. This will include avoiding unnecessary disturbance of natural vegetation and the rehabilitation of each drill site, immediately after drilling has been completed. All tracks to the drill sites must be rehabilitated at the end of the prospecting programme. The financial provision provides for the final checking of all sites before site clearance.

Safety after the completion of the prospecting activities will be done by concurrent rehabilitation of drill holes. Overburden will be recorded, and the holes filled back simultaneously.

35 CALCULATE AND STATE THE QUANTUM OF THE FINANCIAL PROVISION REQUIRED TO MANAGE AND REHABILITATE THE ENVIRONMENT IN ACCORDANCE WITH THE APPLICABLE GUIDELINE

The quantum of the financial provision required is R 58 812.00 Jaments (Pty) Ltd must annually update and review the quantum of the financial provision (as per Regulation 54 (2) of the MPRDA). The financial Quantum Calculation is found under Appendix I.

36 CONFIRM THAT THE FINANCIAL PROVISION WILL BE PROVIDED AS DETERMINED

Jaments (Pty) Ltd herewith confirms both its capacity and willingness to make the financial provision required should the prospecting right be granted.

37 MECHANISMS FOR MONITORING COMPLIANCE WITH AND PERFORMANCE ASSESSMENT AGAINST THE ENVIRONMENTAL MANAGEMENT PROGRAMME AND REPORTING THEREON

- Monitoring of Impact Management Actions
- Monitoring and reporting frequency
- Responsible persons
- Time period for implementing impact management actions
- Mechanism for monitoring compliance

Source activity	**Impacts requiring monitoring programmes**	**Functional requirements for monitoring**	**Roles and responsibilities** For the execution of the monitoring programmes	**Monitoring and reporting frequency and time periods for implementing impact management actions**
Desktop studies	N/A	N/A	N/A	N/A
Geophysics	N/A	N/A	N/A	N/A
Mapping	N/A	N/A	N/A	N/A
Site establishment and drilling	Visual impact	All areas exposed must be monitored for erosion	Project Manager	Weekly and after heavy winds and rain
	Dust generated	All areas exposed must be monitored for erosion	Project Manager	Weekly and after heavy winds and rain

	Noise	All areas where machinery will be operating	Operators and Project Manager	Daily
	Water and environmental pollution	All areas of operations	Operators and Project Manager	Daily
Post closure and rehabilitation	Rehabilitated areas	All rehabilitated areas	Environmentalist	Weekly, monthly and after heavy rain

38 IMPACTS MANAGEMENT OUTCOMES

ACTIVITY (Whether listed or not listed). (E.g. Excavations, blasting, stockpiles, discard dumps or dams, Loading, hauling and transport, Water supply dams and boreholes, accommodation, offices, ablution, stores, workshops, processing plant, storm water control, berms, roads, pipelines, power lines, conveyors, etc.).	POTENTIAL IMPACT (Including the potential impacts for cumulative impacts) (E.g. dust, noise, drainage surface disturbance, fly rock, surface water contamination, groundwater contamination, air pollution etc.)	ASPECTS AFFECTED	PHASE In which impact is anticipated (E.g. Construction, commissioning, operational, Decommissioning, closure, post-closure)	MITIGATION TYPE (modify, remedy, control, or stop) Through (E.g. noise control measures, storm-water control, dust control, rehabilitation, design measures, blasting controls, avoidance, relocation, alternative activity etc.) (E.g. Modify through alternative method. Control through noise control. Control through management and monitoring through rehabilitation)	STANDARD TO BE ACHIEVED (Impact avoided, noise levels, dust levels, rehabilitation standards, end use objectives) etc.
Planning and Project	EMP	Project Management	Planning	A finalized EMP must address all authorization conditions stipulated by the DEA (and other commenting authorities).	MPRDA & NEMA

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

ACTIVITY (Whether listed or not listed). (E.g. Excavations, blasting, stockpiles, discard dumps or dams, Loading, hauling and transport, Water supply dams and boreholes, accommodation, offices, ablution, stores, workshops, processing plant, storm water control, berms, roads, pipelines, power lines, conveyors, etc.).	POTENTIAL IMPACT (Including the potential impacts for cumulative impacts) (E.g. dust, noise, drainage surface disturbance, fly rock, surface water contamination, groundwater contamination, air pollution etc.)	ASPECTS AFFECTED	PHASE In which impact is anticipated (E.g. Construction, commissioning, operational, Decommissioning, closure, post-closure)	MITIGATION TYPE (modify, remedy, control, or stop) Through (E.g. noise control measures, storm-water control, dust control, rehabilitation, design measures, blasting controls, avoidance, relocation, alternative activity etc.) (E.g. Modify through alternative method. Control through noise control. Control through management and monitoring through rehabilitation)	STANDARD TO BE ACHIEVED (Impact avoided, noise levels, dust levels, rehabilitation standards, end use objectives) etc.
	Response Planning	personnel on site		Response procedures to fires, explosions, or any accidents that will require rapid medical responses; and	

				Responses to community and stakeholder concerns and communication procedures with potentially affected parties (I&AP).	
	Project Schedule	Undertaking the project in a timeous manner	Planning	Plan and develop a construction sequence to alleviate noise generation during the construction phase.	N/A
	Method Statement	Project Management	Planning	Ensure that a method statement has been compiled and submitted to the Site/Construction manager.	N/A
	Grievances	Project Management	Planning	Develop grievance mechanisms for the recording and management of complaints and grievances specifically including (but not limited to) grievances from those living in the area.	N/A
	Records and Administration	Project Management	Planning	Ensure the following are up to date and available on site: A complaint registers. An approved method statements. Copies of the EMP.	

38.1 Indicate the frequency of the submission of the performance assessment/ environmental audit report

Regular monitoring of all the environmental management procedures and mitigation measures shall be carried out by Jaments (Pty) Ltd in order to ensure that the provisions of this EMP are adhered to. Formal monitoring and performance assessment of the EMP will be undertaken annually. A framework for a monitoring and performance assessment report is included in Appendix. Site photographs taken before drilling commences after each frilling site has been rehabilitated must be included in the performance assessment reports.

39 ENVIRONMENTAL AWARENESS PLAN

39.1 Manner in which the applicant intends to inform their employees of any environmental risk which may result from their work

All employees will be required to undergo site induction. Additionally, daily toolbox talks will be held each morning before the activities for the day are commenced.

The Site Induction training will focus on the following:

- Discussion of environmental impacts as indicated in the Impact Assessment Table
- Waste management –The removal of all waste from site to prevent litter
- Water usage – Conservation of water, correlation between water & erosion.
- Driving protocol – Pre-start vehicle checks prior to driving, adhering to speed limits on dirt roads.
- Environmental mitigation – Example no collection of wood, no open fires, no snaring of animals, no unnecessary destruction of vulnerable natural vegetation, clean-up of hydrocarbon spills, etc.
- Emergency procedure – Type of emergencies, type of alarms, emergency equipment, location of assembly point and identification of emergency wardens.

During the daily toolbox talks, the following will be discussed:

- Any environmental or health and safety incidents that may have occurred the previous day.
- Status of housekeeping on site.
- Ad hoc refresher in terms of emergency procedures.

40 MANNER IN WHICH RISKS WILL BE DEALT WITH TO AVOID POLLUTION OR ENVIRONMENTAL DEGRADATION

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

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

40.1 Specific information required by the Competent Authority

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

Financials will be reviewed annually to allow for adjustments and compensation where necessary.

- Prospecting Work Programme
- The Financial Provision reviewed on an annual basis.
- Performance assessment
- External Audits.

B) UNDERTAKING

The EAP herewith confirms

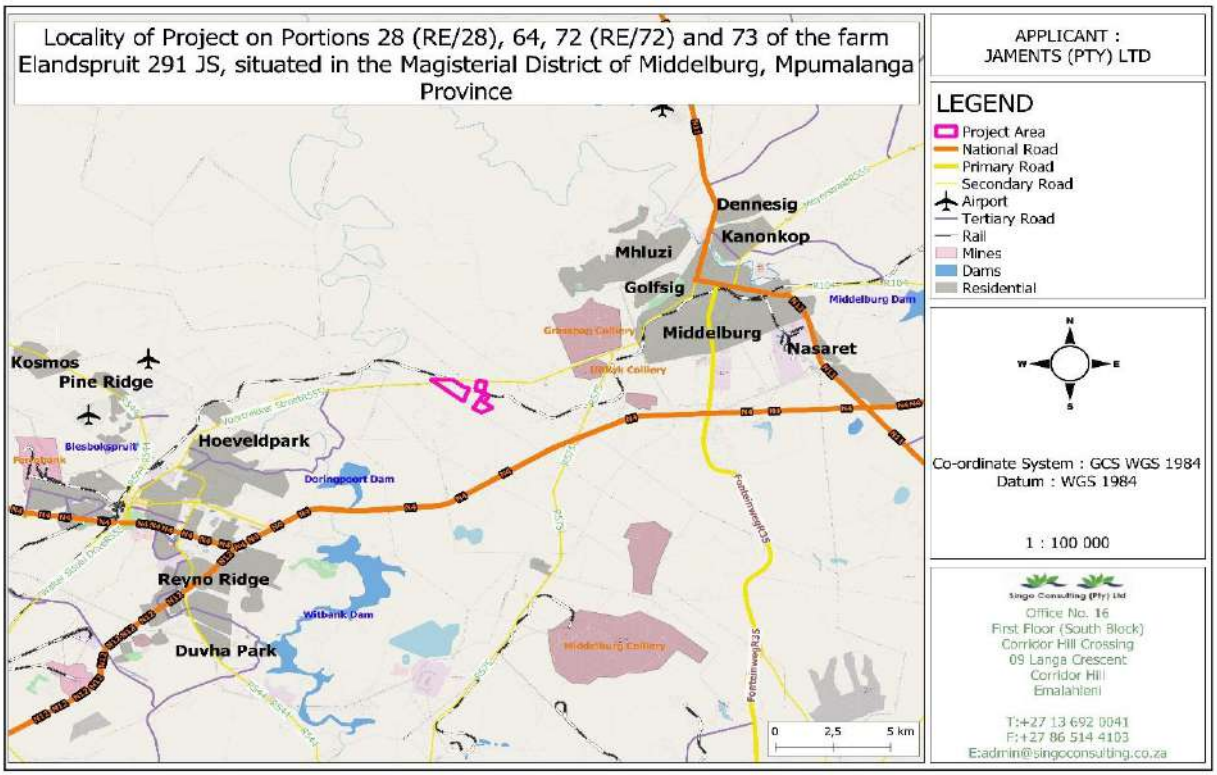
- the correctness of the information provided in the reports
- the inclusion of comments and inputs from stakeholders and I&APs
- the inclusion of inputs and recommendations from the specialist reports where relevant
- that the information provided by the EAP to interested and affected parties and any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

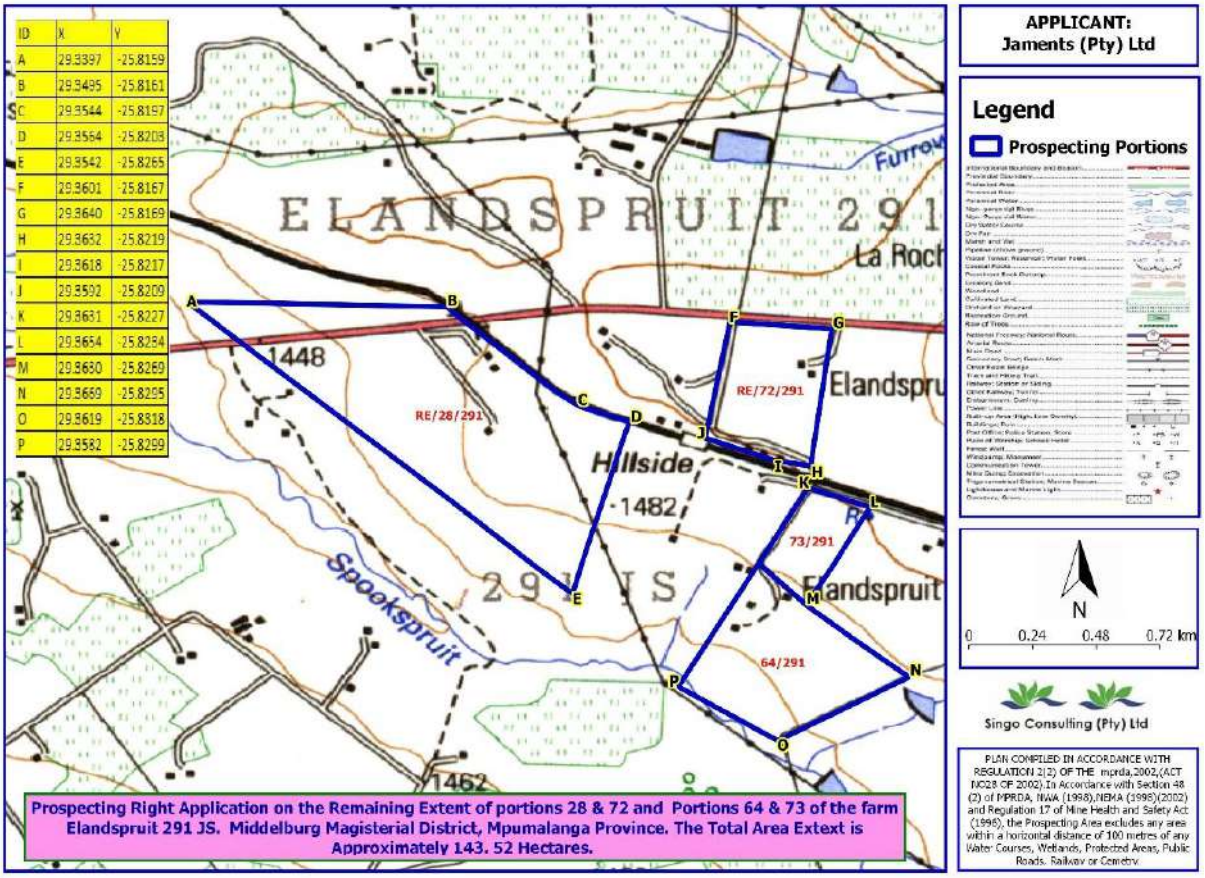
Signature of the EAP
Singo Consulting (Pty) Ltd
Name of company
September 2023
Date

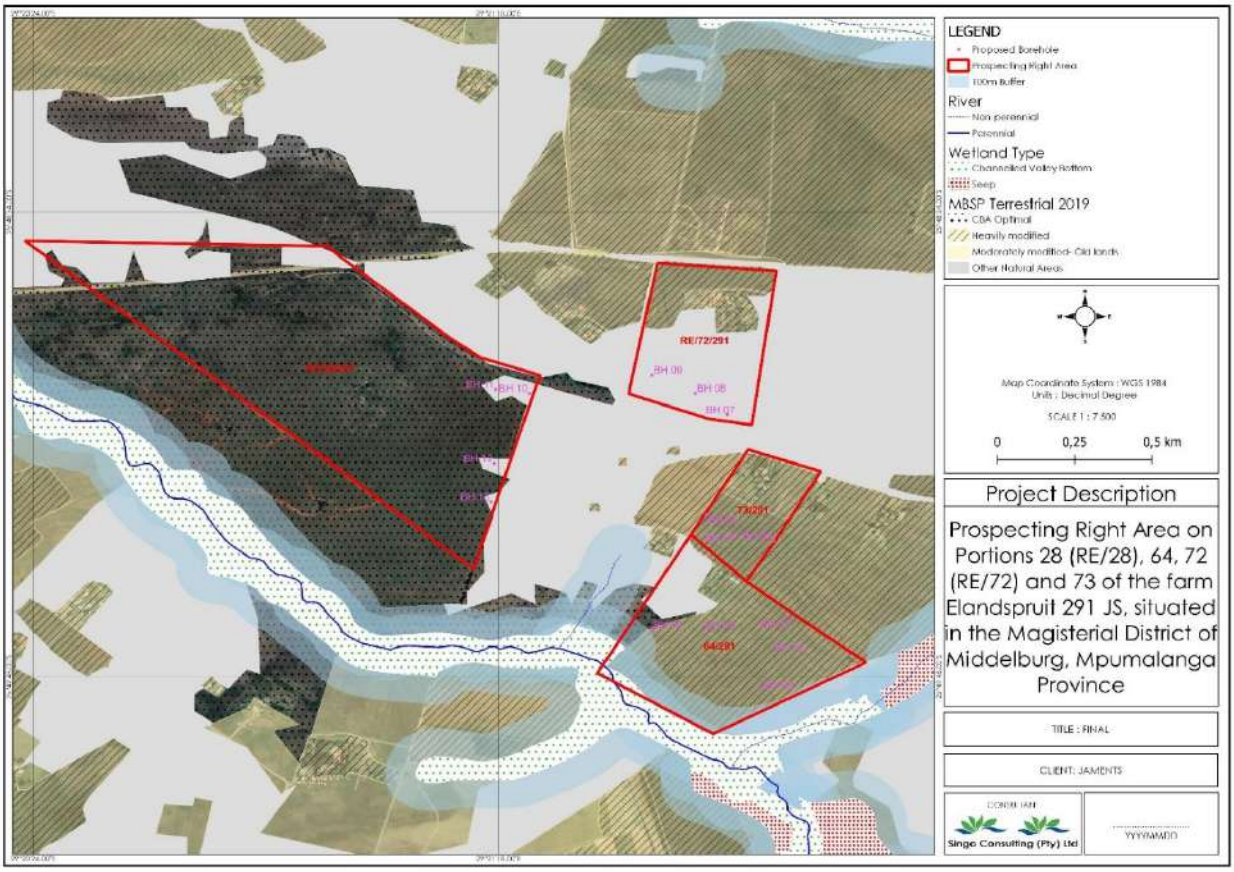
- END –

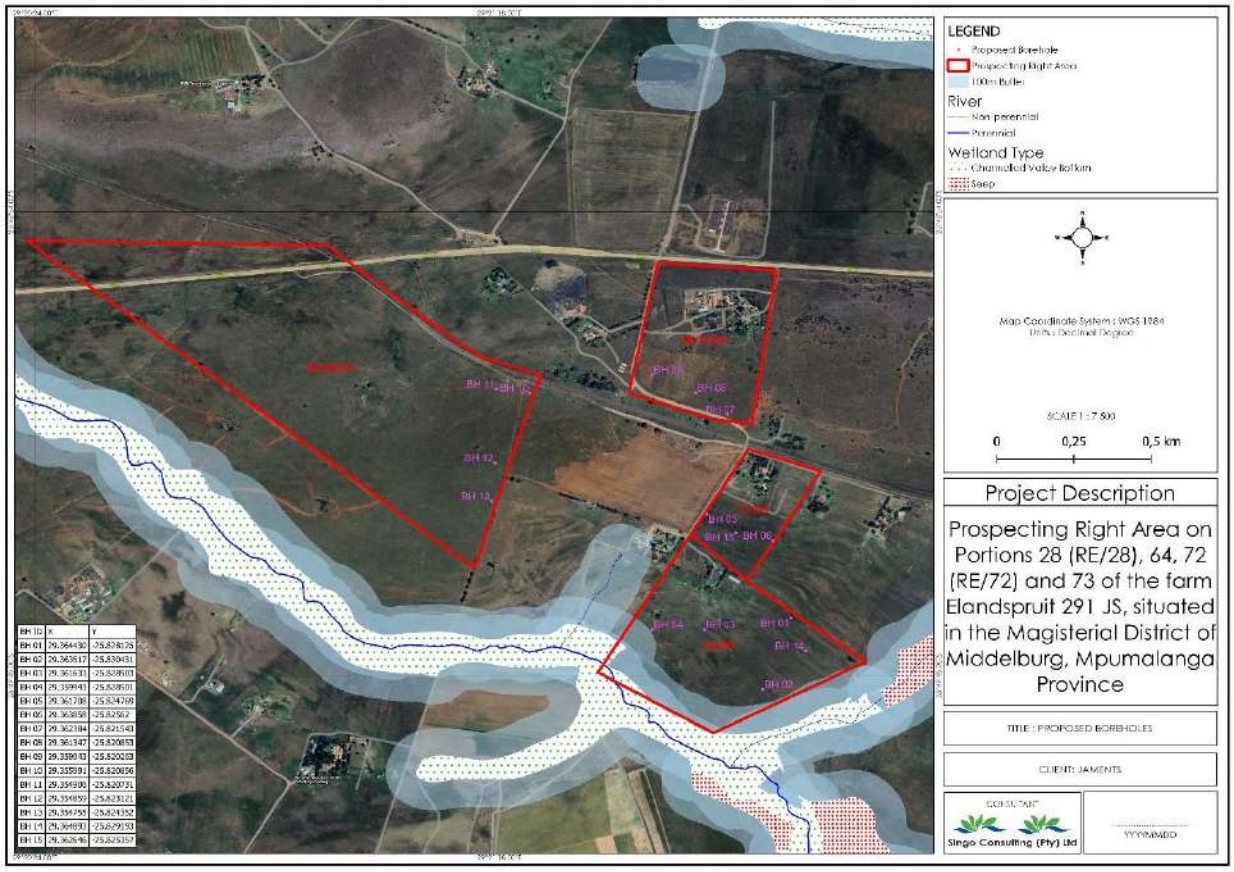
APPENDICES

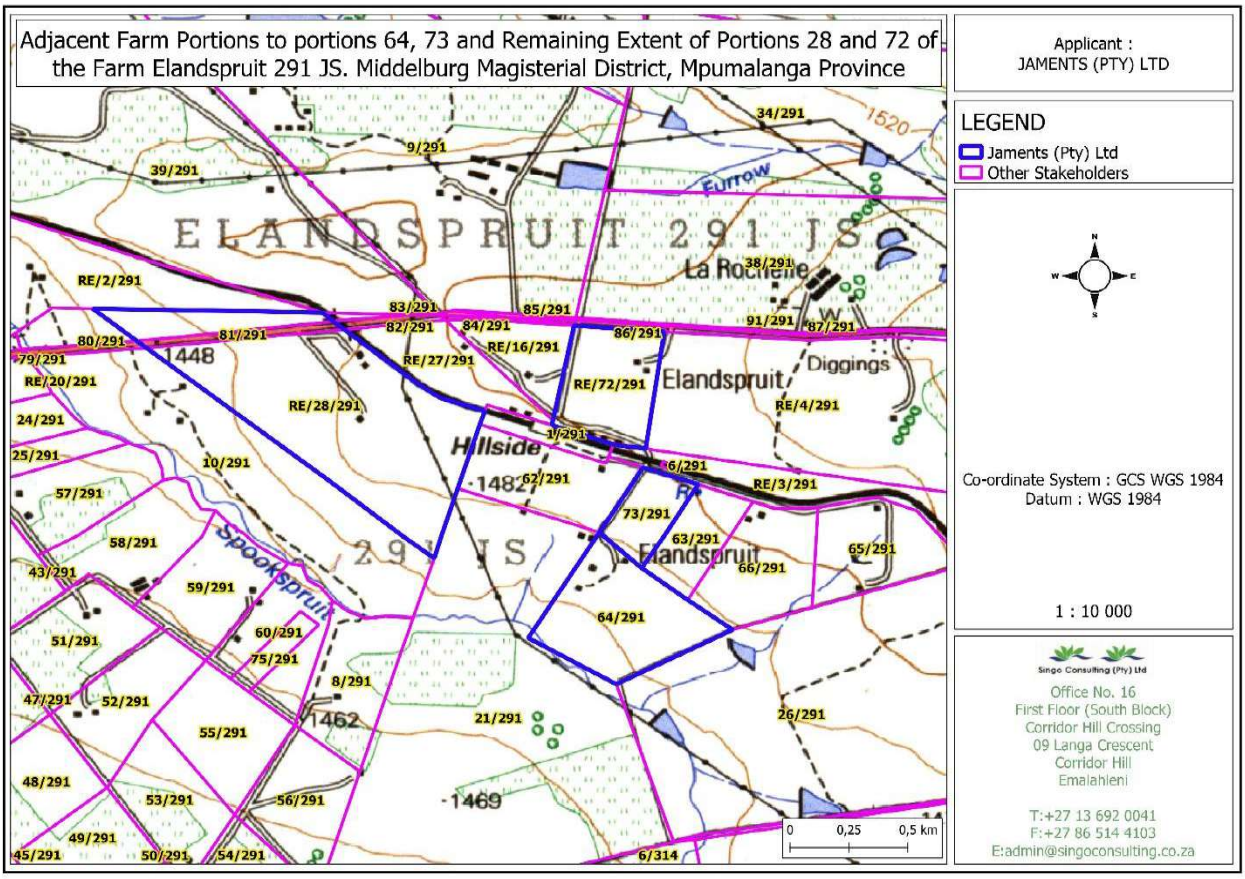
Appendix 1: PROJECT MAPS

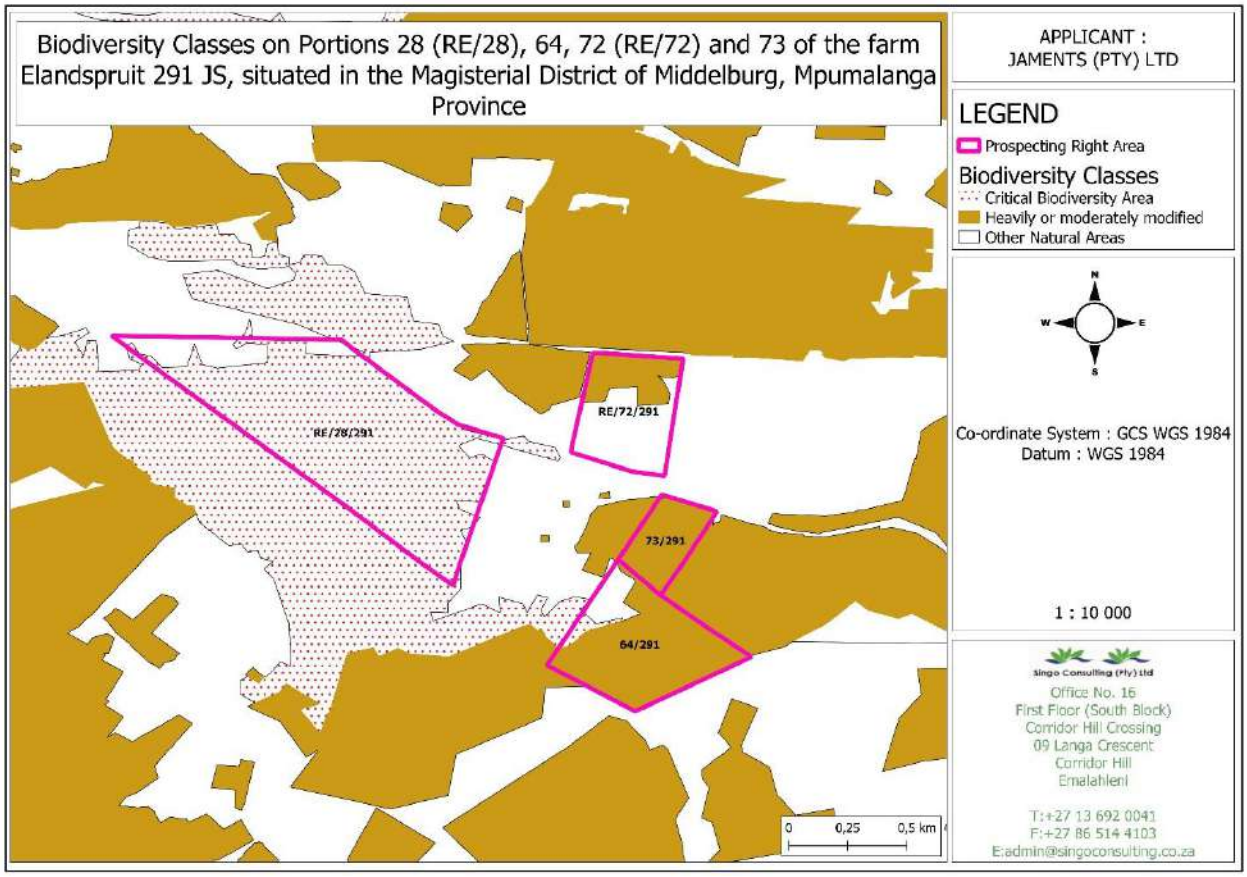

Locality of Project on Portions 28 (RE/28), 64, 72 (RE/72) and 73 of the farm Elandspruit 291 JS, situated in the Magisterial District of Middelburg, Mpumalanga Province
APPLICANT :
JAMENTS (PTY) LTD
LEGEND
Project Area
National Road
Primary Road
Secondary Road
Airport
Tertiary Road
Rail
Mines
Dams
Residential
Dennesig
Kanonkop
Mhluzi
Golfsig
Middelburg Dam
Middelburg
Nasaret
Kosmos
Pine Ridge
Hoeveldpark
Doringpoort Dam
Reyno Ridge
Witbank Dam
Duvha Park
Middelburg Colliery
0 2,5 5 km
Co-ordinate System : GCS WGS 1984
Datum : WGS 1984
1 : 100 000
Singo Consulting (Pty) Ltd
Office No. 16
First Floor (South Block)
Corridor Hill Crossing
09 Langa Crescent
Corridor Hill
Emalahleni
T:+27 13 692 0041
F:+27 86 514 4103
E:admin@singoconsulting.co.za

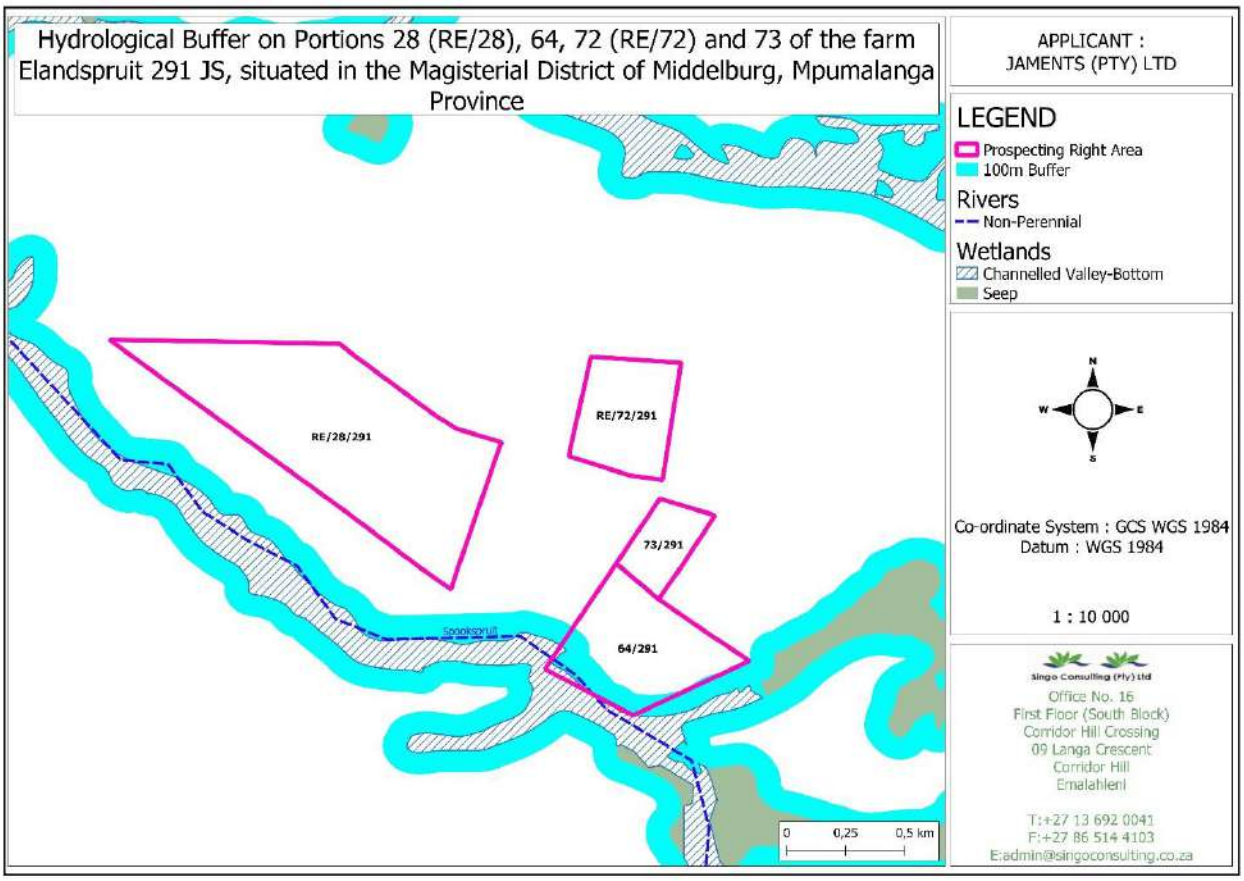

ID X Y
A 29.3397 -25.8159
B 29.3495 -25.8161
C 29.3544 -25.8157
D 29.3564 -25.8208
E 29.3542 -25.8265
F 29.3601 -25.8167
G 29.3640 -25.8169
H 29.3632 -25.8219
I 29.3618 -25.8217
J 29.3592 -25.8209
K 29.3631 -25.8227
L 29.3654 -25.8254
M 29.3680 -25.8269
N 29.3669 -25.8295
O 29.3619 -25.8318
P 29.3582 -25.8299
ELANDSPRUIT 291
Hillside
1482
1448
1462
RE/28/291
RE/72/291
73/291
64/291
Spookspruit
Furrow
APPLICANT:
Jaments (Pty) Ltd
Legend
Prospecting Portions
N
0 0.24 0.48 0.72 km
Singo Consulting (Pty) Ltd
PLAN COMPILED IN ACCORDANCE WITH REGULATION 2(2) OF THE mprda,2002,(ACT NO28 OF 2002).In Accordance with Section 48 (2) of MPRDA, NWA (1998),NEMA (1998)(2002) and Regulation 17 of Mine Health and Safety Act (1998), the Prospecting Area excludes any area within a horizontal distance of 100 metres of any Water Courses, Wetlands, Protected Areas, Public Roads, Railway or Cemetry
Prospecting Right Application on the Remaining Extent of portions 28 & 72 and Portions 64 & 73 of the farm Elandspruit 291 JS. Middelburg Magisterial District, Mpumalanga Province. The Total Area Extext is Approximately 143. 52 Hectares.

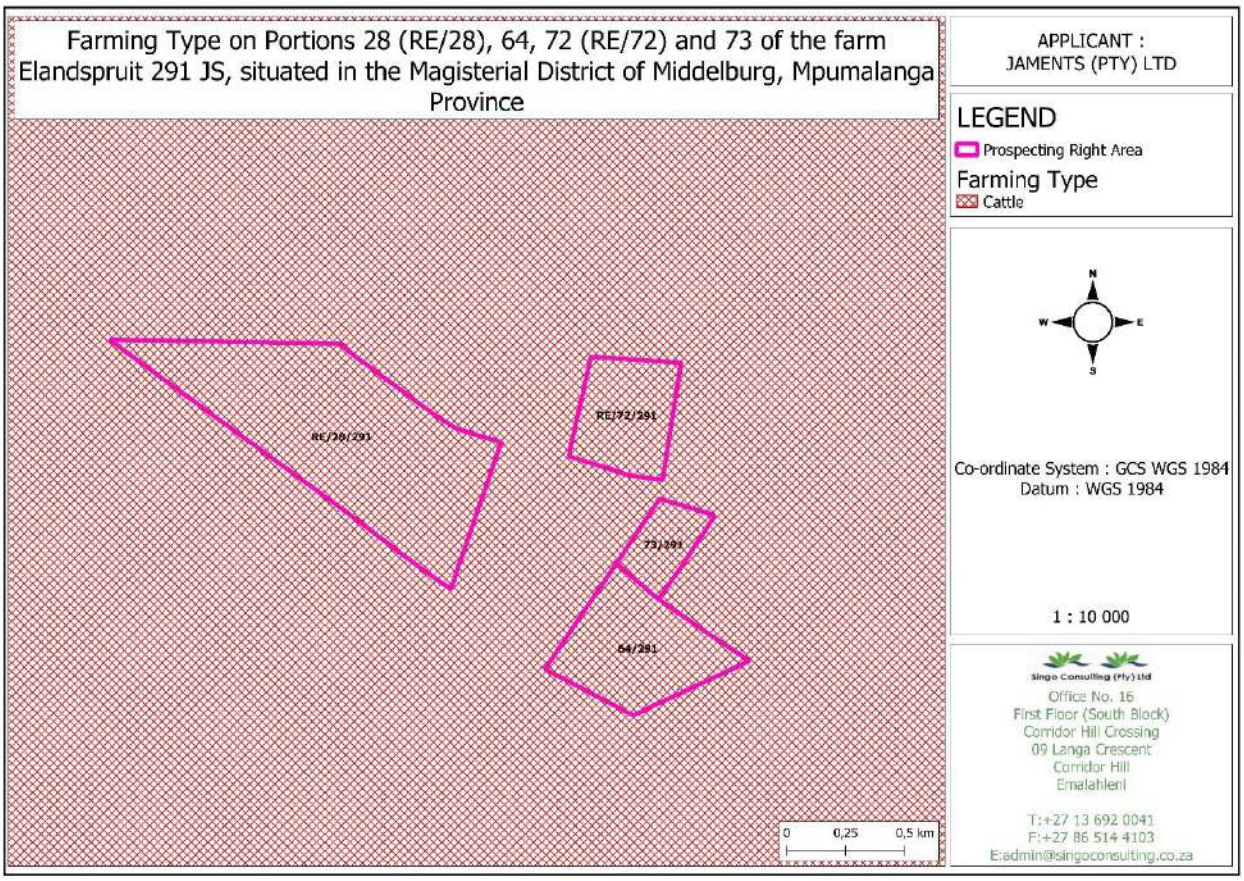

LEGEND
Proposed Borehole
Prospecting Right Area
100m Buffer
River
Non perennial
Perennial
Wetland Type
Channelled Valley Bottom
Seep
MBSP Terrestrial 2019
CBA Optimal
Heavily modified
Moderately modified- Old lands
Other Natural Areas
Map Coordinate System : WGS 1984
Units : Decimal Degree
SCALE 1 : 7 500
0
0,25
0,5 km
Project Description
Prospecting Right Area on Portions 28 (RE/28), 64, 72 (RE/72) and 73 of the farm Elandspruit 291 JS, situated in the Magisterial District of Middelburg, Mpumalanga Province
TITLE : FINAL
CLIENT: JAMENTS
CONSULTANT
Singo Consulting (Pty) Ltd
YYYYMMDD

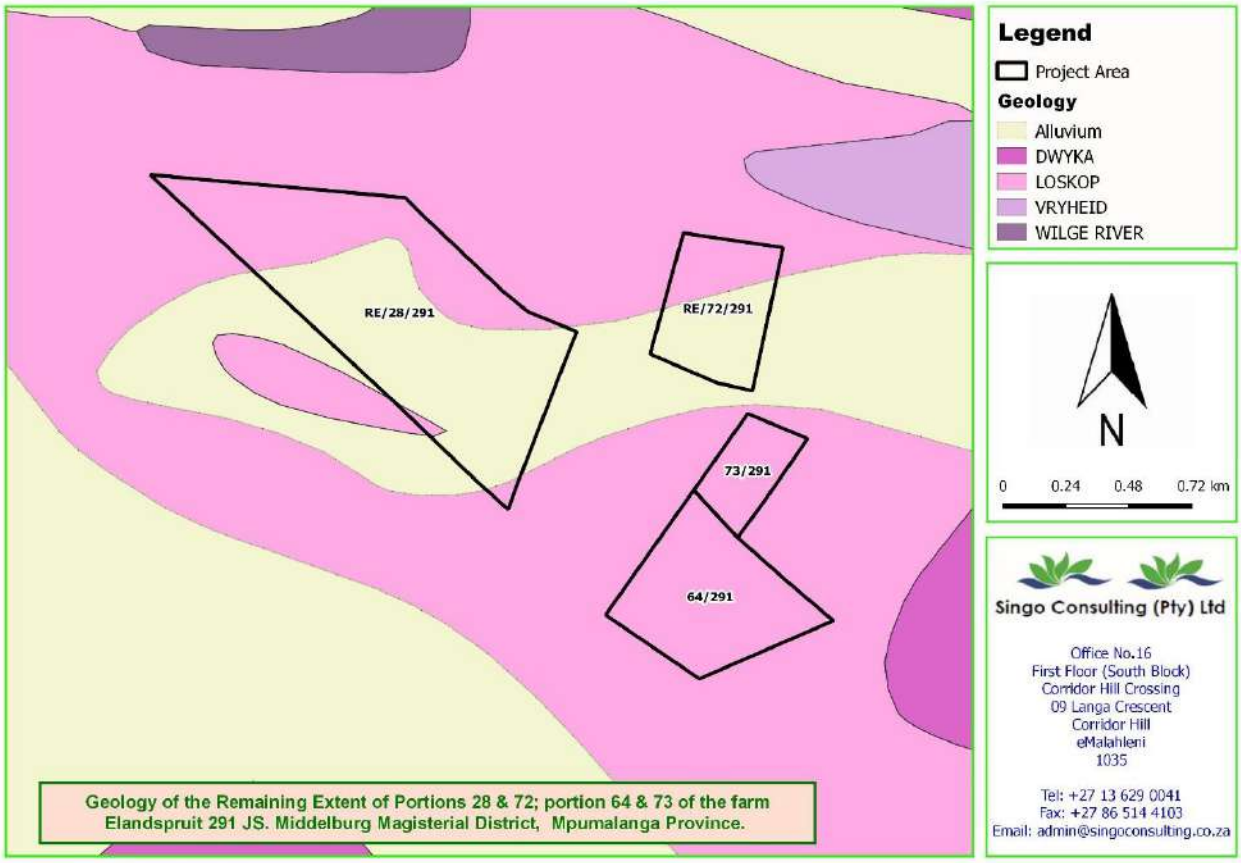

LEGEND
Proposed Borehole
Prospecting Right Area
100m Buffer
River
Non perennial
Perennial
Wetland Type
Channelled Valley Bottom
Seep
Map Coordinate System : WGS 1984
Units : Decimal Degree
SCALE 1 : 7 500
0
0,25
0,5 km
Project Description
Prospecting Right Area on Portions 28 (RE/28), 64, 72 (RE/72) and 73 of the farm Elandspruit 291 JS, situated in the Magisterial District of Middelburg, Mpumalanga Province
TITLE : PROPOSED BORHOLES
CLIENT: JAMENTS
CONSULTANT
Singo Consulting (Pty) Ltd
YYYYMMDD

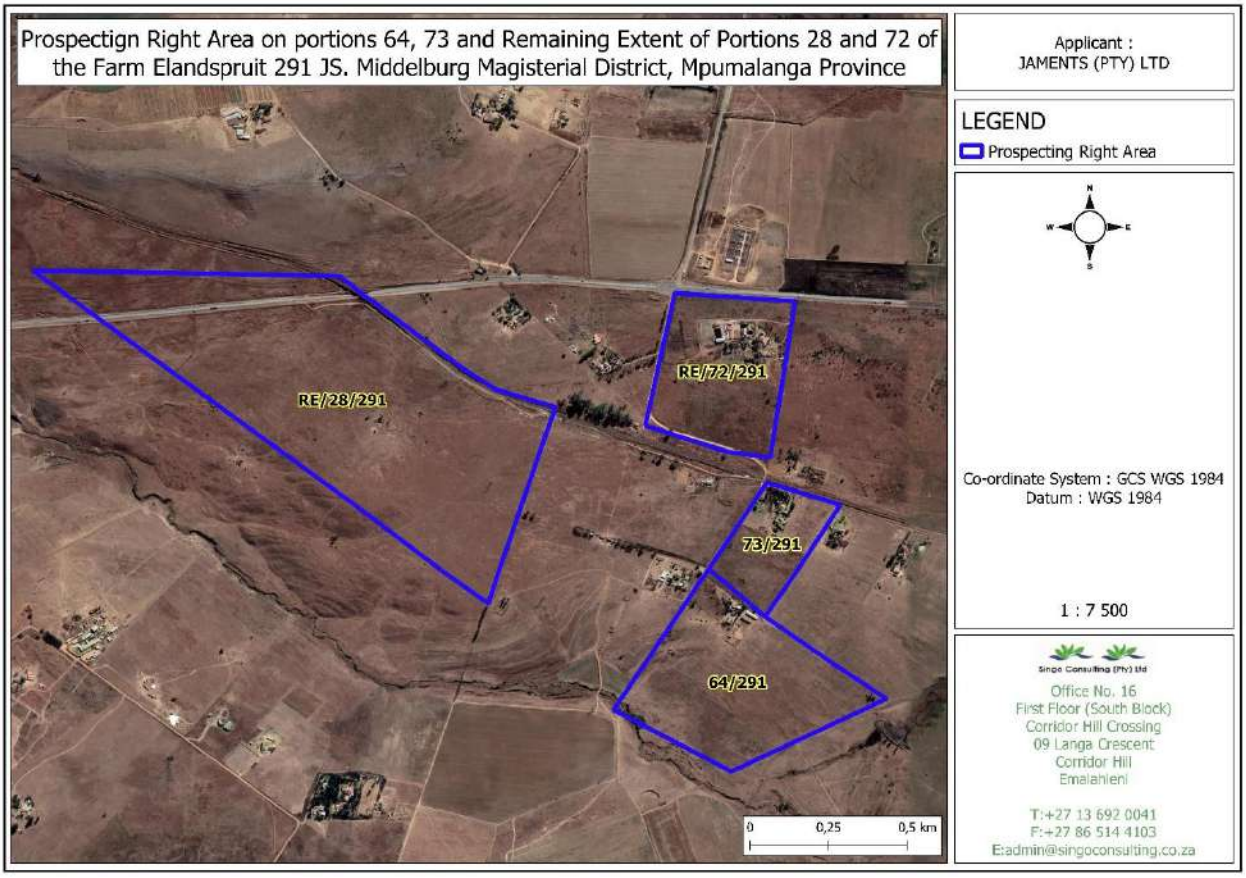

Adjacent Farm Portions to portions 64, 73 and Remaining Extent of Portions 28 and 72 of the Farm Elandspruit 291 JS. Middelburg Magisterial District, Mpumalanga Province
Applicant :
JAMENTS (PTY) LTD
LEGEND
Jaments (Pty) Ltd
Other Stakeholders
ELANDSPRUIT 291 JS
La Rochelle
Elandspruit
Diggings
Hillside
Spookspruit
Furrow
RE/2/291
39/291
9/291
34/291
38/291
83/291
85/291
82/291
84/291
RE/16/291
86/291
91/291
87/291
80/291
81/291
79/291
RE/20/291
RE/27/291
RE/72/291
RE/4/291
RE/28/291
24/291
25/291
10/291
1/291
6/291
RE/3/291
57/291
62/291
73/291
58/291
63/291
65/291
43/291
59/291
66/291
64/291
51/291
60/291
75/291
8/291
47/291
52/291
55/291
21/291
26/291
48/291
53/291
56/291
49/291
45/291
50/291
54/291
6/314
1448
1462
1469
1482
Co-ordinate System : GCS WGS 1984
Datum : WGS 1984
1 : 10 000
0
0,25
0,5 km
Singo Consulting (Pty) Ltd
Office No. 16
First Floor (South Block)
Corridor Hill Crossing
09 Langa Crescent
Corridor Hill
Emalahleni
T:+27 13 692 0041
F:+27 86 514 4103
E:admin@singoconsulting.co.za

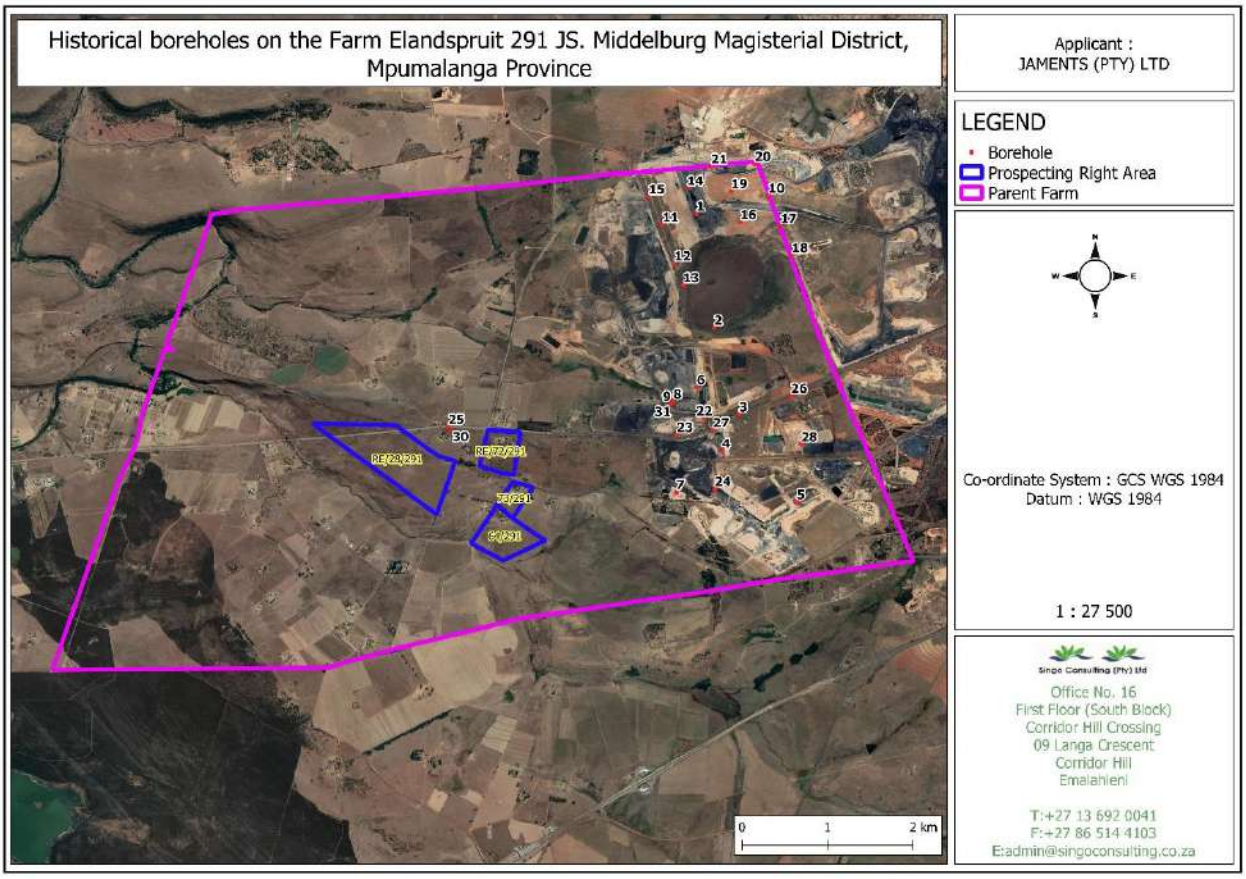

Biodiversity Classes on Portions 28 (RE/28), 64, 72 (RE/72) and 73 of the farm Elandspruit 291 JS, situated in the Magisterial District of Middelburg, Mpumalanga Province
APPLICANT :
JAMENTS (PTY) LTD
LEGEND
Prospecting Right Area
Biodiversity Classes
Critical Biodiversity Area
Heavily or moderately modified
Other Natural Areas
RE/28/291
RE/72/291
73/291
64/291
Co-ordinate System : GCS WGS 1984
Datum : WGS 1984
1 : 10 000
0
0,25
0,5 km
Singo Consulting (Pty) Ltd
Office No. 16
First Floor (South Block)
Corridor Hill Crossing
09 Langa Crescent
Corridor Hill
Emalahleni
T:+27 13 692 0041
F:+27 86 514 4103
E:admin@singoconsulting.co.za

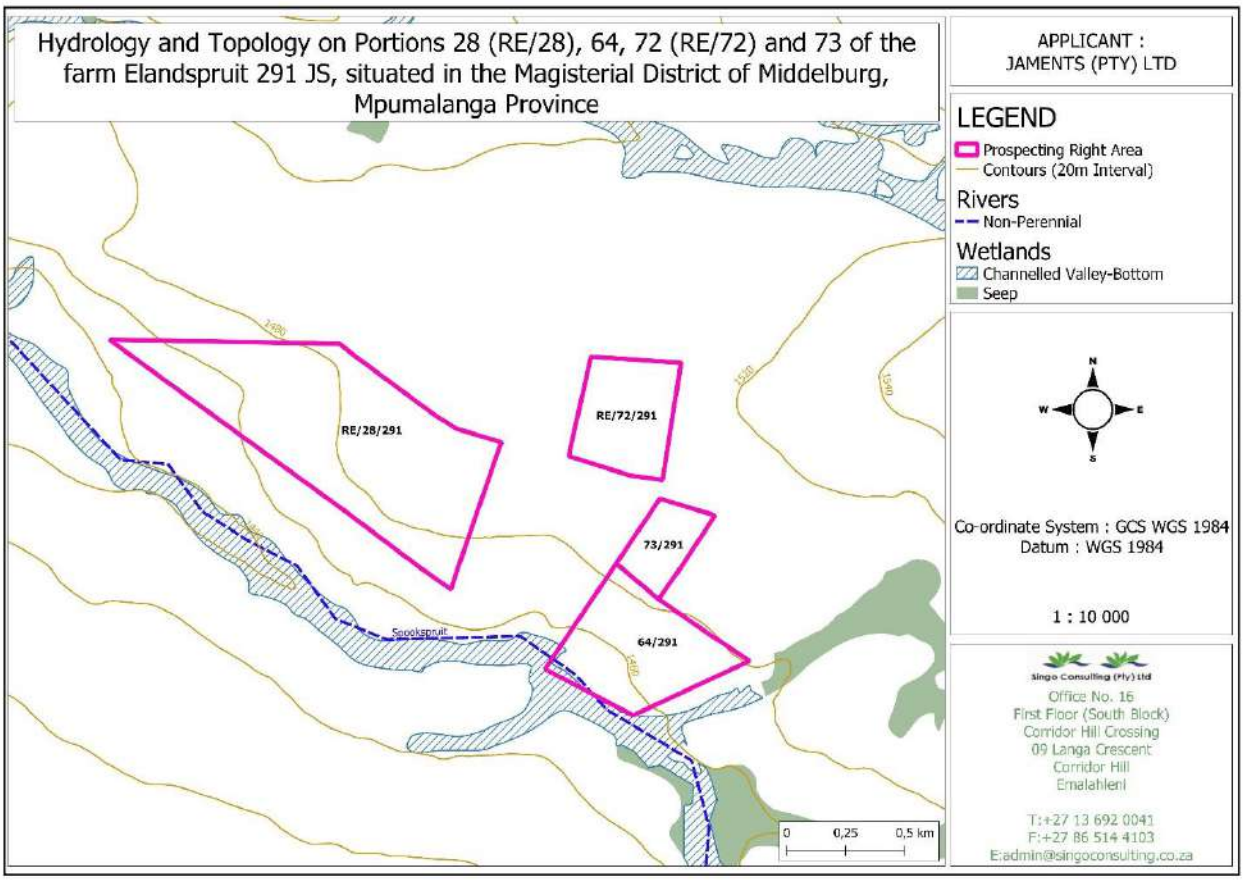

Hydrological Buffer on Portions 28 (RE/28), 64, 72 (RE/72) and 73 of the farm Elandspruit 291 JS, situated in the Magisterial District of Middelburg, Mpumalanga Province
APPLICANT :
JAMENTS (PTY) LTD
LEGEND
Prospecting Right Area
100m Buffer
Rivers
Non-Perennial
Wetlands
Channelled Valley-Bottom
Seep
RE/28/291
RE/72/291
73/291
64/291
Spookspruit
N
W
E
S
Co-ordinate System : GCS WGS 1984
Datum : WGS 1984
1 : 10 000
0
0,25
0,5 km
Singo Consulting (Pty) Ltd
Office No. 16
First Floor (South Block)
Corridor Hill Crossing
09 Langa Crescent
Corridor Hill
Emalahleni
T:+27 13 692 0041
F:+27 86 514 4103
E:admin@singoconsulting.co.za

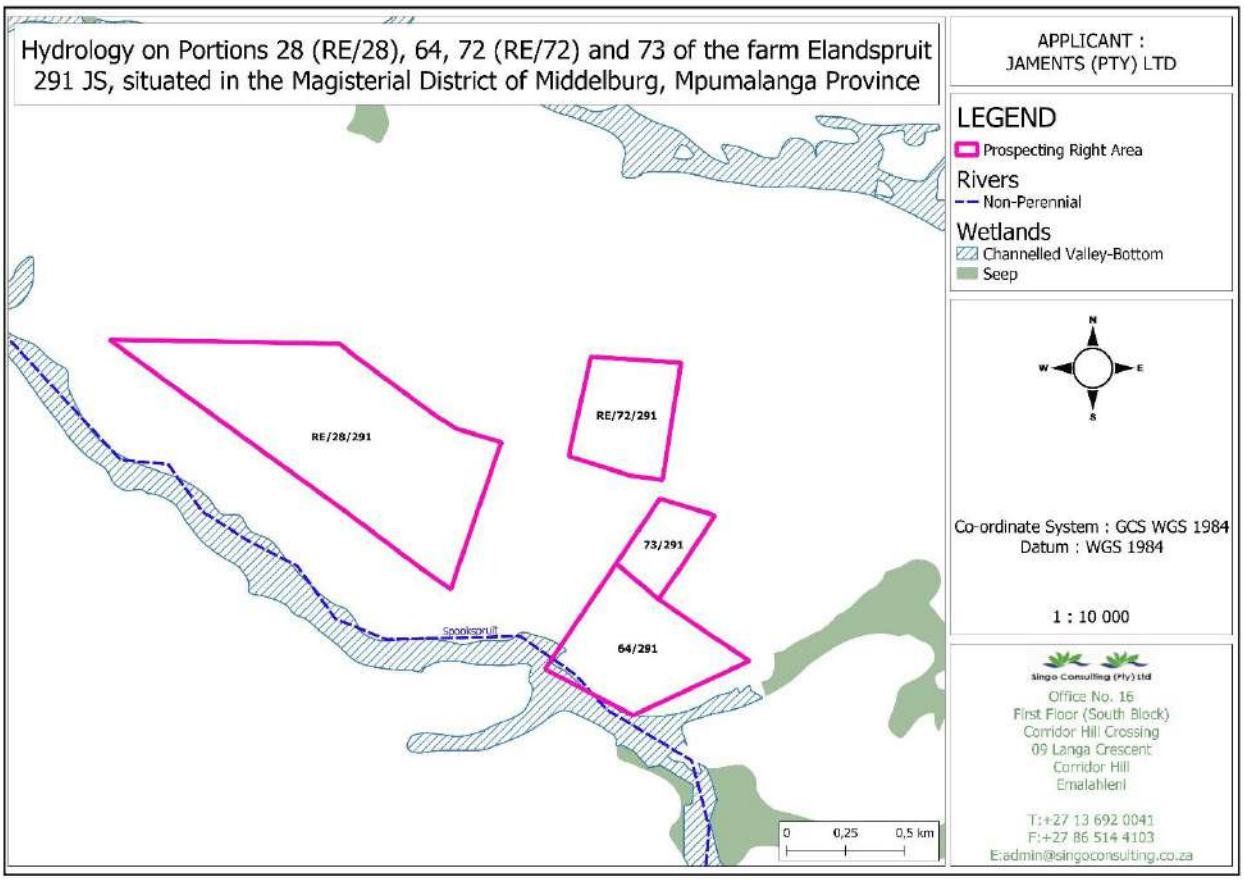

Farming Type on Portions 28 (RE/28), 64, 72 (RE/72) and 73 of the farm Elandspruit 291 JS, situated in the Magisterial District of Middelburg, Mpumalanga Province
APPLICANT :
JAMENTS (PTY) LTD
LEGEND
Prospecting Right Area
Farming Type
Cattle
RE/28/291
RE/72/291
73/291
64/291
N
W
E
S
Co-ordinate System : GCS WGS 1984
Datum : WGS 1984
1 : 10 000
0
0,25
0,5 km
Singo Consulting (Pty) Ltd
Office No. 16
First Floor (South Block)
Corridor Hill Crossing
09 Langa Crescent
Corridor Hill
Emalahleni
T:+27 13 692 0041
F:+27 86 514 4103
E:admin@singoconsulting.co.za

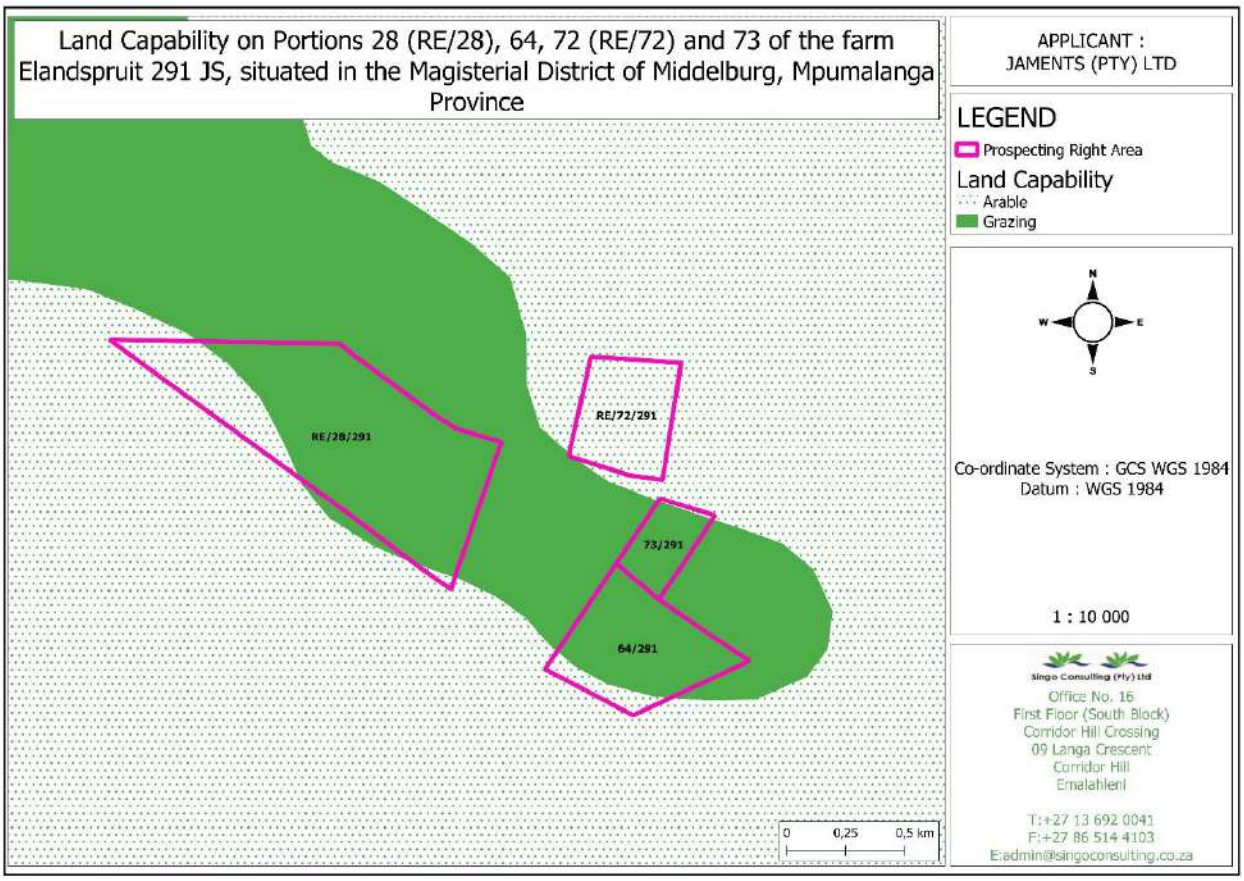

RE/28/291
RE/72/291
73/291
64/291
Legend
Project Area
Geology
Alluvium
DWYKA
LOSKOP
VRYHEID
WILGE RIVER
N
0 0.24 0.48 0.72 km
Singo Consulting (Pty) Ltd
Office No.16
First Floor (South Block)
Corridor Hill Crossing
09 Langa Crescent
Corridor Hill
eMalahleni
1035
Tel: +27 13 629 0041
Fax: +27 86 514 4103
Email: admin@singoconsulting.co.za
Geology of the Remaining Extent of Portions 28 & 72; portion 64 & 73 of the farm Elandspruit 291 JS. Middelburg Magisterial District, Mpumalanga Province.

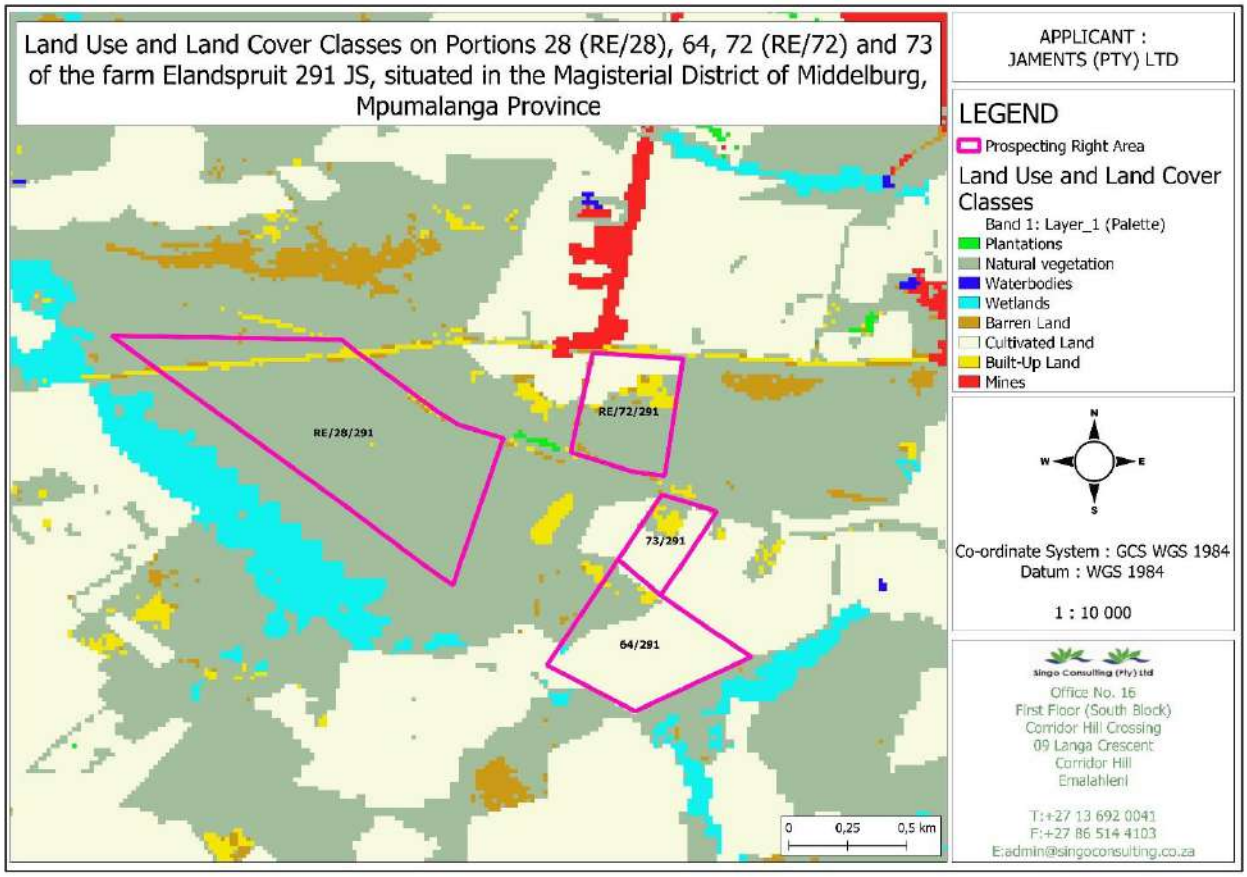

Prospectign Right Area on portions 64, 73 and Remaining Extent of Portions 28 and 72 of the Farm Elandspruit 291 JS. Middelburg Magisterial District, Mpumalanga Province
RE/28/291
RE/72/291
73/291
64/291
0 0,25 0,5 km
Applicant :
JAMENTS (PTY) LTD
LEGEND
Prospecting Right Area
N
W
E
S
Co-ordinate System : GCS WGS 1984
Datum : WGS 1984
1 : 7 500
Singo Consulting (Pty) Ltd
Office No. 16
First Floor (South Block)
Corridor Hill Crossing
09 Langa Crescent
Corridor Hill
Emalahleni
T:+27 13 692 0041
F:+27 86 514 4103
E:admin@singoconsulting.co.za

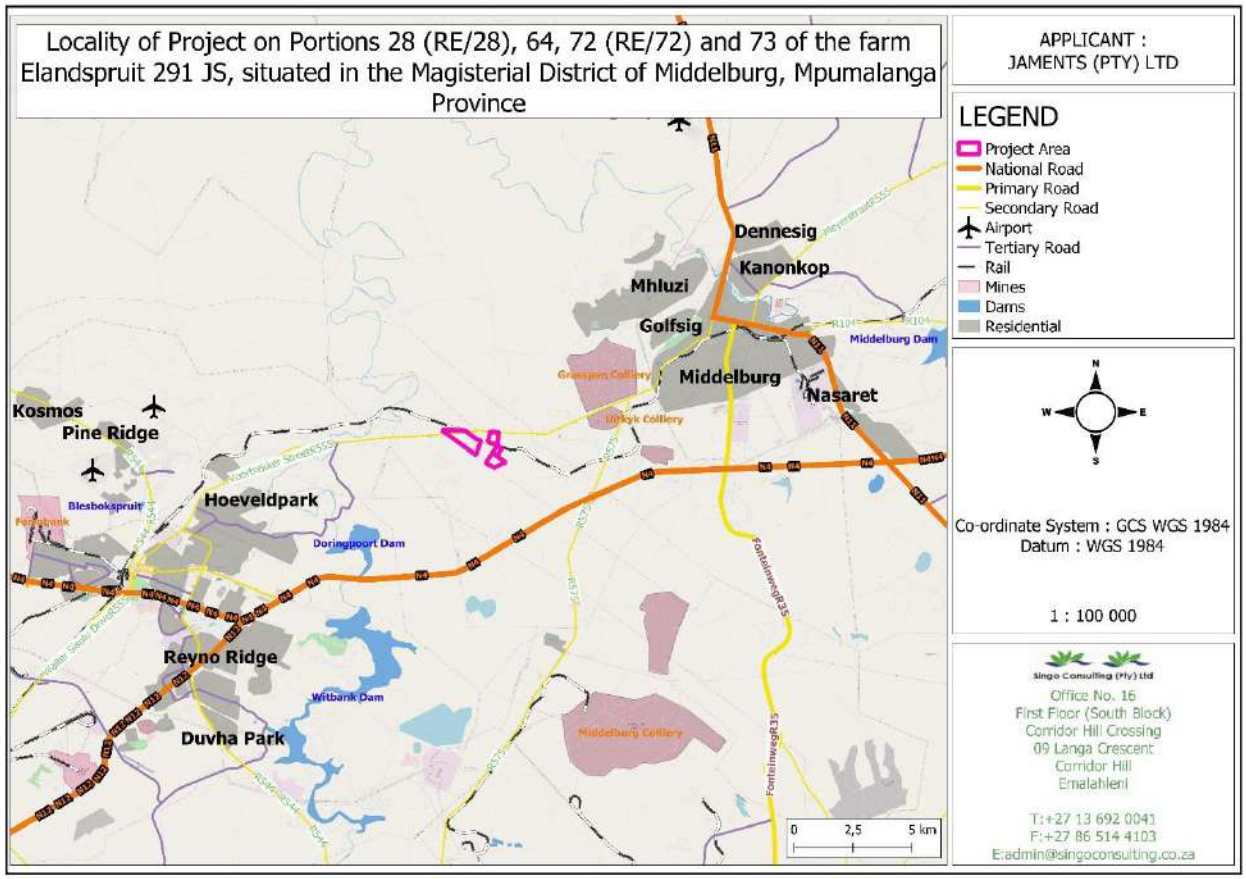

Historical boreholes on the Farm Elandspruit 291 JS. Middelburg Magisterial District, Mpumalanga Province
Applicant :
JAMENTS (PTY) LTD
LEGEND
Borehole
Prospecting Right Area
Parent Farm
RE/28/291
RE/72/291
73/291
64/291
0 1 2 km
Co-ordinate System : GCS WGS 1984
Datum : WGS 1984
1 : 27 500
Singo Consulting (Pty) Ltd
Office No. 16
First Floor (South Block)
Corridor Hill Crossing
09 Langa Crescent
Corridor Hill
Emalahleni
T:+27 13 692 0041
F:+27 86 514 4103
E:admin@singoconsulting.co.za

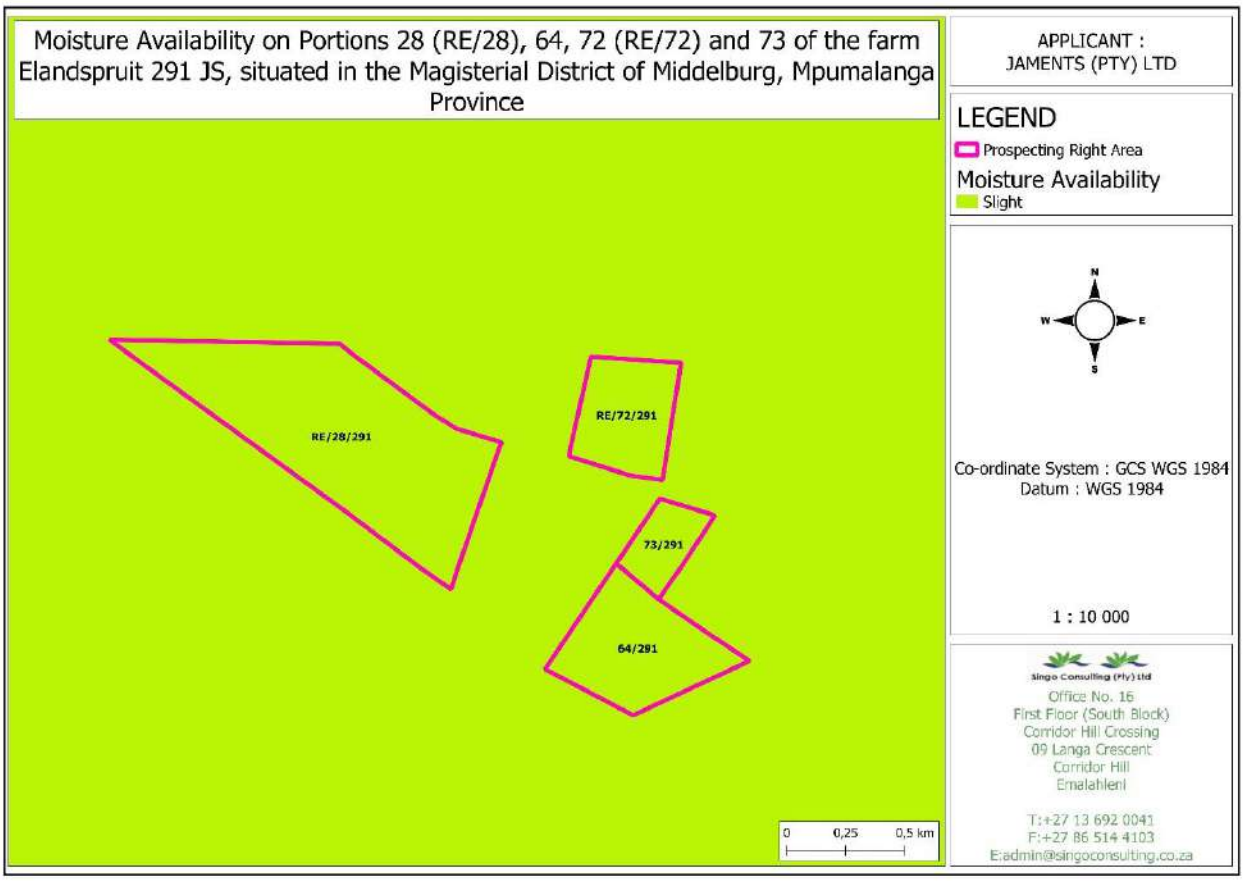

Hydrology and Topology on Portions 28 (RE/28), 64, 72 (RE/72) and 73 of the farm Elandspruit 291 JS, situated in the Magisterial District of Middelburg, Mpumalanga Province
APPLICANT :
JAMENTS (PTY) LTD
LEGEND
Prospecting Right Area
Contours (20m Interval)
Rivers
Non-Perennial
Wetlands
Channelled Valley-Bottom
Seep
RE/28/291
RE/72/291
73/291
64/291
Spookspruit
0 0,25 0,5 km
Co-ordinate System : GCS WGS 1984
Datum : WGS 1984
1 : 10 000
Singo Consulting (Pty) Ltd
Office No. 16
First Floor (South Block)
Corridor Hill Crossing
09 Langa Crescent
Corridor Hill
Emalahleni
T:+27 13 692 0041
F:+27 86 514 4103
E:admin@singoconsulting.co.za

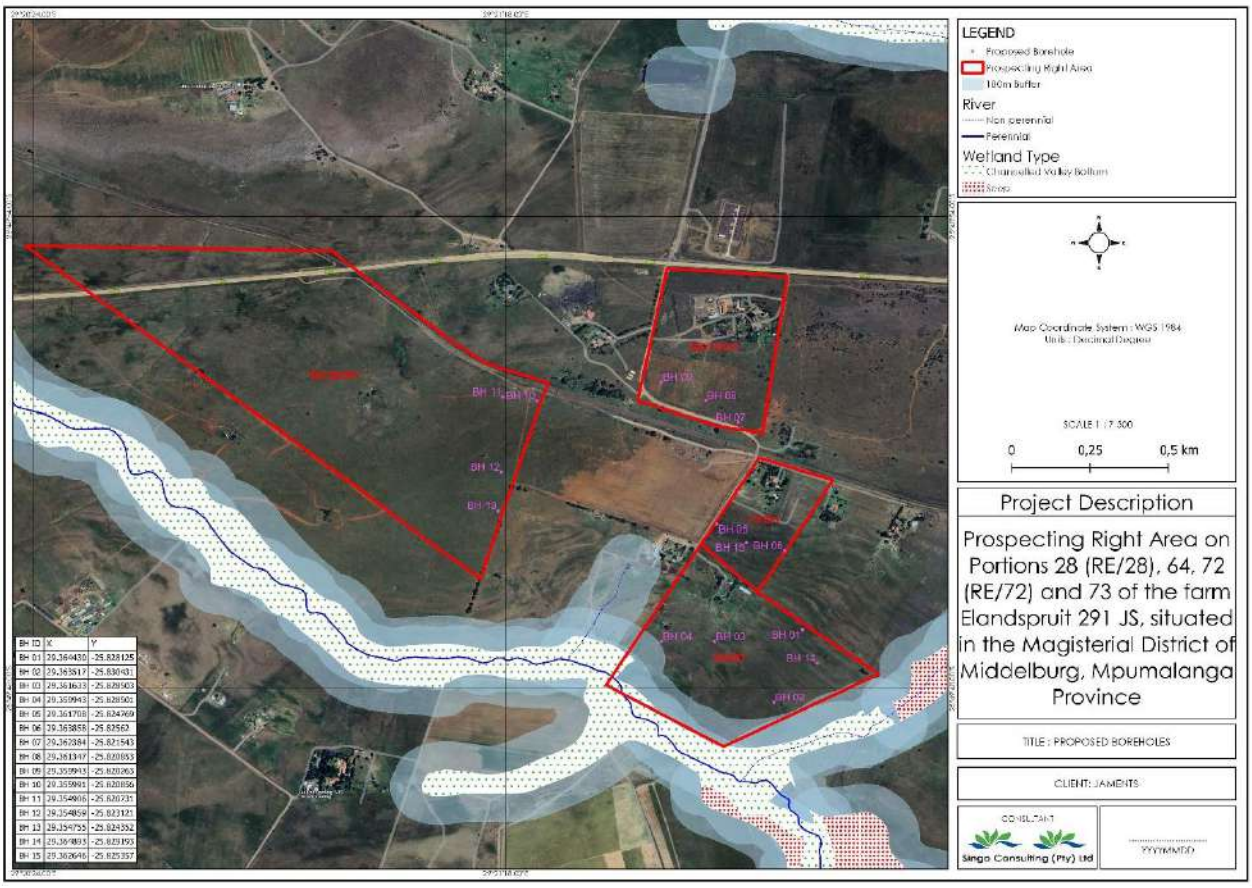

Hydrology on Portions 28 (RE/28), 64, 72 (RE/72) and 73 of the farm Elandspruit 291 JS, situated in the Magisterial District of Middelburg, Mpumalanga Province
APPLICANT :
JAMENTS (PTY) LTD
LEGEND
Prospecting Right Area
Rivers
Non-Perennial
Wetlands
Channelled Valley-Bottom
Seep
RE/28/291
RE/72/291
73/291
64/291
Spookspruit
N
W
E
S
Co-ordinate System : GCS WGS 1984
Datum : WGS 1984
1 : 10 000
0
0,25
0,5 km
Singo Consulting (Pty) Ltd
Office No. 16
First Floor (South Block)
Corridor Hill Crossing
09 Langa Crescent
Corridor Hill
Emalahleni
T:+27 13 692 0041
F:+27 86 514 4103
E:admin@singoconsulting.co.za

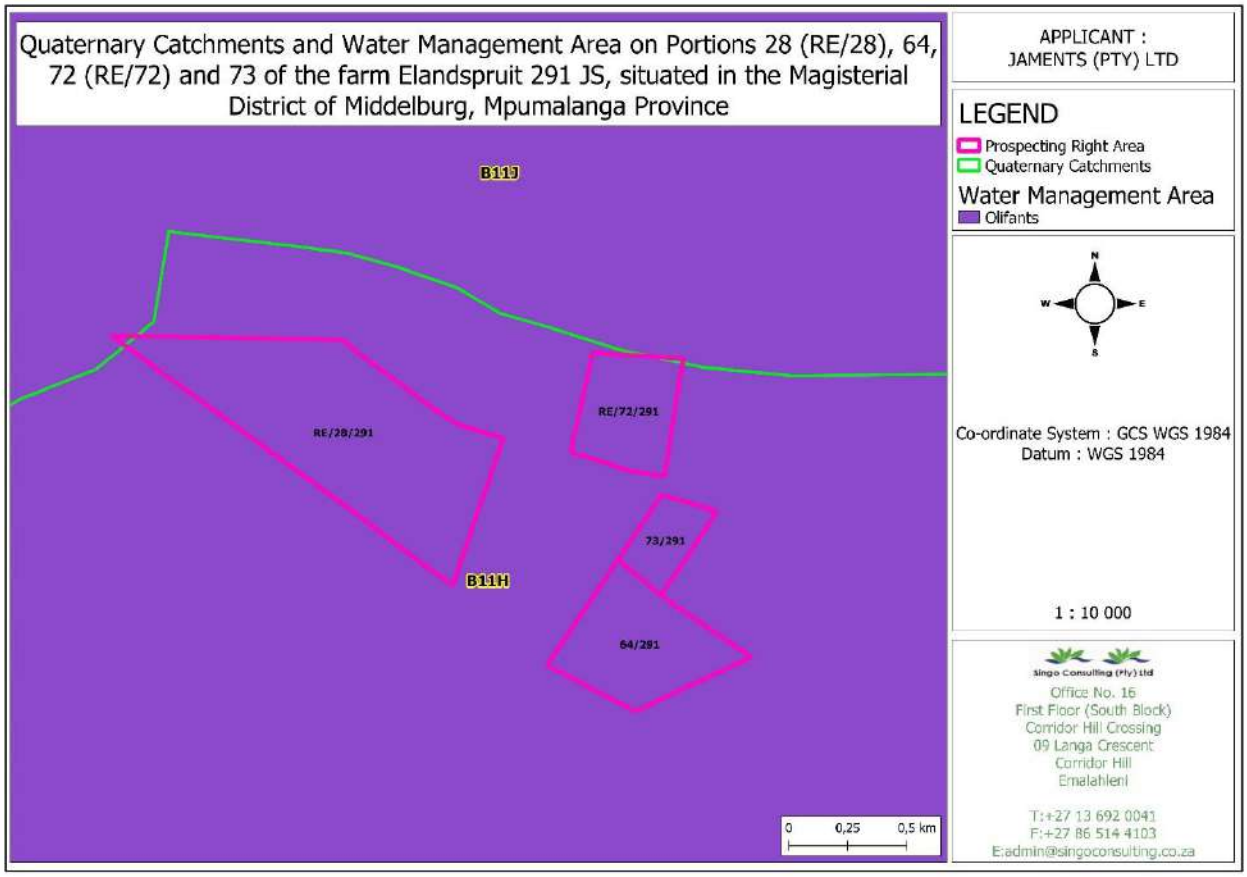

Land Capability on Portions 28 (RE/28), 64, 72 (RE/72) and 73 of the farm Elandspruit 291 JS, situated in the Magisterial District of Middelburg, Mpumalanga Province
APPLICANT :
JAMENTS (PTY) LTD
LEGEND
Prospecting Right Area
Land Capability
Arable
Grazing
RE/28/291
RE/72/291
73/291
64/291
N
W
E
S
Co-ordinate System : GCS WGS 1984
Datum : WGS 1984
1 : 10 000
0
0,25
0,5 km
Singo Consulting (Pty) Ltd
Office No. 16
First Floor (South Block)
Corridor Hill Crossing
09 Langa Crescent
Corridor Hill
Emalahleni
T:+27 13 692 0041
F:+27 86 514 4103
E:admin@singoconsulting.co.za

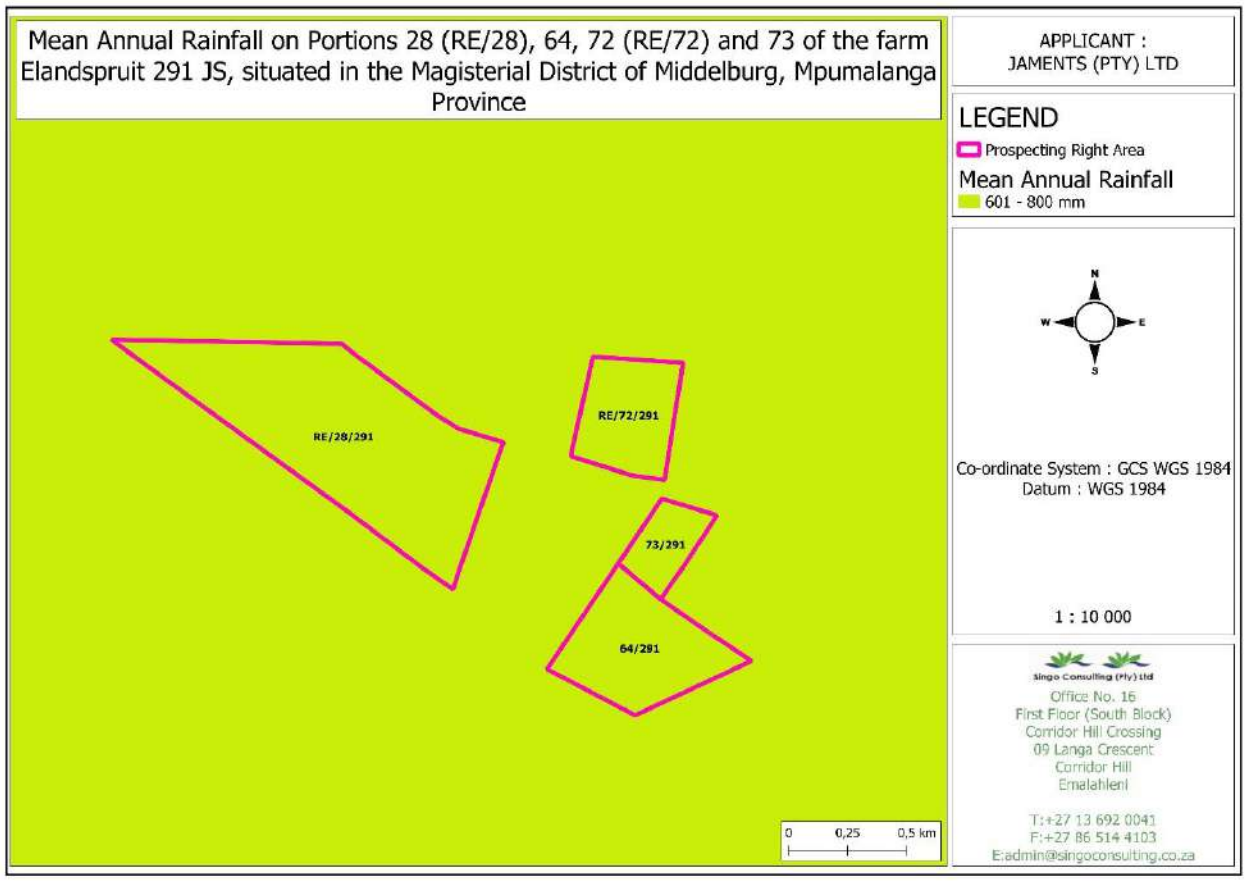

Land Use and Land Cover Classes on Portions 28 (RE/28), 64, 72 (RE/72) and 73 of the farm Elandspruit 291 JS, situated in the Magisterial District of Middelburg, Mpumalanga Province
RE/28/291
RE/72/291
73/291
64/291
0 0,25 0,5 km
APPLICANT :
JAMENTS (PTY) LTD
LEGEND
Prospecting Right Area
Land Use and Land Cover Classes
Band 1: Layer_1 (Palette)
Plantations
Natural vegetation
Waterbodies
Wetlands
Barren Land
Cultivated Land
Built-Up Land
Mines
N
W
E
S
Co-ordinate System : GCS WGS 1984
Datum : WGS 1984
1 : 10 000
Singo Consulting (Pty) Ltd
Office No. 16
First Floor (South Block)
Corridor Hill Crossing
09 Langa Crescent
Corridor Hill
Emalahleni
T:+27 13 692 0041
F:+27 86 514 4103
E:admin@singoconsulting.co.za

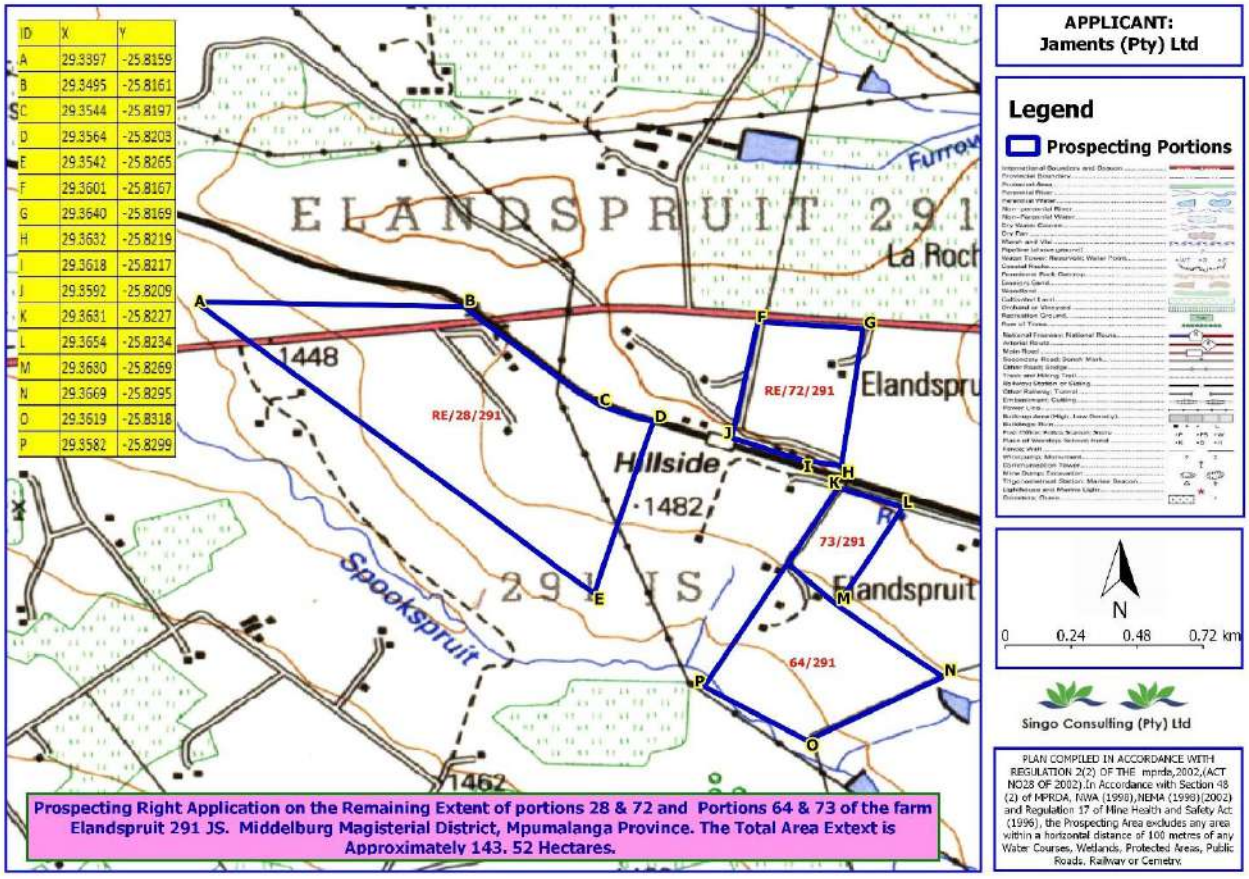

Locality of Project on Portions 28 (RE/28), 64, 72 (RE/72) and 73 of the farm Elandspruit 291 JS, situated in the Magisterial District of Middelburg, Mpumalanga Province
Dennesig
Kanonkop
Mhluzi
Golfsig
Middelburg
Nasaret
Middelburg Dam
Kosmos
Pine Ridge
Hoeveldpark
Doringpoort Dam
Reyno Ridge
Witbank Dam
Duvha Park
0 2,5 5 km
APPLICANT :
JAMENTS (PTY) LTD
LEGEND
Project Area
National Road
Primary Road
Secondary Road
Airport
Tertiary Road
Rail
Mines
Dams
Residential
N
W
E
S
Co-ordinate System : GCS WGS 1984
Datum : WGS 1984
1 : 100 000
Singo Consulting (Pty) Ltd
Office No. 16
First Floor (South Block)
Corridor Hill Crossing
09 Langa Crescent
Corridor Hill
Emalahleni
T:+27 13 692 0041
F:+27 86 514 4103
E:admin@singoconsulting.co.za

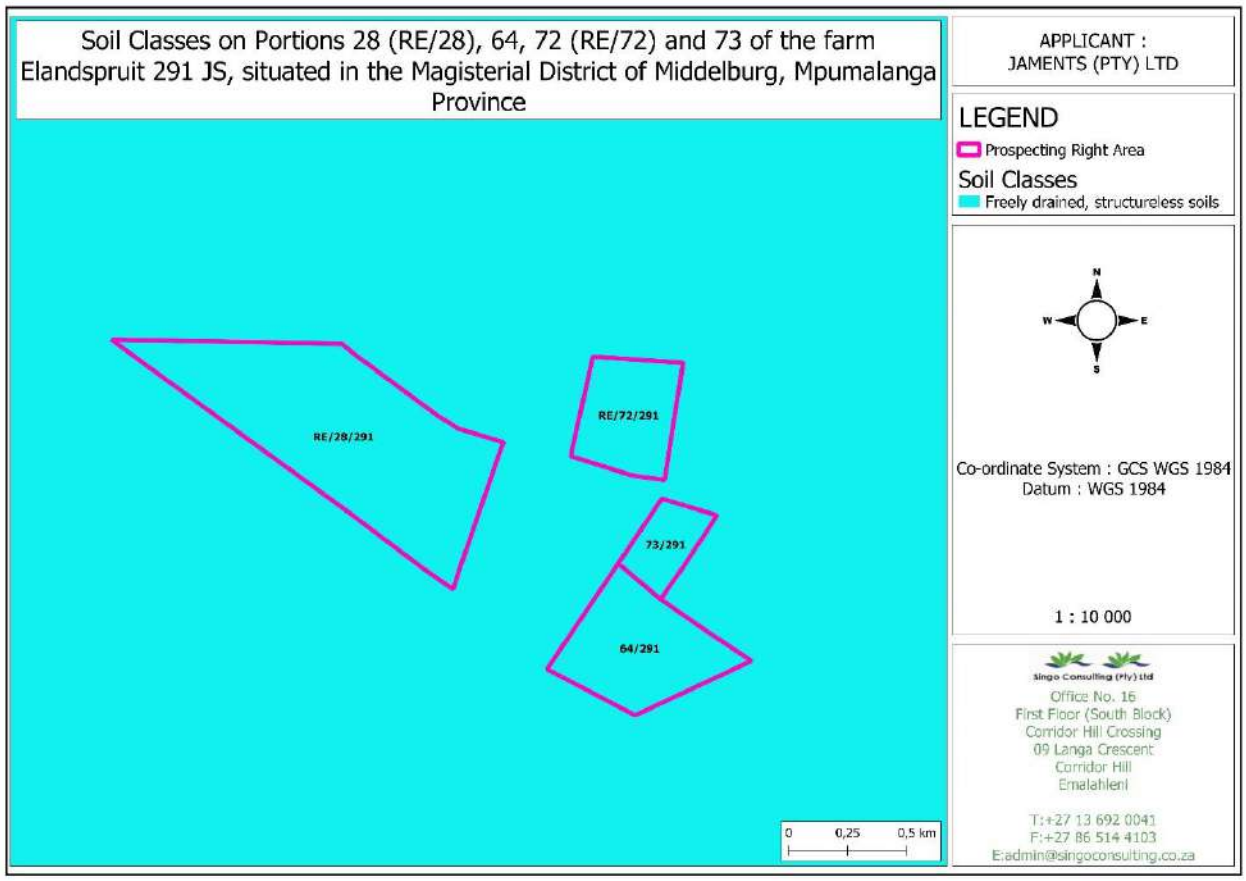

Moisture Availability on Portions 28 (RE/28), 64, 72 (RE/72) and 73 of the farm Elandspruit 291 JS, situated in the Magisterial District of Middelburg, Mpumalanga Province
RE/28/291
RE/72/291
73/291
64/291
0 0,25 0,5 km
APPLICANT :
JAMENTS (PTY) LTD
LEGEND
Prospecting Right Area
Moisture Availability
Slight
N
W
E
S
Co-ordinate System : GCS WGS 1984
Datum : WGS 1984
1 : 10 000
Singo Consulting (Pty) Ltd
Office No. 16
First Floor (South Block)
Corridor Hill Crossing
09 Langa Crescent
Corridor Hill
Emalahleni
T:+27 13 692 0041
F:+27 86 514 4103
E:admin@singoconsulting.co.za

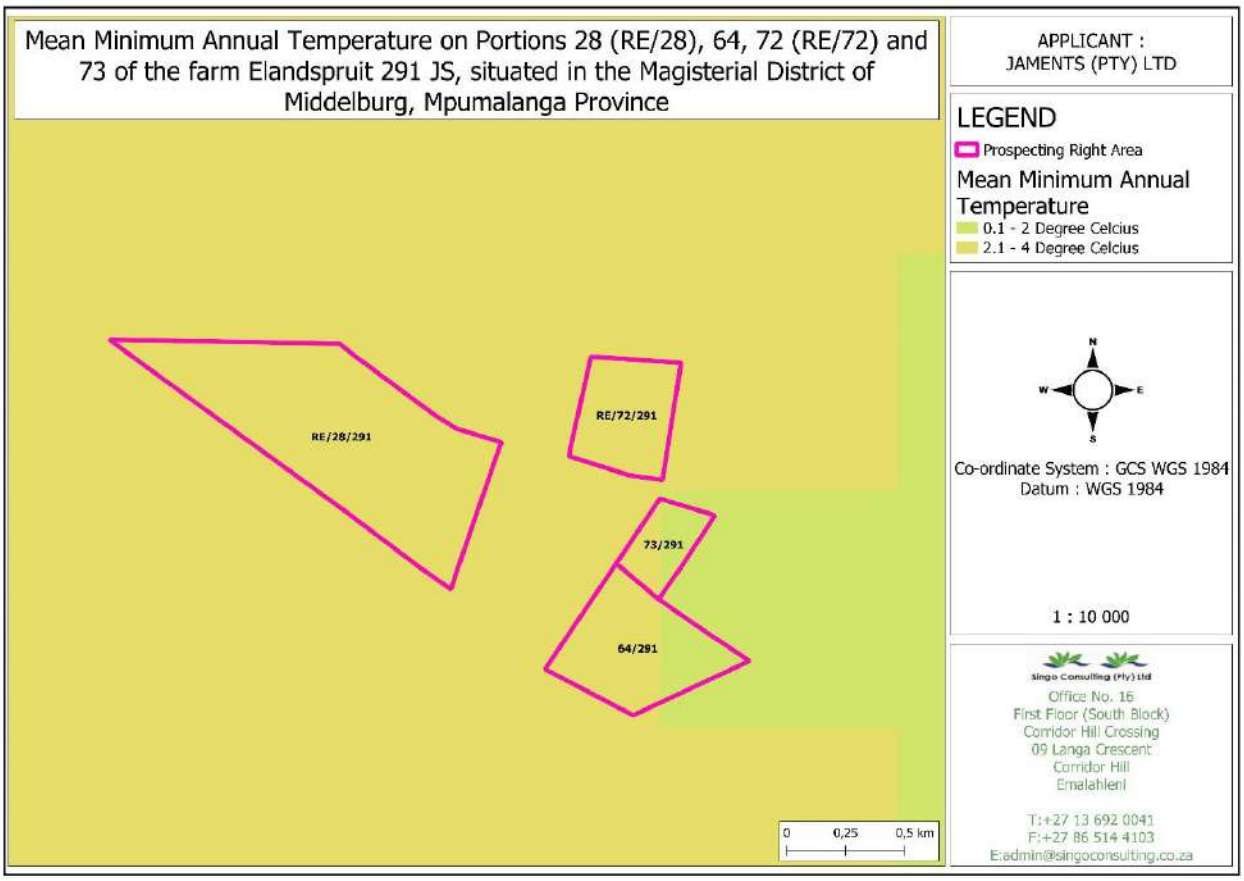

LEGEND
Proposed Borehole
Prospecting Right Area
100m Buffer
River
Non perennial
Perennial
Wetland Type
Channelled Valley Bottom
Seep
Map Coordinate System : WGS 1984
Units : Decimal Degrees
SCALE 1 : 7 500
0 0,25 0,5 km
Project Description
Prospecting Right Area on Portions 28 (RE/28), 64, 72 (RE/72) and 73 of the farm Elandspruit 291 JS, situated in the Magisterial District of Middelburg, Mpumalanga Province
TITLE : PROPOSED BOREHOLES
CLIENT: JAMENTS
CONSULTANT
Singo Consulting (Pty) Ltd
YYYYMMDD

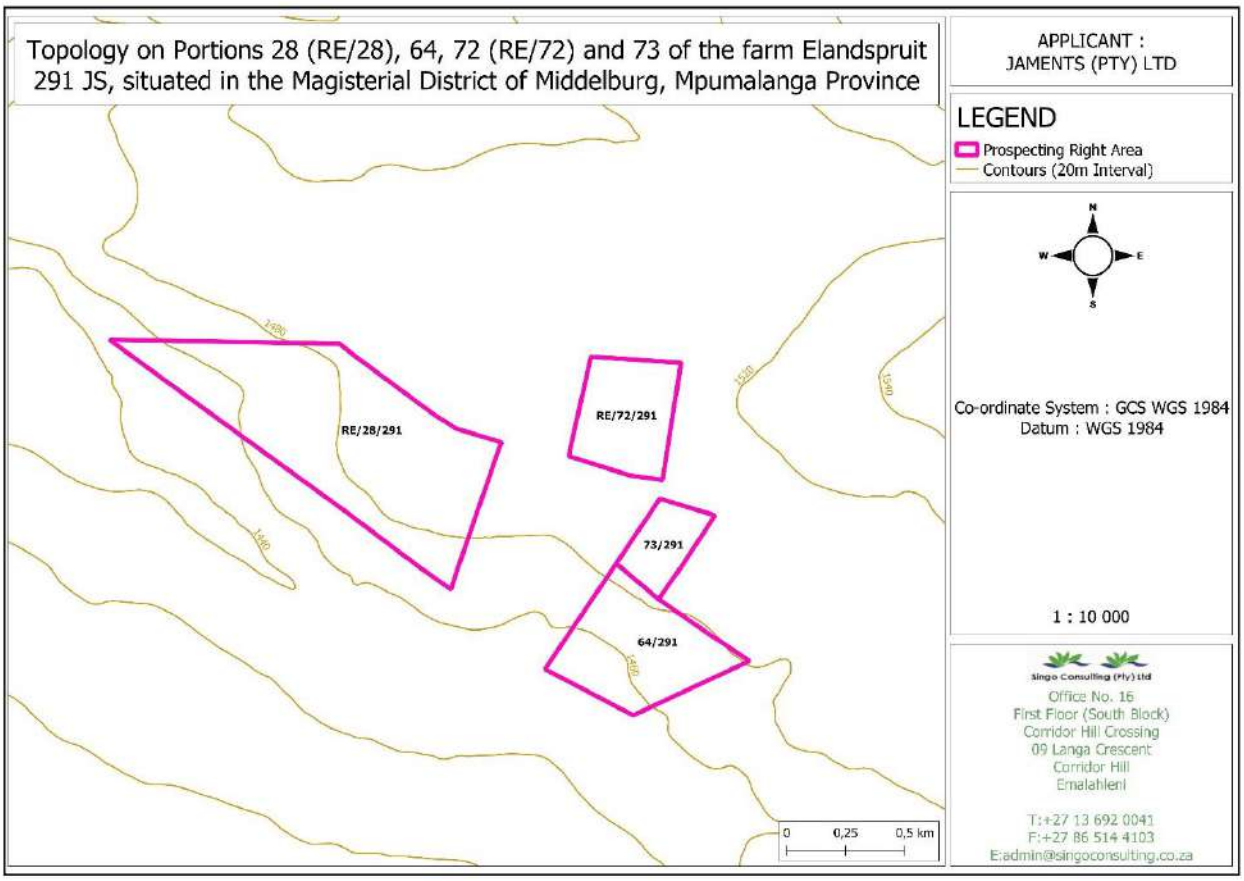

Quaternary Catchments and Water Management Area on Portions 28 (RE/28), 64, 72 (RE/72) and 73 of the farm Elandspruit 291 JS, situated in the Magisterial District of Middelburg, Mpumalanga Province
B11J
RE/28/291
RE/72/291
73/291
B11H
64/291
0 0,25 0,5 km
APPLICANT :
JAMENTS (PTY) LTD
LEGEND
Prospecting Right Area
Quaternary Catchments
Water Management Area
Olifants
N
W
E
S
Co-ordinate System : GCS WGS 1984
Datum : WGS 1984
1 : 10 000
Singo Consulting (Pty) Ltd
Office No. 16
First Floor (South Block)
Corridor Hill Crossing
09 Langa Crescent
Corridor Hill
Emalahleni
T:+27 13 692 0041
F:+27 86 514 4103
E:admin@singoconsulting.co.za

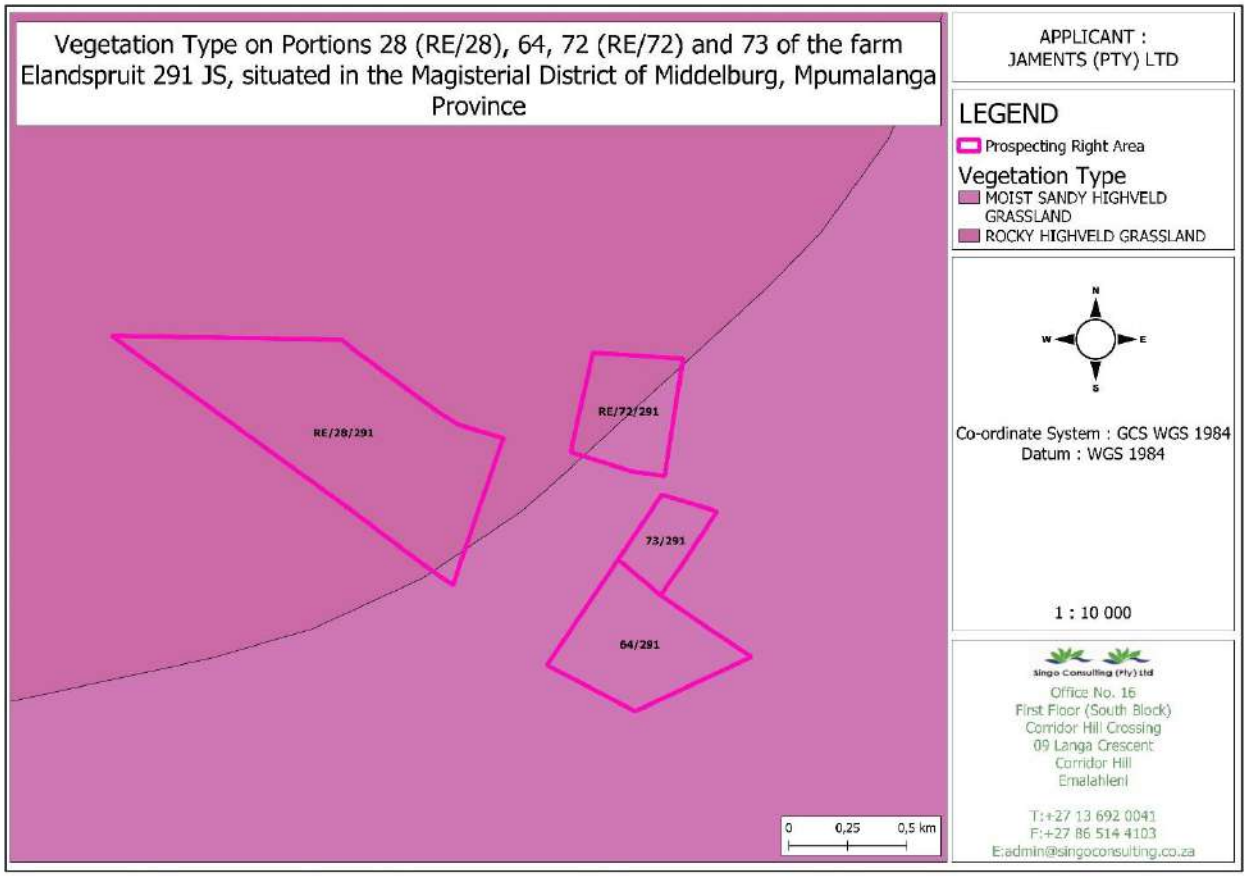

Mean Annual Rainfall on Portions 28 (RE/28), 64, 72 (RE/72) and 73 of the farm Elandspruit 291 JS, situated in the Magisterial District of Middelburg, Mpumalanga Province
RE/28/291
RE/72/291
73/291
64/291
0 0,25 0,5 km
APPLICANT :
JAMENTS (PTY) LTD
LEGEND
Prospecting Right Area
Mean Annual Rainfall
601 - 800 mm
N
W
E
S
Co-ordinate System : GCS WGS 1984
Datum : WGS 1984
1 : 10 000
Singo Consulting (Pty) Ltd
Office No. 16
First Floor (South Block)
Corridor Hill Crossing
09 Langa Crescent
Corridor Hill
Emalahleni
T:+27 13 692 0041
F:+27 86 514 4103
E:admin@singoconsulting.co.za


ID X Y
A 29.3397 -25.8159
B 29.3495 -25.8161
C 29.3544 -25.8197
D 29.3564 -25.8203
E 29.3542 -25.8265
F 29.3601 -25.8167
G 29.3640 -25.8169
H 29.3632 -25.8219
I 29.3618 -25.8217
J 29.3592 -25.8209
K 29.3631 -25.8227
L 29.3654 -25.8234
M 29.3630 -25.8269
N 29.3669 -25.8295
O 29.3619 -25.8318
P 29.3582 -25.8299
ELANDSPRUIT 291
Hillside
Elandspruit
Spookspruit
1448
1482
1462
RE/28/291
RE/72/291
73/291
64/291
APPLICANT:
Jaments (Pty) Ltd
Legend
Prospecting Portions
N
0 0.24 0.48 0.72 km
Singo Consulting (Pty) Ltd
PLAN COMPILED IN ACCORDANCE WITH REGULATION 2(2) OF THE mprda,2002,(ACT NO28 OF 2002).In Accordance with Section 48 (2) of MPRDA, NWA (1998),NEMA (1998)(2002) and Regulation 17 of Mine Health and Safety Act (1996), the Prospecting Area excludes any area within a horizontal distance of 100 metres of any Water Courses, Wetlands, Protected Areas, Public Roads, Railway or Cemetry.
Prospecting Right Application on the Remaining Extent of portions 28 & 72 and Portions 64 & 73 of the farm Elandspruit 291 JS. Middelburg Magisterial District, Mpumalanga Province. The Total Area Extext is Approximately 143. 52 Hectares.


Soil Classes on Portions 28 (RE/28), 64, 72 (RE/72) and 73 of the farm Elandspruit 291 JS, situated in the Magisterial District of Middelburg, Mpumalanga Province
RE/28/291
RE/72/291
73/291
64/291
0 0,25 0,5 km
APPLICANT :
JAMENTS (PTY) LTD
LEGEND
Prospecting Right Area
Soil Classes
Freely drained, structureless soils
N
W
E
S
Co-ordinate System : GCS WGS 1984
Datum : WGS 1984
1 : 10 000
Singo Consulting (Pty) Ltd
Office No. 16
First Floor (South Block)
Corridor Hill Crossing
09 Langa Crescent
Corridor Hill
Emalahleni
T:+27 13 692 0041
F:+27 86 514 4103
E:admin@singoconsulting.co.za


Mean Minimum Annual Temperature on Portions 28 (RE/28), 64, 72 (RE/72) and 73 of the farm Elandspruit 291 JS, situated in the Magisterial District of Middelburg, Mpumalanga Province
RE/28/291
RE/72/291
73/291
64/291
0 0,25 0,5 km
APPLICANT :
JAMENTS (PTY) LTD
LEGEND
Prospecting Right Area
Mean Minimum Annual Temperature
0.1 - 2 Degree Celcius
2.1 - 4 Degree Celcius
N
W
E
S
Co-ordinate System : GCS WGS 1984
Datum : WGS 1984
1 : 10 000
Singo Consulting (Pty) Ltd
Office No. 16
First Floor (South Block)
Corridor Hill Crossing
09 Langa Crescent
Corridor Hill
Emalahleni
T:+27 13 692 0041
F:+27 86 514 4103
E:admin@singoconsulting.co.za


Topology on Portions 28 (RE/28), 64, 72 (RE/72) and 73 of the farm Elandspruit 291 JS, situated in the Magisterial District of Middelburg, Mpumalanga Province
RE/28/291
RE/72/291
73/291
64/291
1480
1440
1520
1560
1400
0 0,25 0,5 km
APPLICANT :
JAMENTS (PTY) LTD
LEGEND
Prospecting Right Area
Contours (20m Interval)
N
W
E
S
Co-ordinate System : GCS WGS 1984
Datum : WGS 1984
1 : 10 000
Singo Consulting (Pty) Ltd
Office No. 16
First Floor (South Block)
Corridor Hill Crossing
09 Langa Crescent
Corridor Hill
Emalahleni
T:+27 13 692 0041
F:+27 86 514 4103
E:admin@singoconsulting.co.za


Vegetation Type on Portions 28 (RE/28), 64, 72 (RE/72) and 73 of the farm Elandspruit 291 JS, situated in the Magisterial District of Middelburg, Mpumalanga Province
RE/28/291
RE/72/291
73/291
64/291
0
0,25
0,5 km
APPLICANT :
JAMENTS (PTY) LTD
LEGEND
Prospecting Right Area
Vegetation Type
MOIST SANDY HIGHVELD GRASSLAND
ROCKY HIGHVELD GRASSLAND
N
W
E
S
Co-ordinate System : GCS WGS 1984
Datum : WGS 1984
1 : 10 000
Singo Consulting (Pty) Ltd
Office No. 16
First Floor (South Block)
Corridor Hill Crossing
09 Langa Crescent
Corridor Hill
Emalahleni
T:+27 13 692 0041
F:+27 86 514 4103
E:admin@singoconsulting.co.za

Appendix 2 : Acceptance Letter

mineral resources & energy

Department
Minerals Resources and Energy
REPUBLIC OF SOUTH AFRICA

Private Bag X7279, Witbank, 1035, Tel: 013 653 0500, Fax 013 690 3288, Saveways Centre, First Floor, Mandela Drive, Witbank, 1035, From: Directorate: Mineral Regulation: Mpumalanga Region, Email: Basetsana.malla@dmre.gov.za Enquiries: S.B Malla

Ref: MP 30/5/1/1/2/16326PR.

BY EMAIL/FAX

Email: kenneth@singoconsulting.co.za

The Director/s
Jaments (Pty) Ltd
Private Bag X7297
Highveld Mall
Witbank
1035

Dear Sir/Madam

ACCEPTANCE OF AN APPLICATION FOR PROSPECTING RIGHT IN TERMS OF SECTION 16(4) OF THE MINERAL AND PETROLEUM RESOURCES DEVELOPMENT ACT, 2002 (ACT 28 OF 2002) [HEREIN AFTER REFERRED TO AS THE ACT] AS AMENDED BY SECTION 12(d) OF THE MINERALS AND PETROLEUM RESOURCES DEVELOPMENT AMENDMENT ACT, 2008 (ACT 49 OF 2008) [HEREINAFTER REFERRED TO AS THE AMENDMENT ACT]

1. Please be informed that your application for prospecting of **Coal** on **Portion 28, 64, 72, 73** of the farm **Elandspruit 291 JS**, Magisterial District of **Middelburg** is hereby accepted in terms of section 16(2) of the Act as amended by section 12(b) of the Amendment Act.

2. Please take notice that in terms of section 16(4) of the Act as amended by section 12(d)(a) and 12(d)(b) of the Amendment Act, you are required to:-

   2.1. to consult in the prescribed manner with the landowner, lawful occupier and any interested and affected party, the Land Restitution Commission and submit the result of such consultation within 30 working days from the date of the signature below.

3. You are in terms of section 17(1) of the Act as amended by section 13(c) of the Amendment Act required to give effect to the objects referred to in section 2(d) of the Act **to ensure that you are BBBEE compliant**. Therefore, please submit on or before ..... to this office for the attention of the writer hereon any documentation proving such including but not limited to: -

   3.1. Certified copies of share certificates and share holders register

   3.2. Certified copies of Shareholders agreements

   3.3. Certified copies articles and memorandum of association of the company

   3.4. Trust deed documents and letters of authority for any trust holding shares

   3.5. Details relating to funding (all relevant agreements)

   3.6. Any other information that may be necessary to explain and serve as evidence that the applicant meets the appropriate HDSA ownership and/or compliance requirements of the aforesaid Act and Mining Charter; **thereby including women and communities in your structure.**

4. Please submit **within 14 days** from date of this letter for the attention of ***Mr Ntshele Phasha 3 copies of a complete prospecting work programme prepared in terms of regulation 7 of the Mineral and Petroleum Resources Development Act, 2002 (Act no 28 of 2002): Mineral and Petroleum Development Regulation.***

5. **Your attention is also drawn to the provisions of Section 17(1) (e) of the MPRDA, which provides that the minister may grant an application for a prospecting right if the applicant is not in contravention of any relevant provision of this Act. Section 19(2) (f) places an obligation on the holder of a prospecting right to pay the prescribed prospecting fees, as per regulation**

76 of the MPRDA. You are therefore reminded to ensure that payment of all prospecting fees for all the prospecting right that you hold, are up to date, failing which this may have a negative impact on the outcome of your current application.

6. ***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 Regulations 21 (Scoping Report) and Regulation 23 (EIR and EMPr) (In case of Scoping and Environmental Impact Report). All timeframes are effective from the date of this letter.***

7. Please take note that failure to adhere to the timeframe stipulated above and to submit any documentation required in terms of this notice will result into non-compliance with the provision of the Act and the Amendment Act and will result in your application being processed refusal.

Yours faithfully:

REGIONAL MANAGER
MPUMALANGA REGION
DATE: 25/08/2023

Acceptance of a prospecting right under file reference number 16326PR.

Appendix 3: Newspaper Advert

,

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

Application for Prospecting Right: Jaments (Pty) Ltd has received an Acceptance Letter, (**DMRE Ref: MP 30/5/1/1/2/16326 PR**) for the purpose of prospecting **Coal** on **portions 28, 46, 72** and **73** of the farm **Elandspruit 291 JS**, situated in the Magisterial District of Middelburg in the Steve Tshwete Local Municipality under the Nkangala District Municipality, Mpumalanga Province.

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 **Jaments (Pty) Ltd** has applied for a Prospecting Right for the above-mentioned mineral.

INVITATION TO COMMENT

Registration as Interested & Affected Party: As part of the EIA process, more especially the Public Participation Process (PPP) for this proposed project, Interested and Affected Parties (I&APs) are invited to register and kindly submit any comments or concerns to reach **Ms Sinazo Bhengu** no later than Saturday, the **18th of September 2021** using the contact details provided below. The public is also invited to review and comment on the Draft Basic Assessment Report and Environmental Management Programme (EMPr). The draft EMPr report will be available for review for 30 days calendar period from **Monday the 20th of September 2021 to Sunday the 20th of October 2021**. This report will be available at Gerard Sekoto Library (Walter Sisulu St & Wanderers Ave, Middelburg, 1055) and a soft copy upon request from **Singo Consulting (Pty) Ltd**, using the EAP's contact details below.

ENVIRONMENTAL ASSESSMENT PRACTITIONER AND CLIENT DETAILS:

Singo Consulting (Pty) Ltd

Office No. 16, Corridor Hill Crossing
09 Langa Crescent
Corridor Hill
eMalahleni
1035.
Tel No.: +27 13 6920 041
Fax No.: +27 86 5144 103
Cell No.: +27 65 8174 850
Email: sinazo@singoconsulting.co.za

JAMENTS
HOME OF THE FUTURE

15 Celia Street
Model Park
Emalahleni
1035

LANDOWNERS:

The proposed Prospecting Right is located on **portions 28, 46, 72** and **73** of the farm **Elandspruit 291 JS**, this proposed farm in owned by Gateway Church International, Alalomiekoppie CC, Ward Terma Immaculate, Claassens Elizabeth Johanna Arnolda. Should you be the landowner or lawful occupier and see this advert, kindly contact the EAP on the contact details provided.

Appendix 4: Stakeholders & Landowner Consultation

Appendix 5: landowner Consultation

Appendix 6: Comments and Responses

Singo Consulting (Pty) Ltd
+27 13 692 8041
Protect & manage the best remaining environment

1. What is your interest in the proposed project? E.g., Property Owner/ Lessee/ Tenant? Please provide details of the property.

Property Owner - 1 x House, 3 x Store, 3 x Garages, River, Borehole, 1 x Flat, existing bird cages

2. Do you have grounds for concerns in respect to this application? **Please tick the appropriate box and substantiate.**

YES ☒ NO ☐

3. Categorized issues of concerns: **Please" X" the appropriate box**

✓	Air quality	✓	Noise
	Archaeology	✓	Soil
✓	Surface water		Employment
✓	Groundwater	✓	Security
✓	Ecology	✓	Visual
✓	Land use and Planning	✓	Quality of life
✓	Waste management	✓	Property value
	Economy	✓	Nuisance

4. If yes, please list elaborate further.

All above qualities are extremly important and need to be considered for ALL Residentual persons.

Singo Consulting (Pty) Ltd
+27 13 692 0041
Protect & manage the best remaining environment

We already have all kind of sinusses due to mining activity close to us. Animals get sick and we loss income. If we don't have clean water, we can't do anything!

5. Are there, in your opinion, any other interested/ or affected parties that should be contacted in relation to this application? Please "X" appropriate box.

YES	NO
X	

6. If yes, please provide their contact details:

Name:	Organization:	
Noida Claasens Jameel		
Contact details Noida - 084 707 1538	Jameel - 083 230 5317	
Address: Lives in the area		
Tel No:	Fax No:	Cell No:
Email address:		

SIGNATURE: _____ DATE: 8/9/2023

THANK YOU

Consulting (Pty) Ltd

kenneth@singoconsulting.co.za www.sing

Office 870
5 Balalaika Street
Tasbet Park Ext 2
Witbank

+27 86 514 41

Protect & manage the best remaining env

Personal Details:

Full Names and Surname:	Raymond Claassens						
Contact Details:							
Tel(w):		**Tel(h):**		**Fax No:**		**Cell No:**	083 231 4182
Email:	claassensronnie@gmail.com nolda 49 @ gmail.com						
Physical Address:	73 Elandspruit						
Postal Address:							
Preferred method of communication: fax ☐ e-mail ☒ post ☐ Preferred telephonic communication: cell ☒ home ☐ work ☐							
Organisation/Representative:							
Farm name, number and subdivision or Street Address (if applicable):	73 Elandspruit of the farm Elandspruit 291 JS.						

Singo Consulting (Pty) Ltd

+27 13 692 0041
+27 78 2727 839
+27 72 081 6682
kenneth@singoconsulting.co.za
www.singoconsulting.co
Office 870
5 Balalaika Street
Tasbet Park Ext 2
Witbank
+27 86 514 4103

10 YEARS

Protect & manage the best remaining environment

1. What is your interest in the proposed project? E.g., Property Owner/ Lessee/ Tenant? Please provide details of the property.

Land owner

2. Do you have grounds for concerns in respect to this application? **Please tick the appropriate box and substantiate.**

YES ☐ NO ☒

3. Categorized issues of concerns: **Please" X" the appropriate box**

	Air quality		Noise
	Archaeology		Soil
	Surface water		Employment
	Groundwater		Security
	Ecology		Visual
	Land use and Planning Waste management		Quality of life Property value
	Economy		Nuisance

4. If yes, please list elaborate further.

Singo Consulting (Pty) Ltd
To manage & protect the best remaining environment
11 YEARS
Office 820
5 Balalaika Street
Tasbet Park Ext 2
Witbank
+27 13 692 0041
+27 78 2727 839
+27 72 081 6682
kenneth@singoconsulting.co.za
www.singoconsulting.co.za

13/09/2023

Attention: Marlize Venter
Tell no.: 079 983 9309
Email: mgrobler2014@gmail.com

RESPONSE REGARDING THE COMMENTS BY MARLIZE VENTER, LANDOWNER OF PORTION 64 OF THE FARM ELANDSPRUIT 291 JS FOR THE PROSPECTING RIGHT APPLICATION BY JAMENTS(PTY) LTD FOR COAL ON PORTIONS: 28, 64, 72 AND 73 OF THE FARM ELANDSPRUIT 291 JS, SITUATED IN THE MAGISTERIAL DISTRICT OF MIDDELBURG IN MPUMALANGA PROVINCE (MP 30/5/1/1/2/16326 PR)

We refer to the comments recieved by the office dated 8th of September 2023. Our response is in Red colour and the issues raised by the Interested & Affected Party are in **Black colour (Bold).**

1. **We have a lot of concerns (Air quality, noise, soil, Security, Visual, Quality of life, Property value, Nuisance, Land use planning and waste management, Ecology, Ground, and surface water), at the moment. We already saw how the washing plant affected us in a very bad way. All the above qualities are extremely important and need to be considered for all residential persons.**
   - Certainly, to clarify, our current focus is on prospecting rather than immediate mining operations. Our objective is to determine the presence of coal in this area. In this regard, we want to emphasize that all the concerns you have detailed will be carefully taken into consideration and rigorously adhered to throughout our prospecting activities.
   - This means that we are committed to conducting our prospecting efforts with a strong dedication to environmental and safety standards, as well as community and regulatory compliance. We want to ensure that our exploration activities are conducted in a responsible and sustainable manner, in alignment with the concerns you've raised and the expectations of all stakeholders involved.

2. **Is this for mining coal on 64/291 or is this only for the impact that the Washing bay will have on us?**
   - No this is not a mining application by washing Bay, at this point our current focus as Singo Consulting (Pty) Ltd. is on prospecting rather than immediate mining operations. Our objective is to determine the presence of coal in this area.

Singo Consulting (Pty) Ltd
To manage & protect the best remaining environment
11 YEARS
Office 870
5 Balalaika Street
Tasbet Park Ext 2
Witbank
+27 13 692 0041
+27 78 2727 839
+27 72 081 6682
kenneth@singoconsulting.co.za
www.singoconsulting.co.za
+27 86 514 4103

3. **We already have all kind of sinuses due to mining activity close to us. Animals get sick and we loss income, if we don't have clean water, we can't do anything.**

- Our mission is to obtain environmental authorization for a prospective coal prospecting project on specific portions of the Elandspruit 291 JS farm.
- We will operate in accordance with the Mineral and Petroleum Resources Development Act (Act 28 of 2002) and comply with other relevant regulations, including the National Water Act of 1998, National Air Quality Standards (GN 1210; 2009), and National Dust Control Regulations (GN 275; 2017).

Appendix 7: Background Information Document (BID)

Appendix 8: Proof of site notices placement.


SPRUIT (HILLSIDE)
WARNING
NOTICE
Criminals will be prosecuted


73


ELANDSPRUIT 291
Legend
Prospecting Portions
APPLICANT:
Jaments (Pty) Ltd
Hillside
1482
Elandspruit
JAMENTS


GARMIN


64


73
ALZU

Appendix 9: EAP CV

Appendix 10: EA Form

Appendix 11: Screening Tool

Appendix 12: Specialist Studies