BASIC ASSESSMENT REPORT
And
ENVIRONMENTAL MANAGEMENT PROGRAMME REPORT

2019

PROSPECTING RIGHT APPLICATION BY KAMOMA 2020 INVESTMENT (PTY) LTD FOR CLAY MINERAL ON FARM BETTYSGOOD 213 IT, MAGISTERIAL DISTRICT OF CAROLINA, MPUMALANGA PROVINCE.

APPLICANT:

KAMOMA 2020 INVESTMENT (PTY) LTD

PREPARED BY:

Singo Consulting (Pty) Ltd

Office No. 16, First Floor (South Block)
Corridor Hill Crossing, 09 Langa Crescent,
Corridor Hill, eMalahleni, 1035

TELL: 013 692 0041
FAX: 086 514 4103

COMPILED FOR:

mineral resources
Department:
Mineral Resources
REPUBLIC OF SOUTH AFRICA

Department of Minerals and Resources
Regional office
Saveways Crescent Centre,
Mandela Drive,
Emalahleni, 1035
Mpumalanga

DMR REF: MP/30/5/1/1/2/ (15587) PR

Table of Contents

LIST OF FIGURES

Photos

Tables

Appendix

mineral resources

Department:
Mineral Resources
REPUBLIC OF SOUTH AFRICA

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).

Project applicant:	KAMOMA 2020 INVESTMENT (PTY) LTD		
Registration no (if any):	2016/266205/07		
Trading name (if any):			
Responsible Person, (e.g. Director, CEO, etc):	MR M Masipa		
Contact person:	MR M Masipa		
Physical address:	1686 Magaliesberg Country Estate, Longmore Street, Pretoria North		
Postal address:	1686 Magaliesberg Country Estate, Longmore Street, Pretoria North		
Postal code:	1803		
Telephone:	0814128530	Cell	0814128530
E-mail:	dihloma@gmail.com	Fax:	086 5144 103

FILE REFERENCE NUMBER SAMRAD: MP/30/5/1/1/2/ (15587) PR

Distribution List			
No.	Name	Designation	**Affiliation**
1	**Kenneth singo**	Director/ Principal	**Singo Consuting (Pty) Ltd**
2	Rudzani Shonisani	Junior Consultant	**Singo Consuting (Pty) Ltd**
3	MR M Masipa	**Applicants**	**Kamoma 2020 Investment (Pty) Ltd**
4	**Not applicable**	**I&AP's**	**All Stakeholders**

Report Sign-Off			
Name	Designation	Signature	**Date**
Kenneth Singo	Principal Environmental Scientist, Pr.Sci.Nat		**2020/02/07**
Rudzani Shonisani	**Junior Go-Environmental Scientist**		**2020/02/07**

1. IMPORTANT NOTICE

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

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

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

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

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

2. Objective of the basic assessment process

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

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

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

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

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

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

(ii) the degree to which these impacts—

(aa) can be reversed;

(bb) may cause irreplaceable loss of resources; and

(cc) can be managed, avoided or mitigated;

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

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

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

(iii) Identify residual risks that need to be managed and monitored.

PART A

SCOPE OF ASSSSMENT AND BASIC ASSESSMENT REPORT

1. Contact Person and correspondence address

a) *Details of EAP's.*

(i) Details of the EAP's

Name of the Practitioner: Rudzani Shonisani

Tell No.: 013 692 0041

Cell No.: 078 548 1244/ 079 930 4772

Fax No.: 086 514 4103

E-mail address.: rudzani@singoconsuting.co.za

Name of Reviewer: Kenneth Singo

Tell No.: 013 692 0041

Cell No.: 078 2727 839

Fax No.: 086 514 4103

E-mail addresss.: kenneth@singoconsuting.co.za

(ii) Expertise of the EAP's.

1. The qualifications of the EAP

2. EAP Manager and Project Reviewer

(Refer to Appendix 6)

b) *Location of the overall Activity.*

Table 1: Locality

Farm Name:	Bettysgoed 213 IT, Portions: 1, 2, 3, 5 and RE
Application area (Ha)	Approximately 2731,271ha
Magisterial district:	Magisterial District of Carolina
Distance and direction from nearest town	The project area is situated in the Albert Luthuli Local Municipality, which is located within the Magisterial District of the Gert Sibande, in Mpumalanga Province. The proposed prospecting area is located approximately 96 km East of Carolina, approximately 117 km North-Eastern of Ermelo and approximately 34 km North-Eastern of Empuluzi.
21-digit Surveyor General Code for each farm portion	T0IT00000000021300000 T0IT00000000021300001 T0IT00000000021300002 T0IT00000000021300003 T0IT00000000021300005

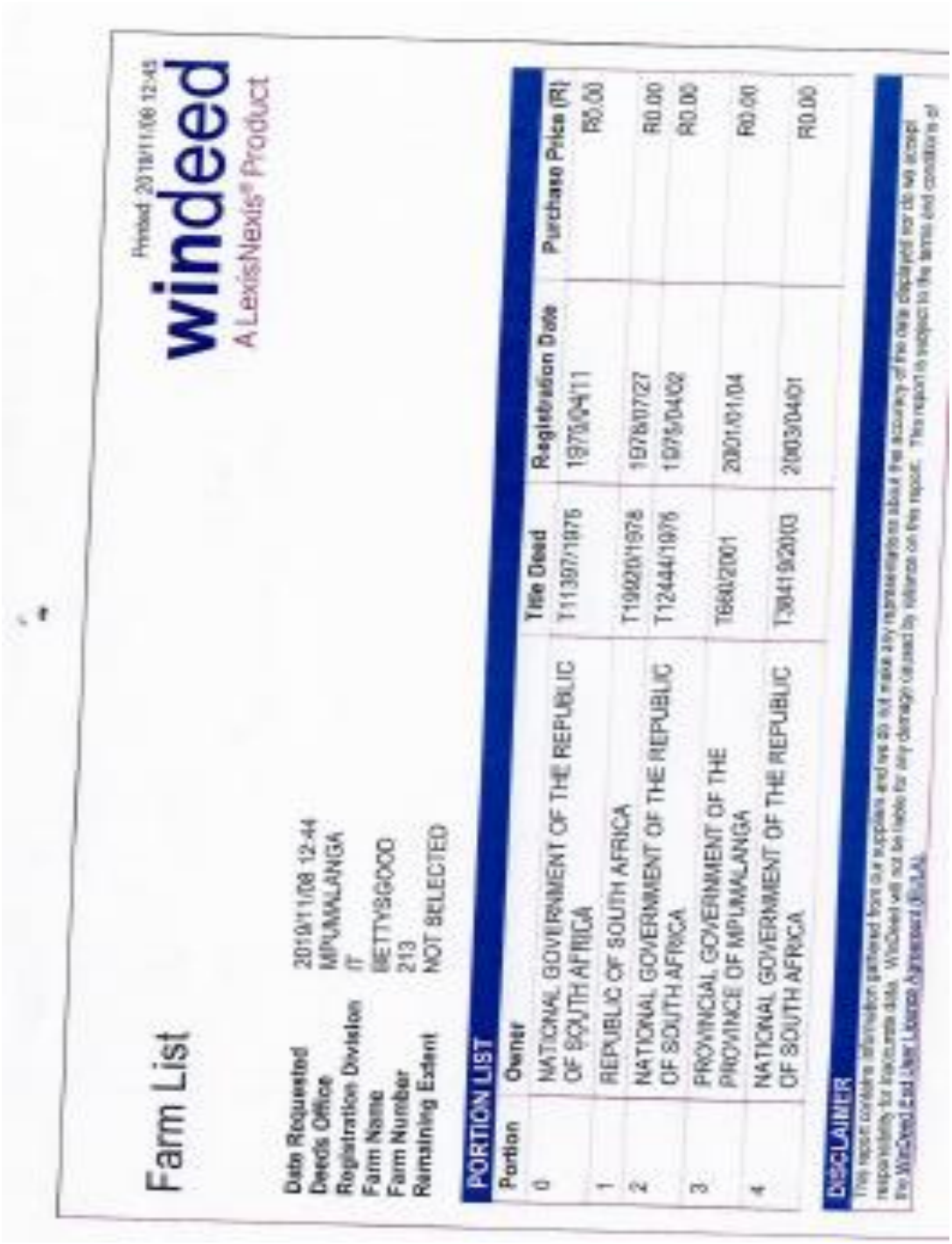
Table 2: Farm portion and farm name together with the land owner details.

FARM NAME	FARM NUMBER	PORTION	AREA (Ha)	FARM OWNER	TITLE DEED NUMBER	Farm Occupier	SG CODE
Bettysgoed	213 IT	1	2731,271ha	NATIONAL GOVERNMENT OF THE REPUBLIC OF SOUTH AFRICA	T19920/1978		T0JS00000000041200001
Bettysgoed	213 IT	2	2731,271ha	NATIONAL GOVERNMENT OF THE REPUBLIC OF SOUTH AFRICA	T12444/1975		T0JS00000000041200002
Bettysgoed	213 IT	3	2731,271ha	NATIONAL GOVERNMENT OF THE REPUBLIC OF SOUTH AFRICA	T660/2001		T0JS00000000041200003
Bettysgoed	213 it	5	2731,271ha	NATIONAL GOVERNMENT OF THE REPUBLIC OF SOUTH AFRICA	(Has been consolidated)		
Bettysgoed	213 IT	RE	2731,271ha	NATIONAL GOVERNMENT OF THE REPUBLIC OF SOUTH AFRICA	T11397/1975		T0JS00000000041200000

A land owner enquiry was done on the 27th of November 2019 to William Nyoni (William.Nyoni@drdlr.gov.za) and Happy Motna (happy.motna@drdlr.gov.za). The content of the enquiry enclosed'' **A Windeeed search was conducted in order to find out who the landowner of Bettysgoed 213 IT area is and the outcomes showcased that National**

Government is the land owner, thus a site visit and meeting with the chief was held and documents were received. We would like to find out if ever the Duma Traditional Tribe of Bettysgoed area as per the attached landowner document, are the lawful occupiers of the area according to your system''. See figure 1.

A respond was obtained on the 2nd of December 2019, stating the following '' The Remaining Extent, Portions 1, 2 and 4 of the farm Bettysgoed 213 IT are under the management and control of the Department (Agriculture, Land Reform and Rural Development). All requests on the subject properties needs to be submitted formally to the Department for consent and or adjudication''.



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Farm List

Date Requested 2019/11/08 12-44
Deeds Office MPUMALANGA
Registration Division IT
Farm Name BETTYSGOED
Farm Number 213
Remaining Extent NOT SELECTED

PORTION LIST

Portion	Owner	Title Deed	Registration Date	Purchase Price (R)
0	NATIONAL GOVERNMENT OF THE REPUBLIC OF SOUTH AFRICA	T11397/1975	1975/04/11	R0.00
1	REPUBLIC OF SOUTH AFRICA	T19920/1978	1978/07/27	R0.00
2	NATIONAL GOVERNMENT OF THE REPUBLIC OF SOUTH AFRICA	T12444/1976	1976/04/02	R0.00
3	PROVINCIAL GOVERNMENT OF THE PROVINCE OF MPUMALANGA	T6802/2001	2001/01/04	R0.00
4	NATIONAL GOVERNMENT OF THE REPUBLIC OF SOUTH AFRICA	T39419/2003	2003/04/01	R0.00

DISCLAIMER

This report contains information gathered from our suppliers and we do not make any representations about the accuracy of the data displayed nor do we accept responsibility for inaccurate data. WinDeed will not be liable for any damages caused by reliance on this report. This report is subject to the terms and condition of

DUMA TRADITIONAL COUNCIL

ENQUIRIES: M.S. MNISI
REF .....
CELL 082 8416 513
TELL .....

P.O BOX 2008
DUNDONALD
2336
DATE 26/11/2019

INKHOSI M.S MNISI

Att to: Ms Shonisani Rudzani

Singo Consulting (PTY) Ltd
9 Langa Hill
Emalahleni
1040

From : Inkosi M.S Mnisi (Duma Traditional Council)

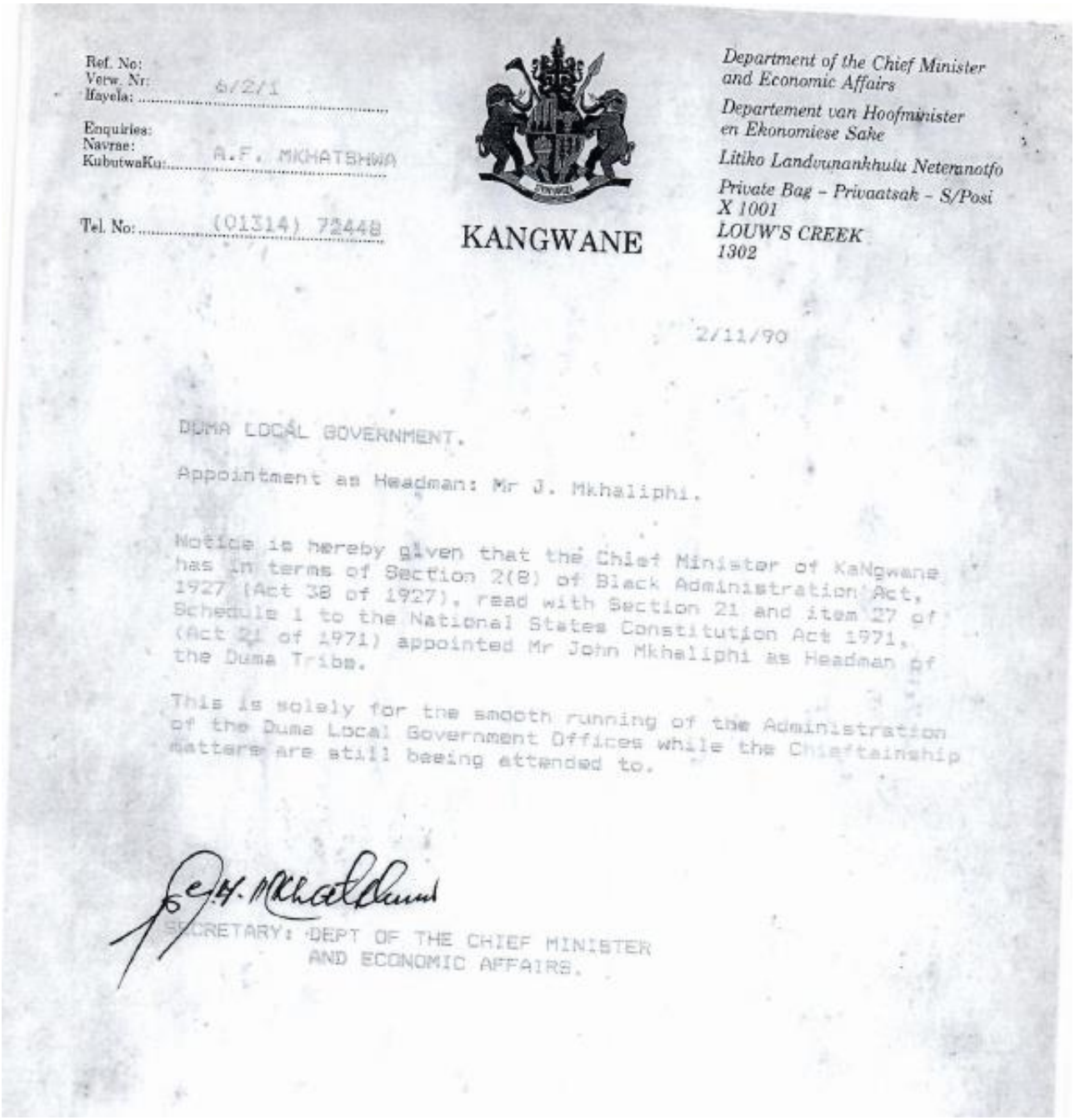
Subject : Confirmation Letter

I Inkosi M.S Mnisi of the above Traditional Council hereby confirm that I granted permmision to Singo Consulting company to make reaseach of mineral and resouces in my area of jurisdiction

Your help and consideration will be highly appreciated

Yours faithfully
Inkosi M.S Mnisi
M.S Mnisi

DUMA TRADITIONAL COUNCIL
CHIEF M.S MNISI
2019 -11- 26
P.O. BOX 2008
DUNDONALD 2336



Ref. No:
Verw. Nr:
Ifayela: 6/2/1

Enquiries:
Navrae:
KubutwaKu: A.F. MKHATSHWA

Tel. No: (01314) 72448

KANGWANE

Department of the Chief Minister
and Economic Affairs
Departement van Hoofminister
en Ekonomiese Sake
Litiko Landvunankhulu Neteranotfo
Private Bag - Privaatsak - S/Posi
X 1001
LOUW'S CREEK
1302

2/11/90

DUMA LOCAL GOVERNMENT.

Appointment as Headman: Mr J. Mkhaliphi.

Notice is hereby given that the Chief Minister of KaNgwane has in terms of Section 2(8) of Black Administration Act, 1927 (Act 38 of 1927), read with Section 21 and item 27 of Schedule 1 to the National States Constitution Act 1971, (Act 21 of 1971) appointed Mr John Mkhaliphi as Headman of the Duma Tribe.

This is solely for the smooth running of the Administration of the Duma Local Government Offices while the Chieftainship matters are still beeing attended to.

SECRETARY: DEPT OF THE CHIEF MINISTER
AND ECONOMIC AFFAIRS.

Figure 1: Landowner documents

2. Locality map

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

The project area is situated in the Albert Luthuli Local Municipality, which is located within the Magisterial District of the Gert Sibande, in Mpumalanga Province. The proposed prospecting area is located approximately 96 km East of Carolina, approximately 117 km North-Eastern of Ermelo and approximately 34 km North-Eastern of Empuluzi.

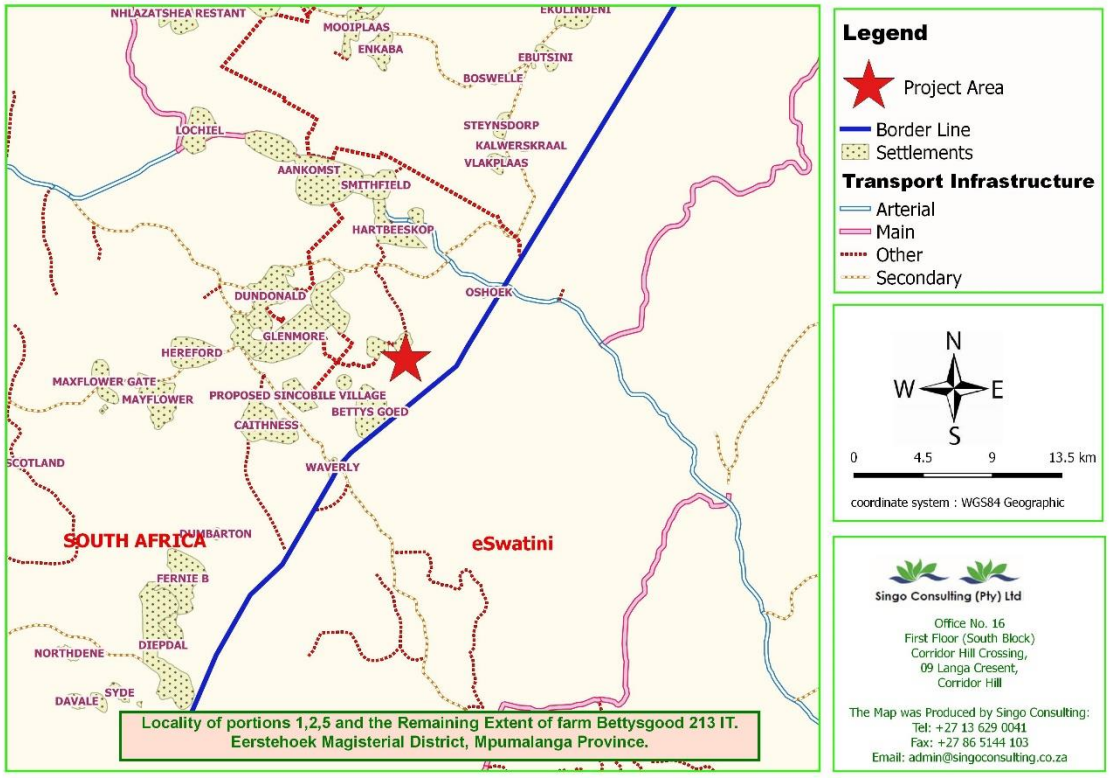


Figure 2: Locality Map of the PR Application Area.

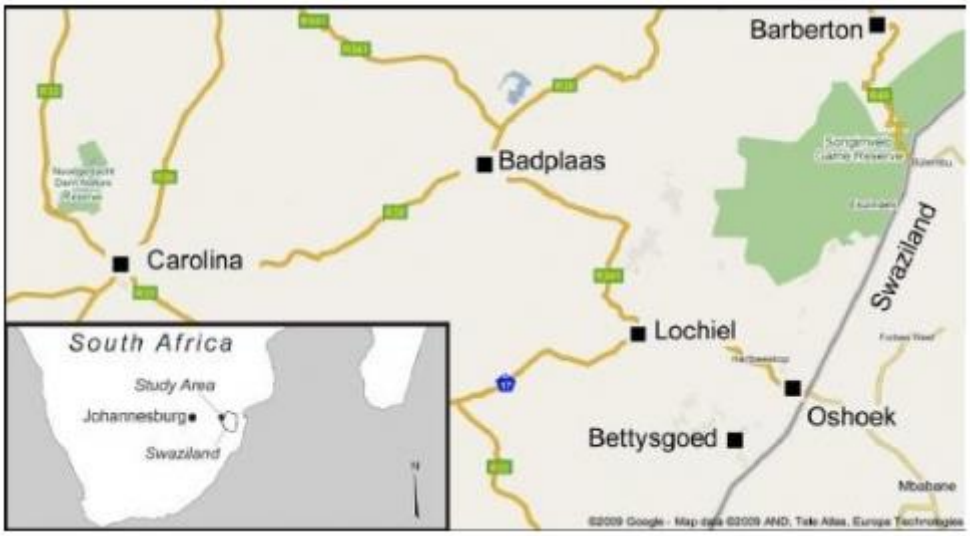


Figure 3: Generalized Locality Map of the Area.

Figure 4: Bettysgoed 213 IT Application

REFER TO APPENDIX 5 FOR MORE PROJECT PHOTOS.

3. Description of the scope of the proposed overall activity.

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

Phase 1: Non-Invasive Prospecting:- Desktop Study - Analysis of Existing Data GIS & analytical desktop studies Surveys

Phase 2: Non-Invasive Prospecting:- Multi-Spectral and Aerial Surveys

Phase 3: Invasive Prospecting:- Reconnaissance Borehole drilling, Sampling and Analysis

Phase 4: Invasive Prospecting: - Resource drilling, Sampling and Analysis, Resource Estimation and Pre-Feasibility Study

Phase 5- Feasibility Studies and Mining Right Application

Since exploration is temporary in nature no permanent structures will be constructed, negotiations and agreements may be made with the farm owners to use any existing infrastructure like access roads and other things like workshops. No accommodation will be provided on site.

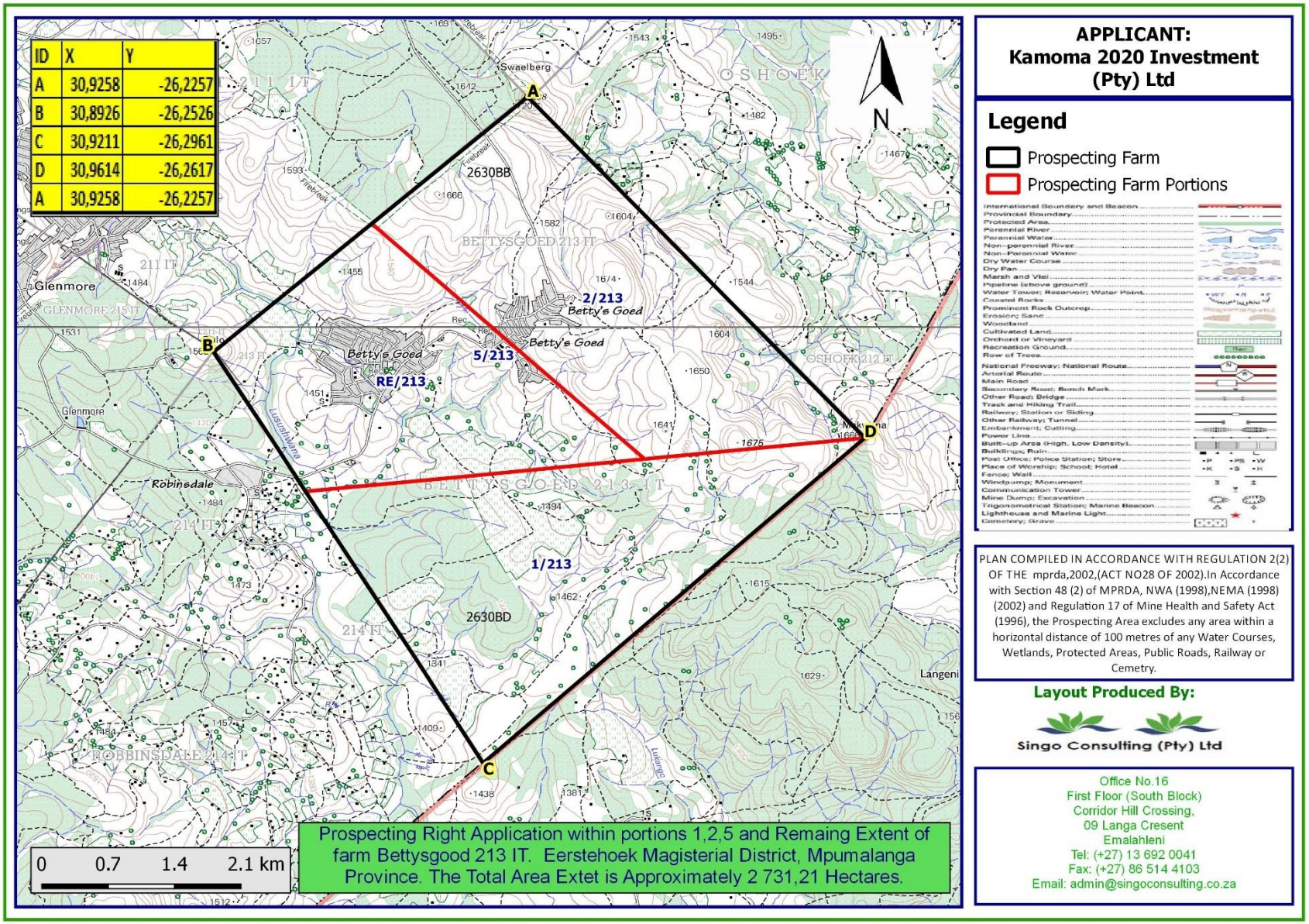

ID X Y
A 30,9258 -26,2257
B 30,8926 -26,2526
C 30,9211 -26,2961
D 30,9614 -26,2617
A 30,9258 -26,2257
Swaelberg
Glenmore
Robinsdale
Langeni
2630BB
2630BD
BETTYSGOED 213 IT
GLENMORE 215 IT
ROBBINSDALE 214 IT
OSHOEK 212 IT
2/213
Betty's Goed
5/213
RE/213
1/213
0 0.7 1.4 2.1 km
Prospecting Right Application within portions 1,2,5 and Remaing Extent of farm Bettysgood 213 IT. Eerstehoek Magisterial District, Mpumalanga Province. The Total Area Extet is Approximately 2 731,21 Hectares.
APPLICANT:
Kamoma 2020 Investment (Pty) Ltd
Legend
Prospecting Farm
Prospecting Farm Portions
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.
Layout Produced By:
Singo Consulting (Pty) Ltd
Office No.16
First Floor (South Block)
Corridor Hill Crossing,
09 Langa Cresent
Emalahleni
Tel: (+27) 13 692 0041
Fax: (+27) 86 514 4103
Email: admin@singoconsulting.co.za

Figure 5: Site Plan of the Area.

(i) Listed and specified activities

Table 3: Listed and specified activities

NAME OF ACTIVITY **(E.g. For prospecting -** drill site, site camp, ablution facility, accommodation, equipment storage, sample storage, site office, access route **etc…etc…etc E.g. for mining**, - excavations, blasting, stockpiles, discard dumps or dams, Loading, hauling and transport, Water supply dams and boreholes, accommodation, offices, ablution, stores, workshops, plant, storm water control, berms, roads, pipelines, power lines, conveyors, etc…etc…etc.)	**Aerial extent of the Activity** **Ha or m²**	**LISTED ACTIVITY** (Mark with an **X** where applicable or affected).	**APPLICABLE LISTING NOTICE** ***(GNR 983, GNR 984 or GNR 985)***	**WASTE MANAGEMENT AUTHORISATION** (Indicate whether an authorisation is required in terms of the Waste Management Act). **(Mark with an X)**
Prospecting Area	0.6 ha / 2731.271ha 20*30=600m²*10 boreholes=6000m² 6000m²÷10000=0.6ha	**X**	GNR 327 Listing Notice 1, Activity 20.	Not required
Vegetation clearing	0.6ha		Not Listed	
Site camp	600 m²		Not Listed	
Drilling	0.6 ha		Not Listed	
Equipment storage	50 m²		Not Listed	
Site offices	40 m²		Not Listed	
Ablution facilities	30 m²		Not Listed	
Sample storage	40 m²		Not Listed	

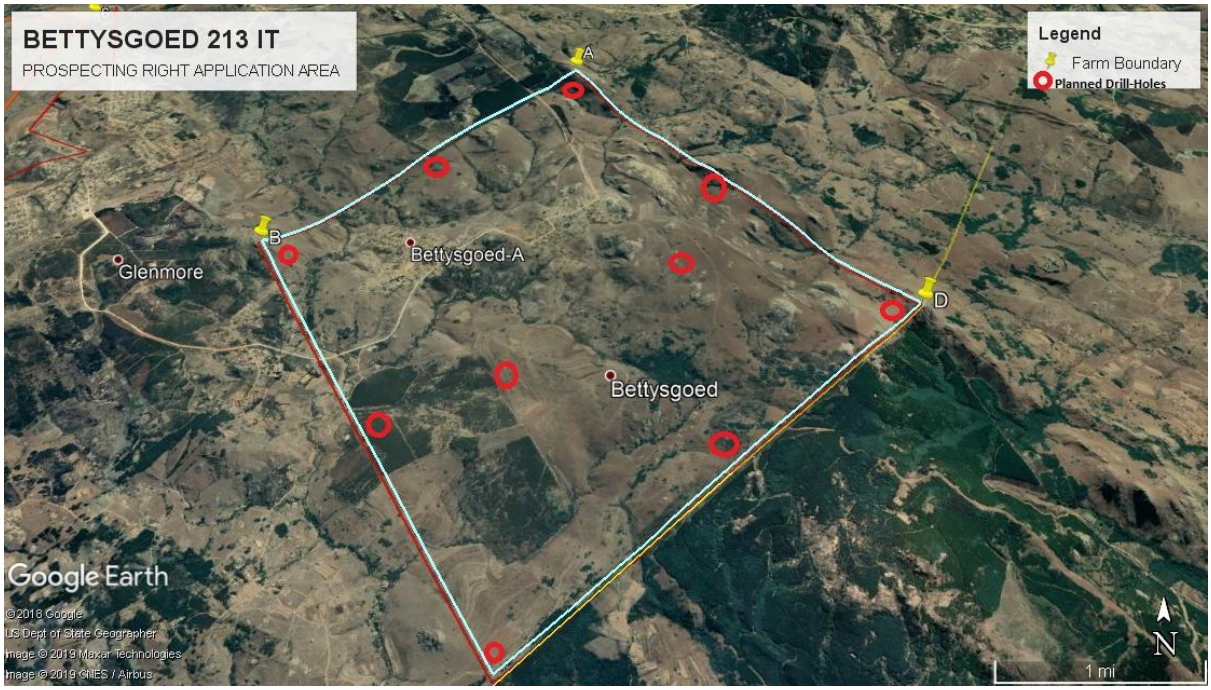


Figure 6: Planned Drill-Holes

(ii) Description of the activities to be undertaken

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

Phase 1: Non-Invasive Prospecting:- Desktop Study - Analysis of Existing Data GIS & analytical desktop studies Surveys

Phase 2: Non-Invasive Prospecting:- Multi-Spectral and Aerial Surveys

Phase 3: Invasive Prospecting:- Reconnaissance Borehole drilling, Sampling and Analysis

Phase 4: Invasive Prospecting: - Resource drilling, Sampling and Analysis, Resource Estimation and Pre-Feasibility Study

Phase 5- Feasibility Studies and Mining Right Application

Phase 1 – Desktop Study - Analysis of Existing Data GIS & analytical desktop studies Surveys

The exploration records of all previous work in the area will be re-examined, and the following studies will be carried out:

- Literature review
- Detailed aerial photograph and satellite image interpretation
- Regional airborne geophysics with main emphasis on magnetic and gravity
- Regional soil geochemistry interpretation
- Geological mapping will also be carried out.

These records will need to be captured into a GIS format for geological modelling and exploration scheduling analysis.
This work will form an initial desktop and surface fieldwork study to be continued during the period that the prospecting permit application is being assessed and, presumably, approved. A period of 6 months is estimated for this.

Phase 2 – Aerial and Ground Geophysics, Multi-Spectral AND Aerial Surveys

Once targets have been generated in the first phase there will be a need to follow up on these targets. Aerial and ground geophysics supported by Multi Spectral and aerial surveys to sharpen the identified potential areas to determine the sidewall properties, profiles and average grades and to do drill hole targeting. It is anticipated that phase will take approximately 6 months to complete.

Phase 3 –Drilling and Reconnaissance Resource Generation

In the event that the present application is approved and areas with possible targets for the minerals applied for, this identified prospective target will require further subsurface investigation.
Drilling (diamond, or Percussion) of the prospective areas will commence to establish presence of mineralization. Geological borehole logging, down the hole logging and sampling will also be carried out.
Whole rock analysis of all the potential intersections will be carried out. For budgeting purposes, it is assumed that every meter of the initial holes will be analysed will be made.
It is anticipated that initially approximately 10 drill-holes will be drilled (See Figure 6). Drill holes could vary in depth from 25m to 100m, with an average depth in the order of 750 meters. The total amount of drilling to be budgeted for at this stage is 100 meters.

Phase 4 – - Resource drilling, Sampling and Analysis, Resource Estimation and Prefeasibility Study

Dependent on the results of Phase 3 drilling further 2 drill-holes totalling between 100-700 meters may be required. The geological information generated will be used to model and estimate resource. The resources will at least be expected to be in the

Indicated Category according to the appropriate reporting standard (SAMREC, JORC, or NI43 -101).

Phase 5- Feasibility Study

The final phase of the prospecting programme would involve preparation of a Feasibility study. This would include:

- Resource drilling
- Geological Modelling
- Initial conceptual Mine Planning.
- Planning the infrastructure requirements
- Environmental management planning
- Financial modelling
- Market analysis
- Analysis of transport logistics to markets
- Assessment of personal and training requirements
- Assessment of socio-economic factors

A feasibility study is multidisciplinary in nature, and requires the highest levels of expertise available. Such studies are both costly and time consuming. All listed activities will be done or performance within the radius of 30*20=600m²

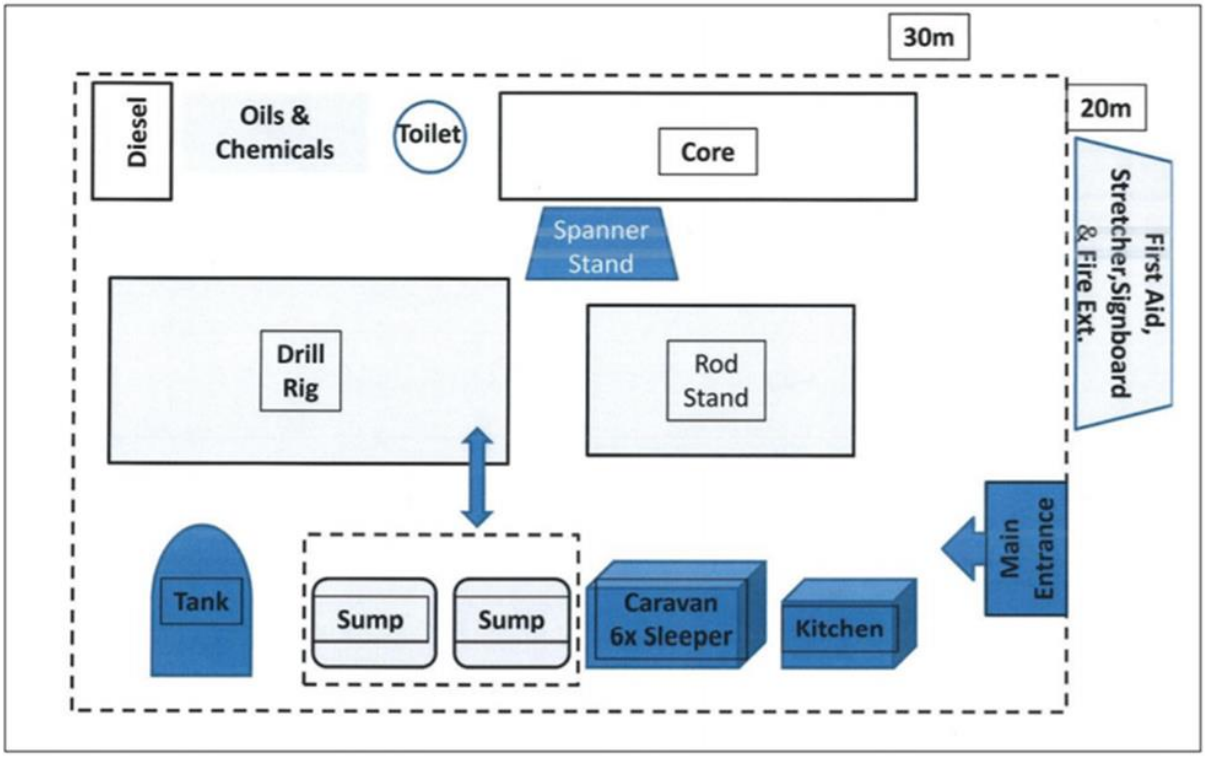


Figure 7: General Layout for prospecting area activities.

4. Policy and Legislative Context

Table 4: Policy and Legislatives

APPLICABLE LEGISLATION AND GUIDELINES USED TO COMPILE THE REPORT (a description of the policy and legislative context within which the development is proposed including an identification of all legislation, policies, plans, guidelines, spatial tools, municipal development planning frameworks and instruments that are applicable to this activity and are to be considered in the assessment process	**REFERENCE WHERE APPLIED**	**HOW DOES THIS DEVELOPMENT COMPLIY 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)

Water Use Licence (WUL)	Not applicable	No water use license is required for this Application. Any water required for drilling activities will be obtained from a legal source within the area or brought in via mobile water tanker. Appropriate dust extractions / suppression equipment will be a condition imposed on the drill contractor for their drill rigs.
National Environmental Management Act, 1998	This Basic Assessment Report & EMP	An Application for Environmental Authorisation was acknowledged by the DMR on 30 October 2019. The application was accepted by the DMR on the 30 October 2019 MP/30/5/1/1/2/ (15587) PR. The Environmental Authorisation application was accepted by DMR on 30 October 2019 and requested additional information on 31 November 2019. The Basic Assessment Report in terms of the EIA regulations (which is 90 days from application) must be submitted on February 2020.
National Heritage Resources Act, 1999	Management measures	Should archaeological artefacts or skeletal material be revealed in the area during development activities, such activities should be halted, and SAHRA notified in order for an investigation and evaluation of the find(s) to take place
National Environmental Management: Waste Act, Act 59 of 2008 (NEMWA)NEM: WA (as amended)	Management measures environmental awareness plan	The generation of potential waste will be minimised through ensuring employees of the drilling contractor are subjected to the appropriate Environmental awareness campaign before drilling. All waste generated during the drilling activities will be disposed of in a responsible manner.
Mineral and Petroleum Resources Development Act, 2002	Application for Prospecting in terms of Section 16	A Prospecting Right Application has been submitted to the DMR by the Applicant. The application was accepted by the DMR on the 30 October 2019. MP/30/5/1/1/2/ (15587) PR
Integrated Development Plan (IDP)		The IDP identified job creation as one of their primary objectives. If the prospecting is successful, this mine may contribute to job creation
Strategic Development Framework (SDF)		The area is designated for agricultural usage.

5. Need and desirability of the proposed activities.

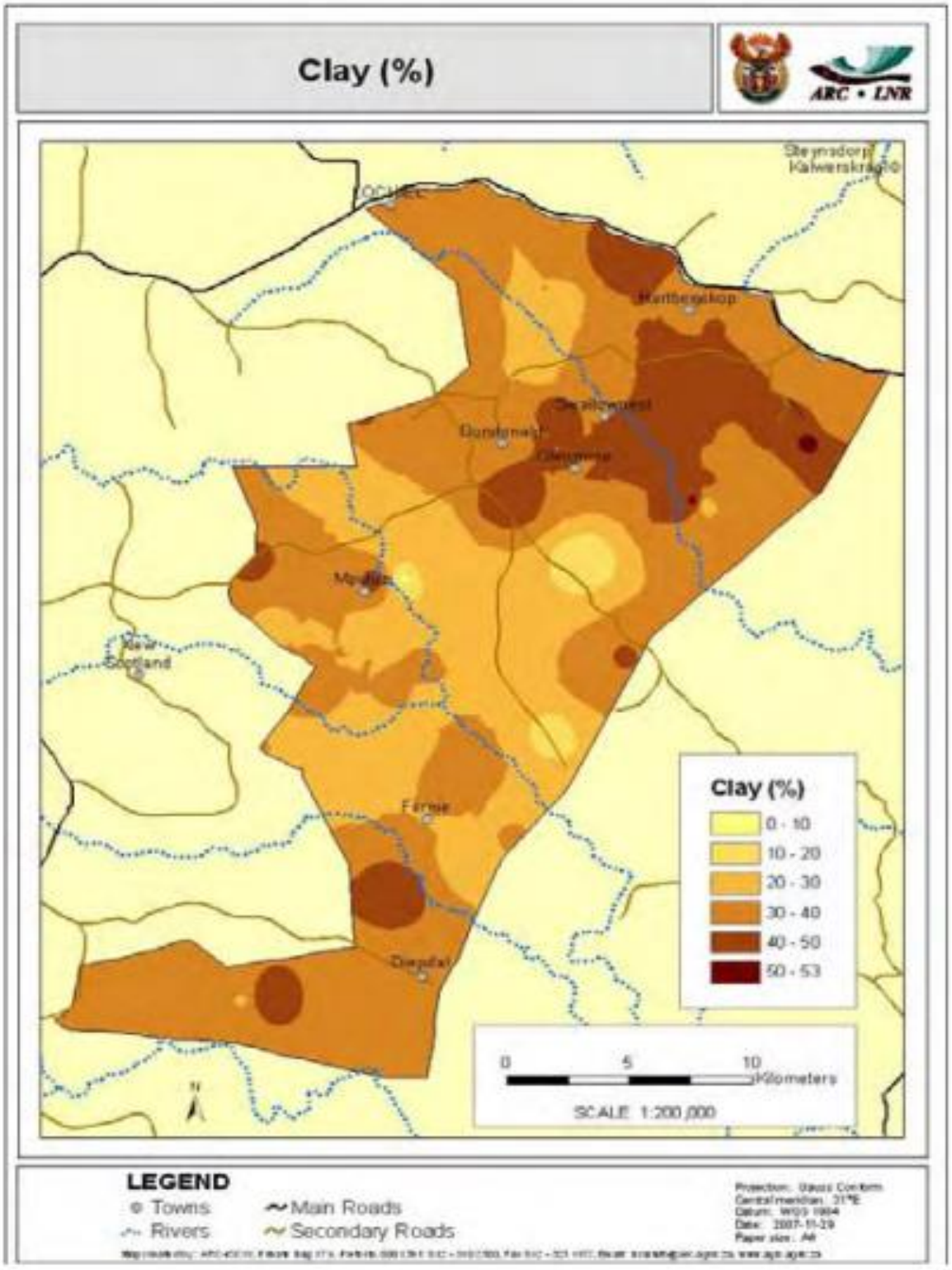
(Motivate the need and desirability of the proposed development including the need and desirability of the activity in the context of the preferred location).

The term clay is somewhat ambiguous unless specifically defined, because it is used in three ways: as a diverse group of fine-grained minerals, as a rock term, and as a particle size term. As industrial minerals, clays are a complex group that consists of several mineral commodities, each having somewhat different mineralogy, geologic occurrence, technology and uses. The most complete definition for the term clay was proposed by the Association Internationale Pour I'Etude des Argiles (AIPEA) stating that clay is a naturally occurring material composed primarily of fine-grained minerals, which shows plasticity through a variable range of water content, and which can be hardened when dried and/or fired.

Clay has plasticity properties when mixed with water at certain proportions; which makes it suitable for making pottery. It is also used in ceramics, bricks, cooking pots, art, dishware and musical instruments. Industrial uses of clay are in paper making, cement production and chemical filtering. Recent studies have investigated clay's adsorption capacities in various applications such as the removal of heavy metals from waste water and air purification. In environmental studies it is important to know the adsorption process of heavy metals in clay minerals, since they are able to immobilize these metals. It was found that natural bentonite could be used effectively for the removal of zinc ions from aqueous solutions.
Clay minerals are typically formed over long periods of time by gradual chemical weathering of rocks, usually silicate-bearing, by low concentrations of carbonic acid and other diluted solvents. Clay deposits may be formed in place as residual deposits, but thick deposits usually are formed as a result of a secondary sedimentary deposition process after they have been eroded and transported from their original location of formation.

In South Africa the biggest attapulgite producer is Atta Clay in Lydenburg, Mpumalanga Province. Other attapulgite producers are Arleco Mining (owned by Meyers Minerals) in Mokopane, Limpopo Province, Matutu Absorbents and Dwaalboom Attapulgite (owned by G & W Base and Industrial Minerals) in Rustenburg, North-West Province.
Processing is done by simple methods of crushing, drying, classification and pulverization; after processing the product is often divided into gellent or colloidal and sorptive grades. Additional treatment may include extrusion to improve viscosity in drilling muds, heating to yield low volatile clay for improved sorbent properties and ultra-fine pulverization to enhance suspension properties in pharmaceuticals. The properties of attapulgite influence their applications or uses. Main applications are in drilling muds, coatings, pet litter, animal feed, floor absorbents, horticulture, pharmaceuticals, dessicant, bleaching clay, fertilizer, oil

pollution control, carriers and anti-slip agents. The clay products were recorgnised in the Betttysgoed area and around Dundonald which gives more reasons for the desire and need of the prospecting right application to be granted in order for the job opportunities and clay market to increase.



Source: (University of Pretoria; [assessing the potential soil acidification risk under dry land agriculture])

Figure 8: Clay percentage Map of Bettysgoed and all neighboring areas.

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

Geophysical surveys, and drilling are the only major methods used in exploring for deposits of this type and also for resource definition and evaluation. The technology to be used cannot be replaced by any other methods thus these are the preferred activities.

There is no site or layout alternative as the property provides the ideal geological formation for the presence of the minerals applied for. The positioning of the boreholes is determined by the expected location of the mineral reserve.
There are no technology alternatives considered and the proposed site was identified as the preferred alternative due to the following reasons:

- The site offers the mineral sought after s shown in photo 1,
- Very little natural vegetation needs to be disturbed in order to establish the mining area as most of the area has agricultural activities and grazing o cattle's.
- The mining area can be reached by an existing access road from the gravel road that is constantly being maintained by the Chieftaincy and the community of Bettysgoed.
- Maintenance and servicing of the equipment will be done at a fenced workshop, the amount of hazardous waste to be produced at the site will be minimal and will mainly be as a result of accidental oil or diesel spillages when drilling.
- 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 and more information will be discussed after the granting of the prospecting right.

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

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

Details of the development footprint alternatives have been considered. With reference to the site plan provided in Appendix 2 and the location of the individual activities on site, provide details of the alternatives considered with respect to:

The property on which or location (Bettysgoed 213 IT) where it is proposed to undertake the activity was the only property alternative considered.

8. Details of the development footprint alternatives considered.

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:

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

a) the property on which or location where it is proposed to undertake the activity

The planned surface work including drilling is important to be done on rocks that have potential to host the minerals to be explored. The Mphuluzi granite hold the sub-surface of the area. The location is of interest also due to the amount of clay visible on the roads. The farms under application fall within the Lithosols which comprise the major soils of two patterns, while margalitic black clays form the last pattern. It is interesting that each of these reflects in a uniquely different way the properties of the shale from which soil formation has taken place. The shales give rise to clay soils, and hence the freely drained red and yellow-brown soils of the apedal soil patterns.

The properties are used for farming and surrounds the community of Bettysgoed. Adequate infrastructure to undertake the prospecting and/or mining should the project be successful won't be necessary as there is a community with the area. It is important to note that until such time that the non-invasive activities have been completed the exact location of the drill sites cannot be confirmed. However, the following buffers will be applied to the final site selection:

- No drill site will be positioned within 50m of a structure
- No drill site will be positioned within 100m of a water course or wetland
- Where possible existing access roads will be utilised to access the drill sites.

b) the type of activity to be undertaken

The exploration records of all previous work in the area will be re-examined, and the following studies will be carried out:

- Literature review
- Detailed aerial photograph and satellite image interpretation
- Regional airborne geophysics with main emphasis on magnetic and gravity
- Regional soil geochemistry interpretation
- Geological mapping will also be carried out.

These records will need to be captured into a GIS format for geological modelling and exploration scheduling analysis. Should mineralisation be encountered then further drilling will be undertaken. A suitable level of feasibility study (technical and economic evaluation) will also be undertaken if the results of the phase justify it.

- A total of 10 drill holes are proposed for the site;
- It will be possible to drill 30-40m per day, covering about 1-3 days to drill one hole depeding on the drill machine used, if it is new or old;
- All holes will be drilled by means of a percussion and diamond drill rig. The drilled holes will be co-ordinated by GPS and logged onto a modelling system. It will be mapped onto an ortho-photo (1:10 000) scale.
- The holes will be drilled to an average of 450m 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 100m from any stream/river and not within 100m from a natural wetland. Identified heritage sites will be marked and 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.

c) the design or layout of the activity

Since exploration is temporary in nature no permanent structures will be constructed, Negotiations and agreements will be made with the Chieftaincy and the community at large to use any existing infrastructure like access roads.

- Portable ablution facilities will be used.
- Activities will be limited to the drilling of 10 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 closely controlled and supervision will be focussed.
- No changes to the layout is considered but with the geophysical survey information, the holes can be orientated to match the shape of the good quality of resource.

d) the technology to be used in the activity

Geophysical surveys and drilling are the only major methods used in exploring for deposits of this type and also for resource definition and evaluation. The technology to be used cannot be replaced by any other methods thus these are the preferred activities. Geophysical surveys also provide an added advantage of being done quickly and so execution can commence early. The safety factor of utilising geophysical surveys is also apparent, as there is less time to keep people exposed to moving machinery.

e) the operational aspects of the activity

Due to the nature of the prospecting activities, no permanent services in terms of water supply, electricity, or sewerage facilities are required. The prospecting will commence with non-invasive prospecting for 6 – 8 months 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 2 - 4 months, combining the results from phase 1 with interpreted geological report. Only then will the applicant commence with invasive prospecting with the drilling and sampling programme continuing for approximately 12 – 24

months, 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 6 – 12 months, producing Pre-Feasibility reports, resource statements and 3D mapping. Once this is complete a decision will be made whether further drilling or sampling is required in specific areas of interest, prior to finalising the Feasibility Report.

The applicant shall ensure that this Environmental Management Plan is provided to the Project Manager and any other person or organisation who may work on the site.

f) the option of not implementing the activity

The option of not approving the activities will result in a significant loss to valuable information regarding the mineral status present on these properties. The proposed activities have very low significance since these are short term activities. The probability of occurrence of an impact was determined and most of these activities can be controlled and impacts can be reduced or avoided. The probability was also used basing on looking at other prospecting activities of similar nature. Generally prospecting activities have low impact on the environment. The planned activities negative impacts can be controlled and avoided or minimised therefore the layout does not require revision. Changes in plan will be discussed with the farmers and approvals will be signed. In addition to this, should economical reserves be present and the applicant does not have the opportunity to prospect, the opportunity to utilize the said reserves for future phases will be lost. Loss of potential employment opportunities for Mpumalanga as a province.

9. Details of the Public Participation Process Followed

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

Regulatory Framework

This section of the report provides an overview of the tasks undertaken for the public participation process to date. The public participation process was undertaken in accordance to the requirements of the EIA Regulations, 2014 (as amended, 07 April 2017) particularly Chapter 6 of this Regulation. It provides a guideline on how public

participation processes must be conducted, it further stipulates timeframes in which these processes must be conducted in accordance to.

- **Landowner Identification and Notification**

A Landowner was identified through a search conducted online (Windeed Search) that accesses the Title Deeds office database. Once the landowner was established (i.e. **Mr ROUX JOHANNES OOSTHUIZEN**) consultation email together with a landowner notification letter, BID, maps and comment form attached, were drafted and couldn't be sent through an email to the landowner as contact details were not found, however all drafted paperwork were hand delivered to the farm premises on the 19th of January 2019 and again the landowner was not available. The documents were given to one of the workers to kindly give him so he can contact the consultant back. A copy of notice was plugged by the entrance for his attention as well. See figure below

Figure 9: land owner documents given to the worker to give the land owner and also a notice plugged at his gate for attention

The land owner's email was able to be obtained with the help of a community participation meeting that was held at patattafontein on Sunday the 24th of February 2019. A consultation email was sent on the 26th to the land owner as another attempt to get hold of him after the hard copy drop-in attempt and a hush respond was received from the landowner on the 26th of February 2019.

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, inter alia, involves the following:

Notification of Stakeholders (incl. Interested & Affected Parties)

- **Notification of Stakeholders**

✓ Personnel representing Government departments and Non-governmental organizations were consulted using Background Information Document (BID), Consultation letters, and in some instances, consultations were conducted telephonically. The following departments and organization formed part of the consultation process;

- Department of Agriculture, Forestry and Fisheries
- Department of Rural Development and Land Reform
- Department of Water and Sanitation
- Department of Environmental Affairs
- Department of Tourism
- Transnet
- Eskom
- Steve Tshwete Municipality
- Sanral
- Department of Labour
- Anglo American (Adjacent Landowners)

- **Notification of I&AP**

These I&APs details were collected using information in the public domain. Using this information these identified I&APs were contacted via email and through posted letters with a description of the prospecting operation and a way to contact for further information and how to be part of the process.

- **Newspaper advertisement**

A newspaper notice was placed in the legal section of *Middleburg Observer on the 1th of January 2019* about the prospecting right application (see proof of placement below). Notices about the application were placed around the site of the prospecting right application area inviting interested persons to register as I&APs. See figure 8 below.

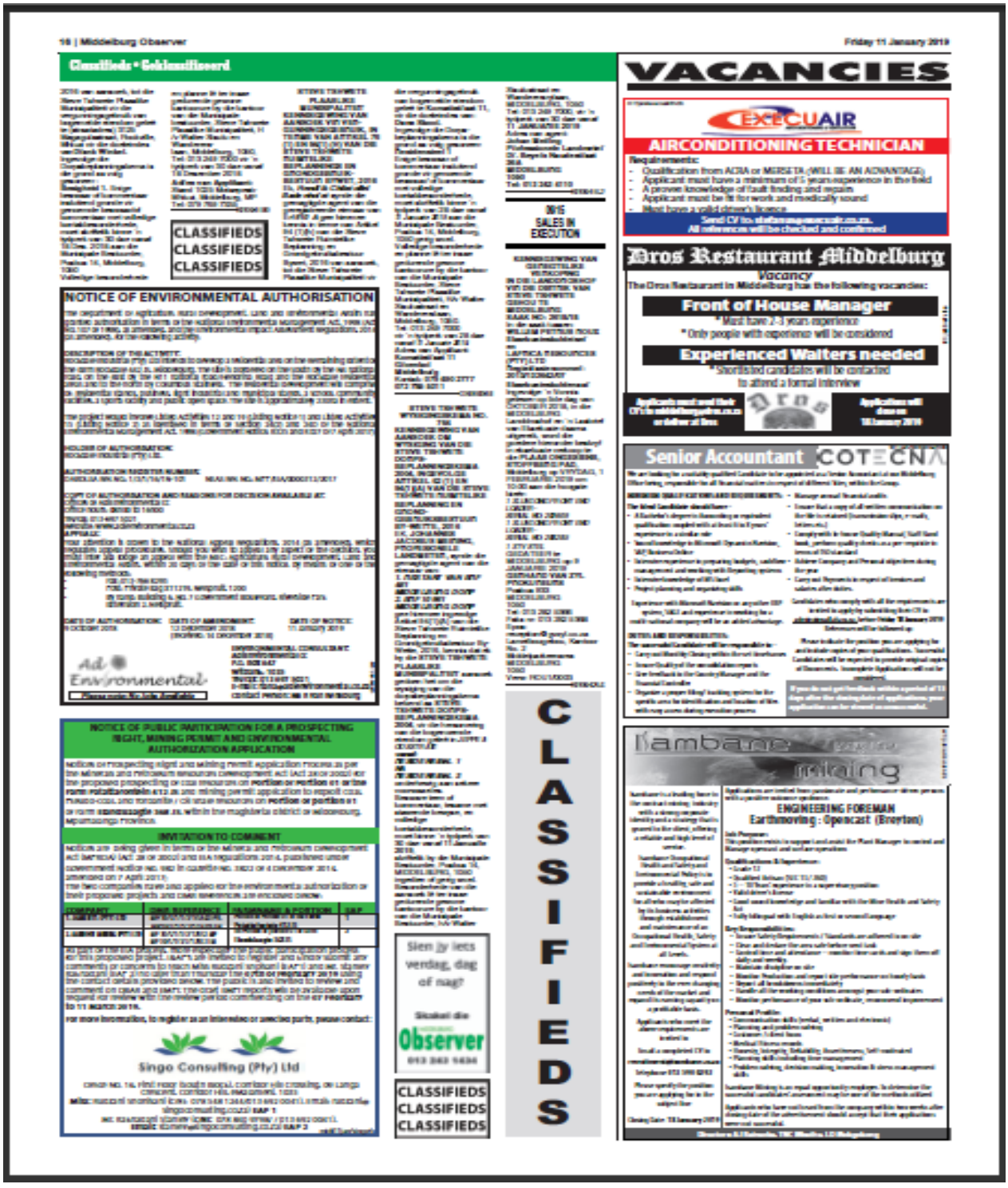


Figure 10: Newspaper placement on Middleburg observer

- **Site notice placement**

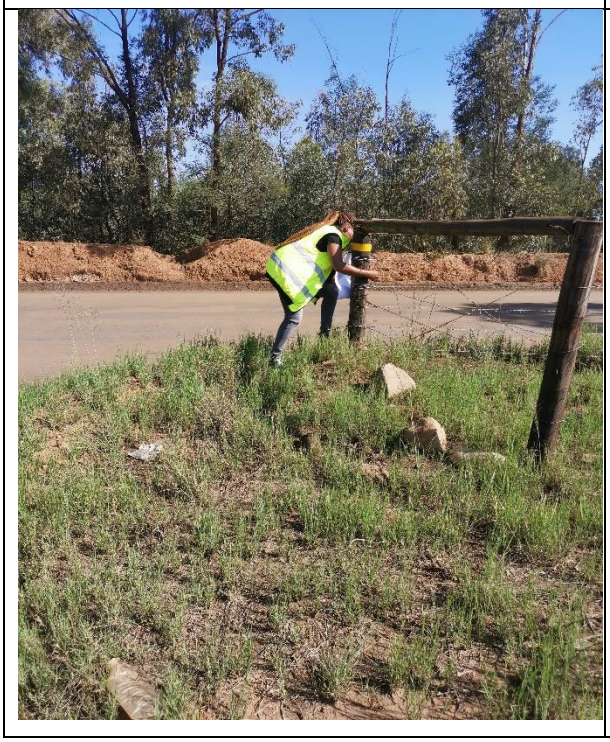
To inform surrounding communities and adjacent landowners of the proposed development, site notices were erected on site and at visible locations around the

site on the 19th of January 2019. The site notices also clearly stipulated where and how the DBAR and EMPr can be accessed. See appendix 5 for more.

The location of where site notices were plugged at.

Site notices were located close to the farm boundary, close to the farm entrance, close to the mostly used road.

-25,7178270, 29.7047650



- **Public community meeting**

A community meeting was attempted to have after multiple planning with one of the community members named lucky with cell number(060 7192 132), however upon meeting with the community on the 31st of January 2019, the community refused to participate and voice their comments in writing and also to fill the attendance register without the client's involvement which then results to placing another meeting with client's involved which was held on the 24th of February at Patattafontein with the farm residents, client and consultant firm. Please refer to **appendix 4** for minutes and engagement meetings.

a. 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	Issues raised	EAPs response to issues as mandated by the applicant	Section and paragraph reference in this report where the issues and or response were incorporated.
AFFECTED PARTIES					
Landowner/s					
Duma Traditional Council **CHIEF M.S MNISI** CELL: 082 841 6513 P.O.BOX 2008 Dundonald 2336	**X**	26/11/2019	Duma Local Government appointed Mr J Mkhaliphi as headman of the Duma Tribe. We are the leadership of bettysgoed area since 1973. A meeting is requested with the community of Bettysgoed. We have general request from the company: • We request soccer jersey for our team • 2 nets for soccer poles	On the 25th of November 2019. A site visit was conducted by Singo Consulting and a meeting was held with the chief representative and chief M.S MNISI. A letter for ownership was requested. A meeting was held on the 6th of December 2019. Discussions will be made during the public participation meeting in the presence of the applicant.	APPENDIX 4

			• Sound system that will assist the events that are normally held foe cultural groups in our area as a way of protecting teenagers from crime and teenage pregnancy. • Small farmer who need tractor and other materials. This project will assist us as the community by providing jobs for our people.		
		06/12/0219	We will request a separate meeting in the [presence of the applicant, neighbouring chiefs, counsellor, municipalities representatives.	A meeting will be scheduled early January 2020.	

Lawful occupier/s of the land					

Landowners or lawful occupiers on adjacent properties (Adjacent Villages Chiefs)	X				
	X				Appendix 4
Municipality of the area	X				
Chief Albert Luthuli Local Municipality STEVE TSHWETE LOCAL MUNICIPALITY Eric Ntanganendzeni Ratshibvumo ericr@stlm.gov.za 'council@stevetshwetelm.gov.za' 'social@nkangaladm.gov.za'	X	19/01/2019	The local Municipality was consulted and a response was received from the municipality representative named Pearl Moswathupa. Good day Rudzani Could you kindly send me a copy of the Basic Assessment Report so that the Department can make detailed comments Regards Pearl	Good Day Pearl, Please note that the Basic Assessment Report will be sent to you upon completion; as the review period of the Report will commence from 7th February 2019 to 11th March 2019. Kind Regards,	Appendix 4
Organs of state **(Responsible for infrastructure that may be affected Roads Department, Eskom, Telkom, DWA e**					

Eskom 'Wayleavesmou@eskom.co.za' 	X	19/01/2019 25/01/2019 12/02/2019	HI Please find herewith Eskom letter of comments for your application. Please complete Annexes D and E on the attachment and return them to us before commencement of the project as proof that you are accepting the conditions Good Day Please find attached Regards	Good day, Please find attached signed copy as per your request. The applicant is agreeing that he will abide by the rules stated on the comment form to ensure that the all Eskom environmental standard procedures are adhered to at all times. Kind Regards,	Appendix 4
Communities					
No communities are located near the project area.					
Dept. Land Affairs	**X**				
'RhulaniC' RhulaniC@daff.gov.za 	**X**	19/01/2019	Hi Kindly receive the attached registration form	Dear RhulaniC, Thank you for your comments, Please note that your request have been noted and a draft report which includes all your concerns will be	Appendix 4

			The project must comply with conservation of agricultural resource act (Act 43 of 1993) The main interest of the act is on soil, vegetation and water. Regards	available for review from the 7th of February to the 11th of March 2019. Kind Regards,	
Department of Agriculture, Land Reform and Rural Development	**X**				
Sonto Shongwe sonto.shongwe@drdlr.gov.za	**X**	14/01/2019 15/01/2019	Good day We acknowledge the receipt of your enquiry. Kindly note that your enquiry has been forwarded to Mr Lazarus Masuku since the official that has been working with enquiries here in Nkangala has since resigned in December. All enquiries will now be dealt with by the Nelspruit team until further notice In future please forward enquiries to the Manager in Nelspruit at lazarus.masuku@drdlr.gov.za Kind Regards	Good day Sonto, Thank you for your tremendous assistance and your request for us to send more enquiries to the Manager has been noted. Kind Regards,	Appendix 4

Petruscha Elaine Lindoor Petruscha.Lindoor@drdlr.gov.za Lazarus Masuku Lazarus.Masuku@drdlr.gov.za		04/01/2019	Good day Attached please find as requested. Regards Petruscha	Good Day Thank you for your tremendous help Kind Regards	
Traditional Leaders					
No Traditional Leaders on the project area					
Dept. Environmental Affairs	**X**				
Tshilidzi Ramavhona TRamavhona@environment.gov.za *Kenneth N. Mavhunga* Sub-Directorate: Forestry Regulations an Support Directorate: Forestry Management Limpopo/Mpumalanga Department of Agriculture, Forestry and Fisheries Tel: +27 (0)13 754 0759 Cell: +27 (0)83 843 1239 Web: www.daff.gov.za E-mail: kennethmav@daff.gov.za ***"Our Forests, Our Future"***	**X**	19/01/2019	An email was sent to the department of environment, however no response have been received.	Responds from the delegate is still waited upon	Appendix 4

environmental affairs Department: Environmental Affairs REPUBLIC OF SOUTH AFRICA					
Other Competent Authorities affected					
Department of water and sanitation DWS	**X**				
Peter Ackerman **Tel: 012 336 8217** **E-mail: AckermanP@dws.gov.za** **Seani Nevondo** **Tel: 012 318 0516** **E-mail:** **NevondoS@dws.gov.za** water & sanitation Department: Water and Sanitation REPUBLIC OF SOUTH AFRICA	**X**	19/01/2019	An email was sent to the department of water and sanitation, however no response have been received from the department.	Although no response have been received the applicant is committing that: -No use of huge amounts of water will be done. 1m x 1m sumps will be dug at each drilling site and plastics will be used to avoid water from percolating into the ground. Water will be drained from the sump once drilling is completed and the sump will be closed. -Arrangements will be done for water supply. -Jamet's to comply with National Environmental Management Act, Act 107 of 1998 (NEMA), Minerals and Petroleum Resources Development Act, Act 28 of 2002 (MPRDA), National Water Act, Act36 of 1998 (NWA) and Conservation of Agricultural Resources Act, Act No. 43 of 1983 (CARA)	Appendix 4

Department of labour	**X**				
Peter Molapo Labor Works 'peter.molapo@labour.gov.za'	**X**	19/01/2019	An email was sent to the department of labour, however no response have been received from the department.	Responds from the delegate is still waited upon	Appendix 4
SANRAL 'info@nra.co.za'	**X**	19/01/2019	An email was sent to sanral, however no response have been received from the department.	Responds from the delegate is still waited upon	Appendix 4
OTHER AFFECTED PARTIES					
Community meeting was held on the 24th February 2019, and attendance register is attached with the number of attendees interested and affected by the project.					
INTERESTED PARTIES					
Community meeting was held on the 24th February 2019, and attendance register is attached with the number of attendees interested and affected by the project.					

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

a) Baseline Environment

(i) *Type of environment affected by the proposed activity.*

(its current geographical, physical, biological, socio- economic, and cultural character).

Topography

The prospecting area is situated within a region with generally flat to gently undulating topography, which is typical of the Mpumalanga region.

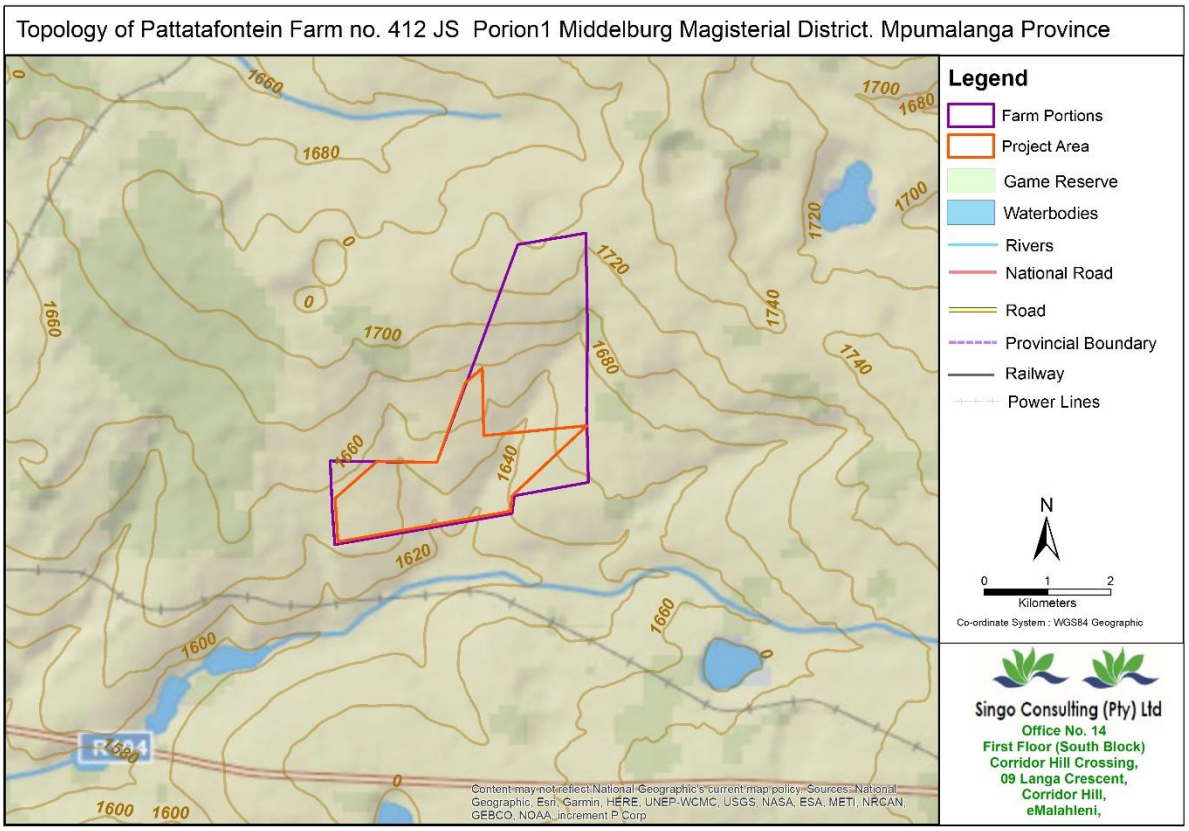


Figure 11: Topography of the area.

Regional Climate

Project areas occur within the area with typical Highveld conditions. The summers are moderate and wet while the winters are harsh, cold and dry. Minimum long-term temperatures have been recorded from -1.80C to 13.70C with maximum temperatures ranging between 18.40C and 27.10C. Average daily temperatures are in the middle 200C range in summer (October to March) and are lower than 150C (April to September). Winter minima fall below 00C in June, July and August. The

average total annual rainfall is ~735mm with the rain falling mostly in the summer months (October to April). Peak rainfall occurs in January.

Figure 12: Average rainfall per month in the project area

Wind roses comprise 16 spokes, which represent the directions from which wind blows during a specific period (see Figure 11). The colours used in the wind roses depicted in figure 12, reflect the wind speed categories. The dotted circles provide information regarding the frequency of wind speed occurrence and direction categories. The prevailing wind directions are from the north-east and north, with frequencies of up to 10% and strong wind speeds of up to 15m/s. During day-time the predominant winds are from the north-westerly sector. Night-time conditions are characterized by winds from the north-easterly and south-easterly sectors.

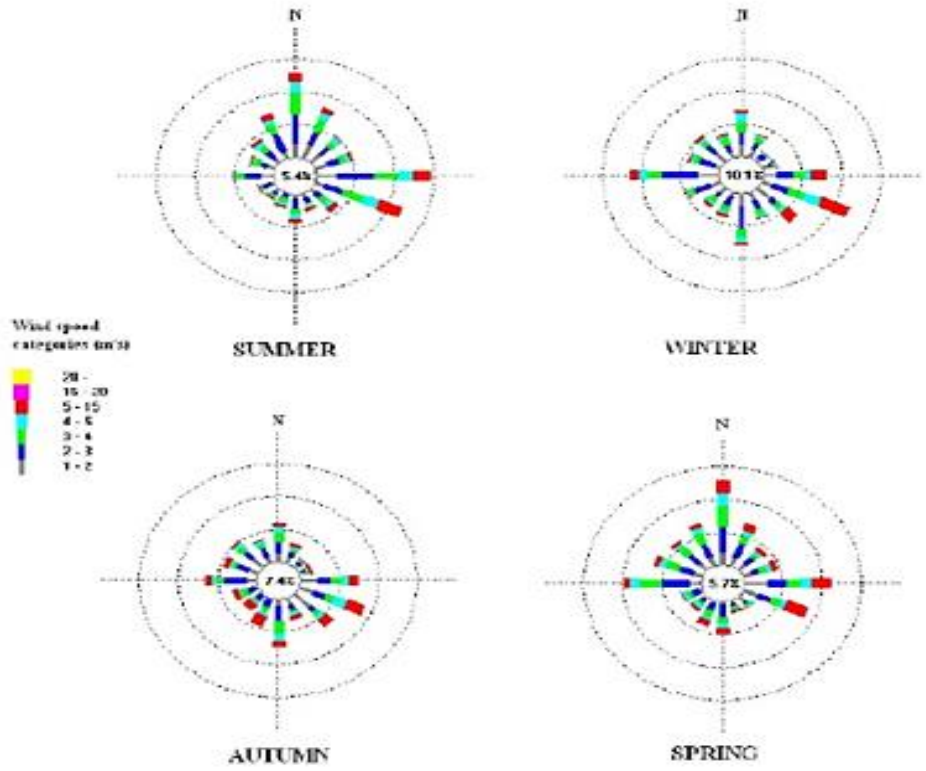


Figure 13: Wind characteristics of the permit areas.

Air Quality

The assessment of the ambient air quality is based on available ambient air quality information identified in the literature review and data supplies by the Department of Environmental Affairs (DEA) and the South African Weather Service (SAWS).

Regional Ambient 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, ranging from volatile organic compounds and heavy metals to dusts and odors.

The Permit area are in the Mpumalanga Highveld Priority Area which has been declared by the Minister of Environment and Tourism in terms of section 18 (1) and 57 (1) of the National Environmental Management: Air Quality Act, No. 39 of 2004. The permit area is situated near coal mines (e.g. Canyon Coal Mine), resulting in a

significant negative impact on air quality in the area that requires 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 neighboring provinces and countries bordering South Africa.

Mpumalanga experiences distinct weather patterns in summer and winter that affect the dispersal of pollutants in the atmosphere. In summer, unstable atmospheric conditions result in mixing of the atmosphere and rapid dispersion of pollutants. Summer rainfall also aids in removing pollutants through wet deposition. In contrast, winter is characterized by atmospheric stability caused by a persistent high-pressure system over South Africa. This dominant high-pressure system results in subsidence, causing clear skies and a pronounced temperature inversion over the Highveld. This inversion layer traps the pollutants in the lower atmosphere, which results in reduced dispersion and a poorer ambient air quality. Preston-Whyte and Tyson (1988) describe the atmospheric conditions in the winter months as highly unfavorable for the dispersion of atmospheric pollutants.

Plumes emitted at night from stacks during stable conditions can be transported up to thousands of kilometers downwind of the source before reaching ground level in a well diluted state. During day-time however, strong convection currents transport plumes upward and downward whilst drifting downwind (Mpumalanga State of Environment report, 2003). Pollutants thus reach ground level close to the point source of emission and are well diluted due to convective mixing (Turner, 2001). Emissions at low levels (such as from mine residue deposits, households or vehicles) do not disperse much at night because of the atmospheric stability, resulting in high concentrations of pollutants at ground level despite the relatively low emissions quantities. During the day, these low-level emissions are readily mixed into the convective layer close to the earth's surface (Turner, 2001), which results in lower concentrations of pollutants at ground level and better air quality.

Noise

The project area is surrounded by crop farming activities and also Belfast timber plantations. The project is approximately 1.78 KM from the casshome railway-rail. The farm boundary covers the farm houses and pans/ wetlands inclusive within its boundaries. The farm area can be accessed through a gravel route from R555 and R104 national roads from Middleburg town. The site can also be accessed from Belfast through R33 connecting to N4 and off-ramping to R104 then joining a gravel road to potentially access the Patattafontion 412 JS, Portion 01 Farm. The tractors operating on crop farms, traffic on the R104, and the trucks transporting coal and machinery on operating site of Canyon Coal Mine are a primary source of noise in the area hence ambient noise levels has already been impacted. In the proposed coal prospecting right area, noise will be generally from machinery operating on site which will not last for more than 5 days.

Geology

Regional Geology

The regional geology of the project areas consists of various groups within the Karoo Supergroup as well as numerous dolerite intrusions. The Ecca Group occurs extensively with the region and of the 16 formations, one, the Vryheid Formation, dominates the immediate study area. The Vryheid Formation comprises shale and sandstone elements interspersed with coal beds. These were laid down in a number of different cycles of deltaic and fluvial processes. Locally, sandstones and siltstones of the Vryheid Formation are encountered. These rock types weather to fine grained sands, silts and clays.

The Farm Patattafontein 412 JS, Portion 01 is situated within Springs-Witbank Coalfield. The sediments of the coalfield were deposited on an undulating pre-Karoo floor and consequently the distribution and thickness of the Karoo Sequence sediments vary significantly. The sediments of the Karoo basin were deposited in fluvial floodplains and shallow shelves over a period of more than one hundred million years extending from the late Carboniferous (290million years ago) to the early Jurassic (190millin years ago).

General Geology

The project area is situated within the Witbank Coalfield. The Witbank Coalfield extends from Brakpan in the west through to Belfast in the east. The northern boundary is a very irregular sub-crop against the pre-Karoo basement rocks of predominantly Waterberg sandstones with the most northerly limit about 15 km NW of Witbank, with many "inlets" to the east and west. The south boundary is a prominent pre-Karoo felsite contact called the Smithfield ridge.

The basin is a multiple seam deposit type with the development of five major seam horizons which may in places be composite seams. The major controls for the development of the coal are proximity to undulations of the "basement" topography, through erosion channelling and sediment influx into swamp beds and finally erosion of the current erosion surface. The primary economic coal seams have been the No. 2 Seam and No. 4 Lower Seam and, in places, the No. 5 Seam.

Structurally, the coal horizons are un-deformed with each displaying a very slight dip to the south east of less than a degree and minor discrete faulting events that have a south west to north east trend of graben features and other minor faulting events. The most distinctive post-depositional feature is the intrusion of dolerites related to the Lesotho Basalts that have resulted in a variety of sills and dykes of various ages.

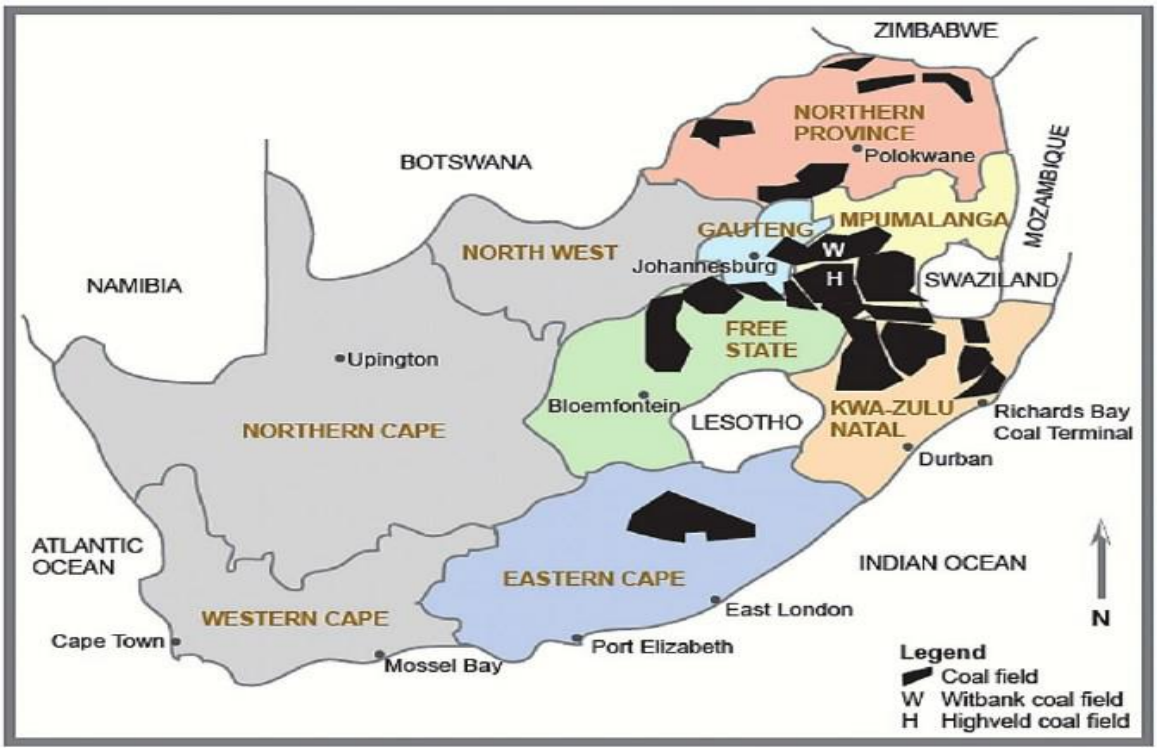


Figure 14: Depiction of the Witbank coalfield (represented by W).

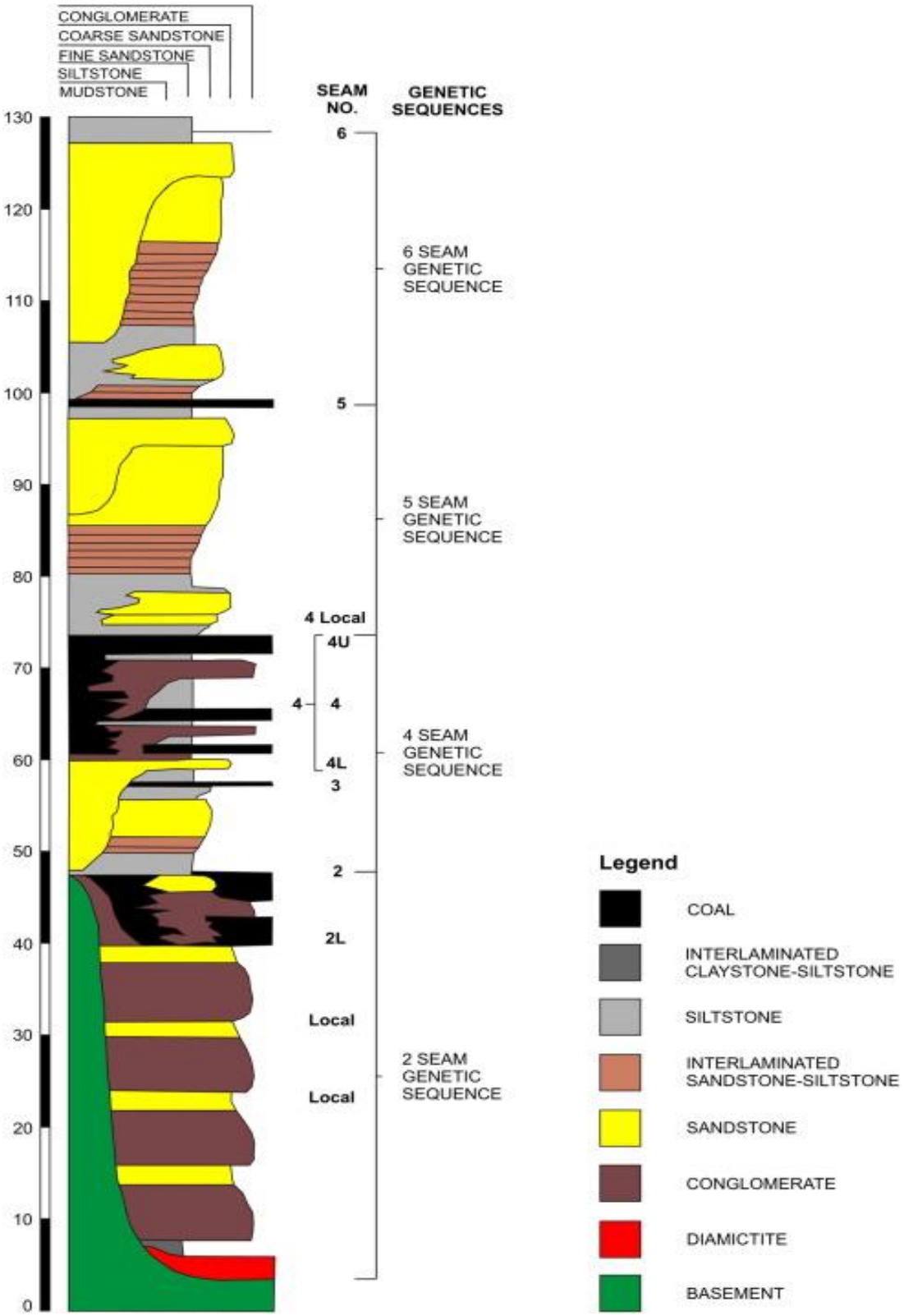


Figure 15: The stratigraphic column of the Witbank coalfield.

Local Geology

The project area is underlain by geology consisting of sandstone of the Vryheid Formation and the Ecca Group of the Karoo Supergroup which contains bands of coal within the sedimentary layers.

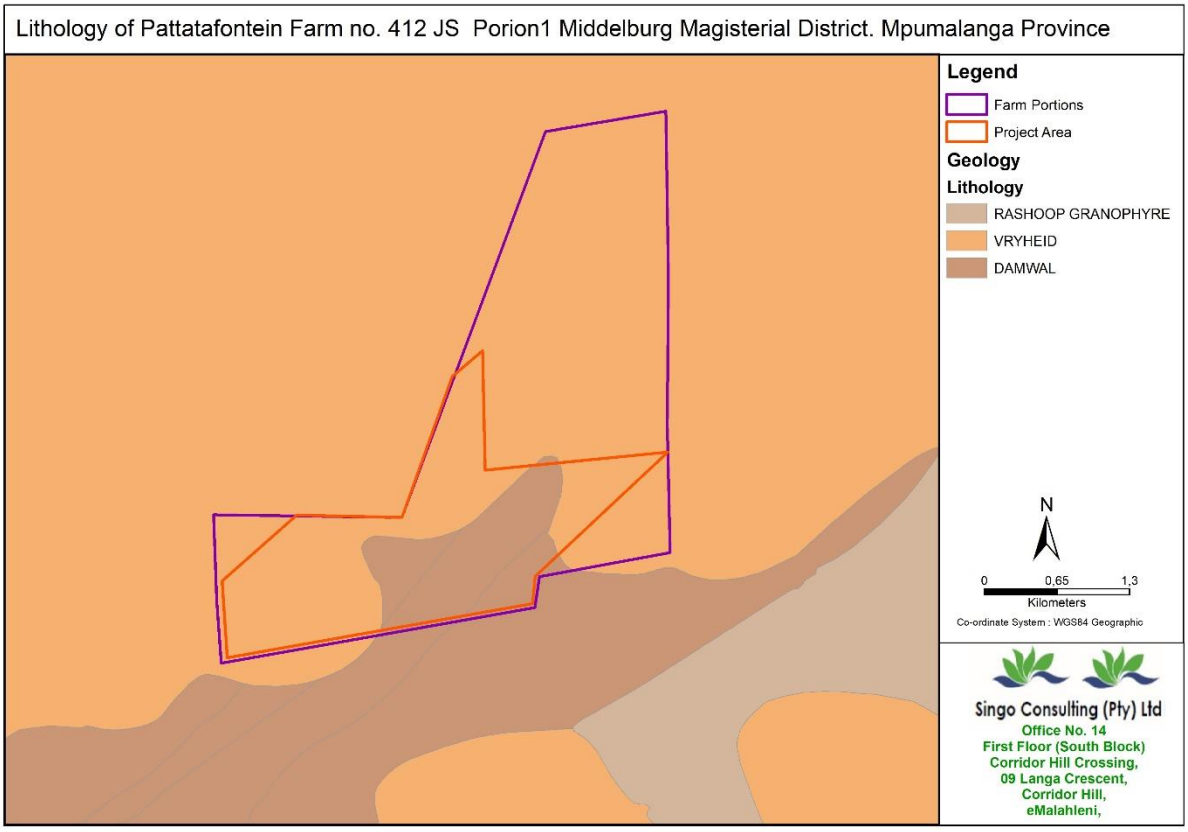


Figure 16: The local Geology of the area.

Soil Study

The area of the property is associated with classes undifferentiated shallow soil and land classes, where the area of the permit is associated with classes as undifferentiated structureless soil, freely drained soil and structureless soil. The area seems dominated by red and yellow structureless soil with a plinthic horizon.

Top soil of many parts of the property and on alternative site is disturbed or degraded by erosion as the property is used for cultivation and mining activities, the permit area is located in a flate slope where storm water not easily flows in high speed, it flows in a slow speed as the slope is flate which most of the storm water is being dammed in after rain fall. As it is highlighted below on map (see Figure 4), the project falls under soil type or association with class 1 to 4, undifferentiated structureless soil as stated in the soil classification map. Soil classes from this type of soil is characterised by sand,

red soil which is less productivity due to dominating of sand soils have severe limitations that reduce the choice of plants or that require special conservation practices, soils and miscellaneous areas have limitations that preclude commercial plant production and restrict their use to recreational purposes, wildlife habitat, or esthetic purposes. Several different soil forms are found in the proposed area. Pink, brown and green, structureless, sandy loam to sandy clay soils, generally moderately deep to deep. Soil forms mainly include Hutton and Clovelly, with some shallow Glenrosa and Mispah soils.

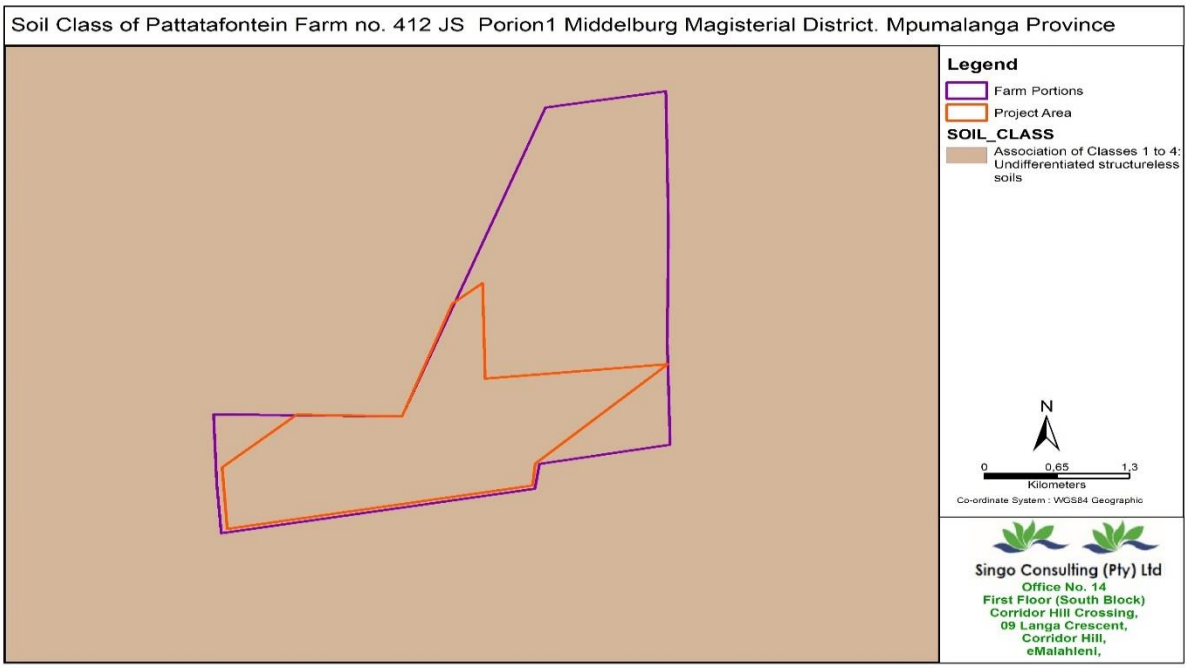


Figure 17: Soil study of the area of interest.

Photo 1: Soil type observed on site.

Water Resources

The Farm Patattafontein 412 JS falls within the Upper Olifants catchment, B12C sub-catchment. The Upper Olifants catchment covers an area of 11 461 km2, falling mainly within the Gauteng and Mpumalanga Provinces. The area includes the towns of Bronkhorstspruit, Delmas, Douglas, Kriel, Kinross, Ogies, Evander, Secunda, Bethal, Belfast, eMalahleni and Steve Tshwete. The Upper Olifants catchment is the most urbanised of the four sub-catchments, with most of the urban population located in eMalahleni and Steve Tshwete.

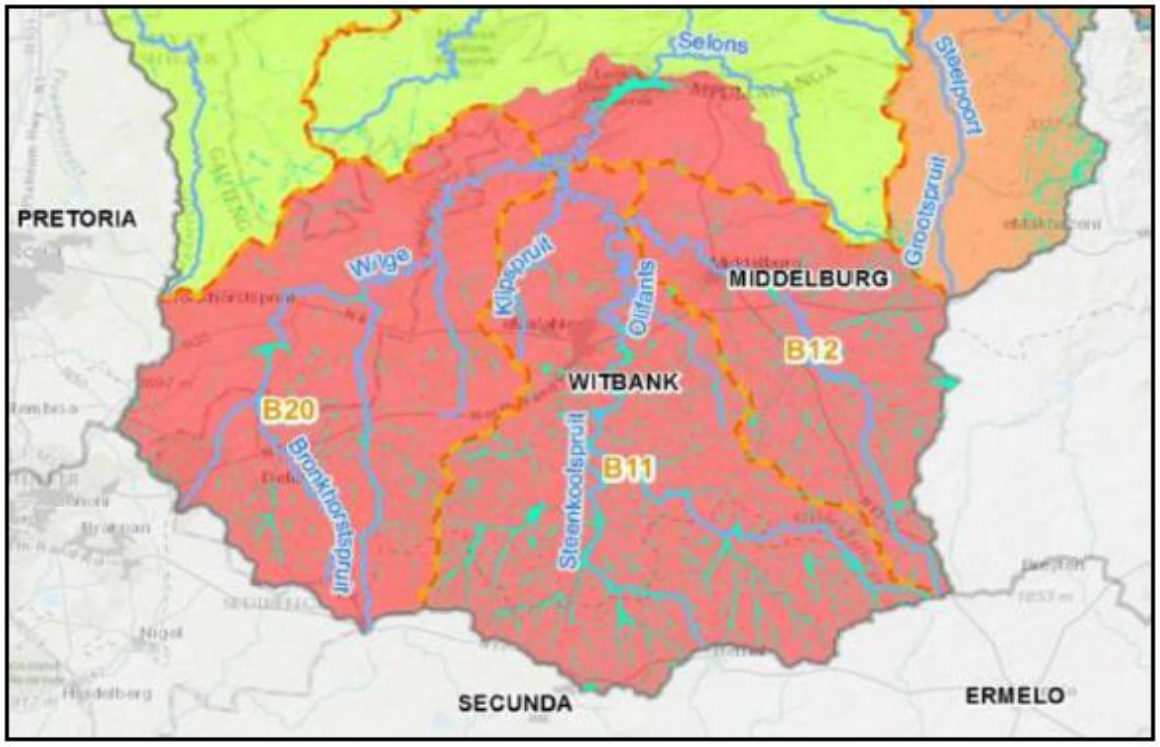


Figure 18: The sub-catchment of the project area inclusive.

Surface Water

According to the wetland sensitivity map below, there is a sensitive wetland body within the project area. Furthermore, the presence of water body means that water resources on site must be protected. All activities must take place 500m away from the water bodies and if that can't be then the water bodies must be channeled away from the site. All activities must be conducted in a manner that ensures the protection of water resources from pollution, best practice guidelines must be applied.

Photo 2: Wetland in the farm boundary

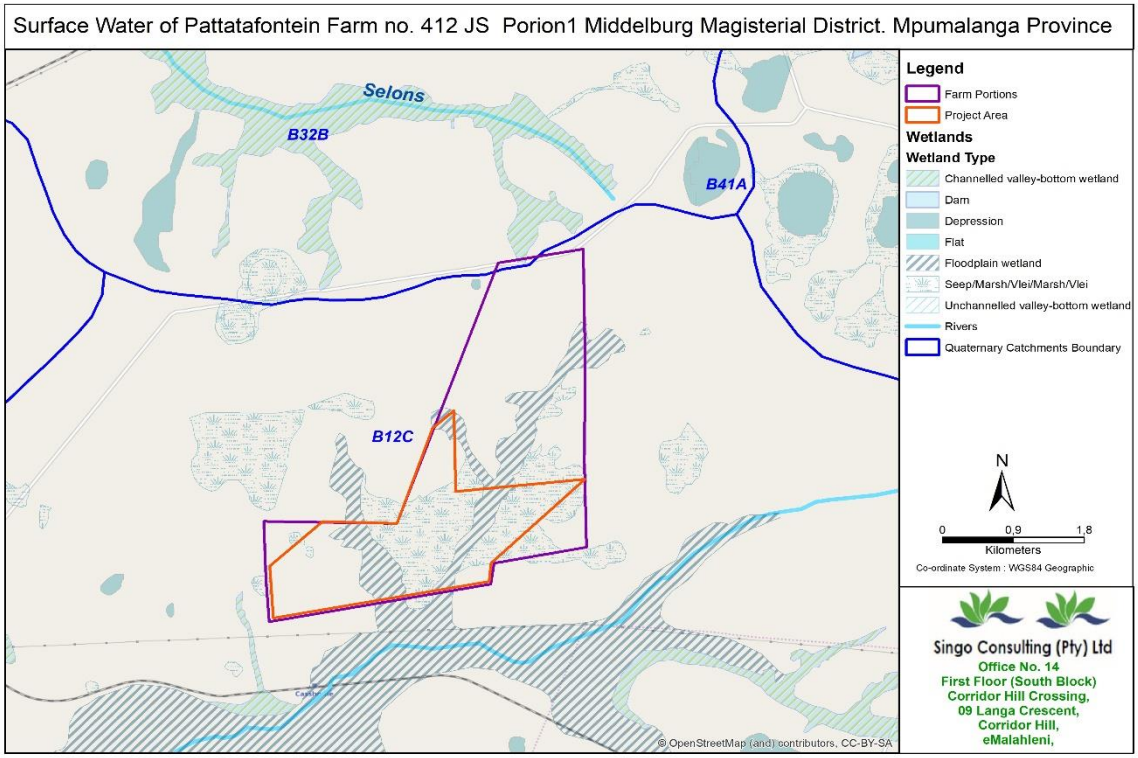


Figure 19: Environmental Sensitive Area Wetlands.

Ground Water

The rock types underlying the study site can be divided into two distinct aquifers, namely a shallow weathered aquifer and a deeper fractured aquifer (source: Trans alloys Groundwater Model – MVB Groundwater Consulting).

Shallow aquifer: This aquifer mainly comprises unconsolidated sand and clay. The depth of weathering based on the geological borehole logs and some field investigations varies between 0m to 12m in depth. Recharge to this aquifer occurs from rainfall as well as from surface water sources. (source: Trans alloys Groundwater Model – MVB Groundwater Consulting).

Deep fractured aquifer: A deeper fractured aquifer also underlies the study area in the fresh shale, sandstone and coal seams underlying the weathered material. The primary porosity of the Ecca Group rocks does not allow significant groundwater flow, except where the porosity has been increased by subsequent secondary structures, such as faults and dykes. No dykes were however, detected in the study area.

The area has a wetland on site as mentioned above and any prospecting activities that will commence will have to be done 200m away from the buffer zone. Refer to the map below.

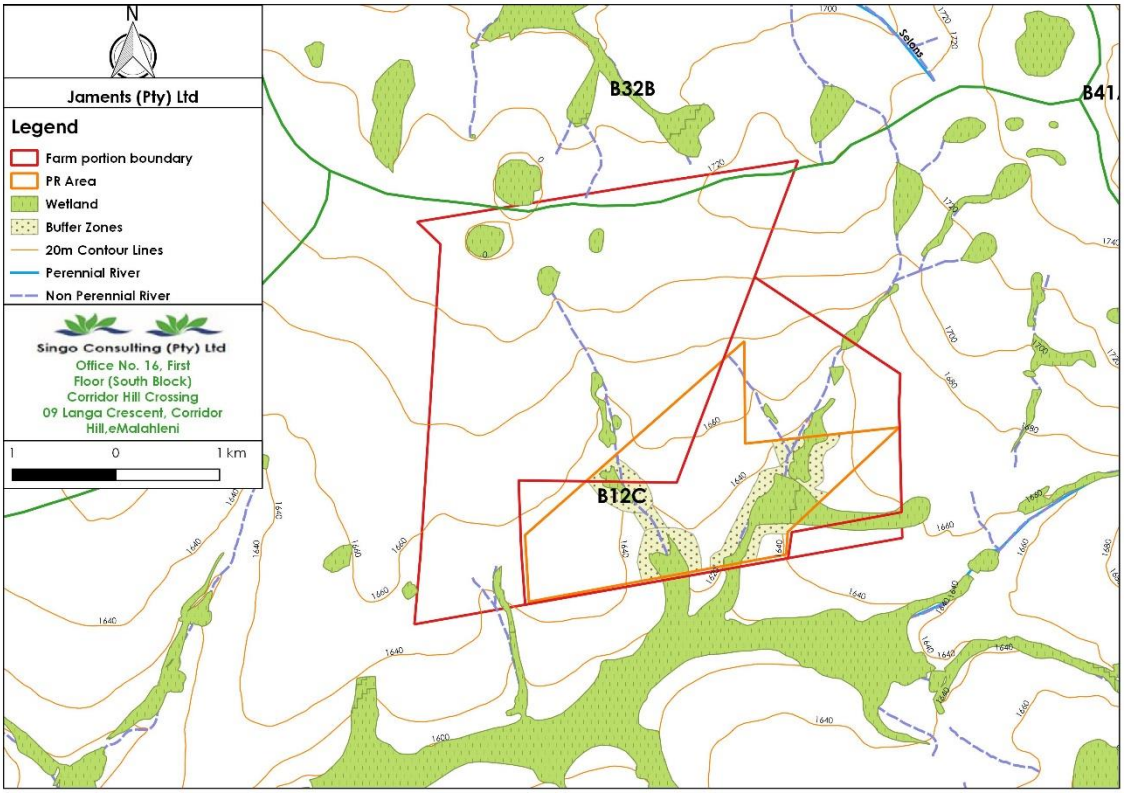


Figure 20: Wetland and Buffer zones.

Flora and Fauna

Rand Highveld Grassland

Rand Highveld Grassland occurs in Gauteng, North-West, Free State and Mpumalanga Provinces. In areas between rocky ridges from Pretoria to Witbank, extending onto ridges in the Stoffberg and Roossenekal regions as well as west of Krugersdorp centred in the vicinity of Derby and Potchefstroom, extending southwards and northwards from there. Altitude 1 300-1 635 m, but reaches 1 760 m in places (Mucina & Rutherford, 2006). The vegetation is species-rich, wiry, sour grassland alternating with low, sour shrub land on rocky outcrops and steeper slopes. Most common grasses on the plains belong to the genera Themeda, Eragrostis, Heteropogon and Elionurus. High diversity of herbs, many of which belong to the Asteraceae, is also a typical feature. Rocky hills and ridges carry sparse (savannoid) woodlands with Protea caffra subsp. caffra, Protea welwitschii, Acacia caffra and Celtis africana, accompanies by a rick suite of shrubs among which the genus Sersia (S. magalismonata) is most prominent.

Eastern Highveld Grassland

Eastern Highveld Grassland occurs in the Mpumalanga and Gauteng Provinces: It occurs in the plains between Belfast in the east and the eastern side of Johannesburg in the west and extending southwards to Bethal, Ermelo and west of Piet Retief. Altitude ranges from 1520 m to 1780 m, but also declines as low as 1300 m (Mucina & Rutherford, 2006). The vegetation is species-rich, wiry, sour grassland alternating with low, sour shrub land on rocky outcrops and steeper slopes. Most common grasses on the plains belong to the genera Themeda, Eragrostis, Heteropogon and Elionurus. High diversity of herbs, many of which belong to the Asteraceae, is also a typical feature. Rocky hills and ridges carry sparse (savannoid) woodlands with Protea caffra subsp. caffra, Protea welwitschii, Acacia caffra and Celtis africana, accompanies by a rick suite of shrubs among which the genus Sersia (S. magalismonata) is most prominent.

Plants of Conservation Importance:

A possible 11 nationally protected species and 16 provincially protected species could occur on site. The nationally protected Callilepis leptophylla (listed as Declining) was not observed during current surveys but was confirmed on site during previous

studies. Provincially protected species that were observed on site include: Disa versicolor, Habenaria epipactidea, Eulophia clavicornis var. clavicornis, Brunsvigia radulosa, Crinum graminicola, Gladiolus permeabilis, Protea welwitchii and Cyrtanthus breviflorus. The timber Belfast planatations are on the one end of the farm area and protected and also crops are on the area of interest.

Photo 3: *Protected Belfast Plantations near the area of interest.*

Photo 4: Crop Farming in the farm area.

Alien Invasive Plant Species

Alien species which were recorded in the study area included species such as Acacia mearnsii (Invader 2, proposed Category 2), Eucalyptus sp. (Invader 2, proposed Category 2), Campuloclinium macrocephalum (Weed 1, proposed Category 1b) and Opuntia ficus-indica (Weed 1).

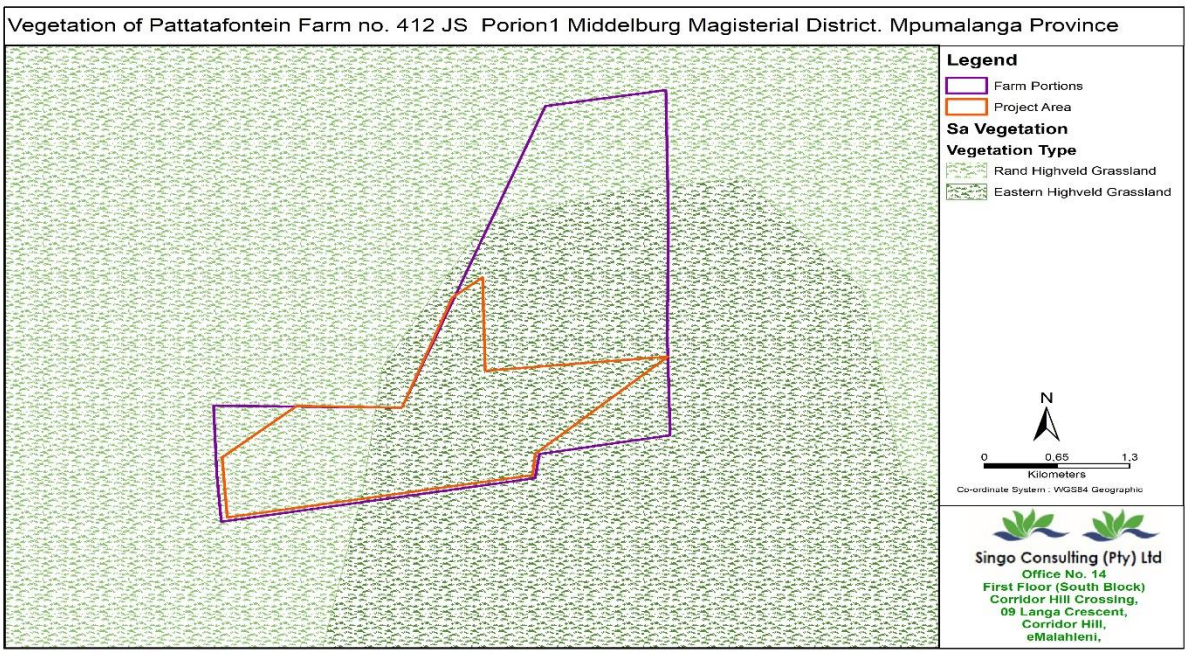


Figure 21: Vegetation diversity on the area of interest.

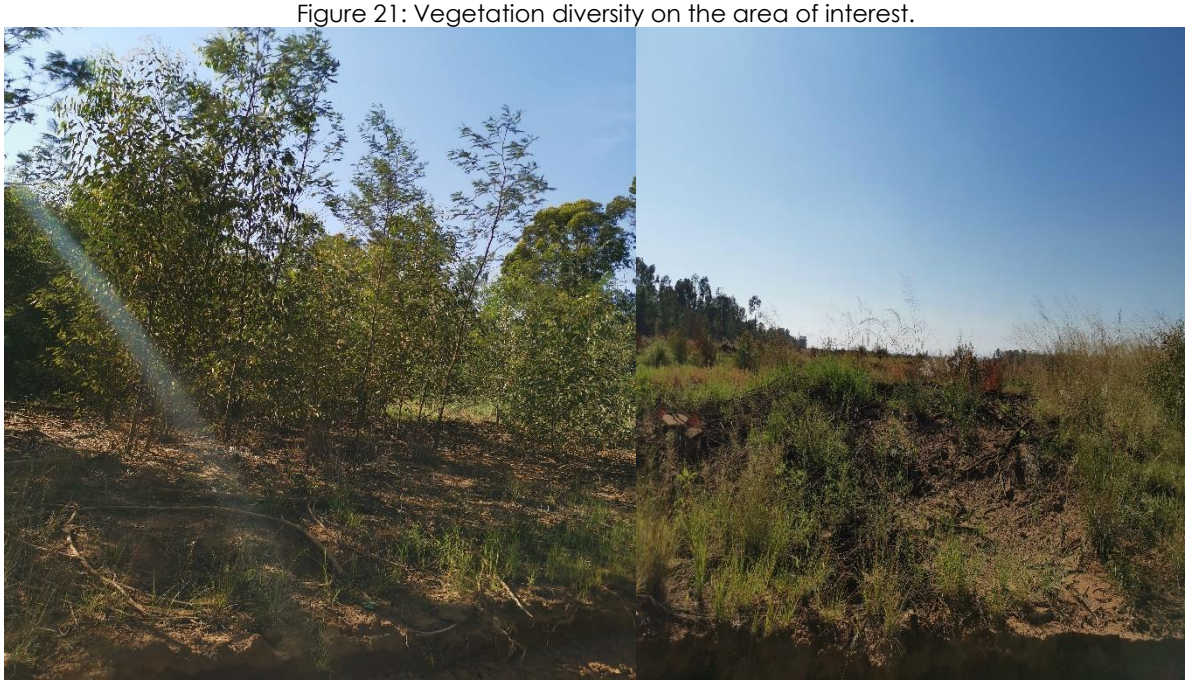


Photo 5: Vegetation type seen on site.

Fauna

Mpumalanga is faunally diverse with approximately 163 mammal species consisting of 98 smaller and 64 larger species. It is the objective of Mpumalanga Tourism and Parks Agency (MTPA) to conserve all of these species in situ. The grassland and forest biomes sustain many endemic and red data mammal species. The grassland biome is one of the biomes in which Red Data Book (RDB) insectivore richness is concentrated (Gelderblom, Bronner, Lombard & Taylor, 1995). High mammalian species richness occurs in savannahs, which could be as a result of the wide variety of habitats available. In Mpumalanga Province, savanna areas with the availability of sufficient cover, karst areas, wetlands, pans and a well-managed mosaic of short and tall grassland, are habitats that significantly contribute towards the ecological requirements of certain mammal species.

Smaller mammal species are extremely vulnerable to feral cats and dogs. Limited animal burrows (Yellow Mongoose, Highveld Gerbil, Multimmamate Mouse) and African Molerat are around the sandy sections of the open grasslands.

Avifauna

According to Birdlife South Africa (BLSA), the study area does not fall within any Important Bird Areas (IBA), which has been highlighted as important conservation areas within South Africa (Birdlife South Africa, 2014). All avifaunal species seen or heard during the time of the assessment were recorded. Surveys were conducted across the entire study area and in the immediate surroundings. It must be noted that some migratory birds may not have been identified during the site survey period. The majority of the study area comprises of habitat suitable for grassland and wetland birds. Several bird species were identified, primarily throughout the transformed habitat areas and in and around the wetland areas and pans located in the study area.

In terms of avifaunal SCC, only Geronticus calvus (Southern Bald Ibis) was identified during the site survey (Photo 6). There is however a high probability that Circus ranivorus (African Marsh Harrier) and Tyto capensis (African Grass Owl) may possibly utilise the study area specifically for foraging purposes, especially around the wetland depression associated with Alternative Site 9. The avifaunal SCC found in the study area are presented in the table below.

Table 5: Avifauna SCC with a POC of more than 60%

Common Name	Scientific Name	Mpumalanga RDL status	IUCN Status	POC %
African Grass Owl	*Tyto capensis*	VU	LC	65
African Marsh Harrier	*Circus ranivorus*	VU	LC	63
Southern Bald Ibis	*Geronticus calvus*	VU	VU	100

Photo 6: Observed Geronticus calvus.

Amphibian

Only one amphibian species was identified during the assessment periods namely a swamp of bees. Other common amphibian species which are known to occur in the surrounding regions include the Plain Grass Frog (Ptychadena anchietae), Common Caco (Cacosternum boettgeri), Red toad (Schismaderma carens), Tremolo sand frog (Tomopterna cryptotis), Guttural toad (Amietophrynus gutturalis), and the Striped gras frog (Ptychadena mossambica). The above mentioned amphibians are not considered to be threatened in the Mpumalanga Province (NW SoER, 2003).

Photo 7: Amphibian type that was noticed on site

All Flora and Fauna species will be conserved, & all potential impacts on Floral and faunal species will be managed using management framework stipulated on the National Environmental Management: Biodiversity Act (Act No. 10 of 2004).

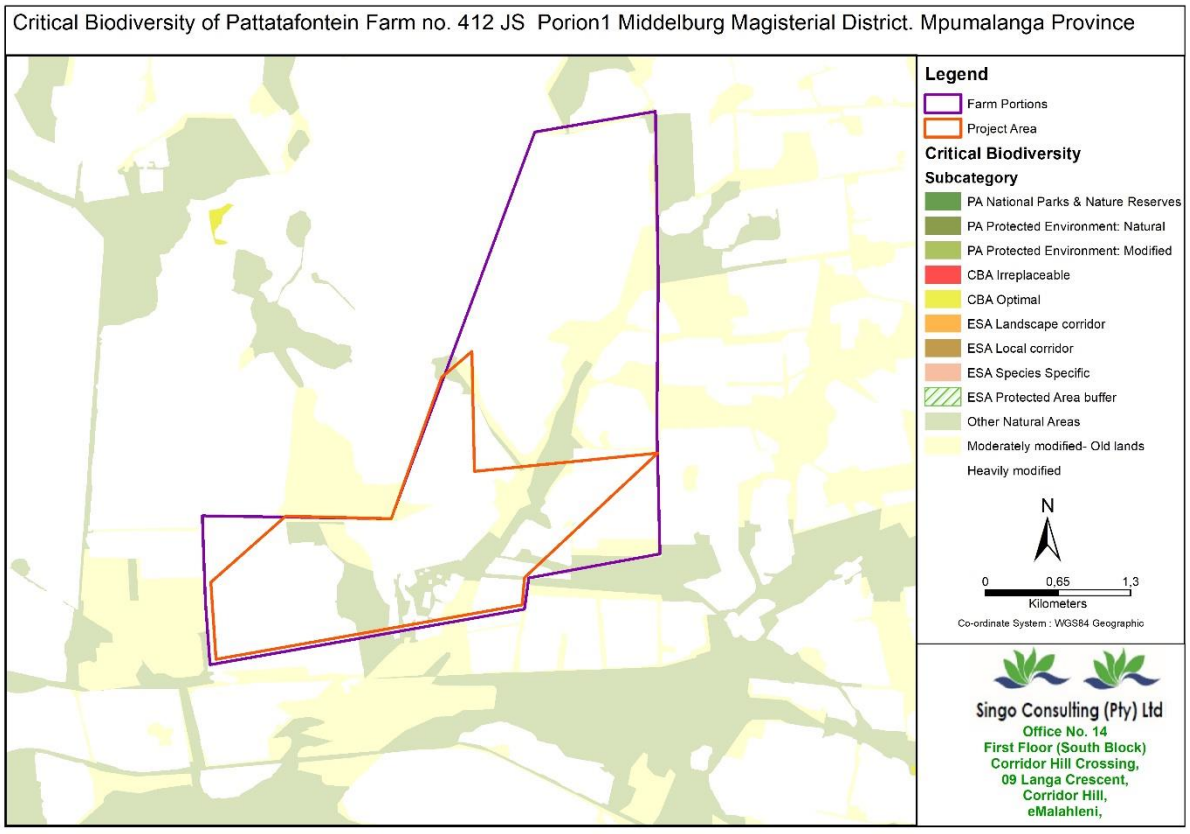


Figure 22: Biomes Map showing location of 15460 PR Application.

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 study area.

The Phase 1 Heritage Impact Assessment conducted revealed that no heritage resources of significance occur within the study area or stand to be affected by the proposed project. There will therefore be no impacts on archaeological or cultural historical sites for any phases of the project.

It is essential to note that it is possible that the Phase 1 HIA may have missed heritage resources in the project area, as some heritage sites may occur in thick clumps of vegetation while others may lie below the surface of the earth and may only be exposed once development commences.

Should, however, any heritage resources of significance be exposed during the rather operational phase of the project, the South African Heritage Resources Authority (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 (permits) from SAHRA to conduct the required mitigation measures.

Socio-Economic

The study area for the proposed projects is in the Steve Tshwete Local Municipality (STLM), situated at the Centre of Nkangala District Municipality. The STLM can be described as an urban and rural area, and it is a home to a number of large industries such as Columbus Steel, Eskom (power generation), the Nkangala District Municipality's headquarters and various government departments.

The STLM economy is dominated by the electricity sector, farming and mining activities; the main contributors to the GGP of the area. As can be expected from a predominantly mining area, the largest employment sector in the study area is mining and quarrying.

According to the 2016 Community Survey of StatSA, the poverty headcount of Steve Tshwete increased from 4.3% in 2011 to 5.1% in 2016which then made the municipality to be 4th lowest in the Province however the poverty intensity decreased slightly from 42% to 41.7% in the same period. In 2015, Steve Tshwete's share of population below the lower-bound poverty line was the 2nd lowest (favourable) along the municipal areas.

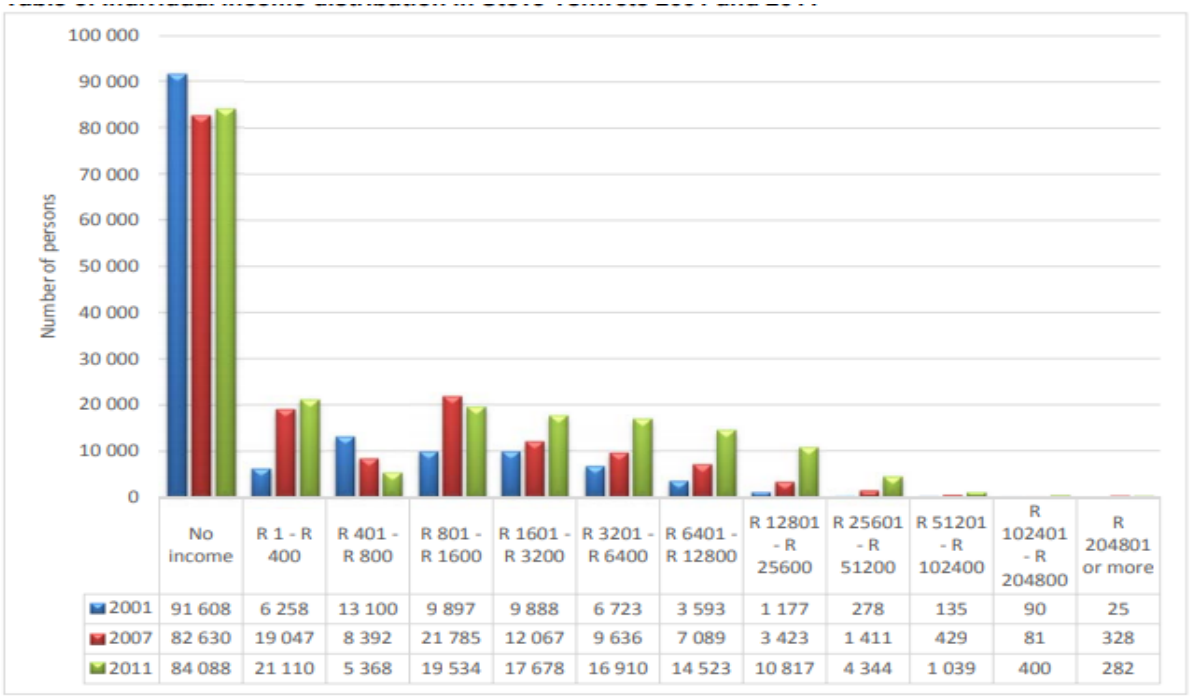
Steve Tshwete economy is one of the biggest economic areas and it is therefore expected that a significant number of employment opportunities are being provided in the area. Mining, trade and manufacturing are the major leading employment drivers in Steve Tshwete LM.

The unemployment rate of Steve Tshwete decreased slightly from 19.7% in 2011 to 16.4% in 2015 and was the lowest among all the municipal areas of Mpumalanga. Unemployment rate for females 21.8% and that of males 12.9%. 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 Steve Tshwete are trade (including industries such as tourism), community/government services and mining. High labour intensity in industries such as agriculture, trade and construction.

Socio-economic Environment

Average Household Income

According to the census, the number of people without an income has decreased from 91608 to 84088 between 2001 and 2011. The majority (63690) of Steve Tshwete individual earn within the R1-R 3200 followed by about 47 633 individuals who earn from R3200-R102 400 in 2011 There has been an increase This could be attributed to the number of mines and manufacturing industries located in STLM. Individual income distribution in Steve Tshwete is detailed in the table below:



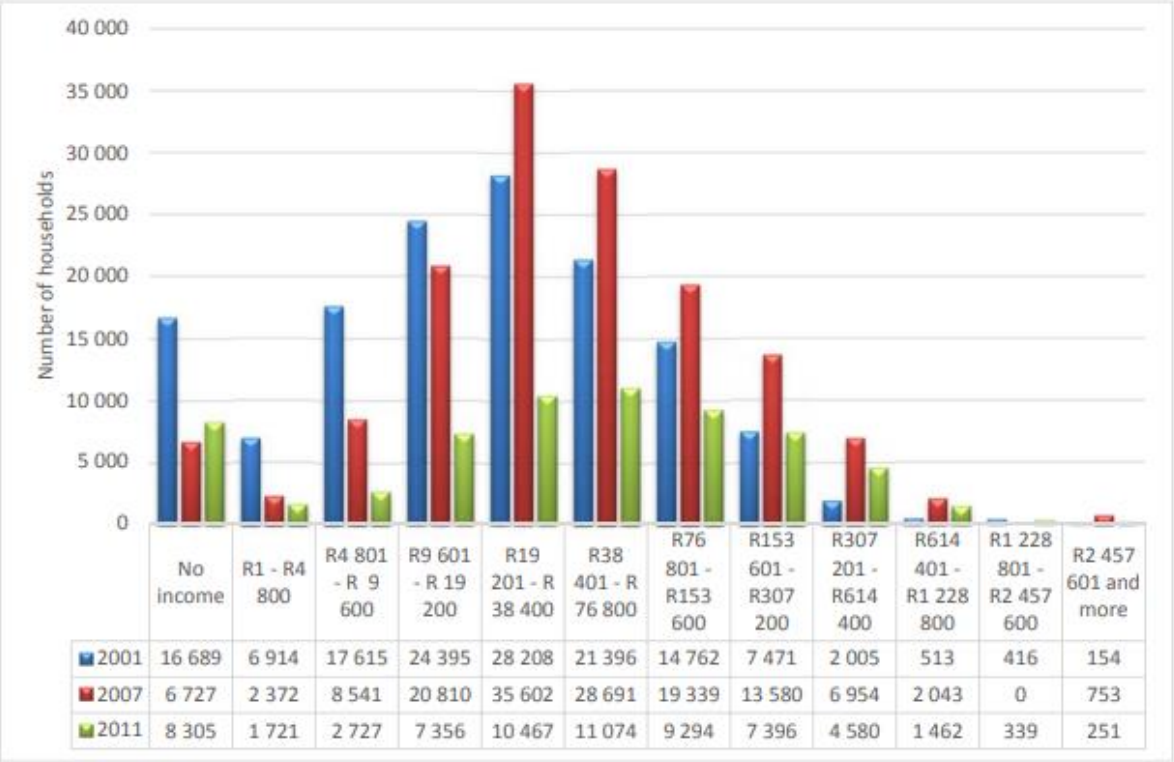
	No income	R 1 - R 400	R 401 - R 800	R 801 - R 1600	R 1601 - R 3200	R 3201 - R 6400	R 6401 - R 12800	R 12801 - R 25600	R 25601 - R 51200	R 51201 - R 102400	R 102401 - R 204800	R 204801 or more
2001	91 608	6 258	13 100	9 897	9 888	6 723	3 593	1 177	278	135	90	25
2007	82 630	19 047	8 392	21 785	12 067	9 636	7 089	3 423	1 411	429	81	328
2011	84 088	21 110	5 368	19 534	17 678	16 910	14 523	10 817	4 344	1 039	400	282

Source: Statistics South AfricaCensus 2001 and 2011

Figure 23: Individual income distribution in Steve Tshwete.

Household income

According to Census 2011, the average annual household income increased from R 55 369 per annum in 2001 to R134 026 per annum in 2011. This represents an absolute increase in nominal terms over the 10-year period, which was the highest among the eighteen local municipalities in the province. This is closely related to its higher education levels and employment rates.



	No income	R1 - R4 800	R4 801 - R 9 600	R9 601 - R 19 200	R19 201 - R 38 400	R38 401 - R 76 800	R76 801 - R153 600	R153 601 - R307 200	R307 201 - R614 400	R614 401 - R1 228 800	R1 228 801 - R2 457 600	R2 457 601 and more
2001	16 689	6 914	17 615	24 395	28 208	21 396	14 762	7 471	2 005	513	416	154
2007	6 727	2 372	8 541	20 810	35 602	28 691	19 339	13 580	6 954	2 043	0	753
2011	8 305	1 721	2 727	7 356	10 467	11 074	9 294	7 396	4 580	1 462	339	251

Figure 24: household income distribution in Steve Tshwete

Economy

Manufacturing, mining and finance are the main drivers of the municipal economic in Steve Tshwete. These industries generate mass employment opportunities and are mainly in rural parts of this local municipality. In terms of strongest main economic generator the stainless steel manufacturing industry dominates in STLM. On the other hand, mining continues to grow despite key economic sectors being on the decline. Middelburg also forms the main commercial centre of Steve Tshwete Local Municipality with the majority of people conducting their shopping activities. This includes the eMhluzi Mall and new Middelburg mall, approximately with space of 20 000m², which have expanded commercial and 106 shopping activities to the outskirts of the local municipality. Moreover, the recent opening of the carbonated soft drink factory (Twizza) has contributed to a large number of job opportunities.

Labour Market

Steve Tshwete 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 Steve Tshwete LM. The unemployment rate of Steve Tshwete decreased

slightly from 19.7% in 2011 to 16.4% in 2015 and was the lowest among all the municipal areas of Mpumalanga. Unemployment rate for females 21.8% and that of males 12.9%.Youth unemployment rate according to the 2011 Census challenge with especially very high youth unemployment rate of females. The largest employing industries in Steve Tshwete are trade (including industries such as tourism), community/government services and mining. High labour intensity in industries such as agriculture, trade and construction.

b) Description of the current land uses.

The locality and extent of current land use within and around the prospecting right area is shown in the figure below. The surrounding land uses are associated with agricultural activities (crop framing), Belfast timber Plantation and mining activities (Canyon Coal Mine, also known as Hakhano (Venda name meaning area of harvest) and residential activities (Middelburg) which is about 30km away from the project.

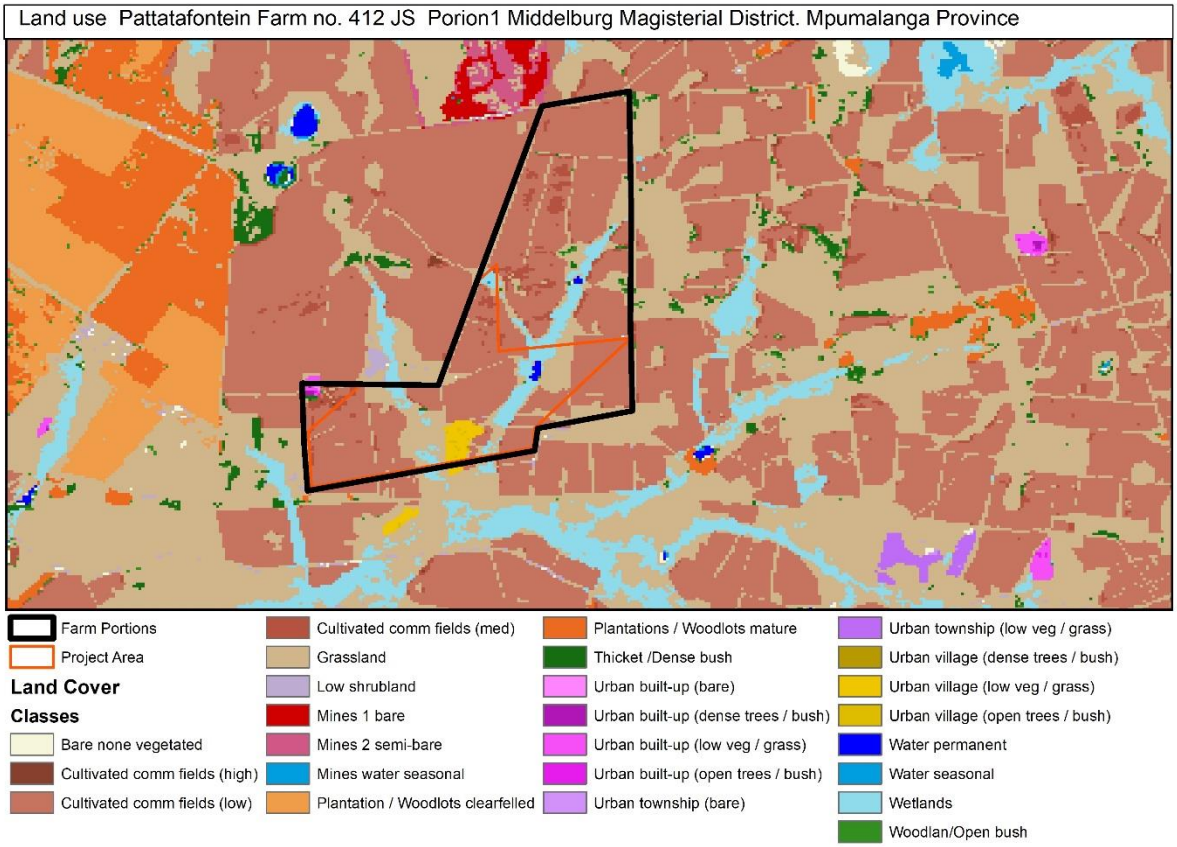


Figure 25: Land use Map of the area of interest.

Photo 8: Land usage images.

Like anywhere in SA, there is no doubt that the gross poverty and inequality in Middelburg will lead to people seeking jobs from these operations. The 30km distance from the Middelburg town could be just a walking distance to seek for employment to someone eagerly seeking for job. Combined with this landscape of poverty and inequity, the harsh reality of the double family burden carried by many black people in South Africa - together with lack of job creation by our government, has further inspired people to go to the forefront of the strike wave around the proposed mining area.

c) Description of specific environmental features and infrastructure on the site.

Portion 01 of the Farm Patattafontein 412 JS is a green field (in simple terms is a project that is built from scratch and it lacks constraints of prior work. there's existing building or infrastructure) with grass, shrubs and few trees on site as they are mine houses that exist. From the desktop survey of the project areas together with the actual site assessment, there are no critical biodiversity area but there is sensitive freshwater bodies on site. During site inspection many items could not be identified from a distance as entrance was not to be permitted and also the crop that is on the farm

has grown to an extend of hiding infrastructures or activities that takes place in the farm. Major infrastructure on site and around the site includes; Railway line, farm houses and entrance road (maintained by Hakhano colliery). See below.

Photo 9: Infrastructures on and around the site.

10. Environmental and current land use map.

(Show all environmental, and current land use features)

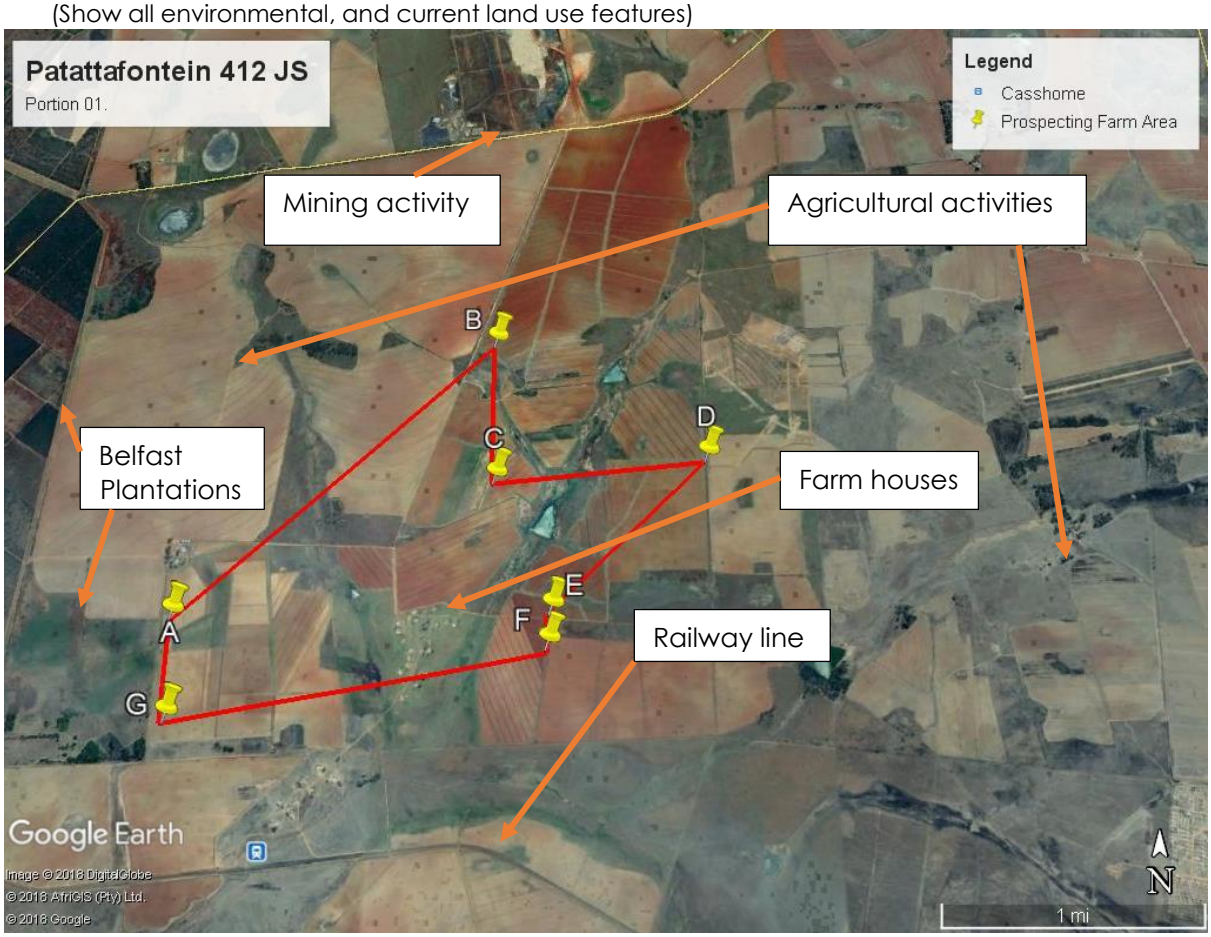


Figure 26: Environmental and current land use map.

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11. Impacts and risks identified including the nature, significance, consequence, extent, duration and probability of the impacts, including the degree to which these impacts

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

Element	Aspects and Impacts	Mitigation	Impact (post-mitigation)			
			Extent	Duration	Probability	Level of Significance
Soils	There will be minor disturbance of the soil at the proposed drill sites.	Rehabilitate each site as soon as the drilling is completed.	Low	Short Term	Definite	Low
Vegetation	The potential impact of the proposed prospecting on the vegetation would occur at proposed drilling sites and the access routes used to get to these sites. However large parts of the site have been transformed.	Environmental awareness training. Drillers to comply with all EMP procedures. Drilling sites to be located in disturbed areas wherever possible. The prospecting area including drill sites and access routes are to be rehabilitated to as near original condition as possible. No fires to be made in the prospecting area.	Low	Short Term	Definite	Low
Animal life	Animal life will be affected in the immediate vicinity of the drilling rig. It is anticipated that the noise and general activity will keep the animal life away from the site while the prospecting is ongoing.	Environmental awareness training for workers. If any animals are encountered they must not be killed or injured, but should rather be removed or chased away from the site. All gates will be kept closed.	Low	Short Term	Definite	Low
Surface Water	There are no rivers, on site, however there is a wetland.	Water for drilling to be obtained bought and brought on site.	Low	Short term	Possible	Low

Ground water	No groundwater will be used or abstracted during the prospecting operations.	Establish EMP procedures to minimise hydrocarbon spills.	Low	Short Term	Possible	Low
Air Quality	Dust will not be created due to road maintenance that is done constantly by hakhona colliery and during drilling operations.	Establish EMP procedures to minimise the generation of dust. Ensure vehicles drive slowly.	Low	Short Term	Probable	Low
Noise	Noise will be created by the drilling rig and vehicles. However, this is a sparsely populated agricultural and mining area.	Ensure vehicles and equipment are maintained. Silencers should be fitted on all engines.	Low	Short Term	Definite	Low

Cultural Heritage	There are no known important heritage resources on the site.	If any heritage resources, including fossils, graves or human remains, are encountered these must be reported to the authorities.	Low	Short Term	Possible	Low
Visual	The prospecting activity will not change the visual character of the property.	Rehabilitate drill sites and access tracks.	Low	Short Term	Definite	Low
Socioeconomic	The effect of this prospecting activity for employment and socio-economic regime would be positive, but very limited in extent and duration. If a significant resource is delineated this could have a significant positive socio-economic impact, however a mining right application would be subject to a separate EIA process.	Environmental awareness training will be provided to all workers. Maximise procurement of goods and services from local providers.	Low	Short Term	Definite	Low (positive)
Social Neighbours	The prospecting operations should not impact on the neighbours due to the distance and low intensity of the prospecting operation.	Ensure compliance with the EMP. Ensure workers do not trespass onto neighbours' property. Maintain communications and keep a "Complaints Register" on site.	Low	Short Term	Possible	Low

Solid Waste	All solid waste will be transported to the nearest municipal waste site. Any industrial (hazardous) waste will be transported to a suitable waste disposal facility.	Ensure compliance with the EMP. Include in environmental awareness training. Workers will not stay overnight at the site.	Low	Short Term	Definite	Low
Traffic and access	Prospecting activities will generate very limited additional traffic. Prospecting vehicles are to access the property via existing roads and tracks only.	Comply with traffic regulations. Keep to speed limits. Ensure compliance with the EMP.	Low	Short Term	Definite	Low
Cumulative Impacts	There are no significant cumulative impacts associated with this prospecting programme.	No mitigation required for prospecting.	N/A	N/A	N/A	N/A

12. Methodology used in determining and ranking the nature, significance, consequences, extent, duration and probability of potential environmental impacts and risks;

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

Criteria to Consider when Determining Severity of impacts

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

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

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

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

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

Rating	Description	Quantitative rating
Positive	A benefit to the receiving environment.	P
Neutral	No cost or benefit to the receiving environment.	-
Negative	A cost to the receiving environment.	N

- **Extent** of impact: A spatial indication of the area impacted (i.e. how far from activity the impact is realised). The extent of an impact is considered as to whether impacts are either limited in extent of if it affects a wide area or group of people. Impact extent can be site specific (within the boundaries of the development area), local, regional or national and/or international.

Rating	Description	Quantitative rating
Low	Site-specific: Occurs within the site boundary.	1
Medium	Local: Extends beyond the site boundary. Affects the immediate surrounding environment (i.e. up to 5 km from the project site boundary).	2
High	Regional: Extends far beyond the site boundary, widespread effect (i.e. 5 km and more from the project site boundary).	3
Very high	National and/or international, extends far beyond the site boundary, widespread effect.	4

- **Duration** of impact: A temporal indication of the how long the effects of the impact will persist, assuming the activity creating the impact ceases. For example, the impact of noise is short lived (impact ceases when activity ceases) whereas the impact of removing topsoil exists for a much longer period of time.

Rating	Description	Quantitative rating
Low	Short term: Quickly reversible, less than project lifespan, 0-5 years.	1
Medium	Medium term: Reversible over time, approximate lifespan of the project, 5-17 years.	2
High	Long term: Permanent. Extends beyond the decommissioning phase, >17 years.	3

- **Impact Probability**: The probability of the impact describes the likelihood of the impact actually occurring.

Rating	Description	Quantitative rating
Improbable	Possibility of the impact 78aterialize78g is negligible, chance of occurrence <10%.	1
Probable	Possibility that the impact will 78aterialize is likely, chance of occurrence 10 – 49.9%.	2

Highly probable	It is expected that the impact will occur, chance of occurrence 50 – 90%.	3
Definite	Impact will occur regardless of any prevention measures, chance of occurrence >90%.	4
Definite and cumulative	Impact will occur regardless of any prevention measures, chance of occurrence >90% and is likely to result in in cumulative impacts	5

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

- **Impact Intensity**: The intensity of the impact is determined to quantify the magnitude of the impacts and benefits associated with the proposed project.

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

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

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

- **Impact Significance**: The impact magnitude and significance rating is utilised to rate each identified impact in terms of its overall magnitude and significance.

Impact	Rating	Description	Quantitative rating
Positive	High	Of the highest positive order possible within the bounds of impacts that could occur.	+12-16
	Medium	Impact is real, but not substantial in relation to other impacts that might take effect within the bounds of those that could occur. Other means of achieving this benefit are approximately equal in time, cost and effort.	+6-11
	Low	Impacts is of a low order and therefore likely to have a limited effect. Alternative means of achieving this benefit are likely to be easier, cheaper, more effective and less time consuming.	+1-5
No impact	No impact	Zero impact	0
Negative	Low	Impact is of a low order and therefore likely to have little real effect. In the case of adverse impacts, mitigation is either easily achieved or	-1-5

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

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

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

Potential impact on heritage resources

There are no graves or historical ruins in the proposed prospecting area. The area has been extensively used for mining and agriculture in the past and therefore no to very limited heritage resources are present. The prospecting is so localised that it is not anticipated that there will be any impact on heritage resources. The major activity involved drilling and it is going to be done along current access routes.

Potential impacts on communities, individuals, or competing land uses in close proximity

The following impacts are regarded as community impacts:

- Potential groundwater and soil pollution resulting from accidental hydrocarbon spills and soil erosion

- Noise during prospecting operations- There are no residential housing within the radius from the prospecting sites therefore noise impact will be limited
- Influx of persons (job-seekers) to site as a result of increased activity and the possible resultant increase in opportunistic crime
- Creation of limited temporary jobs for locals. Impact on current land use: A large majority of the prospecting area is currently used for agricultural activities.

Potential impact of vegetation

Prospecting site will be cleared to a maximum of 100 m^2. Therefore, vegetation clearance will be limited and sites will be sited as to avoid large trees or shrubs. The site camp will be established at the existing farm houses therefore no vegetation clearance will be required. Existing access roads will be utilised.

14. The possible mitigation measures that could be applied and the level of risk.

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

This section contains guidelines, operating procedures and rehabilitation/pollution control requirements which will be binding on the holder of the prospecting right after approval of the Environmental Management Plan. It is essential that this portion be carefully studied, understood, implemented and adhered to at all time.
The applicant shall ensure that this Environmental Management Plan is provided to the Project Manager and any other person or organisation who may work on the site. Jament's Pty Ltd Development shall ensure that any person or organisation that works on the site complies with the requirements of this Environmental Management Plan.

Responsibility

- The environment affected by the prospecting operations shall be rehabilitated, as far as is practicable, to its existing state.
- The environment affected by prospecting shall be maintained in a stable condition that will not be detrimental to the safety and health of humans and animals.

- The prospecting shall not result in the pollution of the environment or lead to the degradation thereof.
- It is the responsibility of the Company to ensure that the Project Manager, employees and contractors are capable of complying with all the statutory requirements which must be met in order to prospect, which includes the implementation of this EMP.
- The Project Manager will be responsible for the practical implementation of this EMP.

Schedule

Ongoing, during the prospecting period.

Community relations

The Company shall notify the landowner two weeks before prospecting operations commence. The notice shall include contact details for any complaints about the actual prospecting activities.

The Company shall keep a "Complaints Register" on site. The Register shall contain the contact details of the person who made the complaint, and information regarding the complaint itself. The Company shall respond to all complaints within seven days. Copies of all responses should be kept together with the Register.

Schedule

Ongoing, during the prospecting period.

Layout Plan

A copy of the layout plan as provided for in Regulation 2(2) must be available at the prospecting site for scrutiny when required.

Schedule

Ongoing, during the prospecting period.

Workers

Environmental awareness training must be provided to all workers. Workers will not be allowed to trespass onto neighbouring properties.

Schedule

Ongoing, during the prospecting period.

Protection of flora and fauna

Except to the extent necessary for carrying out the prospecting activities, flora shall not be removed, damaged or disturbed nor shall any vegetation be planted.
It is anticipated that the noise and general activity will keep the animal life away from the site whilst drilling is taking place. If animals are encountered during the prospecting operations they must not be killed or injured. Trapping, poisoning and / or shooting of animals is strictly prohibited. No domestic pets are permitted on site.

Schedule

Ongoing, during the prospecting period.

Road safety and access

The access road to and routes in the prospecting area must be established in consultation with the landowner and existing roads and tracks shall be used as far as practicable. The erection of temporary gates in fence lines and the open or closed status of farm gates is not necessary as there is already existing fence and gates. No new roads are to be constructed on this site. Tracks across areas covered by natural vegetation will be kept to the absolute minimum required.
Employees must comply with all speed and traffic regulations on public roads and should not exceed 40km/hour on farm roads.

Schedule

Ongoing, during the prospecting period.

Water

Water for drilling will be sourced from Sedibeng water points and will be brought to the drilling sites by a bowser. No groundwater will be used or abstracted during the drilling programme. Employees will bring in their own drinking water on a daily basis.

Schedule

Ongoing, during the prospecting period.

Office / Camp Site

In order to minimise impacts in the prospecting area, no temporary office or camp site will be established. All employees will stay offsite. The employees will drive to the site every day when drilling operations are in progress.
A security company may be contracted to protect the drilling equipment overnight or over weekends if the drill contractors have a weekend off.

Schedule

Ongoing, during the prospecting period.

Vehicles and Fuel

Vehicles will be kept to the absolute minimum required to complete the prospecting tasks. This will consist of 4WD vehicles (bakkies), a drilling rig, a water bowser and a fuel bowser. All servicing and refuelling of the support vehicles will take place in town (i.e. outside of the prospecting area).
If emergency maintenance is required in the field, the Company must ensure that no pollution occurs. When servicing equipment, drip trays shall be used to collect the waste oil, hydraulic fluid and other lubricants. Drip trays shall be provided in the prospecting area for stationary plant (such as the drill rig).
Vehicles and equipment used in the prospecting operation must be adequately maintained so that no spillage of oil, diesel, petrol or hydraulic fluid occurs.
Only the drilling rig will need to be refuelled in the prospecting area. The surface under the refuelling point shall be protected against pollution by means of carefully placed drip trays. If any hazardous substances such as fuels and oils etc. are brought to the site and left overnight then they shall be securely stored in an open area with temporary fencing in a previously disturbed area. This area should be located on a facility with a PVC lining in order to prevent soil and groundwater pollution.

The Company shall ensure that there is always a supply of absorbent material available to absorb / breakdown / encapsulate minor hydrocarbon spills. The quantity of such materials shall be able to handle a minimum of a 200 litre hydrocarbon spill.
Used oil should be collected in a suitable container and this should then be removed from the site, either for resale or for recycling.

Any effluents or waste containing oil, grease or other industrial substances must be collected in a suitable container and removed from the site, either for resale, recycling or for appropriate disposal at a recognised facility.

Schedule

Ongoing, during the prospecting period.

Toilet facilities

Portable chemical toilets must be brought to the site during the Invasive Prospecting Phases (i.e. Drilling). These toilets must be serviced regularly.

Schedule

Ongoing, during the prospecting period.

Waste management

Suitably covered containers shall be available at the drilling rig at all times and conveniently placed for the disposal of waste.
Biodegradable waste and non-biodegradable waste (e.g. glass bottles, plastic bags, metal scrap, etc.) shall be disposed of in different containers. All waste must be removed from the site on a daily basis and disposed of at a recognised waste disposal facility (e.g. nearest municipal waste site). Specific precautions shall be taken to prevent waste from being dumped on or in the vicinity of the prospecting site.
If any hazardous waste is generated, then this must be transported to a recognised waste disposal facility.

Schedule

Ongoing, during the prospecting period.

Effluents

Any effluents or waste containing oil, grease or other industrial substances must be collected in a suitable container and removed from the site, either for resale, recycling or for appropriate disposal at a recognised facility.

Schedule

Ongoing, during the prospecting period.

Access to drill sites

The project manager will flag the most appropriate access route to each drill site. Drill site access tracks shall be rehabilitated, as far as is practicable, to their original state. A map showing the proposed sites for the second phase of activity must be submitted to the DMR for approval before the second phase of drilling commences.

Schedule

Peg positions of borehole sites prior to commencement of drilling operations. Vehicle access requirements are ongoing, during each drilling phase.

Drilling

The following procedures at each drilling site must be complied with:

- Every effort must be made to minimise the area needed at each drilling site.
- Vegetation should not be cut or trimmed unless absolutely essential.
- The area that was disturbed by the drilling operation at each site shall be rehabilitated, as far as is practicable, to its original state as soon as the drilling is completed.
- Photographs, for monitoring purposes, should be taken before drilling commences and after each drilling site has been rehabilitated. These photographs should be included in the required Performance Assessment Reports.

Schedule

Ongoing, during the prospecting period.

Heritage Resources

If any heritage resources, including graves or human remains, are encountered these should be reported to responsible authorities immediately.

Windblown sand and dust

During prospecting operations all reasonable measures must be taken to minimise the generation of dust and to prevent windblown sand. These measures include:

- Removal or cutting of vegetation shall be avoided unless absolutely essential.
- Vehicles should not exceed 40 km/hour along farm roads.

Schedule

Ongoing, during the prospecting period.

Noise

The noise levels on the site should be limited by taking the following measures:

- Vehicles and equipment should be regularly maintained.
- Silencers should be installed and maintained on machinery, trucks and prospecting equipment.
- No loud music should be played in the prospecting area.

Schedule

Ongoing, during the prospecting period.

Rehabilitation

If the access tracks to the drill sites and the drill sites themselves result in new patches of exposed earth, then it will be necessary to re-establish a protective vegetative cover over these areas. This can be achieved by contracting labour to manually cut and prune branches from the local shrubs and spread these over the area to be rehabilitated. Seeds from these branches will fall onto the ground. The spread cut branches will hold the topsoil and sand in place (i.e. protect it from erosion), help to retain moisture in the soil and also initially protect the seedlings of germinating plants.

Schedule

Rehabilitation of the drilling sites – immediately after each drilling phase.

Environmental Related Emergencies and Remediation

The Company will operate on the principle that "prevention is better than cure" and so will institute procedures to reduce the risk of emergencies taking place. These will include ensuring that all contracts specify that the contractor is required to comply with all the environmental measures specified in this EMP, environmental awareness training, on-going risk assessment and emergency preparedness.

Emergency telephone numbers

All employees shall have the telephone numbers of emergency services, including the local ambulance and fire fighting service. All employees must be made aware of procedures to be followed during the environmental awareness training course.

Fire

The Company shall ensure that there is basic fire fighting equipment available on Site at all times. This shall include at least two rubber beaters and at least one fire extinguisher. The Company shall advise the relevant authority of a fire as soon as one starts and shall not wait until the fire is out of control.

Hydrocarbon spills

The Company shall ensure that all employees are aware of the procedures to be followed for dealing with hydrocarbon spills. The Company shall ensure that the necessary materials and equipment for dealing with hydrocarbon spills and leaks is available on Site at all times.

The Company shall ensure that there is always a supply of absorbent material readily available to absorb/ breakdown and where possible is designed to encapsulate minor hydrocarbon spillage. The quantity of such materials shall be able to handle a minimum of 200 l of hydrocarbon liquid spill.

There are a number of different products on the market, which can be used as absorbents and encapsulators of hydrocarbons. The following are examples of these products:

- *Spill-Sorb*
- Drizzit
- Enretech
- Peat Moss

In the event of a significant hydrocarbon spill, the following procedure is required:

- The source of the spillage shall be isolated
- The spillage must be contained using sand berms, sandbags, pre-made booms, sawdust or absorbent materials.
- The area shall be cordoned off, secured and made safe.
- If a serious spill has occurred in a sensitive environment, then the Department of Environmental Affairs and Development Planning: Directorate Pollution & Waste Management must be notified.

Treatment and remediation of spill areas shall be undertaken to the satisfaction of the Project Manager. Remediation may include in-situ bioremediation using appropriate products (e.g. Enretech-1 and / or the removal of the spillage together with the contaminated soil and the disposal at a recognised facility.

15. Motivation where no alternative sites were considered.

Since exploration is temporary in nature no permanent structures will be constructed, Negotiations and agreements will be made with the farm owners to use any existing infrastructure like access roads and their farm houses.

16. Statement motivating the alternative development location within the overall site.

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

As is clear from the information provided, each of the phases is dependent on the results of the preceding phase. The location and extent of drilling will be determined based on information derived from the desktop investigations and surveys. An estimated number and extend have been provided, but this will be finalised.

Since exploration is temporary in nature no permanent structures will be constructed, Negotiations and agreements will be made with the farm owner to use any existing infrastructure like access roads, farm houses and other things like coreshed.

17. Full description of the process undertaken to identify, assess and rank the impacts and risks the activity will impose on the preferred site (In respect of the final site layout plan) through the life of the activity.

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

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 neighbouring 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:
  -South African National Biodiversity Institute (SANBI) Biodiversity
  -Geographic Database LUDS system
  -Geographic Information System base maps
  -Municipal Integrated Development Plan and Spatial Development Framework.
- Site visits conducted in 19 January 2019. 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).

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, processing plant, storm water control, berms, roads, pipelines, power lines, conveyors, etc…etc…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….etc…)	**ASPECTS AFFECTED**	**PHASE** In which impact is anticipated (e.g. Construction, commissioning, operational Decommissioning, closure, post-closure)	**SIGNIFICANCE** if not mitigated Pos High (+12-16), Pos Medium (+6 – 11), Pos Low (+1-5), No impact (0), Neg Low (-1-5), Neg Medium (-611), Neg High (-12-16)	**MITIGATION TYPE** (modify, remedy, control, or stop) through (e.g. noise control measures, stormwater control, dust control, rehabilitation, design measures, blasting controls, avoidance, relocation, alternative activity etc. etc) E.g. Modify through alternative method. Control through noise control Control through management and monitoring through rehabilitation..	**SIGNIFICANCE** if mitigated Pos High (+12-16), Pos Medium (+6 – 11), Pos Low (+15), No impact (0), Neg Low (-1-5), Neg Medium (-611), Neg High (-12-16)
Ground / Airborne Surveys	Poor access control	Loss of cattle	Phase 1	5	Access control measures Consultation with landowner	5
Data collection & assessment	None	Not applicable	Phase 2	0	No mitigation required	0
Data assessment	None	Not applicable	Phase 2	0	No mitigation required	0

Site Camp establishment	None	Not applicable	Phase 3	0	No mitigation required	0
Drilling	Noise	Animals and people	Prospecting Phase 3	7	Noise Control. Ensure vehicles and equipment and maintained. Silencers should be fitted on all engines.	5
Drilling	Surface Disturbance	Animals, Environment	Prospecting Phase 3	10	Rehabilitate each site as soon as the drilling is completed. Avoid significant vegetation such as trees and large shrubs Raised blade clearing will be conducted to minimize disturbance and aid rehabilitation efforts Fire emergency procedure will be developed to contain and minimise destruction of flora and faunal habitat which may result from fire	7
Driving	Air pollution	Animals, people,	Prospecting Phase 3	7	Establish EMP procedures to	5
		Environment			minimise the generation of dust. Ensure vehicles drive slowly. Comply with traffic regulations. Keep to speed limits. Ensure compliance with the EMP.	
Drilling	Ground water pollution	Animals, people	Prospecting Phase 3	Medium	Establish EMP procedures to minimise hydrocarbon spills.	Low
Accommodation and Site camp	Solid Waste	Animals, people and environment	Prospecting Phase 3	Low	Ensure compliance with the EMP. Include in environmental awareness training. Workers will not stay overnight at the site.	Low

Access roads	Soil compaction resulting from repeated use of access roads to drill sites	Loss of soil resources	Phase 3	9	Where track clearing is necessary, raised blade clearing be conducted to minimize disturbance and aid rehabilitation efforts As part of rehabilitation, all compacted roads and drill pads will be ripped and revegetated	6
Access roads	Potential destruction of unknown heritage resources	Loss of Cultural and/or Heritage Significant	Phase 3	5	Prior to the establishment of access roads or drill pads, a heritage assessment will be conducted on the selecting drilling sites and access roads. It is anticipated that limited to no heritage resources will be found due to the areas altered and disturbed state	4
GIS & analytical desktop studies	None identified		Phase 4	0	No mitigation required	0

The supporting impact assessment conducted by the EAP must be attached as an appendix, marked ***Appendix 3***

19. Summary of specialist reports.

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

LIST OF STUDIES UNDERTAKEN	RECOMMENDATIONS OF SPECIALIST REPORTS	SPECIALIST RECOMMENDATIONS THAT HAVE BEEN INCLUDED IN THE EIA REPORT (Mark with an X where applicable)	REFERENCE TO APPLICABLE SECTION OF REPORT WHERE SPECIALIST RECOMMENDATIONS HAVE BEEN INCLUDED.
Soil Study	Done		
Wetland Delineation	Done		

Attach copies of Specialist Reports as appendices **(Refer to appendix 6 and Figure 18)**

20. Environmental impact statement

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

The majority of the prospecting activities are non-invasive and hence will have very low to negligible environmental or social impact. The invasive activities that entail the drilling of approximately 5 exploration holes will have a minimal environmental and social impact as each drill site will be confined to an area of 0.01 hectares (100m^2). This needs to be viewed in the context of the entire prospecting license area under application, which covers just 2731.271ha.

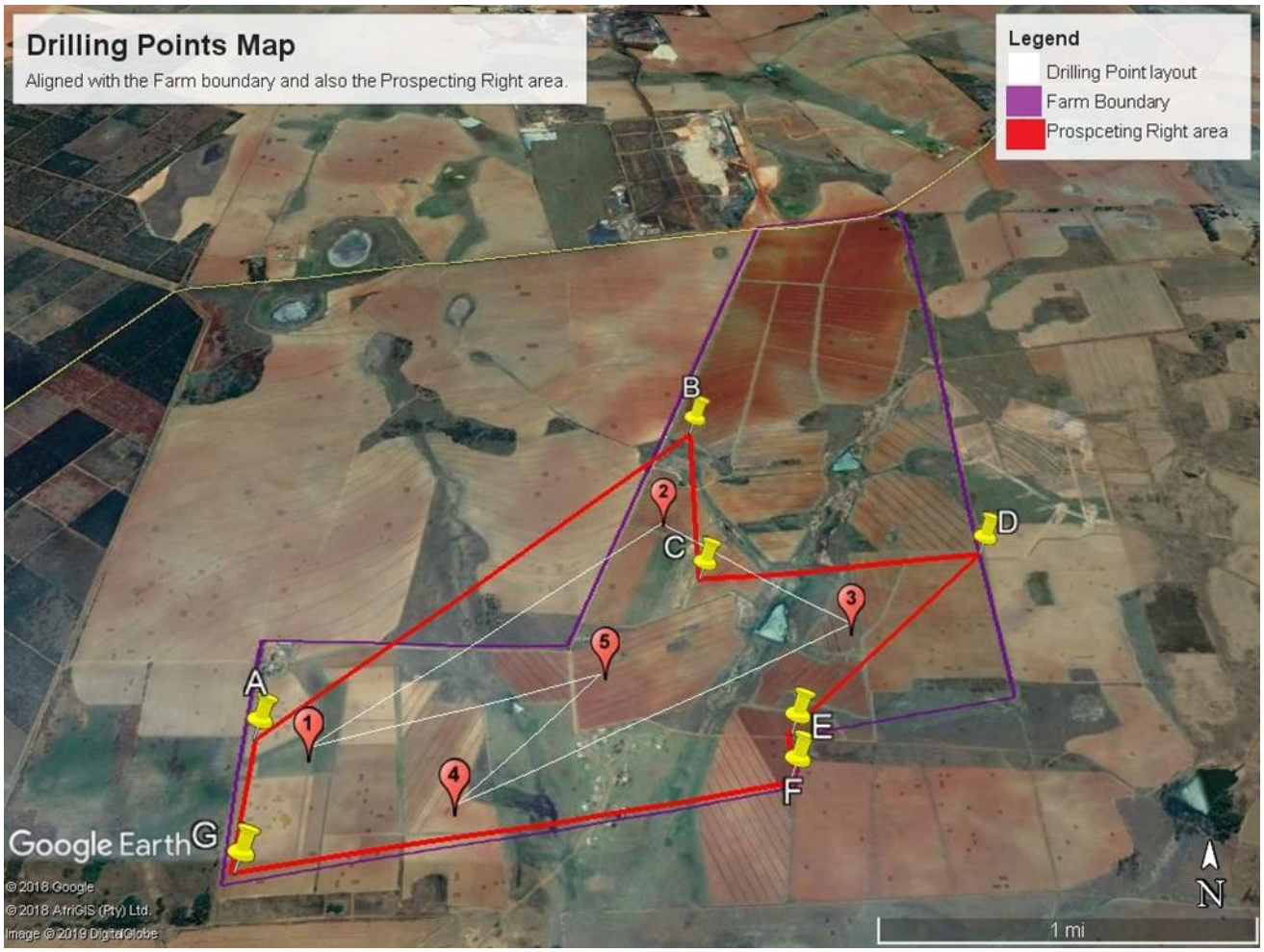
The proposed prospecting operation will not affect any existing alternative land uses on the property or on adjacent property or non-adjacent property. The following actions are subject to the proposed mitigation measures and require monitoring:

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

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

(ii) **Final Site Map**

Provide a map at an appropriate scale which superimposes the proposed overall activity and its associated structures and infrastructure on the environmental sensitivities of the preferred site indicating any areas that should be avoided, including buffers .Attached as **Appendix 4**



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

Table 6: Summary of positive and negative impacts

Proposed Activity	Potential Impacts
Desktop Study	No impacts on site
Airborne / Ground Geophysics	• Low impacts from short-term staff and • vehicle access to the site, • interfering with the animal grazing paddocks • managing fences and gates • Livestock falling into dug trenches • Creation of employment

Drilling	• Access tracks • Disturbance of vegetation and topsoil • Oil & fuel spills • Dust & noise • Labour issues • Litter • Possible discovery of fossils • Creation of employment
Sample processing / evaluation / decision making	No impacts on site.
Rehabilitation	Replacing topsoil, covering with brushwood etc

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

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

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

The objectives of the EMPr will be to:

- Provide sufficient information to strategically plan the prospecting activities as to avoid unnecessary social and environmental impacts.
- Provide sufficient information and guidance to plan prospecting activities in a manner that would reduce impacts (both social and environmental) as far as practically possible.
- Ensure an approach that will provide the necessary confidence in terms of environmental compliance.
- Provide a management programme that is effective and practical for implementation. Through the implementation of the proposed mitigation measures it is anticipated that the identified social & environmental impacts can be managed and mitigated effectively.

Through the implementation of the mitigation and management measures it is expected that:

- Noise generation can be managed through consultation and restriction of n operating hours and by maintaining equipment and applying noise abatement equipment if necessary;
- Dust fall can be managed by application of wet suppression on exposed surfaces and use of water during drilling;
- Soil disturbance and clearance of vegetation at drill pad areas will be limited to the absolute minimum required and disturbed areas will be re -vegetated with locally indigenous species as soon as possible;
- Animal life is protected and preserved at all times and the prospecting activities has minimal disturbance to the surrounding habitat;
- Social friction with landowners can be managed by regular engagement with the landowner and the entering into an access agreement with the landowner.

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

The Company will operate on the principle that "prevention is better than cure" and so will institute procedures to reduce the risk of emergencies taking place. These will include ensuring that all contracts specify that the contractor is required to comply with all the environmental measures specified in this EMP, environmental awareness training, on-going risk assessment and emergency preparedness.

All employees shall have the telephone numbers of emergency services, including the local ambulance and fire fighting service. All employees must be made aware of procedures to be followed during the environmental awareness training course.

22. Aspects for inclusion as conditions of Authorisation.

Any aspects which must be made conditions of the Environmental Authorisation

Maintain a minimum 500 m buffer from any infrastructure or dwelling; The Landowner should be engaged at least 1 month prior to any site activities being undertaken once

drill sites are known; and a map detailing the drilling locations should be provided to the landowner as well as the DMR prior to commencement of prospecting activities.

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

23. Description of any assumptions, uncertainties and gaps in knowledge.

(Which relate to the assessment and mitigation measures proposed)

It is assumed that the description of the proposed project, provided by the applicant is sufficient for providing the authorities with the right information for understanding the proposed project.

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

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

It is the opinion of the EAP that the proposed prospecting activities should be authorised. The environmental impacts associated with the limited drilling activities are minimal provided that the proposed mitigation is implemented; The spatial extent of the physical impact is less than 100m^2 per drill site over a prospecting right area of more than 371.984 hectares, 5 drill sites will be established in total throughout the duration of the drilling programme; With appropriate care and consideration the impacts resulting from drilling can be suitably avoided, minimised or mitigated; With implementing the appropriate rehabilitation activities, the impacts associated with the drilling activities can be reversed; and Monitoring of the required mitigation measures is to take place on site daily by the site geologist. Annual monitoring audits are to take place by an appointed independent environmental assessment practitioner to compile the required annual environmental compliance report required by the DMR.

Without implementation of prospecting activities the knowledge concerning the potential mineral resource within the prospecting right area will not be confirmed.

II. Conditions that must be included in the authorisation

The company should comply with all environmental legislation. Maintain a minimum 500m buffer from any infrastructure or dwelling; the landowner should be engaged (re-consulted) at least 1 month prior to any site activities being undertaken once drill sites are known; a map detailing the drilling locations should be provided to the landowners as well as the DMR prior to commencement of prospecting activities. Record must be kept of the implementation of the EMP measures and monitoring of the efficiency of the implemented measures; and a suitable closure plan must be submitted to show sufficiently providence for the avoidance, management and mitigation of environmental impacts associated with the decommissioning of the proposed activities.

25. Period for which the Environmental Authorisation is required.

The authorisation is required for the duration of the prospecting right which is an initial 5 years plus a potential to extend the right by an additional 3 years. Therefore a total period of 8 years is required.

26. Undertaking

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

Confirmed.

27. Financial Provision

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

A financial provision of approximately, **R4722** which includes rehabilitation activities will be made available by Jament's (Pty) Ltd. The applicant undertakes to provide financial provision through funding from the investors of Jament's (Pty) ltd.

Singo Consulting (Pty) Ltd

CALCULATION OF THE QUANTUM

JAMENTS

MP/30/5/1/1/2/ (15460) PR

Applicant: **Jaments pty Ltd** Ref No.:
Evaluator: **Kenneth Singo** Date: **Feb-19**

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	14.45	1	1	0
2 (A)	Demolition of steel buildings and structures	m2	0	202.63	1	1	0
2(B)	Demolition of reinforced concrete buildings and structures	m2	0	298.61	1	1	0
3	Rehabilitation of access roads	m2	0	36.26	1	1	0
4 (A)	Demolition and rehabilitation of electrified railway lines	m	0	351.93	1	1	0
4 (A)	Demolition and rehabilitation of non-electrified railway lines	m	0	191.96	1	1	0
5	Demolition of housing and/or administration facilities	m2	0	405.26	1	1	0
6	Opencast rehabilitation including final voids and ramps	ha	0	206254.16	1	1	0
7	Sealing of shafts adits and inclines	m3	0	108.78	1	1	0
8 (A)	Rehabilitation of overburden and spoils	ha	0	141626.44	1	1	0
8 (B)	Rehabilitation of processing waste deposits and evaporation ponds (non-polluting potential)	ha	0	176393.17	1	1	0
8 (C)	Rehabilitation of processing waste deposits and evaporation ponds (polluting potential)	ha	0	512329.37	1	1	0
9	Rehabilitation of subsided areas	ha	0	118590.81	1	1	0
10	General surface rehabilitation	ha	0.3	112192.03	1	1	33657.609
11	River diversions	ha	0	112192.03	1	1	0
12	Fencing	m	0	127.98	1	1	0
13	Water management	ha	0	42658.57	1	1	0
14	2 to 3 years of maintenance and aftercare	ha	0	14930.5	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		33657.609

1	Preliminary and General	4038.91308	weighting factor 2 1	4038.91308
2	Contingencies	3365.7609		3365.7609
			Subtotal 2	41062.28
			VAT (15%)	6159.34
			Grand Total	47222

SIGN Ndinannyi Kenneth Singo
DATE 4/2/2019

a. Explain how the aforesaid amount was derived.

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

Singo Consulting (Pty) Ltd

CALCULATION OF THE QUANTUM

JAMENTS

MP/30/5/1/1/2/ (15460) PR

Applicant: Jaments pty Ltd
Evaluator: Kenneth Singo

Ref No.:
Date: Feb-19

No.	Description	Unit	A Quantity	B Master Rate	C Multiplication factor	D Weighting factor 1	E=A*B*C*D Amount (Rands)
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			VAT (15%)		6159.34
			Grand Total		47222

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DATE

Ndinannyi Kenneth Singo
4/2/2019

b. 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).

Work will be approved on a phase by phase basis, dependent on the results obtained in the previous phase i.e. although prospecting work may be provided for financially in the budget for a specific year, it will only take place if justified. The amount is also reflected in the Prospecting Work Programme submitted to the DMR.

28. Specific Information required by the competent Authority

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

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

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

Current land uses inside the prospecting area, such as maize farming, grazing, may be temporarily impacted through the presence of the fenced areas that drill rigs will operate within. These are however, small areas, approximately 10m x10m in total. These areas will be rehabilitated post drilling activities and the areas will once again become available for grazing. The current access roads are fenced.

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

Whilst no heritage resources have been identified within the proposed prospecting area care will be taken to avoid any sensitive heritage resources that may otherwise be identified during the prospecting. Where graves or fossils are identified proposed boreholes will be moved to avoid features of this type. If fossils or graves are discovered, the relevant authorities will be immediately notified and drilling will be stopped in this area. The area does have protected areas, threatened ecosystems or critical biodiversity, however no sensitive parts will be negatively affected by the drilling procedures owing to the small scale of the prospecting activity, the only potential negative impact is related to the proposed borehole sites that will need to be cleared and possibly access roads to some of these sites. These should be placed on previously disturbed land or tracks. Any natural vegetation should be avoided. The location of the boreholes must be done.

29. 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 4)**.

The proposed site was selected based on extensive research and also following on information from previous and current prospecting as well as mining activities around the area. The area is known for coal resources and there are mines currently mining close to the application area. In terms of the technologies proposed, the proposed prospecting has been chosen based on the history and current state of coal in the area. The prospecting activities proposed in the Prospecting Works Programme (PWP) is dependent on the preceding phase as previously discussed, therefore no

alternatives are indicated, but rather a phased approach of trusted prospecting techniques.

PART B

ENVIRONMENTAL MANAGEMENT PROGRAMME REPORT

1) Draft environmental management programme.

a) **Details of the EAP**,

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

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

b) **Description of the Aspects of the Activity**

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

It is confirmed that the requirement to describe the aspects of the activity that are covered by the draft environmental management programme is already included in PART A SECTION (1)(h).

c) **Composite Map**

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

Exploration is a temporal activity thus no permanent structures will be erected, however a general layout is enclosed.

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

I. **Determination of closure objectives.**

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

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

Environmental Legislation

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

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

As the NEMA is the cornerstone of all environmental legislation, the management measures implemented by the Jament's 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, are 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 takes into account the consequences of the depletion of the resource;
- that a risk averse and cautious approach is applied, which takes into account the limits of current knowledge about the consequences of decisions and actions; and
- that negative impacts on the environment and on people's environmental rights be anticipated and prevented, and where they cannot be altogether prevented, are minimised and remedied.

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

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

2 000litres per day and 50 000 litres required for drilling purposes for the licence.

II. ***Has a water use licence has been applied for?***

Since exploration is a temporal activity no WUL is required at prospecting stage. No water use license application has been lodged as there are no water resources that will be affected by the proposed project. The prospecting site is not located above an important groundwater aquifer. No groundwater will be used or abstracted during the prospecting operations. Clean water for employees will be purchased from the shops.

III. Impacts to be mitigated in their respective phases

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

ACTIVITIES **(E.g. For prospecting -** drill site, site camp, ablution facility, accommodation, equipment storage, sample storage, site office, access route **etc…etc…etc** **E.g. For mining**,- excavations, blasting, stockpiles, discard dumps or dams, Loading, hauling and transport, Water supply dams and boreholes, accommodation, offices, ablution, stores, workshops, processing plant, storm water control, berms, roads, pipelines, power lines, conveyors, etc…etc…etc.)	**PHASE** (of operation in which activity will take place. State; Planning and design, Pre-Construction' Construction, Operational, Rehabilitation, Closure, Post closure).	**SIZE AND SCALE of disturbance**or (volumes, tonnages and hectare m²)	**MITIGATION MEASURES** (describe how each of the recommendations in herein will remedy the cause of pollution or degradation and migration of pollutants)	**COMPLIANCE WITH STANDARDS** (A description of how each of the recommendations herein will comply with any prescribed environmental management standards or practices that have been identified by Competent Authorities)	**TIME PERIOD FOR IMPLEMENTATION** Describe the time period when the measures in the environmental management programme must be implemented Measures must be implemented when required. With regard to Rehabilitation specifically this must take place at the earliest opportunity. .With regard to Rehabilitation, therefore state either:- .. Upon cessation of the individual activity or. Upon the cessation of mining, bulk sampling or alluvial diamond prospecting as the case may be.
Site Office and core shed	Prospecting Phase 3	N/A	No permanent structures for offices and coreshed will be put on site.	N/A	N/A

Accommodation	Prospecting Phase 3	N/A	In order to minimise impacts in the prospecting area, no camp site will be established. All employees will stay outside prospecting area. The employees will drive to the site every day when drilling operations are in progress. A security company may be contracted to protect the drilling equipment overnight or over weekends if the drill contractors have a weekend off.	N/A	N/A

IV Impact Management Outcomes

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

ACTIVITY (whether listed or not listed). **(E.g. Excavations, blasting, stockpiles, discard dumps or dams, Loading, hauling and transport, Water supply dams and boreholes, accommodation, offices, ablution, stores, workshops, processing plant, storm water control, berms, roads, pipelines,**	**POTENTIAL IMPACT** **(e.g. dust, noise, drainage surface disturbance, fly rock, surface water contamination, groundwater contamination, air pollution etc….etc…)**	**ASPECTS AFFECTED**	**PHASE** In which impact is anticipated **(e.g. Construction, commissioning, operational Decommissioning, closure, postclosure)**	**MITIGATION TYPE** **(modify, remedy, control, or stop) through (e.g. noise control measures, storm-water control, dust control, rehabilitation, design measures, blasting controls, avoidance, relocation, alternative activity etc. etc)** **E.g.** • **Modify through alternative method.**	**STANDARD TO BE ACHIEVED** **(Impact avoided, noise levels, dust levels, rehabilitation standards, end use objectives) etc.**

power lines, conveyors, etc…etc…etc.).				• **Control through noise control** • **Control through management and monitoring** • **Remedy through rehabilitation..**	
Site Office and core shed	Physical surface disturbance	Visual	Post Closure	No construction on site. If need be to utilise existing building and agreement to be done with farmer	Impact avoided
Accommodation	Physical surface disturbance	Visual	Post Closure	No construction on site. If need be to utilise existing building and agreement to be done with farmer	Impact avoided
Site Establishment	Dust and Noise from Vehicles driving in veld to access the proposed drill site	Air	Operation	Noise control, Reduce dust by driving slow. Ensure vehicles and equipment are maintained. Silencers should be fitted on all engines.	Impact controlled SANS10103 NEM:AQA GNR827
Site Establishment	Carbon emissions due to internal combustion of fuel	Air	Operation	Ensure vehicles and equipment are maintained.	Impact controlled NEM:AQA GNR827

Drilling	Noise	Environmental nuisance	Operation	Ensure vehicles and equipment are maintained. Silencers should be fitted on all engines.	Impact controlled

Drill site	Removal of top soil for sump. Drainage surface disturbance	Biodiversity loss	Operations and Post Closure	Revegetation needs to take place with topsoil that has the surrounding vegetation seedbanks. Badly damaged areas shall be fenced in to enhance rehabilitation. Areas to be rehabilitated must be planted with a mixture of local pioneer species indigenous to the area, as soon as the new growing season starts. To get the best results in a specific area, it is a good idea to consult with a vegetation specialist officer of the Dept of Agriculture or the local extension. Seed distributors can also give valuable advice as to the mixtures and amount of seed necessary to seed a certain area. Re-seeding, as well as fencing in of badly damaged areas, will always be at the discretion of the Environmental Control Officer and in compliance with EMP.	Impact controlled
Drill Site	Dust	Air pollution	Operation	Put dust control measures	Impact controlled
Drilling	Use of drilling mud during	Ground water contamination	Operation and Post Closure	Put control measures	Impact controlled

	drilling operations				
Drilling	Failure of drill sludge control system	Surrounding environment, Ground water contamination	Operation	Establish EMP procedures to minimise hydrocarbon spills.	Impact controlled
Drilling	Breakdown of machinery, oil spillages	Surrounding environment and water contamination	Operation	Establish EMP procedures to minimise hydrocarbon spills.	Impact controlled

V Impact Management Actions

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

ACTIVITY whether listed or not listed. **(E.g. Excavations, blasting, stockpiles, discard dumps or dams, Loading, hauling and transport, Water supply dams and boreholes, accommodation, offices, ablution, stores, workshops, processing plant, storm water control, berms, roads, pipelines, power lines, conveyors, etc…etc…etc.)**.	**POTENTIAL IMPACT** **(e.g. dust, noise, drainage surface disturbance, fly rock, surface water contamination, groundwater contamination, air pollution etc….etc…)**	**MITIGATION TYPE** **(modify, remedy, control, or stop) through (e.g. noise control measures, storm-water control, dust control, rehabilitation, design measures, blasting controls, avoidance, relocation, alternative activity etc. etc)** **E.g.** • **Modify through alternative method.** • **Control through noise control** • **Control through management and monitoring** **Remedy through rehabilitation..**	**TIME PERIOD FOR IMPLEMENTATION** Describe the time period when the measures in the environmental management programme must be implemented Measures must be implemented when required. With regard to Rehabilitation specifically this must take place at the earliest opportunity. .With regard to Rehabilitation, therefore state either:-.. Upon cessation of the individual activity or. Upon the cessation of mining, bulk sampling or alluvial diamond prospecting as the case may be.	**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)

Site Office and core shed	Physical surface disturbance	No construction on site. If need be to utilise existing building and agreement to be done with farmer	N/A	N/A
Accommodation	Physical surface disturbance	No construction on site. If need be to utilise existing building and agreement to be done with farmer	N/A	N/A
Site Establishment	Dust and Noise from Vehicles driving in veld to access the proposed drill site	Noise control, Reduce dust by driving slow. Ensure vehicles and equipment are maintained. Silencers should be fitted on all engines.	Ongoing during activity	Jament's will ensure that all employees, contractors, visitors comply with the EMP
Site Establishment	Carbon emissions due	Ensure vehicles and equipment	Ongoing during activity	Jament's will
	to internal combustion of fuel	are maintained..		ensure that all employees, contractors, visitors comply with the EMP
Drilling	Noise	Ensure vehicles and equipment are maintained. Silencers should be fitted on all engines.	Ongoing during activity	Jament's will ensure that all employees, contractors, visitors comply with the EMP
Drill site	Removal of top soil for sump. Drainage surface disturbance	Rehabilitate ground soon after drilling.	Upon cessation of individual activity	Jament's will ensure that all employees, contractors, visitors comply with the EMP
Drill Site	Dust	Put dust control measures	Ongoing during activity	Jament's will ensure that all employees, contractors, visitors comply with the EMP
Drilling	Use of drilling mud during drilling operations	Put control measures	Ongoing during activity	Jament's will ensure that all employees, contractors, visitors comply with the EMP

Drilling	Failure of drill sludge control system	Establish EMP procedures to minimise hydrocarbon spills.	Ongoing during activity	Jament's will ensure that all employees, contractors, visitors comply with the EMP
Drilling	Breakdown of machinery, oil spillages	Establish EMP procedures to minimise hydrocarbon spills.	Ongoing during activity	Jament's will ensure that all employees, contractors, visitors comply with the EMP

30. Financial Provision

(1) Determination of the amount of Financial Provision.

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

For a prospecting operation such as this, the primary closure and environmental objectives are to:

- Minimise the area to be disturbed and to ensure that the areas disturbed during the prospecting activities are rehabilitated and stable, as per the commitments made in the EMP.
- Sustain the pre-prospecting land use.
- To record and communicate the results of the monitoring programme during decommissioning to the participating stakeholders.
- To receive an effective closure certificate (should the prospect indicate that the resource(s) would not support a sustainable mining operation).

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

The environmental objectives in relation to closure were consulted with affected parties. It was explained that should the prospecting yield negative results, then the end use for area will revert to its pre-prospecting land use. The end-use of the area will therefore not be changed by the prospecting operations.

However, should the prospecting operation yield positive results, then the farm could be subject to a mining rights application and another more comprehensive Public Participation, Scoping, EIA and EMP process.

If a mining right is granted then the area will be rehabilitated according to the requirements of the approved Environmental Management Programme that would apply throughout the life of the mine.

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

The activities involved are for prospecting and will involve no permanent removal of soil and rock.

Should the prospecting yield negative results, then the end use for area will revert to its pre-prospecting land use. The end-use of the area will therefore not be changed by the prospecting operations.

However, should the prospecting operation yield positive results, then the farm could be subject to a mining rights application and another more comprehensive Public Participation, Scoping, EIA and EMP process.

If a mining right is granted then the area will be rehabilitated according to the requirements of the approved Environmental Management Programme that would apply throughout the life of the mine.

Table 7: Rehabilitation plan.

Aspect / Impact	**Rehabilitation Measure**	**Monitoring Frequency & Responsibility**
Removal of construction structures	• Clear and completely remove from site all construction plant equipment, storage containers, signage, temporary fencing, temporary services, fixtures and any other temporary works (excluding those already on the site); and • Ensure that all access roads utilised during construction (which are not earmarked for closure and rehabilitation) are returned (as far as possible) to their state prior to construction.	Once off, Jament's
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, Jament's

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). • 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	Once off, Jament's

	compost (per volume about one quarter of the plant hole), one cup of 2:3:2 fertiliser and an approved ant and termite poison.	
Waste and Rubble Removal	Clear the site of all inert waste and rubble, including surplus rock, foundations and batching plant aggregates. Remove from site all domestic waste and dispose of in the approved manner at a registered waste disposal site.	Once off, Jament's

Solid & Hazardous Waste	Environmental Management Programme (EMPR). Dispose of all hazardous waste not earmarked for reuse, recycling or resale at a registered hazardous waste disposal site. Remove from site all temporary fuel stores, hazardous substance stores, hazardous waste stores and pollution control sumps. Dispose of hazardous waste in the approved manner. Do not hose oil or fuel spills into a storm water drain or sewer, or into the surrounding natural environment. Dispose of all visible remains of excess cement and concrete after the completion of tasks. Dispose of in the approved manner (solid waste concrete may be treated as inert construction rubble, but wet cement and liquid slurry, as well as cement powder must be treated as hazardous waste).	Once off, Jament's
Erosion protection	Protect all areas susceptible to erosion and ensure that there is no undue soil erosion resultant from activities within and adjacent to the construction site. Retain shrubbery and grass species wherever possible. Perform regular monitoring and maintenance of erosion control measures.	After rainfall events

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

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

- The removal of all wastes generated on-site by the drilling activity.
- Backfilling of sumps, where applicable
- The ripping of cleared and compacted soils where this may have occurred; and
- The re-contouring of drill sites to resemble the topography similar to that prior to the commencement of drilling activities

- Take photos of the site before prospecting commences and after prospecting

(e) 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 therefore: **R47222**. The Company must annually update and review the quantum of the financial provision *(Regulation 54 (2))*.TABLE FOR CALCULATIONS ATTACHED BELOW

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

Jament's Pty Ltd undertakes to provide financial provision and a Bank Guarantee will be the method of providing for the financial provision. The amount is anticipated to be an operating cost and provided for in the Prospecting Work Programme.

Table 8: Application 10450PR Quantum Calculation

Singo Consulting (Pty) Ltd

CALCULATION OF THE QUANTUM

JAMENTS (PTY) LTD HOME OF THE FUTURE

MP/30/5/1/1/2/ (15460) PR

Applicant: Jaments pty Ltd
Evaluator: Kenneth Singo
Ref No.:
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SIGN Ndinannyi Kenneth Singo
DATE 4/2/2019

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

h) Monitoring of Impact Management Actions
i) Monitoring and reporting frequency
j) Responsible persons
k) Time period for implementing impact management actions
l) 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
Drilling (Site Establishment)	The clearing of vegetation	Monitor daily	Geologist/ EAP	Daily by Geologist, Annually by independent environmental assessment practitioner to compile the required annual environmental compliance report required by the DMR
Drilling	The storage of hydrocarbon based materials on site	Monitor daily	Geologist/ EAP	Daily by Geologist, Annually by independent environmental assessment practitioner to compile the required annual environmental compliance report required by the DMR
Drilling	On-site waste management	Monitor Daily	Geologist/ EAP	Daily by Geologist, Annually by independent environmental assessment practitioner to compile the required annual environmental compliance report required by the DMR

Drilling	The creation of roads/tracks	Monitor daily	Geologist/ EAP	Daily by Geologist, Annually by independent environmental assessment practitioner to compile the required annual environmental compliance report required by the DMR
Drilling	The removal of	Monitor Daily	Geologist/ EAP	Daily by Geologist, Annually by

	storage and soil			independent environmental assessment practitioner to compile the required annual environmental compliance report required by the DMR
Drilling	Driving activities	Monitor Daily	Geologist/ EAP	Daily by Geologist, Annually by independent environmental assessment practitioner to compile the required annual environmental compliance report required by the DMR
Drilling	Groundwater: Monitor the water quality of the boreholes	Monitor Daily	Geologist/ EAP	Daily by Geologist, Annually by independent environmental assessment practitioner to compile the required annual environmental compliance report required by the DMR

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

Environmental audit report will be submitted annually.

i) Environmental Awareness Plan

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

All employees must be provided with environmental awareness training to inform them of any environmental risks which may result from their work and the manner in which the risks must be dealt with in order to avoid pollution or the degradation of the environment. Employees should be provided with environmental awareness training before prospecting operations start. All new employees should be provided with environmental awareness training Induction courses will be provided to all employees by a reputable trainer.

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

No risks have been identified other than those that have been identified within this document, these are to be communicated to all contractors and all contractors are to be provided with a copy of the approved EMP. Environmental training needs for each section should to be identified and addressed to ensure environmental management is part of day to day operations. The environmental risk responsibilities guide the training requirements of each individual. The responsibility for each level of management according to the Integrated Risk Management and ISO14001 role descriptions are. Environmental training recommended for the different levels of management guide the training needs identification process. This is a minimum guideline and any additional training can be added where section specific issues or high risk items require training and awareness It is the responsibility of the line manager to ensure environmental training needs for individual staff members are identified, agreed to, facilitated and tracked.

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

The financial provision will be reviewed annually indicating work that would have been completed and money used for rehabilitation as required by the law.

2) UNDERTAKING

The EAP herewith confirms

a) the correctness of the information provided in the reports ☒

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

c) the inclusion of inputs and recommendations from the specialist reports where
relevant; ☒and

d) that the information provided by the EAP to interested and affected parties and
any responses by the EAP to comments or inputs made by interested and affected parties are correctly reflected herein. ☒

Signature of the environmental assessment practitioner:

SINGO CONSULTING (PTY) LTD

Name of company:

26 February 2019

Date:

-END-

Department:
Mineral Resources
REPUBLIC OF SOUTH AFRICA

Private Bag X7279, Emalahleni, 1035, Tel: 013 653 0500, Fax: 013 656 1474
1st Floor, Saveways Crescent Centre, Mandela Drive, Emalahleni 1035

Enquiries: Mr. T. Mazibuko **Email**: themba.mazibuko@dmr.gov.za
Ref no: (MP) 30/5/1/3/3/2/1(15460) EM
Directorate: Mine Environmental Management: Mpumalanga Region

BY REGISTERED MAIL

Jaments (Pty) Ltd
Private Bag X7214
Posnet Suite
Witbank
1035

For attention: G.B Simelane **Fax:** 086 5144 103

ACKNOWLEDGEMENT RECEIPT OF AN APPLICATION FOR ENVIRONMENTAL AUTHORISATION IN RESPECT OF PORTION OF PORTION (REMAINING EXTENT) AND PORTION 1 PATATTAFONTEIN 412 JS, SITUATED WITHIN THE MAGISTERIAL DISTRICT OF MIDDELBURG, AS REQUIRED IN TERMS OF REGULATION 3(6) OF THE NATIONAL ENVIRONMENTAL MANAGEMENT ACT, 1998 (ACT NO.107 OF 1998): ENVIRONMENTAL IMPACT ASSESSMENT REGULATIONS, 2014 LODGED IN TERMS OF REGULATION 19 OF THE ABOVE-MENTIONED REGULATIONS AS READ TOGETHER WITH SECTION 12 OF THE MINERAL AND PETROLEUM RESOURCES DEVELOPMENT ACT, 2008 (ACT NO.49 OF 2008) AS AMENDED.

The above-mentioned matter refers.

1. This letter serves to inform you that your application for an Environmental Authorisation lodged with this office on 30 August 2018 is hereby acknowledged.

2. Kindly be informed that the above-mentioned application has not yet been evaluated. Once the evaluation is concluded, you shall be informed in due course of the outcome thereof. Notwithstanding this, you are reminded that all documents must be submitted in accordance with the timeframes stipulated on the NEMA: EIA Regulations, 2014.

3. For any enquire regarding this application please contact the above mentioned Official.

Yours faithfully

REGIONAL MANAGER:
MINERAL REGULATION
MPUMALANGA REGION
DATE: 19/10/2018

ALL THE CORRESPONDENCE SHOULD BE ADDRESSED TO THE ATTENTION OF THE REGIONAL MANAGER OF DEPARTMENT OF MINERAL RESOURCES: MPUMALANGA.

mineral resources

Department:
Mineral Resources
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, Mpumalanga Province
Directorate: Mineral Regulation: Mpumalanga Region
Subdirectorate: Mineral Laws **Enquiries**: Ms P Maluleka
Ref: MP 30/5/1/1/2/**15460** PR

REGISTERED MAIL

The Directors
Jaments (Pty) Limited
P/Bag X7214
EMALAHLENI
1035

Fax: 086 514 4103

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 the Portion of the portion 1 of the farm Patattafontein 412 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. **Further be informed that there is issued mining right for coal on the farm the Remaining Extent of the farm Patattafontein 412 JS, therefore, it is excluded from this application.**

3. 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:-

   3.1. 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 on or before the 11 February 2019

4. 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 11 February 2019 to this office for the attention of the writer hereon any documentation proving such including but not limited to:-

   4.1. Certified copies of share certificates and share holders register
   4.2. Certified copies of Shareholders agreements
   4.3. Certified copies articles and memorandum of association of the company
   4.4. Trust deed documents and letters of authority for any trust holding shares
   4.5. Details relating to funding (all relevant agreements)
   4.6. 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.**

5. Please submit **within 14 days** from date of this letter for the attention of ***Mr Siyabonga Panduva 3 copies of a complete prospecting work programme prepared in terms of regulation 7 of the Mineral and***

3. 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:-

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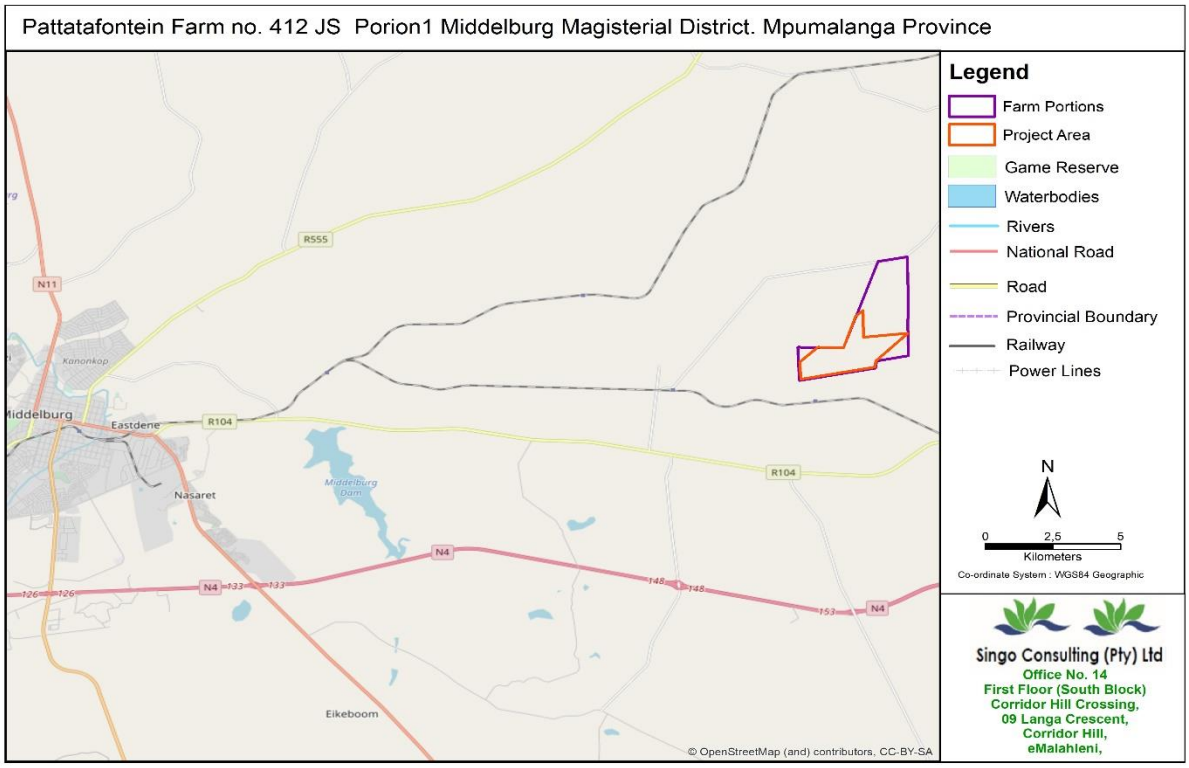
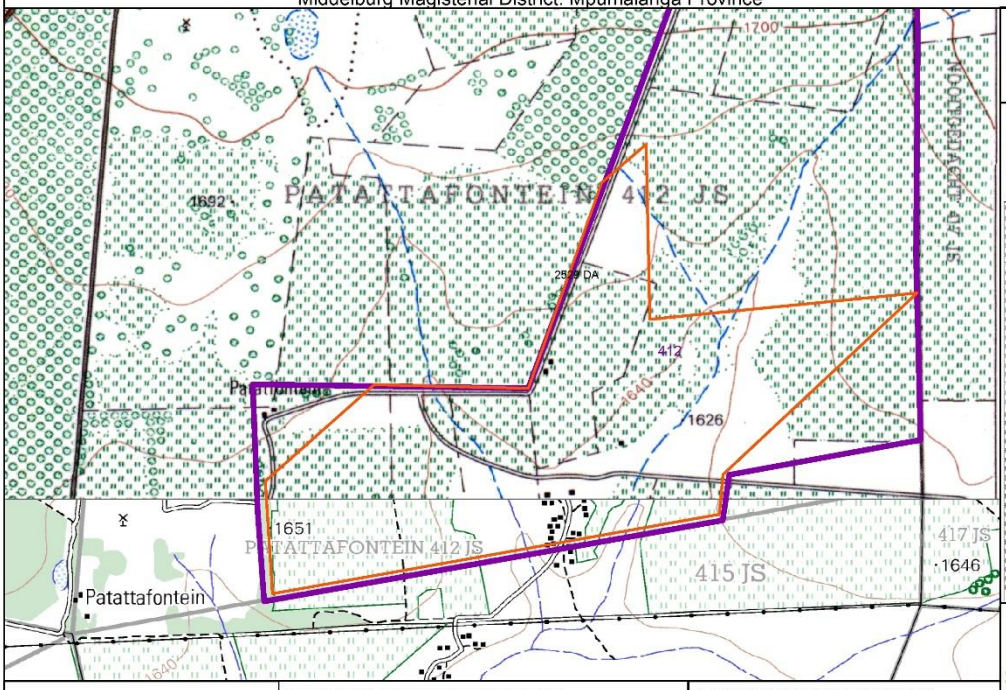
   4.1. Certified copies of share certificates and share holders register
   4.2. Certified copies of Shareholders agreements
   4.3. Certified copies articles and memorandum of association of the company
   4.4. Trust deed documents and letters of authority for any trust holding shares
   4.5. Details relating to funding (all relevant agreements)
   4.6. 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.**

5. Please submit **within 14 days** from date of this letter for the attention of ***Mr Siyabonga Panduva 3 copies of a complete prospecting work programme prepared in terms of regulation 7 of the Mineral and***

Appendix 2: *Maps for Patattafontein 412 JS Project*



Layout Plan for Prospecting Right Application in Pattatafontein Farm no. 412 JS Portion Of Porion1
Middelburg Magisterial District, Mpumalanga Province



APPLICANT:
JAMENTS PTY(LTD)

Legend

- Farm Portion
- Project Area

N

0 0,35 0,7

Kilometers

Co-ordinate System : WGS84 Geographic

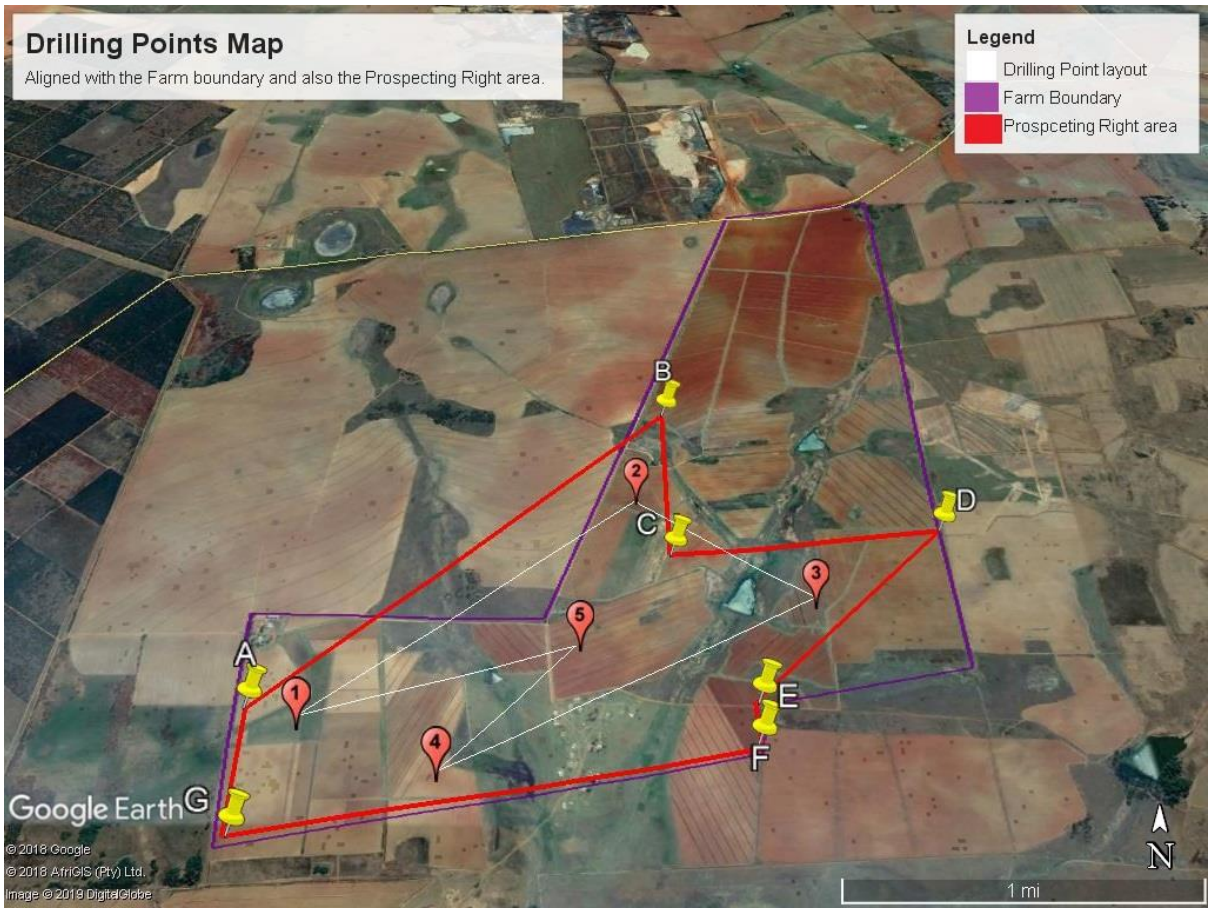
PLAN COMPILED IN ACCORDANCE WITH REGULATION 2(2) OF THE MPRDA,2002,(ACT NO 28 OF 2002)

In Accordace with Section 48 (2) of MPRDA,NWA (1998) NEMA (1998) (2002) and Regulation17 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.

Total Area Extent is Approximately: 371,384 Hectares

The map was produced by Singo Consulting
T: +27 13 629 0041
F: +27 86 5144 103
E: admin@singoconsulting.co.za

Singo Consulting (Pty) Ltd
Office No. 14
First Floor (South Block)
Corridor Hill Crossing,
09 Langa Crescent,
Corridor Hill,
eMalahleni,


Drilling Points Map
Aligned with the Farm boundary and also the Prospecting Right area.
Legend
Drilling Point layout
Farm Boundary
Prospceting Right area
A
B
C
D
E
F
G
1
2
3
4
5
Google Earth
© 2018 Google
© 2018 AfriGIS (Pty) Ltd.
Image © 2019 DigitalGlobe
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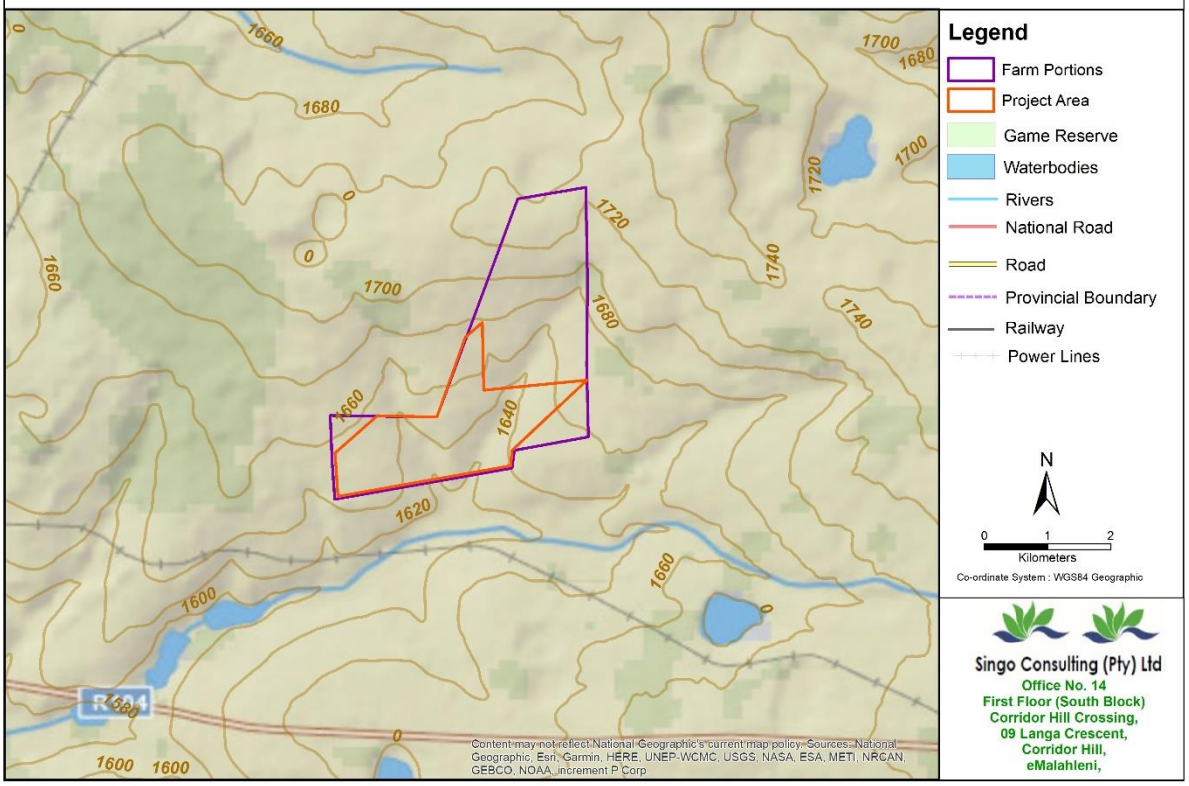
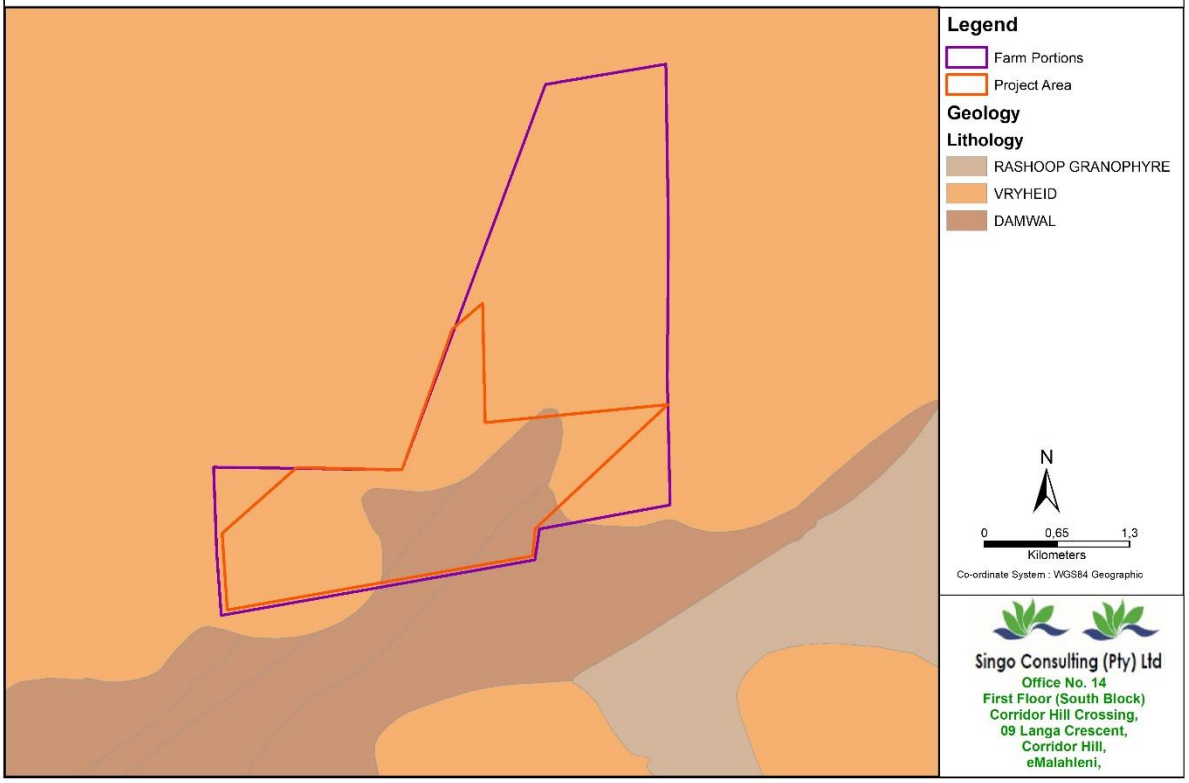
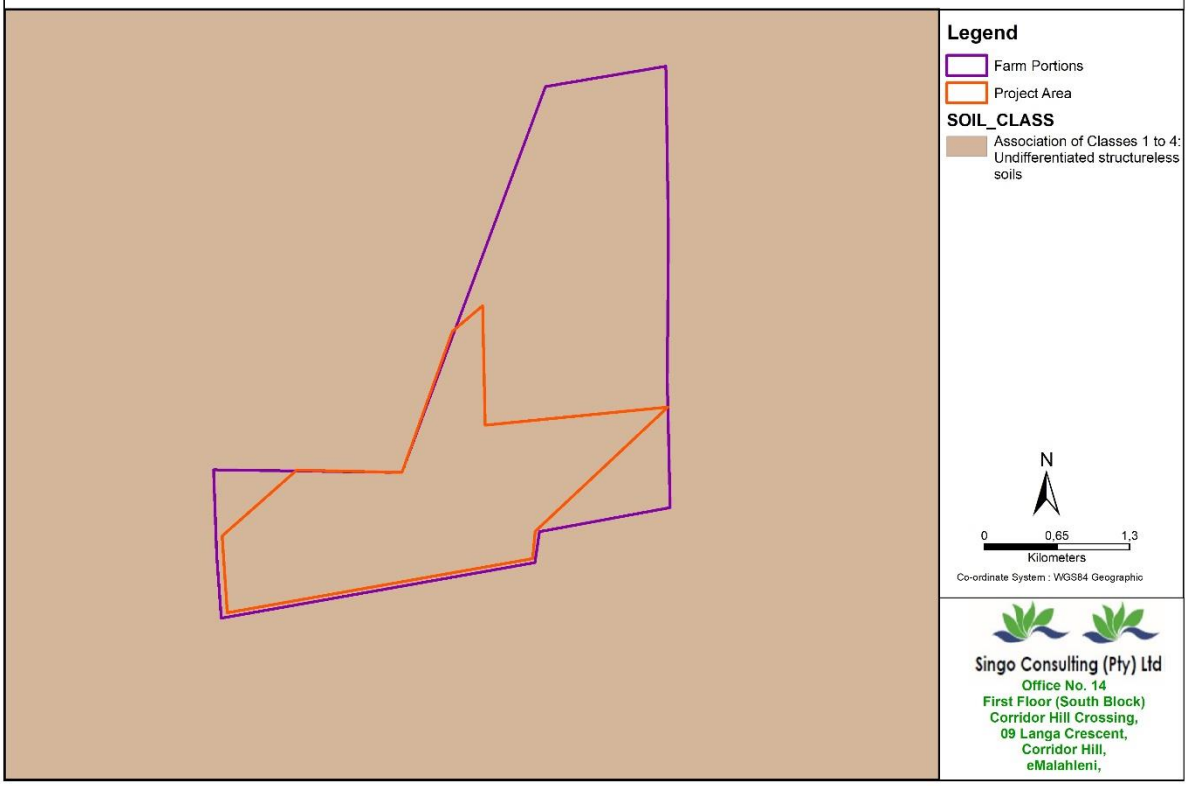
Topology of Pattatafontein Farm no. 412 JS Porion1 Middelburg Magisterial District. Mpumalanga Province



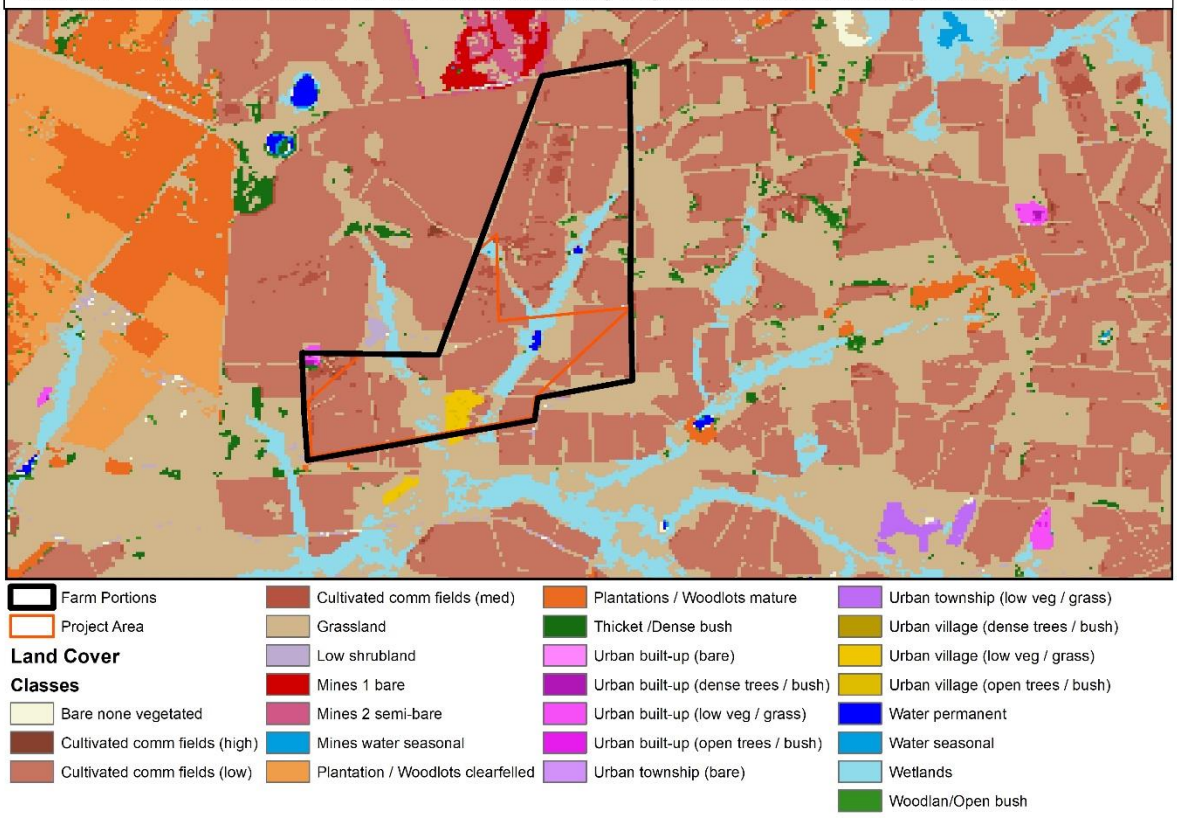
Lithology of Pattatafontein Farm no. 412 JS Porion1 Middelburg Magisterial District. Mpumalanga Province



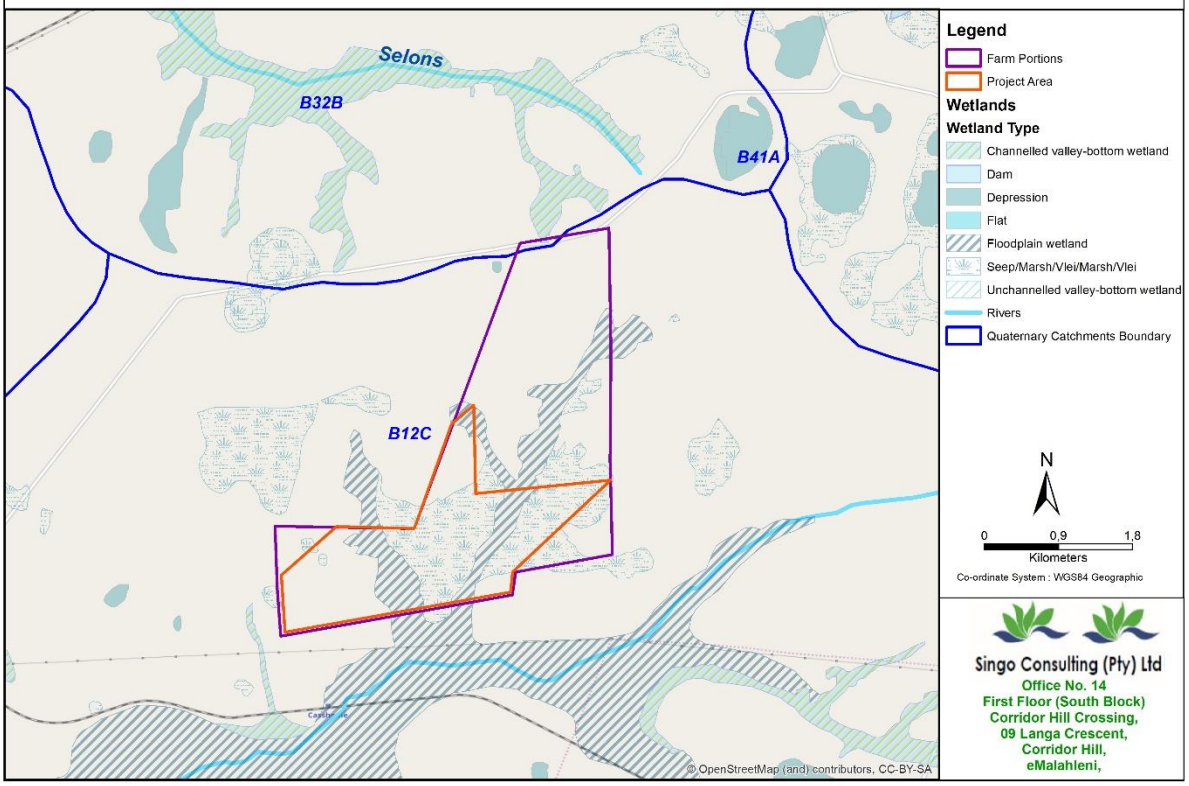
Soil Class of Pattatafontein Farm no. 412 JS Porion1 Middelburg Magisterial District. Mpumalanga Province



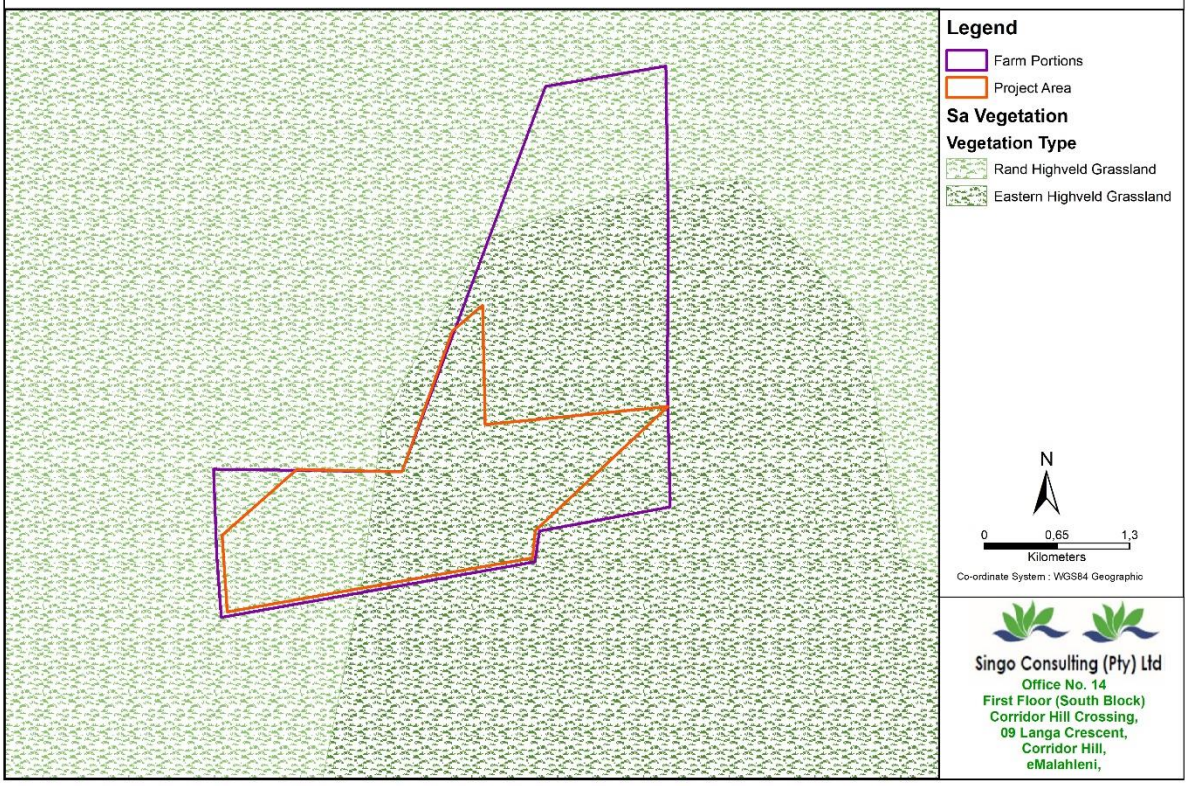
Land use Pattatafontein Farm no. 412 JS Porion1 Middelburg Magisterial District. Mpumalanga Province

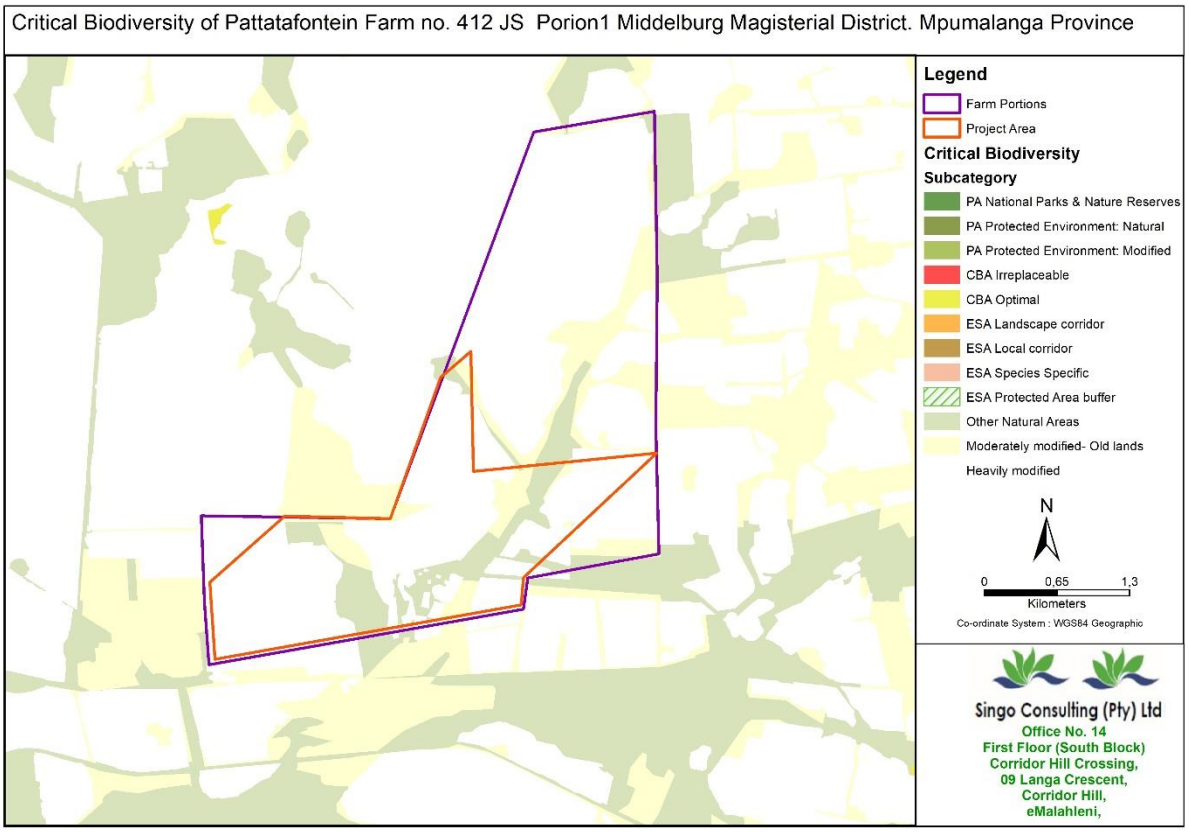


Surface Water of Pattatafontein Farm no. 412 JS Porion1 Middelburg Magisterial District. Mpumalanga Province

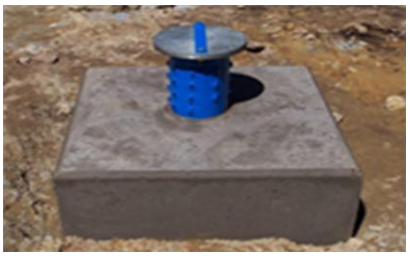


Vegetation of Pattatafontein Farm no. 412 JS Porion1 Middelburg Magisterial District. Mpumalanga Province





Appendix 3: Background Information Document



STEVE TSHWETE
LOCAL MUNICIPALITY

BACKGROUND INFORMATION DOCUMENT

PROSPECCTING RIGHT APPLICATION BY **JAMENTS (PTY) LTD** FOR COAL RESOURCES ON PORTION **1** OF THE FARM **PATATTAFONTEIN 412 JS**, IN MIDDLEBURG, MPUMALANGA PROVINCE.

APPLICANT:

P/Bag X7214
Postnet Suite 125
Witbank
1035

Prepared by:

Office No. 16
First Floor (Left Block)
Corridor Hill Crossing,
09 Langa Crescent,
Corridor Hill,
eMalahleni,
1035
Tell No.: +27 13 6920 041
Cell No.: +27 78 548 1244
Fax No.: +27 86 5144 103

Prepared for:

Department of Minerals and Resources
Regional office
Saveways Crescent Centre,
Mandela Drive,
Emalahleni,
Mpumalanga
1035

DMR Reference: MP/30/5/1/1/2/ (15460) PR

1. PURPOSE & INTRODUCTION

The purpose of this Background Information Document (BID) is to inform Interested and/or Affected Parties (I&APs) about the Basic Assessment that is being conducted for the proposed prospecting right application on Portion 01 of the Farm **PATATTAFONEIN 412 JS** with **DMR Ref: MP/30/5/1/1/2/ (15460) PR**, under the jurisdiction of Steve Tswete local municipality and Nkangala District Municipality, Mpumalanga Province.

Background Information Document also provides information regarding the project and the Basic Assessment process, in addition, to grant Interested and Affected Parties with the opportunity to:

- Register as an I&AP and to respond to the environmental compliance process;
- Raise issues of concern and provide suggestions for enhanced benefits;
- Contribute to local knowledge;
- Comment on the Draft Basic Assessment Report (DBAR) & Environmental Management Program (EMP); and
- Inform any other person / organization that they may feel should be informed about the project.

Jaments (Pty) Ltd is proposing to prospect for coal resources on the above-mentioned farm within the magisterial district of Witbank in Mpumalanga Province and the company has appointed **Singo Consulting (Pty) Ltd,** as an independent Environmental Assessment Practitioner (EAP), to conduct the Environmental Impact Assessment (EIA), compile an Environmental Management Plan (EMP) and to undertake the Public Participation Process (PPP) of this Prospecting Right Application.

1.1 PROJECTS LOCALITY

The project area is located at Middleburg at approximately 1.78 KM from the casshome railway-rail. The farm boundary covers the farm houses and pans/ wetlands inclusive within its boundaries. The farm area can be accessed through a gravel route from R555 and R104 national roads from Middleburg town. The site can also be accessed from Belfast through R33 connecting to N4 and off-ramping to R104 then joining a gravel road to potentially access the Patattafontion 412 JS, Portion 01 Farm (refer to Figure 1 and 2). The area is characterized by a flat to gentle undulating topography whilst the farm is operational for grazing and cultivation. The area falls within the Witbank Coalfield, which comprises sediments of the Ecca Group of the Karoo sequence that were deposited on an igneous pre-Karoo basement. The area is a Greenfield and along the farm boundary, wetlands were observed during preliminary survey.

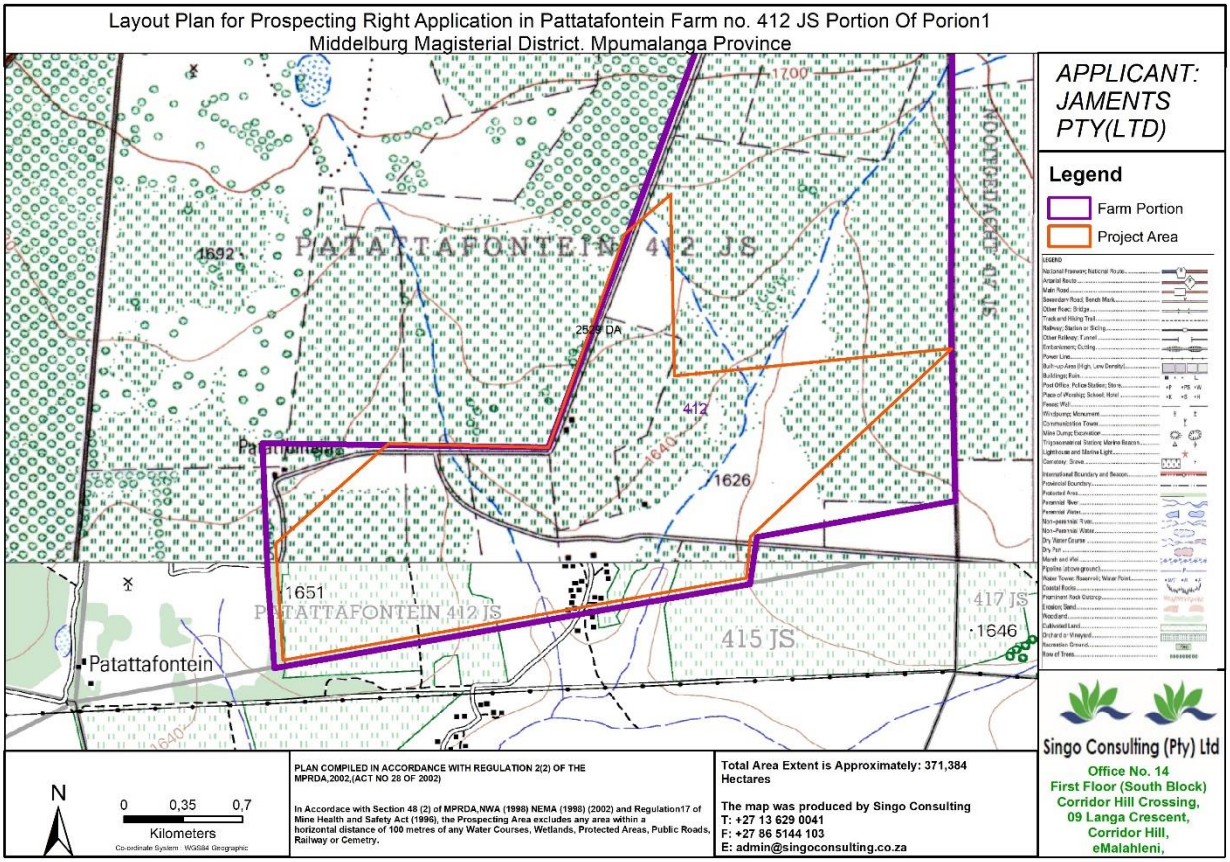


Figure 27: Locality Regulating 2.2 Map of the area

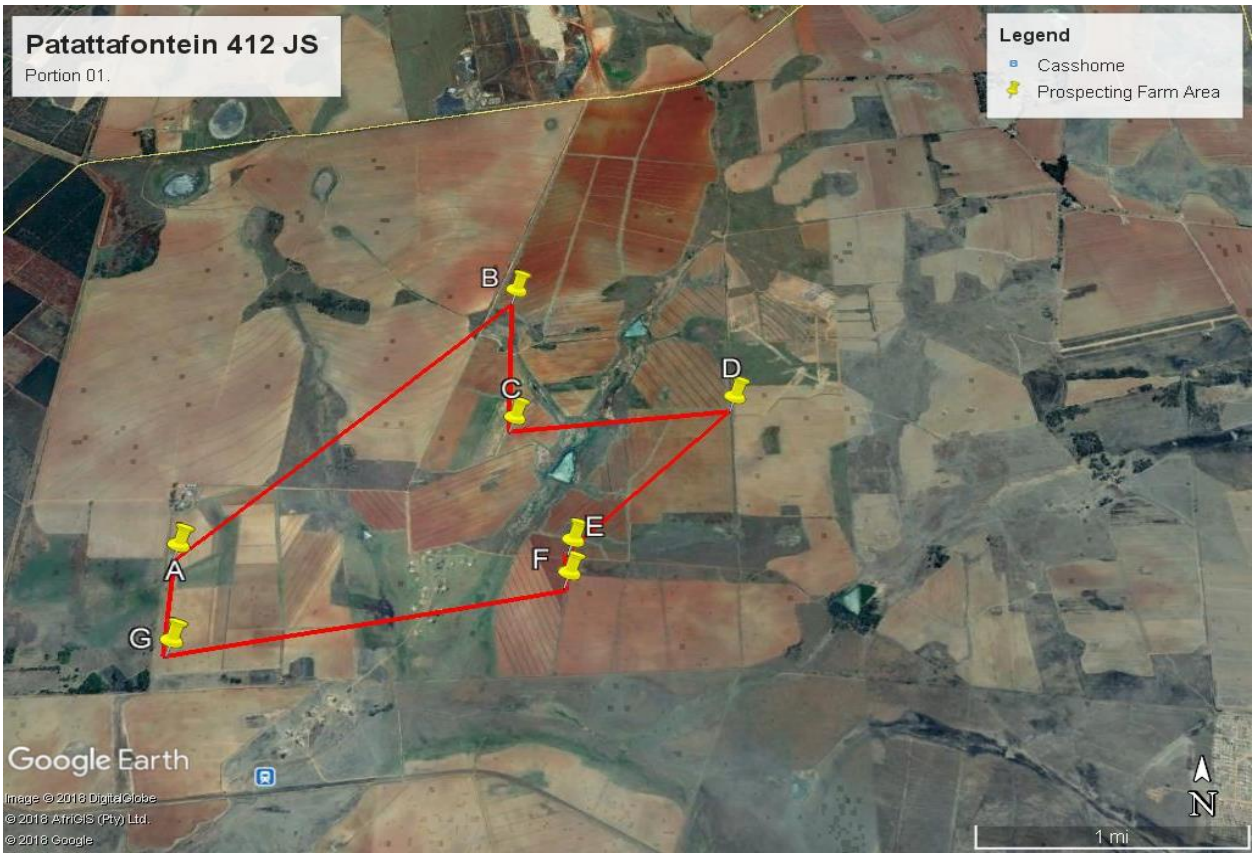


Figure 28: Google Earth View

1.2 PROJECTS DESCRIPTION

Prospecting activities will be undertaken over a period of five (5 years) and the application includes both invasive and non-invasive methods. Invasive methods are activities that result in land disturbances; in this project, they comprise of diamond drilling and sampling. Non-invasive methods are methods that do not cause disturbances to the land and includes desktop research, geological mapping, consultation with land owners, drilling, and potential resource modeling. Stakeholders affected by the proposed prospecting activities, during the prospecting period will be consulted before any activities take place. The company therefore applied for prospecting on the property as discussed above to determine the presence of coal resources and whether these are feasible to enter into further studies towards a Mining Right. In this project at least 15 boreholes will be drilled using Percussion drilling and diamond drilling methods. Coal samples will be taken to the lab for further analysis such that the quality can be established and hence the resource can be modelled. The drilling layout that will take place is shown below.

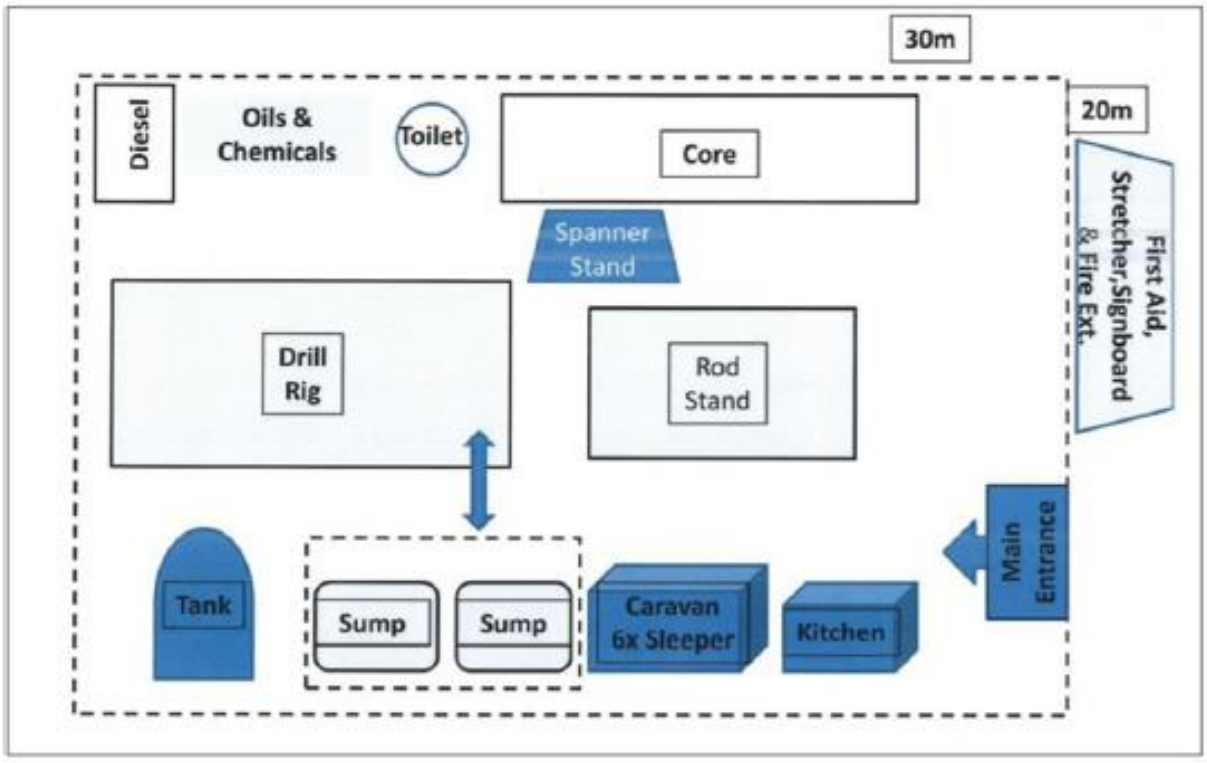


Figure 29: The drill site layout plan showing areas where specific activities will take place in the project area.

Closure and rehabilitation of boreholes will be undertaken during the operational phase when the activities are completed in those boreholes. All aborted boreholes must be backfilled with drilling material and sealed for sanitary purposes. See Figure 4.

Figure 30: Process that is undertaken when prospecting

1.3 PROJECTS JUSTIFICATION

Mining in South Africa directly contributed to the establishment of the Johannesburg Stock Exchange in the late 19th century, and today it still accounts for a large portion of its market

capitalization. From this, it is clear that mining in South Africa has shaped the country politically, culturally, and economically and that the South African mining sector has provided the critical mass for a number of industries that are either suppliers to the mining industry, or users of its products. These include, but are not limited to, energy, financial services, water and engineering services, and specialist seismic geological and metallurgical services. The proposed coal prospecting right will not only contribute directly to the South African economy, but will also contribute to the development and growth of other industries supporting the mining sector.

The proposed prospecting right in search for coal resources that is prior to mining project, will contribute to favorable economic impacts on both a local, regional and national scale. This will result in numerous job creation and skills development opportunities and provide an economic injection in the region. If the project will not to proceed; the additional economic activity, skills development and available jobs would not be created, and the coal reserves would remain unutilized.

The Mpumalanga province is rich in coal resources, which provides major employment opportunities in the area. The majority of the coal is mined in the Witbank Coalfield in South Africa. The Witbank Coalfield seams have diverse characteristics, resulting in a range of potential markets/utilization in the power generation, export, domestic, metallurgical, liquefaction and chemical sectors.

2. POLICY AND LEGISLATIVE CONTEXT

The Prospecting Right Application is subject to the following Acts:

• The National Environmental Management Act, 1998 (Act No.107 of 1998) ("NEMA"); and,

• The Mineral and Petroleum Resources Development Act, 2002 (act no.28 of 2002) ("MPRDA").

In terms of the MPRDA an application for a Prospecting Right is subject to an application for environmental authorisation in terms of NEMA.

The following listed activities are applicable to the proposed project, and thus the application is subject to a Basic Assessment ("BA") and Environmental Management Plan report.

• NEMA GN 983, Listing Notice 1, Activity Number 20: Any activity including the operation of that activity which requires a prospecting right in terms of section 16 of the MPRDA, including associated infrastructure, structures and earthworks, directly related to the prospecting of a mineral resource, including activities for which an exemption has been issued in terms of section 106 of the MPRDA. Singo Consulting (Pty) Ltd has been appointed as the Independent Environmental Assessment Practitioners ("EAP") to review the BA Report and to oversee the PPP for the Prospecting Right Application.

3. BASIC ASSESSMENT

The BA Process is a tool used to obtain an objective view of the potential impacts of a proposed project including environmental, social and economic impacts. A BA Report is compiled as part of the Prospecting Right Application to ensure that potential impacts associated with the proposed prospecting activities are identified, considered and mitigated. It is intended to supply the competent authority with sufficient information to make an informed decision in granting or refusing an environmental authorisation associated with the Prospecting Right application. The Basic Assessment Report will encompass the following:

- Description of the local environment including environmental conditions, historic and cultural aspects and socio economic conditions,
- Identification and assessment of the significance of potential impacts of the proposed prospecting activities on the local environment,
- Evaluation of the proposed mitigation and management options available to minimise any negative impacts and enhance any positive impacts,
- A record of any issues, comments and concerns raised by I&AP's and minutes of any meetings held with stakeholders. The BA can be described as two interlinked processes which result in a BA Report. Namely the Technical Process and the Public Participation Process:

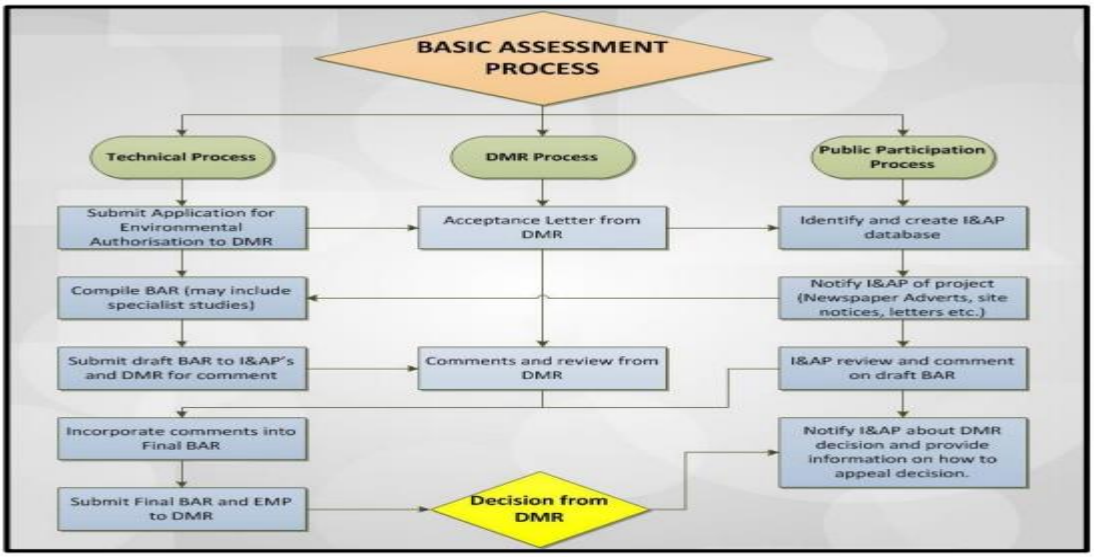


Figure 31: Structure of the prospecting right process.

* ***Impacts Associated with Listed Activities***

The prospecting activities will be divided into two distinct phases: Desktop Study phase (non-invasive) and drilling phase (invasive).

These are explained in more details below.

- ***Phase 1 - Desktop Study***

The desktop study will involve accessing all available public information on the geology, mineral occurrence and topography of the prospecting right application area, and all information on past work carried out in the area from geophysics, geochemistry, image interpretation, drilling and mining. Any literature accessed will be reviewed, collated and archived for reference.

- ✓ ***Spatial Database Compilation***

Spatial information will be compiled into a GIS database for access, correlation and evaluation. The GIS system will be used and maintained for the period of the prospecting right exploration program and regularly updated as new information is generated by the exploration program.

- ✓ ***Land Survey***

All spatial information accessed and collected in the field will be standardized using the WGS84 datum.

- ✓ ***Remote sensing***

As part of the initial review, public domain aerial photos will be acquired and a detailed geological and structural interpretation will be done on these to aid in identifying target areas that are not readily evident on the ground and to provide an independent interpretation of the geology of the area.

- ✓ ***Geophysical survey to be undertaken***

Both airborne and ground geophysical surveys may be undertaken for the prospecting right area. This is dependent on the results of the desktop study. These surveys will be used in conjunction with the data available to the public from the Council for Geoscience.

- ***Phase 2 - Geological Drilling***

This phase of the prospecting programme will include the drilling of boreholes in order to substantiate the models developed in the initial phase and assess the economic feasibility of targets areas. Prospecting activities will include diamond drilling, percussion drilling or a combination of these methods. In most cases the drill rig will be a self-contained, truck-mounted unit that will be accompanied by a compressor and a generator.

The only additional equipment likely to be required is a water bowser. Other vehicles required on site will include trucks for the transporting of equipment and cars capable of reaching the site for the inspection and logging of the cores and works.

The footprint of disturbance for a prospecting rig is generally smaller than 400m². The time required on a specified drilling site is expected to be between 2 and 5 days, but is dependent on the depth

to be drilled and the tests and samples required. The drill site will be demarcated and all equipment, infrastructure and activities will be kept within the demarcated area. A number of sumps will be dug and plastic lined for the recycling of drilling fluids. All hydrocarbons and chemicals will be stored on impervious surfaces with bunds to prevent accidental spillages.

- ✓ ***Drilling Methods***

- ⁎ ***Percussion Drilling***

The percussion drilling uses a pneumatic reciprocating piston-driven 'hammer' to energetically drive a heavy drill bit into the rock. The rock cuttings are blown up the outside of the rods to surface with compressed air. The cuttings are then categorically placed (according to depth) in order to easily assess the geology of the area and to determine the depth of the desired resource (if present).

- ⁎ ***Diamond Drilling***

Diamond drilling uses a truck-mounted rig with support vehicles to extract a continuous cylinder of rock. This method uses a rapidly rotating drill bit that uses water and drilling fluids, contained in either an in-ground sump or above ground tanks, to cool and lubricate the drill bit. The fluids travels back to the surface around the outside of the drill pipe. The fluids are recycled through a series of sumps, to drop out the drill cuttings, and reused as far as possible. The drill cuttings form a sludge which is collected in the sumps for later disposal. As the drill rods advance, the cylinder of remaining rock gradually becomes enveloped by the drill rods. The core of rock is logged by a geologist and samples are sent for laboratory analysis.

- ✓ ***Sampling***

Drill core samples will be collected for geochemical, metallurgical and petrographic analysis. The core will be split using a diamond saw. One half of the core will be quartered for geochemical and metallurgical sampling.

- ✓ ***Personnel Requirements***

Drilling rigs will be managed by a site supervisor who would be simultaneously responsible for all drilling operations. The number of employees required to operate a drill rig is variable but is normally not more than 5 persons. The rig will be run on a single shift basis and will operate less than 12 hours a day.

- ✓ ***Housing and Infrastructure Requirements***

Ideally the drillers' accommodation will be in the closest town or village. However, it might be necessary for the driller to set up a camp site (caravan) in close proximity to the drilling site if the distance to town does not allow for daily commuting. This will be arranged on an ad hoc basis

with the landowner and community members. All access and accommodation on the property identified will be conducted in terms of a written agreement. Drilling sites will be accessed using existing farm tracks and roads, where available. It may however be necessary to create additional access routes to specific sites. This can only be verified once the positions of the drilling sites have been finalized.

- ✓ ***Water Use***

Water required for the operation of the drilling rig as well as the potable water for domestic use will be brought in with a water bowser. The details of where the water will be sourced from and the amount required will be finalised at a later stage. Volumes required will be compared to registration and licencing requirements contained in the National Water Act and subsequent authorisations applied for.

- ✓ ***Waste Management***

All waste generated at the drilling site will be collected in plastic or steel drums and removed from site and disposed of at an appropriate waste facility. Hazardous waste will be collected and stored separately and disposed of at an appropriate facility. Chemical toilets will be provided for the employees and sewage will be disposed of at the nearest waste tip or sewage farm.

- ✓ ***Rehabilitation***

Upon completion of the drilling of each borehole, those that have production potential will be capped, while those with no potential will be sealed and closed. The site will be cleared of all incidental oils and chemicals. All imported materials with potential for contamination will be removed and disposed of at the nearest appropriate waste facility. The sludge pond created by the drilling operations will be pumped out and the mud disposed of at the nearest appropriate waste facility. The running surface of the drilling site will be scarified and the topsoil returned as and where it was removed. Vegetation establishment will be monitored and supplemented as necessary. All works and procedures will be conducted in terms of a written agreement with the land owner and communities. Rehabilitation of the boreholes will be undertaken as soon as drilling has been completed at each site.

The majority of impacts will be associated with the invasive prospecting stage of the project.

- ❖ ***Public Participation Process***

An important aspect of the BA process is the public participation process with allows I&AP's an opportunity to provide comments on the proposed activities and be informed about the process. This component will allow I&AP's to both influence the course of the technical investigations and

review its findings. I&AP's are any stakeholders, land owners and any otherwise interested or affected persons who would like to comment on or be informed about the project.

The Department of Mineral Resources ("DMR") is the competent authority in respect of both the NEMA and the MPRDA processes. Based on the information provided in the BA, the DMR will make a decision regarding the granting of the Prospecting Right authorisation. A Prospecting Right requires an approved environmental authorisation and this, in conjunction with other information such as BEE, technical and financial competence will form part of the decision making for the Prospecting Right application. Once the competent authority has reached a decision regarding the granting or rejection of the Environmental authorisation all I&AP's will be notified and given direction and information about the appeals process.

Affected or interested parties in the proposed coal Prospecting Project are invited to register as I&AP to become involved in the PPP. The following anticipated dates are important to note for the PPP going forward.

- Announcement of the Prospecting Right Application: January 2019
- Stakeholder engagement and consultation: **11 January 2019 – 7 February 2019**
- Review of Draft Basic Assessment Report: **7 February 2019 – 11 March 2019**
- Submission of the Final EMP: **13 March 2019**

PLEASE NOTE THE FOLLOWING:

* *Contributions from stakeholders will assist in informed decision-making for authorities and provides information to be considered by the project team and specialists conducting research. All comments can be submitted using the contacts details which appear on the cover page or as part of the Comment and Registration Sheet below.*

* *Hard copy will be available at Mhluzi and Gerald Sekoto Public Libraries and the E-copies of the Draft Basic Assessment Report will also be available upon request on:*

E: rudzani@singoconsulting.co.za

Please complete the following form in clear handwriting or typing to register as an interested and affected party (I&AP) and **return by no longer than 7th of February 2019.**

REGISTRATION AND COMMENT FORM FOR CONSULTATION AND PUBLIC PARTICIPATION PROCESS:
Please comment and return to:

Singo Consulting (Pty) Ltd

Physical address:	Office No. 14, First Floor (South Block), Corridor Hill Crossing, 09 Langa Crescent Corridor Hill, Emalahleni, 1035.
Postal address	P/Bag X7297 Postnet Suite 87 Highveld Mall Witbank 1035
Tell No:	+27 13 6920 041 078 548 1244
Fax No:	+27 86 5144 103
Email:	admin@singoconsulting.co.za rudzani@singoconsulting.co.za

Personal Details:

Full Names and Surname:							
Contact Details:							
Tel(w):		**Tel(h):**		**Fax No:**		**Cell No:**	
Email:							
Physical Address:							
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):	

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

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
	Archeology		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.*

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*

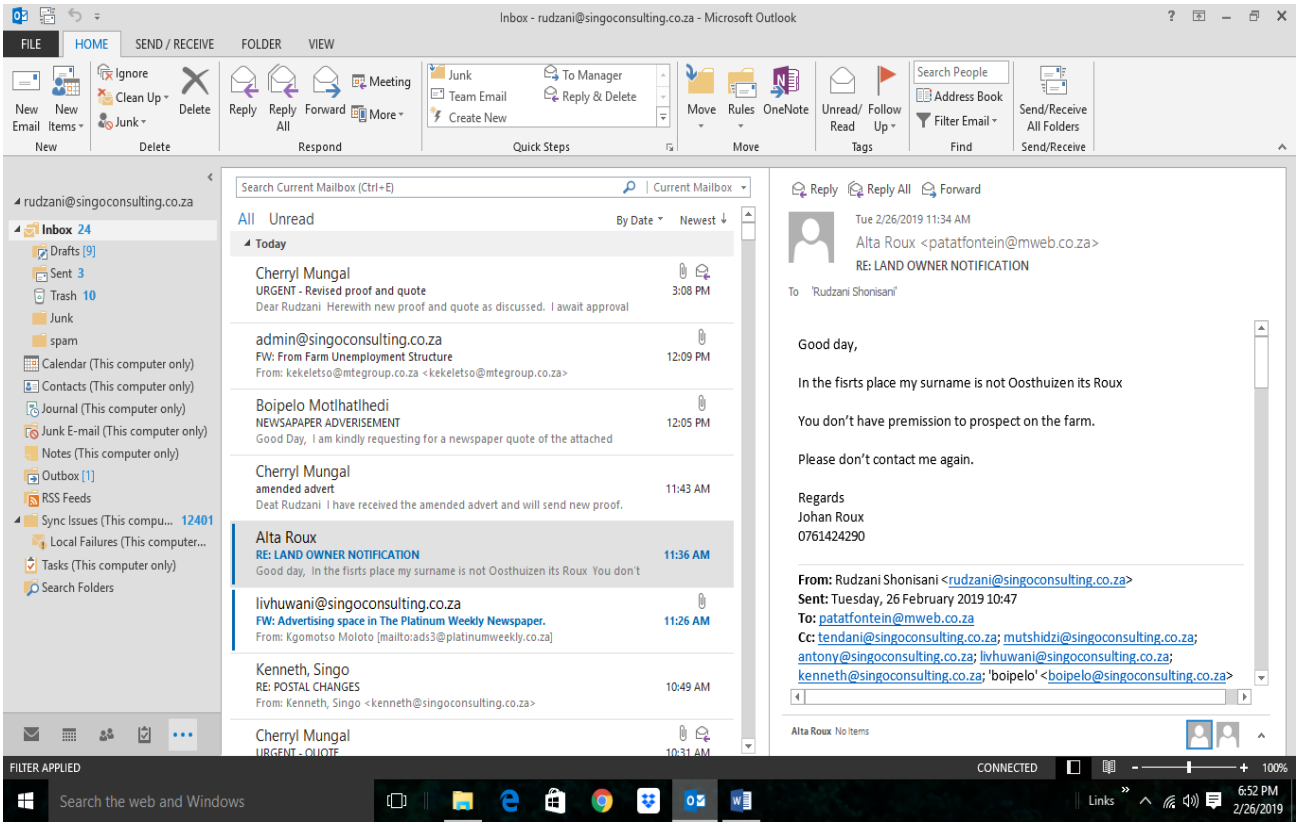
6. *If yes, please provide their contact details:*

Name:		Organization:
Contact details		
Address:		
Tel No:	Fax No:	Cell No:
Email address:		

..... **.....**

Signed **Date**

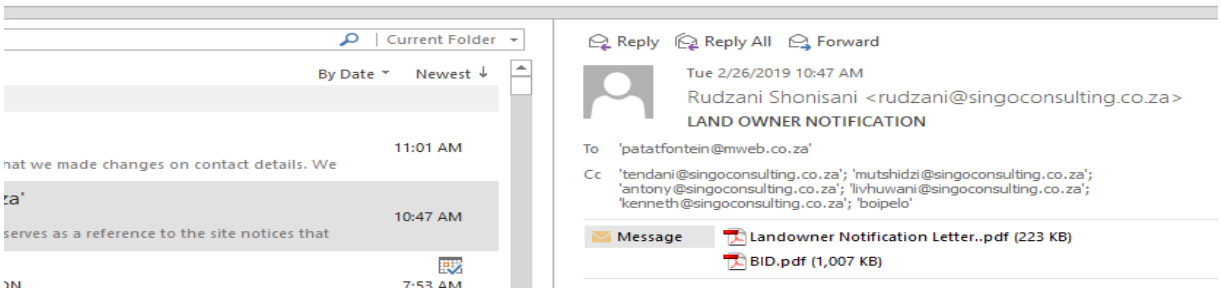
Appendix 4: Stakeholder's Engagement.



Good day,

In the first place my surname is not Oosthuizen its Roux. You don't have permission to prospect on the farm.
Please don't contact me again.

Regards
Johan Roux
0761424290



Dear Mr Oosthaizen,

This email serves as a reference to the site notices that were plugged on the farm boundaries for prospecting right.

We attempted to meet up with you on the farm but it was not a successful attempt on the 19th of January 2019, however we left hard copies at your premises with the hope that you will contact us as soon as you get hold of them after multiple trials failures of getting your contact details on Windeed search.

This Notification is being given in compliance with the terms of: Mineral and Petroleum Resources Development Act, 2002 (Act No. 28 of 2002) (MPRDA), National Environmental Management Act, 1998 (Act No. 107 of 1998), and EIA Regulations (as amended, 07 April 2017) which requires that landowners and people in control of land be notified of Jament's intentions to obtain a prospecting right for coal as mentioned on the attached background information document and landowner letter.

We would appreciate hearing from you because as the landowner it is important and valuable that we engage with you and get your comments. Note that we are submitting the report today (26-02-2019) without your comments, however agreement will still be needed upon granting of the prospecting right.

If you would like to engage with us, please do not hesitate to contact me.

Kind Regards,

From: Rudzani Shonisani [mailto:rudzani@singoconsulting.co.za]
Sent: Friday, January 11, 2019 11:14 AM
To: 'Wayleavesmou@eskom.co.za'; 'Tshilidzi Mavulwana Transnet Freight Rail WTB'; 'TRamavhona@environment.gov.za'; 'Pearl Moswathupa'; 'ericr@stlm.gov.za'; 'RhulaniC'; 'info@nra.co.za'; 'AckermanP@dws.gov.za'; 'Nevondo Seani (BHT)'; 'KennethMAV@daff.gov.za'; 'peter.molapo@labour.gov.za'; 'council@stevetshwetelm.gov.za'; 'social@nkangaladm.gov.za'
Cc: 'Kenneth, Singo'; 'stanley@singoconsulting.co.za'; 'samkele@singoconsulting.co.za'; 'anthony@singoconsulting.co.za'; 'boipelo'; 'Emmanuel'; 'tendani@singoconsulting.co.za'; 'mutshidzi@singoconsulting.co.za'; 'vincent@singoconsulting.co.za'; 'livhuwani@singoconsulting.co.za'

Subject: INVITATION TO PARTICIPATE IN A PROSPECTING RIGHT APPLICATION ON PORTION 01 OF THE FARM PATATTAFONTEIN 412 JS, UNDER MIDDLEBURG MAGISTERIAL DISTRICT.

Good day,

Invitation to participate in a **Prospecting Right Application** on **Portion 01** of the **Farm Patattafontein 412 JS**, situated under the **Magisterial District of Middleburg**, Mpumalanga Province.

Jaments Pty (Ltd) , hereby wish to inform you that it has submitted an application for a Prospecting Right together with the application of environmental authorization to the Mpumalanga DMR for the proposed Coal exploration project on portion **01** of the Farm **Patattafontein 412 JS**. See attached BID for detailed description of the proposed project.

This Notification is being given in compliance with the terms of: Mineral and Petroleum Resources Development Act, 2002 (Act No. 28 of 2002) (MPRDA), National Environmental Management Act, 1998 (Act No. 107 of 1998), and EIA Regulations (as amended, 07 April 2017) which requires that stakeholders must be notified of **Jament's Pty Ltd's** intention to obtain Prospecting Right for the above mentioned mineral.

This invitation is being extended to you because the department that you represent might be somehow enforcing any of the Republic of South Africa's laws of which ensures; prevention of pollution & environmental degradation, promotes sustainable development & socio-economic development, or instead might be affected by mining activities. Hence you are being offered an opportunity to:

- Register as an I&AP and to respond to the environmental compliance process;
- Raise issues of concern and provide suggestions for enhanced benefits;
- Contribute to local knowledge;
- Comment on the Draft Basic Assessment Report (DBAR) & Environmental Management Program (EMP)

Singo Consulting (Pty) Ltd has been appointed as an independent Environmental Assessment Practitioner (EAP) to manage the environmental authorization process, by conducting Environmental Impact Assessment, Public Participation for the proposed project and compile an Environmental Management Plan. A Basic Assessment process has commenced, for your participation kindly fill the comment form on the last page of the attached BID and register your comments, issues, questions that you have about the proposed project and return it by no longer than Thursday the **7th of February 2019**. Should you need any clarity on the attached documents or have any queries with regards to the project, please do not hesitate to contact me on the details below.

Public Participation Process and timelines

Chapter 6, regulation 40(2)(3) of EIA Regulations (GNR 326, 7 April 2017) requires that the Public Participation Process provides access to all information that may have potential to influence decision regarding the applications, it further outlines that the potential interested and affected parties be provided with an opportunity to comment on reports and plans. The Draft Basic Assessment Report will be available for review from **7th of February 2019** to **11th of March 2019.** E-copies of this report will be made available to I&AP's on request via email.

If you know anyone who might be interested in this project, kindly forward this email to that person.

Kind regards,

From: Rudzani Shonisani [mailto:rudzani@singoconsulting.co.za]
Sent: Tuesday, January 15, 2019 8:47 AM
To: 'Pearl Moswathupa'
Cc: 'stanley@singoconsulting.co.za'; 'Kenneth, Singo'

Subject: RE: INVITATION TO PARTICIPATE IN A PROSPECTING RIGHT APPLICATION ON PORTION 01 OF THE FARM PATATTAFONTEIN 412 JS, UNDER MIDDLEBURG MAGISTERIAL DISTRICT.

Good Day Pearl,

Please note that the Basic Assessment Report will be sent to you upon completion; as the review period of the Report will commence from 7th February 2019 to 11th March 2019.

Kind Regards,

From: Pearl Moswathupa [mailto:pearlm@stlm.gov.za]
Sent: Monday, January 14, 2019 2:19 PM
To: Rudzani Shonisani

Subject: RE: INVITATION TO PARTICIPATE IN A PROSPECTING RIGHT APPLICATION ON PORTION 01 OF THE FARM PATATTAFONTEIN 412 JS, UNDER MIDDLEBURG MAGISTERIAL DISTRICT.

Good day Rudzani

Could you kindly send me a copy of the Basic Assessment Report so that the Department can make detailed comments

Regards
Pearl

STEVE TSHWETE
LOCAL MUNICIPALITY

About Steve Tshwete Local Municipality
Our mission is to be the number 1 African city (Municipality) in service delivery and good governance, while creating a legacy of excellence and achievements through achieving economic development and world class infrastructure. A resilient, sustainable and people centred Municipality.
Our head office is at corner Walter Sisulu Street & Wanderers Avenue, Middelburg, 1050, South Africa.
For more information about Steve Tshwete Local Municipality, please call +27013-249-7000, or visit www.stlm.gov.za

From: Rudzani Shonisani [mailto:rudzani@singoconsulting.co.za]
Sent: Friday, January 11, 2019 11:14 AM
To: Wayleavesmou@eskom.co.za; 'Tshilidzi Mavulwana Transnet Freight Rail WTB' <Tshilidzi.Mavulwana@transnet.net>; TRamavhona@environment.gov.za; Pearl Moswathupa <pearlm@stlm.gov.za>; Eric Ntanganendzeni Ratshibvumo <ericr@stlm.gov.za>; 'RhulaniC' <RhulaniC@daff.gov.za>; info@nra.co.za; AckermanP@dws.gov.za; 'Nevondo Seani (BHT)' <NevondoS@dws.gov.za>; KennethMAV@daff.gov.za; peter.molapo@labour.gov.za; Council <council@stlm.gov.za>; social@nkangaladm.gov.za
Cc: 'Kenneth, Singo' <kenneth@singoconsulting.co.za>; stanley@singoconsulting.co.za; samkele@singoconsulting.co.za; anthony@singoconsulting.co.za; 'boipelo' <boipelo@singoconsulting.co.za>; 'Emmanuel' <emmanuel@singoconsulting.co.za>; tendani@singoconsulting.co.za; mutshidzi@singoconsulting.co.za; vincent@singoconsulting.co.za; livhuwani@singoconsulting.co.za

Subject: INVITATION TO PARTICIPATE IN A PROSPECTING RIGHT APPLICATION ON PORTION 01 OF THE FARM PATATTAFONTEIN 412 JS, UNDER MIDDLEBURG MAGISTERIAL DISTRICT.

Good day,

Invitation to participate in a **Prospecting Right Application** on **Portion 01** of the **Farm Patattafontein 412 JS**, situated under the **Magisterial District of Middleburg,** Mpumalanga Province.

Jaments Pty (Ltd) , hereby wish to inform you that it has submitted an application for a Prospecting Right together with the application of environmental authorization to the Mpumalanga DMR for the proposed Coal exploration project on portion **01** of the Farm **Patattafontein 412 JS**. See attached BID for detailed description of the proposed project.

This Notification is being given in compliance with the terms of: Mineral and Petroleum Resources Development Act, 2002 (Act No. 28 of 2002) (MPRDA), National Environmental Management Act, 1998 (Act No. 107 of 1998), and EIA Regulations (as amended, 07 April 2017) which requires that stakeholders must be notified of **Jament's Pty Ltd's** intention to obtain Prospecting Right for the above mentioned mineral.

This invitation is being extended to you because the department that you represent might be somehow enforcing any of the Republic of South Africa's laws of which ensures; prevention of pollution & environmental degradation, promotes sustainable development & socio-economic development, or instead might be affected by mining activities. Hence you are being offered an opportunity to:

- Register as an I&AP and to respond to the environmental compliance process;
- Raise issues of concern and provide suggestions for enhanced benefits;
- Contribute to local knowledge;
- Comment on the Draft Basic Assessment Report (DBAR) & Environmental Management Program (EMP)

Singo Consulting (Pty) Ltd has been appointed as an independent Environmental Assessment Practitioner (EAP) to manage the environmental authorization process, by conducting Environmental Impact Assessment, Public Participation for the proposed project and compile an Environmental Management Plan. A Basic Assessment process has commenced, for your participation kindly fill the comment form on the last page of the attached BID and register your

comments, issues, questions that you have about the proposed project and return it by no longer than Thursday the **7th of February 2019**. Should you need any clarity on the attached documents or have any queries with regards to the project, please do not hesitate to contact me on the details below.

Public Participation Process and timelines

Chapter 6, regulation 40(2)(3) of EIA Regulations (GNR 326, 7 April 2017) requires that the Public Participation Process provides access to all information that may have potential to influence decision regarding the applications, it further outlines that the potential interested and affected parties be provided with an opportunity to comment on reports and plans. The Draft Basic Assessment Report will be available for review from **7th of February 2019** to **11th of March 2019.** E-copies of this report will be made available to I&AP's on request via email.

If you know anyone who might be interested in this project, kindly forward this email to that person.

Kind regards,

From: Rudzani Shonisani [mailto:rudzani@singoconsulting.co.za]
Sent: Monday, February 4, 2019 4:05 PM
To: 'Petruscha Elaine Lindoor'
Cc: 'Lazarus Masuku'; 'Sonwabo Gosa'; 'stanley@singoconsulting.co.za'; 'Kenneth, Singo'

Subject: RE: LAND CLAIM ENQUIRY

Good Day

Thank you for your tremendous help.

Kind Regards,

From: Petruscha Elaine Lindoor [mailto:Petruscha.Lindoor@drdlr.gov.za]
Sent: Monday, February 4, 2019 11:41 AM
To: rudzani@singoconsulting.co.za
Cc: Lazarus Masuku; Sonwabo Gosa

Subject: RE: LAND CLAIM ENQUIRY

Good day

Attached please find as requested.

Regards

Petruscha

COMMISSION ON RESTITUTION OF LAND RIGHTS

OFFICE OF THE REGIONAL LAND CLAIMS COMMISSIONER: MPUMALANGA
18 Bell Street, Bell Tower building, Restitution House, Nelspruit | Private Bag X11330, Nelspruit, 1200
Tel: (013) 752 4054 | Fax: (013) 752 5410

Enquiries: Petruscha Lindoor
Date: 04/02/2019

SINGO CONSULTING
E-MAIL: rudzani@singoconsulting.co.za
NAME: Rudzani Shonisani

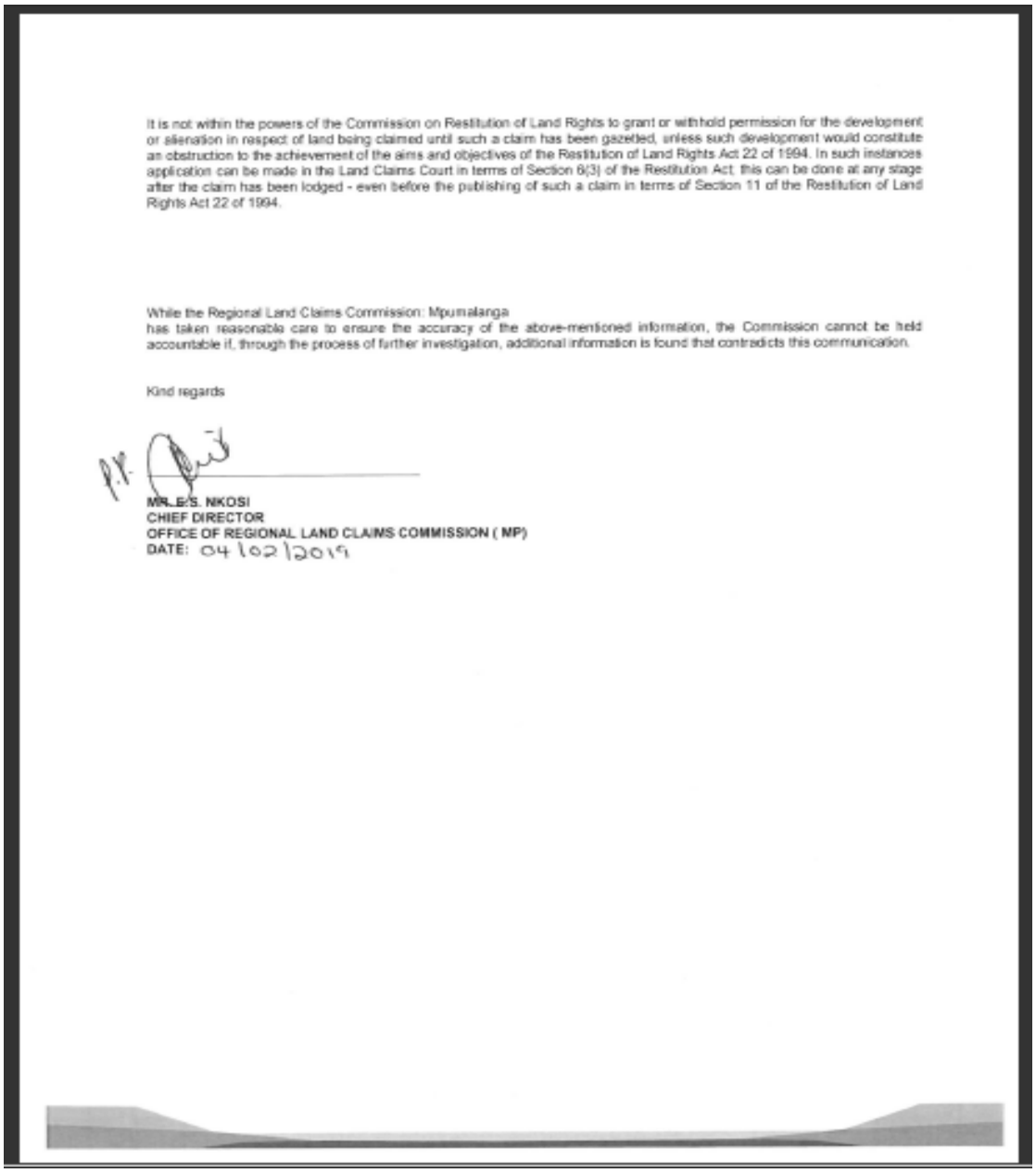
Dear Sir/Madam

LAND RESTITUTION IN TERMS OF THE RESTITUTION OF LAND RIGHTS ACT NO. 22 OF 1994

I refer to your enquiry, 04/02/2019

Please note that claim for the restitution of land rights has been lodged against the following property:

Property Description	Comments	File number	Claim Status
Province: Mpumalanga **Magisterial District: Nkangala 1** **Property:** Portion 1 Farm Patattafontein 412 JS	• According to our Database, there is a registered Land Claim which was lodged against the mentioned property. • **For more information, oefon whether the requested portion is affected, please contact Mr Eric Gumede or Mr Thomas Sambo on 013 655 1000.**	• **1047 cons 9052**	• Gazetted



It is not within the powers of the Commission on Restitution of Land Rights to grant or withhold permission for the development or alienation in respect of land being claimed until such a claim has been gazetted, unless such development would constitute an obstruction to the achievement of the aims and objectives of the Restitution of Land Rights Act 22 of 1994. In such instances application can be made in the Land Claims Court in terms of Section 6(3) of the Restitution Act; this can be done at any stage after the claim has been lodged - even before the publishing of such a claim in terms of Section 11 of the Restitution of Land Rights Act 22 of 1994.

While the Regional Land Claims Commission: Mpumalanga
has taken reasonable care to ensure the accuracy of the above-mentioned information, the Commission cannot be held accountable if, through the process of further investigation, additional information is found that contradicts this communication.

Kind regards

MR. S.S. NKOSI
CHIEF DIRECTOR
OFFICE OF REGIONAL LAND CLAIMS COMMISSION (MP)
DATE: 04/02/2019

From: Lazarus Masuku
Sent: 04 February 2019 10:48 AM
To: Ntokozo Nkambule; Petruscha Elaine Lindoor; Vusi Kleinboy Khoza

Subject: FW: LAND CLAIM ENQUIRY

Good day Colleagues

Find the land claims enquiry and prepare a response to the client.

Regards

From: Rudzani Shonisani [mailto:rudzani@singoconsulting.co.za]
Sent: Monday, February 4, 2019 10:42 AM
To: 'lazarus.masuku@drdlr.gov.za'

Subject: FW: LAND CLAIM ENQUIRY

Good Day Mr. Lazarus,

May your kindly assist me with the state of the land claim for **Prospecting Right Application By Jaments (Pty) Ltd For Coal Resources on Portions: 01 of the Farm Patattafontein 412 JS with DMR Ref: MP/30/5/1/1/2/ (15460) PR, under the jurisdiction of Steve Tshwete Local Municipality and Nkangala District Municipality, Mpumalanga Province.**

Please refer to previous email engagement with Ms Sonto which directed me to communicating with you.

Your assistance will be of great help to ensure the accuracy and success of the project.

Kind Regards,

From: Rudzani Shonisani [mailto:rudzani@singoconsulting.co.za]
Sent: Tuesday, January 15, 2019 8:53 AM
To: 'Sonto Shongwe'
Cc: 'Kenneth, Singo'; 'stanley@singoconsulting.co.za'; 'samkele@singoconsulting.co.za'; 'Emmanuel'; 'livhuwani@singoconsulting.co.za'; 'vincent@singoconsulting.co.za'; 'boipelo'

Subject: RE: LAND CLAIM ENQUIRY

Good day Sonto,

Thank you for your tremendous assistance and your request for us to send more enquiries to the Manager has been noted.

Kind Regards,

From: Sonto Shongwe [mailto:sonto.shongwe@drdlr.gov.za]
Sent: Monday, January 14, 2019 11:16 AM
To: Rudzani Shonisani
Subject: RE: LAND CLAIM ENQUIRY

Good day

We acknowledge the receipt of your enquiry.

Kindly note that your enquiry has been forwarded to Mr Lazarus Masuku since the official that has been working with enquiries here in Nkangala has since resigned in December.

All enquiries will now be dealt with by the Nelspruit team until further notice

In future please forward enquiries to the Manager in Nelspruit at lazarus.masuku@drdlr.gov.za

Kind Regards

From: Rudzani Shonisani [mailto:rudzani@singoconsulting.co.za]
Sent: 11 January 2019 11:47 AM
To: Sonto Shongwe
Cc: 'Kenneth, Singo'; stanley@singoconsulting.co.za; samkele@singoconsulting.co.za; anthony@singoconsulting.co.za; 'Emmanuel'; 'boipelo'; livhuwani@singoconsulting.co.za; mutshidzi@singoconsulting.co.za; tendani@singoconsulting.co.za; vincent@singoconsulting.co.za

Subject: LAND CLAIM ENQUIRY

Prospecting Right Application By Jaments (Pty) Ltd For Coal Resources on Portions: 01 of the Farm Patattafontein 412 JS with DMR Ref: MP/30/5/1/1/2/ (15460) PR, under the jurisdiction of Steve Tshwete Local Municipality and Nkangala District Municipality, Mpumalanga Province.

You are kindly receiving this email as an enquiry for any possible land claim on **Portions: 01** of the Farm **Patattafontein 412 JS**, Magisterial District of Middleburg (Steve Tshwete Municipality), Mpumalanga Province. **DMR Ref: MP/30/5/1/1/2/ (15460) PR.**

Kindly review attached BID for detailed description of proposed project. This is to ensure that all claimants are properly consulted and are given opportunity to:

- Register as an I&AP and to respond to the environmental compliance process;
- Raise issues of concern and provide suggestions for enhanced benefits;
- Contribute to local knowledge;
- Comment on the Draft Basic Assessment Report (DBAR) & Environmental Management Program (EMP); and
- Inform any other person / organization that they may feel should be informed about the project.

Your comments will be highly appreciated as they will assist us in developing a well-informed BAR and EMPr.

Thank you for your time, your participation will highly be appreciated.

Kind regards,

From: Thakgalo Lechaba <LechabRT@eskom.co.za>
Sent: Friday, 25 January 2019 14:48
To: Samkele Dandala <samkele@singoconsulting.co.za> (samkele@singoconsulting.co.za) <samkele@singoconsulting.co.za>

Subject: patattafontein 412 JS

HI

Please find herewith Eskom letter of comments for your application.

Please complete Annexes D and E on the attachment and return them to us before commencement of the project as proof that you are accepting the conditions

Eskom

Samkele Dandala
Singo consulting (pty) Ltd
16 Corridor Hill Crossing
Middleburg
1035

Date: 25 January 2019

Enquiries: Thakgalo Lechaba
Tel 013 755 9857
Wayleavesmou@eskom.co.za
Our ref: LD-InvE/TL/424/2019
Your ref:

Dear Samkele

INVITATION TO PARTICIPATE IN A PROSPECTING RIGHT APPLICATION ON PORTION 01 OF THE FARM PATATTAFONTEIN 412 JS, SITUATED UNDER THE MAGISTERIAL DISTRICT OF MIDDLEBURG, MPUMALANGA PROVINCE

Your Ref: MP/30/5/1/1/2/ (15460) PR

This application affects Eskom Distribution Kraal Raleigh 11kv overhead power line which traverses above property.

Eskom Distribution will raise no objection to the above mentioned application, provided Eskom's rights and services are acknowledged and respected at all times.

Further to the above the following conditions must be adhered to and accepted in **writing**;

1. There is a 9 metres building and tree restriction on either side of the center line of the 11 kV power line which must be adhered to in all future development. No construction will be allowed in these restriction areas and closer to the supporting mechanisms. Eskom rights are protected by wayleave agreement and servitude.

2. Eskom shall at all times have unobstructed access to egress from its services.

3. All work within Eskom Distribution reserve area and servitude must be done in accordance with the requirements of the *Occupational Health and Safety Act No. 85 of 1993 as amended*. Special attention must be given to the clearances between Eskom's conductors, structures, cables and electrical apparatus and proposed work as stipulated by *Regulation R15 of the Electrical Installations Regulations* of the aforementioned Act or any other legal requirement.

4. No construction work may be executed closer than 10 meters from any Eskom distribution structure or structure supporting mechanism.

5. Eskom Distribution shall not be liable for the death of or injury to any person or for the loss of or damage to any property whether as a result of the encroachment or of the use of the area where Eskom Distribution has its services, by the applicant, his/her agent, contractors, employees, successors in title and assigns.

6. Eskom Distribution's services and equipment must be acknowledged at all times and may not be tampered or interfered with. It is important to acknowledge and respect Eskom's Distributions

services at all times. It will be required of the developer to familiarize himself/herself with all safety hazards related to electrical plant.

7. Eskom's rights and duties in the servitude shall be accepted as having prior right at all times and shall not be obstructed or interfered with. Please note: Where an electrical outage is required, at least fourteen working days is required for arrangement.

8. Eskom is not the landowner thus Eskom's consent doesn't relieve the applicant from obtaining the necessary statutory, landowner's and or municipal approvals.

9. The applicant indemnifies Eskom against loss, claims or damages, including claims pertaining to interference with Eskom Services, apparatus or otherwise.

10. If and where applicable: Wherever any pipe crosses the Eskom services, the edge of the excavation shall not come within 10 metres of the Eskom services and structures. Any angles crossing should preferably be from 45° degrees to 90°. Cathodic protection must be installed to prevent corrosion of the pipe. Pipeline markers to be situated at 30 metre intervals and where the pipeline is crossing Eskom's servitude, the pipeline must be clearly marked.

11. The effective management and handling of waste is of crucial importance. No dumping shall be allowed within Eskom Distribution Servitudes. All unwanted waste (gaseous, liquid or solids) should be disposed of at a registered waste disposal site as stipulated under Section 20 of the Environmental Conservation Act (Act 73 of 1989). The applicant will adhere to all relevant environmental legislation. Any cost incurred by Eskom as a result of non-compliance will be charged to the applicant.

12. No mechanical equipment, including mechanical excavators or high lifting machinery, shall be used in the vicinity of Eskom's apparatus and/or services, without prior written permission having been granted by Eskom. If such permission is granted the applicant must give at least seven working days prior notice of the commencement of work. The Eskom's authorized area representative for the Hendrina CNC: **Nathan Mbalane +27 13 296 3457.** This allows time for arrangements to be made for supervision and/or precautionary instructions to be issued.

13. The contractor in charge of the construction or maintenance work on site must at all times be in possession of the letter of approval of the service concerned, and as well as all plans that are required and that are referred to in the correspondence, so that during and inspection the contractor can present the documentation to Eskom official(s) when requested to do so. If no approval can be presented Eskom representative can order the contractor to cease all works until such approval can be presented

14. Eskom will recover costs from the applicant where any damages of Eskom assets and or any penalties suffered by Eskom occur. The Applicant accepts costs if:

- Eskom pylons subside or are damaged as a result of blasting activities.
- Eskom has to incur any costs to comply with statutory requirements because of the applicants or applicant's contractor work or the presence of the equipment or plant in the reserve area. Such proven costs shall be refunded on demand.

15. No tree shall be planted within the servitude area or allowed to grow to a height in excess of horizontal distance of that tree from the nearest conductor of any power line or to grow in such a manner as to endanger that line should it fall.

16. Any development, which necessitates the relocation of our services, will be to the account of the developer. If you decide on the option of relocation of the existing power lines, the Customer Services, Regional Key Customer Executive (08600 37566) should be contacted in connection with costs.

Our Ref: LD-InvEl/EL/424/2019

Should the applicant or his contractor damage any of Eskom services during commencement of any work whatsoever, then Eskom's 24 hour Contact Centre Tel: 08600 37566 must be dialed immediately to report the incident

We thank you and hope you will find the above in order. Should you have technical queries on the Eskom standards and specifications please feel free to phone **Cecilia cartucho +27 13 693 3751**

Yours sincerely

P.P

For Livhuwani Mashamba
LAND DEVELOPMENT AND ENVIRONMENTAL MANAGER

CC SENIOR ENGINEER CECILIA CARTUCHO
CC SENIOR SUPERVISOR HENDRINA CNC. NATHAN MBALANE

Our Ref: LD-lm/E/TL/424/2019

Eskom

Annex E - Indemnity

To: Eskom (Address)

Mpumalanga Operating Unit - Asset Creation

28 Ferreira Street, Orion Building

P O Box 1567 Nelspruit 1200 SA

Tel +27 13 755 9726 www.eskom.co.za

In consideration of Eskom having agreed to us using the Eskom servitude area situated at .....for purposes of..... And having regard that electricity is transmitted over the said servitude areas, we, the undersigned hereby agree and undertake:

1. To keep you indemnified and to hold you harmless against all loss, expense or damage from any cause arising including, but not limited to, death of or injury to any person or the loss of or damage to any property, which you may sustain as a result of having agreed to us using the abovementioned servitude areas or us not taking the required safety precautions with regard to the transmission of electricity and which are caused by our negligence or that of our employees contractors or agents.

2. To pay to you on demand whatever sum of loss or damages that is certified as such by an Eskom official, whose appointment and authority need not be proved, and such certificate shall be prima facie proof of the said loss or damages. We waive the benefits of the exceptions *non causae debiti*, *non numeratae pecuniae* and exclusion and any other exceptions which may be pleaded in respect of this indemnity.

3. If during the period of this indemnity any claim is made against Eskom by any third party for loss or damages from any cause arising out of our use of the abovementioned servitude area, including the taking of safety precautions by us or failure to do so, we will, immediately upon being notified thereof by you, at our own cost and expense undertake the defence of such claim in your name and for your benefit, subject to your instructions and input in such defence. Eskom's written consent shall be obtained before any settlement of compromise is agreed to or before any indulgence or waiver of rights are considered.

4. If any claim is instituted against us by any third party because of our presence and/or activities in the abovementioned servitude area we will immediately upon receipt or notification of such claim inform you accordingly and keep you informed until the matter is finalised.

5. This indemnity shall commence on the date of signature hereof and shall cease and terminate on the date that we stop using the abovementioned servitude areas subject thereto that it will still be of effect in losses, damages or claims arising before the termination date.

SIGNED AT..... THIS..... DAY OF..... (.....) (20...).....

....

WITNESS SIGNATURE OF AUTHORISED PERSON

Mpumalanga Operating Unit
Asset Creation
28 Ferreira Street Nelspruit 1200
P O Box 579 Nelspruit 1200 SA
Tel +27 13 755 9174 Fax +27 13 755 9980 www.eskom.co.za

Eskom

Annex D - Letter of Consent

Application to encroach on Eskom's right

With reference to your application (**INVITATION TO PARTICIPATE IN A PROSPECTING RIGHT APPLICATION ON PORTION 01 OF THE FARM PATATTAFONTEIN 412 JS, SITUATED UNDER THE MAGISTERIAL DISTRICT OF MIDDLEBURG, MPUMALANGA PROVINCE.**); permission is hereby granted under the conditions listed on the attached documents. Kindly indicate your acceptance of these conditions by initiating each page and signing in the appropriate area on the last page of the second copy and returning this copy to Eskom at the following address:

Lechabt@eskom.co.za or Wayleavesmou@eskom.co.za or NekhahTT@eskom.co.za

Should you have any questions, please do not hesitate to contact us at either of the following:

TEL NUMBER	**Tel +27 13 755 9657**
FAX NUMBER:	**Fax 086 5373 074**
ADDRESS:	**28 Ferreira Street, Orion Building**
	P O Box 1567 Nelspruit 1200 SA

Yours sincerely

SIGNATURE

NAME: **Thakgalo Lechaba**

TITLE: **Miss.**

The Letter of Consent should contain two copies of the selected generic and specific conditions referring to the specific application received.

The second copy should have a clause at the bottom of the last page, as shown:

I,..... (FULL NAMES AND SURNAME)

Herewith unconditionally accept the stipulations in the Letter of Consent pertaining to my co-use of Eskom servitude.

SIGNED AT..... THIS..... DAY OF..... (MONTH) (YEAR).....

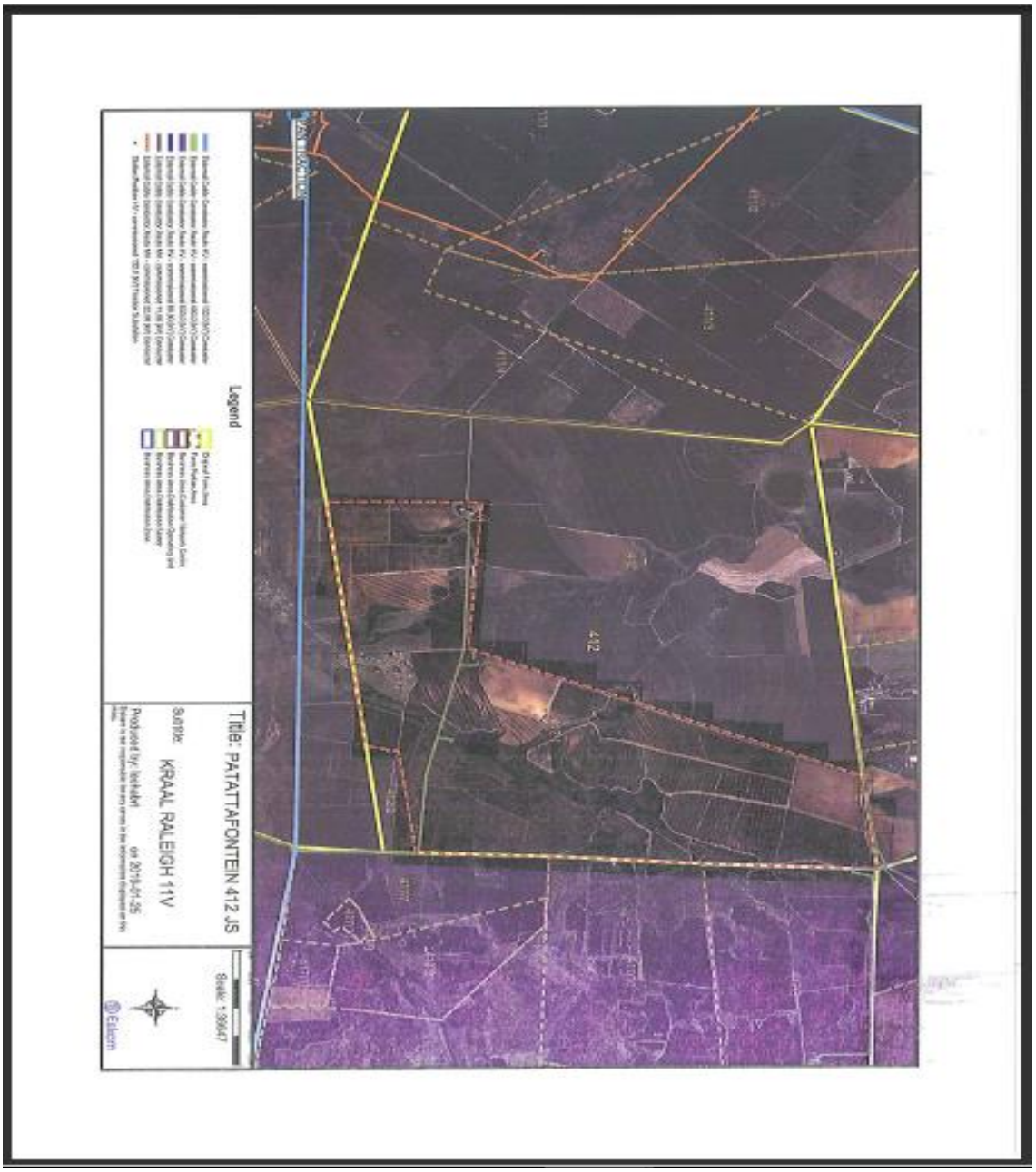
.....

APPLICANT

WITNESS..... WITNESS.....

Mpumalanga Operating Unit
Asset Creation
28 Ferreira Street Nelspruit 1200
P O Box 578 Nelspruit 1200 SA
Tel +27 13 755 9174 Fax +27 13 755 9600 www.eskom.co.za

Eskom Holdings SOC Ltd Reg No 2002/015527/30



Signed comment for Eskom

Eskom

Annex E - Indemnity

To: Eskom (Address)

Mpumalanga Operating Unit - Asset Creation

28 Ferreira Street, Orion Building

P O Box 1567 Nelspruit 1200 SA

Tel +27 13 755 9726 www.eskom.co.za

In consideration of Eskom having agreed to us using the Eskom servitude area situated at .....for purposes of..... And having regard that electricity is transmitted over the said servitude areas, we, the undersigned hereby agree and undertake:

1. To keep you indemnified and to hold you harmless against all loss, expense or damage from any cause arising including, but not limited to, death of or injury to any person or the loss of or damage to any property, which you may sustain as a result of having agreed to us using the abovementioned servitude areas or us not taking the required safety precautions with regard to the transmission of electricity and which are caused by our negligence or that of our employees contractors or agents.

2. To pay to you on demand whatever sum of loss or damages that is certified as such by an Eskom official, whose appointment and authority need not be proved, and such certificate shall be prima facie proof of the said loss or damages. We waive the benefits of the exceptions *non causae debiti*, *non numeratae pecuniae* and exclusion and any other exceptions which may be pleaded in respect of this indemnity.

3. If during the period of this indemnity any claim is made against Eskom by any third party for loss or damages from any cause arising out of our use of the abovementioned servitude area, including the taking of safety precautions by us or failure to do so, we will, immediately upon being notified thereof by you, at our own cost and expense undertake the defence of such claim in your name and for your benefit, subject to your instructions and input in such defence, Eskom's written consent shall be obtained before any settlement of compromise is agreed to or before any indulgence or waiver of rights are considered.

4. If any claim is instituted against us by any third party because of our presence and/or activities in the abovementioned servitude area we will immediately upon receipt or notification of such claim inform you accordingly and keep you informed until the matter is finalised.

5. This indemnity shall commence on the date of signature hereof and shall cease and terminate on the date that we stop using the abovementioned servitude areas subject thereto that it will still be of effect in losses, damages or claims arising before the termination date.

SIGNED AT Witbank THIS 11 DAY OF February (.....) (20..17.....

....

WITNESS SIGNATURE OF AUTHORISED PERSON

Mpumalanga Operating Unit
Asset Creation
28 Ferreira Street Nelspruit 1200
P O Box 570 Nelspruit 1200 SA
Tel +27 13 755 9174 Fax +27 13 755 9860 www.eskom.co.za

Eskom

Samkele Dandala
Singo consulting (pty) Ltd
16 Corridor Hill Crossing
Middleburg
1035

Date: 25 January 2019

Enquiries: Thakgalo Lechaba
Tel 013 755 9657
Wayleavesmou@eskom.co.za
Our ref: LD-Inw/E/TL/424/2019
Your ref:

Dear Samkele

INVITATION TO PARTICIPATE IN A PROSPECTING RIGHT APPLICATION ON PORTION 01 OF THE FARM PATATTAFONTEIN 412 JS, SITUATED UNDER THE MAGISTERIAL DISTRICT OF MIDDLEBURG, MPUMALANGA PROVINCE

Your Ref: MP/30/5/1/1/2/ (15460) PR

This application affects Eskom Distribution Kraal Raleigh 11kv overhead power line which traverses above property.

Eskom Distribution will raise no objection to the above mentioned application, provided Eskom's rights and services are acknowledged and respected at all times.

Further to the above the following conditions must be adhered to and accepted in writing:

1. There is a 9 metres building and tree restriction on either side of the center line of the 11 kV power line which must be adhered to in all future development. No construction will be allowed in these restriction areas and closer to the supporting mechanisms. Eskom rights are protected by wayleave agreement and servitude.

2. Eskom shall at all times have unobstructed access to egress from its services.

3. All work within Eskom Distribution reserve area and servitude must be done in accordance with the requirements of the *Occupational Health and Safety Act No. 85 of 1993 as amended*. Special attention must be given to the clearances between Eskom's conductors, structures, cables and electrical apparatus and proposed work as stipulated by *Regulation R15 of the Electrical Installations Regulations* of the aforementioned Act or any other legal requirement.

4. No construction work may be executed closer than 10 meters from any Eskom distribution structure or structure supporting mechanism.

5. Eskom Distribution shall not be liable for the death of or injury to any person or for the loss of or damage to any property whether as a result of the encroachment or of the use of the area where Eskom Distribution has its services, by the applicant, his/her agent, contractors, employees, successors in title and assigns.

6. Eskom Distribution's services and equipment must be acknowledged at all times and may not be tampered or interfered with. It is important to acknowledge and respect Eskom's Distributions

services at all times. It will be required of the developer to familiarize himself/herself with all safety hazards related to electrical plant.

7. Eskom's rights and duties in the servitude shall be accepted as having prior right at all times and shall not be obstructed or interfered with. Please note: Where an electrical outage is required, at least fourteen working days is required for arrangement.

8. Eskom is not the landowner thus Eskom's consent doesn't relieve the applicant from obtaining the necessary statutory, landowner's and or municipal approvals.

9. The applicant indemnifies Eskom against loss, claims or damages, including claims pertaining to interference with Eskom Services, apparatus or otherwise.

10. If and where applicable: Wherever any pipe crosses the Eskom services, the edge of the excavation shall not come within 10 metres of the Eskom services and structures. Any angles crossing should preferably be from 45º degrees to 90º. Cathodic protection must be installed to prevent corrosion of the pipe. Pipeline markers to be situated at 30 metre intervals and where the pipeline is crossing Eskom's servitude, the pipeline must be clearly marked.

11. The effective management and handling of waste is of crucial importance. No dumping shall be allowed within Eskom Distribution Servitudes. All unwanted waste (gaseous, liquid or solids) should be disposed of at a registered waste disposal site as stipulated under Section 20 of the Environmental Conservation Act (Act 73 of 1989). The applicant will adhere to all relevant environmental legislation. Any cost incurred by Eskom as a result of non-compliance will be charged to the applicant.

12. No mechanical equipment, including mechanical excavators or high lifting machinery, shall be used in the vicinity of Eskom's apparatus and/or services, without prior written permission having been granted by Eskom. If such permission is granted the applicant must give at least seven working days prior notice of the commencement of work. The Eskom's authorized area representative for the Hendrina CNC: **Nathan Mbalane +27 13 298 3457.** This allows time for arrangements to be made for supervision and/or precautionary instructions to be issued.

13. The contractor in charge of the construction or maintenance work on site must at all times be in possession of the letter of approval of the service concerned, and as well as all plans that are required and that are referred to in the correspondence, so that during and inspection the contractor can present the documentation to Eskom official(s) when requested to do so. If no approval can be presented Eskom representative can order the contractor to cease all works until such approval can be presented

14. Eskom will recover costs from the applicant where any damages of Eskom assets and or any penalties suffered by Eskom occur. The Applicant accepts costs if:

- Eskom pylons subside or are damaged as a result of blasting activities.
- Eskom has to incur any costs to comply with statutory requirements because of the applicants or applicant's contractor work or the presence of the equipment or plant in the reserve area. Such proven costs shall be refunded on demand.

15. No tree shall be planted within the servitude area or allowed to grow to a height in excess of horizontal distance of that tree from the nearest conductor of any power line or to grow in such a manner as to endanger that line should it fall.

16. Any development, which necessitates the relocation of our services, will be to the account of the developer. If you decide on the option of relocation of the existing power lines, the Customer Services, Regional Key Customer Executive (08600 37566) should be contacted in connection with costs.

Our Ref: LD-InvW/TL/424/2019

Should the applicant or his contractor damage any of Eskom services during commencement of any work whatsoever, than Eskom's 24 hour Contact Centre Tel: 08600 37566 must be dialed immediately to report the incident

We thank you and hope you will find the above in order. Should you have technical queries on the Eskom standards and specifications please feel free to phone **Cecilia cartucho +27 13 693 3751**

Yours sincerely

P.P

For Livhuwani Mashamba
LAND DEVELOPMENT AND ENVIRONMENTAL MANAGER

CC SENIOR ENGINEER CECILIA CARTUCHO
CC SENIOR SUPERVISOR HENDRINA CNC. NATHAN MBALANE

Our Ref: LD-lm/B/TL/424/2019

Eskom

Annex D - Letter of Consent

Application to encroach on Eskom's right

With reference to your application **(INVITATION TO PARTICIPATE IN A PROSPECTING RIGHT APPLICATION ON PORTION 01 OF THE FARM PATATTAFONTEIN 412 JS, SITUATED UNDER THE MAGISTERIAL DISTRICT OF MIDDLEBURG, MPUMALANGA PROVINCE.)**; permission is hereby granted under the conditions listed on the attached documents. Kindly indicate your acceptance of these conditions by initiating each page and signing in the appropriate area on the last page of the second copy and returning this copy to Eskom at the following address:

Lechabt@eskom.co.za or Wayleavesmou@eskom.co.za or NokhahTT@eskom.co.za

Should you have any questions, please do not hesitate to contact us at either of the following:

TEL NUMBER **Tel +27 13 755 9657**

FAX NUMBER: **Fax 086 5373 074**

ADDRESS: **28 Ferreira Street, Orion Building**

P O Box 1567 Nelspruit 1200 SA

Yours sincerely

SIGNATURE

NAME: **Thakgalo Lechaba**

TITLE: **Miss.**

The Letter of Consent should contain two copies of the selected generic and specific conditions referring to the specific application received.

The second copy should have a clause at the bottom of the last page, as shown:

I GIVEN BONGANI SIMELANE (FULL NAMES AND SURNAME)

Herewith unconditionally accept the stipulations in the Letter of Consent pertaining to my co-use of Eskom servitude.

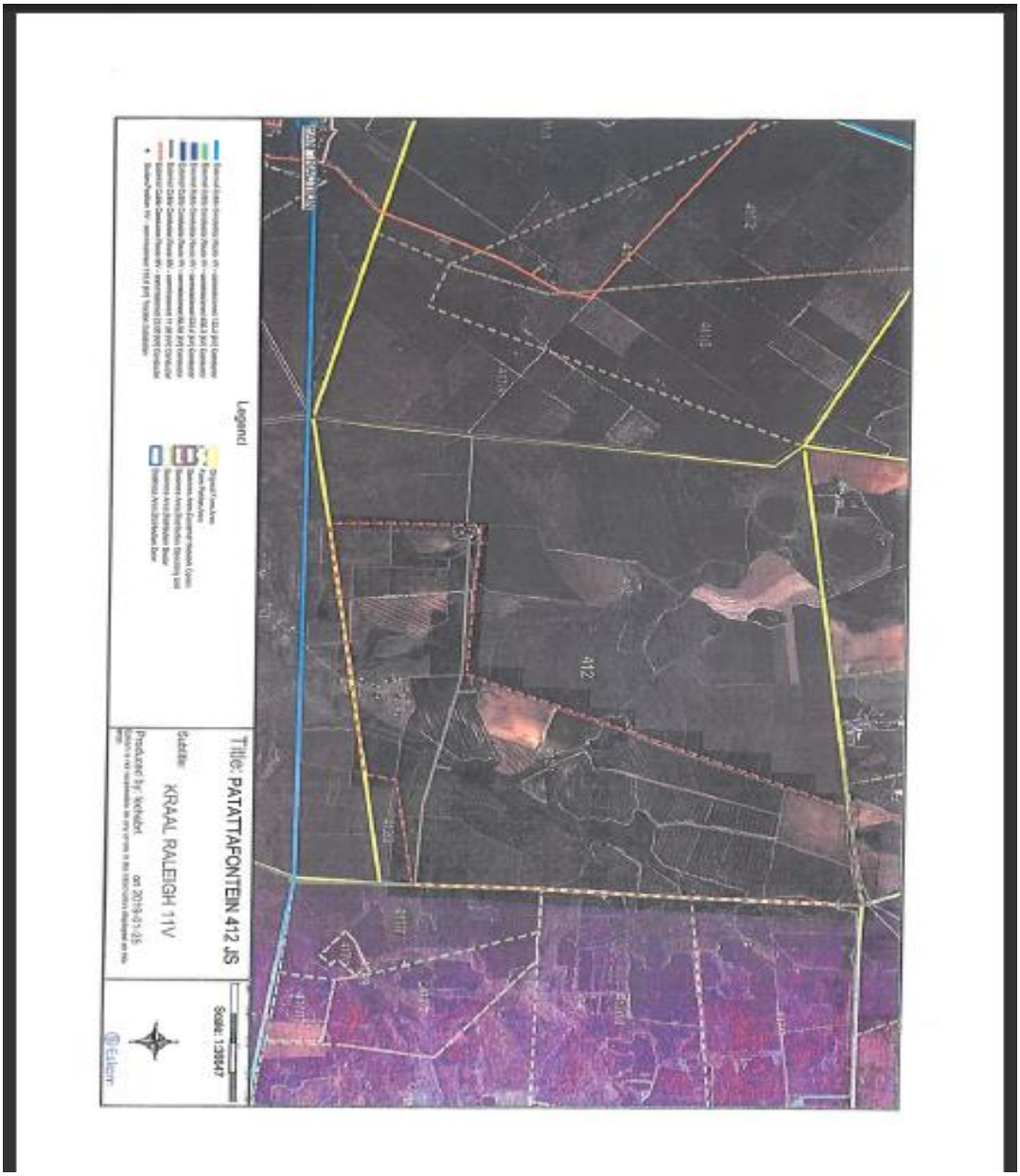
SIGNED AT WITBANK THIS 11 DAY OF February (MONTH) (YEAR) 2019

APPLICANT

WITNESS..... WITNESS.....

Mpumalanga Operating Unit
Asset Creation
28 Ferreira Street Nelspruit 1200
P O Box 579 Nelspruit 1200 SA
Tel +27 13 755 9174 Fax +27 13 755 9660 www.eskom.co.za

Eskom Holdings SOC Ltd Reg No 2002/015527/30



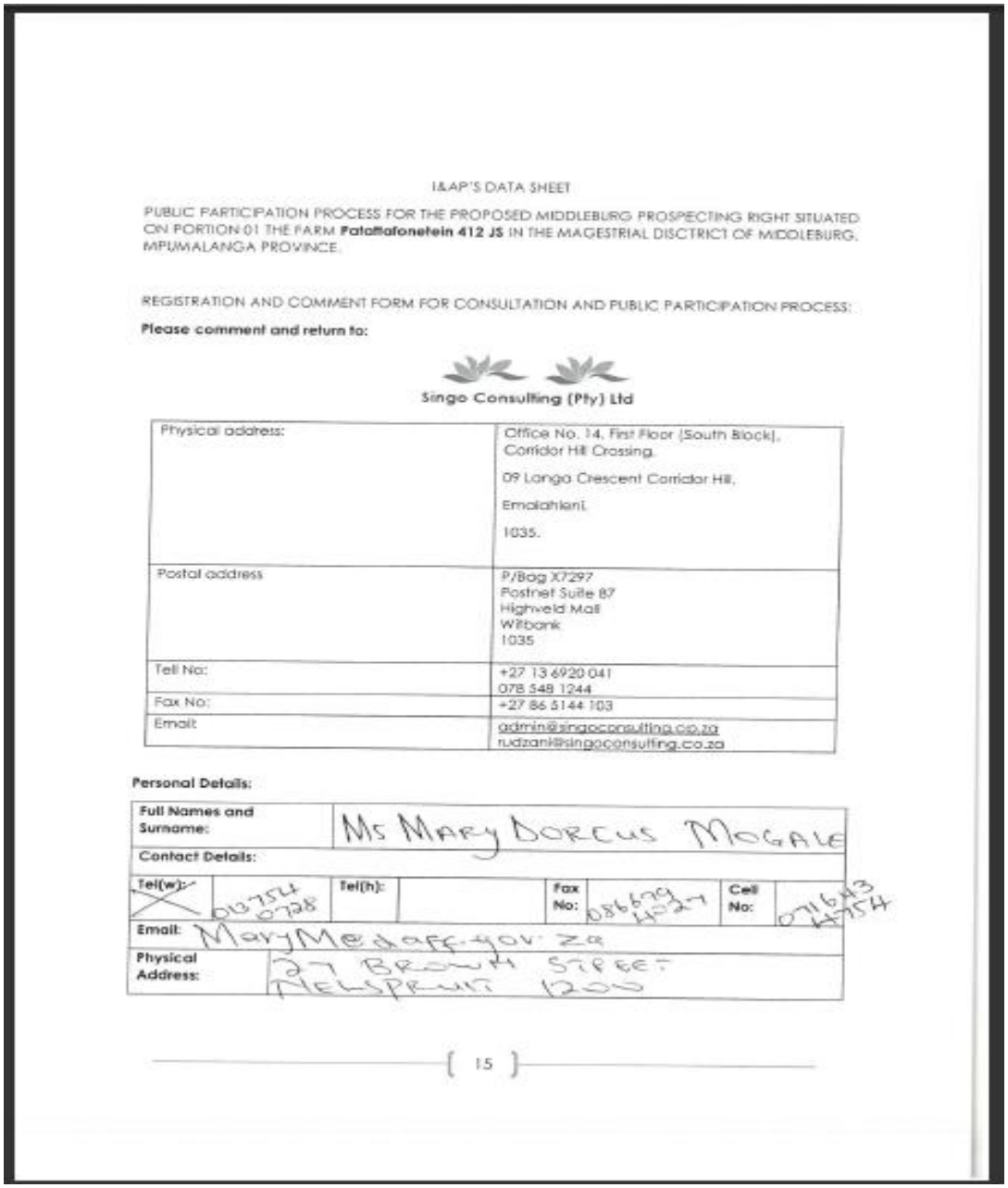
From: MaryM <MaryM@daff.gov.za>
Sent: Monday, 28 January 2019 09:54
To: samkele@singoconsulting.co.za
Subject: EllyT@daff.gov.za

Good Morning

Kindly find attached form for registration as an IAP for Paattafontein 412 JS.

Regards

Mary Dorcus Mogale
Resource Auditor
Land Use and Soil Management
Department of Agriculture, Forestry and Fisheries
Tel: 013 754 0728/01
Cell: 071 643 4754/082 362 7583
Fax: 013 754 0735
Web: www.daff.gov.za
E-mail: MaryM@daff.gov.za



I&AP'S DATA SHEET

PUBLIC PARTICIPATION PROCESS FOR THE PROPOSED MIDDLEBURG PROSPECTING RIGHT SITUATED ON PORTION 01 THE FARM **Patatlafontein 412 JS** IN THE MAGESTRIAL DISCTRICT OF MIDDLEBURG, MPUMALANGA PROVINCE.

REGISTRATION AND COMMENT FORM FOR CONSULTATION AND PUBLIC PARTICIPATION PROCESS:

Please comment and return to:

Singo Consulting (Pty) Ltd

Physical address:	Office No. 14, First Floor (South Block), Corridor Hill Crossing. 09 Longa Crescent Corridor Hill, Emalahleni. 1035.
Postal address	P/Bag X7297 Postnet Suite 87 Highveld Mall Witbank 1035
Tell No:	+27 13 6920 041 078 548 1244
Fax No:	+27 86 5144 103
Email:	admin@singoconsulting.co.za rudzani@singoconsulting.co.za

Personal Details:

Full Names and Surname:	Ms Mary Dorcus Mogale						
Contact Details:							
Tel(w):	013754 0728	**Tel(h):**		**Fax No:**	086629 4927	**Cell No:**	071643 4754
Email:	MaryM@daff.gov.za						
Physical Address:	27 Brown Street Nelspruit 1200						

Postal Address:	P.O.Box 5806, WELKOM 1200
Preferred method of communication: fax ☐ e-mail ☒ post ☐	
Preferred telephonic communication: cell ☒ home ☐ work ☒	
Organisation/Representative:	DEPARTMENT OF AGRICULTURE FORESTRY AND FISHERIES
Farm name, number and subdivision or Street Address (if applicable):	PATATTAFONTEIN 412 JS.

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

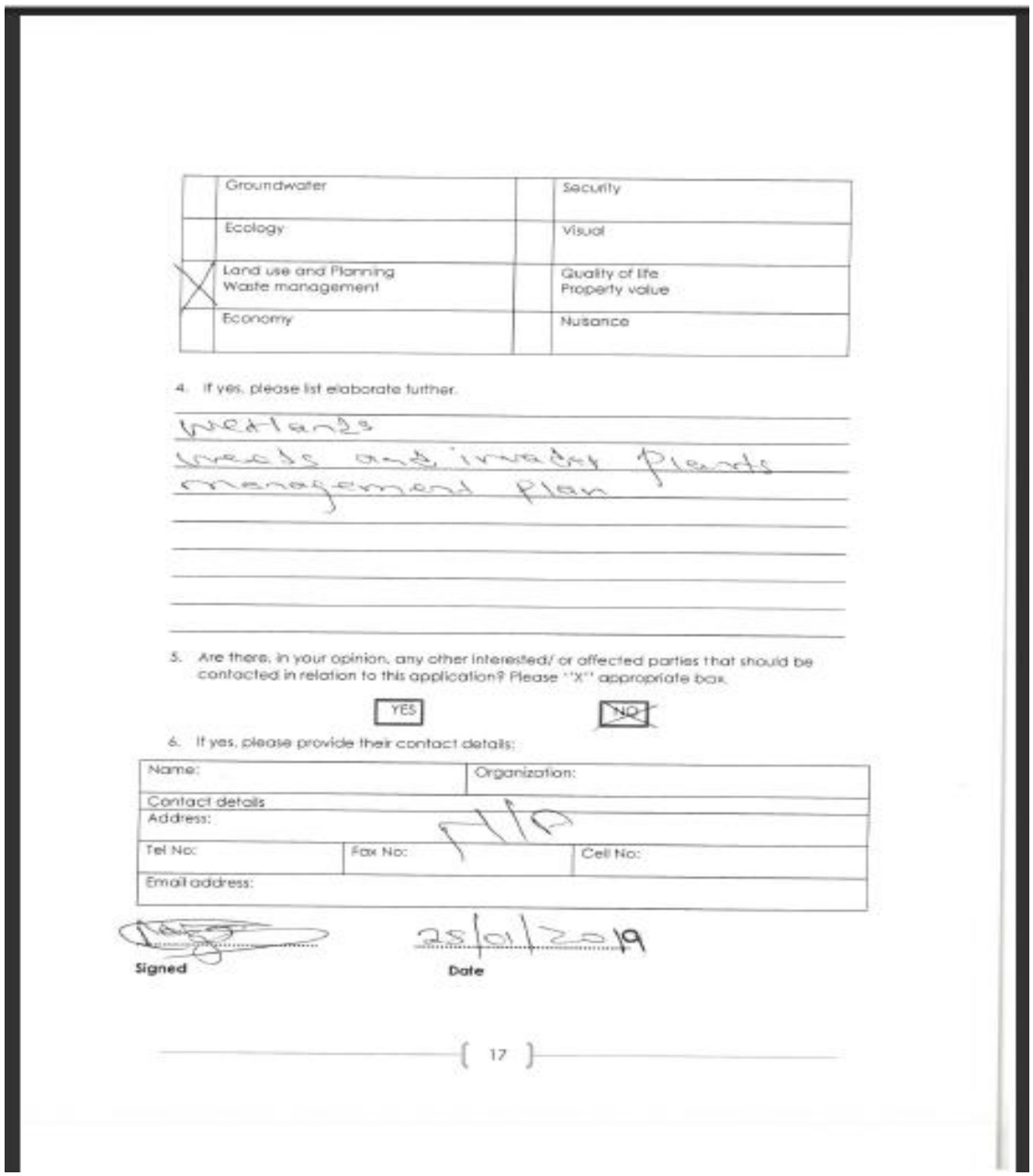
GOVERNMENT OFFICIAL

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
	Archeology	X	Soil
X	Surface water		Employment



	Groundwater		Security
	Ecology		Visual
X	Land use and Planning Waste management		Quality of life Property value
	Economy		Nuisance

4. If yes, please list elaborate further.

Wetlands
weeds and invader plants
management plan

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

6. If yes, please provide their contact details:

Name:		Organization:
Contact details Address:	N/A	
Tel No:	Fax No:	Cell No:
Email address:		

25/01/2019

Signed Date

17

Community Meeting

MEETING WITH THE COMMUNITY, CLIENTS AND CONSULTANT COMPANY.

Date: 24 FEBRUARY 2019

Time: 11:00am

Venue: Patattafontein

Attendee: (Refer to Attendance Register)

Client(s): Jament's Pty Ltd and Dakama Holdings

Apologies:

Lucky (Community Member)

AGENDA:

1. **Proggrame director: Rudzani Shonisani**
2. **Welcoming prayer: Community Member**
3. **Introduction of Singo Consulting: Dr Kenneth Singo**
4. **Introduction of (Clients): Rudzani Shonisani**
5. **Opening of questions and answers session**
6. **Way Forward: Collective**
7. **Closure: Community member**

Matters of the day:

INTRODUCTION OF SINGOCONSULTING (DONE BY Dr Kenneth Singo)
Singo consulting is an independent firm that was appointed by the two companies to run the day to day processing of making sure that all relevant parties are communicated with to ensure the success of the project.
PRESENTATION (DONE BY Ms. Shonisani, Mr. Mamphwe and Mr. Singo) The process of the Mining runs in three phases, namely; PR (prospecting right), MP (mining permit) AND MR (mining right) however the ones in question for pattatafontein farm are PR AND MP, which were broken down to simply terms and understandable manner for the community in large. *The processing was explained in detail by the respective delegates as shown on the Agenda.* • Prospecting right, is lodged to the government and runs for a period of 5 years, making use of two methods which are invasive and non-invasive whereby invasive are those that disturbs the ground or environment like drilling and sampling, whilst non-invasive are those that do not disturb the environment like mapping, desktop study, land owner consultations and community public participations. • The mining permit is granted for mine to operate for 2 years with an extension of extra 3 years if the coal resource that is mined is not fully consumed upon the first 2 years. When you apply for MP you also have to apply for EA (Environmental Authorization) as you are going to disturb the land and that requires you to also gave a plan of how you are going to restore the land back which we call it Rehabilitation. The period we are on as far is the process of consultation and reviewing of the draft report which in total in the first 90 days of the project's commencement. Which is why we are having a meeting here today to also gather your local information that can assist with

improving the report and get all your concerns if you will be affected negatively or positively by the unnamed mine that is yet to be grated to license to operate or begin.

Once you have stated your concerns all information will be recorded and be made part of the report that will be sent to the DMR and then the DMR will weigh all concerns and comments before grating the mine to check if it will benefit the community or too many health safety reasons will be on the rise.

If the DMR grants the mine to start, you will also get such notices that you saw around which will be alerting you that now the mine has been granted the license to start with the operations.

- Mining right is the one which includes Social and Labour Plans (SLP) whereby the community gets to benefit for the life span of the mine period and mining right runs for period of 30 years with unlimited hectors and extensions of time.

Questions and Answers

Issue raised	**Response**	**Actions**
Oupa Giane: I saw a notice last year on Middleburg observer, who did you consult>?	R.Shonisani: We consulted the land owner but he was not available which lead us to dropping some documents for his attention at the premises of the farm.	Noted
Elvis Mahlangu: SLP (Social and Labour Plan), Business Opportunities and Jobs are they going to be there or available for us as the community?	Jament's Pty Ltd: In the case of prospecting right, employment will not be done because drilling activity can only last for 2-5 days, however this relationship we are building here will assist us in the future once we have placed a mining right or permit and it is granted. Dakama Holdings: Employment will commence once mining license is granted and employment will also be influenced more by what your concerns are or comments. Business opportunities will also happen, if amongst the community there's someone who has business, can resent it and their services can be used by the mine as a way of creating more jobs for the community.	

	SLP is more talked about if it is a mining right that is being applied for because the hector for permit is small. More information will be talked to with us and you as the community together with the Applicant.	
December Mokwena: Where did you get the right to advertise before talking to us?	Jament's: In south Africa, Everyone has the right by law according to the constitution.	Noted
Elvis Mahlangu: As the community we only need that 70% must be from this farm houses because already we don't have electricity and the land owner is doing nothing about it, we want to work with the companies in peace because we cannot prevent the minerals from being extracted as by law they belong to the government.	Rudzani Shonisani: That will happen if you are voicing out your concerns on comment form so that there should be record for future purposes where you can reference back to.	Noted
Elvis Mahlangu: We will remain and discuss as a community and once we are agreeing we will send the comment forms to you guys and it will be as soon as possible.	Rudzani Shonisani: That will indeed help us and also the DMR to decide on sound concrete proof od comments.	Noted.
WAY FORWARD		
Elvis Mahlangu: We are pleading that this should not be the last we see you here talking to us, we would like you guys as a whole to come every time they are developments or email us to see.	Rudzani Shonisani: We will be in touch and also send you any developments because you have the right to know once you are registered ad interested or affected parties of the project.	Noted
CLOSURE WITH PRAYER.		
	End-of-Minutes	

PROOF OF ATTENDECES:

1. Attendance Register

SINGO CONSULTING (Pty) Ltd
Meeting venue: Patattafontein
Date: 24-02-2019
Time: 11:00am

Singo Consulting (Pty) Ltd

ATTENDANCE REGISTER

No.	Name & Surname	Designation	Company/LandOwner/ Other(Specify)	Contact Details	Email Address	Signature
1	SIBONGILE MSIZA	Patattafontein	Community	0719682617		[illegible]
2	WINNIE MADONSELA	Patattafontein	Community	0712420630	WinnyMartha8@gmail.com	[illegible]
3	Mpumi Mahlangu	Patatafontein	Community	0768751801		[illegible]
4	Sponono Tiyane	Batatafontein	Community	0790543996		[illegible]
5	Nomhlekhabo Mahlangu	Batatfontein	Community	0772153188		[illegible]
6	Jeffrey Nkosi	Patatafontein	Community	0712111694		Mahlangu.
7	Victor Mahlangu	Patatafontein	Community	0761710774		[illegible]
8	Thulani Nkosi	Batatfontein	Community	0763046171		V. Mahlangu
9	Sipho Mahlangu	Patatafontein	—	0723569720	ss2834860@gmail.com	[illegible]
10	PHINEAS B. MAHLANGU	PATATFONTEIN	COMMUNITY	0711517492		[illegible]
11	Johanna Msiza	PATATAFONTEIN	Community	0765214333		JOHANNA
12	Tshulani Msiza	PATATAFontein	Community	0789995305		Msiza
13	ELVIS MAHLANGU	COMMUNITY		0722588151	bwenqwepi@gmail.com	Mahlangu
14	Thandeka Bhuda	Batatafontein	Community	0722615206	W.W.TDK.com.	Buda.
15	Angel Mpeni	Community		0787187461	bwenqweni@gmail	[illegible]
16	Dumisani Mkuni	Community	Community	0791464118	Dumane@gmail.com	[illegible]
17	Dudu Mahlangu	Community	Community	0767205916		Mahlangu
18	Lazarus Mogaka	Patata	Community	0607118040 32		[illegible]
19	Wanda Djana	Community	Community	0727882307		[illegible]
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21						
22						
23						
24						
25						

SINGO CONSULTING (Pty) Ltd
Meeting venue: Patattafontein
Date: 24-02-2019
Time: 11:00am

Singo Consulting (Pty) Ltd

ATTENDANCE REGISTER

No.	Name & Surname	Designation	Company/LandOwner/ Other(Specify)	Contact Details	Email Address	Signature
1	Ntombi Madonsela					
2	Esther Msiza			071 5126261	Bhalalfontein	[signature]
3	[illegible] Msiza			0764109893	Bhalalfontein	[signature]
4	Patrick Mtsweni			0609176183	"	[signature]
5	JIYANE OUPA	[illegible]		0766555534	"	[signature]
6	George Mahlangu		jiyaneoupa@hotmail.com	0725843990	"	[signature]
7	Driver Mokoena			0780621009	"	[signature]
8	Jackson Nkosi			0723551621	"	[signature]
9	[illegible] Msiza			[illegible]	"	[signature]
10	[illegible]			0824274[illegible]	"	[signature]
11	THOMAS MADONSELA			0764464419	"	
12	WESMAN SILANE			0722938860	"	
13	Thandiwe Mokoena			[illegible]	"	
14	Christinah Mahlangu			0713460038	"	[signature]
15	Elsie Mahlangu			0797636244	"	[signature]
16	Elsa Maseko			0766211674	"	[signature]
17	William Mahlangu			0762885174	Batafontein	[signature]
18	Josephina Mokoena			0799770385	"	[signature]
19	Emma Thukwane			0713427086	"	Josephina
20	Ernout			0766211574	"	[signature]
21	Johannes				"	
22	Poppy Masombuka			0827130173	"	
23	Grieta Mokwena			0791004587	Bhalalfontein	
24	Nomvula Mahlangu			0760806394	"	[signature]
25	Thembisile Jiyane	Dianatnf@gmail.com		0600149870	"	[signature]

SINGO CONSULTING (Pty) Ltd
Meeting venue: Patattafontein
Date: 24-02-2019
Time: 11:00am

Singo Consulting (Pty) Ltd

ATTENDANCE REGISTER

No.	Name & Surname	Designation	Company/LandOwner/ Other(Specify)	Contact Details	Email Address	Signature
1	Joseph Madonsela					
2	Mary Mtsweni			[illegible]735		
3	Xolani Tau					
4	Nolaine Nkosi					
5	Samuel Maseko					
6	Alfred Mahlangu					
7	Siven Sihlindah					
8	Vive Mbiz					
9	Kenneth Mokoena					
10	A Jiyane					
11	Johannes					
12	[illegible] Mdlalose					
13						
14	Titus Sigudu					
15	Lorence Mahlangu					
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2. Appendices of the meeting:


RELAY

Comments from interested and affected Community Members

(1)

Singo Consulting (Pty) Ltd

Office No. 16 First Floor (South Block), Corridor Hill Crossing 09 Langa Crescent, Corridor Hill, eMalahleni, 1040 P/Bag X7214, Postnet Suite 125, eMalahleni, 1035, Mpumalanga Province, ZA
T: 013 896 0041 E: admin@singoconsulting.co.za

Title :(Prof/Miss/Mrs/Mr/Other)	MR	Name(s):	ELVIS PEPROSE
Surname:	MAHLANGU		
Capacity (e.g Director/ secretary/ other)	SECRETARY		
Organisation	COMMUNITY		
Postal Address:	BATATAFONTAIN FARM	Physical Address:	BATATAFONTAIN FARM MIDDELBURG
Tel No:		Cell No:	0722558151
Fax No:	Email:	bwenqwen@gmail.com	

COMMENTS/ ISSUES/ CONCERNS | present your issues/ concerns/ comments below)

1. BUILDING OF EXISTING CHURCH/HALL
2. BUYING OF FARM WITH ENOUGH GRAZING LAND
3. CONTINUES FEEDBACK, REPORT MEETINGS
4. RING FENCING SOME PROCUREMENT FOR US
5. CLOSING/ADDRESSING IDENTIFIED SKILLS GAPS
6. BUILDING OF EXISTING HOUSES ON RELOCATED FARM
7. BE CONSIDERED ON ADULT BASIC EDUCATION& TRAINING

Please add the following for my colleagues ☐ / friend ☐ / neighbor ☑ / other ☐ on your mailing list: (please tick the appropriate box).

Name:	SIBUSISO MHLAMBI	Organization:	FARM UNEMPLOYMENT STRUCTURE
Contact details			
Address:	BEESTEPAN FARM		
Tel No:	Fax No:	Cell No:	0723317632
Email address:	farmunemploymentstructure@gmail.com		

E.P.M.

(2)

Singo Consulting (Pty) Ltd

Office No. 16 First Floor (South Block), Corridor Hill Crossing 09 Langa Crescent, Corridor Hill, eMalahleni, 1040 P/Bag X7214, Postnet Suite 125, eMalahleni, 1035, Mpumalanga Province, ZA
T: 013 896 0041 E: admin@singoconsulting.co.za

Title :(Prof/Miss/Mrs/Mr/Other)		Name(s):	SEE PAGE (1)
Surname:	"		
Capacity (e.g Director/ secretary/ other)	"		
Organisation	"		
Postal Address:		Physical Address:	"
Tell No:		Cell No:	
Fax No:	Email:		

COMMENTS/ ISSUES/ CONCERNS (present your issues/ concerns/ comments below)

70% ON SKILLS DEVELOPMENT
70% ON EMPLOYMENT
70% ON PROCUREMENT
70% ON BURSARIES & LEAMERSHIP
CONSISERED FOR ENTERPRISE DEVELOPMENT
CONSISERED FOR ON COMMUNITY DEVELOPMENT PROJECT (I.S.P. LED)
BE RELOCATES NOT FUR THAN 40 KM FROM TOWN
TO ENTERPREMUARIAL DEVELOPMENT

Please add the following for my colleagues ☐ / friend ☐ / neighbor ☐ / other ☐ on your mailing list: (please tick the appropriate box).

Name: SEE PAGE (1)	Organization:	"	
Contact details	"		
Address: "		"	
Tel No: "	Fax No:	Cell No: "	
Email address: "		"	

E.P.M. Bokhoma

Singo Consulting (Pty) Ltd

Office No. 16 First Floor (South Block), Corridor Hill Crossing 09 Langa Crescent, Corridor Hill, eMalahleni, 1040 P/Bag X7214, Postnet Suite 125, eMalahleni, 1035, Mpumalanga Province, ZA
T: 013 896 0041 E: admin@singoconsulting.co.za

Title :(Prof/Miss/Mrs/Mr/Other)		Name(s):	NTUTHU DUFA
Surname:	JIYANE		
Capacity (e.g Director/ secretary/ other)	TAXI OPERATOR (TAXI OWNER)		
Organisation			
Postal Address:	PORTION 1 OLD BELFAST ROAD BATAFANTEIN	Physical Address:	
Tell No:		Cell No:	072 534 3992
Fax No:	Email:	jiyaneoupa@hotmail.com	

COMMENTS/ ISSUES/ CONCERNS (present your issues/ concerns/ comments below)

1. Life stock
2. 70% EMPLOYEMENT
3. 70% PROCUMENT
4. 70% SKILLS DEVELOPMENT
5. 70% LEANERSHIP BASSARIES ETC
6. PROPER ACCOMADATION IF THERE IS RELOCATION
7.

Please add the following for my colleagues ☐ / friend ☐ / neighbor ☐ / other ☐ on your mailing list: (please tick the appropriate box).

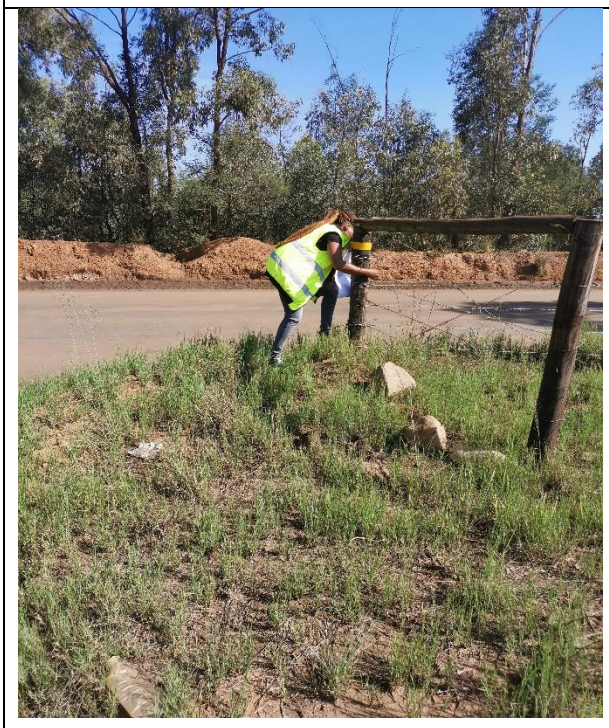
Name:	Organization:	
Contact details		
Address:		
Tel No:	Fax No:	Cell No:
Email address:		

Appendix 5: Site Inspection, Site Notice Plugging and Access routes.

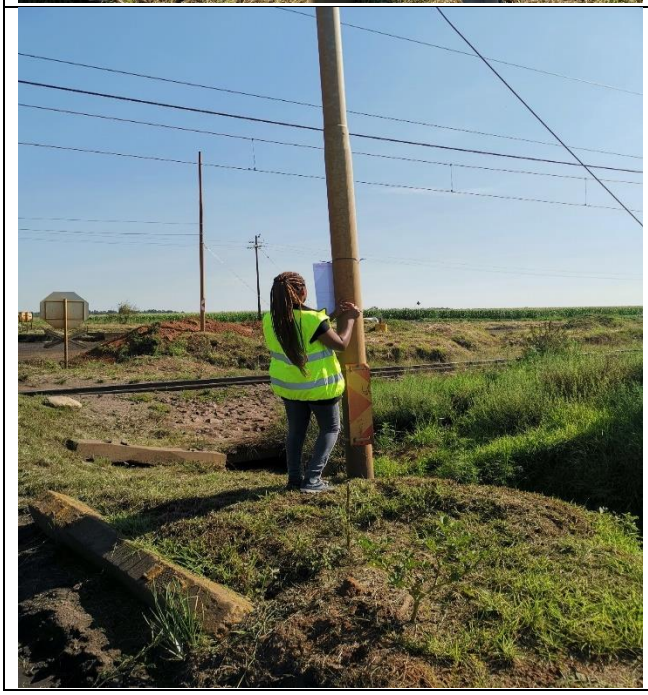
The location of where site notices were plugged at.

Site notices were located close to the farm boundary, close to the farm entrance, close to the mostly used road.

-25,7178270, 29.7047650

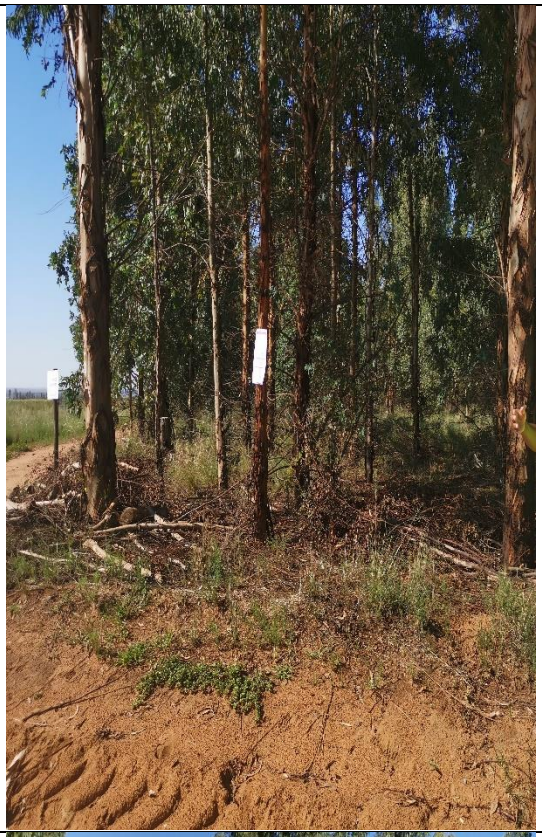


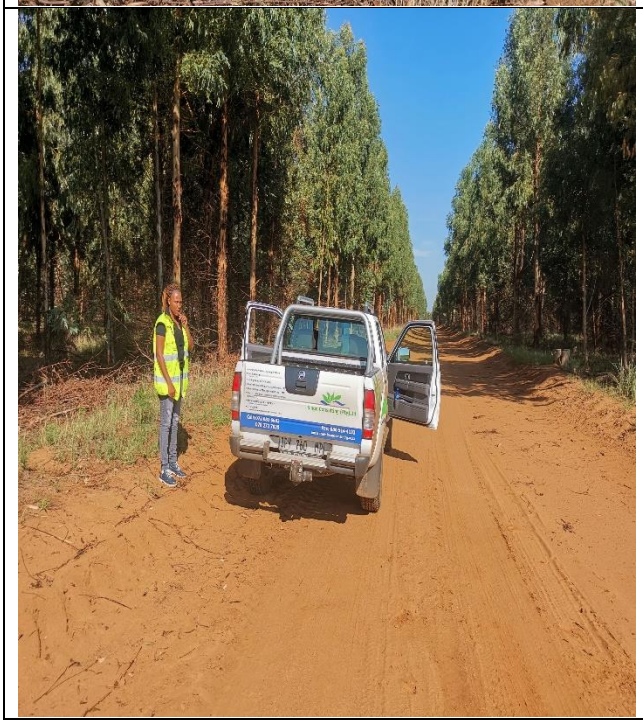
Site was plugged near the rail way before making a right turn to the farm from SE.



Site Notice plugged at the corner of the Farm portion Area, where all trucks and people going to the Canyon ''Hakhano'' Colliery can see and be aware of what is in place to progress.

Site Notices was Plugged close to the Farm main gate, where all access to the farm is currently happening.





Appendix *6: Soil Study*

Agricultural Potential Assessment Report

AGRICULTURAL POTENTIAL ASSESSMENT FOR THE PROPOSED COAL RESOURCES MINE

AREA OF PROJECT: Portion 1 of The Farm Patattafontein 412 JS, Magisterial District of Middleburg, Mpumalanga Province

Prepared by

Singo Consulting (Pty) Ltd

Office No: 16 First Floor (South Block),
Corridor Hill Crossing,
09 Langa Crescent,
Corridor Hill,
eMalahleni.

Prepared for

Date: **January 2019**

Table of Contents

Tables

Figures

Soil and Land use

1. The Introduction

A broad soil classification and agricultural potential were done on approximately 5ha of the applied permit and in the surrounding area to get baseline information regarding soil potential, land use and land capability. Land capability of the study area was classified into three classes (wetland, arable land, grazing land).

2. The Importance of the study

Conduct an Environmental Impact Assessment for the soils, land capability and land use, and propose mitigation measures for significant impacts. Assess the nature of the site in relation to the overall environment and its current and proposed utilization, and determine the capability of the land. It also gives a permanent record of the present soil resources in the area that are potentially going to be affected by the proposed mining permit. The study is going to assess present land use and land capability within the proposed surface disturbance. The study it also helps to estimate the soil impacts from mining activities.

3. Description of the scope of the proposed overall activity

The mining method proposed involves open cast extraction of coal from a pit to be established on virgin ground adjacent to a number of Industrial areas. The topsoil and overburden soil will be stockpiled and reserved for rehabilitation. The coal will be stockpiled on the topsoil and all activities will be contained within the boundaries of the mining site. Therefore, almost of the topsoil within the applied area will be disturbed during mining activities. Open cast is where coal or other minerals have been extracted and the soil at the site reinstated, generally by using the original soil material. This material often undergoes various processes during the removal, storage and replacement resulting in a severely altered soil profile.

4. Description the area of the project

a) Location of the overall Activity

Farm Name:	Patattafontein Farm no. 412 JS Portion of 1
Application area (Ha)	Approximately 371.384 ha
Magisterial district:	Magisterial District of Middelburg
Distance and direction from nearest town	Town / Distance (km) / Direction Witbank / 63.06 km / East Middelburg / 32.01 km / East Vandyksdrift / 31.06 km / North East-East
21-digit Surveyor General Code for each farm portion	T0JS00000000041200001

The project area is located at Middleburg at approximately 1.78KM from the casshome railway-rail. The farm boundary covers the farm houses and pans/ wetlands inclusive within its boundaries. The farm area can be accessed through a gravel route from R555 and R104 national roads from Middleburg town. The site can also be accessed from Belfast through R33 connecting to N4 and off-ramping to R104 then joining a gravel road to potentially access the Patattafontion 412 JS, Portion 01 Farm (refer to Figure 1 and 2). The area is characterized by a flat to gentle undulating topography whilst the farm is operational for grazing and cultivation.

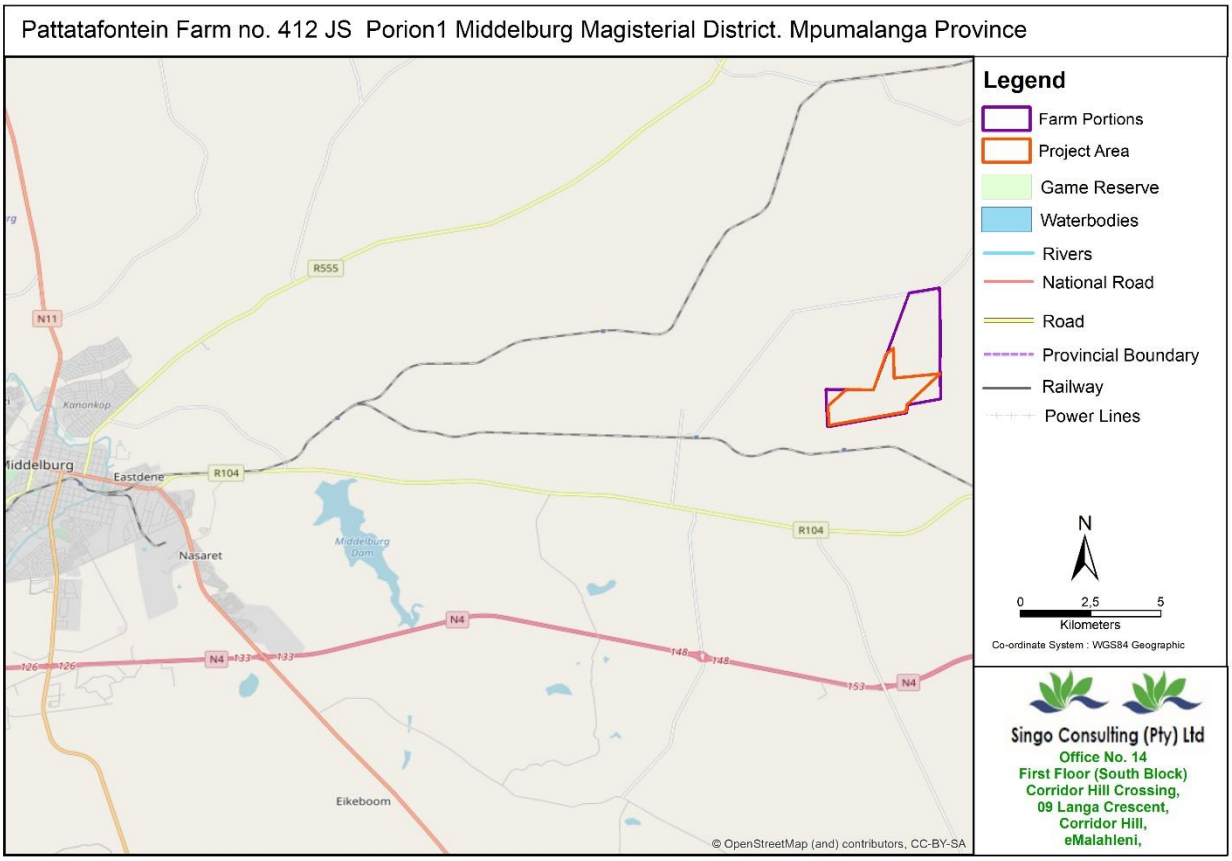


Figure 32:Locality map

b) Climate

The Mpumalanga region climate is described as a summer rainfall area, where summers are mild to warm, whilst winters are cool to cold and dry. No meteorological station is in place at the proposed project area and to overcome this problem it was decided to make use of measured meteorological data obtained from the South African Weather service.

the predominant wind direction comes from the north-west and east with strong winds of up to 10m/s. Calm conditions are experienced 11.2% of the time with a wind direction of predominately north-westerly and easterly during day-time conditions. Wind tends to increase in north-westerly direction. Night-time conditions are characterised by winds from the north-easterly, easterly and south–easterly sectors. summer months are dominated by easterly, south easterly winds. Wind strength can be experienced of up to 15m/s. The autumn months experience strong winds of up to 8 m/s usually blowing in the north-westerly, south easterly and easterly sectors. The winter months reflect dominancy of winds from the north-westerly sectors and during spring the wind direction is in a north-westerly and north-easterly direction, with an increase in frequencies of occurrence being evident.

c) Geology

The project area is on the coal reserve which is located along the northern extent of the Karoo Basin and comprises sediments of the Late Carboniferous Dwyka Group and the Early Permian Vryheid Formation, with the latter forming the central litho-stratigraphic unit of the Ecca Group (SACS, 1980). The Dwyka Group and Vryheid Formation lithologies predominantly consist of fine to very coarse sandstone, inter-bedded sandstone/siltstone and mud-rock consisting of siltstone, minor shale and coal. Minor quantities of conglomerate occur at the base of the succession.

Together, these lithologies represent part of the Karoo Supergroup which, together with the overlying Beaufort Group and the younger formations, extend continuously for over 1 000 km to the south of the Witbank Coalfield. The upper portions of the Karoo Supergroup, namely the Beaufort Group, Molteno, Elliot, Clarens and Drakensberg Formation are absent in the proposed project area due to erosion. The Witbank Coalfield stretches from Springs in the west to Belfast in the east over around 180 km and extends for roughly 40 km in a north-south direction. The irregular northern boundary of the Witbank Coalfield is defined by the limit of the coal-bearing strata. The southern margin of the Witbank Coalfield is distinctly defined over the central portion of the coalfield by the so-called 'Smithfield Ridge' (which is represented by a series of inliers of Rooiberg felsite).

The Smithfield Ridge forms the boundary between the Witbank and Highveld Coalfields. Arbitrary southern boundaries of the Witbank Coalfield exist to the east and west of the central portion of the coalfield. The southern margin extends from south of Delmas Colliery to somewhere just south of South Witbank Colliery, in the eastern part of the coalfield.

The local geology of the project area is entirely covered by the Vryheid formation. The dominant rocks of the Vryheid formation that can be found are; sandstones together with subequal or subordinate mudrock/ rhythmite. The base of an idealised coarsening upwards deltaic cycle in the eastern part of the Vryheid formation consists of dark-grey, muddy siltstone resulting from shelf suspension deposition in anoxic water of moderate depth see figure 2 below.

The coal seams originated as peat swamps developed on broad abandoned alluvial plains and, less commonly in interfluves (backswamps). Most of the economically important coal seams occur in the fluvial succession. The fluvial interval grades into deltaic sediments towards the southwest. The Vryheid formation can be subdivided into a lower fluvial -dominated deltaic interval, a middle fluvial interval and an upper fluvial-dominated deltaic interval in the east. These subdivisions correspond approximately to the lower sandstone, coal zone and upper sandstones.

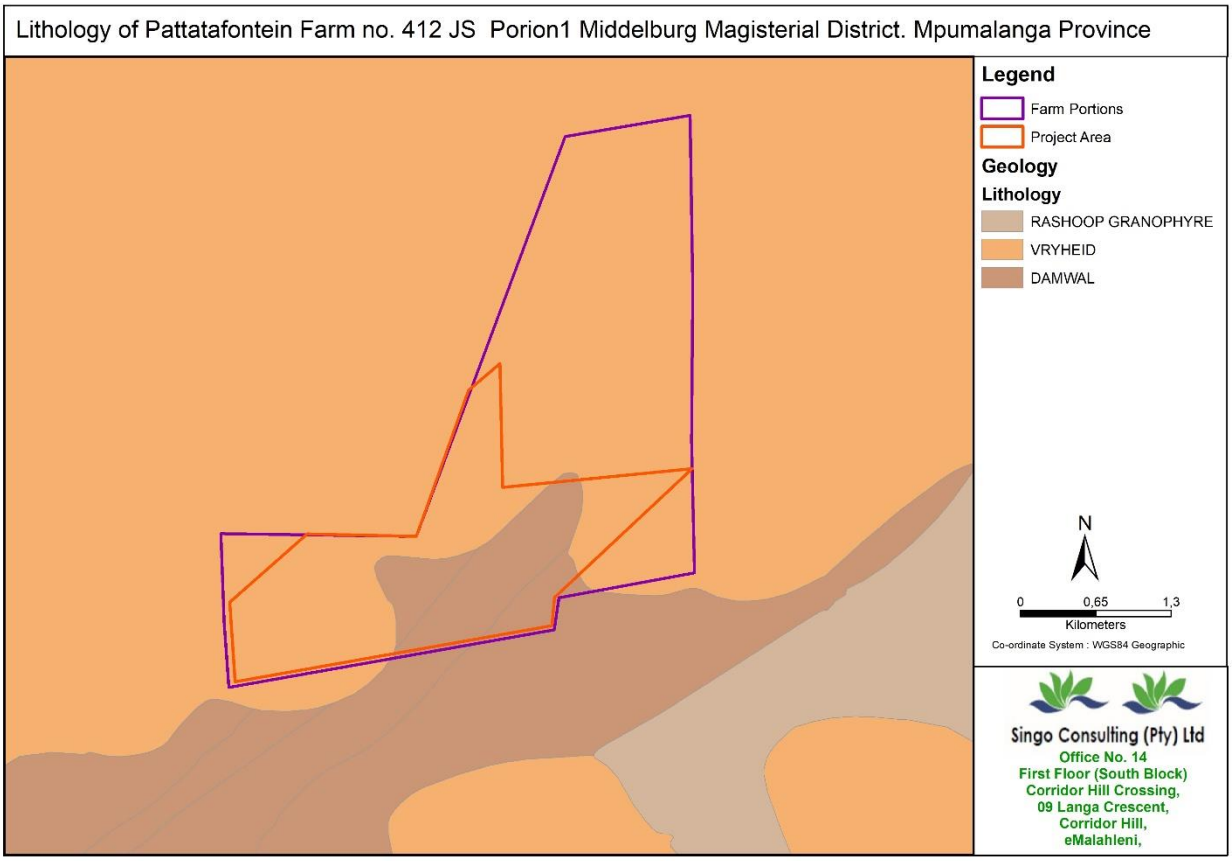


Figure 33: Geology Map

d) Topography

The demarcated study exists of one terrain type:

- Rolling or irregular plains with some relief (largest parts of the area)
- Level plains with some relief

The mining permit area is situated in a region with generally flat topography which is typical of the Mpumalanga region. From the topographical map below, the project area has an average height above sea level ranging from 1700 masl to 1720 masl.

The farm portion is at a higher elevation of 1720mamsl (meters above mean sea level), sloping gently towards the south westerly. The general topography of this area in a regional context consists of quite a number of prominent hills and steep inclines around the area ranges from 1600 to 1740 meters above mean sea level (mamsl). Figure 3 below illustrates the topography of this area.

The Patattafontein farm is located in a region where the vegetation type is called the Rand Highveld Grassland. This type of Vegetation occurs on a highly variable landscape with

extensive sloping plains and a series of ridges slightly elevated over undulating surrounding plains. The vegetation is species-rich, wiry, sour grassland alternating with low, sour shrubland on rocky outcrops and steeper slopes.

There is a high diversity of herbs. Rocky hills and ridges carry sparse (savannoid) woodlands accompanied by a rich suite of shrubs. Poorly conserved, only small patches protected. Almost half has been transformed mostly by cultivation, plantations, urbanisation or dam-building (Environmental Management Framework for the Olifants and Letaba Rivers Catchment Areas).

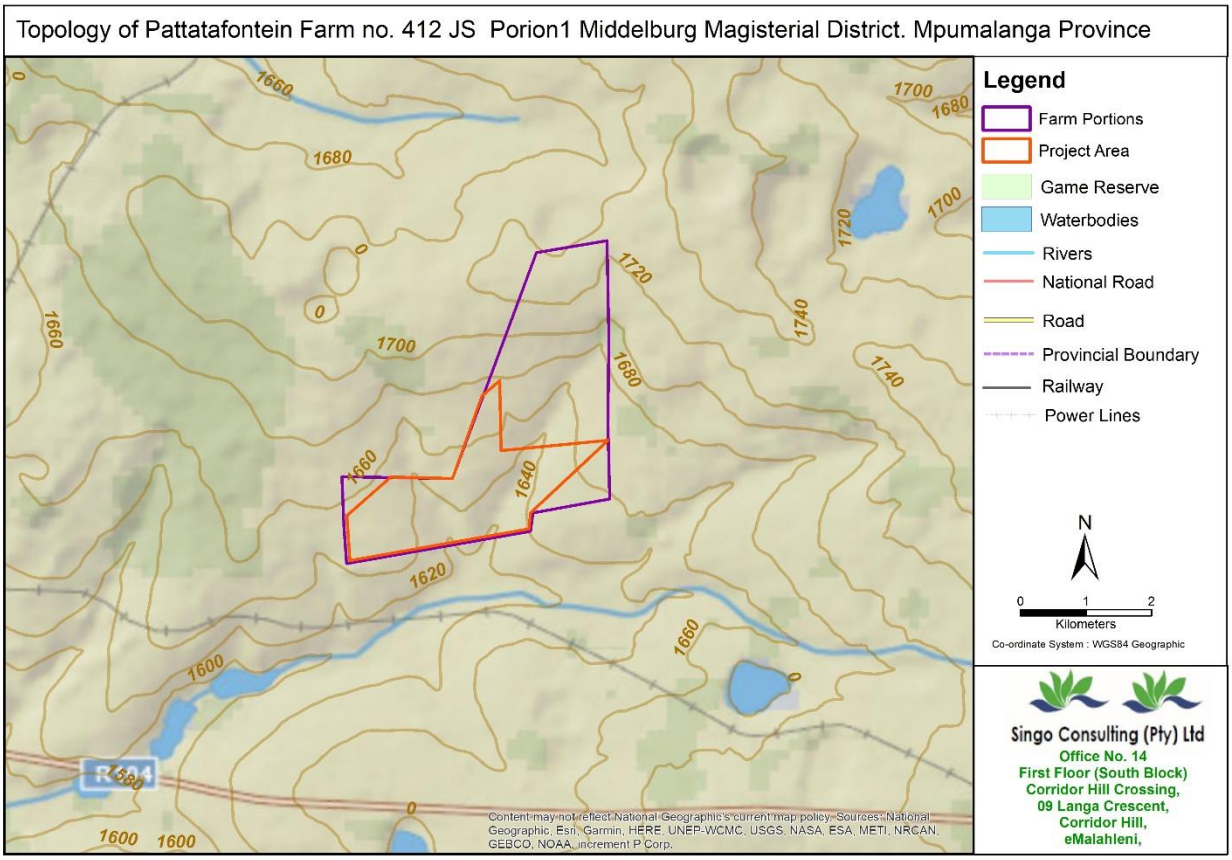


Figure 34: Topography of the area

5. Soil Classification

5.1 Soil Classification of Entire Province

A summary of the soils and their textural properties in Mpumalanga, the natural soil bodies, associated with each geology formation illustrating the range in soil textural properties from red apedal soils, through plinthic soils and duplex soils to red and black clay soils. In some soils the range in textural properties is limited with profile values clustering closely around a central value. Red and yellow, freely drained soil are dominating in the province where gray regie soil also form part of soil classification of the province. CU silty to clayey sand which indicate to be disturbed soil. General soil type is moist dark grey to dark olive grey, mottled light yellow brown and white, soft to firm with depth, intact or slightly shattered to shattered with depth clay or sandy clay with occasional medium and fine grained calcrete and scattered ferricrete nodules with depth.

5.2 Classification of Soil in Permit Area

The area of the property is associated with classes undifferentiated shallow soil and land classes, where the area of the permit is associated with classes as undifferentiated structureless soil, freely drained soil and structureless soil. The area seems dominated by red and yellow structureless soil with a plinthic horizon.

Top soil of many parts of the property and on alternative site is disturbed or degraded by erosion as the property is used for cultivation and mining activities, the permit area is located in a flate slope where storm water not easily flows in high speed, it flows in a slow speed as the slope is flate which most of the storm water is being dammed in after rain fall. As it is highlighted below on map (see Figure 4), the project falls under soil type or association with class 1 to 4, undifferentiated structureless soil as stated in the soil classification map. Soil classes from this type of soil is characterised by sand, red soil which is less productivity due to dominating of sand soils have severe limitations that reduce the choice of plants or that require special conservation practices, soils and miscellaneous areas have limitations that preclude commercial plant production and restrict their use to recreational purposes, wildlife habitat, or esthetic purposes. Several different soil forms are found in the proposed area. Pink, brown and green, structureless, sandy loam to sandy clay soils, generally moderately deep to deep. Soil forms mainly include Hutton and Clovelly, with some shallow Glenrosa and Mispah soils.

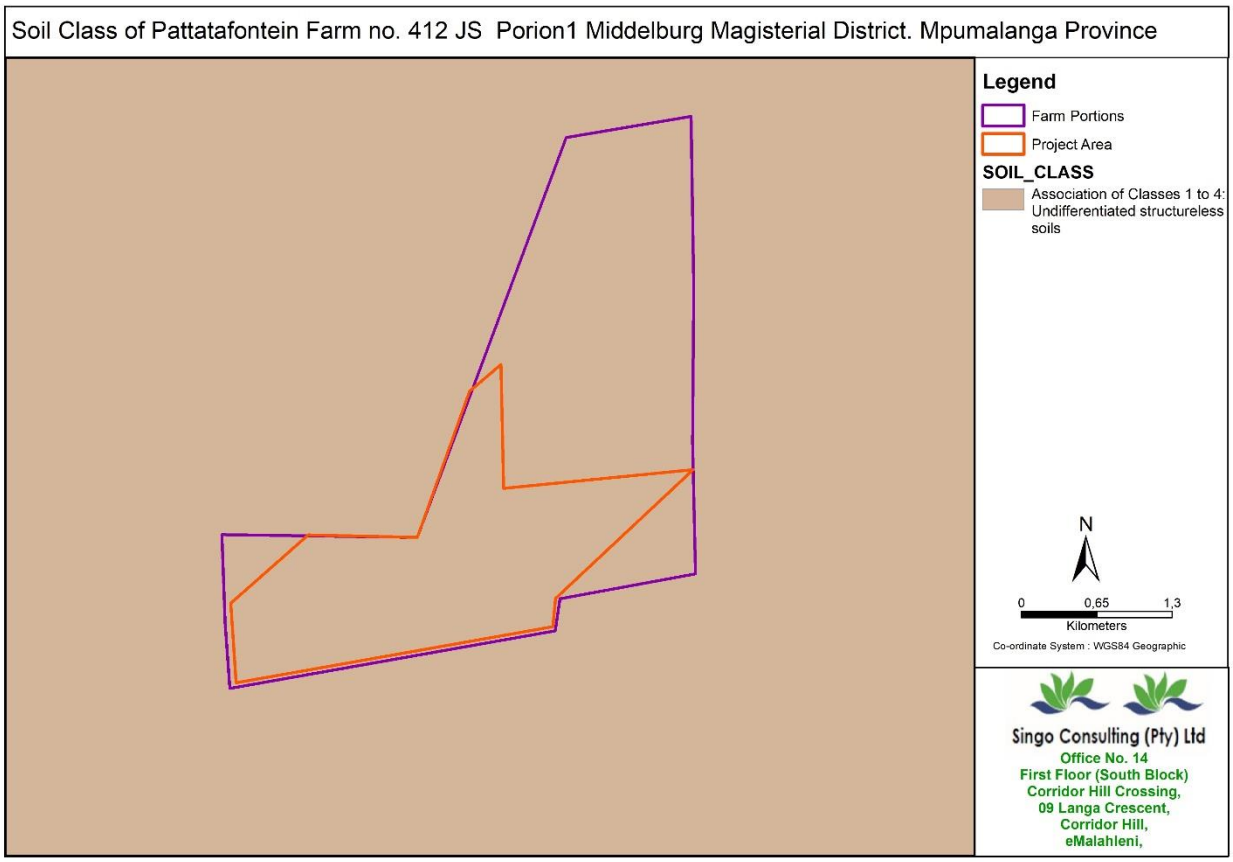


Figure 35: Soil classification map in permit area

Table 9: Soil classification and its land capability

Soil Classes	Land Capability
Class 1	Has few limitations that restrict its use; it may be used safely and profitably. Suitable land with negligible limitations and is highly productive requiring only simple management practices.
Class 2	Has some limitations that reduce the choice of plants or require moderate conservation practice. Suitable land with minor limitations which either reduce production or require more than simple management practices to sustain the use.
Class 3	Has severe limitations that reduce the choice of plants or require special conservation practices. Suitable land with moderate limitations which is moderately suited to a proposed use but which requires significant inputs to ensure sustainable use.

Class 4	Has very severe limitations that restrict the choice of plants, require very careful management. Marginal land with severe limitations which make it doubtful whether the inputs required to achieve and maintain production outweigh the benefits in the long term.

The land suitability class for a land area is determined by the highest ranking limiting factor or a combination of a number of factors. Typically, only the most severe two or three limiting factors would determine the land suitability and the remainder become irrelevant. The soil class system is based on physical and chemical limiting factors

The area is comprised of only 1 to 4 classes of soil which is undifferentiated structureless soil which confirmed by GIS specialist on a soil map. This type of soil is characterised by sand, red soil which is less productivity due to dominating of sand soils have severe limitations that reduce the choice of plants or that require special conservation practices, soils and miscellaneous areas have limitations that preclude commercial plant production and restrict their use to recreational purposes, wildlife habitat, or esthetic purposes.

Figure 36: Soil Picture

External factors like climate, topography, erosion factors, surface rock and water quality parameters are brought in consideration to determine the present agricultural potential.

The permit area is also composed of the two dominating soil which are red to yellow structureless soil with plinthic and freely drained structureless soil. Red-yellow apedal, freely drained soils. Red and yellow colours, high base status. These two type of clay soil are the first layer which are visible as top layer where nutrients are stored for plants. Top soil combine with sand caused by erosion since the area has gentle to low steep slope towards eastern side where storm water flows from west to east. white silt clay which was top soil before land degradation occurred are now not seen clearly as the process of soil erosion through storm water.

Table 10: Land capability classes to establish land use

LAND CAPABILITY CLASS	**LAND USE OPTIONS**	**LAND CAPABILITY GROUPS**
Soil Classes from 1 to 4 which is undifferentiated structureless soil	Light grazing and Intensive well adapted for cultivation	Arable land
	Light grazing, moderate grazing and Intensive	Arable land
	Moderately well adapted cultivation and Intensive well adapted for cultivation. Intensive grazing and moderate grazing	Arable land
	Light grazing, moderate grazing and Intensive	Arable land

6. Characteristics of soil

The soils in the area vary significantly in physical and chemical composition over the different areas. They are strongly influenced by the underlying rocks (geology) from which they are derived from through the process of weathering, as well as by their position in the landscape and the origin of the parent material (in-situ versus colluvium derived).

Primary topsoil is the uppermost layer of soil used in site rehabilitation. It is salvaged from the surface horizons of areas to be disturbed, is relatively stable, contains seeds and microorganisms and is relatively fertile. Secondary topsoil (if used) is placed directly in contact with waste rock and may be obtained from subsurface soil horizons, including weathered rock. These colors are caused by accumulations of organic matter in soils. Humus coats the soil particles,

giving them a red color. Usually, the darker the color, the more organic matter the soil contains, and the more fertile and productive is the soil where dark colors are typical of A horizon. These are the colors of well-aerated soils well-aerated means that air moves freely into and out of the pore spaces of the soil. Some soils have light brown color where it mixed with sand caused by erosion and weathering but not dominating extending well down into the subsoil. That is usually an indication that top soil layer is become dry fast as sand soil dominated, but because second layer from top soil is dark brown to red color the area is classified as wet area. In wet soils, organic matter breaks down very slowly and the soil is darkened by the partially decomposed organic matter that accumulates.

7. Land use

The project area is fall under an area where current land use is mining, cultivation and grasses some of the land use are outside the 5 ha and even outside the property. An environmental and current land use map has been attached as figure 6 below. Land use was identified using aerial imagery and then ground-truth while in the field. The land use is classified as:

- Cultivated
- Grazing
- Natural
- Wetlands
- Infrastructure
- Disturbed

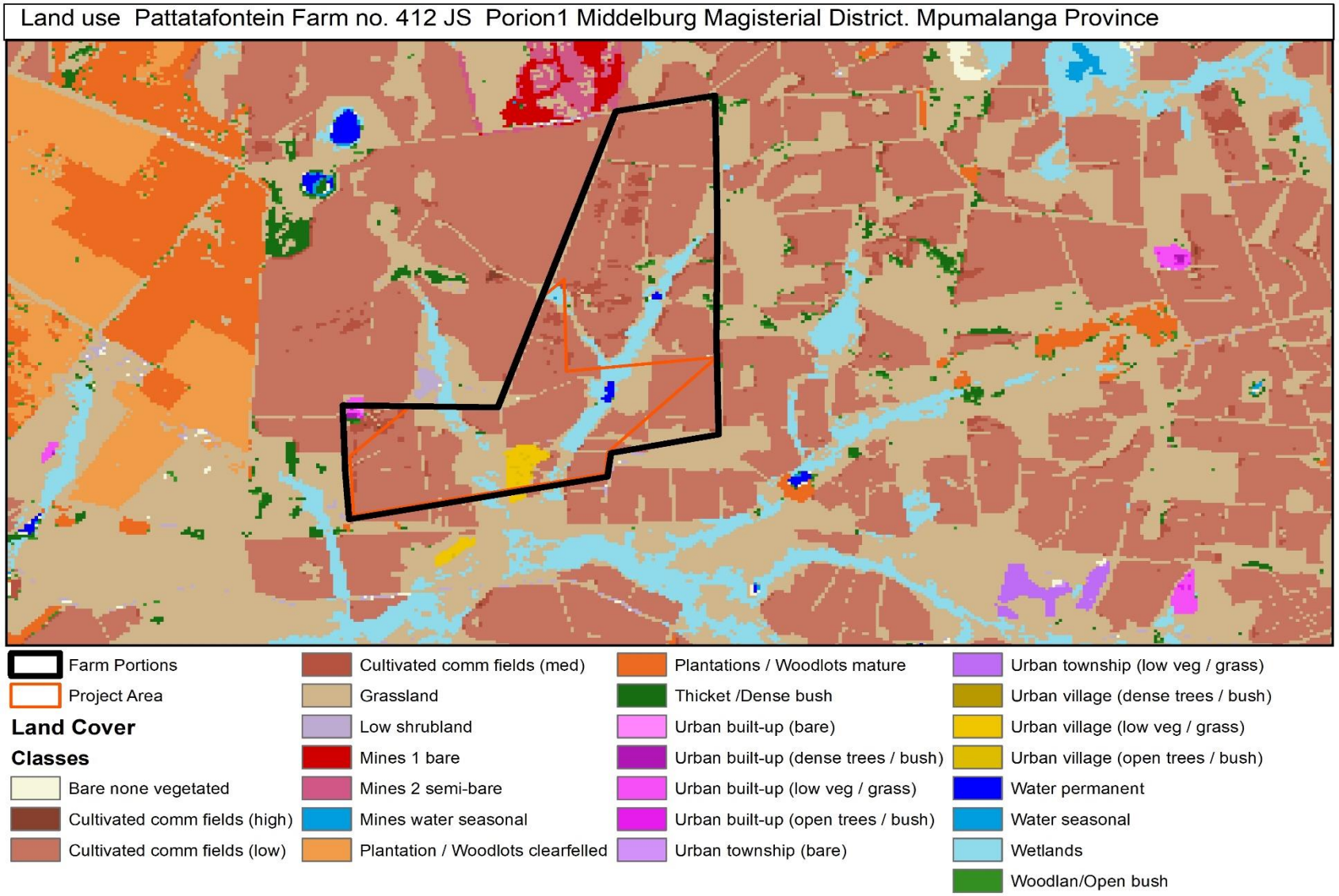


Figure 37: Land use map

8. Impacts Developed During Mining Activities

Soil compaction which will be caused by locomotion of heavy machinery during mining operation. Change in land use and change in land capability these will be caused by operation of mine infrastructure area. Mining will influence changes in land suitability such as changed in physical, chemical and biological properties of soil, changes in slope and slope length and changes in soil depth. The mining activities to occur on the mine are expected to change the nature and hence suitability of the land for certain land use activities, such as the changes on the suitability of areas for cropping and cattle grazing. Long periods of stockpiling create anaerobic conditions, resulting in a decline in microbial activity and/ or changes in bio diversity. Incorrect stripping of topsoil. Various soil horizons with different properties are stripped together and stockpiled.

9. Dust Generation

During the operational time all vegetation will be removed and creates a potential for wind erosion and therefore dust generation. A soil with low clay contents is susceptible to wind erosion, but has a low dust generation potential. Soils with high clay contents have an inherent stability and have a low dust generation potential, except for Vehicle movement. Vehicles can cause powdering and breaking of the soil structure. It is recommended that all roads should be graveled. Open-pit areas: Dust control can be achieved by additives like watering. Stockpiling areas: Rock armouring of the stock piles can reduce wind and water erosion.

10. Policy and Legislative Context

South African law requires that the Environmental Authorisation be sought for certain activities prior to commencement. As part of the application process for Environmental Authorisation it is necessary to assess the environmental and social impacts associated with the activities, so as to identify any potential negative and/or positive consequences as result thereof. Measures must be proposed to avoid or minimise these impacts according to NEMA and CARA. According to Conservation of Agricultural Resources Act 43 of 1984 Section 12(1)(a), a soil conservation work shall, except where otherwise provided in this Act or a scheme, be maintained by every land user of the land concerned and his successor in title at his own expense in a manner which, in the opinion of the executive officer, will ensure the continued efficiency thereof. The Conservation of Agricultural Resources Act (Act 43 of 1983) states that the degradation of the agricultural potential of soil is illegal. The Conservation of Agriculture Resources Act (Act 43 of 1983) requires the protection of land against soil erosion and the prevention of water logging and salinization of soils by means of suitable soil conservation works to be constructed and maintained. The utilization of marshes, water sponges and watercourses are also addressed.

11. Soil Management Plan

A soil monitoring plan should be implemented on site to minimize more soil degradation on site resulted from mine activities that will assess the following: Quality and volume of stockpiles on site, Soil acidity and salt pollution analyses, Fertility analysis, State of erosion on site. Management and monitoring of soil stockpiles, soil must be stored properly and revegetated to prevent erosion and to enable re-use during rehabilitation. This monitoring plan as well as the results of monitoring must be evaluated through an annual soil audit conducted by a soil specialist. The soil to retain and supply nutrients must be assessed during mine operation and during rehabilitation phase. Implement erosion and storm water runoff management measures as according to the EMP requirement to prevent or if prevention is impossible, to limit any erosion from occurring on the mining areas and surroundings and any storm water runoff from the mining areas, topsoil and overburden storage areas. Mine areas must be rehabilitated, and pastures planted immediately after mine is completed. The area will be monitored after rehabilitation. If erosion is detected during the rehabilitation phase, prevention measures will be followed.

Table 11: Erosion Causes and Control Measures

Area	Preferred Control Measures
Cleared Land	Avoid clearing the areas which not essential for the works minimise length of time soil is exposed Divert run-off from undisturbed areas away from the works and direct run-off from cleared areas to pollution control dam.
Exposed Subsoils	Direct run-off from exposed areas to sediment dam
Active Pit	Divert run-off from undisturbed areas away from pit and pump rainfall run-off from pit only to the environmental dams for future water recycling purposes or use directly from a sump for dust suppression purposes.
Rehabilitation	Recontour waste rock dumps progressively to landform criteria install drainage control works replace topsoil, rip on the contour and seed direct run-off from rehabilitated areas to sediment dams

12. Recommendation

The proposed mining land should be returned to its origin as before mining activities even though the applied land on the adjacent area it used for mining and the rehabilitation performance assessment in the proposed land must be done progressively (annually) during

the operational phase by a soil specialist. Final surface rehabilitation of all disturbed areas during mine activities. Rehabilitation of unnecessary water management facilities once appropriate to do so. Specialists should be used to evaluate the erosion and other possible impacts during the entire mining process. Limit impacts to the footprints to keep physical impacts as small as possible. Areas for road, site lay-out should be minimized, dust generation and vehicle associated pollution must be minimized.

13. Conclusion

The survey which was done in the permit area shows that agricultural potential is medium to high as the soils are easily worked and well supplied with plant nutrients. The dark to red clay soil identified during site assessment confirmed that it holds water well and are generally well drained with law permeability. The environmental impact assessment identified the following impacts on the soil for land capability and land use. Soil erosion, Soil compaction, Topsoil loss and degradation, Change in land use and Loss in land capability. The area of 5ha is classified as arable soil according to the mining classification. However, these soils fall into this type of freely drained, structureless soil and red or yellow structureless soil according to the agricultural classification system, which recommends these soils for grazing purposes.

Appendix 7: Company Profile

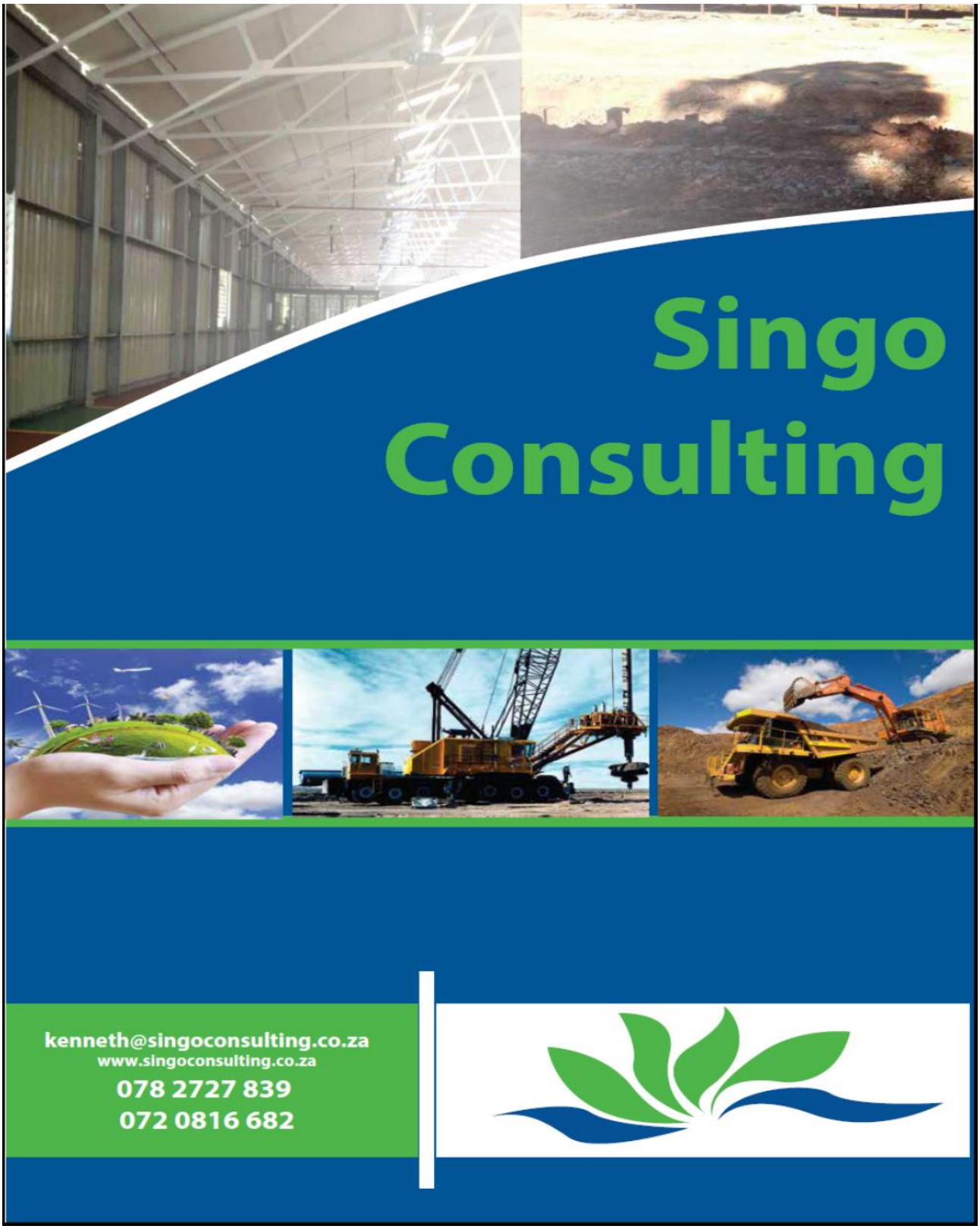


TABLE OF CONTENTS

SINGO CONSULTING

ABOUT US

SINGO CONSULTING

Company Background

In the year 2008, Singo Consulting (Pty) Ltd was formed as an Independent Consulting Company focused to create opportunities for Mining and Environmental Industry. The core business is providing Geological, Environmental and Hydrological Solutions to the industry.

The company has grown rapidly, and it is making itself known within the length and breadth of the Republic of South Africa. Singo Consulting takes pride in the outstanding quality of our services driven by our core values which are; due diligence, integrity, and honestly (independency).

Singo Consulting is a private independent research consultancy and advisory company based in eMalahleni (Witbank), holding no equity in any project and is owned by the staff. This enables it to offer clients objective support on crucial issues.

Vision

To be the leading consulting company within the consultancy market.

Mission

Singo Consulting (Pty) Ltd provides high value Geological, Hydrological Environmental and cleaning & rehabilitation specialized services to clients across a range of industries that are primarily natural resource based. The company aims to be a consultant that communicates sound waste and environmental services solutions.

As a full service Scientific and Environmental firm, Singo Consulting (Pty) Ltd considers each project on an individual basis, providing expert technical services while meeting deadlines and staying within budgets.

1

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MANAGEMENT

SINGO CONSULTING

Dr. Singo Kenneth Ndinannyi - Pr.Sci.Nat
Managing Director
PhD. MSc. BSc (Hons) Mining & Env Geol
+27 78 2727 839 | +27 72 081 6682
kenneth@singoconsulting.co.za

DR. N.K Singo is a registered competent person with the South African Council for Natural Scientific Professions (SACNASP: Earth Science Reg. No: 400069/16), Geological Society of South Africa (GSSA), the Land Rehabilitation Society of Southern Africa (LaRSSA) and South African Affiliates of the International Association for Impact Assessment. Kenneth holds an MSc in Environmental Management (University of South Africa (UNISA) & a BSc (Hons) in Mining & Environmental Geology the University of Venda).

He has just recently qualified for his Ph.D. (Geology, Applied Environmental Mineralogy and Geochemistry) at the University of Johannesburg. He worked for Malatleng Mining CC as Geologist Consultant and Environmental Analyst. In search for growth, he joined Ncondezi Coal Company in Mozambique, Tete Coal basin as Leading Project Geologist. He worked for Anglo American Thermal Coal as a Senior Project Geologist. He is the Managing Director and Principal Consultant for Singo Consulting (Pty) Ltd

Kenneth has knowledge of Mine Water and Mine Environmental Management (acid mine drainage, heavy metal assessments and tailings management) in various commodities including Silica (general), gold, magnesite and base metals (Cu, Pb, Zn). He has extensive knowledge of defunct mining waste and waste water impact assessments in communities residing in the vicinity of those mines. This knowledge was gained through MSc. Kenneth has sound knowledge of risk assessment, both in terms of human health and the environment. He is experienced in the appraisal of potential constraints, as well as devising means of mitigation through remedial strategy development, feasibility and validation.

During his PhD studies, Kenneth learned how to operate within contaminated lands. His PhD largely focused on disused mines (gold, copper and magnesite) ranging from Phase I and Phase II investigations to development of remedial strategies (i.e. Phase III). His PhD further equipped him to intensively understand the waste classification, profiling and understanding of the implications associated with the management of waste, landfill disposal profiling and development of beneficiation strategies.

MANAGEMENT

SINGO CONSULTING

Mrs Elelwani Singo

Safety Officer
NQF level 4 Engineering & Safety Management
+27 73 762 8866
elelwani@singoconsulting.co.za

Mrs Singo is responsible for all safety principles and best practices at the Operating site. She is the facilitator of organisational cost saving initiatives.

Mr Muvhulawa Emmanuel Netshisaulu

Geologist
BSc (Hons) Mining & Env Geology
+27 73 063 6441 | +27 76 913 9393
emmanuel@singoconsulting.co.za

Emmanuel holds a Bsc (Hons) Mining and Environmental Geology from the University of Venda for Science and Technology. He is currently busy with MSc proposal at the University of South Africa. He is in charge of Environmental (Environmental Impact Assessment, Basic Assessment Report and Hydrogeological studies) and Geological (Exploration Plans, Geological Mapping, Geotech Studies, and Drill Management) aspects at Singo Consulting firm.

He is currently working as an Environmental Control Officer (ECO) at Goedvertrouwd Colliery Coal Mining and Processing under Singo Consulting. He is a Geological & Environmental consultant on Singo Consulting (Pty) Ltd.

Mr Ndivhuwo Maxwell Mualusi

Administrative Assistant

Mr Maxwell Mualusi is responsible for assisting in daily office needs such as timelines of company's projects, maintaining appropriate filing systems and managing the company's general administrative activities.

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Mr Talelani Anthony Singo

Hydrologist

MSc Environ (Cand), BSc (Hons) Hydrology & Water Resources

076 6764 348 | 081 533 5218

anthony@singoconsulting.co.za

Anthony is a Hydrologist. He has been actively involved in many projects including, but not limited to: Water quality studies on boreholes drilled in close vicinity of the abandoned mine, water balance & chemistry of the tailings dumps of Musina Copper Mine, Giyani Louis Moore Gold Mine and Zwigodini Magnesite Mine.

He was a Team Leader for the Water Studies Project at Weideman Quarry Open Pit (Ermelo, MP). The scope of the project included: Surface, Intermediate and Deep-water sampling for the analysis of a variety of parameters to meet the DMR requirements.

He is currently busy with his Masters of Science (MSc) in Environmental Sciences at the University of South Africa (UNISA), the main focus of which is closure and rehabilitation of mines.

Anthony is a registered competent person with the South African Council of Natural Science Professions (SACNASP: Water Resources Science Reg. No: 116762), Geological Society of South Africa (GSSA), the Land Rehabilitation Society of Southern Africa (LaRSSA) and Southern Africa Water Institute (WISA). Anthony is currently busy with an MSc in Environmental Management (University of South Africa (UNISA)) and holds BSc (Hons) in Hydrology and Water Resources (the University of Venda).

Anthony has knowledge of Mine Water and Mine Environmental Management in various commodities. He has extensive knowledge of hydrological aspects, such as flood-line modelling, stormwater management (Pollution Control Dam (PCD) sizing, Silt traps sizing & channel sizing), Water quality monitoring (both Surface and ground water). Due to his MSc he already gained knowledge of mine rehabilitation. He is experienced in the appraisal of potential constraints, as well as devising means of mitigation through remedial strategy development, feasibility and validation.

He designs storm water management plans he acquired experience through different projects that were done in South Africa and other African countries such as Angola and many more. He delineates clean and dirty water catchments with the use of GIS.

MANAGEMENT

SINGO CONSULTING

MR STANLEY RAKHADANI

Senior Environmental Assessment Practitioner
BSc (Hons) Mining and Environmental Geology
MSc (Geochemistry) Proposal (UJ & Unisa)

078 840 9798 | 071 4075 8332

stanley@singoconsulting.co.za

Areas of Expertise: Environmental Management (incl. compliance monitoring & auditing), Mining & Geology, Geohydrology, Environmental Law, Water Management (incl. water use auditing), & Project Management

Key Responsibilities: As entitled by the policies of Singo Consulting, Mr Stanley Rakhadani's duties involve taking full responsibility to ensure quality control on all projects as well as managing in house team of consultants. Ensuring that projects are managed efficiently and according to their agreed timeframes and allocated budgets. Liaise with Clients and competent authorities. Conduct mineral exploration, environmental impacts assessment, public participation activities, environmental compliance audit, water use licence audit, borehole certification, pump tests, mine feasibility studies and compile sound and reader friendly reports/plans. Lodge permits/licence applications in terms of the Republic of South Africa laws such as NEMA (i.e. Environmental Authorizations), MPRDA (i.e. Prospecting Rights, Mining Permits, Mining Rights).

Recent Training: Environmental law, Waste Classification & Management, ISO 14001 (March 2018, Singo Consulting Offices, Lecture-Mr Tshusa) Environmental Management Principles (May 2018, Singo Consulting Offices, Lecture-Mrs Ramuhulu N)

Current Academic: Project Co-researcher on the project "Assessment of the potential Acid Mine Drainage (AMD) occurrence around previously mine stressed area using available boreholes (within 2km radius) and newly drilled boreholes at Goedvertrouwd Coal Mine in Balmoral, Mpumalanga Province"

Mr Livhuwani Sigwadi

Junior Consultant
BSc (hons) Environmental Management (Univen)

+2776 6529 062

livhuwani@singoconsulting.co.za

Sigwadi Livhuwani is a junior consultant at Singo consulting (Pty) Ltd from September 2018. He is responsible with all related EIA tasks such as advertisement of projects, conducting of public participation Process and also developing of Empr in the company

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MANAGEMENT

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Ms Samkele Lulutho Dandala

GIS Technician
BSc (Hons) Environmental Management (cand)
062 691 4321
samkelel@singoconsulting.co.za

Samkele Dandala holds a Bachelor's degree in Geography and Environmental Management and she is currently doing her honours in Environmental Management. Samkele has 2 years and 6 months experience in environmental consultancy. She is hardworking and goal driven individual who believes in a combination of working hard and working smart to achieve her goals.

She is a well-rounded individual in the Environment Management and GIS fields as she has been involved in various projects such as environmental consulting projects, disaster management, water use authorization and licensing, environmental remote sensing, and general mapping projects She is currently working as a GIS Technician and Environmental consultant at Singo Consulting.

Miss. Shonisani Rudzani

Junior Consultant
N.Dip Geology
+27 78 548 1244
rudzani@singoconsulting.co.za

Rudzani is a Junior Consultant. She joined Singo Consulting Pty (Ltd) in August 2018 and she has been actively involved in assistance with environmental authorization processes (including Basic Assessment and Scoping & Environmental Impact Assessment processes), report writing public and authority consultation, environmental site . assessment, assisting in the management of large and small EA and environmental permitting projects, as well as applying and enforcing Singo Consulting Pty (Ltd) project standards. She was a core masker intern at Terracore (Pty) Ltd and she was involved in several projects including making, product check, core log interpretation and box masking and also worked at Vhembe Municipality as junior technician, involved in drilling projects, office based report check and admin work.

Rudzani is currently studying towards her BTech in Geology at Tshwane University of Technology and she is doing her research project with Singo Consulting Pty (Ltd) under the supervision of Mr FS Rakhadani and Mr NK Singo.

MANAGEMENT

SINGO CONSULTING

Miss Boipelo Motlhatlhedi

Junior Consultant

BTech: Geology (Cand), N.DIP: Geology

083 473 8300

boipelo@singoconsulting.co.za

Boipelo is a Junior Consultant. She joined Singo Consulting in May 2018 and she has been actively involved in assistance with environmental authorization processes (including Basic Assessment & Scoping & Environmental Impact Assessment processes), report writing, public and authority consultation, environmental site assessment, assisting in the management of large & small EA and environmental permitting projects, as well as applying and enforcing Singo Consulting project standards.

She was a Geophysics intern at Open Ground Resources and she was involved in several projects including gravity and Ground Penetrating Radar (GPR). Boipelo is currently studying towards her BTech in Geology at Tshwane University of Technology and she is doing her research project with Singo Consulting under the supervision of Mr FS Rakhadani and Mr NK Singo.

Mr Tshifhiwa Netshiavha

Junior Consultant

BSc (Hons) Mining and Environmental Geology

+27 076 775 6389 | +27 66 129 5959

owen@singoconsulting.co.za

Mr Netshiavha is a junior consultant in Singo Consulting. Singo Consulting Pty (Ltd) in July 2018 appointed him as a junior consultant. He is accountable with the advertisements of services from Singo Consulting. Prospecting Rights projects and also responsible with the development of Rehabilitation plan.

He did research in legal and illegal mining (Hons) and came up with an applicable model of health and safety. It is highlighted that with great intellectual nourishment from Singo Consulting Pty (Ltd), he will consider enrolment of Msc in Geology.

SERVICES

SINGO CONSULTING

OVERVIEW

We are a receptive company that provides an opportunity to clients to solve the following problems.

Geological

- Borehole Planning and Pegging
- Drilling Management and Supervision
- Core Logging (diamond, percussion and RC drilling) and Core Sampling
- Exploration Rehabilitations and Managing
- Geological (Exploration, Resource Estimation and Competency Report)
- Hydrological and Hydrology (Surface and Groundwater Studies)
- Soil Science (Soil profiling, Modelling and Soil Chemistry)
- Geotechnical (Soil and Rock)
- Mining Feasibility Studies

Environmental

- Conducting Environmental Impact Assessments
- Developing Environmental Management Plans
- Environmental Management Systems
- Legal Compliance with Environmental Mining & Water laws
- Social Impact Assessment
- Social and Community Development Plans

Waste Management

- Loading and transporting

Cleaning Services (our moto Clean it)

- Industrial Cleaning: Singo Consulting is a leading service provider within the mall or shopping complex, mining, government and manufacturing industries. We pride ourselves in customer satisfaction by providing excellent quality services on time. We are driven by the need to protect the environment through preservation, reuse & recycling.
- We do, office and other industrial Cleaning, dam cleaning, Dredging Services, Slurry Pumps, High Pressure Cleaning & more

Site Rehabilitation

- Singo Consulting a leading specialist in providing innovative and effective solutions for slimes dam, dust control, & the rehabilitation of mining & industrial sites. We provide a turnkey solution to all environmental problems.
- Close of the drill site and mined out areas

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GALLERY

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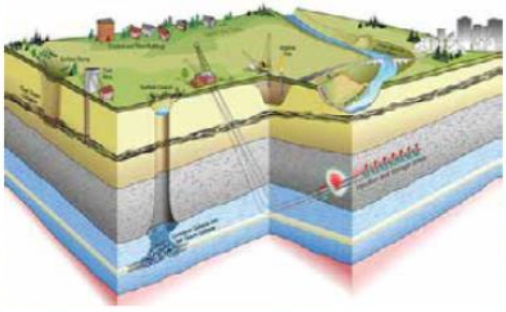

CONTACT US

SINGO CONSULTING

POSTAL ADDRESS

P/ Bag 7214
Postnet Suite 125
Witbank (Benfleur)
eMalaheni
1035, ZA

OFFICE ADDRESS

09 Langa Crescent,
Corridor Hill Crossing
First Floor (South Block),
Office No. 14,
eMalahleni

CONTACT DETAILS

+27 78 2727 839
+27 72 081 6682
+27 86 5144 103
www.singoconsulting.co.za
kenneth@singoconsulting.co.za