BASIC ASSESSMENT REPORT

AND

ENVIRONMEMTAL MANAGEMENT PROGRAMME REPORT

PROSPECTING RIGHT AND ENVIRONMENTAL AUTHORISATION APPLICATION FOR COAL, PSEUDOCOAL, TORBANITE/OIL SHALE ON PORTION REMAINDER OF THE FARM UMNAMATA 8508-GT UNDER THE MAGISTERIAL DISTRICT OF UMZINYATHI, KWA-ZULU NATAL PROVINCE

DMRE REF: KZN 30/5/1/1/2/11056 PR

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PREPARED FOR:

mineral resources & energy

Department:
Mineral Resources and Energy
REPUBLIC OF SOUTH AFRICA

2021

mineral resources & energy

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BASIC ASSESSMENT REPORT AND ENVIRONMENTAL MANAGEMENT PROGRAMME REPORT

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

NAME OF APPLICANT	**Abangani Projects CC**
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FILE REFERENCE NUMBER SAMRAD:	KZN 30/5/1/1/2/ 11056 PR

DOCUMENT CONTROL	
Project Title:	Prospecting Right Application on portion remainder of the farm Umnamata 8508-GT
Mineral	Coal, Pseudocoal, Torbanite/Oil Shale
Site Location	Umzinyathi Magisterial District, Kwa-Zulu Natal Province.
Compiled on behalf of	Abangani Projects CC
Compiled By	Miss Deshney Mapoko
Reviewed By	Dr Kenneth Singo
Submitted to	Department of Mineral Resources and Energy
Date	2021

EXECUTIVE SUMMARY

Abangani Projects CC (the Applicant) has applied for a Prospecting Right in terms of Section 16 of the Mineral and Petroleum Resources Development Act, 2002 (Act 28 of 2002) (MPRDA) and an Application for Environmental Authorization in terms of Chapter 6 of GNR 326 promulgated under the National Environmental Management Act (Act 107 of 1998) (NEMA) to prospect for Coal, Pseudocoal, Torbanite/Oil Shale minerals.

The proposed project will aim to ascertain if economically viable mineral deposit exists within the application area. To undertake prospecting activities, Abangani Projects CC will require a Prospecting Right in terms of the Mineral and Petroleum Resources Development Act (MPRDA, Act No.28 of 2002). The Applicant is also required to obtain an Environmental Authorisation (EA) in terms of the National Environmental Management Act (NEMA, Act No. 107 of 1998) which involves the submission of a Basic Assessment Report (BAR). Singo Consulting (Pty) Ltd has been appointed by Abangani Projects CC to compile the BAR (this report) in support of the Prospecting Right application submitted by Abangani Projects CC, which in turn will be submitted to the DMRE for adjudication.

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

The proposed Prospecting Right Area is situated over the portion remainder of the farm Umnamata 8508-GT and is located approximately 6.79 km North-East of Dundee and approximately 10.77 km North-West of Calrossie within the Endumeni Local Municipality under the Umzinyathi Magisterial District.

A Prospecting Work Programme (PWP) has been developed to include both non-invasive and invasive prospecting activities. The target geological formation of the PWP is the Karoo Supergroup.

The Prospecting Right Application and Application for EA was submitted to the DMRE. The DMRE accepted the proposed application on the 17th of June 2021. The BAR (this report) will be made available to Interested and Affected Parties (I&AP's) for comment from the 06th of September 2021 to the 06th of October 2021. All comments

received during this period will be included in the final BAR & EMPr to be submitted to the DMRE for adjudication.

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LIST OF ABBREVIATIONS

BAR	**: Basic Assessment Report**
BID	**: Background Information Document**
CA	**Competent Authority**
CBA	**Critical Biodiversity Area**
DAFF	**Department of Agriculture, Forestry and Fisheries**
DEFF	**Department of Environmental, Forestry and Fisheries**
DMRE	**: Department of Mineral Resources and Energy**
DWS	**: Department of Water and Sanitation**
EA	**: Environmental Authorisation**
EAP	**: Environmental Assessment Practitioner**
EIA	**: Environmental Impact Assessment**
EIMS	**: Environmental Impact Management Services**
EMPr	**: Environmental Management Programme Report**
GIS	**: Geographic Information System**
I&AP	**: Interest and Affected Party**
MPRDA	**: Mineral and Petroleum Resources Development Act**
NEMA	**: National Environmental Management Act**
NEMWA	**: National Environmental Management Waste Act**
NWA	**: National Water Act**
PPP	**: Public Participation Process**
PRA	**: Prospecting Right Application**
PWP	**: Prospecting Works Programme**

DISCLAMER

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

IMPORTANT NOTICE

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

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

In terms of section 16(3)(b) of the EIA Regulations, 2014, any report submitted as part of an application must be prepared in a format that may be determined by the Competent Authority and in terms of section 17 (1) (c) the competent Authority must check whether the application conforms to the requirements of the EIA Regulations, any protocol or minimum information requirements relevant to the application as identified and gazetted by the Minister in a government notice or instruction or guidance provided by the competent authority to the submission of application.

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

It is furthermore an instruction that the Environmental Assessment Practitioner must process and interpret his/her research and analysis and use the findings thereof to compile the information required herein. (Unprocessed supporting information may be attached as appendices). The EAP must ensure that the information required is placed correctly in the relevant sections of the Report, in the order, and under the provided headings as set out below, and ensure that the report is

not cluttered with un-interpreted information and that it unambiguously represents the interpretation of the applicant.

Objective of the basic assessment process

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

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

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

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

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

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

(ii) the degree to which these impacts—

(aa) can be reversed;

(bb) may cause irreplaceable loss of resources; and

(cc) can be managed, avoided or mitigated;

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

(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 ASSESSMENT AND BASIC ASSESSMENT REPORT

1. Contact Person and Correspondence Address

a) Details of:

(i) The EAP (s) who prepared the report

Name of the Practitioner	Miss Deshney Mapoko
Designation	Junior consultant (Project EAP)
Tel No.	+27 13 692 0041
Cell No.	+27 72 116 1225
Fax No.	+27 86 515 4103
Email	deshney@singoconsulting.co.za

(ii) Details of the EAP who reviewed the report.

Name of the Practitioner	Dr NK Singo
Designation	Principal EAP (Reviewer)
Tel No.	+27 13 692 0041
Cell No.	+27 78 2727 839
Fax No.	+27 86 515 4103
Email	kenneth@singoconsulting.co.za

b) Expertise of the EAP (s)

The qualifications of the EAP

(With evidence attached as Appendix)

- **Miss Deshney Mapoko**

  Tshwane University of Technology, N. Dip Environmental Sciences.
  University of South Africa, BSc Environmental Management (Cand.)

- **Dr Kenneth Singo**

  University of Johannesburg, PhD (Applied Environmental Mineralogy & Geochemistry).

c) Summary of the appointed consulting company.

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

The company aims to be a consulting firm that communicates sound environmental services solutions. Singo Consulting (Pty) Ltd takes pride in the fact that it holds no equity in any project and is owned by the staff, enabling it to offer clients objective support on crucial issues.

❖ Curriculum Vitae of the EAP is attached in Appendix.

2. Locality of the Overall Activity

Table 1 Location of the Overall Activity

Farm Name:	Portion Remainder of the Farm Umnamata 8508-GT
Application area (Ha)	815.005 hectares
Magisterial district:	Umzinyathi Magisterial District
Distance and direction from nearest town	Approximately 6.79 km North-East of Dundee Approximately 10.77 km North-West of Calrossie
21-digit Surveyor General Code for each farm portion	N0GT00000000850800000

2.1. Locality map

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

The proposed prospecting right has been applied over the portion remainder of the farm Umnamata 8508-GT. The farm is located approximately 6.79 km North-East of Dundee and approximately 10.77 km North-West of Calrossie under the Endumeni local municipality within the Umzinyathi Magisterial District, Kwa-Zulu Natal Province. The project area can be accessed using the regional road R33 that crosses the project area on the Northern side of the farm Umnamata 8508-GT. See Figure 1 and Figure 2 below.

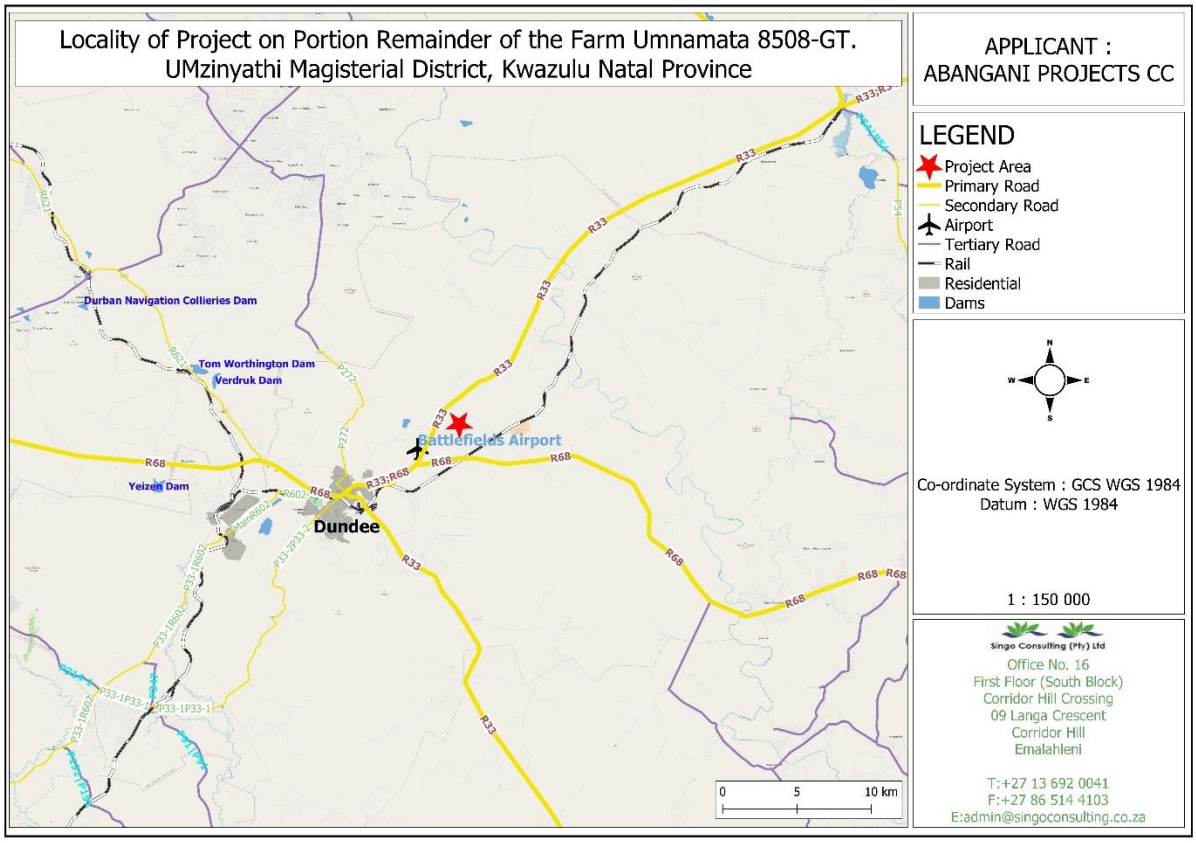


Figure 1: Locality map of the project area

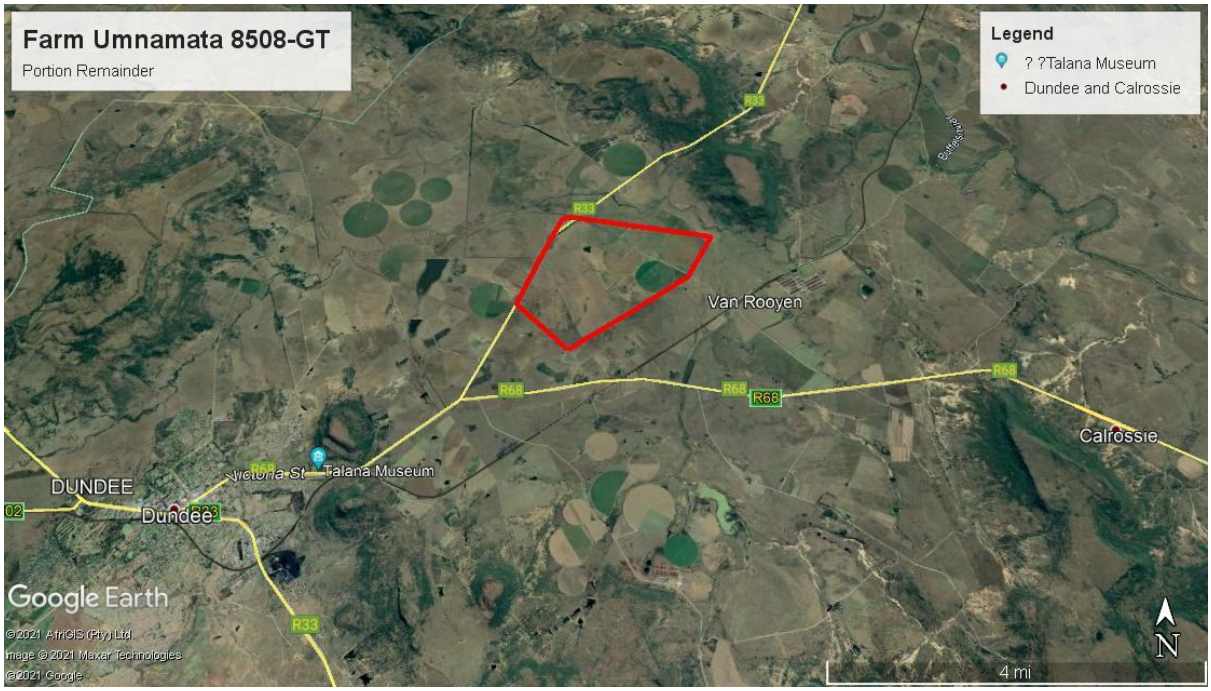


Figure 2: Google Earth View of the project area

2.2. Description of the scope of the proposed overall activity

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

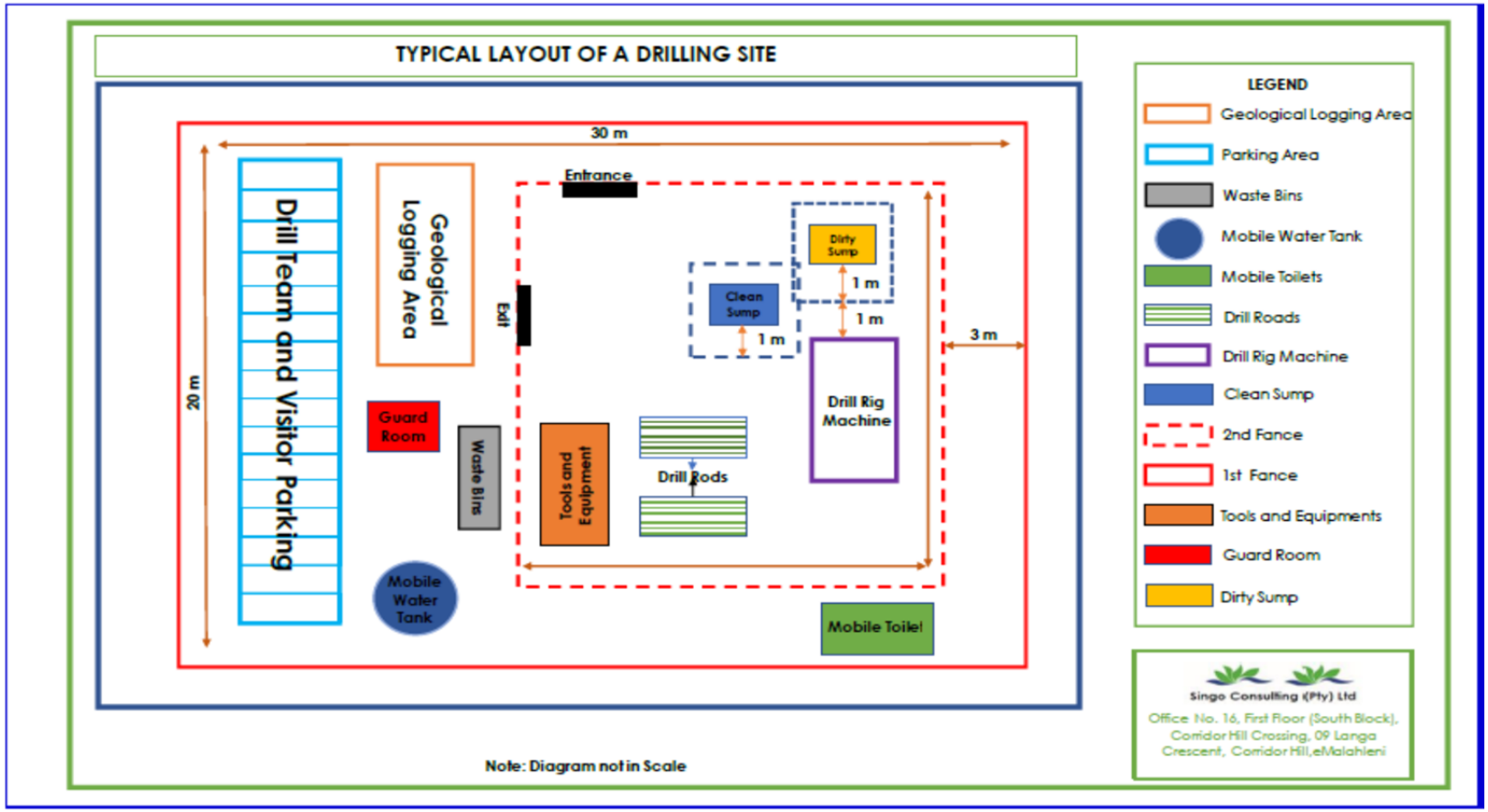


Figure 3: Typical layout plan of a drilling site

2.3. Listed and specified activities

Table 2: 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 327, 325 & 324**	**WASTE MANAGEMENT AUTHORISATION** (Indicate whether an authorisation is required in terms of the Waste Management Act). **(Mark with an X)**
Prospecting Area	815.005 ha	**X**	GNR 327 Listing Notice 1, Activity 20.	Not required
Vegetation clearing	0.6 ha		Not Listed	
Drilling	0.6 ha		Not Listed	

Table 3: Summary of the drilling activities

Drilling method	Diamond drilling
Number of boreholes	10
Depth of boreholes	100m
Duration of drilling	A borehole takes about 2 days to complete; 10 will take at least 20 days.
Demarcated working area	0.6 ha for all 10 drilling sites
Total area to be disturbed	30*20=600m² 10 boreholes* 600m²=6000 m² 6000 m²÷10000=0.6ha

2.4. 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)

Background

Abangani Projects CC is applying for a Prospecting Right without bulk sampling, to prospect for Coal, Pseudocoal and Torbanite/Oil Shale minerals on the

aforementioned properties. The area demarcated for the prospecting covers an area of approximately 815.005 ha (refer to Table 2 below and Figure 5).

Prospecting work will initially entail a high-level desktop study and potential desktop resource evaluation. This will include a data search of any previous drilling, trenching, sampling activities, exploration activities, existing maps and relevant historical data. On successful completion of this desktop study, further possible drilling, trenching and resource estimations will be performed if the results warrant it.

Description of the prospecting methods to be undertaken:

- **Planned non-invasive activities:**

Desktop studies to be undertaken over the area would include studying of geological reports, prospecting data, plans/maps, aerial photographs, topography maps and any other related geological information about this area.

- Consultation with landowners:

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

- Data processing and validation:

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

- ❖ Electronic procession of borehole data
- ❖ Validation of lithological data versus analytical data.
- ❖ Stratigraphic correlation of the applied commodities
- ❖ Editing and correction of data on database.

- Lithofacies and mineral quality modelling:

Variations in a stratigraphic unit across the reserve area are generated and illustrated by contoured maps showing lateral trends of most significant properties. This is done by the utilization of computerized geological software. Detailed in situ reserve and

quality determinations will then be possible through computer based modelling, and qualitative and quantitative calculations.

- Compilation of geology report:

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

- Inspection/Consultation with landowner:

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

- **Planned invasive activities:**

  - Diamond drilling:

The drill rigs are truck-mounted and equipped with diesel driven engines to provide power to the drill. A truck fitted with a water tank will be used to provide the water supply for the drilling process. The drill site is not larger than 20m x 30m (600m²) and consists of a drill rig, water pump, caravan and portable chemical toilet. Except for the sump required by the drill rig, no excavations will be required. The sumps are normally 1 m^2 and 50 cm (0.5 m) deep. It is always necessary to separate topsoil from the subsoils. The dimension of the borehole is NQ (±76 mm), and the average depth of the mineral reserve is estimated to be 100 m. On completion of the borehole, it is cemented from the bottom up. The only rehabilitation that will specifically be required is borehole capping and revegetation. Drill holes must be permanently capped as soon as is practicable.

- **Pre-feasibility studies**

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

A geological report (or Competent Person Report) will be compiled which entails all results obtained during the exploration phase. This will be done by the appointed Exploration Geologist.

Table 4: Proposed prospecting phases and time frames.

Phase	Activity	Skill(s) required	Timeframe	Outcome	Timeframe for outcome	What technical expert will sign off on the outcome?
Phase1: Invasive Prospecting						
	Diamond drilling (5 boreholes) Sampling	Exploration Geologist Exploration Geologist	Month 1 (30 days)	Borehole core data Coal, Pseudo coal and Torbanite/Oil shale samples Rock core samples Core analyses Rock core analyses	Month 1 Month 2 – 3	Exploration Geologist Laboratory analyst
Phase 1: Non-invasive Prospecting						
	Consultations with landowners	Land Tenure Specialist	Month 1	Legal Access Agreement	Month 1	Land Tenure Specialist
	Data processing and validation	Exploration Geologist	Month 7-8	Stratigraphic correct borehole data Analytical correct borehole data	Month 8 – 10 Month 8 - 10	Exploration Geologist /Database administrator Exploration Geologist /Database administrator
	Lithofacies and Coal quality modelling	Exploration Geologist	Month 10-12	Contour maps Reserve breakdown	Month 10-12	Exploration Geologist /Modeller
	Inspection/Consultation with landowners	Land Tenure Specialist /Drilling contractor	Month 5-6	Rehabilitation clearance certificate	Month 5 - 6	Land Tenure Specialist / Environmental officer
Phase 2: Invasive Prospecting						
	Diamond drilling (3 borehole)	Exploration Geologist	Month 13	Borehole core data Coal core samples Rock core samples Core analyses Rock core analyses	Month 13 Month 13-14	Exploration Geologist Laboratory analyst
	Geophysical survey (Optional)	Geophysicist Exploration Geologist	Month 13-15	Lithology data Structural data	Month 13-14	Geophysicist
	Geohydrological survey (Optional)	Geohydrologist Exploration Geologist	Month 13-14	Borehole water yield Water samples	Month 17-20	Geohydrologist
Phase 2: Non-invasive Prospecting						
	Consultation with landowners	Mining Rights officer	Month 12	Legal Access Agreement	Month 12	Land Tenure Specialist

Phase	Activity	Skill(s) required	Timeframe	Outcome	Timeframe for outcome	What technical expert will sign off on the outcome?
	Data processing and validation	Exploration Geologist	Month 17-18	Stratigraphic correct borehole data Analytical correct borehole data	Month 20 – 22 Month 20 - 22	Exploration Geologist /Database administrator Exploration Geologist /Database administrator
	Lithofacies and coal quality modelling	Exploration Geologist	Month 22-24	Contour maps Reserve breakdown	Month 22-24	Exploration Geologist /Modeler
	Inspection/Consultation with landowners	Mining Rights officer	Month 16-17	Rehabilitation clearance certificate	Month 16 - 17	Land Tenure Specialist / Environmental officer
Phase 3: Invasive Prospecting						
	Diamond drilling (2 borehole)	Exploration Geologist	Month 25	Borehole core data Coal core samples Rock core samples Coal core analyses Rock core analyses	Month 25 Month 25-60	Exploration Geologist Laboratory analyst
	Directional drilling (Optional)	Exploration Geologist	Month 24-30	Lithological data	Month 24-60	Exploration Geologist
	Geophysical survey (Optional)	Geophysicist Exploration Geologist	Month 25-27	Lithology data Structural data	Month 25-60	Geophysicist
	Geohydrological survey (Optional)	Geohydrologist Exploration Geologist	Month 25-26	Borehole water yield Water samples	Month 29-60	Geohydrologist
Phase 3: Non-invasive Prospecting						
	Consultation with landowners	Mining Rights officer	Month 24	Legal agreement	Month 24	Land Tenure Specialist
	Data processing and validation	Exploration Geologist	Month 29-30	Stratigraphic correct borehole data Analytical correct borehole data	Month 32 – 60 Month 32 - 60	Exploration Geologist /Database administrator Exploration Geologist /Database administrator
	Lithofacies and Coal	Exploration Geologist	Month 34-36	Contour maps Reserve breakdown	Month 34-60	Exploration Geologist /Modeler
	Inspection/consultation with landowners	Land Tenure Specialist	Month 28-29	Rehabilitation clearance certificate	Month 28 - 60	Land Tenure Specialist / Environmental officer

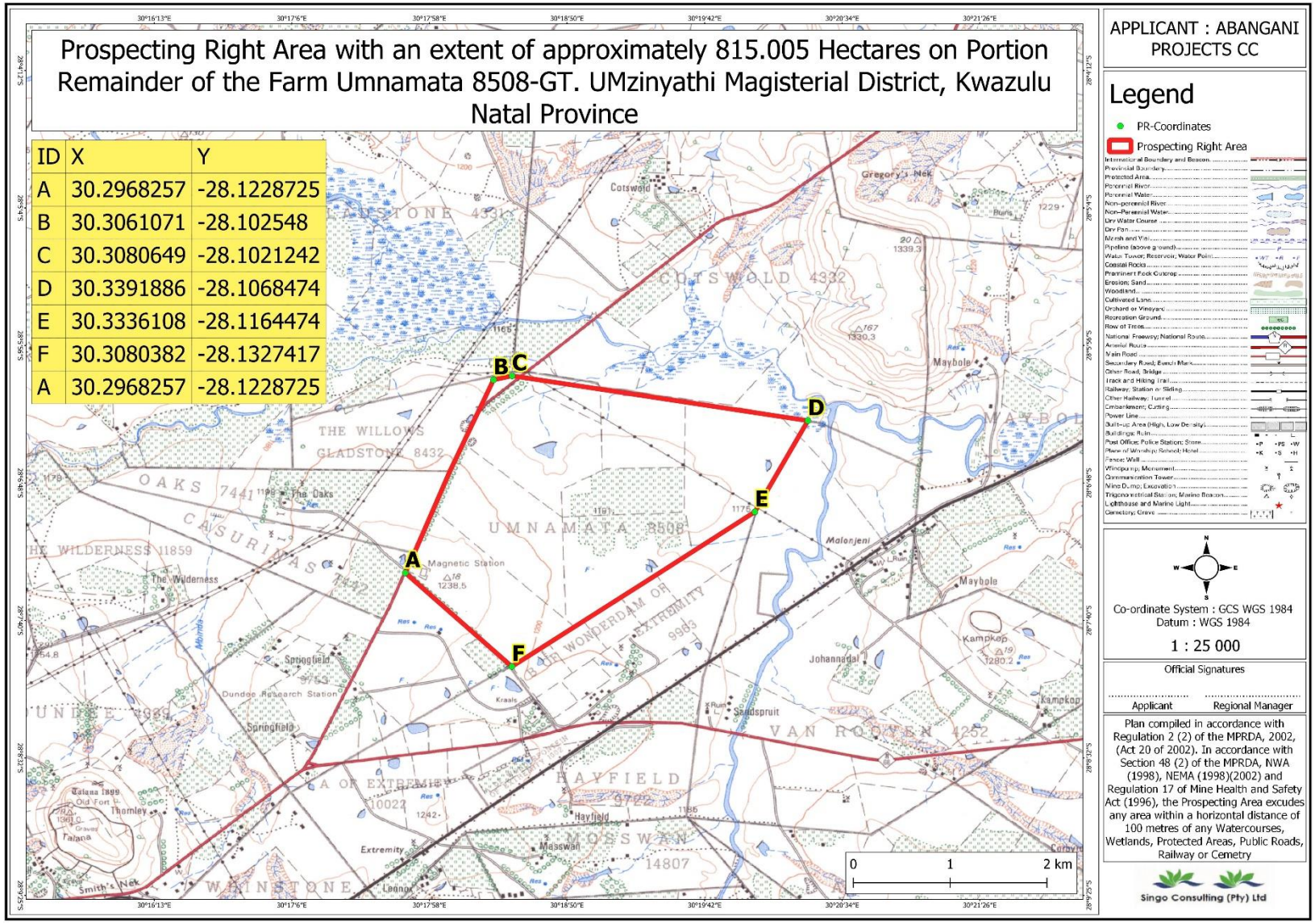


Figure 4: Regulation 2.2 plan for the project area

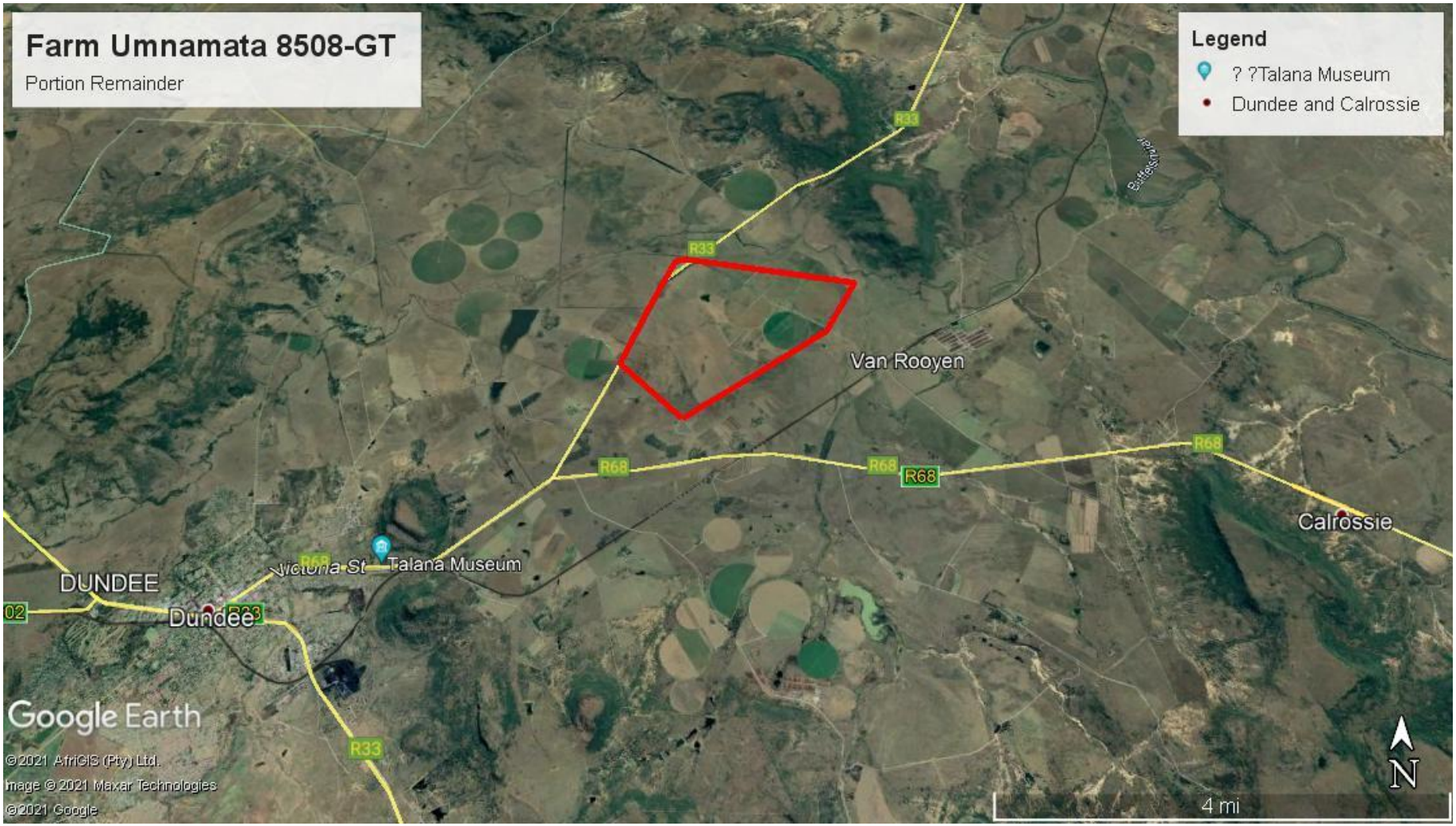


Figure 5: Google earth map showing the project area (In red polygon) and the nearest towns

2.5. Ancillary activities

2.5.1. Access roads

Access to the proposed prospecting area will be the R33 regional road that extends from Dundee. There are pathways that exist within the project area which will be used to access the borehole locations. As a result, no new road(s) will be constructed. The applicant must conduct a detailed technical assessment of the proposed site by negotiating access with the land and surface rights owners as well as the lawful occupiers of the farm. An agreement on access to the project area will be reached and agreed with the landowner. See Figure 5 for access roads to the project area.

2.5.2. Water supply

The proposed drilling system utilizes air only, which ensures that only on-site workers will need water for drinking and general purposes. A temporary storage tank to provide drinking water and general use will be placed on site. Water will be purchased from the local water suppliers in water containers. Best practice guidelines will be implemented during prospecting activities to prevent contamination in the waterways.

2.5.3. Ablution facilities

Portable toilets will be installed on site for ablution purposes, thus reducing potential pollution associated with erecting sewage pipes underground. Portable toilets are dynamic, they can be moved from drill site to drill site, once drilling activities ceases, portable toilets will be easily removed from the drill site.

2.5.4. Accommodation

No accommodation will be provided on site but on neighboring towns.

2.5.5. Blasting and storage of dangerous goods

Blasting is beyond the scope of this project as no bulk sampling is possible under the Prospecting Work Programme (PWP), no blasting will occur. Instead, the project will include geological mapping, exploration drilling, sampling, resource modelling, and resource reporting. Limited quantities diesel fuel, oil and lubricants will be transported with the pick-up truck to the drill site.

3. Policy and Legislative Context

Table 5: Policy and legislative context

Applicable Legislation and Guidelines	Reference Where Applied (i.e. where in this document has it been explained how the development complies with and responds to the legislation and policy context)	How does this Development Comply with and Respond to the Legislation and Policy Context
National Environmental Management Act (No. 107 of 1998) (NEMA):	This entire report is prepared as part of the prospecting right application under the NEMA, section 24	In terms of the National Environmental Management Act an Application for Environmental Authorisation subject to a Basic Assessment Report. The application was lodged at the DMRE
Minerals and Petroleum resources Development Act (No.28 of 2002) (MPRDA): In support of the Prospecting Right Application submitted by Abangani Projects CC, the applicant is required to conduct a NEMA BAR process in terms of Section 5A and Chapter 16 of the MPRDA.	This entire report is prepared as part of the Prospecting Right Application under the MPRDA, section 16.	In terms of the Mineral and Petroleum Resources Development Act a Prospecting Right Application has been applied for Coal, Pseudocoal, Torbanite/oil shale minerals. The application was accepted on the**17th of June 2021.** DMRE Ref: **KZN 30/5/1/1/2/11056 PR**
National Water Act (No. 36 of 1998) (NWA): Water may not be used without prior authorisation by the DWS. Section 21 of the National Water Act (No.36 of 1996) the NWA water uses for which authorisation is required.	No Water Use Licence has been applied for this prospecting project.	No water use license is required for this Application. 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.
The National Environmental Management: Biodiversity Act (Act No. 10 of 2004 – NEMBA) Section 57 and 87	Regulations published under NEMBA provides a list of protected species (flora and fauna), according to the Act (GN R. 151 dated 23 February 2007, as amended in GN R. 1187 dated 14 December 2007) which require a permit in order to be disturbed or destroyed	No applications have been submitted in terms of the National Environmental Management: Biodiversity Act.
Endumeni Local Municipality Integrated Development Plan (IDP)	Land Claims	This department was consulted to ensure that the project does not take place where there is a land claim the claimants not knowing about the project. In addition to acquire the claimant's information to consult them before the project commence.

Strategic Development Framework (SDF)	Alternatives	In terms with the SDF of the Endumeni Local municipality, various strategies and associated policies should be adopted to ensure effective spatial development. The municipality must provide alternative means of support for rural/informal population in order to decrease dependence on the environment and subsistence agriculture. For this purpose, the following policies are adopted: Maximise economic benefit from mining industrial, business, agricultural and tourism development within the area. Promote a climate for economic development. Improve public and investor confidence in the region through crime reduction and infrastructure development.
Constitution of South Africa, **Specifically, everyone has the right:** **a) to an environment that is not harmful to their health or wellbeing; and** **b) to have the environment protected, for the benefit of present and future generations, through reasonable legislative and other measures that** **i) prevent pollution and ecological degradation;** **ii) promote conservation; and** **iii) secure ecologically sustainable development and use of natural resources while promoting justifiable economic and social development.**	BAR & EMPr	Prospecting activities will only proceed after effective consultation. All activities will be conducted in a manner that does not violate the Constitution of the Republic of South Africa.
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.

4. 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).

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

Assessment of the geological information available together with the site Assessment, the area in question is in favor of the Prospecting Right application of the commodities of interest. The applied farm area of application is used for residential and farming activities. It is during the prospecting phase that findings are established on whether the available mineral reserves can be mined at an economic gain. Should prospecting yield positive results, then a mining right/permit will be applied.

NEED AND DESIRABILITY OF THE PROPOSED PROJECT		
PART I: NEED		
Questions (Notice 792, NEMA, 2012)		Answers
1.	Is the land use associated with the activity being applied for considered within the timeframe intended by the existing approved SDF agreed to be the relevant environmental authority?	No. The project is not completely aligned with the objectives of the municipal Spatial Development Framework (SDF) however, it will not compromise the integrity of these respective forward planning documents, due to the small extent and fairly short-term period of the prospecting activities.
2.	Should the development, or if applicable, expansion of the town/area concerned in terms of this land use occurs here at this point in time?	The unemployment rate for Endumeni Local Municipality has significantly dropped from 46% in 2001 to 26.4% in 2011, and it is relatively lower than the district rate which is 36.5% and provincial rate which is 33%, as according to the municipality's IDP. The Abangani Projects CC's prospecting will have a positive impact on the socio-economic conditions of the local communities involved once prospecting proves economic viability of the area. In the case where prospecting results to mining,

		the socio-economic standing of the region as a whole will be uplifted resulting to job creation.
4.	Are the necessary services with adequate capacity currently available (at the time of application) or must additional capacity be created to cater for the development?	Yes. All infrastructure for services and capacity will be temporary and will be provided for the proposed prospecting/drilling activities. Temporary Infrastructure includes i.e Mobile toilets, temporary shaded area (in a form of Gazebo). Drilling mechanisms to be employed will be of diamond core drilling. The road networks are fully intact, and the project will not have a major impact on road congestion. Thus, additional capacity does not need to be created for the development.
5.	Is this development provided for in the infrastructure planning of the municipality, and if not what will the implication be on the infrastructure planning of the municipality (priority and placement of the services and opportunity cost)?	The development is not provided for in the infrastructure planning of the municipality as it is a small development of local importance. Thus, the proposed project will not have any implications for the infrastructure planning, as no services and/or infrastructure needs to be upgraded or created to cater for this project. The proposed project will making use of mobile structures.
6.	Is the project part of a national programme to address an issue of national concern or importance?	The mining sector is a significant contributor to the National GDP as well as a massive employer of people. This project will contribute to the National Development Plan of eradicating poverty/unemployment. Chapter 6 of the National Development Plan highlights an "inclusive rural economy" and the objectives of this plan are to create jobs in mining and industry and activating rural economies through service to small and micro mining.
PART II: DESIRABILITY		
7.	Is the development the best practicable environmental option for this land/site?	The majority of the study area is utilised for agricultural activities including cattle farming, which has already had an impact on environmental management. Following prospecting activities, the affected areas will be repaired.
8.	Would the approval of this application compromise the integrity of the existing approved and credible IDP	Partially. In terms of land use, the project does not meet the goals of the Local Spatial Development System (SDF) and Integrated Development Plan (IDP), although it does not jeopardize the credibility of these respective forward planning

	and SDF as agreed to by the relevant authorities?	documents. Unemployment is a concern in Endumeni Local Municipality, and prospecting should be able to preserve continuity of existing employment and develop additional jobs in the prospecting area for an extended length of time.
9.	Would the approval of this application compromise the integrity of the existing environmental management priorities for the area (e.g. as defined in EMFs), and if so, can it be justified in terms of sustainability considerations?	The integrity of the existing environmental management priorities for the area will not be compromised by this development.
10.	Do location factors favour this land use at this place? (this relates to the contextualization of the proposed land use on this site within its broader context).	The geology is the primary driver in determining the location of prospecting and mining. The project area is essential covered by the Karoo Supergroup which is known to host the minerals sought for. The current infrastructure suffices for the process of prospecting. The planned drilling activities does not need any new infrastructure.
11.	How will the activity of the land use associated with the activity being applied for, impact on sensitive natural and cultural areas (built and rural/natural environment)?	Archaeological and Heritage Impact Assessment (AIA/HIA) study will be conducted prior to the commencement of the drilling activities, this will be conducted over identified localized drill sites and access routes, as opposed to the entire exploration area. This recommendation will be submitted to the South African Heritage Resource Agency (SAHRA) for approval which was also consulted using the SAHRIS online system.
12.	How will the development impact on people's health and well-being? (E.g. In terms of noise, odours, visual character and sense of place, etc.)?	Noise, dust and visual pollution will increase, and possibly water pollution, if impacts are not managed effectively, but with the proper mitigation and good practice environmental management measures, it will result in minimal impacts.
13.	Will the proposed activity or the land use associated with the activity being applied for, result in unacceptable opportunity costs?	SA has been listed as the world's largest producer of coal resources. Realisation for mining lies solely on Prospecting.
14.	Will the proposed land use result in unacceptable cumulative impacts?	There are no significant cumulative impacts associated with this prospecting programme.

4.1. Motivation for the overall preferred site, activities, and technology

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,
- Very little natural vegetation needs to be disturbed in order to establish the prospecting area (0.6 ha).
- The prospecting area can be reached by using the R33 regional road that passes through the farm boundary.
- No residual waste as a result of the prospecting activities will be produced that needs to be treated on site. The general waste produced on-site will be contained in sealed refuse bins to be transported to the local municipal landfill site.
- As maintenance and servicing of the equipment will be done at an off-site 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.
- 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, more information will be discussed after the granting of the prospecting right.

4.2. 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.)

Prospecting is conducted in phases, where the activities and location of drilling and trenching to sample soil are dependent on the previous phase. Therefore, the specific locations and extent of soil sampling and diamond core drilling cannot be predetermined. The overall prospecting area is indicated in Figure 3. Areas to be avoided in terms of sensitivities are also indicated on the sensitivity maps in this report. Positioning of invasive prospecting planned in the sensitive areas and buffer zones should be conducted with a suitably qualified ecologist in order to avoid and/or minimize the destruction of any sensitive vegetation or habitats occurring in these areas.

Details of all alternatives considered

With reference to the site plan provided as Figure 3 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)

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

The following alternatives were investigated as feasible alternatives:

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

The proposed prospecting activities are to be undertaken on the portion remainder of the farm Umnamata 8508-GT, located under the Endumeni Local Municipality within the Umzinyathi Magisterial District. The proposed project area is situated approximately 6.79 km North-East of Dundee and approximately 10.77 North West of Calrossie. See Figure 1and Figure 2 above for the locality of the project area.

- The type of activity to be undertaken

Main activity conducted to determine the Coal, Pseudocoal and Torbanite resources present in an economic feasible quality and quantity is drilling. The boreholes will be drilled with the diamond drilling method so the geologists can get a clear understanding of the actual subsurface setting of the lithologies. As outlined in the PWP all activities will be conducted in a phase approach whereby the execution of a new phase will depend on the results of the preceding phase. Prospecting activities will not compromise any future land uses on the study area.

- 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 farm owners 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 focused.
- No changes to the layout are considered but with the geophysical survey information, the boreholes can be orientated to match the shape of the good quality of resource.

- The technology to be used in the activity

The technologies listed in the PWP have been selected as they are proven effective in the determination of resource viability within the proposed prospecting area. Some of the techniques employed in the non-invasive prospecting will include a literature survey, field reconnaissance/mapping, and geophysics survey of the geology, outcrops. Invasive technology alternatives have also been considered. It is hereby noted that the different phases and timeframes of the prospecting herein envisaged are, by their nature, dependent on the results obtained during the preceding phases of such prospecting. The proposals set out in the Prospecting Work Programme are therefore made on the basis that results obtained during the preceding phases may

necessitate reasonable changes and adaptations to such proposals, which will be reported as prescribed.

- The option of not implementing the activity

If the Prospecting Right is not granted, the potential to identify viable mineral resources could be lost. Historical prospecting and mining activities have taken place in the vicinity of the proposed prospecting right area and as such the proposed prospecting activities represent a continuation of surrounding land uses. Additionally, it allows for marginal land impacted on by historical prospecting and mining activities to be re-introduced into the economy.

5. 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)

A Public Participation Process is undertaken for the proposed prospecting right application. The process is undertaken to ensure compliance with regards to the requirements in terms of the Mineral and Petroleum Resources Development Act, 2002 (Act No. 28 of 2002) [as amended] (MPRDA), the National Environmental Management Act, 1998 (Act No. 107 of 1998) [as amended], (NEMA) and Environmental Impact Assessment Regulations (2014) [as amended].

5.1. Activities undertaken for the Public Participation Process (PPP)

This section of the report provides an overview of the tasks undertaken for the PPP to date. All PPP undertaken is in accordance with the requirements of the NEMA requirements and EIA Regulations (2014) [as amended]. It further provides an outline of the next steps in the PPP and makes recommendations for tasks to be undertaken during the environmental assessment phase of the environmental authorization process.

The PPP conducted for the proposed prospecting project to date include:

- **Identification of key Interested and Affected Parties (affected and adjacent landowners) and other stakeholders (organs of state and other parties)**

Public Participation is the involvement of all parties who are either potentially interested and / or affected by the proposed development. The principal objective of public participation is to inform and enrich decision-making. This is also its key role in this Basic Assessment process.

- **Formal notification of the application to I&APs (including all affected and adjacent landowners) and other stakeholders.**

The project was announced as follows:

❖ Newspaper advertisement

Publication of media advertisement (English) in the courier newspaper, page 7 on the 06th of August 2021. See Figure 6 for the proof of newspaper publication.

❖ Site notice placement

In order to inform surrounding communities, affected and adjacent landowners of the proposed development, site notices were erected on site and at visible locations close to the site on the 05th of August 2021. Refer to Figure 7 for the site notice placed on site.

❖ Written notification

I&AP's and other key stakeholders, who included the above-mentioned sectors, were directly informed of the proposed development by e-mail on the 10th of August 2021. I&APs were given 30 days to comment and / or raise issues of concern regarding the proposed development. Refer to Appendix C for proof of email notification.

❖ Notification to and consultation with landowners and/or lawful occupiers.

The proposed farm portions are owned by; A F T Property Trust-Trustees as according to the deed search results obtained from the WinDeed search conducted in Singo Consulting's premises. The draft BAR & EMPr will be shared with the identified landowners for commenting as well as an opportunity to register as Interested and Affected Parties for the proposed project. The department of land restitution was also consulted in order to enquire if there is a land claim that exists against the farm. Singo

Consulting is therefore awaiting correspondence from the department. See Figure 8 for the deed search results.

LEGAL NOTICES VACANCIES

LEGALS

CHARTERED ACCOUNTANTS (S.A.)
Reg. No. 2003/014418/07

ESTATE NOTICE

ESTATE NUMBER 005648/2021/PMB

In the Estate of the Late **PETRUS JOHANNES MAREE** , Identity Number **370131 5019 083**, of **DUNDEE**, who died on 05/04/2021.

Creditors and Debtors in the above Estate are hereby required to file their claims with and pay their debts to the undersigned within 30 days from date of publication hereof.

DATED at DUNDEE this 6th DAY of August 2021.

GREENHOUGH, McHARDY & JONES INC.
CF TORLAGE –Executor
P O Box 78
DUNDEE
3000

CFT/jg

VACANCY : CASHIER
COMPUTER LITERATE WITH PREVIOUS EXPERIENCE

VACANCY: SALESMAN
WITH HARDWARE KNOWLEDGE

FAX CV'S TO 034 212 4317

ICHTHUS CHRISTIAN SCHOOL

awaits application for

A TEACHING POST FROM JANUARY 2022 FOUNDATION PHASE GRADE 2

The Applicant must:
- be a reborn Christian
- be a member of a Christian Church
- be fully bilingual (English / Afrikaans)
- have a teaching qualification
- have a permanent SACE registration

Please hand CV & application form in at Ichthus

No faxed copies will be accepted
Any enquiries: 034 212 1276
or 082 668 3035
Closing date for application is
20 August 2021.

MYLOTEX (Pty)Ltd
T/A SPRINGLAKE COLLIERY

Mylotex (PTY) LTD trading as Springlake Colliery based in Hattingspruit under Dannhauser Local Municipality
Seeks to appoint suitable qualified and experience candidates to the following position:

2 x Fitters (Blasting Section)

REQUIREMENTS:
- Minimum of Grade 12 Certificate
- Must have completed apprenticeship and in possession of a recognized appropriate Trade Test
- Must have experience in Joy and Sandvik machinery underground mining Blasting Section equipment's and have proven track record in Safety Management.
- 3 years' experience underground environment
- Valid First Aid Certificate
- Must be in possession of a valid Certificate of Fitness (Red Ticket)

DUTIES AND RESPONSIBILITIES:
- Planning and scheduling of work activities
- Assign resources to tasks
- Replacement of motors
- Basic rigging work
- Alignment of gearbox
- Valve repair and installation
- Services and Maintenance of Joy and Sandvik machinery underground (Blasting Section)

How to apply: Send your CV (maximum 3 pages) via email to petrusd@sprinlakecolliery.co.za or. You may also submit your application to your interim community leadership.

Closing date: 13 August 2021

Preference will be given to applicants from the host community, Dannhauser local municipality, and if required skills are unavailable then Mylotex will consider applicants in and outside Amajuba District

Applications which have not been responded to within 21 days of the closing date should be regarded as unsuccessful.

NOTICE OF BASIC ASSESSMENT REPORT FOR THE PROSPECTING RIGHT FOR COAL ON PORTION 2, 8 AND 13 OF THE FARM MADEMOISELLE NO.123-HU, PORTION 1 AND THE REMAINDER OF THE FARM ONGEMAAKT NO.301-HU, PORTION 2 OF THE FARM ZALFLAGER NO.525-HU (PONGOLA NO.525-HU), WITHIN THE ABAQULUSI LOCAL MUNICIPALITY, UNDER THE JURISDICTION OF ZULULAND DISTRICT, KWAZULU-NATAL PROVINCE.
REF NO: KZN 30/5/1/1/2/11066 PR

Notice is hereby given in terms of Section 41 of Chapter 6 of the EIA Regulations published in Government Notice No. 326 of 7 April 2017 published in terms of National Environmental Management Act (Act 107 of 1998) as amended with the intention to undertake an Environmental Impact Assessment

NATURE OF ACTIVITY

Coal African Mining (Pty) Ltd has appointed EnviroStep (Pty) Ltd as an Independent Environmental Assessment Practitioners (EAP) to conduct an Environmental Impact Assessment Process in terms of the National Environmental Management Act (NEMA). Coal African mining (Pty) Ltd intents to prospect for coal on portion 2, 8 and 13 of the farm mademoiselle no.123-hu, portion 1 and the remainder of the farm Ongemaakt no.301-HU, portion 2 of the farm zalflager no.525-HU (Pongola no.525-HU). The following listed activities are triggered by the proposed project:

APPLICABLE LISTING NOTICE	ACTIVITY NUMBER
GNR 327	Activity 20 (a)
GNR 327	Activity 14
GNR 324	Activity 10
GNR 324	Activity 12

LOCATION

The proposed project is located on farm Mademoiselle 123-HU, portion 2, 8 and 13, portion 1 and the remainder of the farm Ongemaakt no.301-HU, portion 2 of the farm zalflager no.525-HU (Pongola no.525-HU), within the Abaqulusi Local Municipality, under the jurisdiction of Zululand District, KwaZulu-Natal Province

NAME OF APPLICANT

Coal African Mining (Pty) Ltd

NAME OF ENVIRONMENTAL ASSESSMENT PRACTITIONER

EnviroStep (Pty) Ltd

REGISTRATION OF INTERESTED AND AFFECTED PARTIES

Interested and affected parties (I&AP), who wish to participate by contributing comments or concerns, or would like obtain more information, should please contact us on the details below. You are kindly requested to register your details on this project database within 30 days of the date of this advertisement been published. As a registered (I&AP), you will be informed of all updates regarding the proposed project of Basic Assessment Report, including the availability of the draft Bar and EMP Report and the decision to grant or refuse the Environmental Authorisation made by competent authority.

REGISTRATION, QUERIES AND WRITTEN COMMENTS SHOULD BE SUBMITTED TO:

CONTACT PERSON	CONTACT DETAILS	EMAIL
Thabelo Nelwamondo	081 760 7362	tmatshisevhe@gmail.com
Vutomi Chabalala	071 533 4879	Vutomidesiree11963@gmail.com

EnviroStep

VACANCIES

ROUTE CONTROL CENTRE (RCC): HARRISMITH

POSITION: MANAGER FOR THE ROUTE CONTROL CENTRE IN HARRISMITH

Position: A position exists for a skilled Call Centre Manager at a Harrismith based route communication and incident management centre. The Call Centre manages and co-ordinates calls and incidents on a section of the N3 National Route, which runs from Heidelberg in Gauteng to Cedara in Kwa-Zulu Natal.

The required candidate must have extensive experience as a Call Centre Manager or preferably have been a Manager of road related operations such as toll plazas, weighbridges, or similar route related establishments. Candidates with extensive experience in a supervisory capacity or as a team leader in call centre operations will be considered provided they meet (and exceed) the required criteria. The available position is for a "Route Control Centre Manager" (also referred to as the "RCC Manager") which is a position of immense responsibility. The Manager for the Route Control Centre (RCC) needs to be a confident, independent, strong willed person, able to manage and oversee the entire operations and functional aspects of the complete Route Control Centre, ensuring that he/she has full knowledge of what is happening at the RCC at all times and must demonstrate that he/she is in full control of the centre.

The candidate will be required to supervise daily operations as well as a minimum of 16 personnel aiming for maximum efficiency, and ensuring that he/she achieves the desired results at all times. An excellent call centre manager must be organized, reliable and a results-driven professional. He/she must have a practical mind able to solve problems on the spot, partnered with an ability to see the "big picture" and make improvements. As a call centre manager, one must also have excellent customer service and communication skills.

The person must have a mature adult persona, be responsible, and be capable of exercising authority over personnel in the workplace. The personnel work in shifts 24hrs, 7 days a week, and 365 days a year. The RCC manager shall be in overall charge of the RCC at Harrismith, and must take responsibility for the entire centre and will be accountable to the following senior management of the N3 Toll Route:
a) Traffic Engineer.
b) The Operations Manager.

The Manager will also be required to develop and maintain close working relationships and to interact very closely with other N3 Toll Route based organisations with whom the RCC interfaces with in order deliver the required service outputs.

Responsibilities (amongst others):

1) Check and ensure call centre is fully operational on a daily basis.
2) Organise and prepare monthly duty Rosters for the personnel.
3) Work in accordance with the call centres Standard Operating Procedures and update to suit.
4) Develop objectives for the call centres day-to day activities.
5) Manage Road Incident Management System and preparation of monthly and quarterly reports.
6) Maintain the high standards of service the call centre has been known for over many years.
7) Hiring of suitable personnel and the training thereof.
8) First line troubleshooting of call centre issues and ensuring that proper fault reports are generated and reported to the correct service providers.
9) Engagement with system service providers to manage fault reporting and rectification.
10) Handle escalated customer service calls.
11) Ensure compliance of all personnel with the Standard Operating Procedures.
12) Ongoing personnel training interventions.
13) Crisis management, especially during "reportable" incidents.
14) Support of the RCC operations by fulfilling the role of the call centre staff, in an emergency.

Other Prerequisites for the position are:

1) The applicant must reside in Harrismith or be prepared to re-locate to Harrismith if currently residing elsewhere or reside within 30 kilometres from the RCC offices.
2) He/she must have a reliable motor vehicle and a valid driver's license.
3) Have extensive relevant or related experience in call centre operations.
4) Minimum qualification: High school diploma, as well as a one year study Certificate or Diploma in a communications and/or management.
5) Must have at least five years' experience in call centre management and/or other route industry related management and/or extensive operations experience of at least seven years in a position where he/she demonstrated oversight responsibility and must have been exposed to scheduling, reporting, and other similar management type functions.
6) The candidate must be proficient in speaking English, and must have very good writing skills in same.
7) Must be computer literate, and proficient with MS Word, MS Excel, and MS Power Point, and be knowledgeable with MS Outlook.
8) He/she must have a rudimentary understanding of the technical aspects of computers, and an elementary and simple knowledge of what a basic electrical installation consists of.
9) Knowledge of Customer Relationship Management (CRM) systems would be of benefit.
10) Must be conversant with social media platforms including Twitter and Telegram.
11) Must have good people management skills, be passionate about his/her work and must be able to work calmly under pressure and have good multi-tasking capabilities.

Remuneration: will be market related.

Candidates:
Candidates who fit these requirements must submit a written letter of application as well as a detailed CV to: info@ziec.co.za . Applications must be received by no later than 5pm, 12 August 2021.

NOTICE OF JOINT PUBLIC PARTICIPATION FOR PROSPECTING RIGHT AND ENVIRONMENTAL AUTHORIZATION APPLICATION. DMRE REF: KZN 30/5/1/1/2/11056 PR AND KZN 30/5/1/1/2/11057 PR

Application for Prospecting Right: Abangani Projects CC has lodged an application for Prospecting Right **(DMRE REF: KZN 30/5/1/1/2/11056 PR)** for **Coal, Pseudocoal, Torbanite / oil shale** on portion remainder of the farm Umnamata 8508-GT and the Prospecting Right **(DMRE REF: KZN 30/5/1/1/2/11057 PR)** for Coal on portion 1 and the remaining extent of the farm Rietvlei 186-GT, portions 3 and 7 of the farm Koppie Alleen 85-GT and portions 1 and 2 of the farm Stefco 428-GT, situated within the Magisterial District of Umzinyathi under the Endumeni Local municipality, Kwa-Zulu Natal Province.
Notice is given in terms of the Mineral and Petroleum Resources Development Act (MPRDA) (Act 28 of 2002) and EIA regulations 2014, published under Government Notice No. 982 in Gazette No. 3822 of 4 December 2014, amended on 7 April 2017, where one of the requirements is that Interested and Affected Parties be notified that **Abangani Projects CC** has applied for a Prospecting Rights.

INVITATION TO COMMENT

As part of the EIA process, more especially the public participation process for this proposed project, Interested and Affected Parties (I&APs) are invited to register and kindly submit any comments or concerns to reach **Ms Deshney Mapoko** on or before the **05th September 2021** using the contact details provided below. The public is also invited to review and comment on Draft Basic Assessment Report and Environmental Management Programme report (DBAR & EMPr) which will be available for review for a 30 days' calendar period from **06th September 2021 – 06th October 2021**. This report will be available at the **Dundee public Library** (Dundee, 3000), **Endumeni Local Municipality** (Civic Ctr, Victoria St, Dundee, 3000) and upon request from **Singo Consulting (Pty) Ltd** using the detailed EAP contacts' below, via emails; Dropbox link; Google drive; WeTransfer, etc.

ENVIRONMENTAL ASSESSMENT PRACTITIONER AND CLIENT DETAILS:

Singo Consulting (Pty) Ltd

Office No. 16, Corridor Hill Crossing
09 Langa Crescent, Corridor Hill
eMalahleni, 1035.
Contact person: Ms Deshney Mapoko
Tel No.: +27 13 692 0041
Fax No.: +27 86 514 4103
Cell No.: +27 72 116 1225
Email: deshney@singoconsulting.co.za

ABANGANI PROJECTS

No. 112 Old North Cast Road
Glen Anil
Durban North
Tel No.: +27 31 822 0507
Cell No.: +27 82 843 2243
Email: phhili@vodamail.co.za

Figure 6: Proof of newspaper publication (Page 7, Courier)

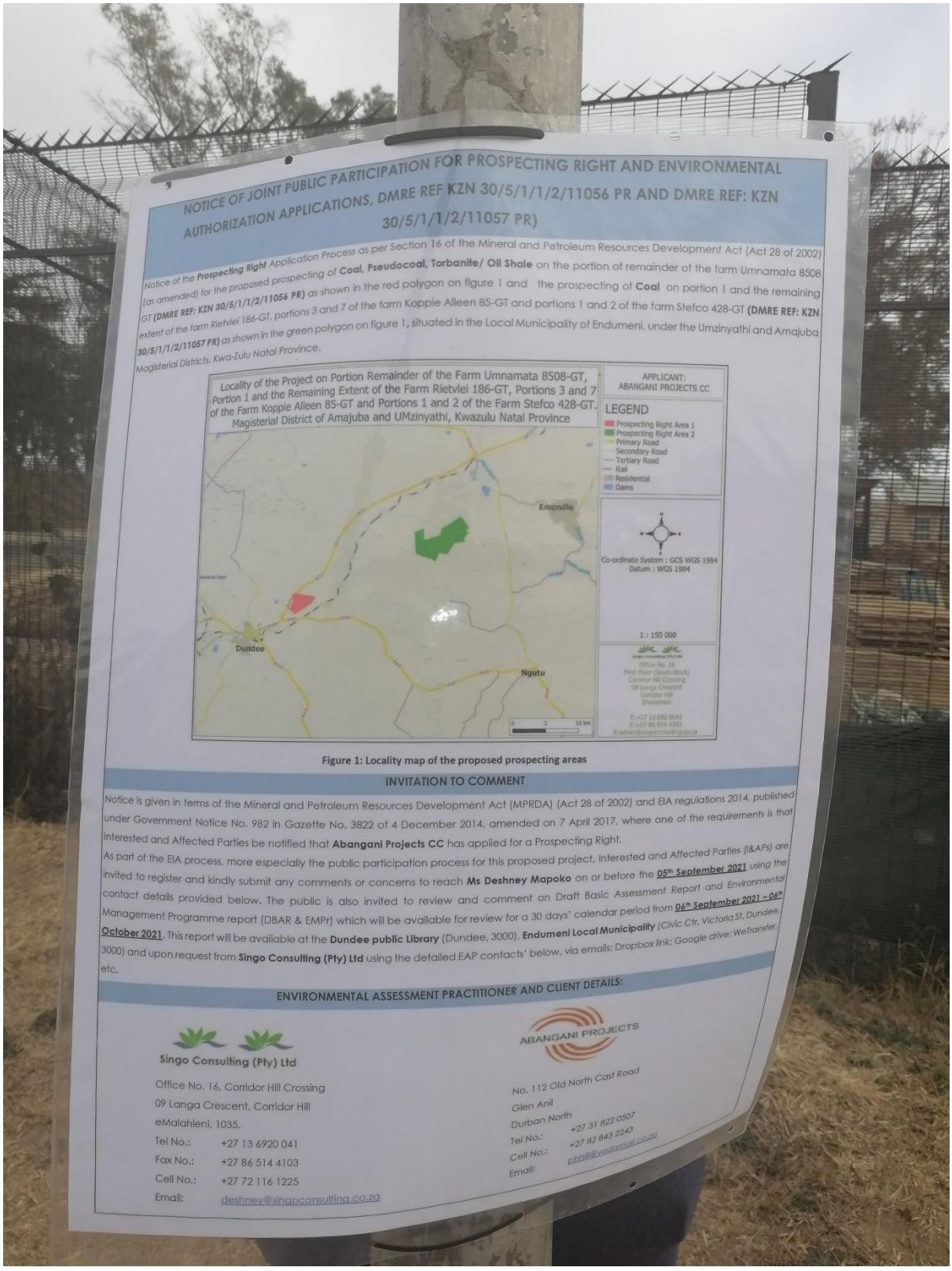
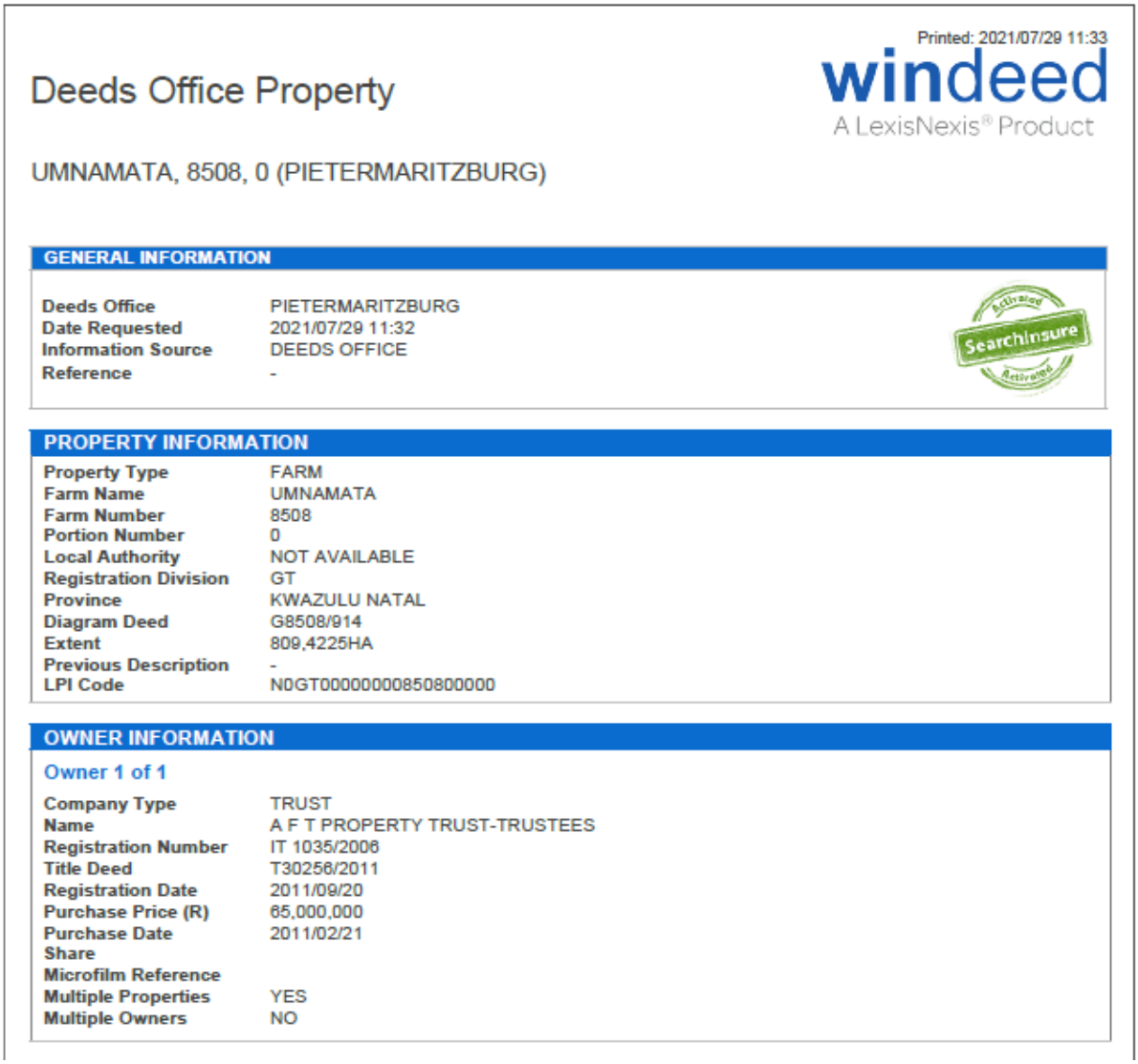


Figure 7: Site notices placed on site



Printed: 2021/07/29 11:33

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A LexisNexis® Product

Deeds Office Property

UMNAMATA, 8508, 0 (PIETERMARITZBURG)

GENERAL INFORMATION

Deeds Office	PIETERMARITZBURG
Date Requested	2021/07/29 11:32
Information Source	DEEDS OFFICE
Reference	-

PROPERTY INFORMATION

Property Type	FARM
Farm Name	UMNAMATA
Farm Number	8508
Portion Number	0
Local Authority	NOT AVAILABLE
Registration Division	GT
Province	KWAZULU NATAL
Diagram Deed	G8508/914
Extent	809,4225HA
Previous Description	-
LPI Code	N0GT00000000850800000

OWNER INFORMATION

Owner 1 of 1

Company Type	TRUST
Name	A F T PROPERTY TRUST-TRUSTEES
Registration Number	IT 1035/2006
Title Deed	T30256/2011
Registration Date	2011/09/20
Purchase Price (R)	65,000,000
Purchase Date	2011/02/21
Share	
Microfilm Reference	
Multiple Properties	YES
Multiple Owners	NO

Figure 8: Deed search results, applied farm portions highlighted in yellow

- **Consultation and correspondence with I&AP's and stakeholders**

All I&AP registrations and comments that are received from stakeholders are formally recorded in the Comments and Responses Report. Refer to Table 6 and Appendix D for the stakeholder correspondence.

- **Draft Basic Assessment Report (BAR) and Environmental Management Programme (EMPr)**

The Draft BAR and EMPr herewith released for a period of 30 days from 13th September 2021 to the 11th October 2021.

Copies of the Draft BAR and EMPr will be submitted to all organs of state and relevant authorities. In addition, copies will be shared to the Endumeni Local Municipality and upon request from Singo Consulting. Refer to Appendix C for proof of notification of the basic assessment report review period and submission to relevant parties.

- **Next phases of the public participation process**

All comments received from I&APs and organs of state and responses sent will be included in the final BAR and EMPr to be submitted to the Competent Authority (CA).

Once the BAR and EMPr is submitted, the CA will have 107 days to reach a decision on the application. Thereafter the registered I&APs will be notified of the CA's decision.

5.2. Summary of issues raised by I&APs

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

Table 6: Summary of issues raised

Interested and Affected Parties List the names of persons consulted in this column, and Mark with an X where those who must be consulted were in fact consulted		Date Comments Received	Issued Raised	EAPs response to issues as mandated by the applicant	Section and paragraph reference in this report where the issues and or response were incorporated
AFFECTED PARTIES					
Landowners/s					
AFT PROPERTY TRUST	**X**	10/08/2021 (phone call)	I'll give you my email address so you can share with me the necessary information.	BID together with notification letter were shared through the received email address.	See Appendix C
Adjacent Landowners					
Lawful occupiers of the land					
Local Municipality					
	X	05/08/2021 (face-to-face)	Please send soft copy of the provided emails	Email was sent with BID attached	See Appendix C

Interested and Affected Parties List the names of persons consulted in this column, and Mark with an X where those who must be consulted were in fact consulted		Date Comments Received	Issued Raised	EAPs response to issues as mandated by the applicant	Section and paragraph reference in this report where the issues and or response were incorporated
ENDUMENI					
Councillor					
District Municipality					
Community					
Organs of state (Responsible for infrastructure that may be affected					

Interested and Affected Parties List the names of persons consulted in this column, and Mark with an X where those who must be consulted were in fact consulted		Date Comments Received	Issued Raised	EAPs response to issues as mandated by the applicant	Section and paragraph reference in this report where the issues and or response were incorporated
Roads Department, Eskom, Telkom, DWA					
	X			Consultation email with BID attached was sent (10/08/2021)	See Appendix C
	x			Consultation email was sent with BID attached (10/08/2021)	See Appendix C
	x			Consultation email was sent with BID attached (10/08/2021)	See appendix C

Interested and Affected Parties List the names of persons consulted in this column, and Mark with an X where those who must be consulted were in fact consulted		Date Comments Received	Issued Raised	EAPs response to issues as mandated by the applicant	Section and paragraph reference in this report where the issues and or response were incorporated
SAHRA NDZALAMA SOUTH AFRICAN HERITAGE RESOURCES AGENCY YA RIXAKA	x			Online consultation was conducted.	
water & sanitation Department: Water and Sanitation REPUBLIC OF SOUTH AFRICA	x			Consultation email was sent with BID attached (10/08/2021)	See appendix C
environment, forestry & fisheries Department: Environment, Forestry and Fisheries REPUBLIC OF SOUTH AFRICA	x			Consultation email was sent with BID attached (10/08/2021)	See appendix C

Interested and Affected Parties List the names of persons consulted in this column, and Mark with an X where those who must be consulted were in fact consulted		Date Comments Received	Issued Raised	EAPs response to issues as mandated by the applicant	Section and paragraph reference in this report where the issues and or response were incorporated
agriculture, forestry & fisheries Department: Agriculture, Forestry and Fisheries REPUBLIC OF SOUTH AFRICA	X			Consultation email was sent with BID attached (26/04/2021)	See appendix C
rural development & land reform Department: Rural Development and Land Reform REPUBLIC OF SOUTH AFRICA	X	24/08/2021 (email)	Our records indicate that claims have been lodged on the property. This property falls under the Matiseni Community claim. The notice of the claim was subsequently witdrawn.	The information has been noted.	See Appendix C
OTHER INTERESTED AND AFFECTED PARTIES					

6. The Environmental attributes associated with alternatives

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

6.1. The Environmental attributes associated with the alternatives

Baseline Environment

Type of environment affected by the proposed activity.

(It's current geographical, physical, biological, socio- economic, and cultural character)

6.1.1. Topography

Topography is the study of the shape and features of land surfaces. The topography of an area could refer to the surface shapes and features themselves, or a description (especially their depiction in maps). Topography is a field of geoscience and planetary science and is concerned with local detail in general, including not only relief but also natural and artificial features, and even local history and culture. This meaning is less common in the United States, where topographic maps with elevation contours have made "topography" synonymous with relief.

Topography is used to determine how soil can be conserved and how water will flow over the land. Data from topography can help to conserve the environment. By understanding the contour of the land, scientists can determine how water and wind may cause erosion. They can help to establish conservation areas such as watersheds and wind blocks. In this project contour lines indicates a lower chance of soil erosion as they are sparsely packed.

The proposed prospecting area is characterized by gentle slopes surfaces and the map shows that there is a mountain or a hill near or within the project area. This can be observed on the topography map in Figure 9 below. The flow of water during rainy seasons flows from the area of high elevation to the area of low elevation as it is indicated by contour lines.

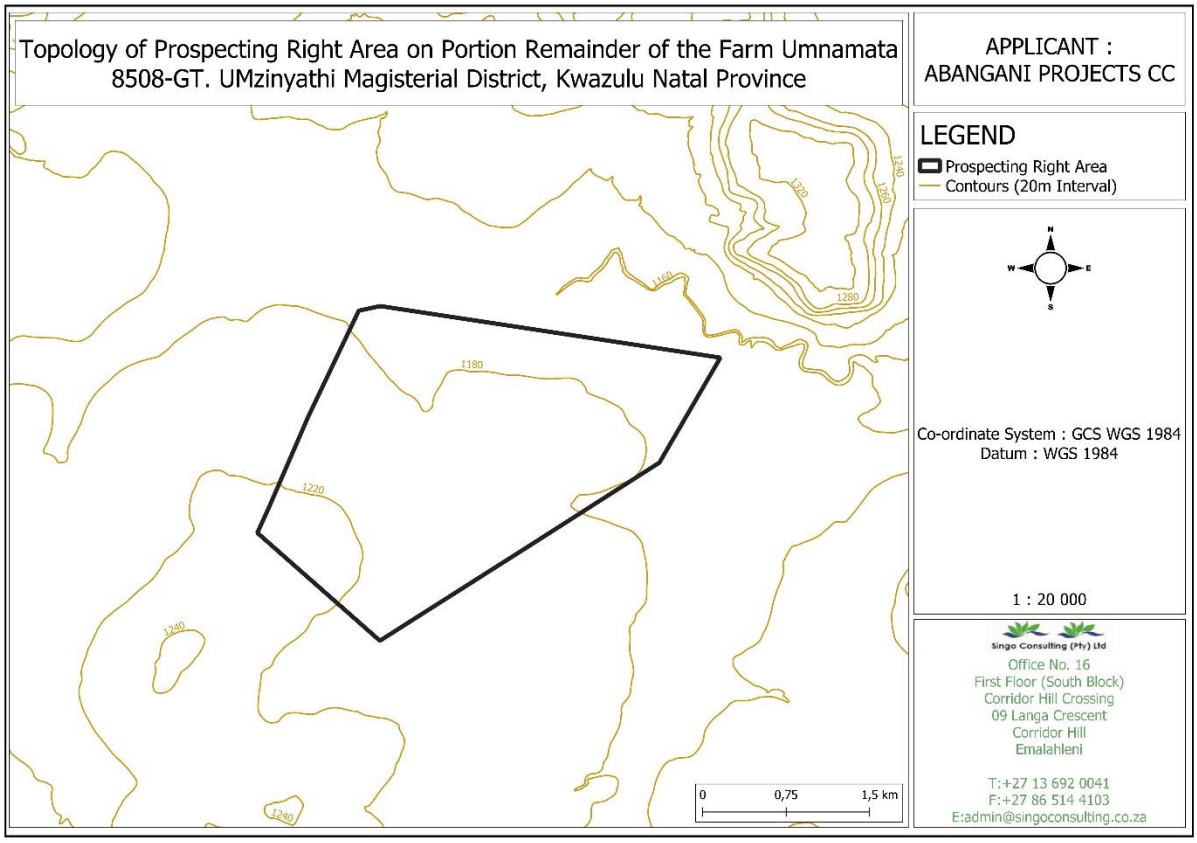


Figure 9: Topographic map of the project area

6.1.2. Geology

Regional geology

The Karoo Supergroup is a thick sequence of sedimentary rocks deposited between 300 and 180 million years ago. The main Karoo Supergroup basin covers over 50% of South Africa's surface and consists of five age-based groups, which show a change of depositional environment in time. These groups are the Dwyka (glacial), Ecca (shallow marine and coastal plain), Beaufort (non-marine fluvial), Stormberg (aeolian) and the volcanic Lebombo or Drakensberg groups (SACS, 1980; Veevers et al., 1994; Johnson et al., 1996; Johnson et al., 2006).

The rocks of the supergroup underlie approximately half of South Africa. The principal outcrops form the Main Karoo Basin. The main Karoo basin forms part of a major series of Gondwanan basins that developed through subduction, compression, collision, and terrane accretion along the southern margin of Gondwana (Cole, 1992; De Wit and Ransome 1992; Veevers et al. 1994; Catuneanu et al. 1998;). These include the Paraná Basin in South America, the Beacon Basin in Antarctica and the Bowen Basin

in Australia. These depocentres filled between the Late Carboniferous and Middle Jurassic and their combined stratigraphies represent the best record of non-marine sedimentation of this period anywhere in the world.

The basal Stratigraphy of the Karoo Supergroup comprises the Dwyka Group which is a Late Carboniferous to Early Permian (~320Ma) sequence of glacial and periglacial sediments including diamictite, till moraine, conglomerate, sandstone, mudstone and varved shale.

The Dwyka group is overlain by the Ecca Group which is an Early to Late Permian (~260 Ma) sequence composed of sandstone, siltstone, mudstone, and large deposits of coal seams deposited in a terrestrial basin on a gently subsiding shelf platform. In the surrounding Witbank Coalfield areas, the Ecca Group is overlain by the Beaufort Group, which is Early Triassic (~260 to 210 Ma), comprising multi-colored mudstone and sandstone with only minor coal accumulation, and was deposited in a fluvial environment.

The Molteno Formation rests unconformably on the Beaufort Group and comprises Late Triassic (~210 Ma) coarse, immature sandstone with minor argillaceous layers derived from braided streams. This in turn is overlain by the Elliot Formation consisting of red mudstone and sandstone and the Clarens Formation comprising Aeolian sandstone. At the top of the Karoo Supergroup stratigraphy is the Drakensburg Group, which comprises Early to Middle Jurassic (~180 Ma) flood basalts.

According to the 2628 East Rand 1:250 000 geology series map the site is situated on Permian (245 000 – 290 000 million years) sandstone, shale and coal beds of the Vryheid Formation of the Ecca Group, and Karoo Supergroup. Jurassic (145 000 – 208 000 million years) dolerite sills intruded into the older sediments through vertical feeder dykes. Quaternary surficial deposits of alluvium and ferricrete can be found throughout the surrounding area.
The Ecca Group, which is part of the Karoo Supergroup, comprises of sediments deposited in shallow marine and fluvial-deltaic environments with coal accumulated as peat in swamps and marshes associated with these environments. The sandstone and coal layers are normally reasonable aquifers, while the shale trends to act as

aquitards. Several layered aquifers perched on the relative impermeable shale are common in such sequences. The Dwyka Formation comprises consolidated products of glaciations (with high amounts of clay) and is normally considered have impermeable qualities.

The general horizontally disposed sediments of the Karoo Supergroup are typically undulating with a gentle regional dip to the south. The extent of the coal is largely controlled by the pre-Karoo topography. Abundant dolerite intrusions are present in the Ecca sediments. These intrusions comprise sills, which vary from being concordant to transgressive in structure, and feeder dykes. Although these structures serve as aquitards and tend to compartmentalize the groundwater regime, the contact zones with the pre-existing geological formations also serve as groundwater conduits. There are common occurrences of minor slips or faults, particularly in close proximity to the dolerite intrusions. Within the coalfield, these minor slips, displacing the coal seam by a matter of 1 to 2 meters, are likely to be common in places.

Local geology

Karoo Dolerite Suite

The Karoo Dolerite Suite Represents a network of dykes and sills which occur as feeders or tongues to the flood basalt province (Walker and Poldervaart, 1949) and are best developed in the main Karoo Basin. The rocks of the Karoo Supergroup were pervasively intruded by these dolerite sills and dykes, central ring complexes (Eales et al., 1984; Galerne et al., 2008) and saucer-shaped sheets (Duncan and Marsh, 2006), contemporaneous with and immediately followed the eruptions of the Drakensberg lavas, as determined by cross-cutting relations (Mountain, 1968; Walker and Poldervaart, 1949). Multiple dolerite intrusion events occurred in the Karoo, Both predating and postdating the flood basalts (Erlank, 1984; Mountain, 1968; Walker and Poldervaart, 1949), therefore making it nearly impossible to associate them with any single intrusive or tectonic event (Chevallier and Woodford, 1999; Duncan and Marsh, 2006; van Zijl, 2006a).

Sills and sheet intrusion in the Karoo range from a few meters to 200m thick (Duncan and Marsh, 2006; Walker and Poldervaart, 1949) and often cap hills with underlying sedimentary strata. Some sheet intrusion dip almost vertically and may be termed

dykes. The true dykes however, are typically up to 10m wide and extend 5 – 30 km along the strike (Duncan and Marsh, 2006). Generally dykes are unrelated to sills (Eales et al., 1984) many dykes appear to have intruded after the sills and sheet intrusions , as revealed by cross-cutting relationships (Walker and Poldervaart, 1949) and resistivity studies (van Zijl, 2006b). Central ring complexes are often interpreted as sites of original volcanic activity (Eales et al., 1984).

The approximate trend of the dykes in the central and eastern Karoo is between north and northwest with subordinate trends at roughly right angles (Walker and Poldervaart, 1949). In the western Karoo, dykes and sills form complex, interconnected and anastamosed system along with discordant sheets and saucer-shaped intrusions (Chevalier and Woodford, 1999). In several areas in the Karoo Basin, the dykes are concentrated in swarms and some have been identified as feeder system to the overlying lavas (Eales et al., 1984) However, the majority of the dykes do not show strong preferred orientation (Duncan and Marsh, 2006).

Masotcheni Formation

The Masotcheni Formation colluvial deposits are commonly concentrated where the hillslope morphology forces overland flow and sheetwash transported sediments to accumulate in bedrock depressions or colluvial hollows (e.g. Dietrich & Dorn, 1984; Mills, 1987; Reneau et al., 1989) and multiple episodes of gully cut-and-fill have been documented in this region (Botha, 1996).

The Masotcheni Formation includes fine clay, silty and sandy, poorly sorted, stratified colluvial sediments (Botha & Fedoroff, 1995; Lyons et al., 2013; Temme et al., 2008; Watson et al., 1984) generated by the erosion of weathered regolith and soils from upslope on the Drakensberg foothill interfluve ridges and deposited along their lower slopes (Botha et al., 2016). In many areas, the Masotcheni Formation is eroded by recently forming gullies, locally named 'dongas' (Lyons et al., 2013). Following the FAO soil Group Classification (IUSS Working Group WRB, 2014) the paleosols are classified as Solonetz and are characterized by silty-clay soils with a high-concentration of sodic clay in a Btn horizon. Moreover, some these paleosols are characterized by typical columnar, prismatic shaped peds with a polygonal structure on top of the Btn-horizon. The colluvial deposits were deposited under semi-arid conditions (Watson et al., 1984), followed by long periods of hillslope stability

represented by paleosol profiles (Botha, 1996). Concentration of runoff towards the colluviums-filled bedrock depressions on middle and lower hillslopes results in preferential erosion of the colluvium/paleosol succession which incorporates some dispersive and highly erodible sediment (Rienks et al., 2000).

Vryheid Formation

The Vryheid Formation consists mainly of sandstone and shale with some subordinate coal seams associated with it (SACS, 1980). The sediments of the Vryheid Formation probably represent alluvial plain, upper and lower delta plain deposits with associated shallow lagoon and coastal swamps (Jermy and Bell, 1990). The change from stable margin to subsiding foreland basin confined the Vryheid Formation and the shales of the succession to "pinch-out" to the north. This "pinching-out" results in a gradation of a fluvial valley-fill sequence into sediments of deltaic origin (Van Vuuren, 1981). According to Cadle et al. (1990) the sandstones become interfingered with the deeper water shales, a so-called "shale-out", approximately 500 km from the present northern basin margin. They state that this is due to rapid basinward facies migration down the southernly dipping paleoslope.

The Formation attains a maximum thickness of 500 m in the deeper part of the basin (SACS, 1980), but in the area of the Eastern Transvaal Coalfield only attains a maximum thickness of 170 m (Greenshields, 1986) and thins to about 80 m in thickness in the proximal basin settings (Cadle et al., 1990). The Vryheid Formation contains 5 major coal seams, with locally developed partings and splits in the coal seams increasing the number to 8, within an 85 m thick stratigraphic horizon (Greenshields, 1986) although this horizon can attain thicknesses up to 160 m in the deeper parts of the basin (Cadle et al., 1990). According to Cidle et al. (1990) all five major seams are still present in the thinnest and most proximal parts of the formation. Greenshields (1986) states that all four cyclothems exhibit a regressive phase where sedimentation occurred in fluvio-deltaic environments, followed by a transgressive phase where sedimentation was typical of both marine and non-marine transgressive shorelines. A seam is therefore associated with clastic successions comprising carbonaceous shale or siltstone, fine to coarse grained sandstone and minor conglomerate (Cadle et al., 1990).

Although the five major coal seams, and their associated overlying and underlying sedimentary packages, can be correlated between coalfields (Cadle et al., 1990),

they have different names in different coalfields (Greenshields, 1986). Greenshields (1986) states that the mining potential of the seams varies throughout the area but that the C seam has the biggest potential, although the B and E, and occasionally the D, seams attain mineable thicknesses over limited areas. The general distribution of the upper seams is often restricted by present-day topography, while the development of the lower seams is controlled by the pre-Karoo topography. Structurally the seams are flat-lying with a gentle south-westerly dip (Greenshields, 1986). The Dundas, Gus and Alfred seams are present in the Majuba Colliery mining area, but only the Gus seam is exploited by the colliery (Lear and Hill, 1989).

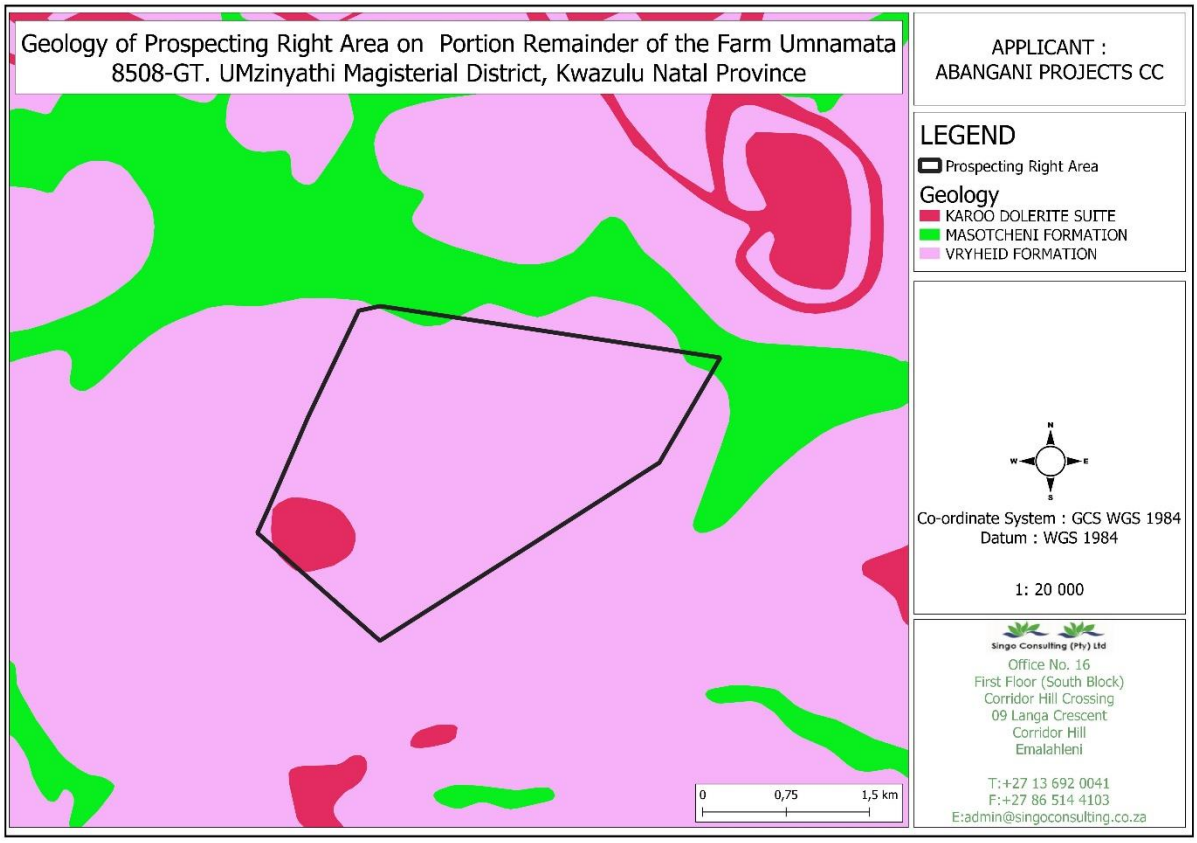


Figure 10: Geology map of the project area

6.1.3. Soil

A map in Figure 11 below was produced from a desktop study. From the map, it can be deduced that the prospecting area is covered with Association of classes 1-4:

undifferentiated structureless soils. This type of soil can be described based on its soil depth, soil drainage, erodibility, and natural fertility.

Soil depth

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

Soil Drainage

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

Erodibility

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

Natural Fertility

Soil fertility refers to the ability of soil to sustain agricultural plant growth, i.e., to provide plant habitat and result in sustained and consistent yields of high quality. The soil, as a nature of them, contains some nutrients which is known as 'inherent fertility'. Among the plant nutrients, nitrogen, phosphorus, and potassium is essential for the normal growth and yield of crop. The proposed area has a low natural fertility soil.

Topsoil will not be removed as there will not be any mining related activities to take place on the proposed site. No foundation excavations will be needed for fuel storage depot as fuel will be transported to site daily during the drilling phase. The boreholes footprint will be minimal. The pathways to be used as access of the drill rig will cause compaction of the soil. It is highly recommended to do rehabilitation after the drilling phase of the applied minerals has ceased.

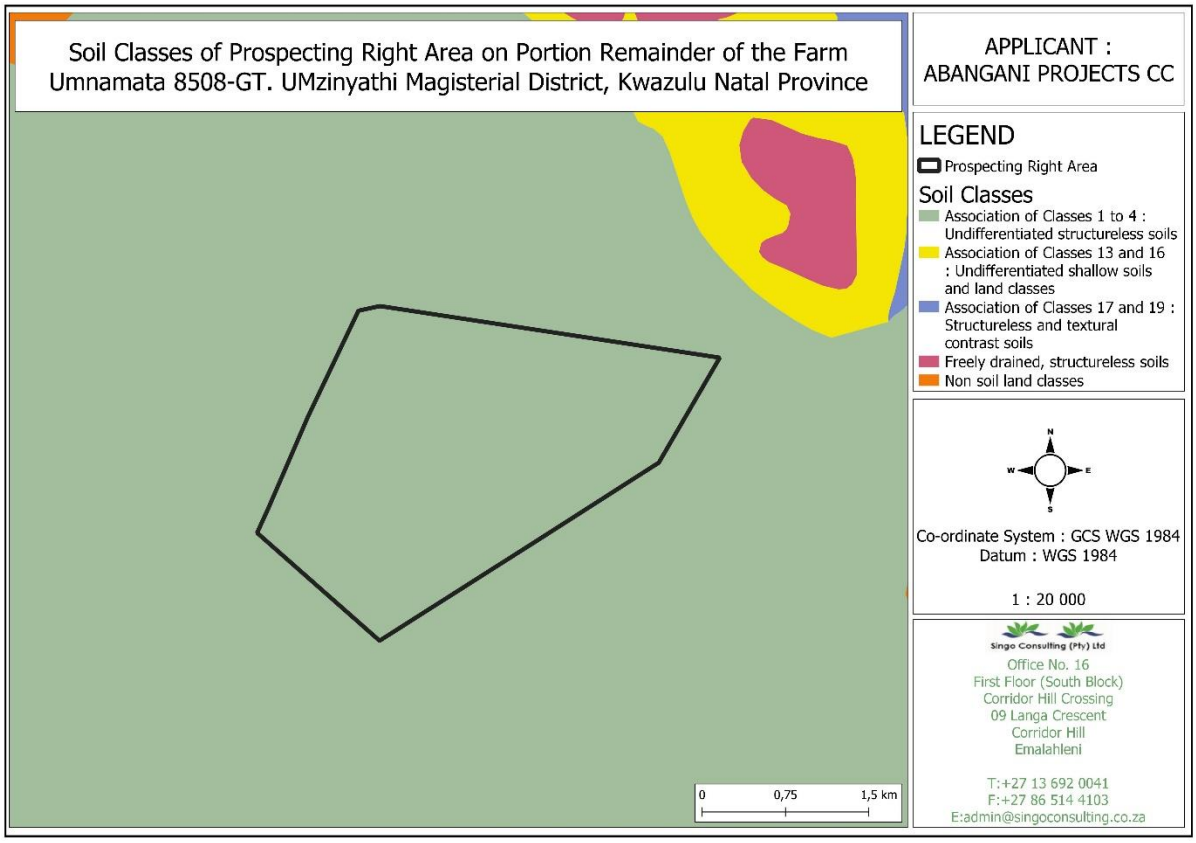


Figure 11: soil classes of the project area

6.1.4. Climate

Umzinyathi has a climate that is warm and temperate. Umzinyathi is classified as Cwb by Köppen and Geiger. According to Figure 13, the mean minimum temperature of the of the prospecting area is between 2.1 to 4 degrees Celsius. The average annual temperature in Umzinyathi is 16.8 °C. According Figure 12, the mean annual rainfall is between 601 – 800 mm. The driest month is June with 12 mm. The precipitation reaches its peak in December, with an average of 160 mm. The warmest month of the year is January with an average temperature of 20.4 °C. At 11.4 °C, on average, July is the coldest month of the year. The difference in precipitation between the driest month and the wettest month is 148 mm. The variation in annual temperature is around 9.0 °C.

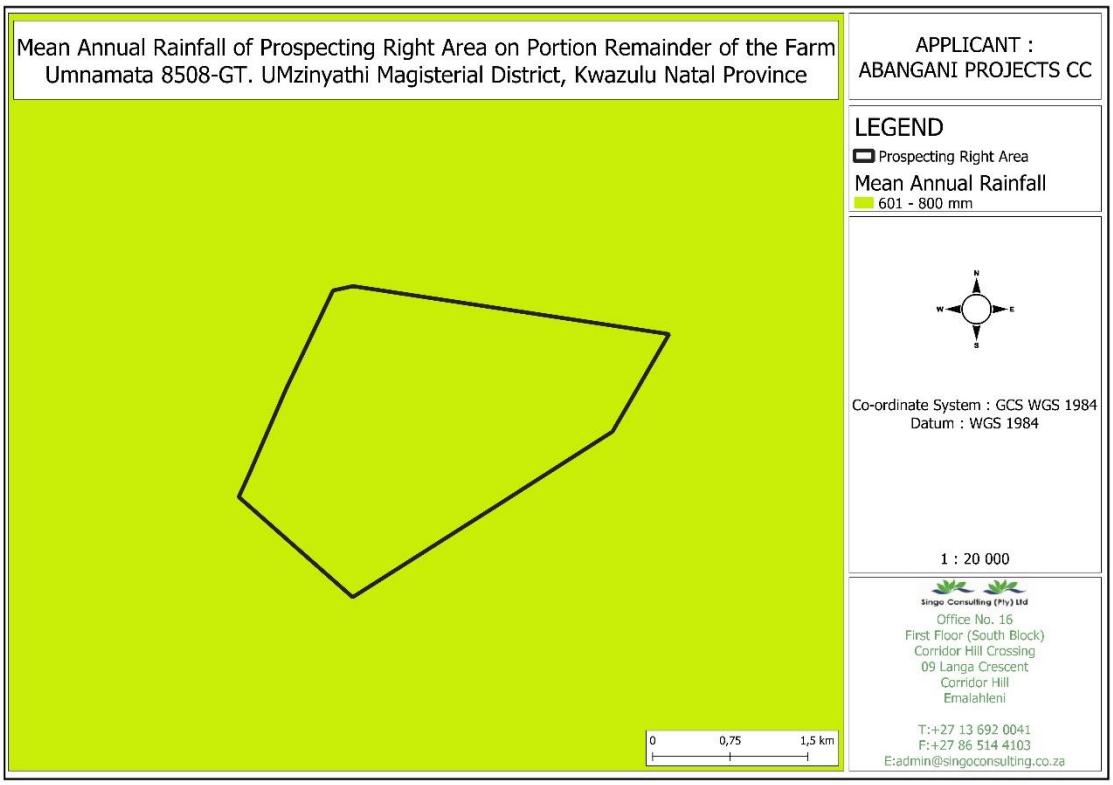


Figure 12: Mean annual rainfall within the prospecting right area.

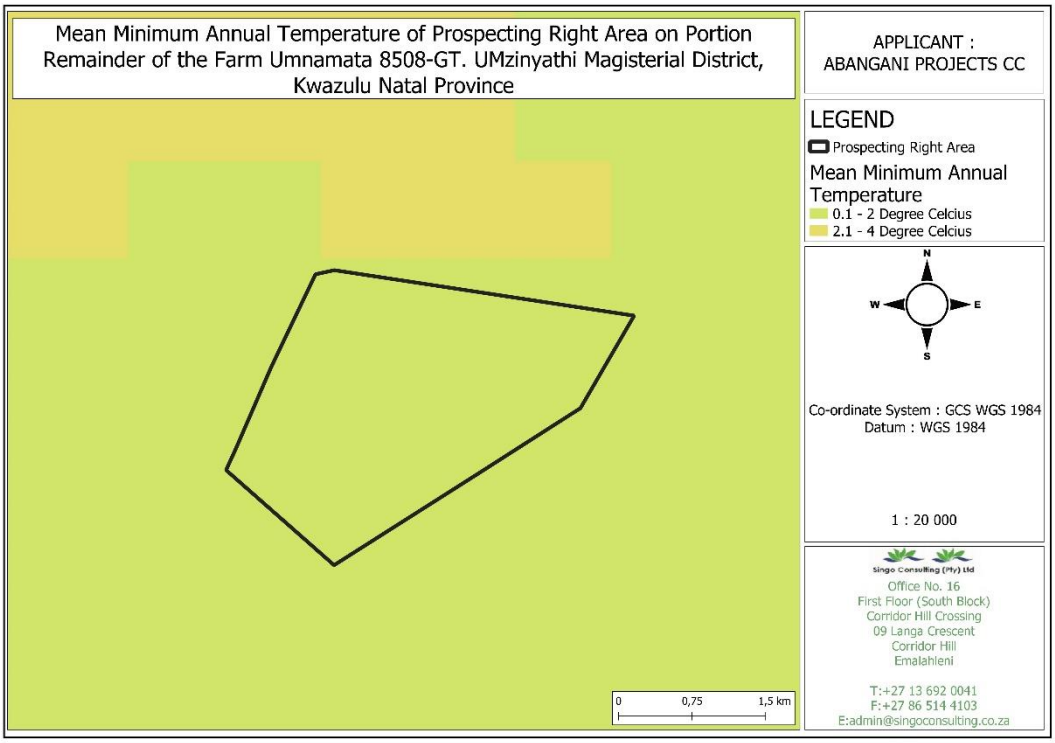


Figure 13: Mean minimum temperature within the prospecting right area.

Table 7: The average weather of Umzinyathi

	January	February	March	April	May	June	July	August	Septem-ber	October	Novem-ber	Decem-ber
Avg. Temperature °C (°F)	20.4 °C (68.8) °F	20.4 °C (68.7) °F	19.3 °C (66.7) °F	16.7 °C (62) °F	14.3 °C (57.7) °F	11.7 °C (53) °F	11.4 °C (52.6) °F	14.1 °C (57.4) °F	16.8 °C (62.2) °F	17.8 °C (64.1) °F	18.8 °C (65.9) °F	20.1 °C (68.1) °F
Min. Temperature °C (°F)	15.6 °C (60.1) °F	15.7 °C (60.3) °F	14.4 °C (58) °F	11.7 °C (53.1) °F	8.5 °C (47.4) °F	5.7 °C (42.3) °F	5.1 °C (41.2) °F	7.4 °C (45.4) °F	9.9 °C (49.7) °F	11.6 °C (53) °F	13.2 °C (55.7) °F	14.8 °C (58.7) °F
Max. Temperature °C (°F)	26.3 °C (79.3) °F	26.1 °C (79.1) °F	25.1 °C (77.2) °F	22.6 °C (72.7) °F	20.9 °C (69.6) °F	18.6 °C (65.5) °F	18.7 °C (65.6) °F	21.7 °C (71) °F	24.5 °C (76.2) °F	25.1 °C (77.1) °F	25.6 °C (78.1) °F	26.3 °C (79.4) °F
Precipitation / Rainfall mm (in)	157 (6.2)	134 (5.3)	110 (4.3)	52 (2)	20 (0.8)	12 (0.5)	15 (0.6)	25 (1)	37 (1.5)	97 (3.8)	130 (5.1)	160 (6.3)
Humidity(%)	71%	71%	69%	65%	55%	50%	47%	44%	46%	58%	64%	68%

6.1.5. Hydrology

Groundwater

The proposed area falls under the karoo (fractured and influenced by dykes). For effective borehole yields, the boreholes must target the fracture zones in this area.
The fractured aquifer consists of the various lithologies of siltstone, shale, sandstone and coal seams. The pores of the geological unites are generally well cemented, and the principle flow mechanism is fractured flow along secondary structures e.g. faults, bedding plane fractures etc. The intrusion of the fractured aquifer by dolerite dykes and sills has led to the formation of preferential flow paths along the contacts of these lithologies due to the formation of cooling joints. The dykes may act as permeable or semi-permeable features to impede flow across the dykes.

The fractured pre-Karoo aquifer is separated from the overlying fractured Karoo aquifer by Dwyka tillites which act as an aquiclude where present. The flow mechanism is fracture flow as can be expected from the crystalline nature of the granite rocks. The water quality is generally characterized by high fluoride levels which limits exploitation of this aquifer in combination with the general low yields, deep (expensive) drilling and the low recharge (Grobbelaar et al, 2004).

Surface water

The prospecting area falls within the Pongola-Mtamvuna Water Management Area (WMA). The farm portions of the prospecting right fall within the quaternary catchment V31E. The V31E catchment covers an extent of 834 km^2, a mean annual

evaporation (MAE) of 1450mm, a mean annual precipitation (MAP) of 855 mm and a mean annual runoff (MAR) of 103.10 mcm. Figure 15 below illustrates the Quaternary catchment and the Water Management Area (WMA).

As according to the hydrology map (Figure 16), the proposed prospecting area has the following water bodies:

- Non-perennial river
- Perennial river
- Unchannelled Valley-bottom wetland
- Seep
- Flood plain

Prospecting right poses a risk to these water resources. Measures will be developed, and guidelines put in place for the protection of these resources to ensure optimal conservation. Extreme caution must be taken during prospecting, owing to the rivers and numerous wetlands existing nearby and within the project area. Water resources within the project area will be buffered as no-go areas with buffers of approximately 500m will be applied at all times during the life of the applied project.

The project area has the overall low sensitivity with patches of very high sensitivities as observed from the proposed development area environmental sensitivity from the screening report developed for this application with features including the wetlands and estuaries that are contained in the area (see Figure 18). These water resources will be strictly monitored during the prospecting period of the proposed project. It is crucial to note that water dependent systems are parts of the environment in which the composition of species and natural ecological processes are determined by the permanent or temporary presence of flowing or standing surface water or groundwater. The in-stream areas of rivers, riparian vegetation, springs, wetlands, floodplains, groundwater-dependent terrestrial vegetation are all examples of water dependent systems (Department of Water, January 2013). The objectives of these systems will be achieved if there is no impact on the in-stream and downstream fitness for use criteria.

The potential contaminants for the prospecting of coal are minimal and can be controlled easily as this activity will only take place for a short period of time. Fuel and oil handling facilities are likely sources of hydrocarbon related contaminants. Oils, grease, and other hydrocarbon products (such as petrol and diesel) handled in these

areas may contaminate the environment by spillages and leakages (e.g., from drill rigs). Absorbent Spill kits will be made available near the drill rigs during drilling activities refer to Figure 14. The oil absorbent chemicals will ensure that no oils infiltrate down to the underground to cause any groundwater contamination. In cases of emergencies or unforeseen events, the spillage must be remediated as soon as practically possible.

Figure 14: Example of Absorbent spill kits to be used.

Upon completion of the drilling each borehole, the only rehabilitation that will specifically be required is borehole casing, capping and revegetation: Drill holes must be permanently capped as soon as is practically possible. It is recommended that the drilling activities take place during the dry seasons where the water percentages in the surrounding streams and wetlands are extremely low. Extreme caution should be taken during prospecting, owing to the perennial and non-perennial rivers and the

wetlands, existing within the project area. No washing of any mechanical equipment's or vehicles will be allowed near the water resources.

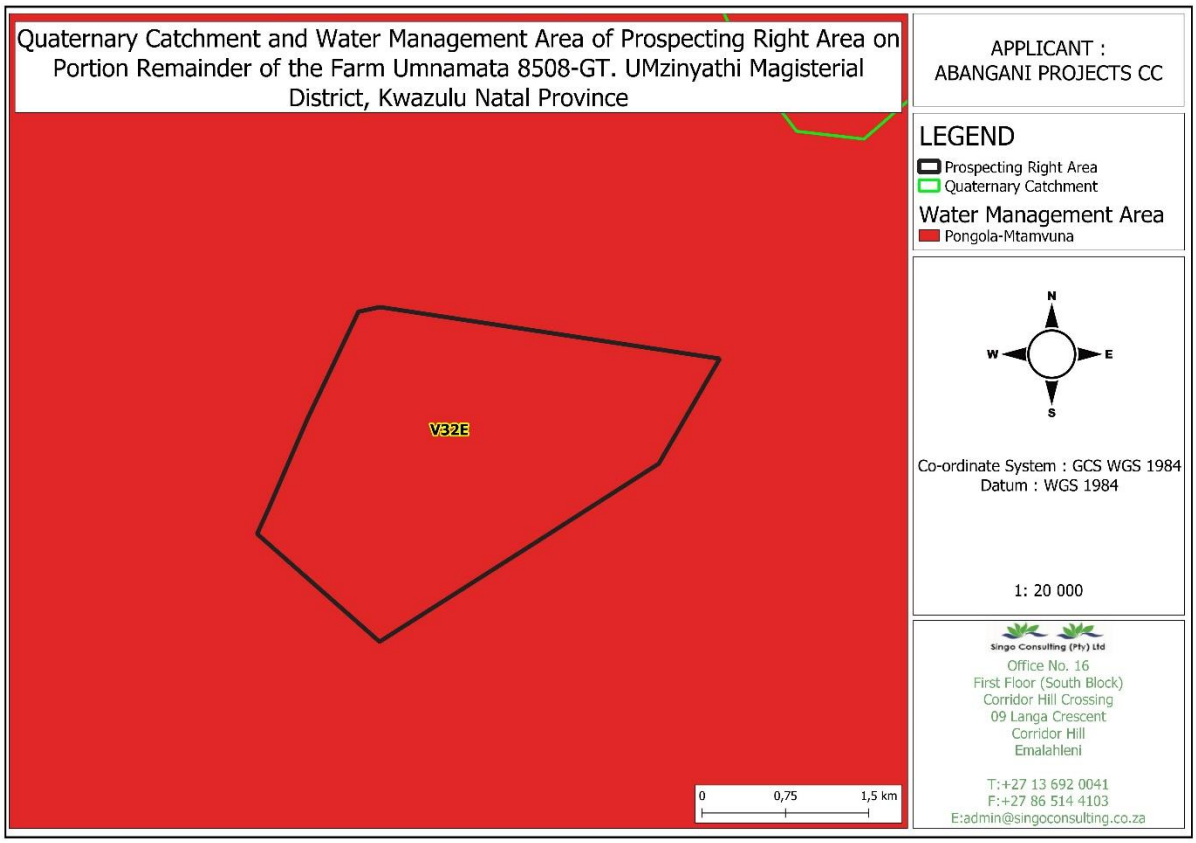


Figure 15 Quaternary Catchment and Water Management Areas of the proposed project area

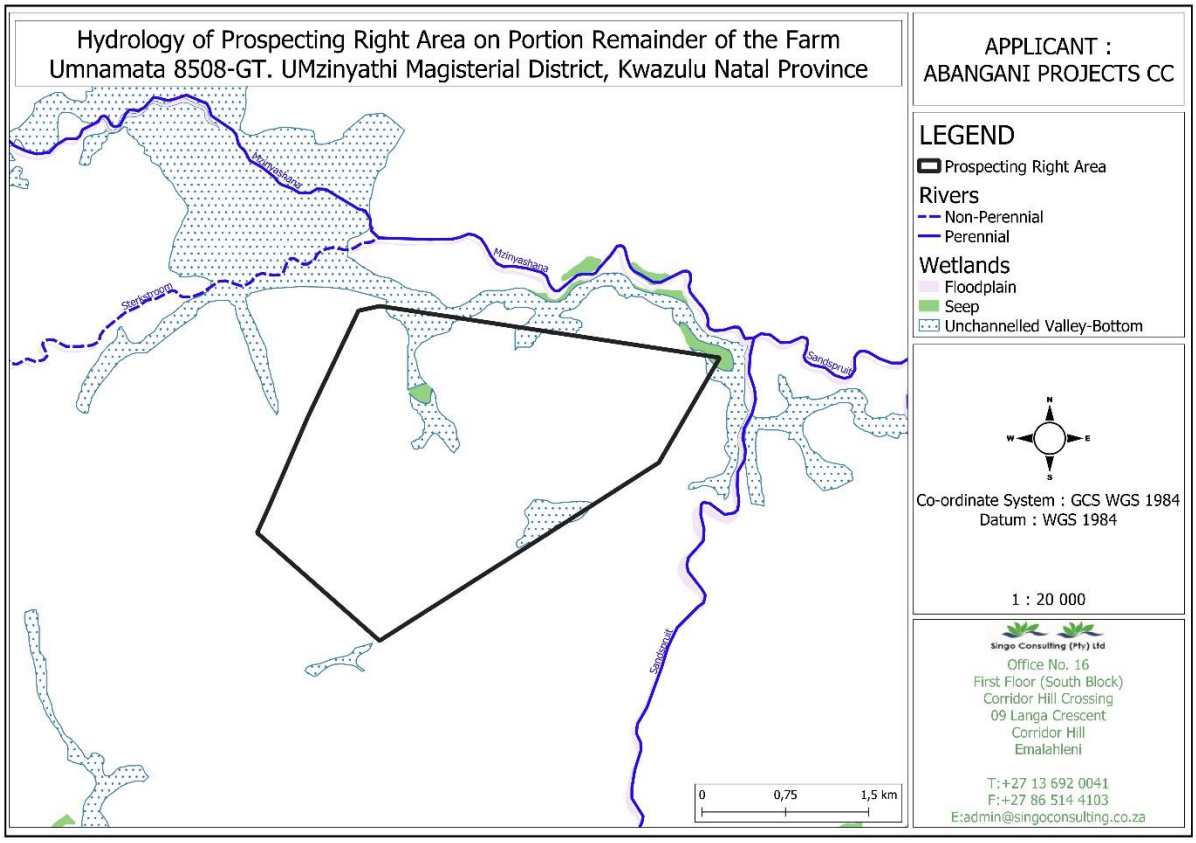


Figure 16: Hydrology map of the project area

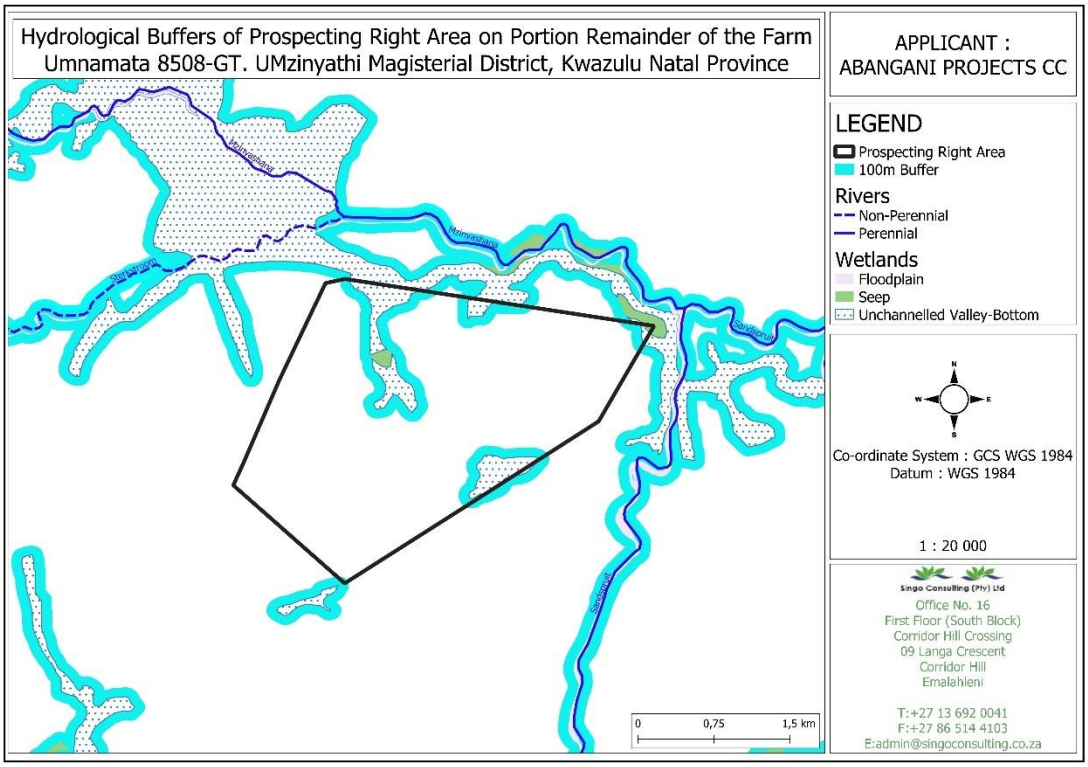


Figure 17: Buffer zone map for the project area

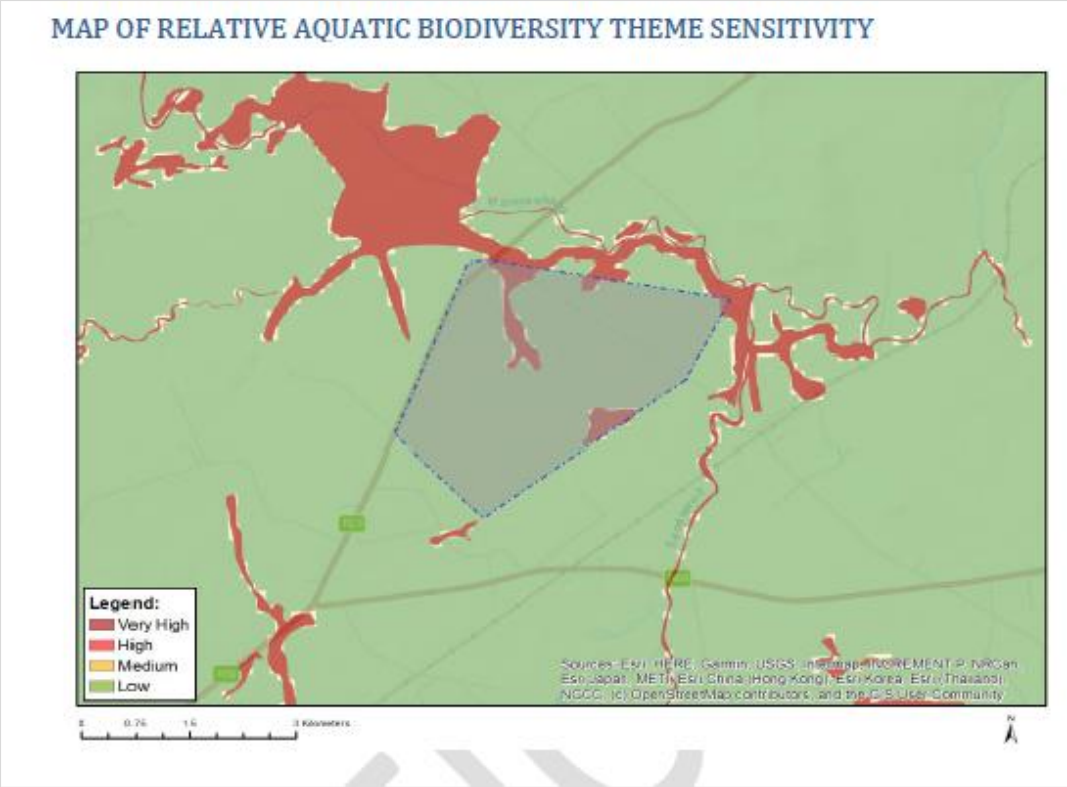


Figure 18: Map of relative aquatic biodiversity theme sensitivity ***source: screening report***

Figure 19: Water resources found near the proposed site.

6.1.6. Biodiversity

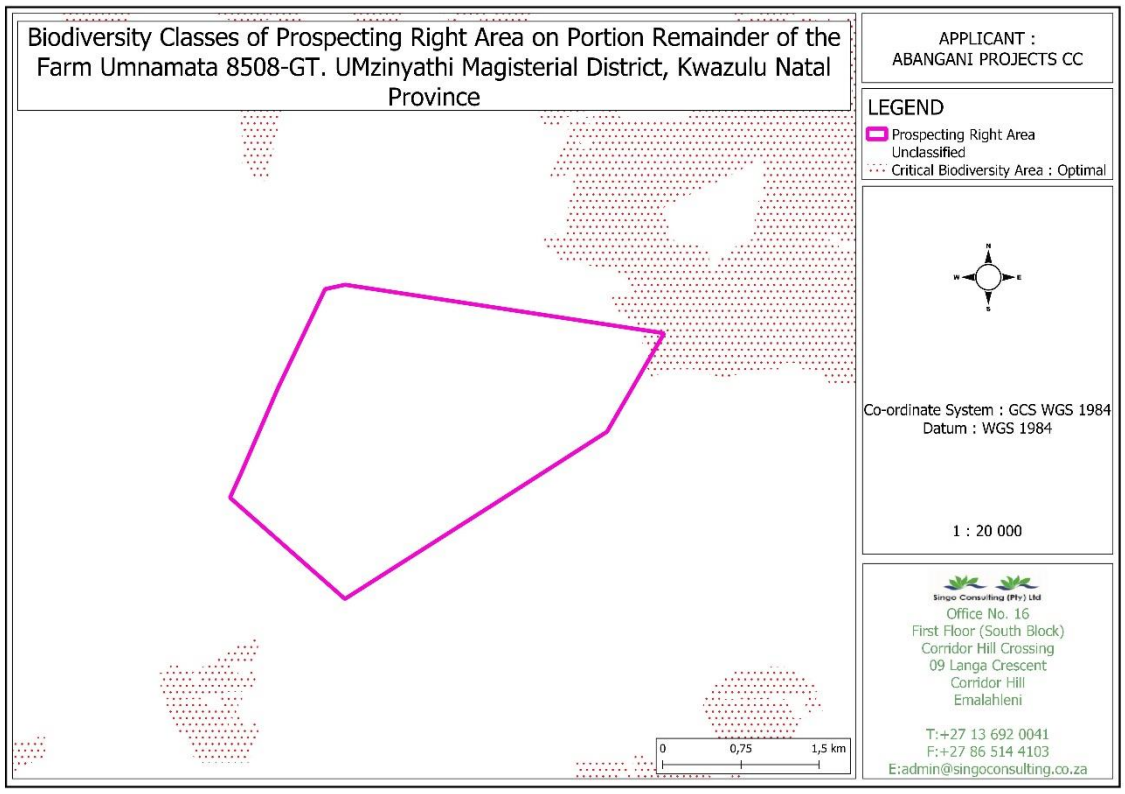


Figure 20: Biodiversity map of the project area

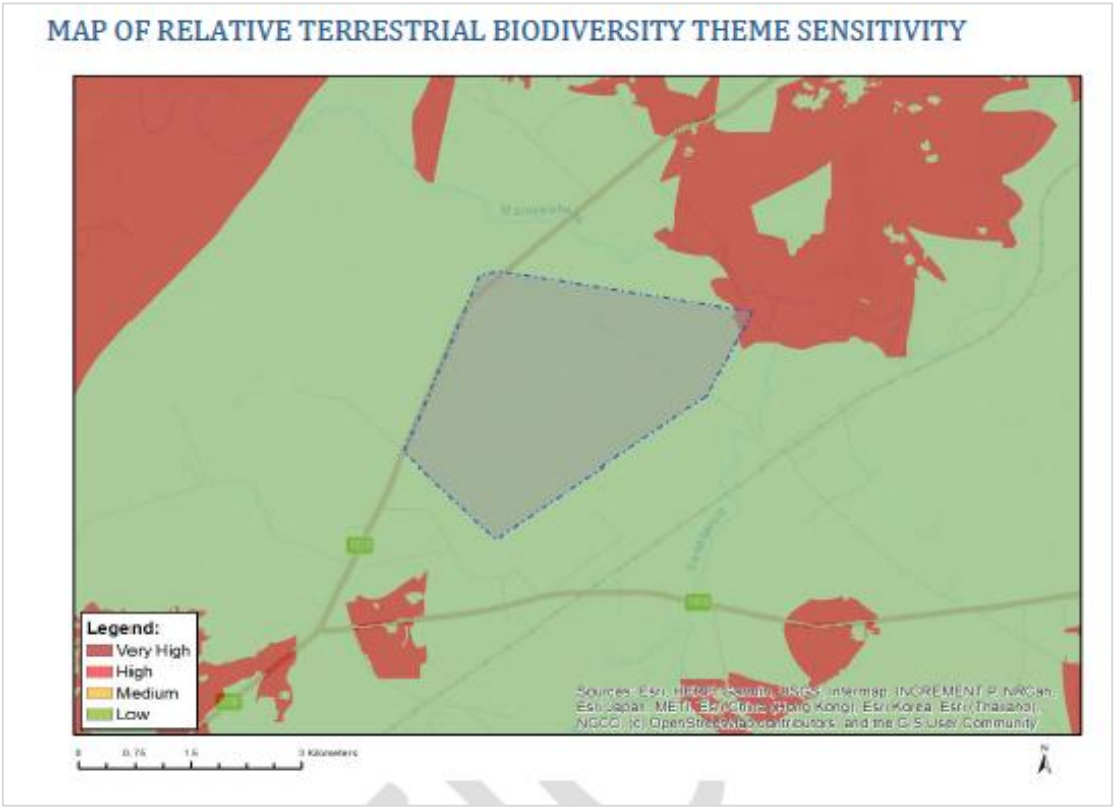
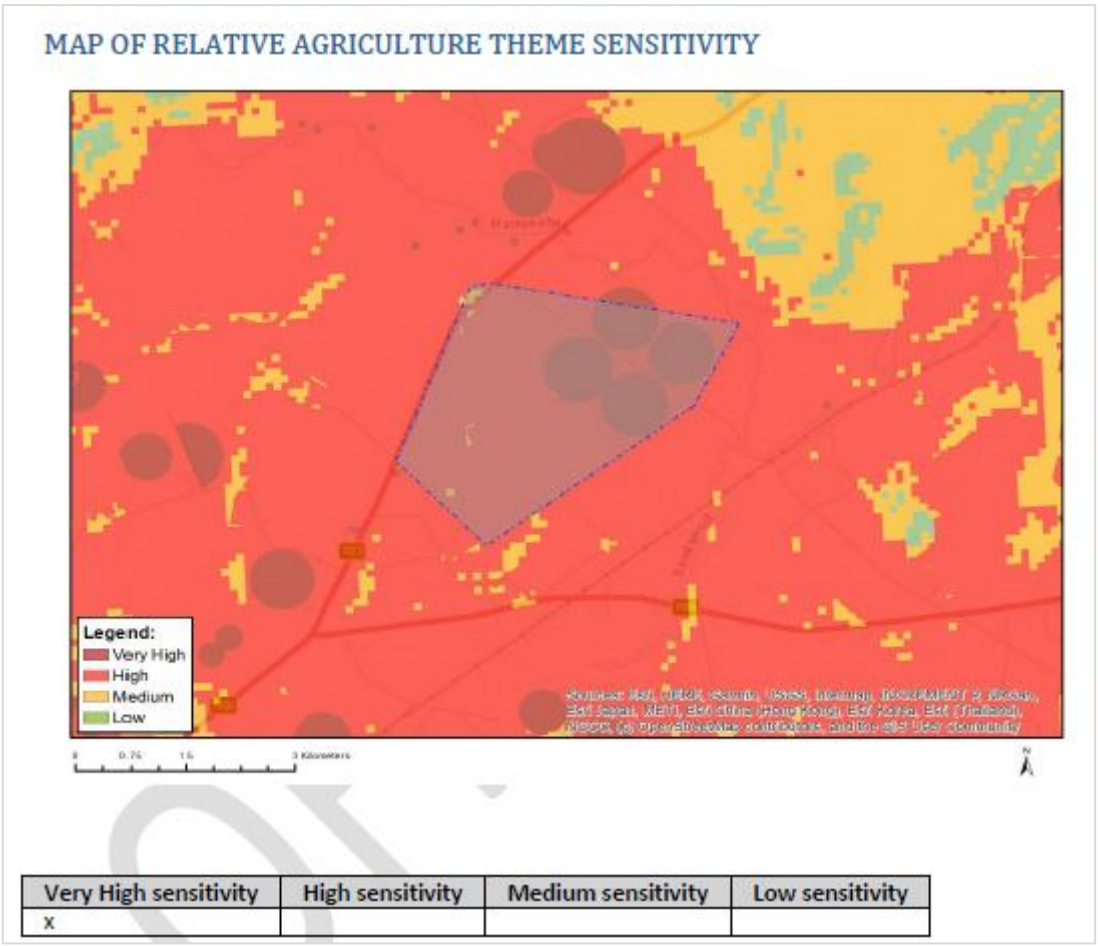


Figure 21: Map of relative terrestrial biodiversity theme sensitivity **Source: Screening report**

As according to the biodiversity maps above (Figure 20 and Figure 21), the proposed project has the sensitivities; Critical Biodiversity Area (CBA), Optimal on the northern side of the project area and an Unclassified area covering the major portion of the applied farm area. The CBA, optimal area can be described as the area that is optimally located as part of the most efficient solution to meet the biodiversity targets. It is recommended that this area be maintained in a natural state with no loss of ecosystems, functionality or species. Land use activities that will compromise the biodiversity objective are not permissible in such areas. The entire CBA area will therefore be regarded as a no-go area. Major portion of the proposed farm area has been transformed due to the agricultural activities taking place within the farm (cattle farming and cultivation as observed from the day of the site assessment on the 05th of August 2021). Drilling is proposed along the access tracks of the agricultural land. Rehabilitation will take place as the drilling activities progress from one borehole to the next.

Approximately 0,6 ha of vegetation will be cleared during prospecting, however, care will be taken to avoid relocation and/or disturbance of any protected species identified. The cleared area with vegetation will be rehabilitated per drill site. According to the screening report that was developed in this office through the national web screening tool, the several development areas were created including the agricultural sensitivity, animal species as well as the plant species sensitivity themes. The agricultural theme showed results that the area is of very high sensitivity, see Figure 22.



Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
X			

Figure 22: Map of relative agriculture theme sensitivity source: screening report

Figure 23: Farming activities occurring on site.

Floral Assessment

The plant species development footprint environmental sensitivity identified showed that the proposed prospecting area has overall low sensitivity as well as patches of medium sensitivity as shown in Figure 24 with features including the polygala Practicola. The polygala Practicola can be described as a plant species endemic to South Africa, distributed mainly in the Kwa Zulu Natal province. This type of species is considered vulnerable as most of its habitat locations continue to decline due to ongoing habitat loss and degradation as a result of too frequent grassland fires, overgrazing, sugarcane and forestry plantations and alien plant invasion.

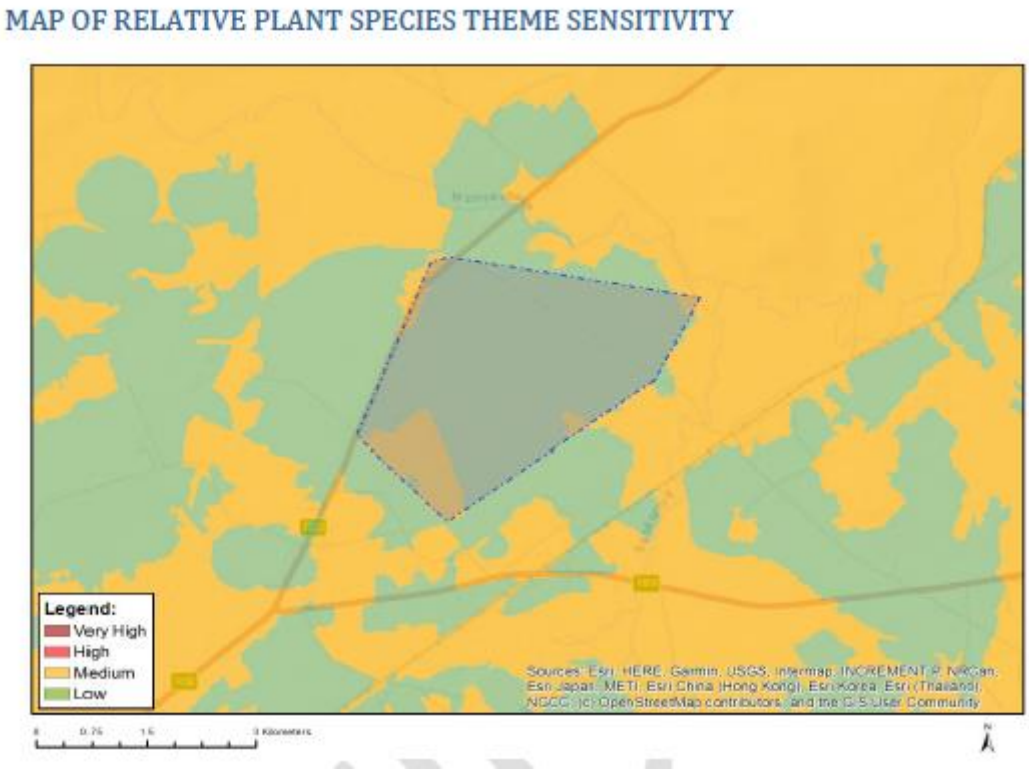


Figure 24: Map of relative plant species theme sensitivity source: Screening report

Faunal Assessment

The screening report showed the development footprint environmental sensitivity for animal species to the of high sensitivity with features including the Aves-Geronticus calvus, Aves-Sagittarius serpentarius and the Aves-Circus ranivorus to name a few. The Aves-Geronticus calvus (Southern bald ibis) is a bird species that is endemic to the

great escarpment, from Limpopo Province through Swaziland and Mpumalanga to eastern Free State, Lesotho and KwaZulu-Natal. It generally prefers high-altitude treeless grassland and recently burnt, ploughed or heavily grazed fields. It mainly eats insects, foraging in small flocks of usually 5-15, rarely up to 100 birds, probing the ground and snapping up prey. The following food items have been recorded in its diet:

- Invertebrates
    - insects
        - grasshoppers (Orthoptera)
        - Coleoptera (beetles)
        - caterpillars (larval stage of Lepidoptera)
            - Busseola fusca (Maize stalk borers)
    - earthworms
    - snails
- Vertebrates
    - frogs
    - small mammals
    - birds
    - carrion (rarely)

The Southern bald ibis is threatened largely due to commercial afforestation, intensive agriculture, acid rain, open cast mining and human interference at breeding colonies. Its world population is estimated to be 5000-10000 individuals.

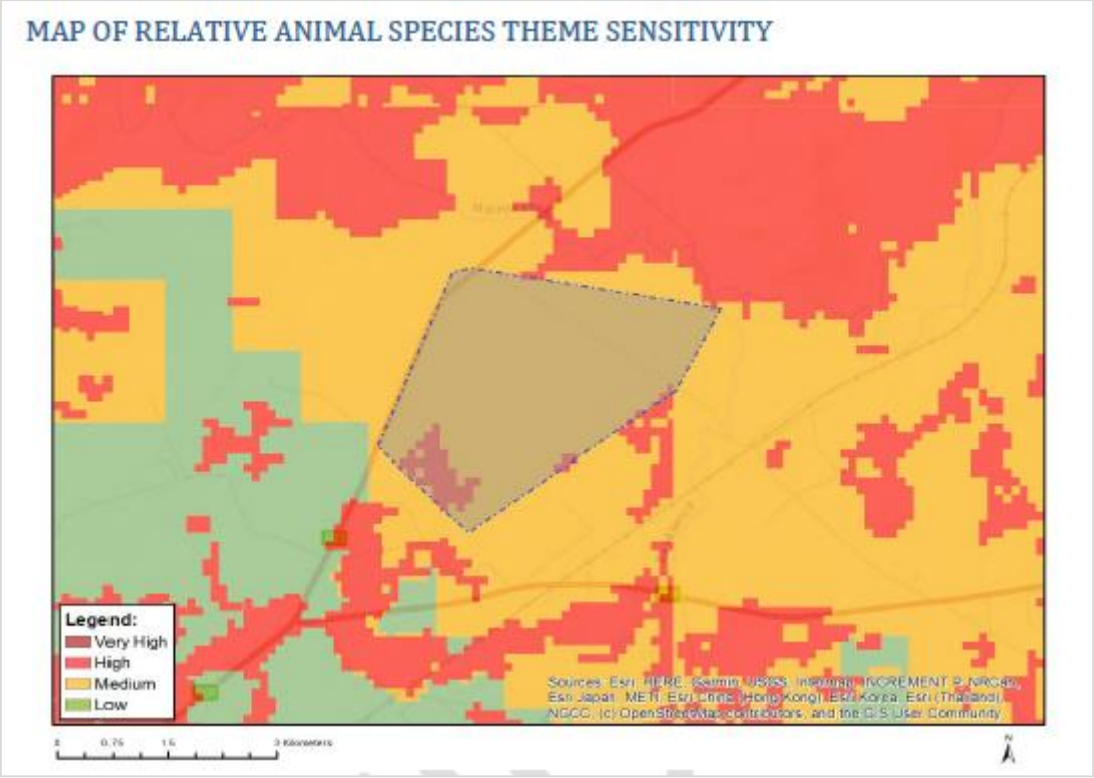


Figure 25: Map of relative animal species theme sensitivity sources: Screening report

6.2. Cultural and Heritage

Heritage Impact Assessment was not undertaken as part of the development of the impact assessment. Based on available Geographic Information System data and site assessment," graves are present within the prospecting area.

During site visit conducted on the 08th of August 2021, no graves were observed within the site area. As outlined in this report, prospecting will be undertaken in phases; the first phase being a desktop assessment, followed by drilling. Based on the outcome of these activities, desktop study and potential drill sites will be determined. Potential heritage impact will only occur once desktop study has been used to identify sites for drilling, and it is therefore recommended that the Heritage Impact Assessment be undertaken prior to drilling activities, and that the Heritage Impact Assessment be conducted over identified localized drill sites and access routes, as opposed to the entire exploration area. This recommendation will be submitted to the South African Heritage Resource Agency (SAHRA) for approval which was also consulted using the SAHRIS online system. From the screening report conducted, the proposed prospecting area has an archeological and cultural heritage of low sensitivity, see Figure 26 below.

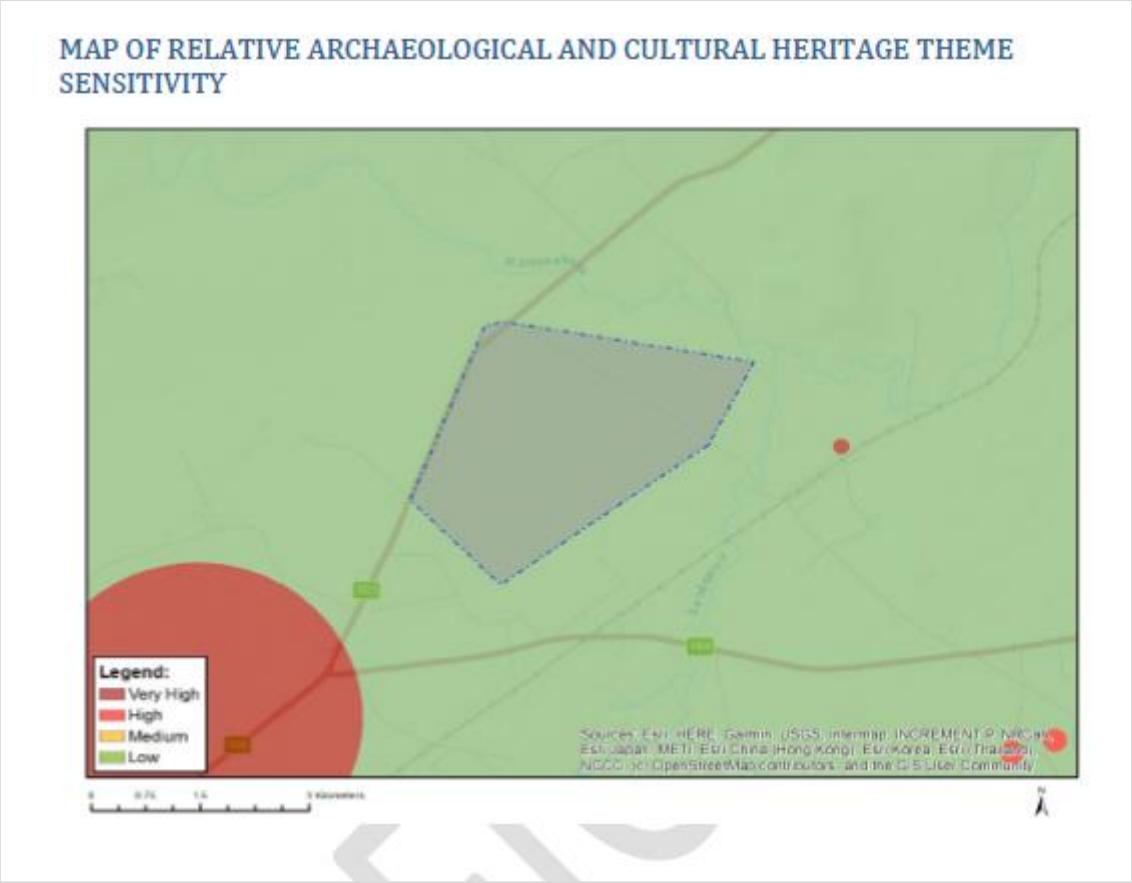


Figure 26: Map of relative Archeological and cultural heritage theme sensitivity source: Screening report

6.3. Paleontological Assessments

Paleontology is the scientific study of life that existed prior to, and sometimes including, the start of the Holocene Epoch (roughly 11,700 years before present). It includes the study of fossils to classify organisms and study interactions with each other and their environments. Paleontology lies on the border between biology and geology but differs from archaeology in that it excludes the study of anatomically modern humans. It now uses techniques drawn from a wide range of sciences, including biochemistry, mathematics, and engineering.

According to the results obtained from the screening report conducted within Singo Consulting's premises using the National Web based screening tool (see Figure 27), it can be concluded that the area has very high paleontological sensitivity. Thus, during the operation of the proposed development, the developer should expect Features with a Very High paleontological sensitivity. Although this is so, Singo Consulting

recommends that both field assessments and drilling are deemed important for purposes of having a true representation of how the paleontology of the area looks like. Where bedrock is to be affected, or where there are coastal sediments, or marine or river terraces and in potentially fossiliferous superficial deposits, a Paleontological Desk Top study must be undertaken to assess whether or not the development will impact upon paleontological resources - or at least a letter of exemption from a Paleontologist is needed to indicate that this is unnecessary.

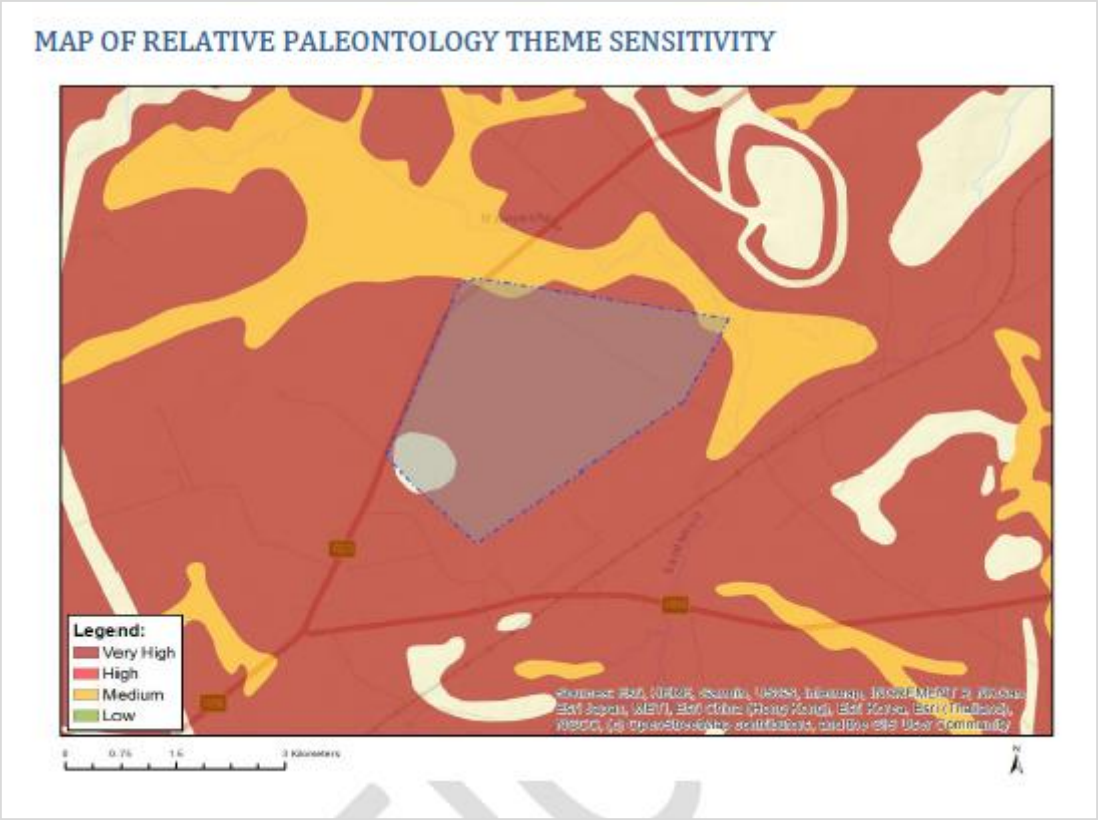


Figure 27: Map of relative paleontology theme sensitivity source: Screening report

6.4. Land Capability

The land capability of the study area and the surrounding area is arable land (Figure 28). The area is arable due to favorable soils and topographical properties. The study area (and the surrounding areas) has a land capability class value of Pivot Irrigation; Land capability;06. Low-Moderate/07. Low-Moderate/08. Moderate as classified and zoned by the agricultural sensitivity on the screening report developed, see Figure 22 above. The main land use of this proposed area is farming.

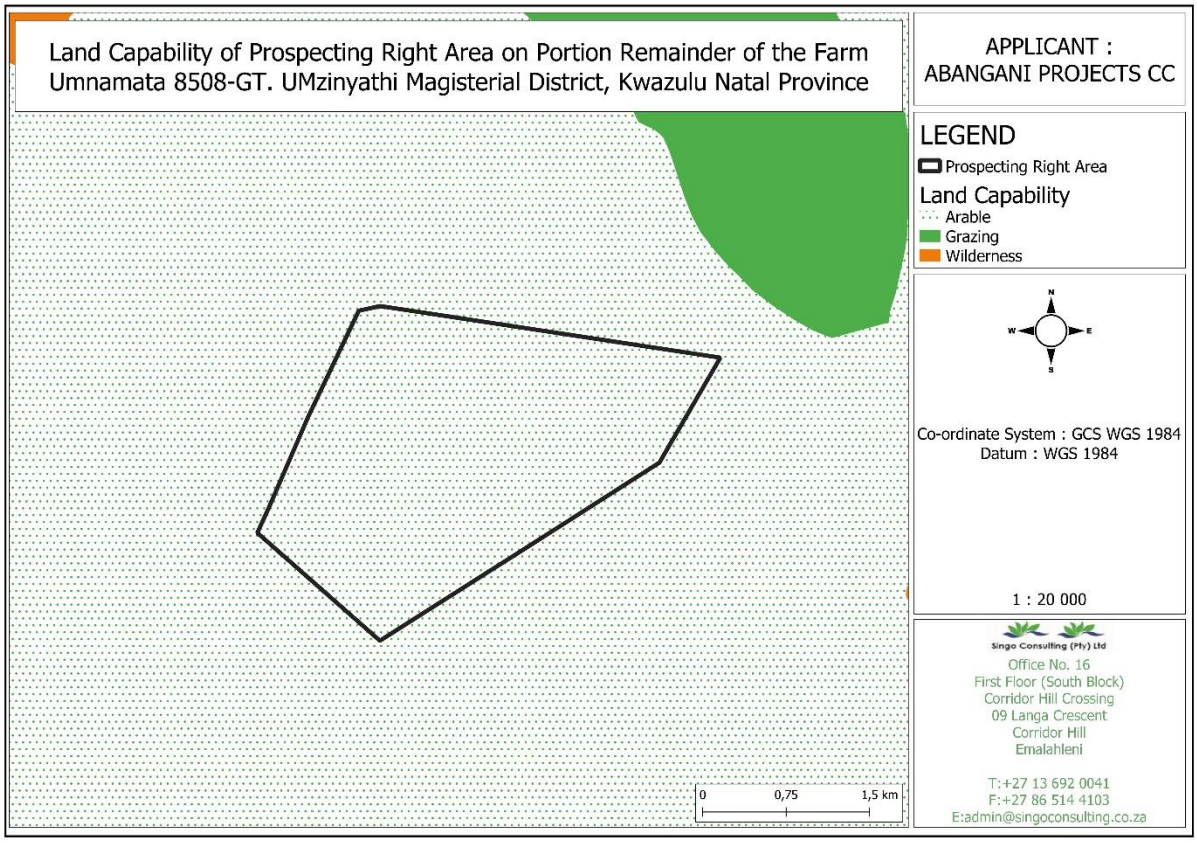


Figure 28: Land capability map for the project area

6.5. Noise and Dust Sources

Noise sources and baseline

Prospecting and associated activities often emit significant noise levels which can become a nuisance or health risk when not properly managed. This impact may affect not only to the prospecting area, but also to the surrounding land users and occupiers. The most sensitive receptors identified for the project area are the landowners of the study area itself and the cattle that is bred within the farm area. The local area is predominantly occupied by agricultural land uses.

The main noise generation activities of the proposed activities during all phases are:

- Transportation of materials;
- Drilling; and
- Loading and off-loading of equipment and materials.
- Limited amount of vehicles moving around the site; and

Noise generation can be expected on the proposed site due to various activities and actions as indicated above. Noise levels may possibly exceed allowed limits for noise as indicated in SANS 10103: 2008. The closest sensitive receptor is the homesteads the study area. Mitigation measures are required to be implemented to reduce this impact. Mitigation measures may include keeping noisy activities to normal working hours and not over weekends or public holidays and maintaining machinery and vehicles in order to avoid unnecessary excessive noise emanating. It is also recommended that consultations be held with affected parties in order to establish an acceptable schedule of noisy activities.

Dust Sources and baseline

The following sensitive receptors of dust have been identified and it is expected that these receptors may be affected by dust fallout and other air pollutants, resulting from the proposed prospecting activities:

- Landowners of the study area;
- Plant species found within the project area

The main source of air pollution in the local area is the dust emanating from the agricultural activities within the farm. Dust fallout will be measured prior to the drilling activities and monitored through out the period of the drilling activities within the proposed farm area. It is not expected that the air quality outside of the study area will deviate from its current condition during prospecting. Normal vehicular activity, as is already present, will most likely continue. There is, however, a risk that dust levels may increase as a result of the proposed activity and therefore mitigation measures will be recommended. Limiting the speed of vehicles on the gravel roads to 30km/h will have a threefold benefit in terms of health and safety: it will reduce dust fallout, reduce exhaust emissions and ensure the safety of workers. Another measure is to suppress dust by means of spraying water on the gravel roads.

Aesthetic Quality

It is important to bear in mind that determining a visual resource in absolute terms is not achievable. Evaluating a landscape's visual quality is both complex and challenging, as many quality standards apply and it is largely subjective, with individuals basing evaluations on experiences, their social level and their cultural background. Furthermore, natural features are inherently variable. Climate, season,

atmospheric conditions, region and sub-region all affect the attributes that comprise the landscape.

Visual Absorption Capacity (VAC) can be described as the ability of an area to absorb physical modifications. Factors affecting VAC include *inter alia*, vegetation, the built environment, existing infrastructure and topography. In terms of these factors, the receiving environment is perceived to have a low to medium VAC.

The prospecting activities will not modify the physical characteristics of the landscape significantly and can easily be rehabilitated upon completion.

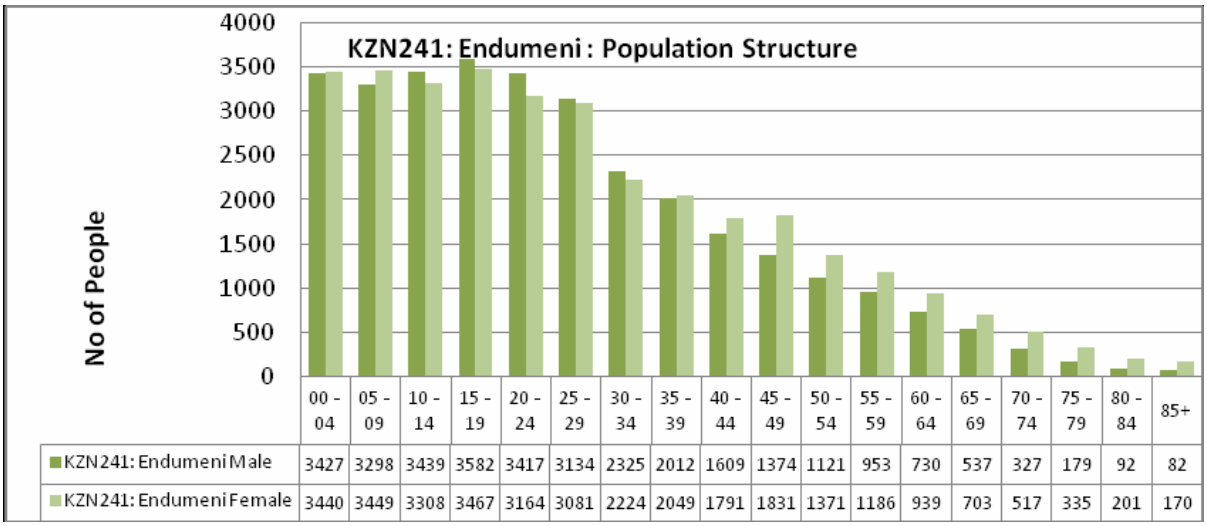
7. Socio-Economic Environment

The proposed prospecting area involves the portion reminder of the farm Umnamata 8508-GT which is located within the Endumeni Local Municipality under the Umzinyathi Magisterial District. The Endumeni Local municipality is one of the four local municipalities located within the Umzinyathi District Municipality within the valleys of the Biggarsberg Mountain Range with the two main towns of Dundee and Glencoe located at the base of the Indumeni mountain.

Endumeni is 1,612km^2 in extent, 55km wide from north-east to south-west on the R33/R602 and 30km on the R33/ R621 south- east to north-west. Endumeni dominates the district economy as it serves as the key administrative, educational and economic centre for the entire district. Dundee is the centre from which tourism based on the cultural heritage of the Zulu Kingdom and 'Battlefields' is emphasized and managed to some extent. Glencoe serves as a secondary centre to Dundee. Together with Amajuba, the area is branded the 'custodian' of the Battlefields region which has international and regional significance. There are no Traditional Authorities within Endumeni Local Municipal jurisdiction. The municipality is located within a well-developed commercial agricultural region and hence, it functions as an important regional rural service center serving the surrounding agricultural hinterland.

The Endumeni population has increased from 51 101 recorded in 2001 to at least 64 862 recorded in 2011 census. The Endumeni has experienced the population growth rate of at least 2.38% per annum between 2001 and 2011, which is lower than the growth rate of 2.83% incurred between 1996 and 2001.This growth at a decreasing

rate can be attributed to various factors with the inclusion of HIV Aids pandemic. The age distribution of Endumeni community suggests that more than 50% of the population falls with the youth category. Undoubtedly the future growth and development will be necessary in order to meet both social and economic needs of this young population section.



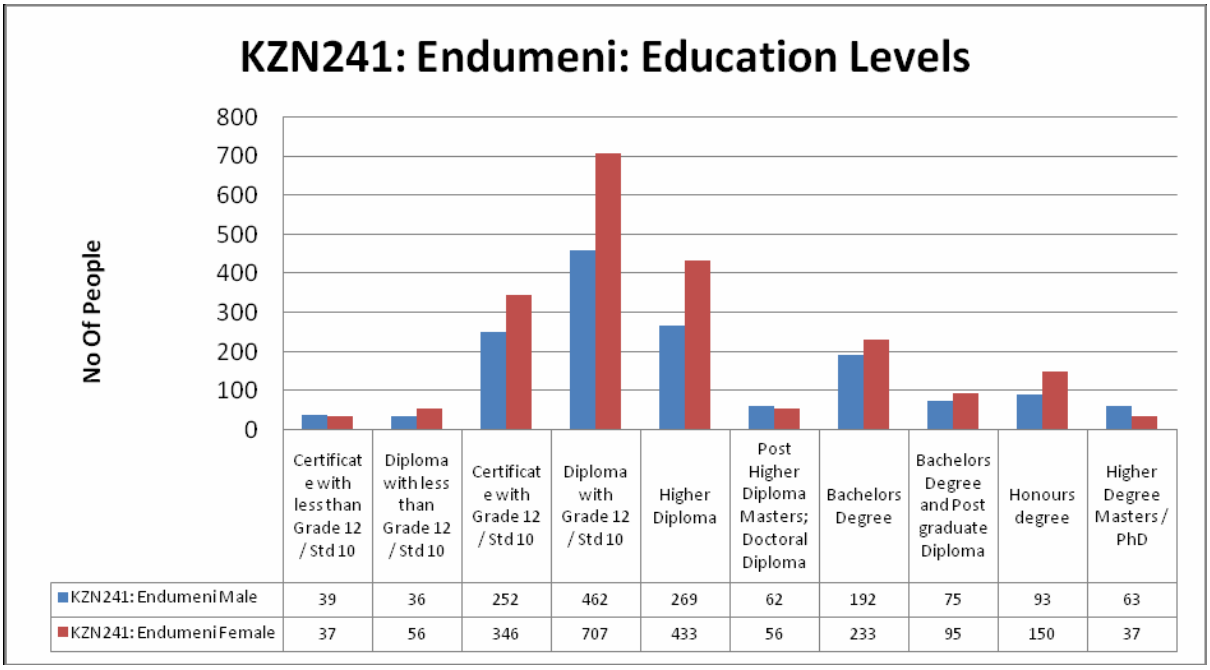
	00 - 04	05 - 09	10 - 14	15 - 19	20 - 24	25 - 29	30 - 34	35 - 39	40 - 44	45 - 49	50 - 54	55 - 59	60 - 64	65 - 69	70 - 74	75 - 79	80 - 84	85+
KZN241: Endumeni Male	3427	3298	3439	3582	3417	3134	2325	2012	1609	1374	1121	953	730	537	327	179	92	82
KZN241: Endumeni Female	3440	3449	3308	3467	3164	3081	2224	2049	1791	1831	1371	1186	939	703	517	335	201	170

Graph 1: Population distribution by age

Unemployment and education

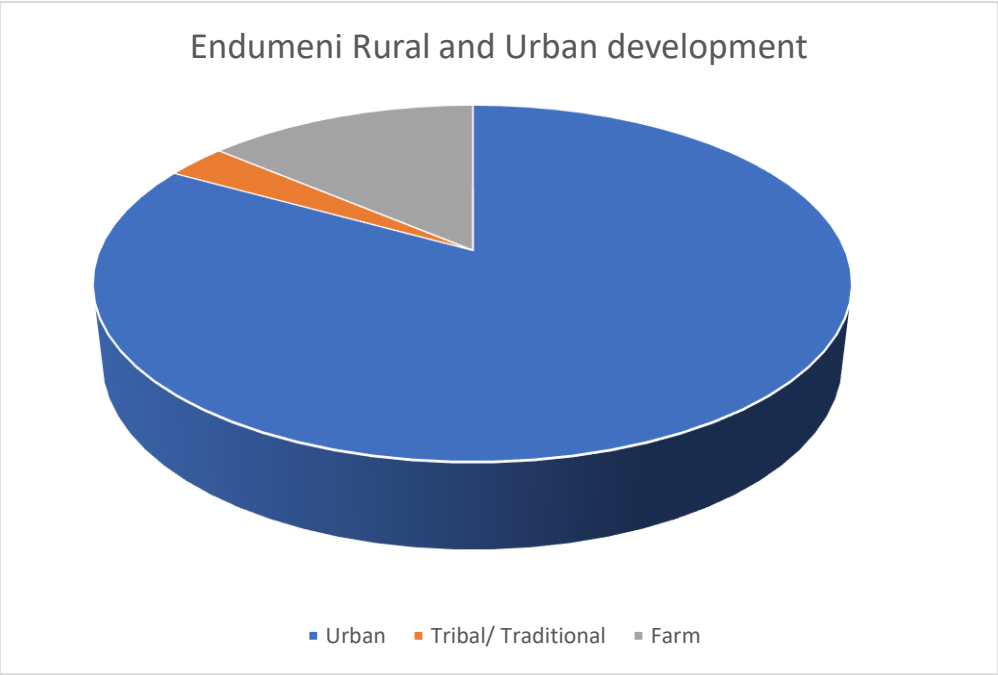
The unemployment rate for Endumeni Local Municipality has significantly dropped from 46% in 2001 to 26.4% in 2011, and it is relatively lower than the district rate which is 36.5% and provincial rate which is 33%. The population aged 20 and above within the Endumeni local municipality with no education, in 2001, there were 15.5% of the population aged 20 and above with no form of education. In 2011, the percentage has dropped as it is 7%, and it is less than the provincial rate which is 10.8%.This is accompanied by the increase in people with matric qualification from 22.2% in 2001 to 31.8% in 2011.

The education level is an important indicator of the future prosperity or challenge facing an economy. In this regard it is noted that the community of Endumeni is becoming more empowered through acquisition of important academic qualification. An increased number of women or female in particular is acquiring more diplomas and degrees. But if the economy fails to absorb those graduates people they will surely search for greener pastures elsewhere.



Graph 2: Education levels of the Endumeni Local Municipality per gender **source: Statssa;2011**

Just over 87% of the population of Endumeni lives in formal urban housing with 3, 1% of the community living in traditional housing and 13,8% on rural farms (See graph below). In comparison to the rest of the district municipality, the people of Endumeni are generally better off in terms of access to service infrastructure: 79,1% of households have access to electricity for lighting, while 61,9% have access to piped water within the dwelling.



Legend:

Urban: 87%

Tribal/ Traditional: 3.1%

Farm :13.8%

Chart 1: Endumeni rural and urban development chart

8. Land Uses

8.1. Parties to be potentially affected by the prospecting activities:

The landowners are likely to be affected by the prospecting activities will be residents on the prospecting area. 100m buffers will be developed to prevent any drilling activities to occur in close proximity of the residents.

8.2. Description of the current land uses

The majority of the study area is used for farming purposes, cultivation and cattle farming.

8.3. Description of specific environmental features and infrastructure on the site Environmental Features

The major sensitive features within the study area include:

- Multiple water resources
- Cattle

Infrastructure on the study area and in close proximity

- Roads in the study area
- Powerlines
- Irrigation utilities




Figure 29: Types of land uses observed on site

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

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

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

ENVIRONMENTAL ASPECT	NATURE OF THE IMPACT	IMPACT STATUS	MAGNITUDE	EXTENT	DURATION	REVERSIBILITY	IRREPLACEABILITY	PROBABILITY	SIGNIFICANCE PRE-MITIGATION	MITIGATION POTENTIAL	SIGNIFICANCE POST-MITIGATION	CONFIDENCE RATING	CUMULATIVE IMPACTS
GEOLOGY AND SOILS	Minor loss and disturbance to topsoil as a result of clearing of vegetation and drilling. When vegetation is cleared and the topsoil is stripped, the soil's natural structure is disturbed and as a result the natural cycle is broken exposing the bare soil to erosion. Vehicles driving on these soils cause compaction of soils and reduces the soil's ability to be penetrated by root growth. Compaction also increases erosion potential. When soils are not stripped and stockpiled according to the soil stripping guidelines these soils would have lost their natural physical and chemical properties, reducing the topsoil's ability to be a plant growth medium. The above factors all contribute to a loss of the topsoil's ability to be a resource through alterations and removal.	–	3	2	1	2	8	5	40	Medium	20	Certain	Very Low
	Hydrocarbon spills on soils can occur where heavy machinery and vehicles are parked such as the hard park area because they contain large volumes of lubricating oils, hydraulic oils, and diesel to run. There is always a chance of these breaking down and/or leaking.	–	3	2	1	3	9	2	18	Medium	9	Sure	Very Low

HYDROLOGY: GROUNDWATER SURFACE WATER	Stormwater, erosion and siltation impacts due to a lack of implementing temporary measures to manage stormwater run-off quantity and quality.	_	**3**	**3**	**1**	**3**	**10**	**3**	**30**	**Medium**	**15**	**Sure**	**Very Low**
	Contamination of stormwater runoff and groundwater, caused by chemicals such as hydrocarbon-based fuels and oils or lubricants spilled from heavy vehicles and machinery and fuel storage area.	_	**3**	**2**	**1**	**3**	**9**	**2**	**18**	**Medium**	**9**	**Sure**	**Very Low**
BIODIVERSITY	Minor loss of natural vegetation and destruction of habitat will result in associated loss of fauna and flora species.	_	**3**	**3**	**1**	**3**	**10**	**4**	**40**	**Low**	**27**	**Sure**	**Very Low**
ENVIRONMENTAL ASPECT	**NATURE OF THE IMPACT**	**IMPACT STATUS**	**MAGNITUDE**	**EXTENT**	**DURATION**	**REVERSIBILITY**	**IRREPLACEABILITY**	**PROBABILITY**	**SIGNIFICANCE PRE-MITIGATION**	**MITIGATION POTENTIAL**	**SIGNIFICANCE POST-MITIGATION**	**CONFIDENCE RATING**	**CUMULATIVE IMPACTS**
	Disruption in the movement patterns of fauna species may impact on biodiversity. Noise, dust and potential light pollution, as well as migration of pollutants such as hydrocarbons in the soils, dust and emissions from vehicle and machinery altering air quality will all have an impact on biodiversity.	_	**3**	**3**	**1**	**3**	**10**	**4**	**40**	**Low**	**27**	**Sure**	**Very Low**
	Introduction and spread of alien invasive species. The moving of soil and vegetation resulting in opportunistic invasions after disturbance and the introduction of seed in construction materials and on vehicles. Invasion of alien plants can impact on hydrology, by reducing the quantity of water entering a watercourse through stormwater, and outcompete natural vegetation, decreasing the natural biodiversity. Once in a system, alien plants can spread throughout the catchment. If allowed to seed before control measures are implemented, alien plants can easily colonise and impact on downstream users.	_	**4**	**3**	**1**	**3**	**11**	**4**	**44**	**Medium**	**22**	**Sure**	**Very Low**
ARCHAEOLOGICAL/ HERITAGE RESOURCES	Alteration of archaeological, historical and palaeontological resources that may be discovered during earthworks and drilling.	_	**2**	**1**	**5**	**5**	**13**	**2**	**26**	**Low**	**17**	**Sure**	**Very Low**

VISUAL AND SENSE OF PLACE	Visibility from sensitive receptors / visual scarring of the landscape as a result of the prospecting activities.	_	**3**	**3**	**1**	**1**	**8**	**5**	**40**	**Medium**	**20**	**Sure**	**Very Low**
NOISE AND VIBRATION	Nuisance and health risks caused by an increase in the ambient noise level as a result of noise and vibration impacts associated with the operation of vehicles, machinery and equipment.	–	**4**	**3**	**1**	**2**	**10**	**5**	**50**	**Low**	**33**	**Sure**	**Very Low**
AIR QUALITY	Increased dust pollution due to vegetation clearance and vehicles driving on gravel roads and drilling.	_	**4**	**3**	**1**	**2**	**10**	**5**	**50**	**High**	**16**	**Sure**	**Very Low**
	Gaseous emissions from vehicles and machinery may cause an impact on ambient air quality.	_	**3**	**3**	**1**	**3**	**10**	**5**	**50**	**Low**	**33**	**Sure**	**Very Low**

ENVIRONMENTAL ASPECT	NATURE OF THE IMPACT	IMPACT STATI	MAGNITUD	EXTEN	DURATIO	REVERSIBILI	IRREPLACEABIL	PROBABILI	SIGNIFICANC PRE-MITIGATION	MITIGATIO POTENTIA	SIGNIFICANC POST-MITIGATION	CONFIDENCE RAT	CUMULATIVE IMPA
WASTE	Generation of additional general waste, litter and building rubble and hazardous waste.	–	**3**	**3**	**1**	**5**	**12**	**5**	**60**	**Medium**	**30**	**Certain**	**Very Low**
SERVICES	Minor impact caused by need for services i.e. water, electricity and sewerage systems during the prospecting phase causing additional strain on natural resources and service infrastructure.	–	**2**	**2**	**1**	**3**	**8**	**5**	**40**	**Medium**	**20**	**Certain**	**Very Low**
TRAFFIC	Minor change in traffic patterns as a result of traffic entering and exiting the site on the surrounding road infrastructure and existing traffic.	–	**2**	**3**	**1**	**1**	**7**	**5**	**35**	**High**	**12**	**Sure**	**Very Low**
	Nuisance, health and safety risks caused by increased traffic on and adjacent to the study area including cars, and heavy vehicles.	_	**5**	**3**	**5**	**5**	**18**	**3**	**54**	**High**	**18**	**Sure**	**Very Low**
HEALTH AND SAFETY	Possibility of prospecting activities and workers causing veld fires, which can potentially cause injury and or loss of life to workers and surrounding landowners, visitors and workers.	–	**5**	**4**	**5**	**5**	**19**	**3**	**57**	**High**	**19**	**Sure**	**Very Low**
	Increased risk to public and worker safety: If not fenced off, the public and workers may fall into excavated areas and trenches.	_	**5**	**3**	**5**	**5**	**18**	**3**	**54**	**High**	**18**	**Sure**	**Very Low**
SOCIO-ECONOMIC	Potential creation of very limited extent short term employment opportunities for the local community, during the prospecting phase.	+	**3**	**3**	**1**	**1**	**8**	**5**	**40**	**N/A**	**40**	**Certain**	**Very Low**

	Multiplier effects on local economy will be positive, but very limited in extent and only short term.	+	2	3	1	1	7	5	35	N/A	35	Certain	Very Low

10. 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).

A "significant impact" is defined as it is defined in the EIA Regulations (2014): "an impact that may have notable effect on one or more aspects of the environment or may result in non-compliance with accepted environmental quality standards, thresholds or targets and is determined through rating the positive and negative effects of an impact on the environment based on criteria such as duration, magnitude, intensity and probability of occurrence". The objective of this EIA methodology is to serve as a framework for accurately evaluating impacts associated with current or proposed activities in the biophysical, social and socio-economical spheres. It aims to ensure that all legal requirements and environmental considerations are met in order to have a complete and integrated environmental framework for impact evaluations.

The process of determining impacts to be assessed is one of the most important parts of the environmental impact assessment process. It is of such high importance because the environmental impacts identified can and are often linked to the same impact stream. In this method all impacts on the biophysical environment are assessed in terms of the overall integrity of ecosystems, habitats, populations and individuals affected. For example, the removal of groundcover for the sloping or scraping of an embankment, can lead to higher amounts of water runoff which increases the rate of erosion. Further down in the river the amount of sediment increases because of the increased erosion. Several fish species cannot endure the high amount of sediment and moves off. The habitat is thus changed or in the process of changing. Thus, one needs to understand that the root of the problem (removal of groundcover) is assessed in terms of the degree of change in the health of the environment and/or components in relation to their conservation value. Thus, if the impact of removal of groundcover of a definable system is high and the conservation value is also high then the impact of removal of groundcover is highly significant.

The Environmental Impact Assessment (EIA) 2014 Regulations promulgated in terms of Sections 24 (5), 24M and 44 of the National Environmental Management Act, 1998 (Act No. 107 of 1998) [as amended] (NEMA), requires that all identified potential impacts associated with the proposed project be assessed in terms of their overall potential significance on the natural, social and economic environments. The criteria identified in the EIA Regulations (2014) include the following:

- Nature of the impact;
- Extent of the impact;
- Duration of the impact
- Probability of the impact occurring;
- Degree to which impact can be reversed;
- Degree to which impact may cause irreplaceable loss of resources;
- Degree to which the impact can be mitigated; and
- Cumulative impacts.

The evaluation of impacts is conducted in terms of the criteria detailed in the 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.

Impact Assessment Methodology

By considering the root cause of the issue in this way, the probability that the activity undertaken does or may result in an impact, can be determined. The associated impact can then be assessed in order to determine its significance and to define mitigation measures or management measures to address the impact.

The following definitions therefore apply:

- An activity is a distinct process or task undertaken by an organization for which a responsibility can be assigned. Activities also include facilities or pieces of infrastructure that are possessed by an organization;

- An environmental aspect is an 'element of an organization's activities, products and services which can interact with the environment. The interaction of an aspect with the environment may result in an impact;
- Environmental impacts are the consequences of these aspects on environmental resources or receptors of particular value or sensitivity, for example, disturbance due to noise and health effects due to poorer air quality;
- Receptors can comprise, but are not limited to, people or human-made systems, such as local residents, communities and social infrastructure, as well as components of the biophysical environment such as aquifers, flora and palaeontology. Impacts on the environment can lead to changes in existing conditions; the impacts can be direct, indirect or cumulative;
- Direct impacts refer to changes in environmental components that result from direct cause-effect consequences of interactions between the environment and project activities. Indirect impacts result from cause-effect consequences of interactions between the environment and direct impacts; and
- Cumulative impacts refer to the accumulation of changes to the environment caused by human activities.

Assessment of Impact Significance

The accumulated knowledge and the findings of the environmental investigations form the basis for the prediction of impacts. Once a potential impact has been determined, it is necessary to identify which project activity will cause the impact, the probability of occurrence of the impact, and its magnitude and extent (spatial and temporal). This information is important for evaluating the significance of the impact, and for defining mitigation and monitoring strategies. The aspects and impacts identified are therefore described according to the following:

(a) Nature of the impact

The NATURE of an impact can be defined as: "a *brief description of the impact being assessed, in terms of the proposed activity or project, including the socio-economic or environmental aspect affected by this impact*".

(b) The status of the impact:

	Status	Description
STATUS	**Positive (+)**	**A benefit to the holistic environment.**
	Negative (-)	**A cost to the holistic environment.**
	Neutral (N)	**No cost or benefit to the holistic environment.**

(c) Magnitude of the impact

The MAGNITUDE of an impact can be defined as: "*a brief description of the intensity or amplitude of the impact on socioeconomic or environmental aspects*".

Determining the magnitude of an impact			
MAGNITUDE **Magnitude / intensity of impact (at the specified scale)**	**Magnitude**	**Score**	**Description**
	Zero	**1**	**Natural and/or social and/or functions processes remain unaltered.**
	Very low	**2**	**Natural and/or social functions and/or processes are negligibly altered.**
	Low	**3**	**Natural and/or social and/or functions processes are slightly altered.**
	Medium	**4**	**Natural and/or social and/or functions processes are notably altered.**
	High	**5**	**Natural and/or social and/or functions processes severely altered.**

(d) Extent of the impact

The EXTENT of an impact can be defined as: "*a brief description of the spatial influence of the impact or the area that will be affected by the impact*".

Determining the extent of an impact			
EXTENT **Extent or spatial influence of impact**	**Extent**	**Score**	**Description**
	Footprint	**1**	**Only as far as the activity, such as footprint occurring within the total site area**
	Site	**2**	**Only the site and/or 500m radius from the site will be affected**

	Local	**3**	**Local area / district (neighbouring properties, transport routes and adjacent towns) is affected**
	Region	**4**	**Entire region / province is affected.**
	National	**5**	**Country is affected**

(e) Duration of the impact

The DURATION of an impact can be defined as: "*a short description of the period of time the impact will have an effect on aspects*".

Determining the duration of an impact			
DURATION **Duration of the impact**	**Extent**	**Score**	**Description**
	Short term	**1**	**Less than 2 years**
	Short to medium term	**2**	**2 – 5 years**
	Medium term	**3**	**6 – 25 years**
	Long term	**4**	**26 – 45 years**
	Permanent	**5**	**46 years or more**

(f) Degree to which impact can be reversed

The REVERSIBILITY of an impact can be defined as: "*the ability of an impact to be changed from a state of affecting aspects to a state of not affecting aspects*".

Determining the reversibility of an impact			
REVERSIBILITY	**Reversibility**	**Score**	**Description**
	Completely reversible	**1**	**Impacts can be reversed through the implementation of minimal mitigation measures and rehabilitation with negligible residual effects.**
	Nearly completely reversible	**2**	**Impacts can nearly be completely reversed through the implementation of mitigation measures and rehabilitation, with marginal residual effects.**
	Partly reversible	**3**	**Impacts can be partly reversed through the implementation of mitigation measures and rehabilitation with moderate residual effects.**
	Nearly irreversible	**4**	**Impacts can be mitigated, but only marginally reversed through the implementation of mitigation measures and rehabilitation with severe residual effects.**

	Irreversible	***5***	**Impacts are permanent and can't be reversed by the implementation of mitigation measures or rehabilitation is not viable.**

(g) Degree to which impact may cause irreplaceable loss of resources

The irreplaceability of an impact can be defined as "the amount of resources that can/can't be replaced".

Irreplaceability = Magnitude + Extent + Duration + Reversibility

Degree to which impact may cause irreplaceable loss of resources			
IRREPLACEABILITY Irreplaceable loss of resources	**Irreplaceability**	**Score**	**Description**
	No loss	**0**	**No loss of any resources**
	Very Low	**1 - 5**	
	Low	**6 - 10**	**Marginal loss or resources**
	Medium	**11 - 15**	**Significant loss of resources**
	High	**16 - 20**	**Complete loss of resources**

(h) Probability of the impact occurring

The PROBABILITY of an impact can be defined as: "the *estimated chance of the impact happening*".

Determining the probability of an impact			
PROBABILITY	**Probability**	**Score**	**Description**
	Unlikely	**1**	**Unlikely to occur (0 – 15% probability of impact occurring)**
	Possible	**2**	**May occur (15 – 40% chance of occurring)**
	Probable	**3**	**Likely to occur (40– 60% chance of occurring)**
	Highly Probable	**4**	**Between 60% and 85% sure that the impact will occur**
	Definite	**5**	**Will certainly occur (85 - 100% chance of occurring)**

(i) Significance of Impacts - Pre-Mitigation

The SIGNIFICANCE can be defined as:" *the combination of the duration and importance of the impact, in terms of physical and socio-economic extent, resulting in an indicative level of mitigation required*".

The significance of an impact is determined as follows:

Significance = Irreplaceability x Probability

The maximum value is 100 significance points (SP). Environmental impacts were rated as either of Very High (VH) High (H), Medium (M), Low (L) or Very Low (VL) significance on the following basis:

Table 9: Significance Rating (SR) Basis

Score	Significance
0	Neutral
1 to 20	Very low
21 to 40	Low
41 to 60	Medium
61 to 80	High
81 to 100	Very high

(j) Degree to which the impact can be mitigated

The degree to which an impact can be MITIGATED can be defined as: "the effect of mitigation measures on the impact and its degree of effectiveness".

	Determining the mitigation potential of an impact		
	Degree	**Calculation**	**Description**
MITIGATION POTENTIAL	**High**	**Pre-mitigation SR / 3 = Post Mitigation SR**	**Impact 100% mitigated**
	Medium	**Pre-mitigation SR / 2 = Post Mitigation SR**	**Impact >50% mitigated**
	Low	**Pre-mitigation SR / 3 = x Then: Pre-mitigation SR – x = Post Mitigation SR**	**Impact <50% mitigated**

(k) Significance of Impacts Post-Mitigation

The SIGNIFICANCE can be defined as:" *the combination of the duration and importance of the impact, in terms of physical and socio-economic extent, resulting in an indicative level of mitigation required*".

The significance of an impact is determined as follows:

Significance = Irreplaceability x Probability

Table 10: Significance Rating

Score	Significance
0	**Neutral**
1 to 20	**Very low**
21 to 40	**Low**
41 to 60	**Medium**
61 to 80	**High**
81 to 100	**Very high**

(l) Confidence rating

CONFIDENCE in the assessment of an impact can be defined as the:" *level of certainty of the impact occurring*".

Determining the confidence rating of an impact			
CONFIDENCE RATING	**CONFIDENCE**	**Certain**	**Amount of information on and/or understanding of the environmental factors that potentially influence the impact is unlimited and sound**
		Sure	**Amount of information on and/or understanding of the environmental factors that potentially influence the impact is reasonable and relatively sound**
		Unsure	**Amount of information on and/or understanding of the environmental factors that potentially influence the impact is limited**

(m) Cumulative impacts

The effect of CUMULATIVE impacts can be described as:" the effect the combination of past, present and "reasonably foreseeable" future actions have on aspects".

Determining the confidence rating of an impact			
CUMULATIVE RATING	**CUMULATIVE EFFECTS**	**Low**	**Minor cumulative effects**
		Medium	**Moderate cumulative effects**
		High	**Significant cumulative effects**

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

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

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

The positive impact of the proposed activity is the discovery of an economically viable mineral resource within the identified Local Municipalities, whose economy is dependent of the mining industry.

It should be noted that this report made available to I&AP's for review and comment and their comments and concerns will be taken into account in this BAR & EMPr. Furthermore, it should be noted that the impact scores themselves will include the results of the public response and comment. Please refer to Section 10 for the Methodology used in determining and ranking the nature, significance, consequence, extent, duration and probability of potential environmental impacts and risks.

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

Access to the application area for the topographical and geophysical survey, prospecting drilling and resource definition drilling will be required which may interrupt the existing land uses, such as grazing and residential developments. However, this impact will be minimal as it is of short duration. Approximately 0,9 ha of vegetation will be cleared during prospecting, however, care will be taken to be ensure that any protected species identified are relocated outside the footprint of the prospecting activities. Provisions have been made for the rehabilitation of all areas disturbed during prospecting, including access tracks.

The prospecting activities will generate general waste during the construction/ operational phase. This waste must be collected during site visits to be disposed of at appropriate landfill sites.

10.2. 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).

The following sections provide a description and assessment of the mitigation measures for each potential impact identified in the impact assessment process. The impact scores below are reflective of the impacts post the implementation of mitigation measures. A second score indicating the final significance of each potential impact is also reflected below. This score indicates the degree of potential loss of irreplaceable resources, the cumulative nature of the impact, as well as the

degree of public concern regarding the impact. It should be noted that this report will be made available to I&AP's for review and comment and their comments and concerns will be addressed in the final report to be submitted to the DMRE for adjudication. Furthermore, it should be noted that the impact scores themselves will include the results of the aforementioned public response and comment. The results of the public consultation will be used to update the impact scores upon completion of the public review period, where after the finalized report will be submitted to the DMRE for adjudication.

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

- Avoid and control through implementation of EMPr mitigation measures (e.g. speed limit enforcement, vehicle maintenance);
- Avoidance and control through preventative measures (e.g. site security, code of conduct);
- Remedy through application of mitigation measures in EMPr;
- Avoid and control through implementation of preventative measures (e.g. monitoring, communication with landowners, emergency response procedures);
- Avoid through implementation of preventative measures (e.g. consultation and communication);
- Avoid and remedy impacts and risks to the community through ongoing communication with the community. In this regard, quarterly community meetings shall be held with the affected communities.
- Avoid through implementation of suitable progressive rehabilitation and soil management;
- Avoid and control through implementation of EMPr mitigation measures (e.g. Spill prevention, Hydrocarbon Storage);
- Avoid through preventative measures (e.g. bunding, spill kits);
- No invasive prospecting activities to be undertaken within 100m of a watercourse.
- Should any watercourse be affected, then the necessary water use licenses should be obtained from the Department of Water and Sanitation.

- No ablution of site laydown areas is to be located within 100m of a watercourse.
- Where shallow aquifers are encountered, a survey of the drinking water/ livestock watering boreholes should be undertaken (within 100 m of the prospecting borehole sites). A detailed groundwater monitoring programme should be developed for these drinking water/ livestock watering boreholes and pre- and post-prospecting water quality samples should be taken.
- Where drinking water/ livestock watering boreholes are to be affected then the advice of a geohydrologist should be sought with regards to the need for plugging and casing of the prospecting boreholes.
- Remedy through clean-up and waste disposal; and
- Avoid and control through implementation of preventative measures (e.g. location of toilets, spill prevention, waste management).

The following impacts will results from the proposed prospecting activities:

- Job creation
- Clearance of vegetation
- Compacting of soils
- Drilling impact on identified lithic scatters
- Deterioration and damage to existing access roads and tracks
- Safety and security risks to landowners and lawful occupiers
- Interference with existing land uses
- Generation and disposal of waste
- Contamination of surface and groundwater
- Introduction/invasion by alien species
- Noise
- Impact on fauna
- Pollution of soils
- Dust
- Erosion due to vegetation clearance
- Impact on surface water features
- Impact on groundwater
- Loss of fossil heritage

11. Motivation where no alternative sites were considered

Prospecting is conducted in phases, where the activities and location of drilling and trenching to sample soil are dependent on the previous phase. Therefore, the specific locations and extent of soil sampling and diamond core drilling cannot be predetermined. The overall prospecting area is indicated in Figure 3. Areas to be avoided in terms of sensitivities are also indicated on the sensitivity maps in this report. Positioning of invasive prospecting planned in the sensitive areas and buffer zones should be conducted with a suitably qualified ecologist in order to avoid or minimize the destruction of any sensitive vegetation or habitats occurring in these areas.

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

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

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

The proposed project area as discussed above, has been selected due to the geology of the site and the anticipated favorable tectono-stratigraphic setting of the proposed prospecting area. No prospecting activities will occur within 500m from the watercourses. Negotiations and agreements will be made with the farm owner to use any existing infrastructures like access roads. Negative impacts identified above will be mitigated through implementation of the proposed mitigation measures as detailed in the EMPr. Where negative impacts cannot be avoided, rehabilitation will be undertaken.

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

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

- **Approach to the EIA**

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

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

- **Guiding principles for an EIA**

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

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

- **Information gathering**

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

- **Specialist Assessments**

The following specialist studies have been conducted:

- Surface water study
- Hydrogeological study

The main objective of the specialist studies is to provide independent scientifically sound information on issues of concern relating to the project proposal.
The findings and recommendations identified by the various specialist studies undertaken, were incorporated into the Basic Impact Assessment.

- **Legislative Framework**

The legal requirements were described and assessed in detail.

- **Alternatives**

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

The following alternatives were investigated as feasible alternatives:

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

The proposed Prospecting Right Area is situated over the portion remainder of the farm Umnamata 8508-GT and is located approximately 6.79 km North-East of Dundee

and approximately 10.77 km North West of Calrossie within the Endumeni Local Municipality under the Umzinyathi Magisterial District. See Figure 1 for the locality map.

- The type of activity to be undertaken

Main activities conducted to determine the coal and pseudocoal resources present in an economic feasible quality and quantity is drilling. The boreholes will be drilled with the diamond drilling method so the geologists can get a clear understanding of the actual subsurface setting of the lithologies. As outlined in the PWP all activities will be conducted in a phase approach whereby the execution of a new phase will depend on the results of the preceding phase. Prospecting activities will not compromise any future land uses on the study area.

- 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 farm owners 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 focused.
- No changes to the layout is considered but with the geophysical survey information, the boreholes can be orientated to match the shape of the good quality of resource.

- The technology to be used in the activity

The technologies listed in the PWP have been selected as they are proven effective in the determination of resource viability within the proposed prospecting area. Some of the techniques employed in the non-invasive prospecting will include a literature survey, field reconnaissance/mapping, and geophysics survey of the geology, outcrops. Invasive technology alternatives have also been considered. It is hereby noted that the different phases and timeframes of the prospecting herein envisaged are, by their nature, dependent on the results obtained during the preceding phases

of such prospecting. The proposals set out in the Prospecting Work Programme are therefore made on the basis that results obtained during the preceding phases may necessitate reasonable changes and adaptations to such proposals, which will be reported as prescribed.

- The option of not implementing the activity

If the Prospecting Right is not granted, the potential to identify viable mineral resources could be lost. Historical prospecting and mining activities have taken place in the vicinity of the proposed prospecting right area and as such the proposed prospecting activities represent a continuation of surrounding land uses. Additionally, it allows for marginal land impacted on by historical prospecting and mining activities to be re-introduced into the economy.

- **Description and assessment of impacts identified**

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

- **Environmental management programme**

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

- **Stakeholder engagement**

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

12.1. Assessment of each identified potentially significant impact and risk

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

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

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

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

- Contamination and compaction of soils;
- Erosion;
- Contamination of ground- and surface water quality and decline in quantity;
- Impacts on biodiversity;
- Loss and displacement of fauna;
- Impacts on existing land use of the study and surrounding area;
- Destruction or loss of heritage features including graves and other historical sites of importance that may be uncovered during excavations;
- Decreased aesthetic value and impact on "Sense of Place";
- Poor air quality and decreased visibility due to dust pollution;
- Increased noise levels;
- Waste generation;
- Increased demand on service infrastructure and resources;
- Slight increase in traffic and need for maintenance of road infrastructure;
- Potential injury and loss of health and life of humans; and
- Altered Socio-Economic Environment (Positive or negative).

Table 11: Assessment of each identified potentially significant impact and risk

NAME OF ACTIVITY	POTENTIAL IMPACT	ASPECTS AFFECTED	PHASE	SIGNIFICANCE if not mitigated	MITIGATION TYPE	SIGNIFICANCE if mitigated
• Clearing of vegetation and topsoil. • Stockpiling of overburden positioned for later rehabilitation. • Prospecting including diamond core drilling, logging and sampling of the borehole core, trenching will involve the digging of excavation trenches down to approximately 3 metres below surface using graders and excavators.	Minor loss and disturbance to topsoil as a result of clearing of vegetation and drilling and trenching. When vegetation is cleared and the topsoil is stripped, the soil's natural structure is disturbed and as a result the natural cycle is broken exposing the bare soil to erosion. Vehicles driving on these soils cause compaction of soils and reduces the soil's ability to be	Soil	Prospecting	**Low (-)**	**Prevent and reduce through management measures.** **Stripping of topsoil:** • Clearing of areas to take place a maximum of one month prior to intended prospecting in the area; • Stripping of topsoil will not take place during rain or excessive wind; and • The top 30 cm of vegetation and topsoil is to be stripped from the area to be prospected. **Storage of topsoil / overburden:** • Topsoil (top 30cm) is to be stored in predetermined topsoil berms, (+/- 5m) outside the boundary of the specific area; and • Topsoil stockpiles will be restricted to 1.5 to 2m in height. **Maintenance and monitoring of topsoil stockpiles:**	**Very Low (-)**

	penetrated by root growth. Compaction also increases erosion potential.				• The stored topsoil should be used as soon as possible in concurrent rehabilitation; • Weekly visual inspections to be conducted.	

NAME OF ACTIVITY	POTENTIAL IMPACT	ASPECTS AFFECTED	PHASE	SIGNIFICANCE if not mitigated	MITIGATION TYPE	SIGNIFICANCE if mitigated
• Dust Suppression.	When soils are not stripped and stockpiled according to the soil stripping guidelines these soils would have lost their natural physical and chemical properties, reducing the topsoil's ability to be a plant growth medium. The above factors all contribute to a loss of the topsoil's ability to be a resource through alterations and removal.					

	Hydrocarbon spills on soil can occur where heavy machinery and vehicles are parked such as the hard park area because they contain large volumes of lubricating oils, hydraulic oils, and diesel	Soil	Prospecting	**Very Low (-)**	**Prevent and reduce and remedy through management measures.** • All vehicles and machinery will be regularly serviced to ensure they are in proper working condition and to reduce risk of leaks; • All leaks will be cleaned up immediately using an absorbent material and spill kits, in the prescribed manner; and	**Very Low (-)**
NAME OF ACTIVITY	**POTENTIAL IMPACT**	**ASPECTS AFFECTED**	**PHASE**	**SIGNIFICANCE** if not mitigated	**MITIGATION TYPE**	**SIGNIFICANCE** if mitigated
	to run. There is always a chance of these breaking down and/or leaking.				• The approved Integrated Water and Waste Management Plan to be implemented. ***Hydrocarbons and hazardous waste*** • All hazardous waste generated shall be kept separate and shall not be mixed with general waste; and • All hazardous waste shall be stored within a sealed drum on an impermeable surfaced area within the central waste storage and transition area.	

	Stormwater, erosion and siltation impacts due to a lack of implementing temporary measures to manage stormwater runoff quantity and quality.	Surface water	Prospecting	**Low (-)**	**Prevent and reduce and remedy through management measures.** • A Stormwater Management Plan (SMP) to be developed for the collective area where prospecting will occur, (or the existing SMP updated, where applicable for present and future activities) and should include the management of stormwater during excavation, as well as the installation of temporary stormwater and erosion control measures during prospecting, followed up by rehabilitation of the area;	**Very Low (-)**

NAME OF ACTIVITY	POTENTIAL IMPACT	ASPECTS AFFECTED	PHASE	SIGNIFICANCE if not mitigated	MITIGATION TYPE	SIGNIFICANCE if mitigated
					• The slopes of the area where prospecting activities will occur, should be profiled to ensure that they are not subjected to excessive erosion but capable of drainage run-off with minimum risk of scrub (hydrologic action by water that causes erosion). A maximum gradient of 1:3 is recommended; • If necessary, temporary diversion channels should be constructed ahead of the stockpiles (if relevant) to intercept clean run-off and divert it around disturbed areas into the natural drainage system downstream (down gradient) of the prospecting area; • Existing vegetation must be retained as far as possible to minimise erosion problems; • Rehabilitation of the prospecting area shall be planned and completed (after conclusion of the prospecting activities) in such a way that the run-off water (if any) will not cause erosion; • Visual inspections shall be done on a weekly basis with regard to the stability of the temporary water control structures, erosion and siltation (if required).	

NAME OF ACTIVITY	POTENTIAL IMPACT	ASPECTS AFFECTED	PHASE	SIGNIFICANCE if not mitigated	MITIGATION TYPE	SIGNIFICANCE if mitigated
					• Sediment-laden run-off from cleared areas should be prevented from entering rivers and streams; • No river or surface water may be affected by silt emanating from the prospecting area • No wastewater may run freely into any of the surrounding naturally vegetated areas.	

	Contamination of stormwater runoff and groundwater, caused by chemicals such as hydrocarbon-based fuels and oils or lubricants spilled from heavy vehicles and machinery and fuel storage area.	Surface water and groundwater resources	Prospecting	**Very Low (-)**	**Prevent and reduce through management measures.** In accordance with Government Notice 704 (GN 704), the onsite management should: • Keep clean and dirty water separated; • Contain any dirty water within a system; and • Prevent the contamination of clean water. In order to achieve these objectives, the following stormwater management measures must be implemented on the site to ensure that those potential stormwater impacts are kept to a minimum: • Clean and dirty stormwater needs to be separated. Dirty stormwater may not be released	**Very Low (-)**

NAME OF ACTIVITY	**POTENTIAL IMPACT**	**ASPECTS AFFECTED**	**PHASE**	**SIGNIFICANCE** if not mitigated	**MITIGATION TYPE**	**SIGNIFICANCE** if mitigated
					into the environment and should be contained and treated on site;	

					• All temporary stormwater infrastructure (if any) on-site shall be maintained and kept clean throughout the prospecting period; • Immediate reporting of any polluting or potentially polluting incidents so that appropriate measures can be implemented; • Fuel and oil spills shall be treated immediately by appropriate mop-up products. Several hydrocarbon absorption/remediation products (i.e. Spill kits) must be placed throughout the site; • Use of bunds or traps to ensure full containment of hydrocarbon and other hazardous materials are mandatory; • Any contaminated material is disposed of in an appropriate manner and the potential risks associated with such spills are limited; • Stormwater leaving the site must in no way be contaminated; • Ensure good housekeeping practices;	

NAME OF ACTIVITY	POTENTIAL IMPACT	ASPECTS AFFECTED	PHASE	SIGNIFICANCE if not mitigated	MITIGATION TYPE	SIGNIFICANCE if mitigated
					• Increased runoff should be managed using berms and other suitable structures as required to ensure flow velocities are reduced; and • Removal of spills, rainwater and waste produced during clean-up of the bunds – shall be done in accordance to relevant specifications.	

	Minor loss of natural vegetation and destruction of habitat will result in associated loss of fauna and flora species.	Surface water	Prospecting	**Low (-)**	**Reduce through management measures.** • A suitably qualified specialist (ecologist) to accompany the site manager to demarcate areas for prospecting, in order to avoid damaging sensitive vegetation as identified during the specialist study and according to the sensitivity maps provided in this report; • Only vegetation falling directly into demarcated access routes or project sites should be removed; • No further vegetation clearance except for the removal of alien invasive species will be allowed; and • All remaining indigenous vegetation should be conserved wherever possible.	**Low (-)**
NAME OF ACTIVITY	**POTENTIAL IMPACT**	**ASPECTS AFFECTED**	**PHASE**	**SIGNIFICANCE** if not mitigated	**MITIGATION TYPE**	**SIGNIFICANCE** if mitigated
	Disruption in the movement patterns of fauna species may impact on biodiversity.	Biodiversity	Prospecting	**Low (-)**	**Prevent and reduce through management measures.** • Reduce the levels of disturbance on areas indicated by the Environmental Control Officer (ECO) as migratory routes, if any;	**Low (-)**

	Noise, dust and potential light pollution, as well as migration of pollutants such as hydrocarbons in the soils, dust and emissions from vehicle and machinery altering air quality will all have an impact on biodiversity.				• Environmental awareness training should include that no hunting, trapping or killing of fauna are allowed; • Any animals rescued or recovered will be relocated in a suitable habitat away from the prospecting operations and associated infrastructure; • Any lizards, snakes or monitors encountered should be allowed to escape to a suitable habitat away from disturbance. • No reptile should be intentionally killed, caught or collected during any phase of the project; and • General avoidance of snakes is the best policy if encountered. Snakes should not be intentionally harmed or killed and allowed free movement away from the area.	
	Introduction and spread of alien invasive species.	Biodiversity Soils	Prospecting	**Medium (-)**	**Prevent and control through management measures.**	**Low (-)**
NAME OF ACTIVITY	**POTENTIAL IMPACT**	**ASPECTS AFFECTED**	**PHASE**	**SIGNIFICANCE** if not mitigated	**MITIGATION TYPE**	**SIGNIFICANCE** if mitigated

	The moving of soil and vegetation resulting in opportunistic invasions after disturbance and the introduction of seed in construction materials and on vehicles. Invasion of alien plants can impact on hydrology, by reducing the quantity of water entering a watercourse through stormwater, and outcompete natural vegetation, decreasing the natural biodiversity. Once in a system, alien plants can spread throughout the catchment. If allowed to seed before control measures are implemented, alien plants can easily colonise and	Surface water ecosystems			• Regular removal of invasive alien species should be undertaken. This should extend through to the closure • phase of the project; and No spreading of alien vegetation onto adjacent properties should be allowed.	
NAME OF ACTIVITY	**POTENTIAL IMPACT**	**ASPECTS AFFECTED**	**PHASE**	**SIGNIFICANCE** if not mitigated	**MITIGATION TYPE**	**SIGNIFICANCE** if mitigated

	impact on downstream users.					
	Alteration of archaeological, historical and palaeontological resources that may be discovered during earthworks and drilling.	Cultural Heritage	Prospecting	**Low (-)**	**Protect heritage resources through developing and implementing procedures.** • Prior to any development, construction or prospecting, a qualified archaeologist should conduct a site inspection on the areas demarcated for geotechnical drilling/prospecting. Proposed access roads to the drill sites should also be surveyed in order to avoid the destruction of heritage material; • Should the prospecting outcome result in further development or construction and mining, a full Phase2 Archaeological Impact Assessment must be conducted on the affected area if triggered; • Because archaeological artefacts generally occur below surface, the possibility exists that culturally significant material may be exposed during the development and construction phases, in which case all activities must be suspended pending further	**Very Low (-)**

					archaeological investigations by a qualified archaeologist. Also,	

NAME OF ACTIVIT	POTENTIAL IMPAC	ASPECTS AFFECTED	PHASE	SIGNIFICANC if not mitigated	MITIGATION TYPE	SIGNIFICANCE if mitigated
					should skeletal remains be exposed during development and construction phases, all activities must be suspended and the relev heritage resources authority contacted (s National Heritage Resources Act (Act No. 1999) Section 36 (6)). Should culturally significant material or skeletal remains b exposed during prospecting all activities suspended pending further investigation qualified archaeologist (Refer to National Heritage and Resources Act, 25 of 1999 36(6)); • Should any objects of archaeological or palaeontological remains be found during activities, work must immediately stop in area and the Environmental Control Offic (ECO) must be informed; • The ECO must inform SAHRA and conta archaeologist and / or palaeontologis depending on the nature of the find, to as the importance and rescue them if neces (with the relevant SAHRA permit). No wo	

NAME OF ACTIVITY	POTENTIAL IMPACT	ASPECTS AFFECTED	PHASE	SIGNIFICANCE if not mitigated	MITIGATION TYPE	SIGNIFICANCE if mitigated
					be resumed in this area without the permission of the ECO and SAHRA.	

	Visibility from sensitive receptors / visual scarring of the landscape as a result of the prospecting activities.	Aesthetic quality and sense of place	Prospecting	**Low (-)**	**Reduce through controlling management measures.** • Unnecessary lights should be switched off during the day and / or night to avoid light pollution; • If lighting is required, the lighting will be located in such a place and such a manner so as to minimise any impact on the surrounding community and fauna; • Install temporary lights that will not create a night sky glow; • Security lighting should be designed in such a way as to minimise emissions onto undisturbed areas on site and neighbouring properties. Light fittings should face downwards; • Housekeeping on site should be enforced; • Rehabilitation measures such as re-vegetation and plan to be implemented; • Reduce the prospecting period through careful planning and productive implementation of resources;	**Very Low (-)**

NAME OF ACTIVITY	POTENTIAL IMPACT	ASPECTS AFFECTED	PHASE	SIGNIFICANCE if not mitigated	MITIGATION TYPE	SIGNIFICANCE if mitigated
					• Plan the placement of lay-down areas and any potential temporary prospecting camps in order to minimise vegetation clearing; • Restrict the activities and movement of workers and vehicles to the immediate prospecting site and existing access roads; • Ensure that rubble, litter and issued materials are managed and removed regularly; • Ensure that all infrastructure and the site and general surrounds are maintained in a neat and appealing way; and • Reduce and control dust through the use of approved dust suppression techniques.	

	Nuisance and health risks caused by an increase in the ambient noise level as a result of noise and vibration impacts associated with the operation of vehicles, machinery and equipment.	Health of landowners and occupiers Biodiversity	Prospecting	**Medium (-)**	**Reduce through controlling measures.** • Vehicles and machinery will be regularly serviced to ensure acceptable noise levels are not exceeded; • Silencers will be utilised where possible; • Heavy vehicle traffic should be routed away from noise sensitive areas where possible; • Noise levels should be kept within acceptable limits. All noise and sounds generated should	**Low (-)**

NAME OF ACTIVIT	POTENTIAL IMPAC	ASPECTS AFFECTED	PHASE	SIGNIFICANC if not mitigated	MITIGATION TYPE	SIGNIFICANCE if mitigated
					adhere to South African Bureau of Stand (SABS) specifications for maximum allow noise levels for constructionsites. No pure t sirens or hooters may be used except whe required in terms of SABS standards or i emergencies; • With regard to unavoidable very noisy ac in the vicinity of noise sensitive areas, th Manager (SM) should liaise with local reside and a suitably qualified ecologist to agree how bes to minimise impacts, and the local popula should be kept informed of the nature an duration of intended activities; • The SM should take measures to discou labourers from loitering in the area, causing noise disturbance; • Noise impacts should be minimised by restr the hours (between 06h00 and 18h00 on Monday to Friday, and 06h00 and 13h00 Saturdays), during which the offending a are carried out and, where possible, by insulatin machinery and/or enclosing areas of activi	

NAME OF ACTIVITY	POTENTIAL IMPACT	ASPECTS AFFECTED	PHASE	SIGNIFICANCE if not mitigated	MITIGATION TYPE	SIGNIFICANCE if mitigated
					• No noisy activities to occur on Sundays or public holidays; • Personal Protective Equipment to all persons working in areas where high levels of noise can be expected; • Signs where it is compulsory;	
	Increased dust pollution due to vegetation clearance and vehicles driving on gravel roads and drilling.	Aesthetic environment Sense of Place Air quality Biodiversity	Prospecting	**Medium (-)**	**Reduce through controlling measures.** • Dust suppression shall be implemented during dry periods and windy conditions; • All exposed surfaces should be minimised in terms of duration of exposure to wind and stormwater; • Excavation, handling and transportation of erodible materials shall be avoided under high wind conditions (excess of 35km/hr) or when a visible dust plume is present; • Ensure that the shortest routes are used for material transport; • Ensure that stockpile height is kept to a minimum; • Minimise travel speed on unpaved roads;	**Very Low (-)**

NAME OF ACTIVITY	POTENTIAL IMPACT	ASPECTS AFFECTED	PHASE	SIGNIFICANCE if not mitigated	MITIGATION TYPE	SIGNIFICANCE if mitigated
					• Implement monthly site inspection to check for possible areas of dust generation not addressed or not effectively managed; • Spray areas to be cleared with water; • Ensure minimum travel distance between working areas and stockpiles; • Ensure that topsoil for stockpiles is sprayed with water before tipping to prevent dust generation; • Ensure graded areas are sprayed with water; • Minimise the amount of graded areas; • Load and offload material, as far as possible, downwind of topsoil stockpiles.	
	Gaseous emissions from vehicles and machinery may cause an impact on ambient air quality.	Health of landowners and occupiers	Prospecting	**Medium (-)**	• All vehicles and machinery will be regularly serviced to ensure they are in proper working condition and to reduce risk of leaks; • Proper planning of movements (vehicle trips) and working of machinery should take place, in order to avoid unnecessary trips and hours of operation.	**Low (-)**

	Generation of additional general waste, litter and building rubble and hazardous waste.	Biodiversity Health and safety Soil	Prospecting	**Medium (-)**	**Control through management measures.** • A central waste storage and transition area shall be established within the site camp;	**Low (-)**

NAME OF ACTIVITY	POTENTIAL IMPACT	ASPECTS AFFECTED	PHASE	SIGNIFICANCE if not mitigated	MITIGATION TYPE	SIGNIFICANCE if mitigated
		Surface water systems			• The central waste storage and transition area shall be surfaced and demarcated appropriately; • Portable wheelie bins shall be placed throughout the site camp as well as at the remainder of the site and at all working areas in the field; • Wheelie bins shall be colour coded and labelled to identify the waste stream for which it is intended; • All portable wheelie bins and other containers shall be emptied at the central waste storage and transition area a minimum of once a week or when filled, as to avoid waste build-up; • The waste shall be removed (within 30 days) by a licensed waste service provider as shall be disposed of at a licensed waste landfill site and records of safe disposal (as required for hazardous wastes) shall be supplied to the Contractor. These records shall be kept on site by the ESM; • Wherever possible and practical, waste materials generated on site must be recycled; and	

NAME OF ACTIVITY	POTENTIAL IMPACT	ASPECTS AFFECTED	PHASE	SIGNIFICANCE if not mitigated	MITIGATION TYPE	SIGNIFICANCE if mitigated
					• Waste specific (hazardous, timber, steel etc.) mitigation measures to be implemented.	
	Minor impact caused by need for services i.e. water, electricity and sewerage systems during the prospecting phase causing additional strain on natural resources and service infrastructure.	Natural resources including water and energy resources	Prospecting	**Low (-)**	**Reduce through controlling management measures.** • Energy savings measures to be implemented at the site e.g.: o No lights to be switched on unnecessarily; o Only security lights to be switched on at night; • Energy saving bulbs to be installed; and • Water should be recycled as far as possible to avoid any additional water usage.	**Very Low (-)**
	Minor change in traffic patterns as a result of traffic entering and exiting the site on the surrounding road infrastructure and existing traffic.	Traffic	Prospecting	**Low (-)**	**Reduce through controlling management measures.** • Where feasible heavy vehicles should not operate on public roads during peak hours; and • Heavy vehicles should adhere to the speed limit of the road.	**Very Low (-)**

	Nuisance, health and safety risks caused by increased traffic on and adjacent to the study area	Safety of workers, contractors and landowners	Prospecting	**Medium (-)**	**Prevent through controlling management measures.** • Drivers will be enforced to keep to set speed limits; • Trucks will be in a road-worthy condition;	**Very Low (-)**
NAME OF ACTIVITY	**POTENTIAL IMPACT**	**ASPECTS AFFECTED**	**PHASE**	**SIGNIFICANCE** if not mitigated	**MITIGATION TYPE**	**SIGNIFICANCE** if mitigated

	including cars, and heavy vehicles.	and occupiers			• Roads and intersections will be signposted clearly. Only main roads should be used; • Where feasible vehicles should not operate on public roads during peak hours; • Vehicles should adhere to the speed limit of the road; • Heavy vehicles should always travel with their headlights switched on; • Heavy vehicles should not stop on the road to pick up hitchhikers – No stopping on the road approaching the site will be allowed; • Abangani Projects CC shall be responsible for ensuring that suitable access is maintained for public traffic to all relevant businesses and properties; and • All traffic accommodation measures are to conform to the latest edition of the South African Road Signs Manual.	

	Possibility of prospecting activities and workers causing veld fires, which can potentially cause	Biodiversity Health and safety of landowners,	Prospecting	**Medium (-)**	**Prevent through controlling management measures.** • All workers will be sensitized to the risk of fire;	**Very Low (-)**
NAME OF ACTIVITY	**POTENTIAL IMPACT**	**ASPECTS AFFECTED**	**PHASE**	**SIGNIFICANCE** if not mitigated	**MITIGATION TYPE**	**SIGNIFICANCE** if mitigated
	injury and or loss of life to workers and surrounding landowners, visitors and workers.	occupiers,and visitors workers			• Smoking is only allowed in designated smoking areas and disposal of cigarette butts safely in sand buckets; • The Applicant shall ensure that the basic firefighting equipment is available on the site; • Extinguishers should be located outside hazardous materials and chemicals storage containers; • Fire response and evacuation: o An Emergency Plan (including Fire Protection, Response and Evacuation Plan) is to be prepared by the Applicant and conveyed to all staff on the site' o Identify major risks to minimise the environmental impacts e.g., air pollution and contaminated effluent runoff.	

	Increased risk to public and worker safety: If not fenced off, the public and workers may fall into excavated areas and trenches.	Health and safety of landowners, occupiers of land, workers, visitors and	Prospecting	**Medium (-)**	• A health and safety plan in terms of the Mine Health and Safety Act (Act 29 of 1996) should be compiled and implemented to ensure worker safety; • A health and safety control officer should monitor the implementation of the health and safety plan for the operational phase;	**Very Low (-)**

NAME OF ACTIVITY	POTENTIAL IMPACT	ASPECTS AFFECTED	PHASE	SIGNIFICANCE if not mitigated	MITIGATION TYPE	SIGNIFICANCE if mitigated
		the general public.			• A record of health and safety incidents should be kept on site and made available for inspection; • Any health and safety incidents should be reported to the Site Manager (SM) immediately; • First aid facilities should be available on site at all times; • Workers have the right to refuse work in unsafe conditions; • Material stockpiles or stacks should be stable and well secured to avoid collapse and possible injury to site workers. • Access to excavation must be controlled; • Excavated areas should be temporarily fenced-off; and • Excavations will be backfilled and landscaped as soon as possible.	
	Potential creation of very limited extent short term employment opportunities for the local community, during the prospecting phase.	Socio-economic	Prospecting	**Low (+)**	• Local labour to be sourced where possible.	**Low (+)**

NAME OF ACTIVITY	POTENTIAL IMPACT	ASPECTS AFFECTED	PHASE	SIGNIFICANCE if not mitigated	MITIGATION TYPE	SIGNIFICANCE if mitigated
	Multiplier effects on local economy will be positive, but very limited in extent and only short term.	Socioeconomic	Prospecting	**Low (+)**	• Supplies to be bought locally as far as possible.	**Low (+)**

The supporting impact assessment conducted by the EAP must be attached as an appendix, marked Appendix – Please refer to Table 8 for the full impact assessment.

13. 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.

Hydrogeological study	• The prospecting right activity will take place during dry seasons where the water percentages in the surrounding streams are exceptionally low. • Drilling activity will not be conducted within 500m from watercourses, the exploration geologists will be advised to drill and sample more than 500m from rivers and wetlands on site. • The exploration boreholes will be cased during drilling and properly rehabilitated by cap sealing the borehole after drilling. • Extreme caution will be taken during prospecting, owing to the river and numerous wetlands existing within and nearby the project area. No washing of any mechanical equipment or vehicles will be allowed near the water resources. • Rivers and wetlands will be buffered as no go area, a 500m buffer will apply. • The core logs of boreholes with mineral of interest should be cleared from the ground immediately after logging by the geologists to prevent washing and leaching to the water resources during rainfall. • Absorbent Spill kits will be made available near the drill rigs during drilling activities.	X	Section 6.1.6 of this report
Hydrological study	• Drilling activity should not be conducted near these water resources; the exploration geologists will be advised to drill and sample away from rivers and wetlands on site.	X	Section 6.1.6 of this report

	• Extreme caution should be taken during prospecting, owing to the perennial and non-perennial rivers and the wetlands, existing within the project area. No washing of any mechanical equipment's or vehicles will be allowed near the water resources. • All the wetlands and non-perennial streams will be buffered as "no go" area preferably a 100m buffer will apply. • The core logs of boreholes with mineral of interest should be cleared from the ground immediately after logging by the geologists to prevent washing and leaching to the water resources during rainfall • Absorbent Spill kits will be made available near the drill rigs during drilling activities • To avoid soil erosion and siltation in the watercourse, vegetation will not be cleared		

Specialist studies attached as Appendix.

14. Environmental impact statement

14.1. Summary of the key findings of the environmental impact assessment;

A summary of the key findings of the environmental impact assessment is outlined below.

Key findings for the Basic Assessment:

- The possible environmental impacts associated with the proposed prospecting are considered insignificant. A diamond core drill rig will be used for drilling.
- There are impacts associated with the water courses that is located onsite. The proposed prospecting area falls within the Pongola-Mtamvuna Water Management Area (WMA) and under the Quaternary Catchment V32E.
- The proposed prospecting area falls within the Critical biodiversity Area, Optimal, as well as an unspecified area.

Key findings for the socio-economic environment:

- The proposed farm portion is owned by A F T Property Trust-Trustees as according to the deed search results obtained from the WinDeed search conducted in Singo Consulting's premises.
- Consultation with all relevant Interested and Affected Parties as well as stakeholders and landowners is conducted in order to capture any comments or concerns regarding the proposed activities and to ensure that they are kept informed and allowed to raise issues. The concerns raised will be included in the final BAR & EMPr.
- Community meeting was held with the Badfontein community as the affected community, issues raised from this meeting have been attended in this Basic Assessment Report.

14.2. 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. Attach as appendix)

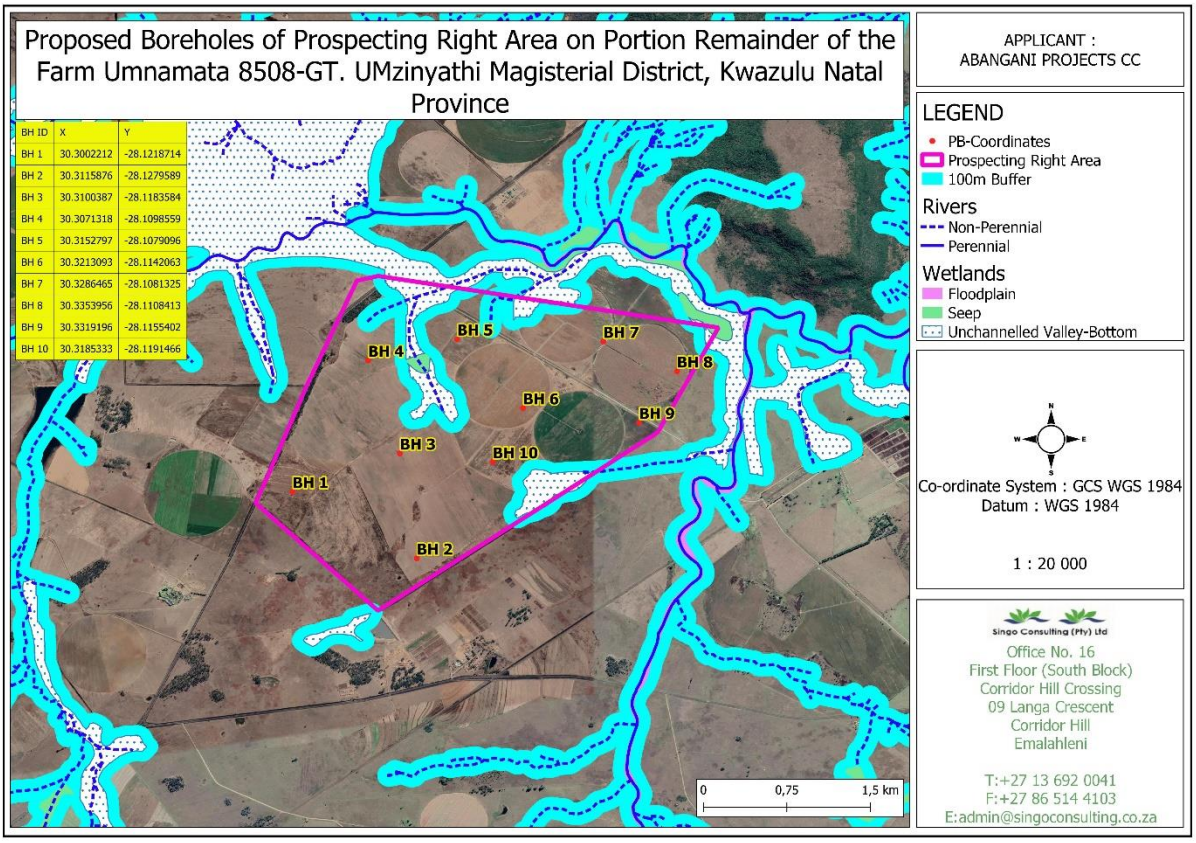


Figure 30: Borehole map of the proposed project area

14.3. Summary of the positive and negative impacts and risks of the proposed activity and identified alternatives

The positive implication of the Prospecting Right is the discovery of an economically viable mineral resource. Although non-invasive techniques will be utilized as part of the proposed prospecting activities. The implementation of the proposed mitigation measure will ensure that the negative implications and risks of the project are minimal.

The Potential positive impacts are as follows:

- Discovery of an economically viable mineral resources
- Employment contributing to the economy.
- Positive contribution to the South African Gross Domestic Product
- Concurrent rehabilitation during prospecting

The potential negative impacts are as follows:

- Clearance/Disturbance of vegetation;
- Compacting of Soils;
- Drilling impact on identified lithic scatters;
- Deterioration and damage to existing access roads and tracks;
- Safety and security risks to landowners and lawful occupiers;
- Interference with existing land uses;
- Generation and disposal of waste;
- Contamination of surface and ground water;
- Introduction/invasion by alien species;
- Noise;
- Impact on faunal species;
- Pollution of Soils;
- Dust;
- Erosion due to vegetation clearance;
- Impact on surface water features;
- Impact on groundwater;
- Loss of fossil heritage.

The EMPr has identified appropriate mechanisms for avoidance and mitigation of these negative impacts.

14.4. 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 following management objectives and impact management outcomes are recommended for inclusion in the EMPR:

- Biodiversity: Prevent and / or restrict the loss of indigenous fauna and flora as far as practically possible;
- Physical aspects: Prevent and / or restrict the impact on soils and surface water;
- Social Aspects: Ensure the health and safety of employees of Abangani projects CC and any contractors associated with the development and operation of the proposed activity as well as the surrounding community and visitors;
- Heritage: Ensure the protection of any potential heritage features or objects that may be excavated during the proposed development.

15. Aspects for inclusion as conditions of Authorization

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

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

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

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

(Which relate to the assessment and mitigation measures proposed)

The following assumptions, uncertainties, and gaps in knowledge are applicable to this BAR & EMPr:

The location of drill sites is not yet known and will be identified through the phased approach of the prospecting programme. This assessment is therefore based on a desktop approach at a broad scale and assuming that drilling could occur within the proposed Prospecting Right area. Once drill sites have been identified, then it is recommended that focus should be given to these sites in order to identify any cultural or heritage resources of significance, any ecologically significant areas that may occur as well as re-engaging landowners regarding the intention to access and conduct drilling activities on their property.

17. Reasoned opinion as to whether the proposed activity should or should not be authorized

17.1. Reasons why the activity should be authorized or not

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

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

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

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

17.2. Conditions that must be included in the authorisation

- The EMPR is a contractual document and must be implemented at all times during the prospecting phase;

- An independent environmental control officer (ECO) must be appointed to monitor the implementation of the EMPR and audit reports to be kept by the applicant;
- All contractors and employees of Abangani Projects CC must be made aware of the EMPR and its requirements as well as the impact of not implementing the measures of the EMPR;
- Copies of the EMPR, Environmental Authorisation and any emergency procedures and method statements, must be kept on site and be available on request of the Competent Authority.

18. Period for which the Environmental Authorisation is required

This Environmental Authorisation is required for a period of 5 years.

19. 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).

It is confirmed that the undertaking required to meet the requirements of this section is provided at the end of the EMPR and is applicable to both the BAR and the EMPR.

20. Financial provision

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

A financial provision of approximately **R2 423 993.50** has been budgeted for the prospecting activities. In addition, **R44 505** will be made available by Abangani Projects CC for rehabilitation purposes.

Table 12 Calculation of the quantum

CALCULATION OF THE QUANTUM

Applicant: **ABANGANI PROJECTS CC** Ref No.: **KZN 30/5/1/1/2/11056 PR**
Evaluator: **Deshney Mapoko** Date: **Sep-21**

No.	Description	Unit	A Quantity	B Master Rate	C Multiplication factor	D Weighting factor 1	E=A*B*C*D Amount (Rands)
1	**Dismantling of processing plant and related structures (including overland conveyors and powerlines)**	**m3**	**0**	**17,14**	**1**	**1**	**0**
2 (A)	**Demolition of steel buildings and structures**	**m2**	**0**	**238,71**	**1**	**1**	**0**
2(B)	**Demolition of reinforced concrete buildings and structures**	**m2**	**0**	**351,79**	**1**	**1**	**0**
3	**Rehabilitation of access roads**	**m2**	**0**	**42,72**	**1**	**1**	**0**
4 (A)	Demolition and rehabilitation of electrified railway lines	m	0	414,61	1	1	**0**
4 (A)	Demolition and rehabilitation of non-electrified railway lines	m	0	226,15	1	1	**0**
5	**Demolition of housing and/or administration facilities**	**m2**	**0**	**477,42**	**1**	**1**	**0**
6	**Opencast rehabilitation including final voids and ramps**	**ha**	**0**	**242984,15**	**1**	**1**	**0**
7	**Sealing of shafts adits and inclines**	**m3**	**0**	**128,15**	**1**	**1**	**0**
8 (A)	**Rehabilitation of overburden and spoils**	**ha**	**0**	**166847,44**	**1**	**1**	**0**
8 (B)	Rehabilitation of processing waste deposits and evaporation ponds (non-polluting potential)	ha	0	207805,47	1	1	0
8 (C)	Rehabilitation of processing waste deposits and evaporation ponds (polluting potential)	ha	0	603565,59	1	1	**0**
9	Rehabilitation of subsided areas	ha	0	139709,6	1	1	**0**
10	**General surface rehabilitation**	**ha**	0,6	132171,31	0,4	1	**31721,1144**
11	River diversions	ha	0	132171,31	1	1	**0**
12	**Fencing**	**m**	**0**	**150,77**	**1**	**1**	**0**
13	**Water management**	**ha**	**0**	**50255,25**	**1**	**1**	**0**
14	**2 to 3 years of maintenance and aftercare**	**ha**	**0**	**17589,34**	**1**	**1**	**0**
15 (A)	**Specialist study**	**Sum**	**0**	**0**	**1**	**1**	**0**
15 (B)	Specialist study	Sum	0	0	1	1	**0**
					Sub Total 1		**31721,1144**

1	Preliminary and General	3806,533728	**weighting factor 2** 1	**3806,533728**
2	Contingencies	3172,11144		**3172,11144**
			Subtotal 2	**38699,76**
			VAT (15%)	**5804,96**
			Grand Total	**44505**

SIGN Deshney Mapoko
DATE **Sep-21**

20.1. Explain how the aforesaid amount was derived

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

20.2. Confirm that this amount can be provided for from operating expenditure

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

Abangani Projects CC herewith confirms both its capacity and willingness to make the financial provision required should the prospecting right be granted. Work will be approved on a phase-by-phase basis, dependent on the results obtained in the previous phase i.e., although prospecting work may be provided for financially in the budget for a specific year, it will only take place if justified. The amount is also reflected in the Prospecting Work Programme submitted to the DMRE.

21. Specific information required by the competent authority

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

21.1. Compliance with the provisions of sections 24(4)(a) and (b) read with section 24 (3) (a) and (7) of the National

Environmental Management Act (Act 107 of 1998). the 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).

The potential impacts on the socio-economic conditions have the potential to include:

- Safety and security risks to landowners and lawful occupiers

  The potential exists for a group of unfamiliar workers to enter the project area during the prospecting activities. This impact could potentially affect the local communities, however the impact will be minimal as people on site will be limited to the Applicant, contractor and geologists for the topographical and geophysical surveys.

- Interference with existing land uses

  Access to the application area for the topographical and geophysical survey will be required which may interrupt the existing land uses, such as livestock grazing, residential developments and game activities. However, this impact will be minimal as no heavy equipment will be brought on site and it is of short duration.

The consultation process will allow directly affected parties to raise their concerns. Further to this, it must be noted that I&AP's, including directly affected parties such as landowners, have the opportunity to review and comment on this report. The results of the public consultation have been included in the final report submitted to the department for adjudication.

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

From these previous research records conducted in the area; the specialist concluded that the general region is significant from a heritage perspective. Heritage sites are likely to include graveyards, Iron Age/Farmer and Historical remains. Since heritage sites, e.g. graves, are not always clearly identifiable as it might consist of stone cairns, it is advised that a qualified archaeologist inspect the proposed prospecting sites prior to drilling to establish whether the sites might be sensitive from a heritage perspective.

The following recommendations were made in terms of the National Heritage Resources Act (Act No. 25 of 1999) in order to avoid the destruction of heritage remains in areas demarcated for prospecting:

- Prior to any development, construction or prospecting, a qualified archaeologist should conduct a site inspection on the areas demarcated for geotechnical drilling/prospecting. Proposed access roads to the drill sites should also be surveyed in order to avoid the destruction of heritage material;
- Should the prospecting outcome result in further development or construction and mining, a full Phase 1 Archaeological Impact Assessment must be conducted on the affected area if triggered;
- Because archaeological artefacts generally occur below surface, the possibility exists that culturally significant material may be exposed during the development and construction phases, in which case all activities must be suspended pending further archaeological investigations by a qualified archaeologist. Also, should skeletal remains be exposed during development and construction phases, all activities must be suspended and the relevant heritage resources authority contacted (see National Heritage Resources Act (Act No. 25 of 1999) Section 36 (6)).

22. Other matters required in terms of sections 24(4)(A) and (B) of the act

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

The EAP included all aspects as required by the EIA regulations, 2014 for the EIA and EMPR as described in the Executive Summary of this report. Please refer to Part A.

PART B
ENVIRONMENTAL MANAGEMENT PROGRAMME REPORT

23. Introduction

23.1. Details of the EAP

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

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

23.2. Description of the Aspects of the Activity

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

Herewith, it is confirmed that the requirement to describe the aspects of the activity that are covered by the draft environmental management programme is already included in PART A, section (2) herein as required.

23.3. 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 should be avoided, including buffers).

Refer to appendix for a composite map.

24. Description of Impact management objectives including management statements

24.1. Determination of closure objectives

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

The prospecting activities are dependent on the preceding phase (non-invasive). Prospecting is conducted in phases, where the activities and location of drilling and trenching to sample soil are dependent on the previous phase. Therefore, the specific

locations and extent of soil sampling and diamond core drilling cannot be predetermined.

The closure objectives include:

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

24.2. Volumes and rate of water use required for the operation

Limited water will be consumed by the surface dust suppression activities (water mist added for dust suppression when required). If diamond drilling is to take place, then it is estimated that up to 20 000 litres per day could be required.

24.3. Has a water use licence been applied for?

It is not required from the applicant to apply for a water use license, due to the low volume of water required for prospecting

24.4. Impacts to be mitigated in their respective phases

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

Table 13: Impacts to be mitigated

Activities	Phase	Size and Scale of Disturbance	Mitigation Measures	Compliance with Standards	Time Period for Implementation
Site clearance	Construction Operation	0.9 ha, short term and localized	• Demarcation of sensitive areas in consultation with relevant specialists and ECO; • Utilise local labour if possible; • Minimise removal of vegetation as far as possible; • Identification and relocation of protected species by a qualified ecologist (and application or the relevant biodiversity permits where required); • Minimize dust generation; • Limit vehicle access; • Implement alien vegetation management; • Ongoing identification of risks and impacts; • Emergency preparedness; • Monitoring and review; and • Avoid disturbance of fauna as much as possible, especially bird nesting sites.	NEMA MPRDA NEMBA NEMAQA Dust regulations NWA DWAF Best Practice Guidelines	Throughout Construction and operation

Site access	Construction Operation	2306.900 ha, short term and localized	All employees and visitors to the site must undergo a site induction which shall include basic environmental awareness and site specific environmental requirements (e.g. site sensitivities and relevant protocols/procedures). This induction should be presented or otherwise facilitated by the Contractors EO/Mine EO wherever possible.	NEMA OHS and MHSA	Throughout Construction and operation
Activities	**Phase**	**Size and Scale of Disturbance**	**Mitigation Measures**	**Compliance with Standards**	**Time Period for Implementation**
			• Landowners/lawful occupiers must be notified prior to accessing properties. A date and time that is suitable to landowners/lawful occupiers and is reasonable to the applicant should be negotiated and agreed upon. • The number, identity of workers, work location and work to be done must be provided to the landowner/lawful occupier prior to going on site. • Consideration must be taken by the applicant and/or contractors when on site not to interfere with the existing land uses and practices.		

Establishment of site infrastructure	Construction	2,1 ha, short term and localized	• Minimise physical footprint of construction; • Ensure construction is consistent with occupational health and safety requirements; • Minimise vegetation clearance; • Ensure proper and adequate drainage; • Minimise waste and control waste disposal; • Fencing of all drill sites with security access control and warning signs; • Establish waste storage areas for recycling; • Ensure adequate containment of waste to prevent pollution; • Minimise dust generation; • Limit vehicle access to approved access roads; • Prepare contingency plans for spillage and fire risks.	NEMA MPRDA NEMBA NEMAQA Dust regulations NWA DWAF Best Practice Guidelines NHRA	Throughout Construction and operation
Activities	**Phase**	**Size and Scale of Disturbance**	**Mitigation Measures**	**Compliance with Standards**	**Time Period for Implementation**
			• Temporary heritage signage around the conserved farmsteads during the construction (drilling) phase.		

Storage of construction vehicles	Construction and Operation	0,9 ha, short term and localized	• Any equipment that may leak, and does not have to be transported regularly, must be placed on watertight drip trays to catch any potential spillages of pollutants. The drip trays must be of a size that the equipment can be placed inside it; • Drip trays must be cleaned regularly and shall not be allowed to overflow. All spilled hazardous substances must be collected and adequately disposed of at a suitably licensed facility; and • Compacting of soil must be avoided as far as possible, and the use of heavy machinery must be restricted in areas outside of the proposed exploration sites to reduce the compaction of soils.	NWA DWAF BPG	Throughout Construction and operation
Transportation/ access to and from drill sites	Construction and Operation	2,1 ha, short term and localized	• Where possible, drill sites should be located along existing access roads to reduce the requirement for additional access roads; • Any new temporary access routes to a drill site should result in minimal disturbance to existing vegetation; • Prior to accessing any portion of land, the Applicant must enter into formal written agreements with the affected landowner. This formal agreement should additionally stipulate landowners special conditions which would form a legally binding agreement;	NEMA NEMBA CARA NEMAQA Dust Regulations Road Traffic Act	Throughout Construction and operation

Activities	Phase	Size and Scale of Disturbance	Mitigation Measures	Compliance with Standards	Time Period for Implementation
			• All farm gates must be closed immediately upon entry/exit; • Under no circumstances may the contractor damage any farm gates, fences, etc.; • On-site vehicles must be limited to approved access routes and areas on the site so as to minimize excessive environmental disturbance to the soil and vegetation on site, and to minimize disruption of traffic (where relevant); • All construction and vehicles using public roads must be in a roadworthy condition and their loads secured. They must adhere to the speed limits and all local, provincial and national regulations with regards to road safety and transport; • Damage caused to public roads as a result of the construction activities must be repaired in consultation with the relevant municipal authorities; and • All measures should be implemented to minimize the potential of dust generation.		

Storage of hazardous substances	Construction and Operation	0,9 ha, short term and localized	All hazardous substances (e.g. fuel, grease, oil, brake fluid, hydraulic fluid) must be handled, stored and disposed of in a safe and responsible manner so as to prevent pollution of the environment or harm to people or animals. Appropriate measures must be implemented to prevent spillage and appropriate steps must be taken to prevent pollution in the event of a spill; and way that does not pose any danger of pollution even during times of high rainfall.	NWA NEMWA DWAF BPG NEMA	Throughout Construction and operation

Activities	**Phase**	**Size and Scale of Disturbance**	**Mitigation Measures**	**Compliance with Standards**	**Time Period for Implementation**
			• Hazardous substances must be confined to specific and secured areas, and stored at all-time within bunded areas; • Adequate spill prevention and clean-up procedures should be developed and implemented during the prospecting activities. • Should any major spills of hazardous materials take place, such should be reported in terms of the Section 30 of the NEMA.		

Waste management	Construction and Operation	Short-medium term, localized	• Waste generated on site must be recycled as far as possible. Recyclable waste must not be stored on site for excessive periods to reduce risk of environmental contamination; • Drill muds, formation water (if encountered), etc. would constitute waste and must be classified and ranked in terms of relevant legislation for correct disposal; and • A Waste Management System must be implemented, and provide for adequate waste storage (in the form of enclosed containers) waste separation for recycling, and frequent removal of non-recyclable waste for permanent disposal at an appropriately licensed waste disposal facility. No waste material is to be disposed of on site.	DWAF Minimum requirements for waste disposal NEMWA	Throughout Construction and operation
Prospecting boreholes:	Construction and Operation Decommissioning	0,9 ha, short term	• Vegetation clearing for prospecting sites should be kept to a minimum in order to reduce the disturbance footprint; • Compaction of soil must be avoided as far as possible, and the use of heavy machinery must	SANS 10103 ECA Noise Regulations NEMAQA	Throughout Construction and operation and decommissioning

Activities	**Phase**	**Size and Scale of Disturbance**	**Mitigation Measures**	**Compliance with Standards**	**Time Period for Implementation**
15 sites , with a footprint of 600 m² each			be restricted in areas outside of the proposed prospecting sites to reduce the compaction of soils;	Dust Regulations NWA	

			• All measures should be implemented to minimize the potential of dust generation; • Local residents should be notified of any potentially noisy activities or work and these activities should be undertaken at reasonable times of the day. These works should not take place at night or on weekends; • Noise attenuation on engines must be adequate, and the noisy activities must be restricted as far as is possible to times and locations whereby the potential for noise nuisance is reduced; • When working near to a potential sensitive area, the contractor must limit the number of simultaneous activities to the minimum; • Ensure proper storage of fuels; • On-site vehicles must be limited to approved access routes and areas on the site so as to minimize excessive environmental disturbance to the soil and vegetation on site, and to minimize disruption of traffic; • Workforce should be kept within defined boundaries and to agreed access routes. • No invasive prospecting activities to be undertaken within 500m of a watercourse. • Should any watercourse be affected, then the necessary water use licences should be		

Activities	Phase	Size and Scale of Disturbance	Mitigation Measures	Compliance with Standards	Time Period for Implementation
			obtained from the Department of Water and Sanitation. • No ablution of site laydown areas is to be located within 100m of a watercourse. • Where shallow aquifers are encountered, a survey of the drinking water/ livestock watering boreholes should be undertaken (within 100m of the prospecting borehole sites). A detailed groundwater monitoring programme should be developed for these drinking water/ livestock watering boreholes and pre- and post-prospecting water quality samples should be taken. • Where drinking water/ livestock watering boreholes are to be affected, and where a pollution event occurs at a particular borehole, then the advice of a geo-hydrologist should be sought with regards to the need for plugging and casing of the prospecting boreholes.		
Prospecting	Construction and Operation	0,9 ha, short term	Workers must be easily identifiable by clothing and ID badges. Workers should carry with them, at all times a letter from the applicant stating their employment, title, role and manager contact details.	OHS and MHSA	Throughout Construction and operation

Resource definition drilling	Planning Phase Construction and Operation	0,9 ha, short term	Local residents (landowners and directly adjacent landowners) should be notified of any potentially noisy activities or work and these activities should be undertaken at reasonable	MPRDA Regulations GN R527 SANS 10103	Planning Phase Throughout Construction and operation

Activities	**Phase**	**Size and Scale of Disturbance**	**Mitigation Measures**	**Compliance with Standards**	**Time Period for Implementation**
			times of the day. This work should not take place at night or on weekends; • The contractor must attempt to restrict noisy activities as far as is possible to times and locations whereby the potential for noise nuisance is reduced; • Dust suppression methods must be applied when necessary to restrict the visual impact of dust emissions. • Any spills of hydrocarbons or fluids used during operation, must be cleaned up immediately; • An above ground drilling sump must be used to contain drilling mud in order to reduce surface and groundwater contamination. No earthen mud sumps are to be constructed and utilized; • No prospecting boreholes should be drilled in the immediate vicinity of existing private boreholes;	ECA Noise Regulations NEMAQA Dust Regulations NWA DWAF BPG NHRA	

			• Soils in drilling areas where disturbances will be encountered must be stripped and stockpiled outside affected areas for use after completion of the drilling program. • Topsoil must be adequately stripped to the correct depth and stored separately from subsoils; • Cut of trench and berm must be constructed around the drill pad to prevent contaminated surface runoff from entering shallow aquifers and surrounding water resources, where required by the topography; • A liner should be placed over the drill pad and drip trays must be used in all areas where hydrocarbons are handled; • On-site vehicles must be limited to approved access routes and areas on the site so as to		
Activities	**Phase**	**Size and Scale of Disturbance**	**Mitigation Measures**	**Compliance with Standards**	**Time Period for Implementation**
			minimize excessive environmental disturbance to the soil and vegetation on site, and to minimize disruption of traffic; • Workforce should be kept within defined boundaries ad to agreed access routes; • The designated competent authority (DMRE) may, at the cost of the Applicant, appoint an independent and competent person to undertake borehole examination. • Should any fugitive emissions be detected, then the recommendations of the must be		

			undertaken throughout the drilling activity up to the decommissioning of the wells. • Should any chance finds be uncovered during the construction phase, these must be handled in accordance with the requirements of the National Heritage Resources Act, 1999 (Act 25 of 1999) (NHRA); and • If a possible heritage site (including graves) or artefact is discovered during construction, all operations in the vicinity of the discovery (at least 30 m buffer) should stop and a qualified specialist contracted to evaluate and recommend appropriate actions. Depending on the type of site that can include initiating a grave relocation process, documentation of structures or archaeological excavations. • Should fossil remains be discovered in the Cenozoic Superficial deposits during any phase of construction, either on the surface or exposed by fresh excavations, the ECO responsible for these developments should be alerted immediately. Such discoveries ought to be protected (preferably in situ) and the ECO should alert SAHRA so that appropriate mitigation		

Activities	Phase	Size and Scale of Disturbance	Mitigation Measures	Compliance with Standards	Time Period for Implementation
			recording, sampling or collection) can be taken by a professional palaeontologist. • The Final BAR and appendices must be submitted to SAHRA for record purposes; • If any evidence of archaeological sites or remains (e.g. remnants of stone-made structures, indigenous ceramics, bones, stone artefacts, ostrich eggshell fragments, charcoal and ash concentrations), fossils or other categories of heritage resources are found during the proposed development, SAHRA APM Unit must be alerted. If unmarked human burials are uncovered, the SAHRA Burial Grounds and Graves (BGG) Unit must be alerted immediately. A professional archaeologist or palaeontologist, depending on the nature of the finds, must be contracted as soon as possible to inspect the findings. If the newly discovered heritage resources prove to be of archaeological or palaeontological significance, a Phase 2 rescue operation may be required subject to permits issued by SAHRA; and • If the development receives an Environmental Authorisation (EA), SAHRA must be informed and all documents pertaining to the EA must be uploaded to the SAHRIS Case file. • Temporary heritage signage around the conserved.		

Refuelling	Construction and Operation	Short term and localized	Refuelling may only take place within demarcated areas that is subject to appropriate spill prevention and containment measures refuelling	NWA DWAF BPG	Throughout Construction and operation
Activities	**Phase**	**Size and Scale of Disturbance**	**Mitigation Measures**	**Compliance with Standards**	**Time Period for Implementation**
			and transfer of hazardous chemicals and other potentially hazardous substances must be carried out so as to minimize the potential for leakage and to prevent spillage onto the soil; Drip trays should be utilized in relevant locations (inlets, outlets, points of leakage, etc.) during transfer so as to prevent such spillage or leakage. Any accidental spillages must be contained and cleaned up promptly.		
Maintenance and repair	Construction and Operation	Short term and localized	• Trucks, machinery and equipment must be regularly serviced to ensure they are in proper working condition and to reduce risk of leaks. All leaks must be cleaned up immediately using spill kits or as per the emergency response plan. For large spills a hazardous materials specialist shall be utilized; • Accidental hydrocarbon spillages must be reported immediately, and the affected soil should be removed, and rehabilitated	NWA DWAF BPG NEMA	Throughout Construction and operation

			or if this is not possible, disposed of at a suitably licenced waste disposal facility.		
Borehole Closure	Decommissioning and Closure	Short term and localized	• Where groundwater is encountered during drilling, all affected prospecting boreholes that will not be required for later monitoring or other useful purposes should be plugged and sealed with cement to prevent possible cross flow and contamination between aquifers; • Cement and liquid concrete are hazardous to the natural environment on account of the very high pH of the material, and the chemicals contained	NWA DWAF BPG	Throughout Decommissioning and Closure
Activities	**Phase**	**Size and Scale of Disturbance**	**Mitigation Measures**	**Compliance with Standards**	**Time Period for Implementation**
			therein. As a result, the contractor shall ensure that: o Concrete shall not be mixed directly on the ground; o The visible remains of concrete, either solid, or from washings, shall be physically removed immediately and disposed of as waste, (Washing of visible signs into the ground is not acceptable); and o All excess aggregate shall also be removed.		

Removal of surface infrastructure	Decommissioning	Short term and localized	• All infrastructure, equipment, and other items used during prospecting will be removed from the site. • Compaction of soil must be avoided as far as possible. The use of heavy machinery must be restricted in areas outside of the proposed prospecting sites to reduce the compaction of soils.	MPRDA Rehab Plan	Decommissioning
Removal of waste	Decommissioning	Small scale and localized	Any excess or waste material or chemicals, including drilling muds etc. must be removed from the site and must preferably be recycled (e.g. oil and other hydrocarbon waste products). Any waste materials or chemicals that cannot be recycled must be disposed of at a suitably licensed waste facility.	NWA DWAF BPG	Decommissioning
Rehabilitation	Rehabilitation	All disturbed areas	Restoration and rehabilitation of disturbed areas must be implemented as soon as prospecting activities are completed;	MPRDA Rehab Plan NEMA	Rehabilitation
Activities	**Phase**	**Size and Scale of Disturbance**	**Mitigation Measures**	**Compliance with Standards**	**Time Period for Implementation**

			• Sites must be restored to the original condition with vegetation cover (where applicable) equalling the surrounding vegetation cover; • All debris and contaminated soils must be removed and suitably disposed of; • Contours and natural surrounding must be reformed; • Natural drainage patterns must be restored; • All surface infrastructure on site must be removed; • Temporary access routes/roads must be suitably rehabilitated; and • Sites must be monitored by the ECO (including relevant specialist's inputs if, necessary) for adequate rehabilitation until the desired rehabilitation objectives have been achieved.		
Consultation	Planning Phase Construction and Operation	Medium term, local	Stakeholder engagement will continue throughout the prospecting activities to ensure the community and landowners are kept informed and allowed to raise issues. The Applicant shall attend applicable community meetings with the affected communities. Any issues raised will then be addressed through a grievance mechanism.	NEMA OHS and MHSA	Planning Phase Throughout Construction and Operation
Monitoring	Post-Operational	All rehabilitated areas	The post-operational monitoring and management period following decommissioning of prospecting activities	MPRDA Rehab Plan	Post-operation

			must be implemented by a suitable qualified independent party for a minimum of one (1)		
			year unless otherwise specified by the competent authority. The monitoring activities during this period will include but not be limited to: • Biodiversity monitoring; and • Re-vegetation of disturbed areas where required. Provision must be made to monitor any unforeseen impact that may arise as a result of the proposed prospecting activities and incorporated into post closure monitoring and management.		

24.5. Impact Management Outcomes

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

Table 14: Measures to rehabilitate the environment affected by the undertaking of any listed activity, impact management outcomes, and impact management actions for

Activity Including Size/ scale	Aspects and potential impacts	Mitigation type and Measures	Standards to be achieved	Compliance with standards	Phase and / or time period for implementation
• Clearing of vegetation and topsoil. • Stockpiling of overburden positioned for	Minor loss and disturbance to topsoil as a result of clearing of vegetation and drilling and trenching. When vegetation is cleared and the topsoil is stripped, the soil's natural structure is disturbed and as a result	**Prevent and reduce through management measures.** **Stripping of topsoil:** • Clearing of areas to take place a maximum of one month prior to intended prospecting in the area;	Impact avoided. All topsoil used in concurrent rehabilitation.	Rehabilitation objectives and standards	Prospecting Invasive Phase

later rehabilitation. • Prospecting including diamond core drilling, logging and sampling of the borehole core, trenching will involve the digging of excavation trenches down to approximately 3 metres below surface using graders and excavators.	the natural cycle is broken exposing the bare soil to erosion. Vehicles driving on these soils cause compaction of soils and reduces the soils' ability to be penetrated by root growth. Compaction also increases erosion potential. When soils are not stripped and stockpiled according to the soil stripping guidelines these soils would have lost their natural physical and chemical properties, reducing the topsoil's ability to be a plant growth medium. The above factors all contribute to a loss of the topsoil's ability to be a resource through alterations and removal.	• Stripping of topsoil will not take place during rain or excessive wind; and • The top 30 cm of vegetation and topsoil is to be stripped from the area to be prospected. **Storage of topsoil / overburden:** • Topsoil (top 30cm) is to be stored in predetermined topsoil berms, (+/- 5m) outside the boundary of the specific area; and • Topsoil stockpiles will be restricted to 1.5 to 2m in height. **Maintenance and monitoring of topsoil stockpiles:** • The stored topsoil should be used as soon as possible in concurrent rehabilitation; • Weekly visual inspections to be conducted.	Rehabilitation objectives and standards		

Activity Including Size/ scale	Aspects and potential impacts	Mitigation type and Measures	Standards to be achieved	Compliance with standards	Phase and / or time period for implementation
• Dust Suppression.	Hydrocarbon spills on soil can occur where heavy machinery and vehicles are parked such as the hard park area because they contain large volumes of lubricating oils, hydraulic oils, and diesel to run. There is always a chance of these breaking down and/or leaking.	**Prevent and reduce and remedy through management measures.** • All vehicles and machinery will be regularly serviced to ensure they are in proper working condition and to reduce risk of leaks; • All leaks will be cleaned up immediately using an absorbent material and spill kits, in the prescribed manner; and ***Hydrocarbons and hazardous waste*** • All hazardous waste generated shall be kept separate and shall not be mixed with general waste; and • All hazardous waste shall be stored within a sealed drum on an impermeable surfaced area within the central waste storage and transition area.	Impact avoided. No signs of soil contamination and loss of topsoil due to contamination. Meet rehabilitation objectives and standards.	Rehabilitation objectives and standards Spill procedure Hazardous Substances Act, 1973 (Act 15 of 1973) [as amended] • Section 2 Declaration of grouped hazardous substances; - Section 9 (1) Storage and handling of hazardous chemical substances	Prospecting Invasive Phase

Activity Including Size/ scale	Aspects and potential impacts	Mitigation type and Measures	Standards to be achieved	Compliance with standards	Phase and / or time period for implementation

				- Section 18 Offences Hazardous Chemical Substances Regulations, 1995 (Government Notice 1179 of 1995) - Section 4 Duties of persons who may be exposed to hazardous chemical substances SANS 10234: 2008: Globally Harmonized	

Activity Including Size/ scale	**Aspects and potential impacts**	**Mitigation type and Measures**	**Standards to be achieved**	**Compliance with standards**	**Phase and / or time period for implementation**

				System of classification and labelling of • chemicals (GHS)	
	Stormwater, erosion and siltation impacts due to a lack of implementing temporary measures to manage stormwater run-off quantity and quality.	**Prevent and reduce and remedy through management measures.** • A Stormwater Management Plan (SMP) to be developed for the collective area where prospecting will occur, (or the existing SMP updated, where applicable for present and future activities) and should include the management of stormwater during excavation, as well as the installation of temporary stormwater and erosion control measures during prospecting, followed up by rehabilitation of the area; • Temporary stormwater management systems	Impact avoided. No signs of soil contamination and loss of topsoil due to contamination. Meet rehabilitation objectives and standards.	Rehabilitation objectives and standards Spill procedure GN704 Regulations in terms of the National Water Act, 1998 (Act No 36 of 1998) Hazardous Substances Act, 1973 (Act 15 of 1973) [as amended]	Prospecting Invasive Phase

		(such as sand bags) will be installed to prevent stormwater from entering or exiting the area where prospecting will occur, which could result in silt laden surface water from draining			
Activity Including Size/ scale	**Aspects and potential impacts**	**Mitigation type and Measures**	**Standards to be achieved**	**Compliance with standards**	**Phase and / or time period for implementation**
		• The slopes of the area where prospecting activities will occur, should be profiled to ensure that they are not subjected to excessive erosion but capable of drainage run-off with minimum risk of scrub (hydrologic action by water that causes erosion). A • maximum gradient of 1:3 is recommended; If necessary, temporary diversion channels should be constructed ahead of the stockpiles (if relevant) to intercept clean run-off and divert it around disturbed areas into the natural • drainage system downstream (down gradient) of the prospecting area;		• Section 2 Declaration of grouped hazardous substances; - Section 9 (1) Storage and handling of hazardous chemical substances - Section 18 Offences Hazardous Chemical	

		• Existing vegetation must be retained as far as possible to minimise erosion problems; Rehabilitation of the prospecting area • shall be planned and completed (after conclusion of the prospecting activities) in such a way that the runoff water (if any) will not cause erosion; Visual inspections shall be done on a weekly basis with regard to the stability of the temporary		Substances Regulations, 1995 (Government Notice 1179 of 1995)	
Activity Including Size/ scale	**Aspects and potential impacts**	**Mitigation type and Measures**	**Standards to be achieved**	**Compliance with standards**	**Phase and / or time period for implementation**

		water control structures, erosion and siltation (if required). • Sediment-laden run-off from cleared areas should be prevented from entering rivers and streams; • No river or surface water may be affected by silt emanating from the prospecting area (especially aimed at prevention of siltation of the nearby watercourse); and • No wastewater may run freely into any of the surrounding naturally vegetated areas.		- Section 4 Duties of persons who may be exposed to hazardous chemical substances SANS 10234: 2008: Globally Harmonized System of classification and labelling of • chemicals (GHS)	
	Contamination of stormwater runoff and groundwater, caused by chemicals such as hydrocarbon based fuels and oils or lubricants spilled from heavy vehicles and machinery and fuel storage area.	**Prevent and reduce through management measures.** In accordance with Government Notice 704 (GN 704), the onsite management should: • Keep clean and dirty water separated; • Contain any dirty water within a system; and	Impact avoided. No signs of soil contamination and loss of topsoil due to contamination.	Rehabilitation objectives and standards Spill procedure	Prospecting Invasive Phase

Activity Including Size/ scale	Aspects and potential impacts	Mitigation type and Measures	Standards to be achieved	Compliance with standards	Phase and / or time period for implementation
		• Prevent the contamination of clean water. In order to achieve these objectives, the following stormwater management measures must be implemented on the site to ensure that those potential stormwater impacts are kept to a minimum: • Clean and dirty stormwater needs to be separated. Dirty stormwater may not be released into the environment and should be contained and treated on site; • All temporary stormwater infrastructure (if any) on-site shall be maintained and kept clean throughout the prospecting period; • Immediate reporting of any polluting or potentially polluting incidents so that	Meet rehabilitation objectives and standards.	GN704 Regulations in terms of the National Water Act, 1998 (Act No 36 of 1998) Hazardous Substances Act, 1973 (Act 15 of 1973) [as amended] • Section 2 Declaration of grouped hazardous substances; - Section 9 (1) Storage	

		appropriate measures can be implemented; • Fuel and oil spills shall be treated immediately by appropriate mop-up products. Several hydrocarbon absorption/remediation products (i.e. Spill kits) must be placed throughout the site;		and handling of hazardous	
Activity Including Size/ scale	**Aspects and potential impacts**	**Mitigation type and Measures**	**Standards to be achieved**	**Compliance with standards**	**Phase and / or time period for implementation**

		• Use of bunds or traps to ensure full containment of hydrocarbon and other hazardous materials are mandatory; • Any contaminated material is disposed of in an appropriate manner and the potential risks associated with such spills are limited; • Stormwater leaving the site must in no way be contaminated; • Ensure good housekeeping practices; • Increased runoff should be managed using berms and other suitable structures as required to ensure flow velocities are reduced; and Removal of spills, • rainwater and waste produced during clean-up of the bunds – shall be done in accordance to relevant specifications.		chemical substances - Section 18 Offences Hazardous Chemical Substances Regulations, 1995 (Government Notice 1179 of 1995) - Section 4 Duties of persons who may be exposed to hazardous chemical substances	

Activity Including Size/ scale	Aspects and potential impacts	Mitigation type and Measures	Standards to be achieved	Compliance with standards	Phase and / or time period for implementation
				SANS 10234: 2008: Globally Harmonized System of classification and labelling of • chemicals (GHS)	
	Minor loss of natural vegetation and destruction of habitat will result in associated loss of fauna and flora species.	**Reduce through management measures.** • A suitably qualified specialist (ecologist) to accompany the site manager to demarcate areas for prospecting, in order to avoid damaging sensitive vegetation as identified during the specialist study and according to the sensitivity maps provided in this report; • Only vegetation falling directly into demarcated access routes or project sites should be removed; • No further vegetation clearance except for the removal of alien invasive species will be allowed; and	Meet rehabilitation objectives and standards. Alien and invasive vegetation management plan implemented and outcomes achieved.	Meet rehabilitation objectives and standards. Alien and invasive vegetation management plan implemented and outcomes achieved.	Prospecting Invasive Phase

Activity Including Size/ scale	Aspects and potential impacts	Mitigation type and Measures	Standards to be achieved	Compliance with standards	Phase and / or time period for implementation
		• All remaining indigenous vegetation should be conserved wherever possible.			

	Disruption in the movement patterns of fauna species may impact on biodiversity. Noise, dust and potential light pollution, as well as migration of pollutants such as hydrocarbons in the soils, dust and emissions from vehicle and machinery altering air quality will all have an impact on biodiversity.	**Prevent and reduce through management measures.** • Reduce the levels of disturbance on areas indicated by the Environmental Control Officer (ECO) as migratory routes, if any; • Environmental awareness training should include that no hunting, trapping or killing of fauna are allowed; • Any animals rescued or recovered will be relocated in a suitable habitat away from the mining operations and associated infrastructure; • Any lizards, snakes or monitors encountered should be allowed to escape to a suitable habitat away from disturbance. • No reptile should be intentionally killed, caught or collected during any phase of the project; and • General avoidance of snakes is the best policy if encountered. Snakes should not be intentionally harmed or killed and allowed free movement away from the area.	NEMBA: National Environmental Management: Biodiversity Act, 2004 (Act No. 10 of 2004)	NEMBA: National Environmental Management: Biodiversity Act, 2004 (Act No. 10 of 2004)	Prospecting Invasive Phase

Activity Including Size/ scale	Aspects and potential impacts	Mitigation type and Measures	Standards to be achieved	Compliance with standards	Phase and / or time period for implementation
	Introduction and spread of alien invasive species. The moving of soil and vegetation resulting in opportunistic invasions after disturbance and the introduction of seed in construction materials and on vehicles. Invasion of alien plants can impact on hydrology, by reducing the quantity of water entering a watercourse through stormwater, and outcompete natural vegetation, decreasing the natural biodiversity. Once in a system, alien plants can spread throughout the catchment. If allowed to seed before control measures are implemented, alien plants can easily colonise and impact on downstream users.	**Prevent and control through management measures.** • An alien vegetation management plan should be drawn up and implemented; • Regular removal of invasive alien species should be undertaken. This should extend through to the closure phase of the project; and • No spreading of alien vegetation onto adjacent properties should be allowed.	Rehabilitation Objectives and Standards Alien and invasive vegetation management plan implemented and outcomes achieved. Proof of alien vegetation control. No listed species visible on the site.	Alien and Invasive Species Management Plan Rehabilitation Objectives and Standards Alien and Invasive Species Regulations (Government Notice 598 of 2014) and Alien and Invasive Species List, 2014 in terms of	Prospecting Invasive Phase

				NEMBA (Government Notice 599 of 2014) - Notice 2	

Activity Including Size/ scale	Aspects and potential impacts	Mitigation type and Measures	Standards to be achieved	Compliance with standards	Phase and / or time period for implementation
				Exempted Alien Species in terms of Section 66 (1) - Notice 3 National Lists of Invasive Species in terms of Section 70(1) – List 1, 3-9 & 11 - Notice 4 • Prohibited Alien Species in terms of	

				Section 67 (1) – List 1, 3-7, 9-10 & 12	
	Alteration of archaeological, historical and palaeontological resources that may be discovered during earthworks and drilling.	**Protect heritage resources through developing and implementing procedures.** • Prior to any development, construction or prospecting, a qualified archaeologist should conduct a site inspection on the areas demarcated for geotechnical drilling/prospecting.	No loss of newly discovered material.	National Heritage Resources Act, 1999 (Act No. 25 of 1999) and associated regulations.	Prospecting Invasive Phase

Activity Including Size/ scale	**Aspects and potential impacts**	**Mitigation type and Measures**	**Standards to be achieved**	**Compliance with standards**	**Phase and / or time period for implementation**
		Proposed access roads to the drill sites should			

		• also be surveyed in order to avoid the destruction of heritage material; Should the prospecting outcome result in further development or construction and mining, a full Phase 1 • Archaeological Impact Assessment must be conducted on the affected area if triggered; Because archaeological artefacts generally occur below surface, the possibility exists that culturally significant material may be exposed during the development and construction phases, in which case all activities must be suspended pending further archaeological investigations by a qualified archaeologist. Also, should skeletal remains be exposed during development and construction phases, all activities must be suspended and the relevant heritage resources authority contacted (see National Heritage Resources Act (Act No. 25 of 1999) Section 36 (6)). Should culturally		• South African Heritage Resources Agency Guidelines.	

Activity Including Size/ scale	Aspects and potential impacts	Mitigation type and Measures	Standards to be achieved	Compliance with standards	Phase and / or time period for implementation
		significant material or skeletal remains be exposed during prospecting all activities must be suspended pending further investigation by a qualified archaeologist (Refer to the National Heritage and Resources Act, 25 of 1999 section 36 (6)); • Should any objects of archaeological or paleontological remains be found during activities, work must immediately stop in that area and the Environmental Control Officer (ECO) must be informed; • The ECO must inform SAHRA and contact an archaeologist and / or paleontologist, depending on the nature of the find, to assess the importance and rescue them if necessary (with the relevant SAHRA permit). No work may be resumed in this area without the permission of the ECO and SAHRA.			

	Visibility from sensitive receptors / visual scarring of the landscape as a result of the prospecting activities.	**Reduce through controlling management measures.** • Unnecessary lights should be switched off during the day and / or night to avoid light pollution;	Rehabilitation objectives and standards	• Rehabilitation objectives and standards	Prospecting Invasive Phase

Activity Including Size/ scale	**Aspects and potential impacts**	**Mitigation type and Measures**	**Standards to be achieved**	**Compliance with standards**	**Phase and / or time period for implementation**
		• If lighting is required, the lighting will be located in such a place and such a manner so as to minimise any impact on the surrounding community and fauna; • Install temporary lights that will not create a night sky glow; • Security lighting should be designed in such a way as to minimise emissions onto undisturbed areas on site and neighbouring properties. Light fittings should face downwards; • Housekeeping on site should be enforced; • Rehabilitation measures such as re-vegetation and plan to be implemented;			

		• Reduce the prospecting period through careful planning and productive implementation of resources; • Plan the placement of lay-down areas and any potential temporary prospecting camps in order to minimise vegetation clearing;			

Activity Including Size/ scale	Aspects and potential impacts	Mitigation type and Measures	Standards to be achieved	Compliance with standards	Phase and / or time period for implementation
		• Restrict the activities and movement of workers and vehicles to the immediate prospecting site and existing access roads; • Ensure that rubble, litter and issued materials are managed and removed regularly; • Ensure that all infrastructure and the site and general surrounds are maintained in a neat and appealing way; and			

		• Reduce and control dust through the use of approved dust suppression techniques.			
	Nuisance and health risks caused by an increase in the ambient noise level as a result of noise and vibration impacts associated with the operation of vehicles, machinery and equipment.	**Reduce through controlling measures.** • Vehicles and machinery will be regularly serviced to ensure acceptable noise levels are not exceeded; • Silencers will be utilised where possible; • Heavy vehicle traffic should be routed away from noise sensitive areas where possible; • Noise levels should be kept within acceptable limits. All noise and sounds generated should adhere to South African Bureau of Standards (SABS) specifications for maximum allowable noise levels for construction sites. No pure tone	Impact reduced. Records of service of all operational vehicles. Silencers utilised where applicable. All employees wear PPE where required.	Meet the South African National Standard SANS 10103:2008 Meet South African Bureau of Standards (SABS) specifications for maximum allowable noise	Prospecting Invasive Phase

Activity Including Size/ scale	**Aspects and potential impacts**	**Mitigation type and Measures**	**Standards to be achieved**	**Compliance with standards**	**Phase and / or time period for implementation**

		sirens or hooters may be utilised except where required in terms of SABS standards or in emergencies; • With regard to unavoidable very noisy activities in the vicinity of noise sensitive areas, the Site Manager (SM) should liaise with local residents and a suitably qualified ecologist and how best to minimise impacts, and the local population should be kept informed of the nature and • duration of intended activities; The SM should take measures to discourage labourers from loitering in • the area, causing noise disturbance; Noise impacts should be minimised by restricting the hours (between 06h00 and 18h00 on Monday to Friday, and 06h00 and 13h00 on Saturdays), during which the offending activities are • carried out and, where possible, by		levels for construction sites. • Meet the requirements of the Mine Health and Safety Act (Act 29 of 1996)	

		insulating machinery and/or enclosing areas of activity; No noisy activities to occur on Sundays or public holidays;			

Activity Including Size/ scale	Aspects and potential impacts	Mitigation type and Measures	Standards to be achieved	Compliance with standards	Phase and / or time period for implementation
		• Personal Protective Equipment to all persons working in areas where high levels of noise can be expected; Signs where it is compulsory; • Regular inspections and maintenance of equipment, vehicles and machinery to prevent unnecessary noise.			

	Increased dust pollution due to vegetation clearance and vehicles driving on gravel roads and drilling.	**Reduce through controlling measures.** • Dust suppression shall be implemented during dry periods and windy conditions; • All exposed surfaces should be minimised in terms of duration of exposure to wind and stormwater; • Excavation, handling and transportation of erodible materials shall be avoided under high wind conditions (excess of 35km/hr) or when a visible dust plume is present; • Ensure that the shortest routes are used for material transport; • Ensure that stockpile height is kept to a minimum; • Minimise travel speed on unpaved roads;	Impact reduced. Speed limit road signs, complying with the South African Road Signs Manual on site. Dust fall monitoring programme should be implemented. Dust fallout and Particulate Matter	South Africa National Standard 1929:2005: Ambient Air Quality: Limits for common pollution Meet the requirements of the National Dust Control regulations, 2013, as published in the Government Gazette (No. 36974) of 1	Prospecting Invasive Phase

Activity Including Size/ scale	Aspects and potential impacts	Mitigation type and Measures	Standards to be achieved	Compliance with standards	Phase and / or time period for implementation
		• Implement monthly site inspection to check for possible areas of dust generation not addressed or not effectively managed; • Spray areas to be cleared with water; • Ensure minimum travel distance between working areas and stockpiles; • Ensure that topsoil for stockpiles is sprayed with water before tipping to prevent dust generation; • Ensure graded areas are sprayed with water; • Minimise the amount of graded areas; • Load and offload material, as far as possible, downwind of topsoil stockpiles.	(PM) levels may not exceed the limits as set out in the Dust Control Regulations above. Monitoring dust stands occurring on site.	November 2013 (GNR 827 of 1 November 2013), in terms of the National Environmental Management: Air Quality Act 39 of 2004 •	

	Gaseous emissions from vehicles and machinery may cause an impact on ambient air quality.	• All vehicles and machinery will be regularly serviced to ensure they are in proper working condition and to • reduce risk of leaks; Proper planning of movements (vehicle trips) and working of machinery should take place, in order to avoid unnecessary trips and hours of operation.	Rehabilitation objectives and standards	• Rehabilitation objectives and standards	Prospecting Invasive Phase

Activity Including **Size/ scale**	**Aspects and potential impacts**	**Mitigation type and Measures**	**Standards to be achieved**	**Compliance with standards**	**Phase and / or time period for implementation**

	Generation of additional general waste, litter and building rubble and hazardous waste.	**Control through management measures.** • A central waste storage and transition area shall be established within the site camp; • The central waste storage and transition area shall be surfaced and demarcated appropriately; • Portable wheelie bins shall be placed throughout the site camp as well as at the remainder of the site and at all working areas in the field; • Wheelie bins shall be colour coded and labelled to identify the waste stream for which it is intended; • All portable wheelie bins and other containers shall be emptied at the central waste storage and transition area a minimum of once a week or when filled, as to avoid waste build up; • The waste shall be removed (within 30 days) by a licensed waste service provider as shall be disposed of at a licensed waste landfill site and records of safe disposal (as required for hazardous wastes) shall be supplied to the Contractor. These records shall be kept on site by the ESM;	Waste management on site visible.	Waste management on site visible. Waste Classification and Management Regulations and Norms and Standards for the assessment of for landfill disposal and for disposal of waste to landfill, 2013 (Government Notice 634 – 635 of 2013) promulgated in terms of the National Environmental Management:	Prospecting Invasive Phase

Activity Including Size/ scale	Aspects and potential impacts	Mitigation type and Measures	Standards to be achieved	Compliance with standards	Phase and / or time period for implementation

		• Wherever possible and practical, waste materials generated on site must be • recycled; and Waste specific (hazardous, timber, steel etc.) mitigation measures to be implemented.		Waste Act, 2008 (Act No. 59 of 2008) [as amended] and: Regulations regarding the planning and management of residue stockpiles and residue deposits from a prospecting, mining, exploration or production operation (GN R. 632 of 2015)	

Activity Including Size/ scale	Aspects and potential impacts	Mitigation type and Measures	Standards to be achieved	Compliance with standards	Phase and / or time period for implementation
				SANS 10234: 2008: Globally Harmonized System of classification and labelling of • chemicals (GHS)	
	Minor impact caused by need for services i.e. water, electricity and sewerage systems during the prospecting phase causing additional strain on natural resources and service infrastructure.	**Reduce through controlling management measures.** • Energy savings measures to be implemented at the site e.g.: o No lights to be switched on unnecessarily; o Only security lights to be switched on at night; • Energy saving bulbs to be installed; and • Water should be recycled as far as possible to avoid any additional water usage.	Impact avoided. Recycling of used and contaminated water through wastewater and sewage treatment and reuse.		Prospecting Invasive Phase

	Minor change in traffic patterns as a result of traffic entering and exiting the site on the surrounding road infrastructure and existing traffic.	**Reduce through controlling management measures.** • Where feasible heavy vehicles should not operate on public roads during peak hours; and	Impact reduced. Speed limit road signs, complying	Reduce through controlling measures	Prospecting Invasive Phase

Activity Including Size/ scale	**Aspects and potential impacts**	**Mitigation type and Measures**	**Standards to be achieved**	**Compliance with standards**	**Phase and / or time period for implementation**
		• Heavy vehicles should adhere to the speed limit of the road.	with the South African Road Signs Manual on site.	Set Speed Limits • South African Road Signs Manual	

	Nuisance, health and safety risks caused by increased traffic on and adjacent to the study area including cars, and heavy vehicles.	**Prevent through controlling management measures.** • Drivers will be enforced to keep to set speed limits; • Trucks will be in a road-worthy condition; • Roads and intersections will be signposted clearly. Only main roads should be used; • Where feasible vehicles should not operate on public roads during peak hours; • Vehicles should adhere to the speed limit of the road; • Heavy vehicles should always travel with their headlights switched on; • Heavy vehicles should not stop on the road to pick up hitchhikers – No stopping on the road approaching the site will be allowed;	Impact reduced. Speed limit road signs, complying with the South African Road Signs Manual on site. South Africa National Standard 1929:2005: Ambient Air Quality: Limits for common pollution	Reduce through controlling measures Set Speed Limits South African Road Signs Manual South Africa National Standard 1929:2005: Ambient Air Quality: Limits for common pollution	Prospecting Invasive Phase

Activity Including Size/ scale	Aspects and potential impacts	Mitigation type and Measures	Standards to be achieved	Compliance with standards	Phase and / or time period for implementation

		• Abangani Projects CC shall be responsible for ensuring that suitable access is maintained for public traffic to all relevant businesses and properties; • and All traffic accommodation measures are to conform to the latest edition of the South African Road Signs Manual.	Meet the requirements of the National Dust Control regulations, 2013, as published in the Government Gazette (No. 36974) of 1 November 2013 (GNR 827 of 1 November 2013), in terms of the National Environmental Management: Air Quality Act 39 of 2004 Dust fall monitoring	National Dust Control regulations, 2013, as published in the Government Gazette (No. 36974) of 1 November 2013 (GNR 827 of 1 November 2013), in terms of the National Environmental Management: Air Quality Act 39 of 2004 Approved dust fall monitoring programme	

Activity Including Size/ scale	Aspects and potential impacts	Mitigation type and Measures	Standards to be achieved	Compliance with standards	Phase and / or time period for implementation
			programme should be implemented. Dust fallout and Particulate Matter (PM) levels may not exceed the limits as set out in the Dust Control Regulations above. Monitoring dust stands occurring on site.		

	Possibility of prospecting activities and workers causing veld fires, which can potentially cause injury and or loss of life to workers and surrounding landowners, visitors and workers.	**Prevent through controlling management measures.** • All workers will be sensitised to the risk of fire; • Smoking is only allowed in designated smoking areas and disposal of cigarette butts safely in sand buckets;	Mine Health and Safety Act (Act 29 of 1996) An Emergency Plan (including Fire Protection,	Impact avoided. No incidents of fires occurring on site.	Prospecting Invasive Phase

Activity Including Size/ scale	**Aspects and potential impacts**	**Mitigation type and Measures**	**Standards to be achieved**	**Compliance with standards**	**Phase and / or time period for implementation**

		• The Applicant shall ensure that the basic firefighting equipment is available on the • site; Extinguishers should be located outside hazardous materials and chemicals storage containers; • Fire response and evacuation: • An Emergency Plan (including Fire Protection, Response and Evacuation Plan) is to be prepared by the Applicant and conveyed to all staff on the site; • Identify major risks to minimise the environmental impacts e.g., air pollution and contaminated effluent runoff.	Response and Evacuation Plan) Veld and Forest Fire Act, 1998 (Act No. 101 of 1998) [as amended] - Section 12 (1) Duty of the landowner to prevent fire from spreading to neighbouring properties.	No one smoking in unauthorised areas. Proof / records of training in terms of the risk of fire and of the emergency management plan. • Basic fire-fighting equipment located in the correct locations on site.	
	Increased risk to public and worker safety: If not fenced off, the public and workers may fall into excavated areas and trenches.	• A health and safety plan in terms of the Mine Health and Safety Act (Act 29 of 1996) should be compiled and implemented to ensure worker safety;	Mine Health and Safety Plan available on site and proof that it is	Health and safety plan in terms of the Mine Health and Safety Act (Act 29 of 1996)	Prospecting Invasive Phase

Activity Including Size/ scale	Aspects and potential impacts	Mitigation type and Measures	Standards to be achieved	Compliance with standards	Phase and / or time period for implementation
		• A health and safety control officer should monitor the implementation of the health and safety plan for the • operational phase; Any health and safety incidents should • be reported to the Site Manager (SM) immediately; First aid facilities should be • available on site at all times; Workers have the right to refuse work in • unsafe conditions; Material stockpiles or stacks should be stable and well secured to avoid collapse and possible injury to site • workers. • Access to excavation must be controlled; • Excavated areas should be temporarily fencedoff; and Excavations will be backfilled and landscaped as soon as possible.	being implemented. Proof of training in awareness of health and safety procedures. Proof / records of health and safety audits available on request. No health and safety incidents reported.	•	

			Proof / record of stockpile and stacks inspections taking place.		
Activity Including Size/ scale	**Aspects and potential impacts**	**Mitigation type and Measures**	**Standards to be achieved**	**Compliance with standards**	**Phase and / or time period for implementation**
			Health and safety signs on site at appropriate locations.		
	Potential creation of very limited extent short term employment opportunities for the local community, during the prospecting phase.	Local labour to be sourced where possible.	-		Prospecting Invasive Phase
	Multiplier effects on local economy will be positive, but very limited in extent and only short term.	Supplies to be bought locally as far as possible.	-		Prospecting Invasive Phase

25. Financial Provision

25.1. Determination of the amount of Financial Provision

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

The closure objectives include:

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

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

The Public Participation Process (PPP) is a requirement of several pieces of South African Legislation and aims to ensure that all relevant Interested and Affected Parties (I&AP's) are consulted, involved and their opinions are taken into account and a record included in the reports submitted to Authorities. The process ensures that all stakeholders are provided this opportunity as part of a transparent process which allows for a robust and comprehensive environmental study. The PPP for the as part of the prospecting right application needs to be managed sensitively and according to best practices in order to ensure and promote:

- Compliance with national legislation;
- Establish and manage relationships with key stakeholder groups; and
- Encourage involvement and participation in the environmental study and authorisation/ approval process.

As such, the purpose of the PPP and stakeholder engagement process is to:

- Introduce the proposed project;
- Explain the environmental authorisations required;

- Explain the environmental studies already completed and yet to be undertaken (where applicable);
- Determine and record issues, concerns, suggestions, and objections to the project;
- Provide opportunity for input and gathering of local knowledge;
- Establish and formalize lines of communication between the I&AP's and the project team;
- Identify all significant issues for the project; and

- Identify possible mitigation measures or environmental management plans to minimise and/or prevent negative environmental impacts and maximize and/or promote positive environmental impacts associated with the project.

Landowners and interested and affected parties have been consulted and provided an opportunity to comment on this Basic Assessment Report, EMPR including all decommissioning, closure and rehabilitation plans.

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

The prospecting activities are dependent on the preceding phase (non-invasive). Prospecting is conducted in phases, where the activities and location of drilling and trenching to sample soil are dependent on the previous phase. Therefore, the specific locations and extent of soil sampling and diamond core drilling cannot be predetermined. Mapping of prospecting activities can also not be conducted.

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

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

Due to the small extent and fairly short-term period of the prospecting activities and as shown in the Environmental Impact Assessment, the impacts will be of a low or very

low significance. Rehabilitation will be conducted and will include borehole capping and re-vegetation. Detailed mitigation measures are provided in the EMPR to ensure the closure objectives are met.

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

The closure cost assessment will be conducted, if required. The report will be submitted to the Department of Mineral Resources together with the Final Basic Impact Assessment report, if required.

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

It is confirmed that the amount for financial provision is anticipated to be an operating cost and is provided for as such in the Prospecting Work Programme. Abangani Projects CC herewith confirms both its capacity and willingness to make the financial provision required should the prospecting right be granted.

26. 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

Table 15: Mechanisms 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
PROSPECTING PHASE				

• Clearing of vegetation and topsoil. • Stockpiling of overburden positioned for later rehabilitation.	Surface Water	• A Stormwater Management Plan (SMP) to be developed for the collective area where prospecting will occur, (or the existing SMP updated, where applicable for present and future activities) and should include the management of stormwater during excavation, as well as the installation of temporary stormwater and erosion control measures during prospecting, followed up by rehabilitation of the area. This Stormwater	Applicant Engineer	After rain / storm events; and Weekly

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
• Prospecting including diamond core drilling, logging and sampling of		Management Plan to be monitored for implementation; • Visual inspections shall be done on a weekly basis with regard to the stability of the temporary water control structures, erosion and siltation.		

the borehole core, trenching will involve the digging of excavation trenches down to approximately 3 metres below surface using graders and excavators. • Dust Suppression.	Dust and air quality pollution	• A minimum of eight dust buckets must be erected around the site in the eight main wind directions. Monthly air quality report will be required as per the regulations to: • Ensure that the environmental mitigation and control measures are implemented; • Monitor environmental performance of the mining operations; • Tracking of progress due to pollution control measure implementation;	Applicant Environmental Specialist	Monthly

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
		• Verify compliance with all relevant legal and statutory requirements; • Promote environmental education and protection; and		

		• Determine sources of significant pollution.		
	Spreading of alien invasive vegetation and impacts on habitat and vegetation.	Specialist monitoring on Faunal and Floral aspects include the monitoring of effects operational processes have on vegetation and accompanied animal life within the immediate or surrounding areas of the operations. • Alien vegetation control and management; • Habitat and vegetation management; • Rehabilitation services include the rehabilitation of operational disturbed areas and hydrocarbon spill areas; • Sloping and re-vegetation of disturbed area to surrounding landscape; and • Remediation of soil at spill sites.	Environmental Specialist	Visual inspections during all phases of the activities.

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

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

28. Environmental Awareness Plan

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

The environmental awareness plan will include the following:

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

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

- All personnel, including contactors, will as a minimum undergo general SHE induction and awareness training;
- The Safety, Health, Environmental and Quality (SHEQ) Manager will identify the SHE training requirements for all personnel and contractors. The training requirements will be recorded in a training needs matrix indicating particular training that must be undertaken by identified personnel and contractors. The training matrix will be administered by the Training Department; and Development of the Training Programme, which will include:

- Job specific training – training for personnel performing tasks which could cause potentially significant environmental impacts;
- Assessment of extent to which personnel are equipped to manage environmental impacts;
- Basic environmental training;

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

General Awareness Training

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

Specific Environmental Training

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

Training Evaluation and Re-training

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

Emergency Procedures

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

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

The broad measures to control or remedy any causes of pollution or environmental degradation as a result of the proposed prospecting activities taking place are provided below:

- ❖ Contain potential pollutants and contaminants (where possible) at source;

- ❖ Handling of potential pollutants and contaminants (where possible) must be conducted in bunded areas and on impermeable substrates;
- ❖ Ensure the timeous clean-up of any spills;
- ❖ Implement a waste management system for all waste stream present on site;
- ❖ Investigate any I&AP's claims of pollution or contamination as a result of mining activities; and
- ❖ Implement the impact management objectives, outcomes and actions, as described in Section above.

It is of critical importance that the broad measures to control or remedy any causes of pollution or environmental degradation are applied during onsite prospecting activities.

29. Specific information required by the Competent Authority

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

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

30. UNDERTAKING

The EAP herewith confirms;

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

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

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

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

Signature of the environmental assessment practitioner:

Name of company:

Date:

-END-

Appendix A: DMRE letters

DMRE acceptance letter

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

Private Bag X 54307, Durban, 4000, 333 Anton Lembede Street, 3rd Floor Durban Bay House, Durban, Tel (031) 335 9600, Fax (031) 305 5801
Reference: KZN30/5/1/1/2/11056PR Enquiries: Mr. Sandile. Njapha Email address: Sandile.njapha@dmre.gov.za,

REGISTERED MAIL

THE MANAGER
ABANGANI PROJECTS CC
3297 MASHIYA STREET
EMALAHLENI
1035

Dear Sir/Madam

ACCEPTANCE OF AN APPLICATION FOR PROSPECTING RIGHT IN TERMS OF SECTION 16(4) OF THE MINERAL AND PETROLEUM RESOURCES DEVELOPMENT ACT, 2002 (ACT 28 OF 2002)

1. Please be informed that your application for Prospecting of Coal, Pseudocoal, Torbanite/ Oil Shale on **Portion Remainder of the Farm Umnamata 8508-GT (The Farm Umnamata 8508-GT)** situated in the Magisterial District of UMzinyathi; is hereby accepted on the above mentioned properties, in terms of section 16 (2) of the Act

2. **Please note that this application is rejected on Portion 1 and 2 of Farm Craighead 15739-GT, Portion 1 of Farm the Willows 8432-GT (Portions 20 of Lot H 29 13268-GV, since there is a granted prospecting right on the same area and for the same mineral.**

3. **You are further directed to amend your regulation 2.2 plan to reflect the above, by exclude the portions/ farm wherein your application has been rejected and submit the amended plan on or before 09th July 2021.**

4. Kindly note that according to the Surveyor General database, the property descriptions applied for are depicted as **Portion Remainder of the Farm Umnamata 8508-GT (The Farm Umnamata 8508-GT) .** You are directed to verify

which property description is correct and advise accordingly, if there are any differences discovered, you are directed to amend your regulation 2.2 plan and submit the amended regulation 2.2 plan on or **before 09th July 2021.**

5. Take note that in light of the minimum requirements as stipulated on regulation 16 (1) and 16 (2) of the EIA Regulations, your application for an Environmental Authorisation was deemed incomplete as it was not accompanied by this acceptance letter as per Regulation 16 (1) (ix) and considering that it is now completed by this acceptance letter, you are hereby required to submit the documents as stipulated on Regulation 19 (1) to 19 (8) of the EIA Regulation (only in cases where Basic Assessment Report is applicable or Regulation 21 (Scoping Report and Regulation 23 (Environmental Impact Report) (only in cases where applicable). All submission timeframes are effective from the dates of this acceptance letter.

6. Please take further note that in terms of section 16 (4) of the Act, you are required to: -

6.1 Upload unto the SAMRAD system one copy and submit three (03) hard copies of the requisite environmental reports as required by section 16 of the MPRDA within ninety (90) days from the date of this letter**. (25th October 2021).**

6.2 to consult in the prescribed manner with the landowner, lawful occupier and any interested and affected party including the Land Restitution Commission and include the result of such consultation in the relevant environmental reports to be submitted and uploaded on the SAMRAD system on or before **29th July 2021 (within 30 days from the date of this letter)**

Please note that the consultation process referred to in paragraph 2.2 above does not imply issuing letters and requesting the affected parties to indicate whether they support your proposed project or not.

It includes among others an extensive process of giving and discussing the specific details of the proposed project, giving the I & A Parties an opportunity to table their comments, objection and support, it also involves ***your written responses and specific commitments made*** *in dealing with the issues raised during the consultation.*

Note that it is important to ensure that your consultation process is comprehensive so that your Environmental Impact Assessment and Environmental Management Plan can be informed by all potential impacts that your project may have.

7. Should the land be owned by the communities or a Trust on behalf of the community, a proper and thorough consultation process must be engaged upon and a legitimate Tribal Resolution or consent must be obtained from the Traditional Authority / Council or Trust and be submitted with the results of consultation. *Should you need any assistance or guidance relating to the required consultation process & procedure in traditional institutions, please contact the District office of the Department of Cooperative Governance and Traditional Affairs in* ***UMzinyathi District Municipality.***

8. Further note that the acceptance of your application does not grant you the right to commence with **prospecting activities**. It only signifies that your application will be processed and evaluated. The Minister or his delegate will make a decision once the process of the evaluation and appeal on the Environmental Authorization application has been finalized.

9. You are in terms of Section 17(1) of the Act required to give effect to the objects referred to in Section 2 (d) of the Act. Therefore please submit on or before **10th September 2021 (within 60 days from the date of this letter)** to this office for the attention of Regional Manager any documentation proving such including but not limited to:-

9.1 Duly signed shareholders agreements with your empowerment partner in which provision **shall** be made for entrepreneurs, local community and employees,
9.2 Share certificates,
9.3 Details relating to the equity by the BEE shareholders, Any other agreement relating to the BEE shareholding including the voting pool agreement where applicable,
9.4 Articles and memorandum of association of the company.
9.5 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.

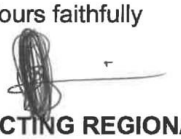
10. Please submit within 60 days **(10th September 2021)** from date of this letter for the attention of Regional Manager a complete prospecting work programme prepared in terms of Regulation 7 of the Mineral and Petroleum Resources Development Act, 2002 (Act no 28 of 2002): Mineral and Petroleum Development Regulation.

11. You are also required to adhere with the requirements of Mine Health and Safety Inspectorate and upload on system the required information and details on or before **26th July 2021 (within 30 days from the date of this letter)**

12. Please be advised that your application might be processed in terms of section 9 (1) (b) of the Act. If this office discovers that there is an existing or pending application on the same properties and for the same mineral, this application shall discontinue.

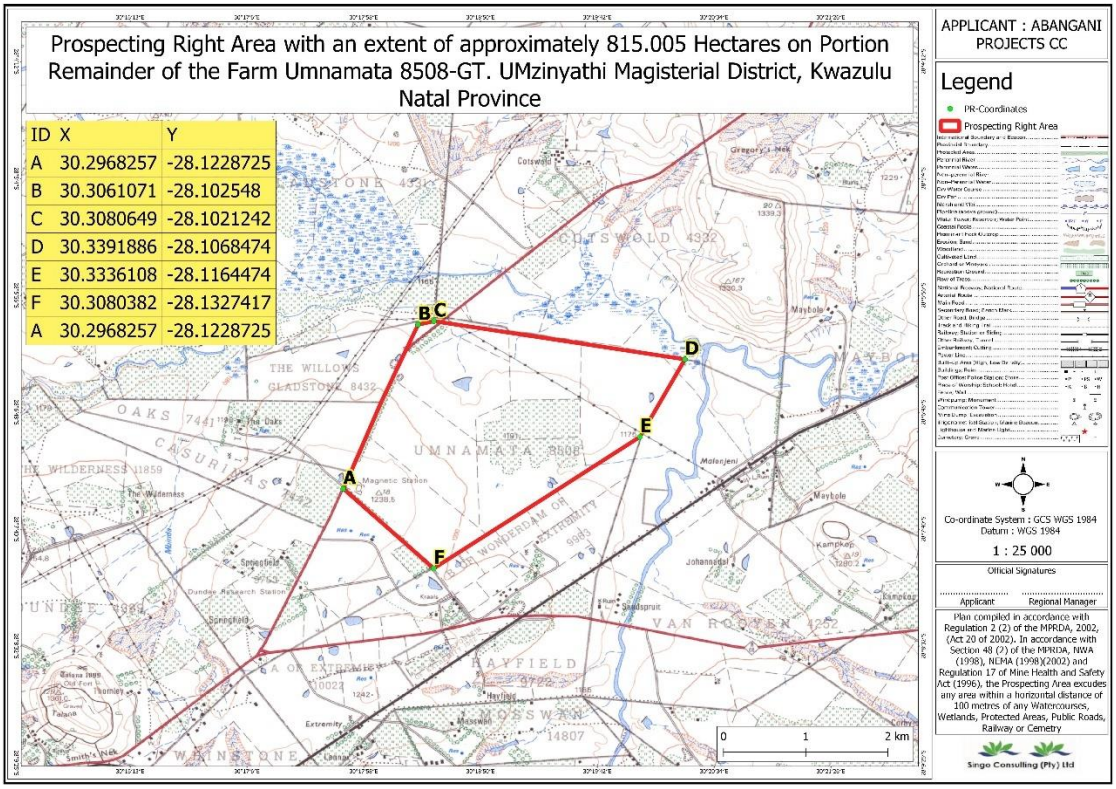
13. Please take note that failure to adhere to the timeframe stipulated above and to submit any documentation required in terms of this notice will result into non-compliance with the provision of the Act and the Amendment Act and will result in the refusal of your application.

Yours faithfully

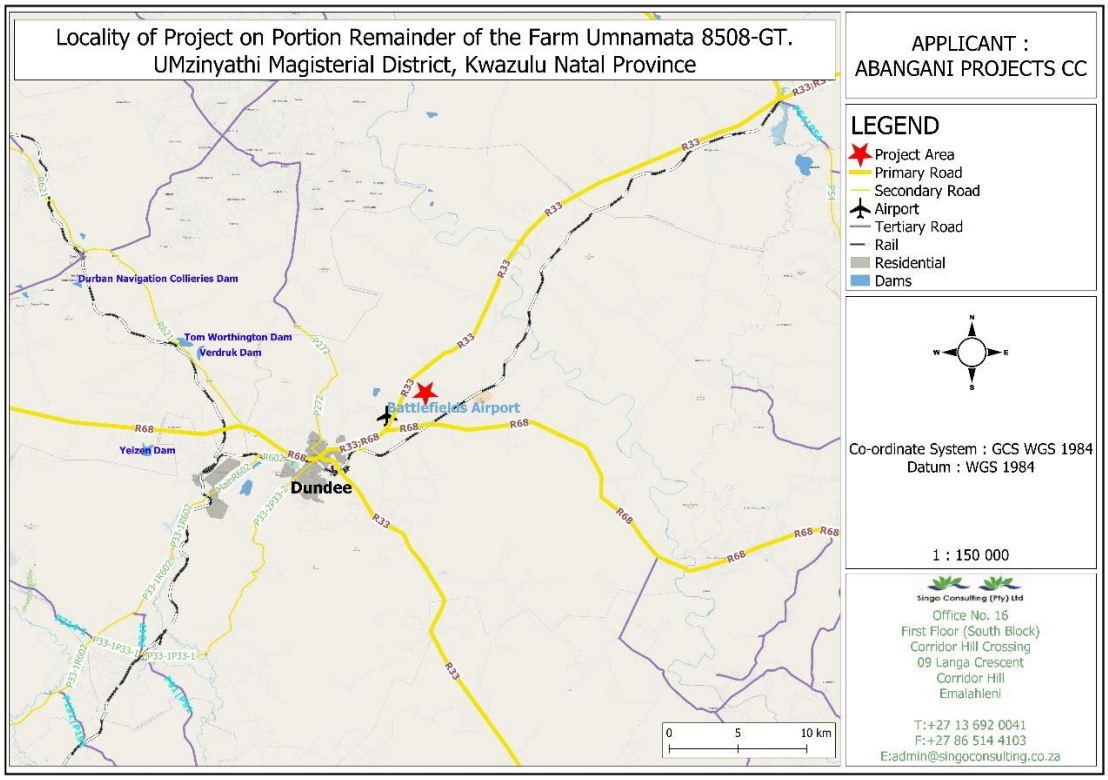


ACTING REGIONAL MANAGER
KWAZULU NATAL REGION
DATE: 17/06/2021.

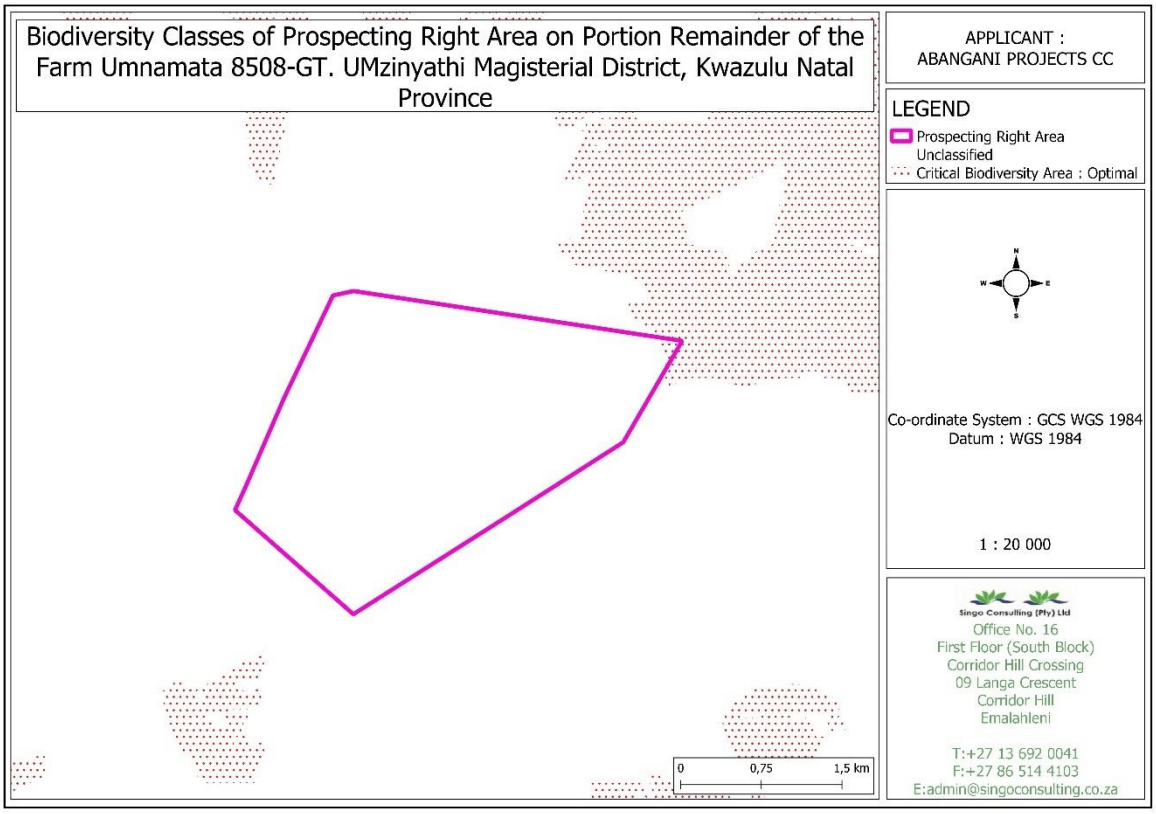
Appendix B: Project maps



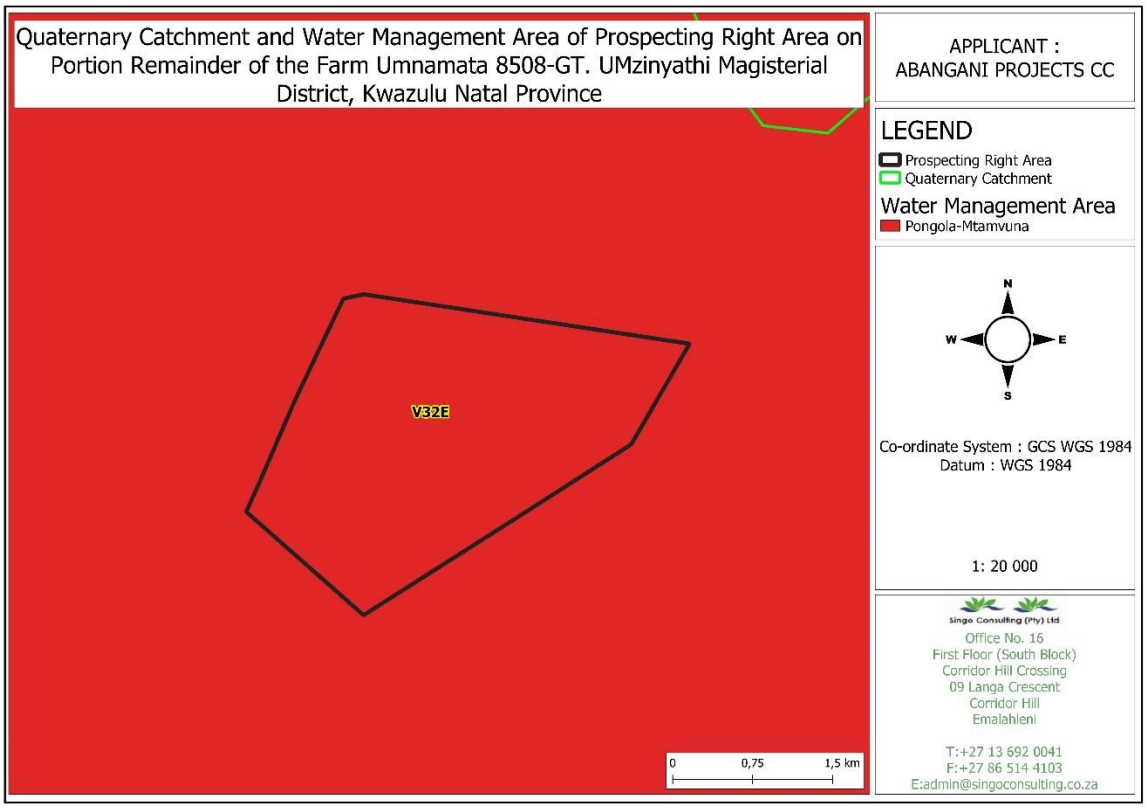
Regulation map



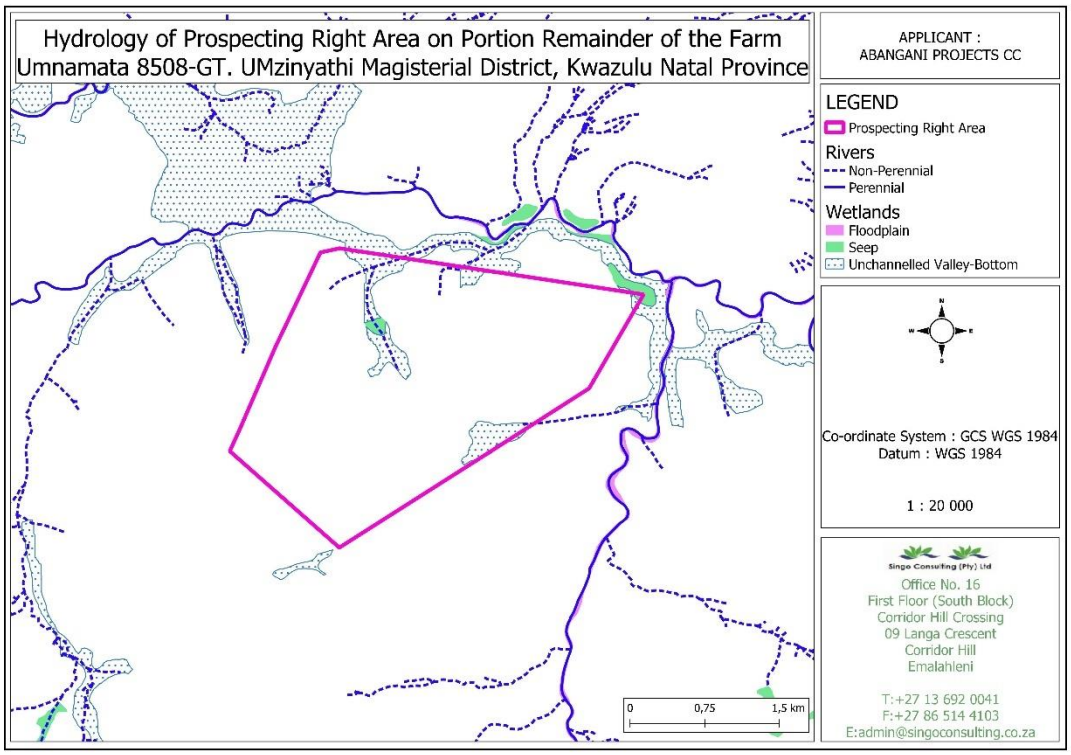
Locality map



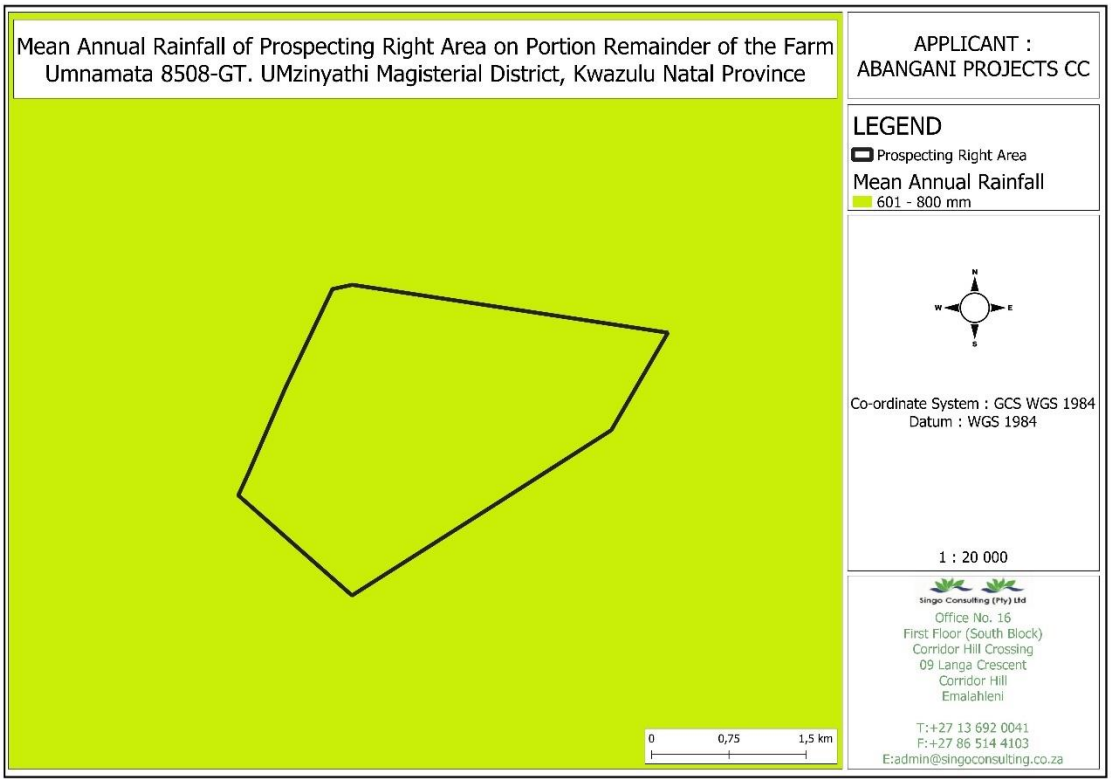
Biodiversity map



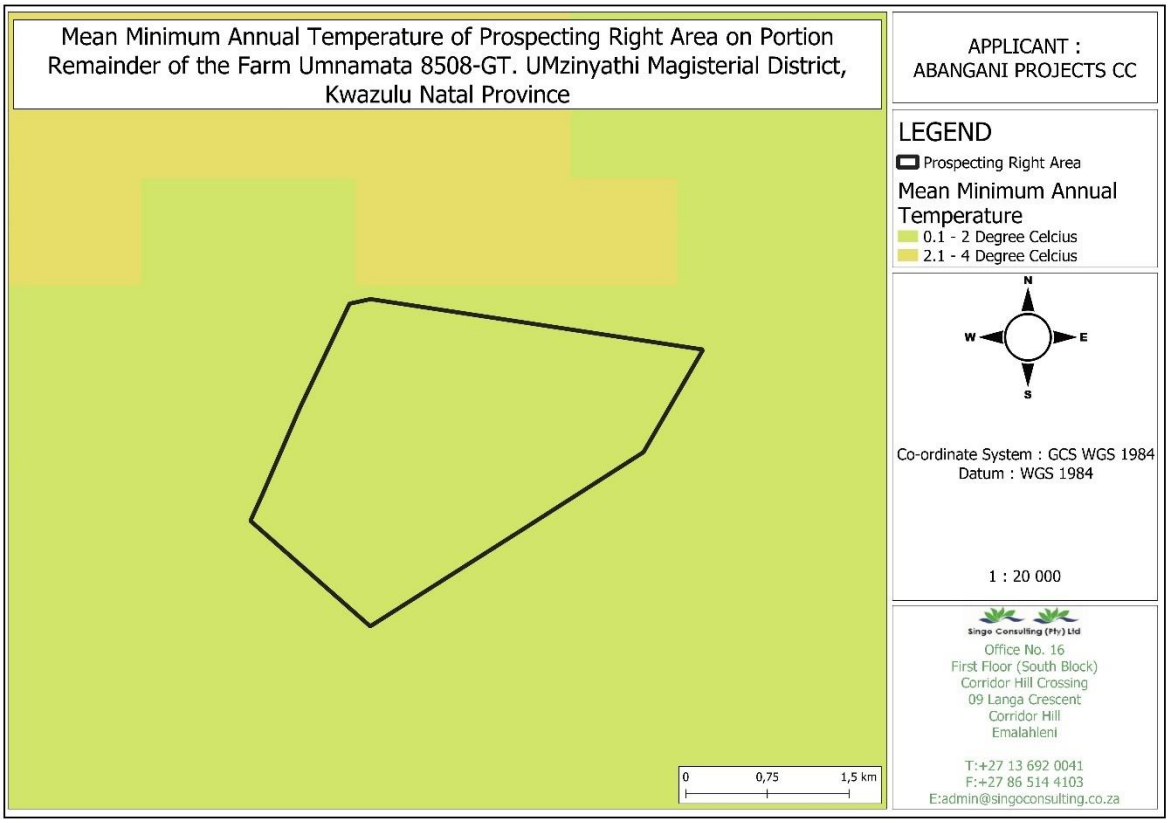
Quaternary Catchment and Water Management Areas map



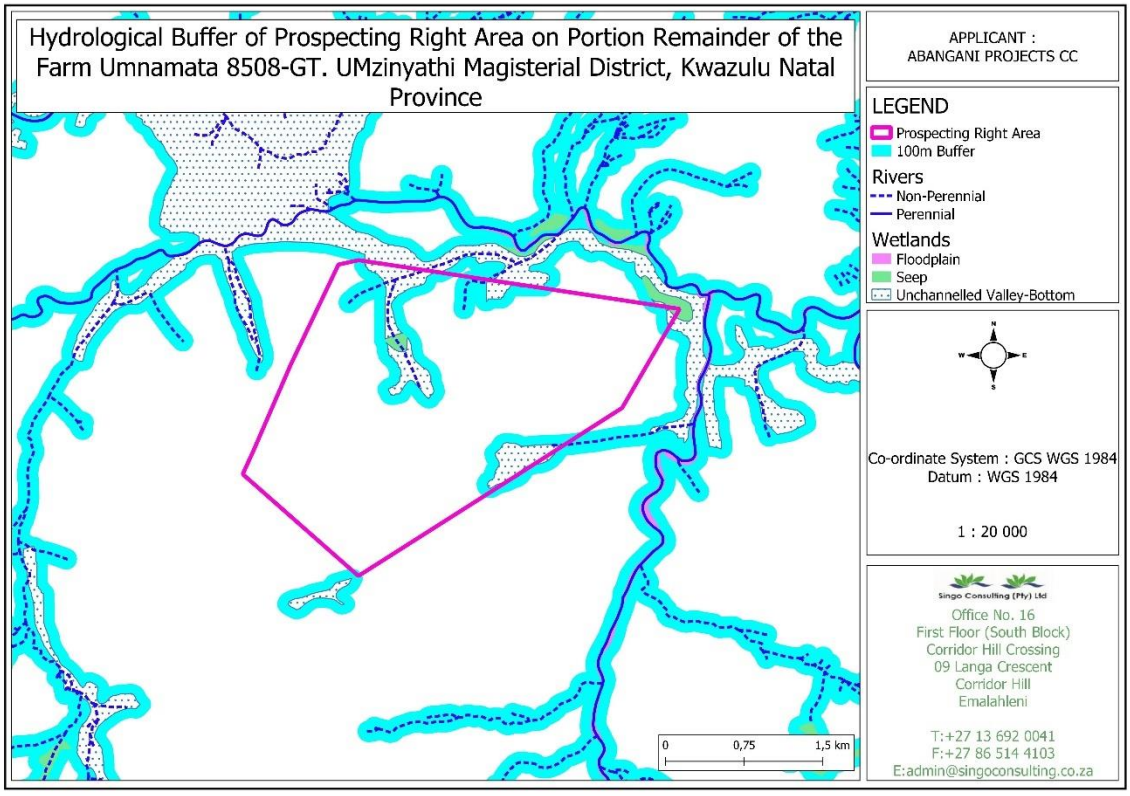
Hydrology



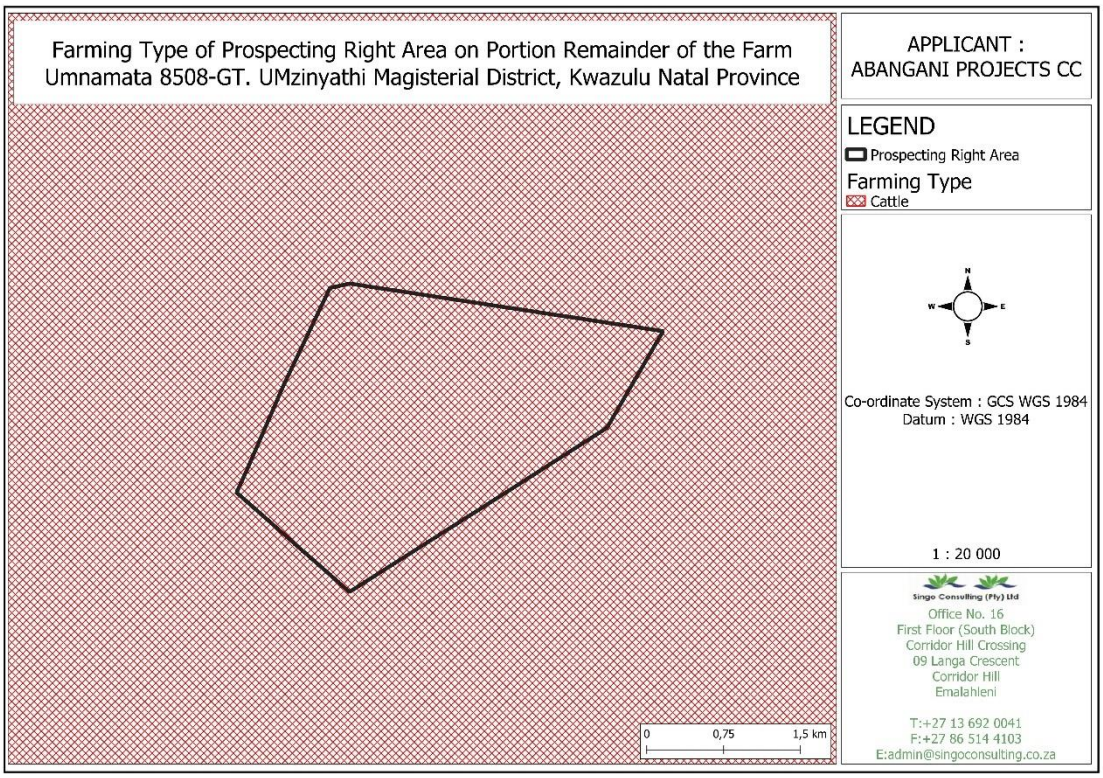
Mean Annual rainfall map



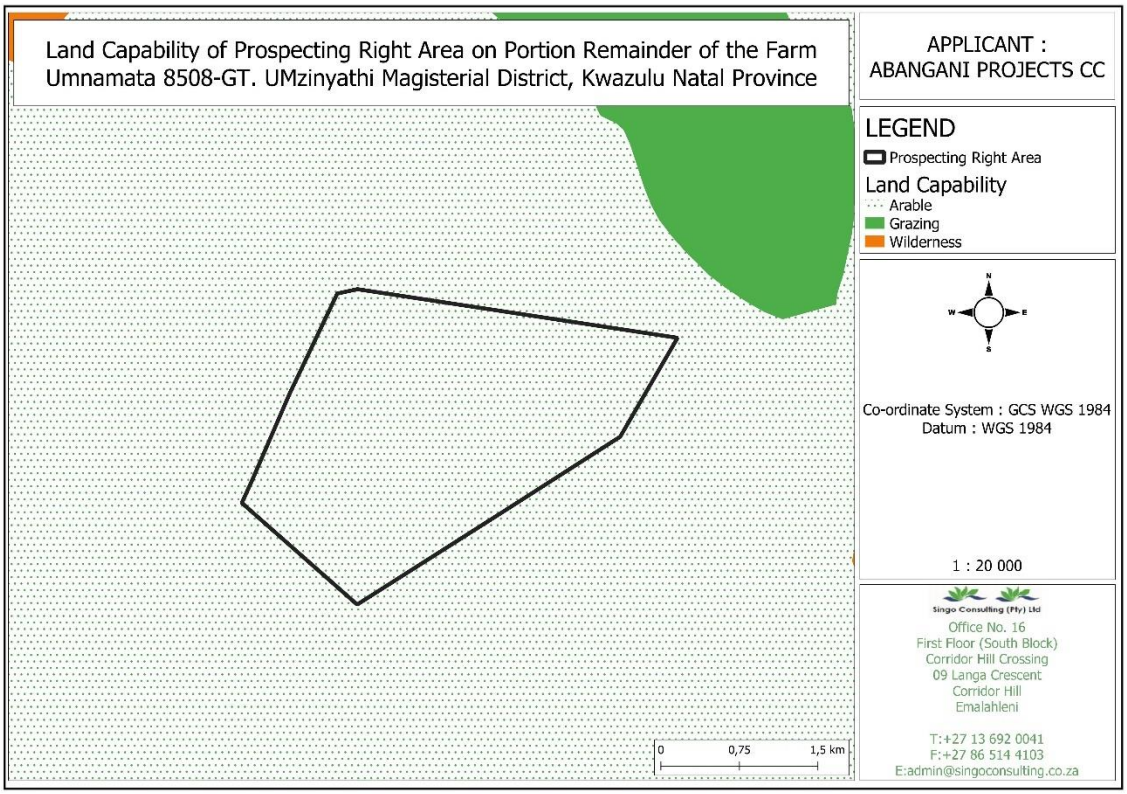
Mean Minimum Annual temperature map



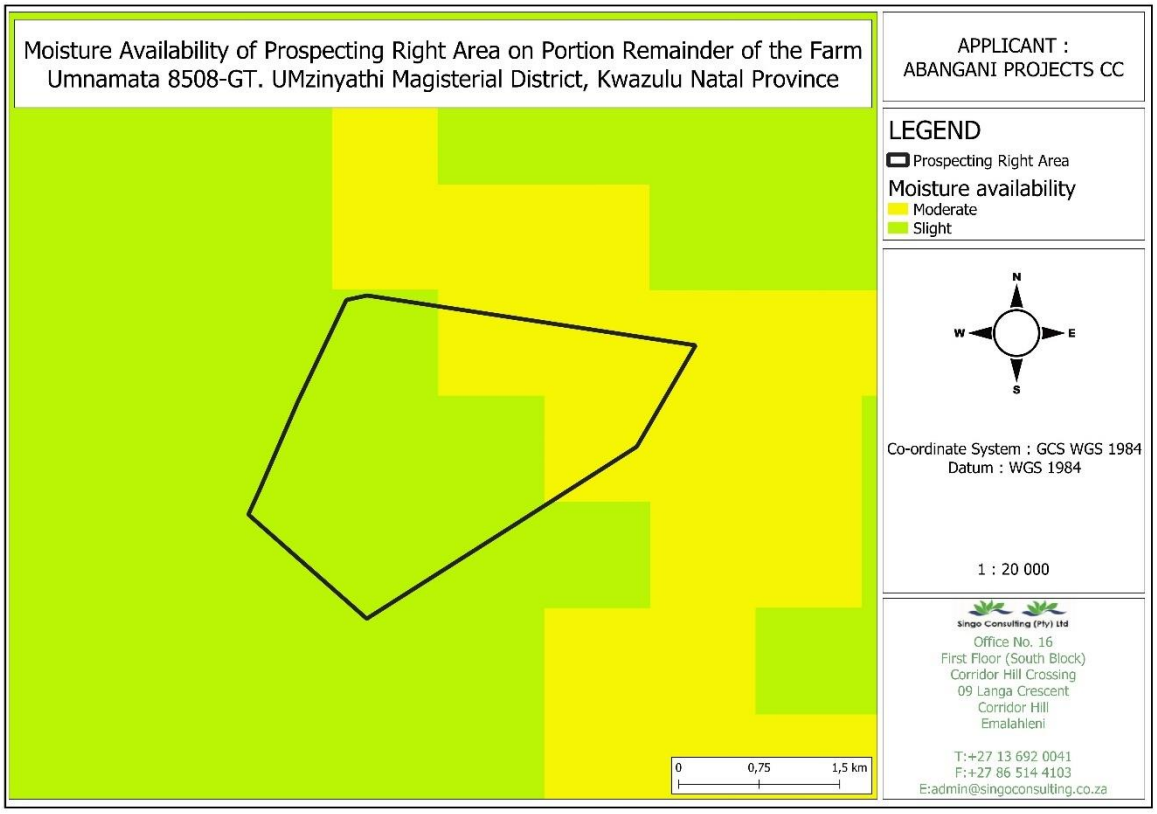
Buffer zone map



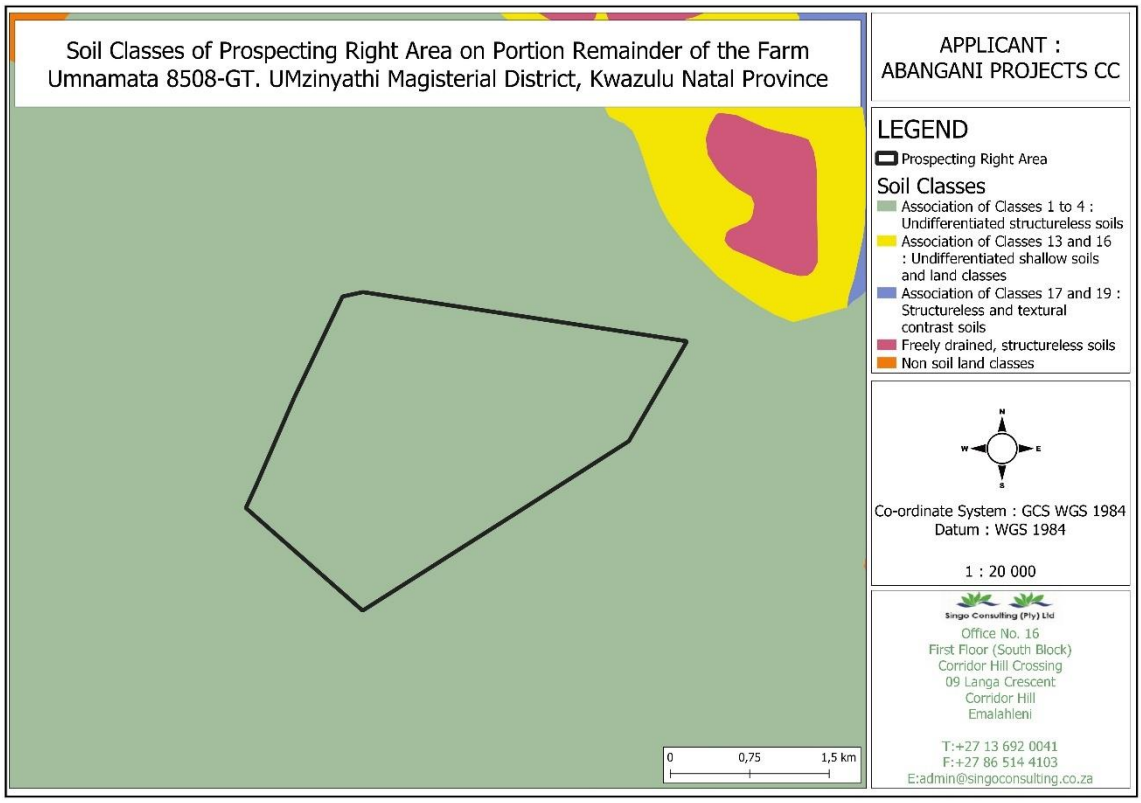
Farming type map



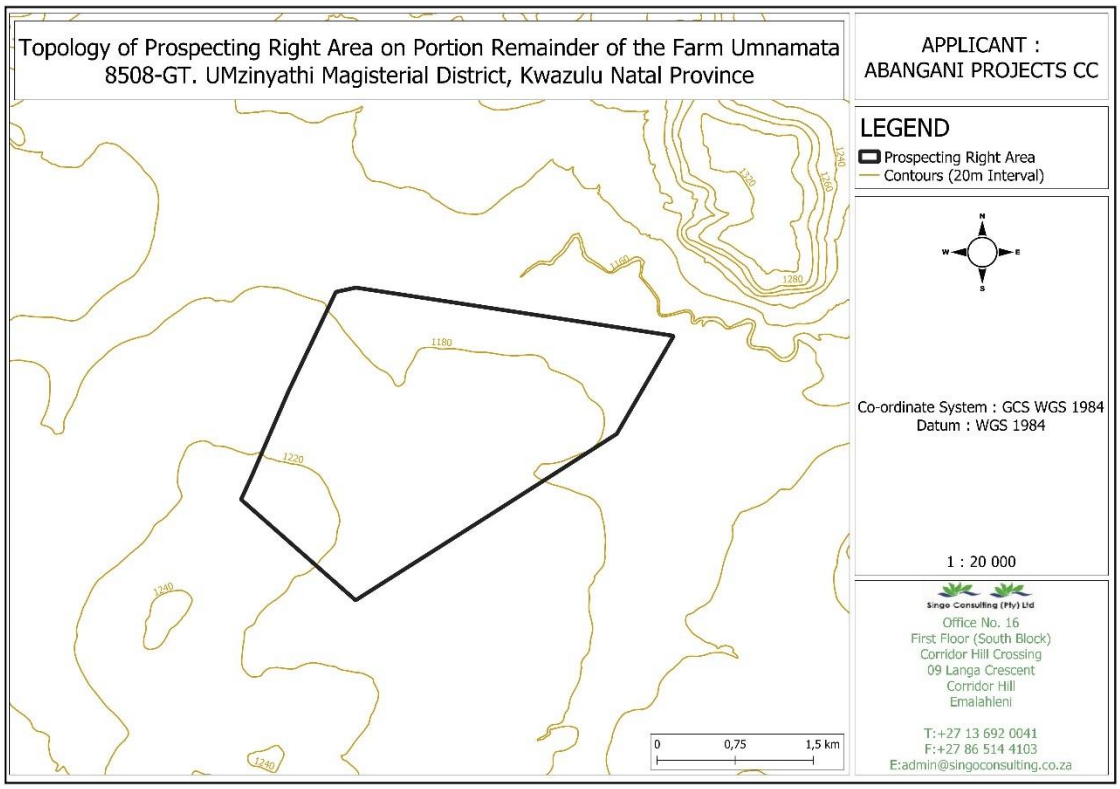
Land capability map



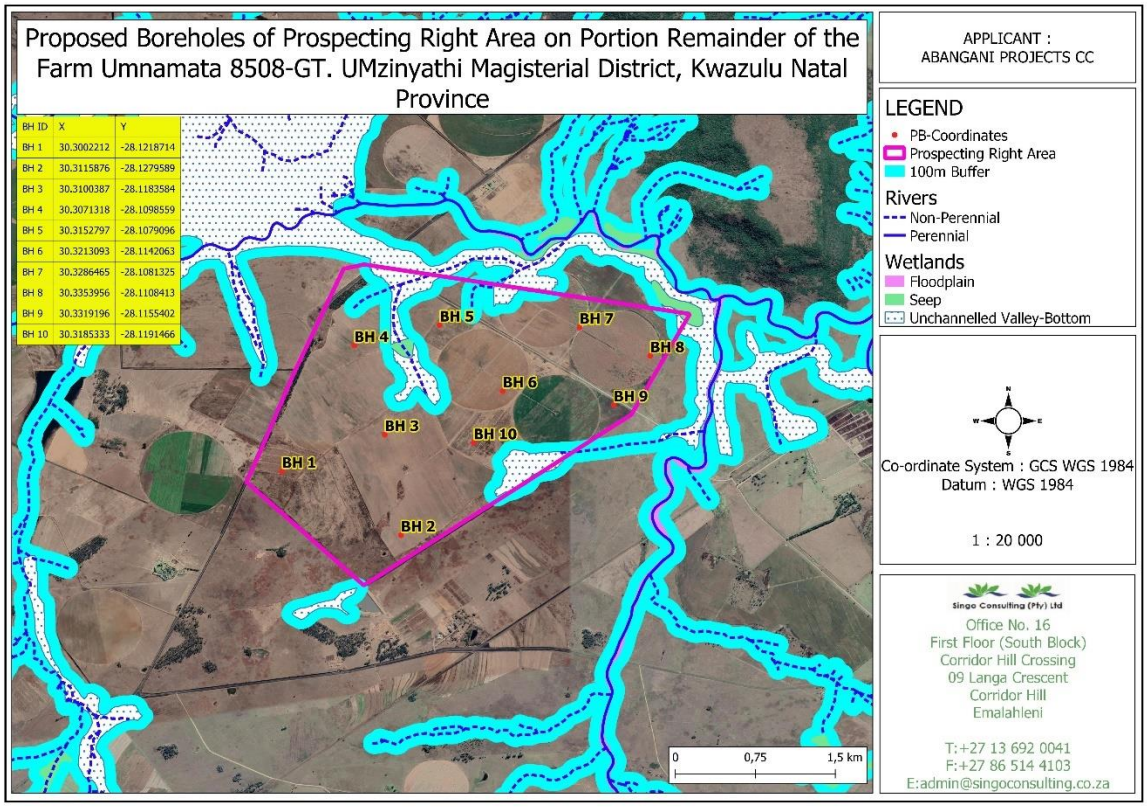
Moisture availability map



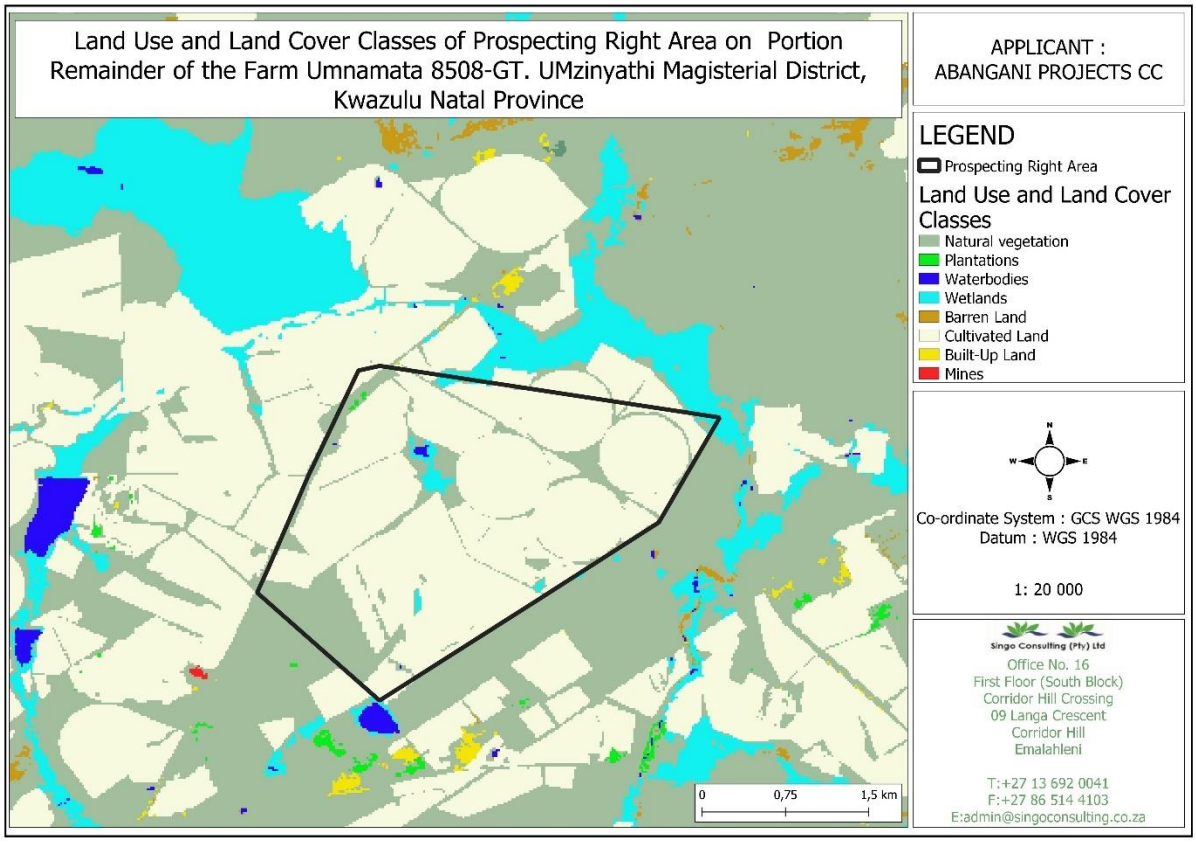
Soil classes map



Topology map



Borehole map


Land Use and Land Cover Classes of Prospecting Right Area on Portion Remainder of the Farm Umnamata 8508-GT. UMzinyathi Magisterial District, Kwazulu Natal Province
APPLICANT :
ABANGANI PROJECTS CC
LEGEND
Prospecting Right Area
Land Use and Land Cover Classes
Natural vegetation
Plantations
Waterbodies
Wetlands
Barren Land
Cultivated Land
Built-Up Land
Mines
N
W
E
S
Co-ordinate System : GCS WGS 1984
Datum : WGS 1984
1: 20 000
0
0,75
1,5 km
Singo Consulting (Pty) Ltd
Office No. 16
First Floor (South Block)
Corridor Hill Crossing
09 Langa Crescent
Corridor Hill
Emalahleni
T:+27 13 692 0041
F:+27 86 514 4103
E:admin@singoconsulting.co.za

Land use map

Appendix C: Public Participation

C1: Background Information Document

BACKGROUND INFORMATION DOCUMENT

Proposed Prospecting Right and Environmental Authorisation Application on the portion of remainder of the farm Umnamata 8508-GT Magisterial District of Mzinyathi; Kwa-Zulu Natal

Prepared by: Singo Consulting (Pty) Ltd

Prepared for: ABANGANI PROJECTS

INTRODUCTION AND THE PURPOSE OF THIS DOCUMENT

Singo Consulting (Pty) Ltd has been appointed as an independent Environmental Assessment Practitioner by **Abangani Projects CC** to conduct Environmental Impact Assessment (EIA), Compile an Environmental Management Programme report (EMPr) and undertake Public Participation Process (PPP). This is done for processes of acquiring Environmental Authorization for the proposed Prospecting Right application within **portion of remainder** of the farm **Umnamata 8508-GT** in the Magisterial District of **Mzinyathi;** Kwa-Zulu Natal Province. **DMRE Ref: KZN 30/5/1/1/2 (11056) PR.**

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

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

This Background Information Document therefore requests and invites I&APs to comment on the environmental, physical, social and economic impacts associated with the proposed Prospecting Activity. Be assured that your comments are of great value as they ensure that relevant issues are taken into consideration. Attached at the end of this document is a registration from, kindly complete it and send it back to **Ms Deshney Mapoko** through given means of communication also attached there.

PROJECT DESCRIPTION

Prospecting Right Application has been submitted for the prospecting of Coal, Pseudocoal, Torbanite/oil shale on the property mentioned above. This Prospecting Area, as seen in figure 1 and 2, is situated approximately 6.79 km North-East of Dundee and approximately 10.77 km North West of Calrossie.

Prospecting activities will be undertaken over a period of five (5) years and are designed in phases, each phase conditional on the success of the previous phase. Both Invasive and non-invasive methods will be implemented. Desktop study of the area has commenced, and this incorporates desktop geographical and geological mapping. This will be followed by geochemical and geotechnical surveys. In turn, this is followed by detailed geophysical studies and later, a detailed drilling, sampling, assaying and mineralogical study. Percussion drilling and Diamond drilling methods will be utilized to prospect the applied commodities. To ensure or minimize impacts on the receiving environment, all the drilling activities will be guided by the project's EMPr.

REGULATORY FRAMEWORK

The proposed Prospecting activity is involved with some sort of physical alteration to accommodate for example drill rigs and site offices. Therefore, EIA process to be undertaken will be conducted in accordance with the National Environmental Management Act (Act 107 of 1998) and Environmental Impact Assessment regulations as amended (April 2017).

The activity is to prospect the existence and occurrence of Coal, Pseudocoal, Torbanite / oil shale therefore this will be conducted in accordance with Mineral and Petroleum Resources Development Act, (Act 28 of 2002). Other regulatory guidelines to be followed include: National Water Act, 1998 (Act 36 of 1998), National Air Quality Standards (GN 1210: 2009) and National Dust Control Regulations (GN 275: 2017).

These all will accurately be followed to ensure that identified impacts are assessed and mitigated according to their significance so that the protection of the receiving environment and populations is met.

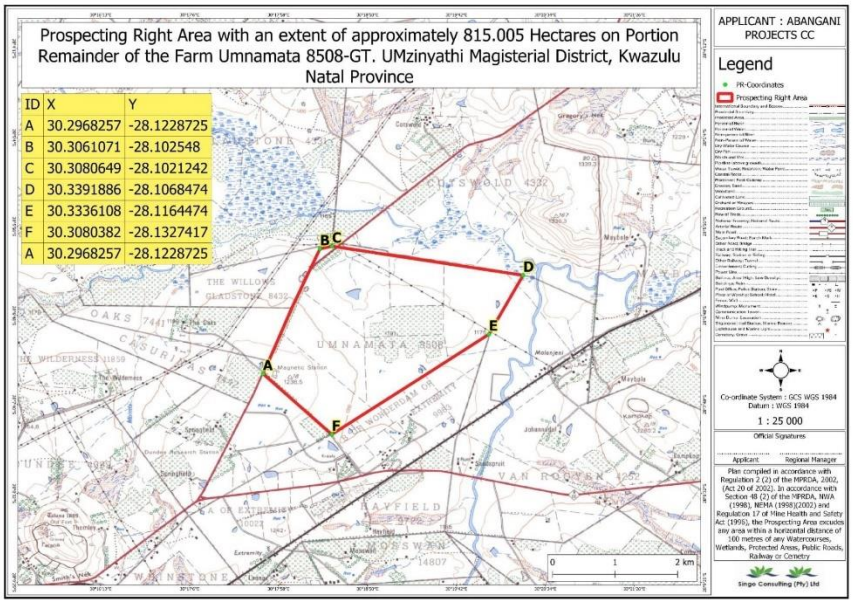


Figure 1: Regulation 2.2 plan of the proposed project area

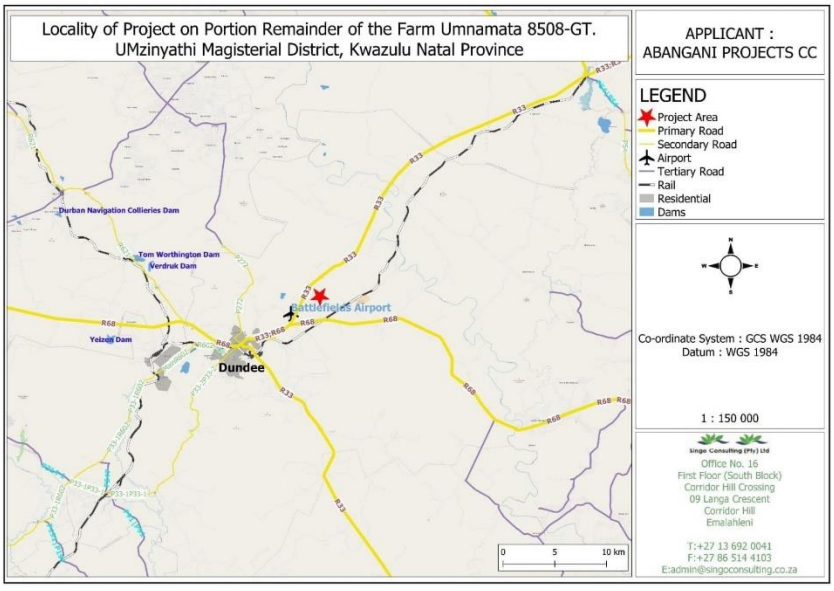


Figure 2: Locality map of the proposed prospecting area

BASIC AND ENVIRONMENTAL IMPACT ASSESSMENT PROCESSES

These are planning and decision-making tools used in identifying potential environmental, economic and social consequences of a proposed activity prior the commencement of the activity.

These together with the public issues and concerns are to be identified sufficiently early so that they can be assessed and incorporated into the final reports when/if necessary.

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

PUBLIC PARTICIPATION PROCESS

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

I&APs can be any person, group of persons or organization interested in or affected by the proposed activity, and any organ of state that may have jurisdiction over any aspect of the activity.

The key objective of PPP is to afford the I&APs with an opportunity to comment and provide valuable inputs during the planning phase of the project.

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

Kindly keep the following dates:

- Announcement of the Prospecting Right Application: **06th August 2021**
- Stakeholder engagement and consultation: **06th August 2021 – 05th September 2021**
- Review of Draft Basic Assessment Report & EMPr: **06th September 2021 – 06th October 2021**
- Submission of the Final BAR & EMPr: **13th October 2021**

This report will be available at the **Dundee public Library** (Dundee, 3000), **Endumeni Local Municipality** (Civic Ctr, Victoria St, Dundee, 3000) and upon request from **Singo Consulting (Pty) Ltd** using the detailed EAP contacts' below, via emails; Dropbox link; Google drive; WeTransfer, etc.

Singo Consulting (Pty) Ltd

Office No: 16, First Floor (South Block)
Corridor Hill Crossing, 09 Langa Crescent,
Corridor Hill, eMalahleni
Tel: +27 72 116 1225/ +27 13 692 0041
Fax: +27 86 5144 103
Email: deshney@singoconsulting.co.za

REGISTRATION & COMMENT SHEET

Attention: **Deshney Mapoko** Email: **deshney@singoconsulting.co.za**

Title		Name		Surname	
Company					
Designation					
Address					
Tel No.			Fax No.		
E-mail			Cell No.		
I would like to receive my notifications be (mark with "X"):			Post ☐	E-mail: ☐ Fax:	
Please indicate why you would have an interest in the above-mentioned project.					
Please provide your comments and questions here:					
Please feel free to attach a separate document					
Please add any person you think may be interested and affected parties:					
Full name			Company		
Address					
E-mail			Contact No.		

C2: Proof of newspaper publication

LEGAL NOTICES VACANCIES

LEGALS

CHARTERED ACCOUNTANTS (S.A.)
Reg. No. 2003/014418/07

ESTATE NOTICE

ESTATE NUMBER 005648/2021/PMB

In the Estate of the Late **PETRUS JOHANNES MAREE** , Identity Number **370131 5019 083**, of **DUNDEE**, who died on 05/04/2021.

Creditors and Debtors in the above Estate are hereby required to file their claims with and pay their debts to the undersigned within 30 days from date of publication hereof.

DATED at DUNDEE this 6th DAY of August 2021.

GREENHOUGH, McHARDY & JONES INC.
CF TORLAGE –Executor
P O Box 78
DUNDEE
3000

CFT/jg

VACANCY : CASHIER
COMPUTER LITERATE WITH PREVIOUS EXPERIENCE

VACANCY: SALESMAN
WITH HARDWARE KNOWLEDGE

FAX CV'S TO 034 212 4317

ICHTHUS CHRISTIAN SCHOOL

awaits application for

A TEACHING POST FROM JANUARY 2022 FOUNDATION PHASE GRADE 2

The Applicant must:
- be a reborn Christian
- be a member of a Christian Church
- be fully bilingual (English / Afrikaans)
- have a teaching qualification
- have a permanent SACE registration

Please hand CV & application form in at Ichthus

No faxed copies will be accepted
Any enquiries: 034 212 1276
or 082 668 3035
Closing date for application is
20 August 2021.

MYLOTEX (Pty)Ltd
T/A SPRINGLAKE COLLIERY

Mylotex (PTY) LTD trading as Springlake Colliery based in Hattingspruit under Dannhauser Local Municipality
Seeks to appoint suitable qualified and experience candidates to the following position:

2 x Fitters (Blasting Section)

REQUIREMENTS:
- Minimum of Grade 12 Certificate
- Must have completed apprenticeship and in possession of a recognized appropriate Trade Test
- Must have experience in Joy and Sandvik machinery underground mining Blasting Section equipment's and have proven track record in Safety Management.
- 3 years' experience underground environment
- Valid First Aid Certificate
- Must be in possession of a valid Certificate of Fitness (Red Ticket)

DUTIES AND RESPONSIBILITIES:
- Planning and scheduling of work activities
- Assign resources to tasks
- Replacement of motors
- Basic rigging work
- Alignment of gearbox
- Valve repair and installation
- Services and Maintenance of Joy and Sandvik machinery underground (Blasting Section)

How to apply: Send your CV (maximum 3 pages) via email to petrusd@sprinlakecolliery.co.za or. You may also submit your application to your interim community leadership.

Closing date: 13 August 2021

Preference will be given to applicants from the host community, Dannhauser local municipality, and if required skills are unavailable then Mylotex will consider applicants in and outside Amajuba District

Applications which have not been responded to within 21 days of the closing date should be regarded as unsuccessful.

NOTICE OF BASIC ASSESSMENT REPORT FOR THE PROSPECTING RIGHT FOR COAL ON PORTION 2, 8 AND 13 OF THE FARM MADEMOISELLE NO.123-HU, PORTION 1 AND THE REMAINDER OF THE FARM ONGEMAAKT NO.301-HU, PORTION 2 OF THE FARM ZALFLAGER NO.525-HU (PONGOLA NO.525-HU), WITHIN THE ABAQULUSI LOCAL MUNICIPALITY, UNDER THE JURISDICTION OF ZULULAND DISTRICT, KWAZULU-NATAL PROVINCE.
REF NO: KZN 30/5/1/1/2/11066 PR

Notice is hereby given in terms of Section 41 of Chapter 6 of the EIA Regulations published in Government Notice No. 326 of 7 April 2017 published in terms of National Environmental Management Act (Act 107 of 1998) as amended with the intention to undertake an Environmental Impact Assessment

NATURE OF ACTIVITY

Coal African Mining (Pty) Ltd has appointed EnviroStep (Pty) Ltd as an Independent Environmental Assessment Practitioners (EAP) to conduct an Environmental Impact Assessment Process in terms of the National Environmental Management Act (NEMA). Coal African mining (Pty) Ltd intents to prospect for coal on portion 2, 8 and 13 of the farm mademoiselle no.123-hu, portion 1 and the remainder of the farm Ongemaakt no.301-HU, portion 2 of the farm zalflager no.525-HU (Pongola no.525-HU). The following listed activities are triggered by the proposed project:

APPLICABLE LISTING NOTICE	ACTIVITY NUMBER
GNR 327	Activity 20 (a)
GNR 327	Activity 14
GNR 324	Activity 10
GNR 324	Activity 12

LOCATION

The proposed project is located on farm Mademoiselle 123-HU, portion 2, 8 and 13, portion 1 and the remainder of the farm Ongemaakt no.301-HU, portion 2 of the farm zalflager no.525-HU (Pongola no.525-HU), within the Abaqulusi Local Municipality, under the jurisdiction of Zululand District, KwaZulu-Natal Province

NAME OF APPLICANT

Coal African Mining (Pty) Ltd

NAME OF ENVIRONMENTAL ASSESSMENT PRACTITIONER

EnviroStep (Pty) Ltd

REGISTRATION OF INTERESTED AND AFFECTED PARTIES

Interested and affected parties (I&AP), who wish to participate by contributing comments or concerns, or would like obtain more information, should please contact us on the details below. You are kindly requested to register your details on this project database within 30 days of the date of this advertisement been published. As a registered (I&AP), you will be informed of all updates regarding the proposed project of Basic Assessment Report, including the availability of the draft Bar and EMP Report and the decision to grant or refuse the Environmental Authorisation made by competent authority.

REGISTRATION, QUERIES AND WRITTEN COMMENTS SHOULD BE SUBMITTED TO:

CONTACT PERSON	CONTACT DETAILS	EMAIL
Thabelo Nelwamondo	081 760 7362	tmatshisevhe@gmail.com
Vutomi Chabalala	071 533 4879	Vutomidesiree11963@gmail.com

EnviroStep

VACANCIES

ROUTE CONTROL CENTRE (RCC): HARRISMITH

POSITION: MANAGER FOR THE ROUTE CONTROL CENTRE IN HARRISMITH

Position: A position exists for a skilled Call Centre Manager at a Harrismith based route communication and incident management centre. The Call Centre manages and co-ordinates calls and incidents on a section of the N3 National Route, which runs from Heidelberg in Gauteng to Cedara in Kwa-Zulu Natal.

The required candidate must have extensive experience as a Call Centre Manager or preferably have been a Manager of road related operations such as toll plazas, weighbridges, or similar route related establishments. Candidates with extensive experience in a supervisory capacity or as a team leader in call centre operations will be considered provided they meet (and exceed) the required criteria. The available position is for a "Route Control Centre Manager" (also referred to as the "RCC Manager") which is a position of immense responsibility. The Manager for the Route Control Centre (RCC) needs to be a confident, independent, strong willed person, able to manage and oversee the entire operations and functional aspects of the complete Route Control Centre, ensuring that he/she has full knowledge of what is happening at the RCC at all times and must demonstrate that he/she is in full control of the centre.

The candidate will be required to supervise daily operations as well as a minimum of 16 personnel aiming for maximum efficiency, and ensuring that he/she achieves the desired results at all times. An excellent call centre manager must be organized, reliable and a results-driven professional. He/she must have a practical mind able to solve problems on the spot, partnered with an ability to see the "big picture" and make improvements. As a call centre manager, one must also have excellent customer service and communication skills.

The person must have a mature adult persona, be responsible, and be capable of exercising authority over personnel in the workplace. The personnel work in shifts 24hrs, 7 days a week, and 365 days a year. The RCC manager shall be in overall charge of the RCC at Harrismith, and must take responsibility for the entire centre and will be accountable to the following senior management of the N3 Toll Route:
a) Traffic Engineer.
b) The Operations Manager.

The Manager will also be required to develop and maintain close working relationships and to interact very closely with other N3 Toll Route based organisations with whom the RCC interfaces with in order deliver the required service outputs.

Responsibilities (amongst others):

1) Check and ensure call centre is fully operational on a daily basis.
2) Organise and prepare monthly duty Rosters for the personnel.
3) Work in accordance with the call centres Standard Operating Procedures and update to suit.
4) Develop objectives for the call centres day-to day activities.
5) Manage Road Incident Management System and preparation of monthly and quarterly reports.
6) Maintain the high standards of service the call centre has been known for over many years.
7) Hiring of suitable personnel and the training thereof.
8) First line troubleshooting of call centre issues and ensuring that proper fault reports are generated and reported to the correct service providers.
9) Engagement with system service providers to manage fault reporting and rectification.
10) Handle escalated customer service calls.
11) Ensure compliance of all personnel with the Standard Operating Procedures.
12) Ongoing personnel training interventions.
13) Crisis management, especially during "reportable" incidents.
14) Support of the RCC operations by fulfilling the role of the call centre staff, in an emergency.

Other Prerequisites for the position are:

1) The applicant must reside in Harrismith or be prepared to re-locate to Harrismith if currently residing elsewhere or reside within 30 kilometres from the RCC offices.
2) He/she must have a reliable motor vehicle and a valid driver's license.
3) Have extensive relevant or related experience in call centre operations.
4) Minimum qualification: High school diploma, as well as a one year study Certificate or Diploma in a communications and/or management.
5) Must have at least five years' experience in call centre management and/or other route industry related management and/or extensive operations experience of at least seven years in a position where he/she demonstrated oversight responsibility and must have been exposed to scheduling, reporting, and other similar management type functions.
6) The candidate must be proficient in speaking English, and must have very good writing skills in same.
7) Must be computer literate, and proficient with MS Word, MS Excel, and MS Power Point, and be knowledgeable with MS Outlook.
8) He/she must have a rudimentary understanding of the technical aspects of computers, and an elementary and simple knowledge of what a basic electrical installation consists of.
9) Knowledge of Customer Relationship Management (CRM) systems would be of benefit.
10) Must be conversant with social media platforms including Twitter and Telegram.
11) Must have good people management skills, be passionate about his/her work and must be able to work calmly under pressure and have good multi-tasking capabilities.

Remuneration: will be market related.

Candidates:
Candidates who fit these requirements must submit a written letter of application as well as a detailed CV to: info@ziec.co.za . Applications must be received by no later than 5pm, 12 August 2021.

NOTICE OF JOINT PUBLIC PARTICIPATION FOR PROSPECTING RIGHT AND ENVIRONMENTAL AUTHORIZATION APPLICATION. DMRE REF: KZN 30/5/1/1/2/11056 PR AND KZN 30/5/1/1/2/11057 PR

Application for Prospecting Right: Abangani Projects CC has lodged an application for Prospecting Right **(DMRE REF: KZN 30/5/1/1/2/11056 PR)** for **Coal, Pseudocoal, Torbanite / oil shale** on portion remainder of the farm Umnamata 8508-GT and the Prospecting Right **(DMRE REF: KZN 30/5/1/1/2/11057 PR)** for Coal on portion 1 and the remaining extent of the farm Rietvlei 186-GT, portions 3 and 7 of the farm Koppie Alleen 85-GT and portions 1 and 2 of the farm Stefco 428-GT, situated within the Magisterial District of Umzinyathi under the Endumeni Local municipality, Kwa-Zulu Natal Province.
Notice is given in terms of the Mineral and Petroleum Resources Development Act (MPRDA) (Act 28 of 2002) and EIA regulations 2014, published under Government Notice No. 982 in Gazette No. 3822 of 4 December 2014, amended on 7 April 2017, where one of the requirements is that Interested and Affected Parties be notified that **Abangani Projects CC** has applied for a Prospecting Rights.

INVITATION TO COMMENT

As part of the EIA process, more especially the public participation process for this proposed project, Interested and Affected Parties (I&APs) are invited to register and kindly submit any comments or concerns to reach **Ms Deshney Mapoko** on or before the **05th September 2021** using the contact details provided below. The public is also invited to review and comment on Draft Basic Assessment Report and Environmental Management Programme report (DBAR & EMPr) which will be available for review for a 30 days' calendar period from **06th September 2021 – 06th October 2021**. This report will be available at the **Dundee public Library** (Dundee, 3000), **Endumeni Local Municipality** (Civic Ctr, Victoria St, Dundee, 3000) and upon request from **Singo Consulting (Pty) Ltd** using the detailed EAP contacts' below, via emails; Dropbox link; Google drive; WeTransfer, etc.

ENVIRONMENTAL ASSESSMENT PRACTITIONER AND CLIENT DETAILS:

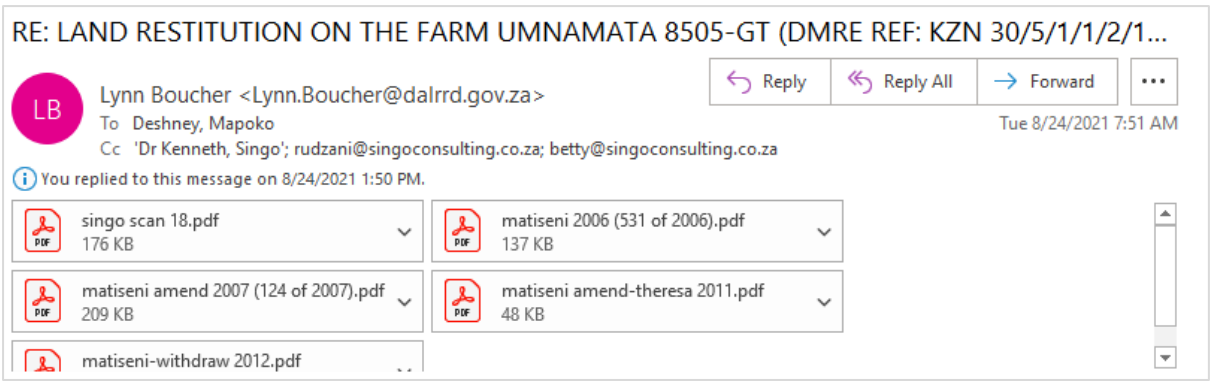
Singo Consulting (Pty) Ltd

Office No. 16, Corridor Hill Crossing
09 Langa Crescent, Corridor Hill
eMalahleni, 1035.
Contact person: Ms Deshney Mapoko
Tel No.: +27 13 692 0041
Fax No.: +27 86 514 4103
Cell No.: +27 72 116 1225
Email: deshney@singoconsulting.co.za

ABANGANI PROJECTS

No. 112 Old North Cast Road
Glen Anil
Durban North
Tel No.: +27 31 822 0507
Cell No.: +27 82 843 2243
Email: phhili@vodamail.co.za

C4: Consultation emails



Good day

Please find attached letter in response to your enquiry.

From: Deshney, Mapoko <deshney@singoconsulting.co.za>
Sent: Saturday, 14 August 2021 16:45
To: Lynn Boucher <Lynn.Boucher@dalrrd.gov.za>
Cc: 'Dr Kenneth, Singo' <kenneth@singoconsulting.co.za>; rudzani@singoconsulting.co.za; betty@singoconsulting.co.za
Subject: LAND RESTITUTION ON THE FARM UMNAMATA 8505-GT (DMRE REF: KZN 30/5/1/1/2/11056 PR) AND FARMS RIETVLEI 186-GT, KOPPIE ALLEEN 85-GT AND STEFCO 428-GT (DMRE REF: KZN 30/5/1/1/2/11057 PR)

EXTERNAL EMAIL: This email originated outside of "DALRRD Environment". CAUTION: Do not click on links or open attachments unless you recognize the sender and know the content is safe.

Good day

Receive warm greetings from Singo Consulting (Pty) Ltd.

You are kindly receiving this email as an enquiry for any possible land claim on the portion of remainder of the farm Umnamata 8508-GT **(DMRE REF: KZN 30/5/1/1/2/11056 PR**) as well as the portion 1 and the remaining extent of the farm Rietvlei 186-GT, portions 3 and 7 of the farm Koppie Alleen 85-GT and portions 1 and 2 of the farm Stefco 428-GT **(DMRE REF: KZN 30/5/1/1/2/11057 PR)** situated within the Umzinyathi Magisterial District in the Kwa-Sulu Natal Province.

Kindly review the attached BIDs for detailed descriptions of proposed projects. 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 Basic Assessment Report (BAR) & Environmental Management Programme report (EMPr); 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.

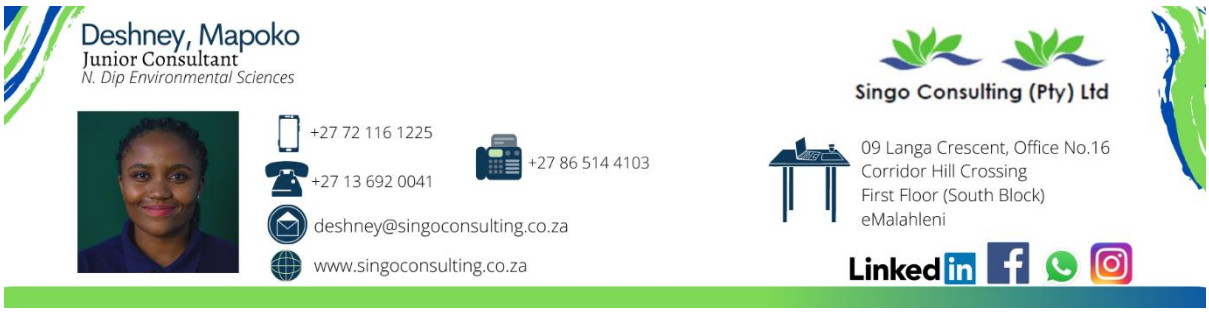
Kind Regards,

Good day

Thank you for your prompt response.

Kindly note that your email has been acknowledged, the applications will be forwarded to the provided contact.

Kind regards,



From: Brian Akkiah <AkkiahB@eskom.co.za>
Sent: Tuesday, August 17, 2021 10:18 AM
To: Ziyanda Mdoda <MaqubeZS@eskom.co.za>; deshney@singoconsulting.co.za
Subject: RE: [CAUTION:EXTERNAL EMAIL] - STAKEHOLDER INVITATION TO COMMENT ON THE PROSPECTING RIGHT APPLICATIONS ON THE FARM UMNAMATA 8505-GT (DMRE REF: KZN 30/5/1/1/2/11056 PR) AND FARMS RIETVLEI 186-GT, KOPPIE ALLEEN 85-GT AND STEFCO 428-GT (DMRE REF: KZN 30/5/1/

Good day,

Please send all applications/requests to KZNOU-L&R@eskom.co.za

Kind Regards,

Brian Akkiah
Land & Rights Officer
Land Development
Eskom, Distribution
Ikhwezi Building 25 Valley View Road New Germany 3600
PO Box 66 New Germany 3610
Tel +27 (0)31 710 5369
Cell +27 84 233 4610
Fax 031 710 5146
akkiahb@eskom.co.za

From: Ziyanda Mdoda <MaqubeZS@eskom.co.za>
Sent: Tuesday, 17 August 2021 10:16
To: deshney@singoconsulting.co.za
Cc: Brian Akkiah <AkkiahB@eskom.co.za>
Subject: RE: [CAUTION:EXTERNAL EMAIL] - STAKEHOLDER INVITATION TO COMMENT ON THE PROSPECTING RIGHT APPLICATIONS ON THE FARM UMNAMATA 8505-GT (DMRE REF: KZN

30/5/1/1/2/11056 PR) AND FARMS RIETVLEI 186-GT, KOPPIE ALLEEN 85-GT AND STEFCO 428-GT (DMRE REF: KZN 30/5/1/

Good day,

Eskom Transmission is not affected by both applications. However Eskom Distribution is affected and an application should be sent to the KZN region. The contact person is Brian Akkiah- AkkiahB@eskom.co.za.

Warm Regards,

Ziyanda Mdoda (SAGC- ST0893)
Senior Advisor Investigations and Audits
Land Management
Eskom Transmission

Megawatt Park C1T37 1 Maxwell Drive Sunninghill Sandton
Te l+27(0)11 800 5226 Pax 8131 5226
Cell +27 (0)72 414 5843
Fax to email +27 (0)876 660 9672
Email MaqubeZS@eskom.co.za

From: Lungile Motsisi <MotsisL@eskom.co.za>
Sent: Monday, 16 August 2021 15:44
To: Ziyanda Mdoda <MaqubeZS@eskom.co.za>
Subject: FW: [CAUTION:EXTERNAL EMAIL] - STAKEHOLDER INVITATION TO COMMENT ON THE PROSPECTING RIGHT APPLICATIONS ON THE FARM UMNAMATA 8505-GT (DMRE REF: KZN 30/5/1/1/2/11056 PR) AND FARMS RIETVLEI 186-GT, KOPPIE ALLEEN 85-GT AND STEFCO 428-GT (DMRE REF: KZN 30/5/1/

FYA

From: Deshney, Mapoko [mailto:deshney@singoconsulting.co.za]
Sent: 14 August 2021 04:36 PM
To: Lungile Motsisi
Cc: 'Dr Kenneth, Singo'; rudzani@singoconsulting.co.za; betty@singoconsulting.co.za
Subject: [CAUTION:EXTERNAL EMAIL] - STAKEHOLDER INVITATION TO COMMENT ON THE PROSPECTING RIGHT APPLICATIONS ON THE FARM UMNAMATA 8505-GT (DMRE REF: KZN

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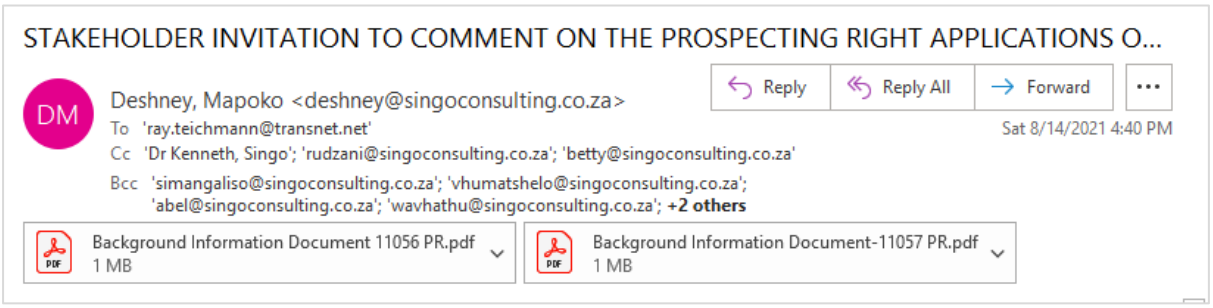

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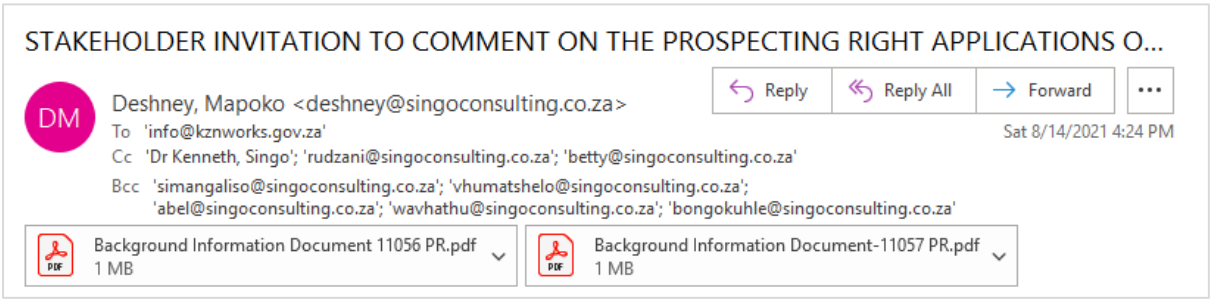

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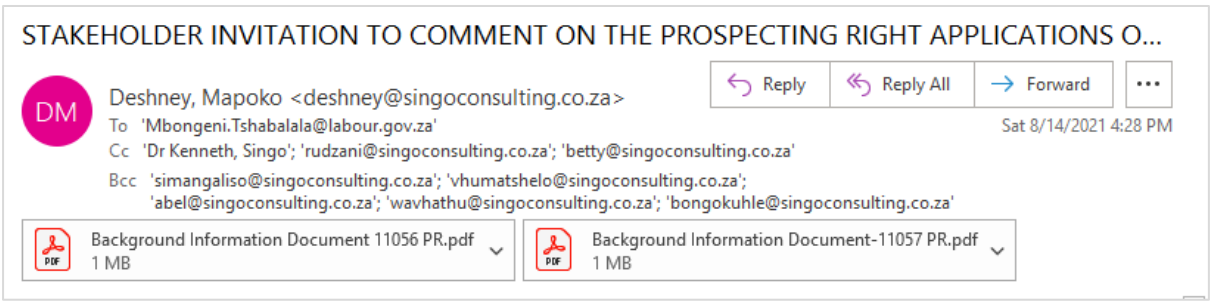

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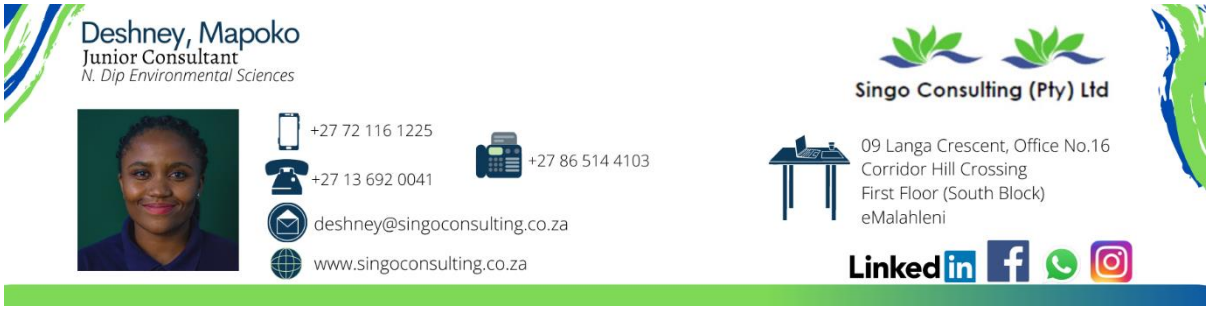

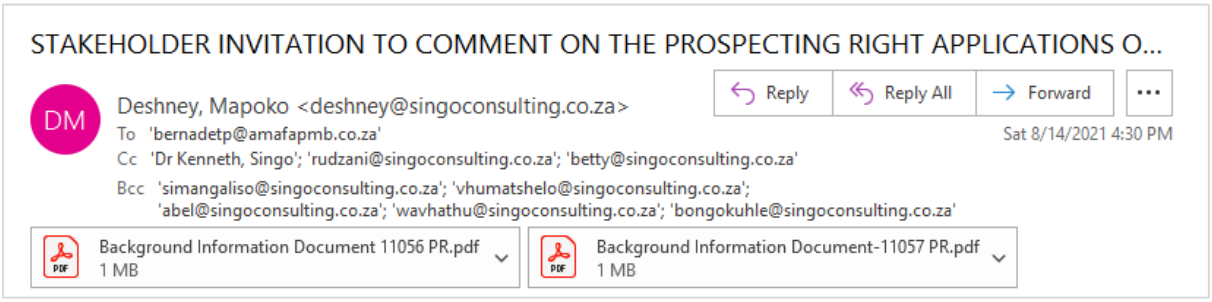

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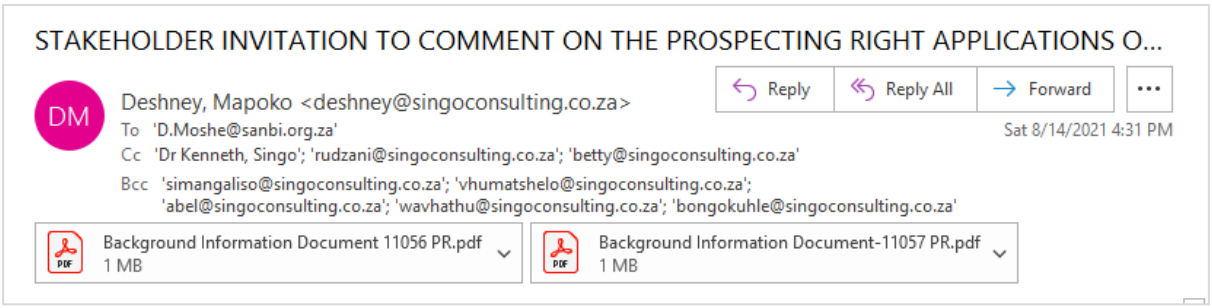

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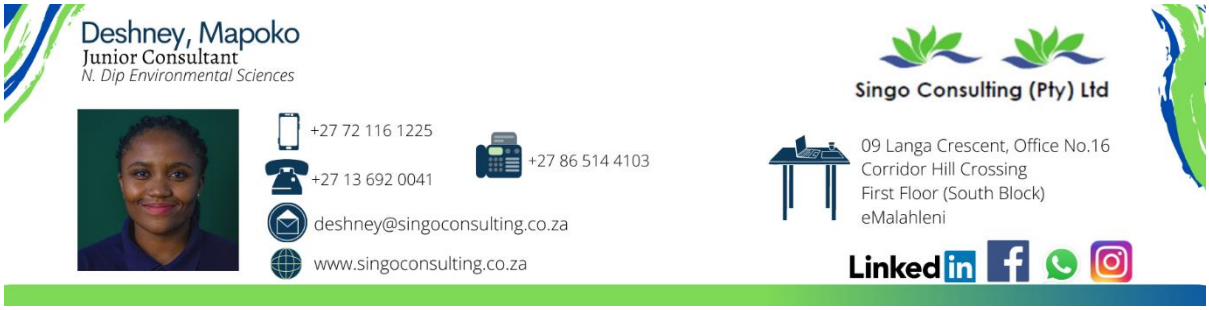

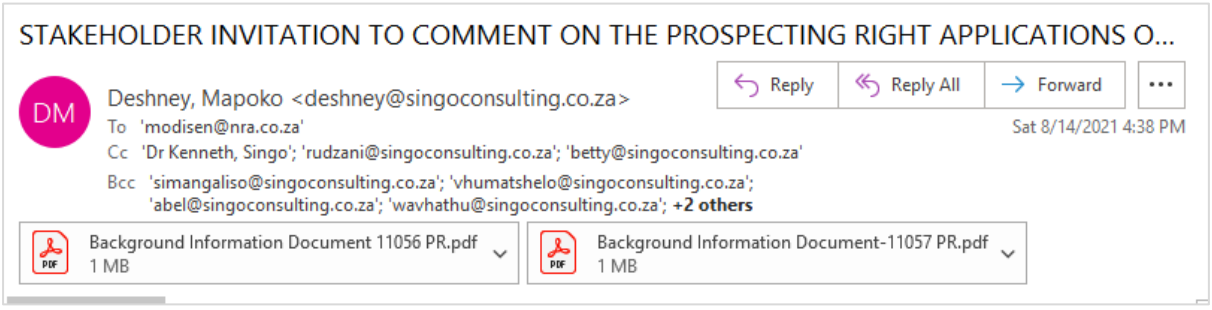

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Receive warm greetings from Singo Consulting (Pty) Ltd.

Abangani Projects CC has applied for Prospecting Rights together with the Environmental Authorizations at the Kwa-Zulu Natal Department of Mineral Resources and Energy for the prospecting of **Coal, Pseudocoal and Torbanite/Oil shale** on the portion of remainder of the farm Umnamata 8508-GT **(DMRE REF: KZN 30/5/1/1/2/11056 PR**) as well as the Prospecting of **Coal** on the portion 1 and the remaining extent of the farm Rietvlei 186-GT, portions 3 and 7 of the farm Koppie Alleen 85-GT and portions 1 and 2 of the farm Stefco 428-GT **(DMRE REF: KZN**

30/5/1/1/2/11057 PR) situated within the Umzinyathi Magisterial District in the Kwa-Sulu Natal Province.

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) where one of the requirements is that all stakeholders must be notified of Abangani Projects' intentions to obtain Mining Permits for the above-mentioned commodities. This invitation is extended to you as the department you serve may somehow enforce any of the laws of the Republic of South Africa that ensure; pollution prevention & environmental degradation, encourage sustainable development & socio-economic development, or might be affected by activities to be taking place instead. Hence you are being offered an opportunity to:

- ✓ Register as an Interested and Affected Party (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 Basic Assessment Report (BAR) & Environmental Management Programme report (EMPr)

Singo Consulting (Pty) Ltd has been appointed as an independent Environmental Assessment Practitioner (EAP) to manage the environmental authorisation process by conducting an Environmental Impact Assessment, Public Participation Process (PPP) for the proposed project and compile a Basic Assessment Report & Environmental Management Programme report (BAR & EMPr). A Basic Assessment process has commenced, for your participation kindly fill the registration and comment form at the end of the Background Information Document attached and register your comments, issues, and/or questions that you may have about the proposed project. Should you need any clarity on the attached document or have any queries with regards to the project, please do not hesitate to contact me on the details below.

Please find the attached Background Information Documents (BID) for brief description of the proposed project and timelines.

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

Kind regards,

Deshney, Mapoko
Junior Consultant
N. Dip Environmental Sciences

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Singo Consulting (Pty) Ltd
09 Langa Crescent, Office No.16
Corridor Hill Crossing
First Floor (South Block)
eMalahleni

Appendix D: Stakeholder Correspondence

D1: Documents from the land restitution department

COMMISSION ON RESTITUTION OF LAND RIGHTS

OFFICE OF THE REGIONAL LAND CLAIMS COMMISSIONER: KWAZULU-NATAL
139 Langalibalele Street, PIETERMARITZBURG, 3200, Private Bag X 9120, PIETERMARITZBURG, 3200
Tel: (033) 341 2600 | Fax: (033) 342 2881

Your Ref:

Enquiries: Lynn Boucher

Singo Consulting
09 Langa Crescent
Corridor Hill Crossing
First Floor (South Block) Office No 14
EMALAHLENI
1035

Dear Sir/Madam

REQUEST INFORMATION ON PROPERTY: LAND CLAIM

We acknowledge receipt of your enquiry received on 14 August 2021 and advise that our records indicate that no claims for restitution in terms of the provisions of the Restitution of Land Rights Act, 22 of 1994 (as amended) have been lodged in respect of the properties described as:

1. **Portion 1 and the Remaining extent of the farm Rietvlei No. 186;**
2. **Portions 3 and 7 of the farm Koppie Alleen No. 85; and**
3. **Portions 1 and 2 of the farm Stefco No. 428.**

Whilst great care is taken to verify the accuracy of the information regarding all claims, the Regional Land Claims Commission will not be held responsible for any damage or loss suffered as a result of information furnished in this regard as there are claims lodged with the Commission which are not yet captured in our database as they are not yet published in the relevant government gazette.

However, our records indicate that claims have been lodged on the properties described as **the Remainder of the farm Umnamata No. 8508.**

This property falls under the Matiseni Community claim. The notice of the claim was subsequently withdrawn. Please find attached the relevant gazette notices for ease of reference.

Regards
pp LM Boucher

MR N. P. MDLULI
MANAGER: INFORMATION AND RECORDS MANAGEMENT
DATE: 24 August 2021

Appendix E: Current site conditions


SAND

Appendix F: Financial Provision

CALCULATION OF THE QUANTUM

Applicant: **ABANGANI PROJECTS CC** Ref No.: KZN 30/5/1/1/2/11056 PR
Evaluator: **Deshney Mapoko** Date: Sep-21

No.	Description	Unit	A Quantity	B Master Rate	C Multiplication factor	D Weighting factor 1	E=A*B*C*D Amount (Rands)
1	**Dismantling of processing plant and related structures (including overland conveyors and powerlines)**	**m3**	**0**	**17,14**	**1**	**1**	**0**
2 (A)	**Demolition of steel buildings and structures**	**m2**	**0**	**238,71**	**1**	**1**	**0**
2(B)	**Demolition of reinforced concrete buildings and structures**	**m2**	**0**	**351,79**	**1**	**1**	**0**
3	**Rehabilitation of access roads**	**m2**	**0**	**42,72**	**1**	**1**	**0**
4 (A)	Demolition and rehabilitation of electrified railway lines	m	0	414,61	1	1	**0**
4 (A)	Demolition and rehabilitation of non-electrified railway lines	m	0	226,15	1	1	**0**
5	**Demolition of housing and/or administration facilities**	**m2**	**0**	**477,42**	**1**	**1**	**0**
6	**Opencast rehabilitation including final voids and ramps**	**ha**	**0**	**242984,15**	**1**	**1**	**0**
7	**Sealing of shafts adits and inclines**	**m3**	**0**	**128,15**	**1**	**1**	**0**
8 (A)	**Rehabilitation of overburden and spoils**	**ha**	**0**	**166847,44**	**1**	**1**	**0**
8 (B)	Rehabilitation of processing waste deposits and evaporation ponds (non-polluting potential)	ha	0	207805,47	1	1	0
8 (C)	Rehabilitation of processing waste deposits and evaporation ponds (polluting potential)	ha	0	603565,59	1	1	**0**
9	Rehabilitation of subsided areas	ha	0	139709,6	1	1	**0**
10	**General surface rehabilitation**	**ha**	0,6	132171,31	0,4	1	**31721,1144**
11	River diversions	ha	0	132171,31	1	1	**0**
12	**Fencing**	**m**	**0**	**150,77**	**1**	**1**	**0**
13	**Water management**	**ha**	**0**	**50255,25**	**1**	**1**	**0**
14	**2 to 3 years of maintenance and aftercare**	**ha**	**0**	**17589,34**	**1**	**1**	**0**
15 (A)	**Specialist study**	**Sum**	**0**	**0**	**1**	**1**	**0**
15 (B)	Specialist study	Sum	0	0	1	1	**0**
						Sub Total 1	**31721,1144**

1	Preliminary and General	3806,533728	**weighting factor 2** 1	**3806,533728**
2	Contingencies	3172,11144		**3172,11144**
			Subtotal 2	**38699,76**
			VAT (15%)	**5804,96**
			Grand Total	**44505**

SIGN Deshney Mapoko
DATE **Sep-21**

Appendix G: Specialist studies

Appendix H: EA form & screening report