mineral resources

Department:
Mineral Resources
REPUBLIC OF SOUTH AFRICA

DMRE REF: KZN 30/5/1/1/2/11412 PR

BASIC ASSESSMENT REPORT AND ENVIRONMENTAL MANAGEMENT PROGRAMME REPORT AS PART OF THE ENVIRONMENTAL AUTHORISATION APPLICATION FOR THE PROSPECTING RIGHT APPLICATION ON PORTION OF THE REMAINING EXTENT OF THE FARM MDLETSHE 17437, PORTION OF THE REMAINING EXTENT OF THE FARM LOT 10 12984, PORTION 1 AND PORTION OF THE REMAINING EXTENT OF THE FARM HORSESHOE BEND 11688, PORTION 13, A PORTION OF THE REMAINING EXTENT OF THE FARM RESERVE NO. 3 15822, PORTION OF PORTION 1 AND A PORTION OF THE REMAINING EXTENT OF THE FARM MTOLO 14390 AND PORTION 22 OF THE FARM RESERVE 12 15832, SITUATED IN THE MAGISTERIAL DISTRICT OF UMKHANYAKUDE, KWAZULU-NATAL PROVINCE.

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JAMENTS
THE HOME OF THE FUTURE

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2023

1. IMPORTANT NOTICE

In terms of the Mineral and Petroleum Resources Development Act (Act 28 of 2002 as amended), the Minister must grant a prospecting or mining right if among others the mining"will not result in unacceptable pollution, ecological degradation or damage to the environment". Unless an Environmental Authorisation can be granted following the evaluation of an Environmental Impact Assessment and an Environmental Management Programme report in terms of the National Environmental Management Act (Act 107 of 1998) (NEMA), it cannot be concluded that the said activities will not result in unacceptable pollution, ecological degradation or damage to the environment.

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

It is therefore an instruction that the prescribed reports required in respect of applications for an environmental authorisation for listed activities triggered by an application for a rightor a permit are submitted in the exact format of, and provide all the information required interms of, this template. Furthermore, please be advised that failure to submit the informationrequired 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 thatit unambiguously represents the interpretation of the applicant.

PREFACE

This Basic Assessment Report has been compiled by Singo Consulting (Pty) Ltd, based on the guidelines provided by the National Environmental Management Act, 1998 (Act no 107 of 1998), Environmental Impact Assessment Regulations, 2014. Full acknowledgement is made for use of the NEMA EIA 2014 regulations guideline in compiling this report. This documentincludes Singo Consulting (Pty) Ltd's own interpretation of the requirements of the National Environmental Management Act (Act 107 of 1998), the regulations, the guidelines, and the integration with other statutory and best practice criteria. This report is the first step in the process of applying for environmental authorisation for the proposed prospecting operation by Jaments (Pty) Ltd.

COMMENTING PERIOD

The draft Basic Assessment Report (BAR) is available for a 30-day commenting period which will start on Wednesday the 19th of July 2023 to the 18th of August 2023 (Excluding Public Holidays). Comments received during this period will be incorporated and addressed in the Final BAR to be submitted to the Department of Mineral Resources and Energy (DMRE) for final decision. Comments must be sent in writing to Singo Consulting (Pty) Ltd.

DISCLAIMER

The opinion expressed in this, and associated reports are based on the information provided by Jaments (Pty) Ltd to Singo Consulting (Pty) Ltd ("Singo Consulting") and is specific to the scope of work agreed with Jaments (Pty) Ltd.

Singo Consulting (Pty) Ltd acts as an advisor to Jaments (Pty) Ltd and exercise all reasonable skill and care in the provision of its professional services in a manner consistent with the level of care and expertise exercised by members of the environmental profession.

Where site inspections and testing of fieldwork have taken place, the report is based on the information made available by Singo Consulting (Pty) Ltd during the visit, visual observations and any subsequent discussions with regulatory authorities. The information used in this report was obtained from relevant stakeholders through sharing BID's as a way of notifying the stakeholders about the proposed project.

Singo Consulting (Pty) Ltd ("Singo Consulting") takes reasonable care and diligence when providing services and preparing documents, but it has been assumed that the information provided to Singo Consulting (Pty) Ltd ("Singo Consulting") is accurate.

PART A:

Basic Assessment Report

Objective of the basic assessment process

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

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

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

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

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

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

(ii) the degree to which these impacts—

(aa) can be reversed;

(bb) may cause irreplaceable loss of resources; and

(cc) can be managed, avoided or mitigated;

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

Executive Summary

Singo Consulting (Pty) Ltd on behalf of Jaments (Pty) Ltd submitted an application for a Prospecting Right subject to Section 16 of the Mineral and Petroleum Resources Development Act, 2002 (Act 28 of 2002) (MPRDA) and an application for Enviromental Authorisation in terms to Chapter 6 of GNR 982 enacted under the National Environmental Management Act (Act 107 of 1998) (NEMA) for Coal.

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

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

Locality description: The proposed Prospecting Right Application to prospect for Coal on portion of the remaining extent of the Farm Mdletshe 17437, portion of the remaining extent of the Farm Lot 10 12984, portion 1 and portion of the remaining extent of the Farm Horseshoe bend 11688, portion 13, a portion of the remaining extent of the Farm Reserve No. 3 15822, portion of portion 1 and a portion of the remaining extent of the Farm Mtolo 14390 and portion 22 of the Farm Reserve 12 15832, situated in the Magisterial District of Umkhanyakude in Kwazulu-Natal Province. The proposed area covers an extent of 5 755,750 ha. The proposed project area is situated approximately 3 km South-West (from the nearest point of the proposed prospecting area) of Hluhluwe Game Reserve, approximately 6.75 km Southwest of Ubizane Wildlife Reserve & Zululand Safari Lodge, approximately 13.43 km Northwest of Jour 5 - Santa Lucia - Falaza Game Park, approximately 7.45km West of Emdoneni Lodge South Africa in Kwazulu Natal Province. The proposed project area can be accessed by gravel roads leading to D856 and P453 from the Provincial Road of N2. However, 5 km buffer will be maintained from Hluhluwe

Game Reserve, Ubizane Wildlife Reserve and Jour 5 - Santa Lucia - Falaza Game Park throughout the lifespan of the proposed Prospecting Right (5 years).

During site assessment, it was identified that the proposed area is currently used for residential, cultivation, sugar cane farming, livestock farming and grazing activities. The following infrastructures were identified onsite, farm roads, houses, water pipeline, sewerage line, powerline, church, and schools. Drilling will be conducted 100m away from the identified infrastructures to avoid any disturbance. Channelled valley bottom wetlands, dam, perennial and non-perennial rivers were observed onsite, and are regarded as no go area for this project. A 100m Buffer zone will be applied from the identified rivers and 500m buffer will be applied from the channelled valley bottom wetlands to avoid triggering section 21 (I) and (c) of the National Water Act No: 36 of 1998. A Water Use License will not be applied as no prospecting will be conducted within a regulated area.

During site assessment, it was identified that the proposed area is characterised of Critical Biodiversity Area and heavily modified. The heavily modified areas were disturbed due to land use activities such as residential, cultivation, sugar cane farming, livestock farming and grazing, schools, and churches to an extent that no floral and faunal species of conservation concern observed onsite. The heavily modified areas are disturbed to an extent that they cannot be reinstated to their natural state. The Critical Biodiversity Area observed onsite was covered with natural vegetation. No drilling will be conducted in Critical Biodiversity Areas and areas where there are floral and faunal species of conservation concern. Paleontological, heritage and cultural features such as graves and old houses were observed onsite during site assessment and their locations were marked. No drilling will be conducted in areas where there are Paleontological, heritage and cultural features. These areas will be demarcated and regarded as no go areas for prospecting activities and SAHRA will be notified of these findings.

The proposed prospecting activities will aim to establish the extent and the quality of the Coal through non-invasive (desktop study) and invasive (core drilling) methods.

Non-invasive prospecting activities will consist of:

- Desktop studies
- Spatial Database Compilation
- Land Survey
- Remote sensing
- Geophysical survey

The proposed borehole map is already developed for invasive prospecting resource

determination.

Invasive prospecting activities will consist of:

- Establishment of drill site and temporary contractors' yard
- Core drilling.
- Rehabilitation of boreholes
- Drill rig, machinery, and vehicle movement.
- Water Management.
- Ablution Facilities.
- Domestic Waste Management
- Storage and Handling of Dangerous goods

Following the invasive prospecting activities and laboratory analysis, data will beassessed in a pre-feasibility study to determine mining potential.

Alternatives: For this specific application, the application area was selected based on extensive research on the geology of the area. Furthermore, the proposed site was also available for prospecting (i.e., not held by another company). No activity or technology alternatives are considered because drilling is still the most effective way and an industry norm to complete resource evaluation and the use of aerial geological mapping as an initial non-invasive technique to delimit areas for invasive drilling is seen as the most responsible method to reduce needless surface disturbance and reduce environmental impact footprint.

Therefore the alternatives will be assessed in terms of:

- Design or layout – The preliminary positions of the proposed prospecting boreholes have been sited, in-line with an economically acceptable grid (SAMREC), to give a representative sample for the project area.
- No go Option.

Public Participation: The following steps are to be undertaken as part of the public participation process:

- Identifying internal and external stakeholders during the development of an Interested and Affected Party (IAP) database.
- Written notice to key stakeholders (directly affected landowners, lawful occupiers, adjacent landowners, local authorities, and relevant organs of state).
- Publication of newspaper for the proposed project which also invite the public to register as I&APs and notify them of the availability of the draft Basic Assessment Report (BAR) for public review.
- Plugging of site notices in and around the application area and various public venues inviting the public to register as Interested and Affected Parties (I&APs) and notifying

them of the availability of the Draft BAR for public review.

- A hard copy of this Draft BAR was couriered at the Mtubatuba Public Library, Mtubatuba Local Municipality, Hlabisa Public Library, and Big 5 Hlabisa Local Municipality to provide the opportunity to any individuals to access and review the full report.
- This Draft BAR was emailed to all registered IAPs and commenting authorities for review.
- Respond to all comments and/or concerns submitted by stakeholders and the proof of correspondence is included in the BAR & EMPr.
- Submission of the Final Basic Assessment Report to DMRE for final decision.
- Notify the I&APs of the decision made by the Competent Authority regarding the EA and the appeals process via e-mail. Depending on the conditions of the EA, a notice will also be placed in the local newspaper giving the I&APs the opportunity to lodge an appeal.

Conclusion and Recommendations: The assessment methods proved adequate to determine the nature and extent of all impacts that the proposed operation may have on the natural, social, and economic environments. Based on the findings of the impact assessment, which included a thorough public participation process, a comprehensive Environmental Management Programme (EMPr) has been developed to prevent, reduce, or contain the impacts of the proposed prospecting operation.

Contents

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APPENDICES

List of Abbreviations

BAR	Basic Assessment Report
BID	Background Information Document
CBA	Critical Biodiversity Area
CSAMT	Controlled Source Audio Magnetotellurics
DEA	Department of Environmental Affairs
DM	District Municipality
DMRE	Department of Mineral Resources and Energy
DWS	Department of Water and Sanitation
EA	Environmental Authorisation
EAPASA	Environmental Assessment Practitioners Association of South Africa
EAP	Environmental Assessment Practitioner
EMPR	Environmental Management Programme Report
ESA	Ecological Support Areas
GDP	Gross Domestic Product
GNR	Government Notice
HA	Hectare
IAP	Interested and Affected Party
IDP	Integrated Development Plan
IEM	Integrated Environmental Management
IWULA	Integrated Water Use License Application
IWWMP	Integrated Water And Waste Management Plan
KPI	Key Performance Indicator
LM	Local Municipality
MAMSL	Meter Above Mean Sea Level
MBGL	Meter Below Ground Level
MHSA	Mine Health and Safety Act, Act 29 of 1996
MPRDA	Minerals And Petroleum Resources Development Act, 1998 (Act No. 28 Of 2002)
MT	Million Tons
NEMA	National Environmental Management Act, 1998 (Act No. 107 Of 1998)
NEM:BA	National Environmental Management: Biodiversity Act, 2004 (Act No. 10 Of 2004)
NFEPA	National Freshwater Ecosystem Priority Areas
NHRA	National Heritage Resources Act, Act (NHRA), 1999 (Act No. 25 of 1999)
NEM: PAA	National Environmental Management: Protected AreasAct (Act No. 57 of 2003)
NWA	National Water Act, 1998 (Act No. 36 Of 1998)
PPP	Public Participation Processes
PWP	Prospecting Work Program
PCLU	Post closure land use
RC	Reverse Cycle
RE	Remaining Extent
RRC	Report On The Results Of Consultation

SAHRA	South African Heritage Resource Agency
SANBI	South African National Biodiversity Institute
SAMREC	South African Mineral Resource Committee
SAPAD	South African Protected Areas Database
SLP	Social and Labour Plan
SMME	Small, Medium And Micro-Sized Enterprises
SP	Significant Points
WMA	Water Management Area
WUL	Water Use License
WULA	Water Use License Application

1. Project Background

Jaments (Pty) Ltd is a private company with an actively managed andgrowing portfolio of mining assets in Mpumalanga. **Jaments (Pty) Ltd** submitted a Prospecting Right Application to the Department of Mineral Resources and Energy (DMRE) to prospect for Coal on portion of the remaining extent of the Farm Mdletshe 17437, portion of the remaining extent of the Farm Lot 10 12984, portion 1 and portion of the remaining extent of the Farm Horseshoe bend 11688, portion 13, a portion of the remaining extent of the Farm Reserve No. 3 15822, portion of portion 1 and a portion of the remaining extent of the Farm Mtolo 14390 and portion 22 of the Farm Reserve 12 15832, situated in the Magisterial District of Umkhanyakude in Kwazulu-Natal Province. The proposed area can be accessed by gravel road leading to R22 Provincial Road. The prospecting right application was accepted by the DMRE on the 24th of May 2023.

The project requires a Prospecting Right in terms of the Mineral and Petroleum Resources Development Act (MPRDA), 2002 (Act 28 of 2002) and Environmental Authorisation (EA) for triggering activities that fall under the Listing Notices of the National Environmental Management Act, 1998 (Act 107 of 1998) (NEMA), as amended, from the Department of Mineral Resources and Energy (DMRE), Kwazulu Natal Province. An integrated applicationfor a Prospecting Right and associated Environmental Authorisation will be followed withthe DMRE KwaZulu Natal identified as the Competent Authority. A Basic Assessment Process is required, as stipulated in GN 517 EIA Regulation 19 (as amended), in support of the application.

Jaments (Pty) Ltd appointed Singo Consulting (Pty) Ltd as independent environmental consultant to conduct the Prospecting Right and associated Environmental Authorisation Application for the proposed project. The DMRE is responsible to assess the information provided and in writing:

(a) grant an environmental authorisation in respect of all or part of the activities applied for; or

(b) refuse environmental authorisation.

2. Purpose and Scope of the Impact Assessment Process

Environmental impact assessment is used to assess the potential implications, combining environmental, social, and economic considerations, of a project before the project commences. The main objectives of Environmental Impact Assessments are to:

- Understand the consequences or impacts (effects) of the proposed development(causes) on the environment.
- Identify ways in which the impacts of the development can be improved. Thesecould include ways to minimize negative impacts and ways to enhance its benefits.
- Provide this information to I&APs and decision-makers.

Ultimately, the aim of an environmental assessment is to prevent significant damage to the environment. The impact assessment will focus on the aspects of the proposed prospecting operation and their impacts on the natural and societal environment. The findings of the impact assessment guide the plan/development, implementation, and monitoring/evaluation of an Environmental Management Programme report which will attempt to maximise human benefit and to minimise environmental degradation resulting from theproposed project.

2.1 Basic Assessment Process

The Basic Assessment Process is carried out in accordance with Regulation 19 of the EIA Regulations, 2014. According to the regulated timeframes, once the application has been accepted by the Competent Authority the Final Basic Assessment Report (BAR) and Environmental Management Program (EMPr) must be submitted within 90 calendar days which musthave been subjected to a public participation process of at least 30 days. The competent authority must within 107 calendar days of receipt of the Final Basic Assessment and EMPr grant or refuse environmental authorisation.

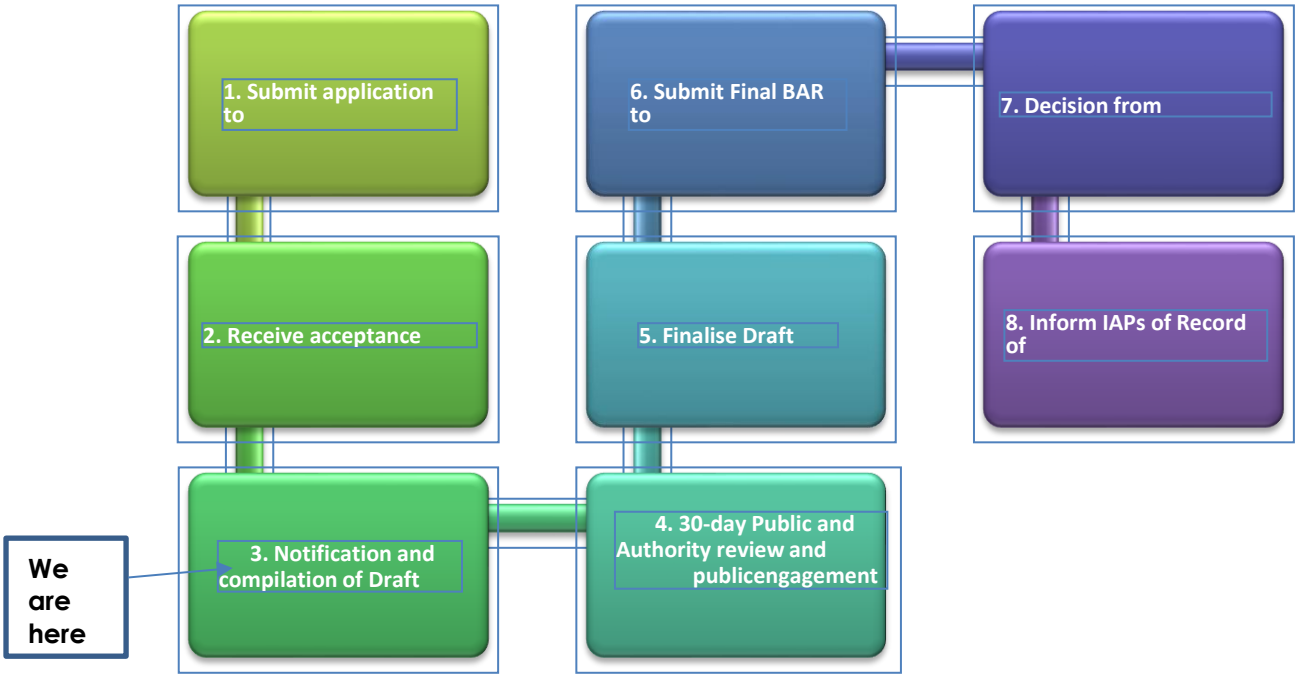


Figure 1: NEMA BAR process as contemplated in the EIA Regulations, 2014 (as amended)

3. Contact Person and correspondence address

Jaments (Pty) Ltd appointed Singo Consulting (Pty) Ltd as independent environmental consultants to facilitate the Integrated Environmental Application Process for the proposed project.

3.1 Details of the Environmental Assessment Practitioner (EAP)

The names and contact details of the Environmental Assessment Practitioners that formed part of the project team are provided below.

Name of the Practitioner	Mr Khodani Mathako
Designation	EAP
Tel No.	+27 13 692 0041
Cell No.	+27 76 054 1408
Fax No.	+27 86 514 4103
Email	khodani@singoconsulting.co.za

(i) Details of the EAP Manager.

Name of the Practitioner	Mrs Rudzani Shonisani
Designation	Environmental Assessment Practitioner (EAP Manager)
Tel No.	+27 13 692 0041
Cell No.	+27 78 548 1244
Fax No.	+27 86 514 4103
Email	rudzani@singoconsulting.co.za

iii) Details of the EAP Principal.

Name of the Practitioner	Dr NK Singo
Designation	Principal EAP
Tel No.	+27 13 692 0041
Cell No.	+27 78 2727 839
Fax No.	+27 86 514 4103
Email	kenneth@singoconsulting.co.za

a) Details of the Principal EAP

3.1.1 Summary of the EAP's past experience

In the year 2008, Singo Consulting (Pty) Ltd was established as an Independent Consulting Company focused to create opportunities within the Mining and Environmental Industry. With time, Singo Consulting (Pty) Ltd has diversified its services, 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.

3.12 Full Particulars of Applicant

The Applicant's contact details as well as the relevant contact person are contained in Table 1 below.

Table 1: Applicant Contact Details

Item	Contact Details
Company Name	Jaments (Pty) Ltd
Tel no.	+27 13 591 2120
Cell no:	+27 13 591 2120
Contact Person	Mr. Bongani Given Simelane
E-mail Address	admin@jaments.co.za
Physical Address	Pentagon House 5 Neven Street, Model Park, Emalahleni,1035
Postal Address	Pentagon House 5 Neven Street, Model Park, Emalahleni,1035

4. Project Location

The proposed prospecting right application area is on portion of the remaining extent of the Farm Mdletshe 17437, portion of the remaining extent of the Farm Lot 10 12984, portion 1 and portion of the remaining extent of the Farm Horseshoe bend 11688, portion 13, a portion of the remaining extent of the Farm Reserve No. 3 15822, portion of portion 1 and a portion of the remaining extent of the Farm Mtolo 14390 and portion 22 of the Farm Reserve 12 15832, situated in the Magisterial District of Umkhanyakude in Kwazulu-Natal Province. It is situated approximately 6.30km Southeast of Hluhluwe Game Reserve, approximately 6.75 km Southwest of Ubizane Wildlife Reserve & Zululand Safari Lodge, approximately 13.43 km Northwest of Jour 5 - Santa Lucia - Falaza Game Park, and approximately 7.45km West of Emdoneni Lodge South Africa. The proposed project area can be accessed by gravel roads leading to R22 Provincial Road.

4.1 Description of the Property

The prospecting right application has been submitted to prospect for Coal on portion of the remaining extent of the Farm Mdletshe 17437, portion of the remaining extent of the Farm Lot 10 12984, portion 1 and portion of the remaining extent of the Farm Horseshoe bend 11688, portion 13, a portion of the remaining extent of the Farm Reserve No. 3 15822, portion of portion 1 and a portion of the remaining extent of the Farm Mtolo 14390 and portion 22 of the Farm Reserve 12 15832. The application area is currently utilised for residential purpose, workshop, cultivation, sugar cane farming and livestock farming. Refer to Table 2 below for the project location details.

Table 2: Project Location details.

Farm Name:	On portion of the remaining extent of the Farm Mdletshe 17437, portion of the remaining extent of the Farm Lot 10 12984, portion 1 and portion of the remaining extent of the Farm Horseshoe bend 11688, portion 13, a portion of the remaining extent of the Farm Reserve No. 3 15822, portion of portion 1 and a portion of the remaining extent of the Farm Mtolo 14390 and portion 22 of the Farm Reserve 12 15832.
Application area (Ha)	5 755,750 Ha
Magisterial district:	Umkhanyakude
Distance and directionfrom nearest town	Approximately 6.30km Southeast of Hluhluwe Game Reserve, approximately 6.75 km Southwest of Ubizane Wildlife Reserve & Zululand Safari Lodge, approximately 13.43 km Northwest of Jour 5 - Santa Lucia - Falaza Game Park, and approximately 7.45km West of

	Emdoneni Lodge South Africa.
21-digit Surveyor General Code for each farm portion	N0GV00000001439000000 RE/14390 N0GV00000001439000000 RE/14390 N0GV00000001168800000 RE/11688 N0GV00000001168800001 1/11688 N0GV00000001298400000 RE/12984 N0GV00000001439000001 1/14390 N0GV00000001582200013 13/15822 N0GV00000001743700000 17437 N0HU00000001583200022 22/15832 N0GV00000001582200000 RE/15822

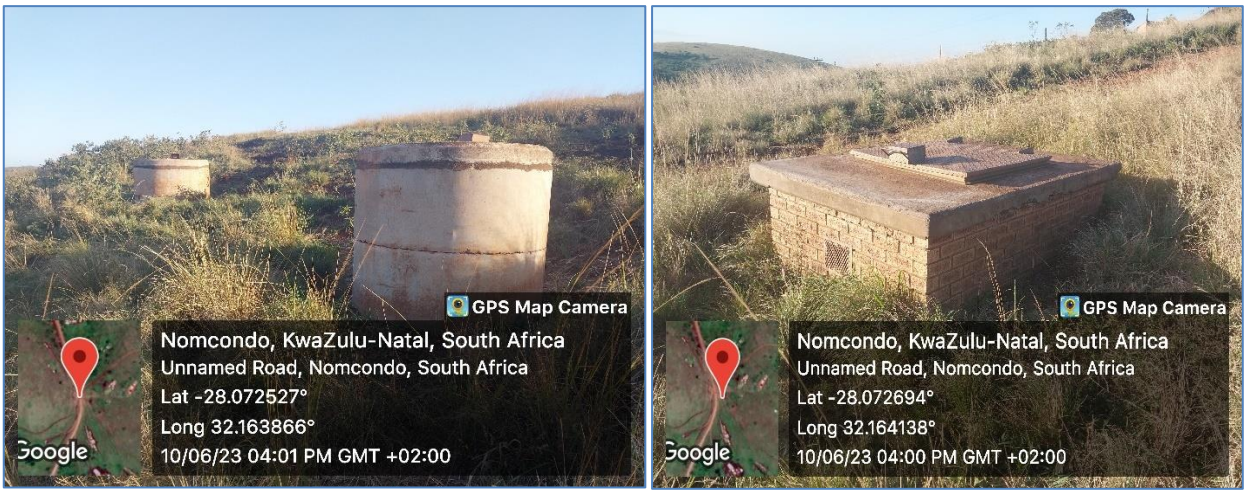
4.2 Adjacent Land Tenure and Use

The neighboring farms are being used for livestock grazing, cultivation, and residential areas.

4.3 Surface Infrastructure and Servitudes

The application area is mostly used for residential activities and the infrastructures found onsite include gravel roads, tar road, schools, churches, fences, gates, houses, reservoir, water pipelines, and power lines. Figure 2 and Figure 3 shows typical Examples of infrastructures identified onsite.

Figure 2: Typical example of gravel roads found onsite.



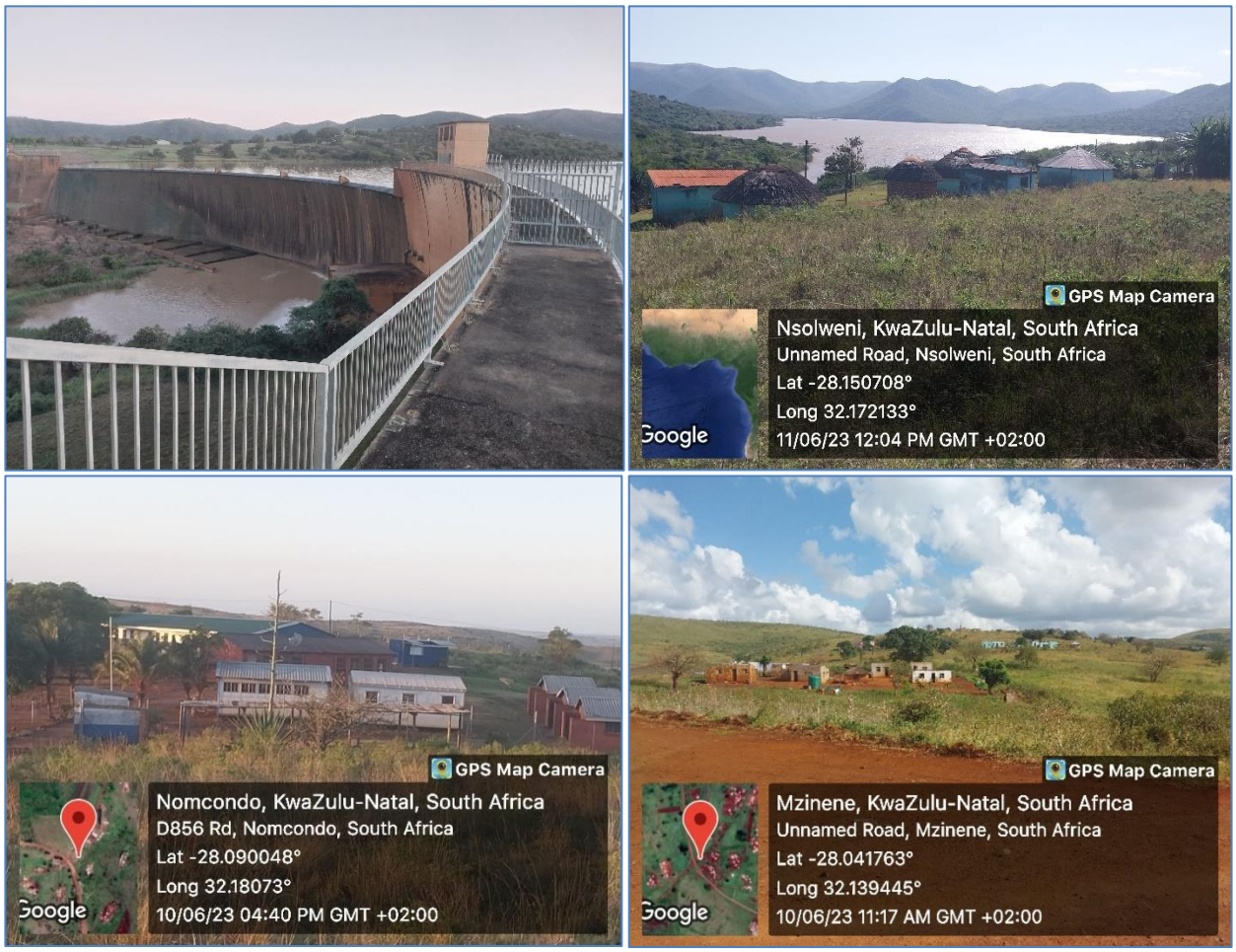


Figure 3: Typical example of infrastructures observed onsite.

4.4 Zoning

The proposed prospecting right application area is zoned for agriculture.

5. Locality map

Please refer to the locality map in Figure 4 below. The proposed project area is located approximately 3 km South-West (from the nearest point of the proposed prospecting area) of Hluhluwe Game Reserve, approximately 6.75 km Southwest of Ubizane Wildlife Reserve & Zululand Safari Lodge, approximately 13.43 km Northwest of Jour 5 - Santa Lucia - Falaza Game Park, and approximately 7.45km West of Emdoneni Lodge South Africa. The Regulation 2(2) plan developed in terms of the Minerals and Petroleum Resources Development Regulations is included in Figure 5 below. The plan indicates the prospecting right area in relation to the farm boundaries.

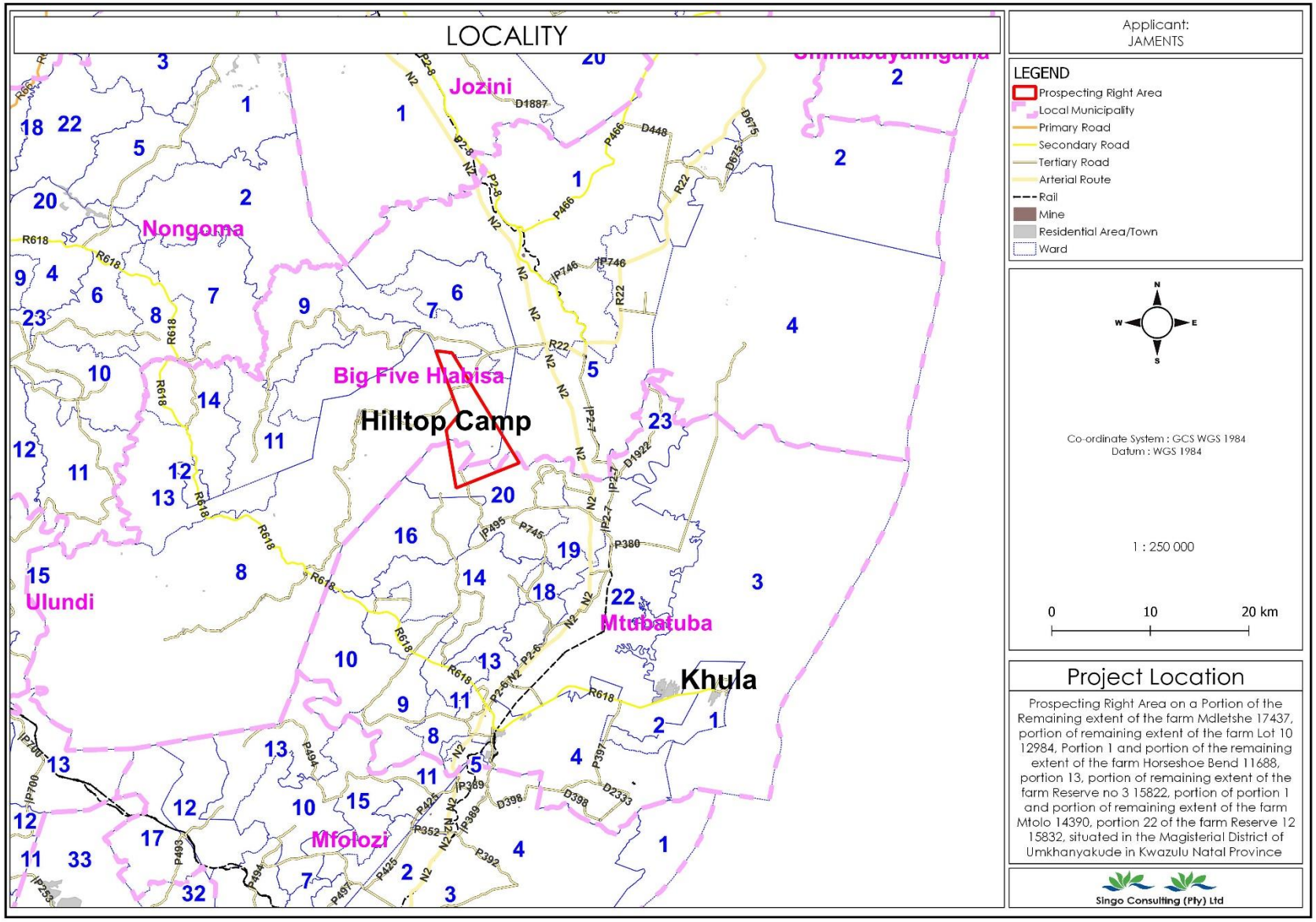


Figure 4: Locality Map

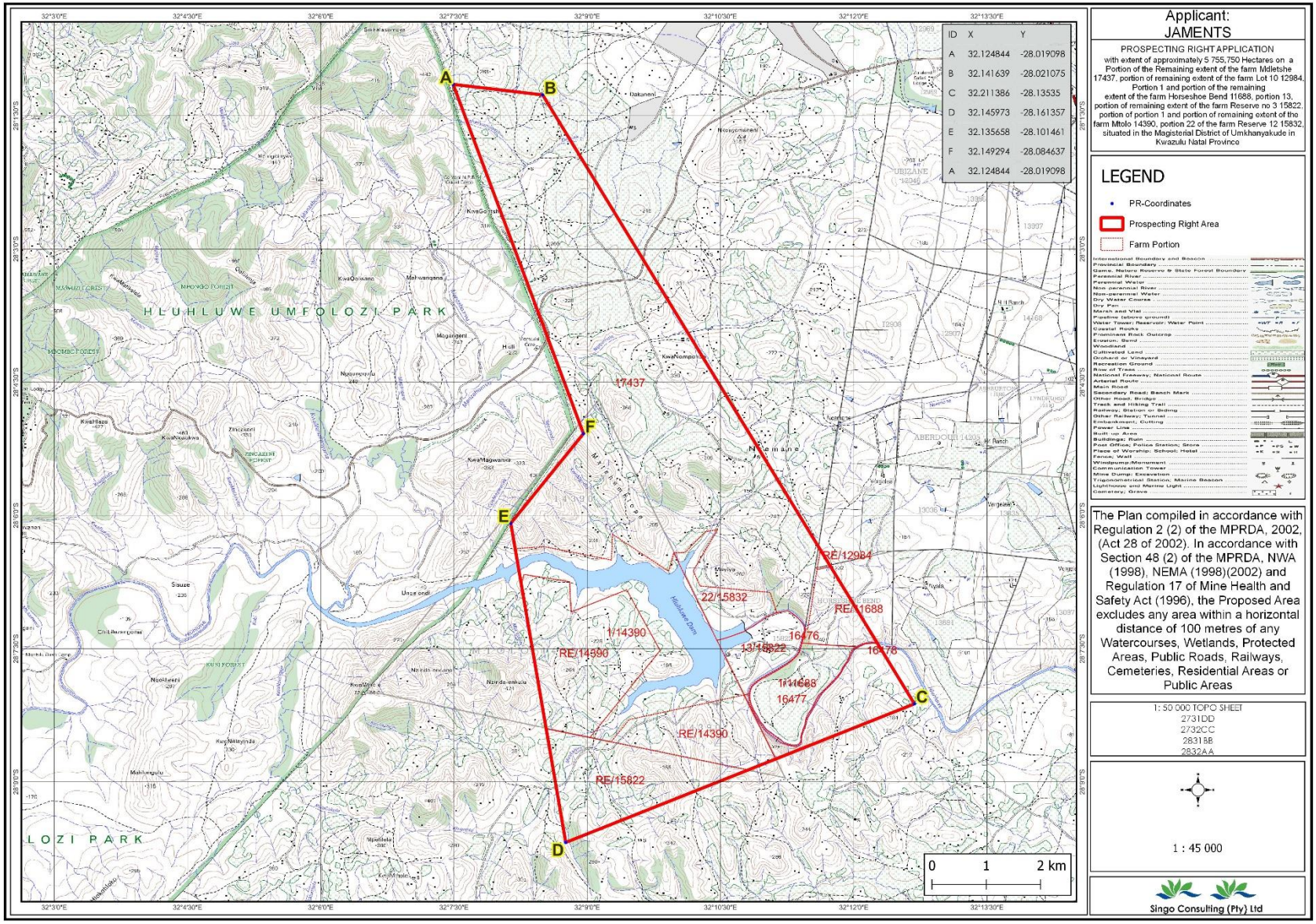


Figure 5: Regulation 2(2) Plan

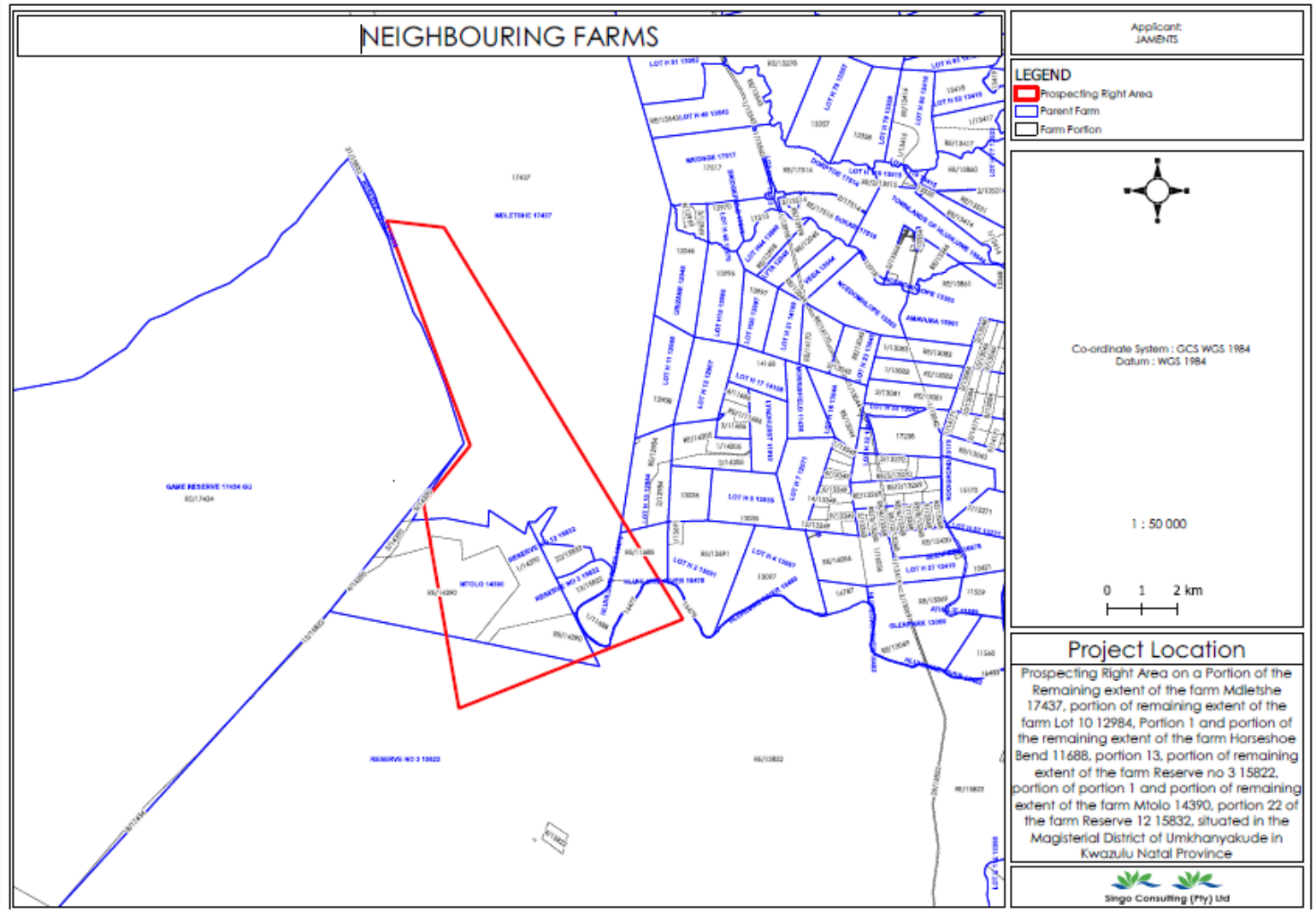


Figure 6:Adjacent Map

6. Description of the scope of the proposed overall activity

The proposed prospecting activities will aim to establish the extent and the quality of the Coal through non-invasive (desktop study) and invasive (core drilling) methods. Core drilling will be targeted for areas identified through the non-invasive techniques described below for reserve determination and prospecting planning. A proposed borehole map indicating the number of boreholes and location of the boreholes during the initial phase of prospecting is provided in Figure 7 below.

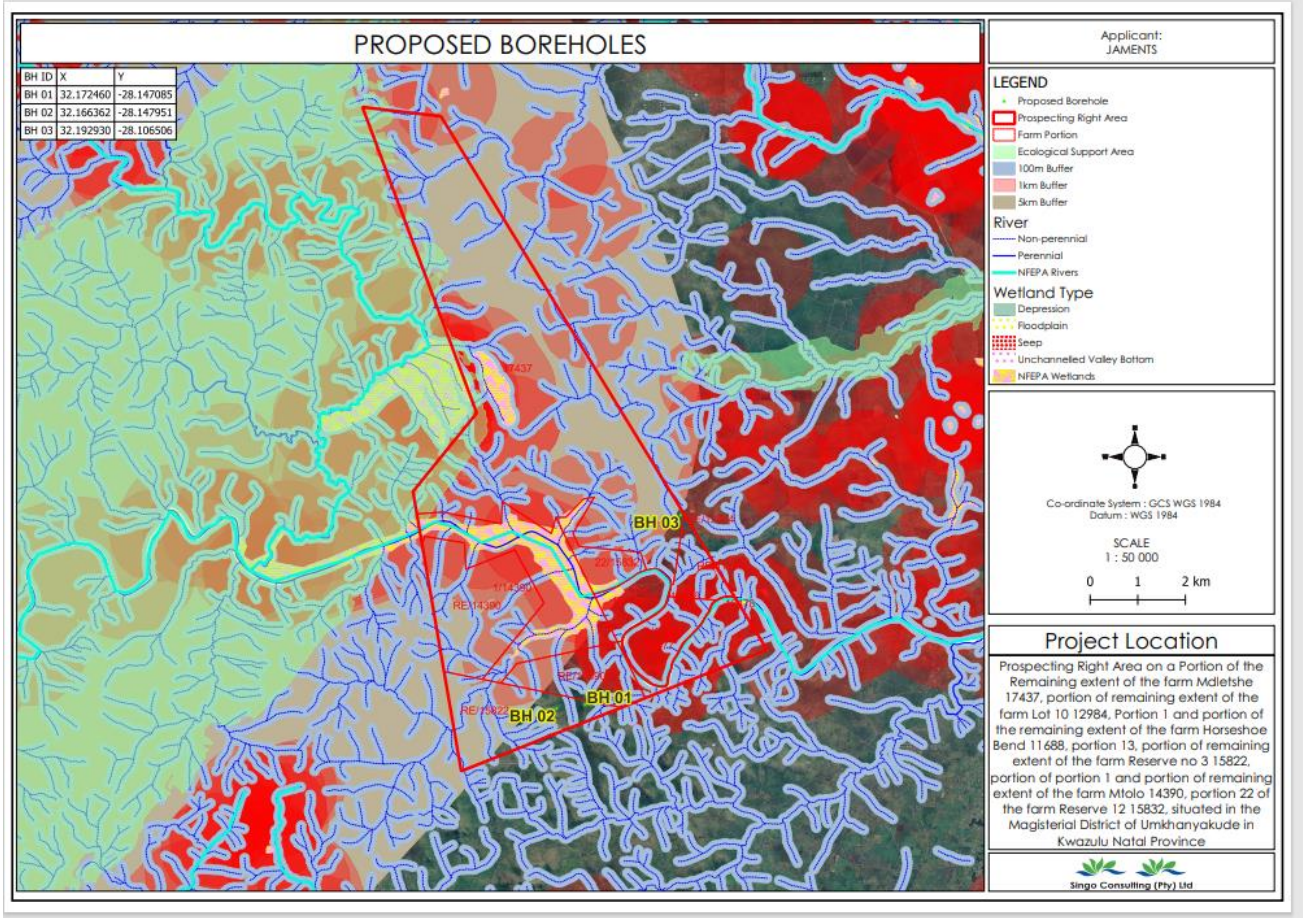


Figure 7: A proposed borehole map during initial prospecting phase

Should the initial drilling of the 3 proposed boreholes which is a minimum be positive and the environmental impacts as a result of prospecting activities are in an acceptable level/ manner, 12 additional boreholes will be drilled. Therefore, a maximum of 15 planned boreholes will be drilled for the proposed project (Refer to Figure 8 below). The prospecting activities are expected to be undertaken over a period of 3 years with the potential for renewal depending on results and studies undertaken.

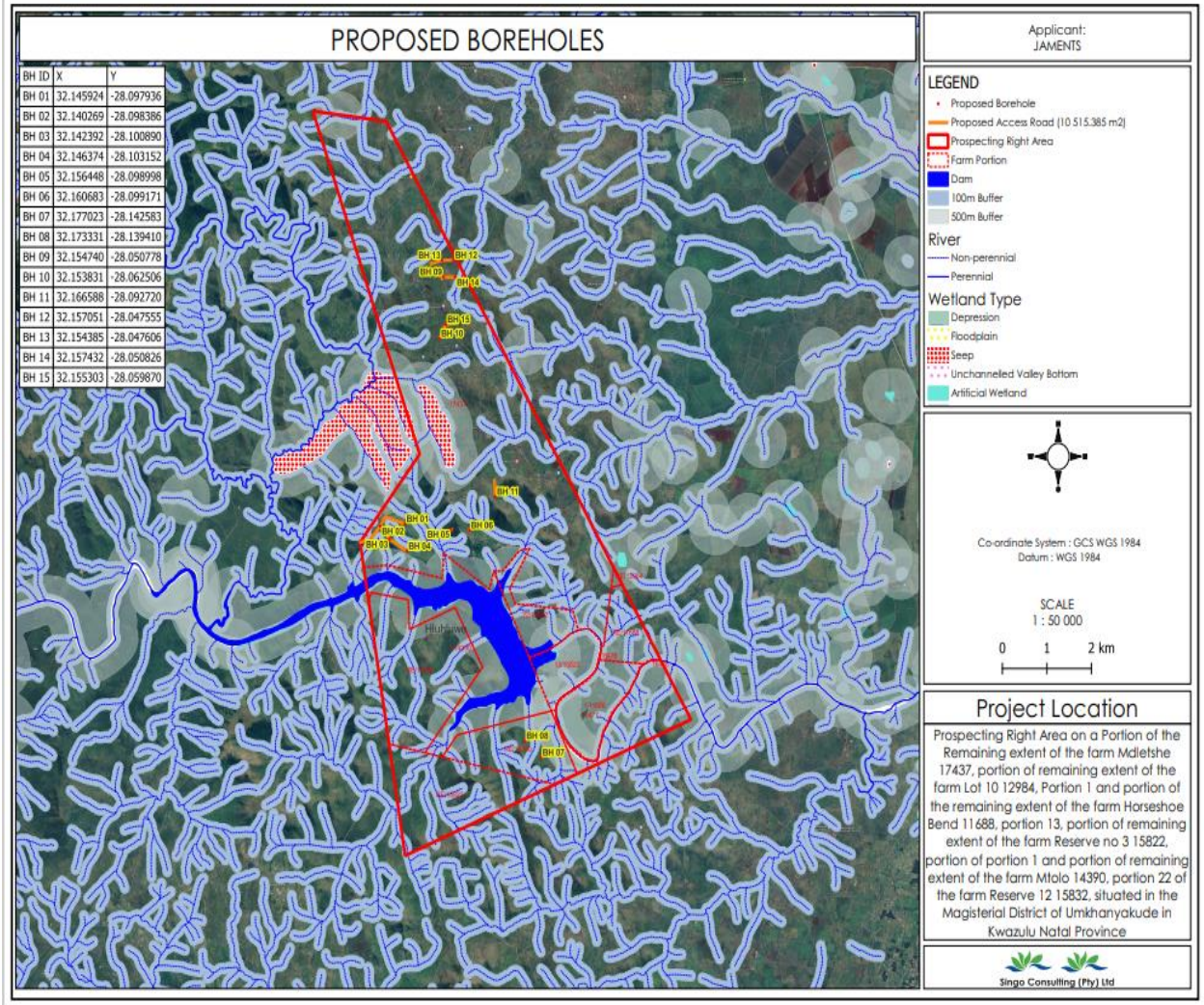


Figure 8: Planned proposed borehole map.

6.1 Listed and specified activities

Please refer to the table below for the specific activities planned (listed of not)

Table 3: List of activities planned associated with the mining operation.

Name of activity E.g., for prospecting (drill site, site camp, ablution facility, accommodation, equipment storage, sample storage, site office, access route, etc.)	**Aerial extent of the activity Ha or m²**	**Listed activity Mark with an X where applicable/ affected**	**Applicable listing notice GN 517, 11 June 2021**
Prospecting by means of diamond drilling 15 boreholes.	5 755,750 ha of the prospecting area	X	GN 517, Listing Notice 1, Activity 20
Mobile office	4 m²		Not Listed
Mobile toilet	2 m²		Not listed
Drill team and visitor team parking	24 m²		Not listed
Access road	1403.98 m²		Not listed
Guard room	2.247 m²		Not listed
Geological logging area	1.5 m²		Not listed
Waste bins and tools	1.801 m²		Not Listed
Drill machine	7.201 m²		Not listed
Drill rods	9.6 m²		Not listed
Clean sump	1.251 m²		Not listed
Dirty sump	0.21699m²		Not listed
Water Cart	0.21601 m²		Not listed

Drilling method	**Diamond core drilling**
Number of boreholes	15
Depth of boreholes	110 m
Duration of drilling	A borehole takes roughly about 2 days to complete; 15 will take at least 30 days.
Demarcated working area	❖ $144\text{m} \times 15\text{m} = \mathbf{2160\ m^2}$ ❖ $\mathbf{2160} \div 10000 = \mathbf{0.216\ ha}$ **0.216 ha** for all 15 drilling sites
Total area to be disturbed	**0.216 ha**

6.2 Description of the activities to be undertaken

The proposed prospecting operation will be carried out in three phases. The activities proposed for each phase is described under the headings below.

6.2.1 Phase 1: Non-invasive prospecting

The proposed timeframe for non-invasive prospecting activities is expected to be 2 months. The proposed activities are described below.

Desktop Studies

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

Spatial Database Compilation

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

Remote sensing

As part of the initial review, public domain aerial photos will be acquired, and a detailed geological and structural interpretation will be done on these to aid in identifying target areas that are not readily evident on the ground and to provide an independent interpretation of the geology of the area. Satellite imagery will also be acquired to provide a more regional viewpoint of the area of interest. As before a detailed geological and structural interpretation will be done on these images to provide a more regional viewpoint on the target areas. Satellite imagery is used to complement the aerial photos interpretations as the combination of multi-spectral bands can be used to highlight certain lithology's, vegetation types, soil types, alteration minerals, etc.

Geophysical survey

Both airborne and ground geophysical surveys may be undertaken for the prospecting right area. This is dependent on the results of the desktop study. These surveys will be used in conjunction with the data available to the public from the Council of Geoscience. A small airborne magnetic/radiometric survey may be carried out over the prospect and

surrounding areas to map the structural geology of the area. Follow up ground geophysical surveys will be carried out on coincident targets from the compilation of geological and geophysical data.

6.2.2 Phase 2: Invasive prospecting

The proposed timeframe associated with invasive prospecting can only be determined by the results of geophysical and geological work carried out in Phase1 of the prospecting programme. Invasive prospecting activities will consist of:

- Establishment of drill site and temporary contractors' yard. This will involve:
  - Clearing of vegetation for sumps and the drill entrance point
  - Earth sumps for water recycling
  - Laydown area for drill rods, fuel, and ablution facilities (chemical toilets)
  - Site office
  - Parking area
- Core drilling. (the number of boreholes required can only be finalised oncethe non-invasive prospecting as detailed above is completed; however, preliminary positions have been proposed in Figure 7). Drilling methods will include diamond core drilling. The borehole depths are expected to vary between 100m and 150m. The core will be logged, cut, and sampled. The samples will be crushed and milled and then analysed at an accredited laboratory to determine quality.
- Rehabilitation of boreholes. Casing will be removed from the borehole on completion thereof and the borehole sealed in accordance with "Standard Borehole Sealing Procedure" i.e.: each borehole certificated in terms of this procedure. Sealing will include:
  - Removing casing- if casing is to be removed, a specialist borehole contractor will advise on appropriate techniques and associated risks.
  - Backfilling- boreholes should be backfilled with clean uncontaminatedmaterial. Backfilled hole should be similar to surrounding strata.
  - Seal top of borehole- backfilled borehole should be compiled with an impermeable plug to prevent entry of potentially contaminated surfacerun-off or other liquids.
  - Record details- the depths and position of each layer of backfilling andsealing material.
- Drill rig, machinery, and vehicle movement. Existing farm roads and tracks will be utilised as far as possible. However, where a road does not exist temporary access roads will be established to access a drill site after consultation with the landowner. The type of access envisaged is limited toremoval of large rocks and disturbance of vegetation. Such access roads may also require 'light' grading to allow the

movement of surface mobile vehicles.

- Water Management. Process and potable water will be obtained from existing lawful users, an irrigation board or water services provider. Two sumps (delivery sump & settling sump) will be installed around the drillingrigs to collect water during the drilling process and settle out the suspended solids, for recycling of the water. This water will be re-used onthe rig. It is recommended that the sumps at the drill sites be plastic linedto limit the amount of seepage of process water.
- Ablution Facilities. Portable chemical toilets will be provided within close proximity of the drilling site and serviced on a regular basis by the serviceprovider.
- Domestic Waste Management - The drilling team will be housed off site inthe nearest town. No accommodation will be provided on site. Specific areas for lunch breaks will be provided and closed bin will be provided to collect domestic waste which will be removed and disposed of by the drilling team at a suitable site.
- Safety and Security - Security staff will be employed once equipment has been established on site.
- Storage and Handling of Dangerous goods –During drilling activities, there will be no storage area for diesel and oil. The diesel will be truck onto the site on a daily basis using a diesel bowser. Drip pans should be placed under drill rig for leakages.

Figure 9: Typical example of layout plan of a drilling site

Figure 10: A typical example of a drilling site.

6.2.3 Phase 3: Analytical assessment of prospecting data

Data will be assessed in a pre-feasibility study to determine resource estimates to commence with prefeasibility and feasibility assessments for the proposed activities.

7. Policy and Legislative Context

This prospecting right application is being sought by Jaments (Pty) Ltd as an initial application for exploration and any future mining activities over the listed farm portions for the extraction of Coal. The prospecting right application is subject to the following Acts:

- Mineral and Petroleum Resources Development Act, 2002 (Act 28 of 2002) (MPRDA).
- National Environmental Management Act, 1998 (Act 107 of 1998) (NEMA) and the NEMA EIA Regulations of 2014, as amended.

The legislative summary below is specific for the proposed prospecting activities to which this application relates.

Table 4: Policies and legislation

Applicable Legislation andGuidelines	Reference where Applied	How does this Development Comply with and Respond to the Policy and Legislative Context
Constitution of South Africa Act 108 of 1996.	In terms of Section 24 of the Constitution of the Republic of South Africa (108 of 1996), everyone has the right to an environment that is not harmful to their health or well-being and to have the environment protected, for the benefit of present and future generations, through reasonable legislation and other measures that prevent pollution and ecological degradation, promote conservation and secure ecologically sustainable development, and use of natural resources while prompting justifiable economic and social development.	The needs of the environment, as well as affected parties, will be integrated into overall project management. The Applicant is committed to implementing the management/mitigation measures identified in the EMPr in order to avoid, reduce and/or minimise the significant environmental impacts.

MPRDA, 2002 (Act 28 of 2002) MPRDA, 2002 (Act 28 of 2002): MPRDA Regulations, 2004	Section 16 of the MPRDA and Regulation 5 of the MPRDA Regulations, GNR 517 (11 June 2021) as amended. In terms of the MPRDA a prospecting right is required	A Section 16 Prospecting Right application was submitted to the Department of Mineral Resources and Energy (DMRE) along with the Prospecting Work Program (PWP). As an EMPR is a requirement for a

Applicable Legislation andGuidelines	Reference where Applied	How does this Development Comply with and Respond to the Policy and Legislative Context
	and amongst others a Prospecting Work Program (PWP) must accompany the application.	Prospecting Right the DMRE does not process applications without being provided with the required environmental authorisation in terms of the NEMA. As such the granting of the Prospecting Right will depend on the issuance of the Environmental Authorisation. Part B: EMPr of this report has included regulation requirements where relevant.
Mine Health and Safety Act, Act 29 of 1996 (MHSA) and associated Regulations	The importance of the Act lies in its numerous regulations, many of which will be relevant to the proposed operation. This cover, among other issues, noise, emergency preparedness, management of dust and handling, storage and transportation of hazardous materials.	The company will employ a Safety Health and Environmental (SHE) officer to ensure regulation is enforced during prospecting as well as adherence to Code of Practise (COP) and Safe Operating Procedures (SOPs). Where these procedures apply to prospecting contractors this will be communicated through induction training. Although not directly addressed in the EMP section of the report, protecting the environment contributes to a safe working environment.

NEMA, 1998 (Act 107 of 1998) NEMA EIA Regulations of 2014, GNR 517 (11 June 2021) as amended.	In terms of Section 24(2) of the NEMA, the Minister of the Department of Environmental Affairs (DEA) may identify activities that may not commence without prior authorisation and make regulations in accordance with the procedures required for such authorisations. Activities identified were published in Government Notice Regulation GNR 517 (11 June 2021) as amended, and the EIA Regulations outlining	An application for Environmental Authorisation was submitted along with the Prospecting Right Application for the listed activities triggered by the proposed project. This BAR process is required as part of the Environmental Authorisation application for the listed activities identified in Table 5 above.

Applicable Legislation andGuidelines	Reference where Applied	How does this Development Comply with and Respond to the Policy and Legislative Context
	the procedures required for authorisation publishedin GNR 517 (11 June 2021) as amended.	
	Section 28 – Duty of care and remediation of environmental damage	The Applicant will be required to comply with the mitigation, management and monitoring measures recommended in the EMPr (Part B of this document) in order to reduce or avoid the potential environmental impacts of the proposed operation.
National Environmental Management: Waste Act (No. 59 of 2009) GNR 921 (9 November 2013)	All organisation that wish to commence, undertake, or conduct a waste management activity must apply for a waste management license. In terms of Section 19 of the NEM: WA the DEA may publish a list of waste management activities which may not commence without prior authorisation. Activities identified were published in GNR 921 (9 November 2013).	A Waste License is not applicable to this application because no mine residue deposits will be established. General waste management has been incorporated intoPart B, the EMP report, which must be implemented by the Applicant.
National Water Act ,1998 (Act No.36 of 1998)	The Act regulates the protection, use, development, conservation, management, and control of water resources in South Africa. In terms of the National Water Act, 1998 (Act No. 36 of 1998) (NWA), activities that involve certain, specified uses of water need to register and apply for an authorisation to do so. The Section 21 water uses are listed below: • 21 (a) Taking water from a water resources; • 21 (b) Storing water; • 21 (c) Impeding or diverting the flow of water in a water course;	The water management plan has been incorporated intoPart B, the EMP report. The Department of Water and Sanitation (DWS) will be consulted as part of this application, to determine if a Water Use License or a General Authorisation (GA) is required. It is expected that the need for a Water Use License or GA will only be finalised once the non-invasive prospecting study have been completed. If required, the application will follow the process outlined in the Regulations Regarding the Procedural

Applicable Legislation andGuidelines	Reference where Applied	How does this Development Comply with and Respond to the Policy and Legislative Context
	• 21 (d) engaging in a stream flow reduction activity contemplated in section 36; • 21 (e) engaging in a controlled activity identified as such in section 37(1) or declared under section 38(1); • 21 (f) Discharging waste or water containing waste into a water resource through a pipe, canal, sewer, sea outfall or other conduit; • 21 (g) Disposing of waste or water containing waste in a manner that may detrimentally impact on a water resource. • 21 (h) disposing in any manner of water which contains waste from. or which has been heated in any industrial or power generation process; • 21 (i) Altering the bed/banks, course or characteristics of a water course; • 21 (j): Removing, discharging or disposing of water found underground if it is necessary forthe efficient continuation of an activity or for the safety of people • 21 (k) using water For recreational purposes.	Requirements for Water Use License Applications and Appeals, March 2017 published by the Department of Water and Sanitation (DWS). The application area is situated within a River FEPA Upstream management area and contains scattered isolated depression wetlands (Refer to Figure 15 in Section 12 below). Invasive prospecting activities will avoid watercourses through the establishment of buffer zones in which no prospecting activities will be allowed without the necessary authorisations from DWS.
National Freshwater Ecosystem Priority Areas (NFEPA)	The National Freshwater Ecosystem Priority Areas (NFEPA) project is a multi-partner project between the Council for Scientific & Industrial Research (CSIR), the Water Research Commission (WRC), the South	

Applicable Legislation andGuidelines	Reference where Applied	How does this Development Comply with and Respond to the Policy and Legislative Context
	African National Biodiversity Institute (SANBI), the Department of Environmental Affairs (DEA), the South African Institute of Aquatic Biodiversity (SAIAB) and South African National Parks (SANParks). The project responds to the reported degradation of freshwater ecosystem condition and associated biodiversity, both globally and in South Africa. It uses systematic conservation planning to provide strategic spatial priorities for conserving South Africa's freshwater biodiversity, within the context of equitable social and economic development. The project has three inter-related components: • A technical component to identify a national network of freshwater conservation areas. • A national governance component to align DEA and DWA policies and approaches for conserving freshwater ecosystems; and A sub-national governance and management component that conducts case studies to demonstrate how NFEPA outcomes can be implemented (CSIR 2010).	

NEMA, 1998 (Act 107 of 1998) GNR 1147 of Nov 2015. Regulations pertaining to the Financial Provision	An applicant or holder of a right or permit must determine and make financial provision to guarantee the availability of sufficient funds to undertake	The financial provision has been determined through a detailed itemisation of all activities and costs,

Applicable Legislation and Guidelines	Reference where Applied	How does this Development Comply with and Respond to the Policy and Legislative Context
for the Rehabilitation, Closure and Post Closure for Prospecting, Exploration, Mining or Production Operations	rehabilitation and remediation of the adverse environmental impacts of prospecting, exploration and mining or production operations, as contemplated in the Act and to the satisfaction of the Minister responsible for mineral resources.	calculated on the actual costs of implementation of the measures required for: • Rehabilitation and remediation • Decommissioning and closure activities at the end of mining • Remediation and management of latent or residualenvironmental impacts. Refer to the Closure Plan attached as Appendix 5.

National Environmental Management: Air Quality Act (Act No. 39 of 2004) GNR 893 (22 November 2013)	The NEM: AQA, has shifted the approach of air quality management from source-based control to receptor-based control. The main objectives of the Act are to: • protect the environment by providing reasonable measures for— i. the protection and enhancement of the quality of air in the Republic; ii. the prevention of air pollution and ecological degradation; and iii. securing ecologically sustainable development while promoting justifiable economic and social development; and • generally, to give effect to section 24(b) of the Constitution in order to enhance the quality of ambient air for the sake of securing an environment that is not harmful to the health and wellbeing of people.	An Air Emissions License (AEL) is not applicable to the project. Dust suppression measures are incorporated in the EMPr to minimize fugitive dust release.

Applicable	Legislation andGuidelines	Reference where Applied	How does this Development Comply with and Respond to the Policy and Legislative Context

	The Act makes provisions for the setting and formulation of National Ambient Air Quality Standards for "substances or mixtures of substances which present a threat to health, well -being or the environment". More stringent standards can be established at the provincial and local levels. The NEM: AQA requires all persons undertaking listed activities in terms of Section 21 of the Act to obtain an AEL. The listed activities and associated minimum emission standards were issued by the DEA on 31 March 2010 (Government Gazette No. 33064 of 31 March 2010) and were last amended in 2020 (Government Gazette No. 43174 of 27 March 2020).	
Noise Control Regulations (GN R154of 1992) SANS Guidelines: SANS 10103:2008, the Measurement and Rating of Environmental Noise with Respect to Annoyance, and to Speech Communication.	The NCRs were revised under Government Notice Number R. 55 of 14 January 1994 to make it obligatory for all authorities to apply the regulations. Subsequently, in terms of Schedule 5 of the Constitution of South Africa of 1996 legislative responsibility for administering the noise control regulations was devolved to provincial and local authorities. The SANS 10103:2008 provides noise levels that are expected in various areas (Rating Level). These are	Noise levels will be maintained within baseline levels in the area or to the SANS standards.

Applicable Legislation andGuidelines	Reference where Applied	How does this Development Comply with and Respond to the Policy and Legislative Context
	used by the Noise Regulations as limits of noise in the various areas.	
National Environmental Management: Biodiversity (Act No.10 of 2004) National List of Threatened Ecosystems (2011)	The National Environmental Management: Biodiversity Act, 2004 (NEMBA; Act No. 10 of 2004) provides for a national list of ecosystems that are threatened and in need of protection, in one of four categories: 'Critically Endangered (CR)', 'Endangered(EN)', 'Vulnerable (VU)' or 'Protected'. Threatened ecosystems are listed in order to reduce the rate of ecosystem and species extinction by preventing further degradation and loss of structure, function and composition of threatened ecosystems.	According to the data sourced from SANBI, no terrestrial threatened ecosystems were recorded in the application area.
NEMBA Alien and Invasive Species Regulations (2014)	The NEMBA Alien and Invasive Species Regulations (2014) aims to: • Prevent the unauthorised introduction and spread of alien and invasive species to ecosystems and habitats where they do not naturally occur; • Manage and control alien and invasive species, to prevent or minimise harm to the environment and biodiversity; and • Eradicate alien and invasive species from ecosystems and habitats where they may	The Applicant will implement alien invasive management with regards to preventing spread of alien invasive species over areas disturbed by prospecting activities.

	harm such ecosystems or habitats.	
Applicable Legislation and Guidelines	Reference where Applied	How does this Development Comply with and Respond to the Policy and Legislative Context
	The NEMBA Alien and Invasive Species Lists (2016) include national lists of invasive species to be read together with the Alien and Invasive Species Regulations (2014).	
Threatened or Protected Species Regulations (2015)	Chapter 4, Part 2 of NEMBA provides for listing of Threatened or Protected Species (TOPS). If a species is listed as threatened, it must be further classified as CR, EN or VU. In addition to these categories, Protected Species are defined as "any species which is of such high conservation value or national importance that it requires national protection". Species listed in this category will include, among others, species listed in terms of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES).	Protected species will be preserved in situ and invasive prospecting will maintain 50m buffer from protected species, or the relevant permits will be applied for destruction or relocation of said species.

National Forest Act (No. 84 of 1998)	An updated list of protected tree species was published under section 12(1) (d) of the National Forests Act (Act No. 84 of 1998) on 6 December 2019. In terms of section 15(1) of this Act, no personmay cut, disturb, damage or destroy any protected tree or possess, collect, remove, transport, export, purchase, sell, donate or in any other manner acquireor dispose of any protected tree or any product derived from a protected tree, except under a licenseor exemption granted by the Minister to an applicant	

Applicable Legislation andGuidelines	Reference where Applied	How does this Development Comply with and Respond to the Policy and Legislative Context
	and subject to such period and conditions as may be stipulated.	
National Environmental Management: Protected Areas Act (Act No. 57 of 2003)	The National Environmental Management: Protected Areas Act (Act No. 57 of 2003) (NEMPAA) was promulgated in order to provide for (among other things) the protection and conservation of ecologically viable areas representative of South Africa's biological diversity and its natural landscapes and seascapes; for the establishment of a national Register of Protected Areas, and for the management of those areas in accordance with national norms and standards.	The 2019 SAPAD database indicates that the application area does not fall over protected or conservation areas in terms of the NEM: PAA.
South African Protected Areas Database (SAPAD, 2020) and South Africa Conservation Areas Database (SACAD, 2020)	The primary function of protected areas is to ensure the conservation of habitats, environmental processes and species occurring within these ecosystems. The South African Protected Areas Database (SAPAD) and the South African Conservation Areas Database (SACAD) are	

The National Protected Areas Expansion Strategy (NPAES; 2010)	Geographic Information System (GIS) inventories of all Protected and Conservation areas in South Africa. The Protected and Conservation Areas (PACA) database also includes data on privately owned protected areas. This Register comprises of all data required for the Register of Protected Areas (legally declared) as well as data on Conservation Areas (areas responsibly managed for biodiversity	
Applicable Legislation andGuidelines	Reference where Applied	How does this Development Comply with and Respond to the Policy and Legislative Context
	conservation but not legally declared as ProtectedAreas).	
National Veld and Forest Fire Act, Act 101 of 1998	General management regarding the training, preparedness and control of fires.	The Applicant will implement firefighting management protocols as stipulated by the NVFFA
National Heritage Resources Act, Act(NHRA), 1999 (Act No. 25 of 1999)	The NHRA is utilized as the basis for the identification, evaluation, and management of heritage resources and in the case of Cultural Resource Management (CRM) those resources specifically impacted on by development as stipulated in Section 38 of NHRA. Applicable sectionsinclude: Protection of Heritage Resources – Sections 34 to 36; and Heritage Resources Management – Section 38	The EIA Screening tool indicates that the application area has a low archaeological and cultural heritage theme sensitivity and a medium paleontological theme sensitivity. Should archaeological artefacts or skeletal material be revealed in the area during development activities, such activities should be halted, and SAHRA NC province notified in order for an investigation and evaluation of the finding(s) to take place. The Applicant has committed to establish buffer zones around any potential historical sites and graves.

Hazardous Substances Act (No. 15 of 1973)	The Hazardous Substances Act (No. 15 of 1973) provides for the control of substances that may cause injury, ill health, or death to human beings.	Hazardous substances in the form of diesel will be stored at the drill sites. The management of hazardous substances during all the phases of the project will be governed by the HAS.
Municipal Plans: Integrated Development Plan (IDP) and Strategic Development Framework	Big 5 Hlabisa Local Municipality IDP: Promotion of a Local Economic Development should be furthered in order to promote manufacturing and other mining related sectors and investor interest in the region.	As mentioned under Section 8 below the activity of prospecting creates the opportunity to develop mineral resources in South Africa which is in line with the Key Performance Area (KPA) of the Promoting Local Economic Development.

8. Need and desirability of the proposed activities

The activity of prospecting creates the opportunity to develop the mineral resources of South Africa as outlined in the national development frameworks and policies. The preferred location for the activity is in the Kwazulu Natal Province. Prospecting activities do 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 are 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.

Although prospecting activities are not labour intensive, approximately 10 people will be hired to assist with general activities. The services required can also be sourced locally depending on their availability thus growing the economy of the Umkhanyakude District. The proposed project area has the potential of the Coal. Jaments (Pty) Ltd intends to start mining application once the prospecting activities have proven viable outcome.

The prospecting activity has the potential to result in a Mining Right Application together with a Social & Labour Plan (SLP) which will contribute to Local Economic Development in the area in general. The implementation of the SLP will also benefit staff through training(skills development) and bursary programmes. The proposed project has the potential to contribute to local taxes as well as the (Gross Domestic Product) GDP. Eventually the mining of minerals will allow for continued supply to other industries who also contributeto local taxes and GDP.

Although prospecting is not seen as an activity that significantly and sustainably contributes to an area's economy, it is a precursor to possible mining activities. The activity of mining has numerous social and economic benefits in local, regional, and national context. These include:

1. Job creation
2. Skills development
3. SMME development
4. Local economic development
5. Contribution to local and national tax income (royalties, companies tax etc.)
6. Contribution to the national gross domestic product

The need to prospect is therefore a crucial step in being able to ascertain if it is feasible to investigate mining and in turn the benefits indicated in points 1-6. The concept of "need and desirability" relates to, amongst others, the nature, scale, and location of development being proposed, as well as the wise use of land. While essentially, the concept of "need and desirability" can be explained in terms of the general meaning of its two components in which need primarily refers to time and desirability to place (i.e. is this the right time and is it the right place for locating the type of land-use/activity being proposed?), "need and desirability" are interrelated and the two components collectively can be considered in an integrated and holistic manner.

NEED AND DESIRABILITY OF THE PROPOSED PROJECT		
PART I: NEED		
Questions (Notice 792, NEMA, 2012)		Answers
1.	Is the land use associated with the activity being applied for considered within the timeframe intended by the existing approved SDF agreed to be the relevant environmental authority?	Prospecting is an integral part of its rationale to make use of the abundant natural resources in the area to create strong, resilient, and prosperous district. The land use is not associated with prospecting.
2.	Should the development, or if applicable, expansion of the town/area concerned in terms of this land use occurs here at this point in time?	Should a mining right be applied for and be approved in future, the integrity of the existing environmental management priorities of the area may be compromised, and a full Environmental Impact Assessment must then be conducted to determine the sustainability of the mining activities. The proposed project will have a positive impact on the socio-economic conditions of the local communities involved, should the results of the prospecting show that feasible reserves are present to mine, and a mining right is approved.
3.	Does the community/area need the activity and the associated land use concerned? This refers to the strategic as well as local level.	The Jaments (Pty) Ltd prospecting will yield positive impact on the socio-economic conditions especially if it graduates to mining, by creating more jobs and providing developments to the local communities.
4.	Are the necessary services with adequate capacity currently available (at the time of application) or must additional capacity be created to cater for the development?	All 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 be making use of mobile structures.
6.	Is the project part of a national programme to address an issue of national concern or importance?	The mining sector is a significant contributor to the National GDP as well as a massive employer of people. This project will contribute to the National Development Plan of eradicating poverty/unemployment. Chapter 6 of the National Development Plan highlights an "inclusive rural economy" and the objectives of this plan are to create jobs in mining and industry and activating rural economies through service to small and micro mining.
PART II: DESIRABILITY		
7.	Is the development the best practicable environmental option for this land/site?	The project area lies on heavily modified area and the other area is covered with plantation. The activities currently present onsite have already had an impact on environmental management. The disturbed areas (drill sites) will be rehabilitated after prospecting activities.
8.	Would the approval of this application compromise the integrity of the existing approved and credible IDP, and SDF as agreed to by the relevant authorities?	The approval of this prospecting application will not compromise the integrity of the existing environmental management priorities of the area provided that sensitive areas are avoided, and the mitigation measures as recommended in this report and in the EMPr are implemented.
9.	Would the approval of this application compromise the integrity of the existing environmental management priorities for the area (e.g., as defined in EMFs), and if so, can it be justified in terms of sustainability considerations?	The integrity of the existing environmental management priorities for the area will not be compromised by this development.
10.	Do location factors favour this land use at this place? (this relates to the contextualization of the proposed land use on this site within its broader context).	Although there is a diabase rock intruding with the prospecting area, the project area's coalfield lithology is made up of sediments of the Dwyka group and Silverton thus providing the ideal geological formation for the presence of the mineral applied 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)?	As far as the Basic Assessment on the area of question, there is no known heritage or cultural significance. Should the standings change, the relevant authority will be notified immediately, and information will be included into the BAR & EMPr.
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.)?	The impacts on well-being, following mitigation, will be as follows: • Visual: Medium to low • Dust: Medium to Low • Noise: Medium to Low • Vibrations: Medium to Low Strict adherence to the recommendations & mitigation measures identified will be ensured.
13.	Will the proposed activity or the land use associated with the activity being applied for, result in unacceptable opportunity costs?	South Africa offers ongoing proof that mineral revenues can create sizeable benefits to the economy in countries where they are sourced. The applied commodities contribute significantly towards the Municipal's GDP.
14.	Will the proposed land use result in unacceptable cumulative impacts?	The proposed project has only been identified to have minimal cumulative impacts that can be mitigated to an acceptable level. The measures outlined in the EMP attached will serve as a method to keep the proposed project from having any serious long term cumulative impacts on the receiving environment.

Table 5: Need and desirability considerations.

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

9.1 Preferred site

The proposed application area was selected based on extensive research on the geology of the area. Furthermore, the proposed site was also available for prospecting (i.e., not held by another company).

9.2 Activities

No activity alternatives are considered. Drilling is still the most effective way and an industry norm to complete resource evaluation as required for the Prospecting works programme to be submitted in support of the Prospecting Right Application if the mineral deposit of interest is identified onsite.

9.3 Technology

The use of aerial geological mapping as an initial non-invasive technique to delimit areas for invasive drilling is seen as the most responsible method to reduce needless surface disturbance and reduce environmental impact footprint. Technological alternatives are therefore also not assessed further.

10. Description of the process followed to reach the proposedpreferred site

The consideration of alternatives is an integral part of the impact assessment process. In terms of Regulation 50 (d) of the MPRDA Regulations R. 527 under the Mineral and Petroleum Resources Development Act, Act 28 of 2002, an environmental impact assessment report must include inter alia the following:

"(d) A comparative assessment of the identified land use and development alternatives and their potential environmental, social and cultural impacts."

The goal of evaluating alternatives is to find the most effective way of meeting the need and purpose of the proposal, either through enhancing the environmental benefits of the proposed activity, or through reducing or avoiding potentially significant negative impacts. Constraints that must be considered when identifying alternatives for the proposed project include environmental, social, and financial issues which will be discussed below. Evaluation must focus on identifying the advantages and disadvantages of the identified alternatives and indicate which alternative is considered feasible in termsof technical, financial, and environmental aspects. Alternatives considered for the proposed project are discussed under the headings below.

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

The property has been identified by the Applicant due to its geological significance and potential to produce Coal reserve. Due to the nature and extent of the geology and minerals available in the area it is not possible to identify an alternative property as the geology is directly associated with the applied area. Numerous alternative drill sites, within the application area, are available and dependent on the site conditions. Refer to Section 10.3 below.

10.2 The type of activity to be undertaken

The activity to be undertaken is prospecting. Prospecting is an activity that is defined as formalized process with a systematic approach to identify the presence of a mineral resource and include invasive (drilling) and non-invasive (desktop studies) activities. Alternative activities that can be undertaken include:

- Diamond core drilling

The activity to be undertaken is not decided by the EAP but defined by the geology of the area. Prospecting for this project will involve diamond core drilling. No bulk sampling will be conducted during diamond core drilling.

10.3 The design and layout of the activity

The preliminary positions of the proposed prospecting boreholes have been sited, in-line with an economically acceptable grid (SAMREC), to give a representative sample for the project area. Alternatives positions are considered to avoid disturbance of water resources, and heritage buildings and other infrastructure available onsite, as well as their applicable buffers. In instances where boreholes will have to be situated inside these buffers, the requisite authorisation will be obtained from the relevant authorities.

Existing farm roads and tracks will be utilised as far as possible. The construction of new roads will be required where no existing roads are present. The type of access envisaged is limited to removal of vegetation. Such access roads may also require 'light' grading to allow the movement of surface mobile vehicles and will not trigger any listed activity in terms of NEMA. Should a site camp need to be erected it will be positioned near an existing road as it increases accessibility as well as reduce any environmental disturbance associated with the need to create new access roads. The site camp will consist of storage for drilling equipment and portable ablution facilities.

It can be stated that invasive prospecting (drilling) will avoid watercourses, infrastructures, any heritage sites which might be identified during drilling and Critical Biodiversity Areas through the establishment of buffer zones around these area in which no activities will be allowed without the necessary authorisations, licenses and/or permits.

10.4 The technology to be used in the activity

The use of desktop studies and literature reviews are viewed as an initial non-invasive technique to delimit areas for invasive drilling prospecting and is seen as the most responsible method to reduce needless surface disturbance and reduce the environmental impact footprint. Technology alternatives are therefore also not assessed further.

10.5 The operational aspects of the activity

Drilling is still the most effective way as well as an industry norm to complete resource evaluation as required for the mine works programme to be submitted in support of a Mining Right Application to be submitted if mineral deposit of interest will be identified during drilling. No further alternatives are relevant.

10.6 The option of not implementing the activity

Should the project not be implemented, the status quo remains, and cultivation, residential, livestock farming and grazing, schools, and churches will continue unaltered with no negative impacts on the biophysical, socio economic or cultural environment. On the other hand, not proceeding with the proposed operation would have a direct consequence in that the mineable potential of the suspected reserve would not be determined.

The secondary effect of that not happening is that the community and IAPs will have been negatively affected by this application for prospecting in that they would not have been informed (together with the prospecting Applicant) as to the future of exploiting any potential mineral reserve: this question will then not have been answered for either party and thecommunity and IAPs will expect another round of public participation in the future when the next Applicant applies to prospect in the area. One possible mitigation mechanism is for the Applicant and the DMRE to be transparent with the community and IAPs in informing them of what the actual reasons are for the prospecting operation not proceedings. Furthermore, not proceeding with the operation will result in the loss of potential employment opportunities for local communities.

11. Details of the Public Participation Process Followed

Public Participation is a legal requirement, where the potential exists for individuals and/or parties to be affected by a proposed activity. According to the principles of Integrated Environmental Management (IEM), these individuals and/or parties shouldbe involved in the decision-making process from an early stage in the project, with regards to any relevant issues and concerns complementing the information on whichthe Regulating Authorities would base their decision. This facilitation of effective communication between the Authorities, the Public and the Applicant forms the primary role of the Public Participation Process. Through the public participation process the Interested and Affected Parties (IAPs) are offered an opportunity to voice their opinions and concerns with regards to the application and have them formally recorded and registered as such to be considered by the Authorities in the decision-making process.

The term "Public Participation" is defined by the International Association for Public Participation (IAP) as "any process that involves the public in problem-solving or decision-making and that uses public input to make better decisions". This application is subject to legislation stipulated in the GN R517 of NEMA with regards to public participation, and the EIA Regulations of 2014 Regulation 41-44. These regulations stipulate the public participation process that must be conducted in order to provide the IAPs with the opportunity to form part of the process. The focus of the public participation process is to involve the public in the decision-making process from an early stage in the project, with regards to any relevant issues and concerns complementing the information on which the Regulating Authorities wouldbase their decision. Steps that will be taken throughout the BAR Process will include:

- Notification of the public in writing and through the newspaper and site notices.
- Stakeholder meetings (one-on-one and focus group meetings with key stakeholders).
- Make information containing all relevant facts in respect of the application available to potential IAPs.
- Provide IAPs a reasonable opportunity to comment on the application.
- Open and maintain an IAP Register of issues and concerns.
- Provide the registered IAPs the opportunity to comment on all reports.
- Record all comments of IAPs in the reports and plans and ensure that written comments, including responses to such comments and records of meetings, are attached to the reports and plans that are submitted to the competent authority.

Newspaper advertisement

On the 2nd of June 2023, a newspaper advertisement (English and Zulu) was Published on the Zululand Observer (page 27) see Figure 11 below for the proof of newspaper publication. A newspaper was published to notify the public about the proposed prospecting right application. The newspaper advert also requested the public to register as an IAP in order to receive all future correspondence regarding this project. The notice informed the public that the draft BAR will be made available for comments from Monday the 19th of July 2023 to Tuesday the 18th of August 2023.

IDOLOBHA LASEMHLATHUZE

ISIMEMO SOKUPHAWULA NGESICELO ESIFAKWE NGOKWESIGABA (1)(E) SOMTHETHO KAMASIPALA WASEMHLATHUZE WOKUHLELWA KWEZINDAWO NOKUPHATHWA KOKUSETSHENZISWA KOMHLABA, KA-2017 (OCHITSHIYELWE): MAQONDANA

- NOKUHLUKANISWA KWEPULAZI ELINGUNOMBOLO 18039, MEVAMHLOPHE, UKWAKHA INGXENYE YOKUQALA (1) KANYE NOKUSELE.
- NOKUHLUKANISWA KWENGXENYE YESINE(4) YEPULAZI ELINGU NOMBOLO 12085 MERCHISTON, UKWAKHA INGXENYE YESISHAGALOLUNYE(9) (EZINGXENYENI EZINE(4)) KANYE NOKUSELE
- NOKUHLUKANISWA KWEPULAZI ELINGU NOMBOLO 12085 MERCHISTON, UKWAKHA INGXENYE YESISHAGALOMBILI(8) KANYE NOKUSELE
- UKUHLANGANISA INGXENYE YOKUQALA (1) ELINGU NOMBOLO 18039, MEVAMHLOPHE KANYE NENGXENYE YESISHAGALOLUNYE (9) (EZINGXENYENI EZINE (4)) NENGXENYE YESISHAGALOMBILI (8) YEPULAZI ELINGUNOMBOLO 12085 MERCHISTON EZIHLONZIWE UKWAKHA IPULAZI ELINGU NOMBOLO 18847, MEVAMHLOPHE.
- NOKUHLANGANISA INGXENYE ESELE YEPULAZI ELINGU NOMBOLO 18039, MEVAMHLOPHE KANYE NENGXENYE YOKUQALA (1) YEPULAZI ELINGU NOMBOLO 11162, ATHERFOLD, UKWAKHA IPULAZI ELIWUNOMBOLO 18848SIMPSON.

Lapha kunikezwa isaziso esithi uMasipala uMhlathuze usezinhlelweni zokucubungula isicelo esifakwe: ngaphansi kwesigaba 27(1)(e) soMthetho kaMasipala wokuHlelwa Kwezindawo kanye Nokuphathwa Kokusetshenziswa Komhlaba, 2017 (ochitshiyelwe), maqondana:

- Nokuhlukaniswa kwepulazi elingu nombolo 18039, Mevamhlophe, ukwakha Ingxenye yokuqala (1) kanye nokusele.
- Nokuhlukaniswa kwengxenye yesine(4) yepulazi elingu nombolo 12085 Merchiston, ukwakha ingxenye yesishagalolunye(9) (ezingxenyeni ezine(4)) kanye nokusele
- Nokuhlukaniswa kwepulazi elingu nombolo 12085 Merchiston, ukwakha ingxenye yesishagalombili(8) kanye nokusele ngaphansi kwesigaba 27(1)(g) soMthetho kaMasipala wokuHlelwa Kwezindawo kanye Nokuphathwa Kokusetshenziswa Komhlaba, 2017 (ochitshiyelwe), maqondana:
- Ukuhlanganisa ingxenye yokuqala (1) Elingu Nombolo 18039, Mevamhlophe kanye nengxenye yesishagalolunye (9) (ezingxenyeni ezine (4)) nengxenye yesishagalombili (8) yepulazi Elingu nombolo 12085 Merchiston ezihlonziwe ukwakha Ipulazi elizoba unombolo 18847, Mevamhlophe.
- Nokuhlanganisa ingxenye esele yepulazi elingu nombolo 18039, Mevamhlophe kanye nengxenye yokuqala (1) yepulazi elingu nombolo 11162, Atherfold, ukwakha ipulazi Elingu nombolo 18848simpson.

Indawo efakelwe lesi sicelo itholakala ngasemgwaqeni wesifundazwe owaziwa ngokuth u-R34, entshonalanga nedolobha laseMpangeni.

Ulwazi olubanzi ngalesisicelo nemiqulu yakhona ivulelekile ukuhlolwa ngokwenza isicelo sesikhathi sokuzobonana ngezikhathi zomsebenzi no:

- Mnumzane Frank Mayisela emahovisini kaMasipala Empangeni Civic Centre, ku Commercial Road, Empangeni, noma kwi-email ethi: MayiselaFT @umhlathuze.gov.za; noma
- Mnumzane Themba Mdumela eRichards Bay Civic Centre, Mark Strasse, noma umthinte kwi-email ethi, MdumelaT @umhlathuze.gov.za ngezikhathi zomsebenzi.

Imiqulu echaza kabanzi ngalesisicelo ingatholwa kwi- website kaMasipala ethi- www.umhlathuze.gov.za ngaphansi kweZaziso kusukela zingu- 1 kuNhlangulana 2023.

Ukuphikisa okubhaliwe noma izethulo eziqondene nokuhlongozwayo, ezibhalwe ngokucacile ukuthi `Ukuphikisana Nokuhlukaniswa Kanye Nokuhlanganiswa kwepulazi elingu nombolo 18039, Mevamhlophe, nokusele lwepulazi elingu nombolo 12085 Merchiston, Ingxenye yesine yepulazi elingu nombolo 12085 Merchiston, Kanye nengxenye yokuqala yepulazi elingu nombolo 11162, Atherfold `, ziveza kabanzi izizathu sokulwisana nalesisicelo mazilethwe kuMphathi kaMasipala ungakashayi umhlaka-3 kuNtulikazi 2023 kulefax: 035 907 5444, noma kwiEmail ethi: MayiselaFT @umhlathuze.gov.za (Kufakwe nalama-Email: creg@umhlathuze.gov.za & MdumelaT @umhlathuze.gov.za), noma iposelwe kwipostal address ebekiwe ngezansi. Umuntu oletha isiphikiso salesisicelo esikhundleni somnikazi wesiza kuyomele alethe nencwadi emgunyazayo ukuba alethe lesisiphikiso esikhundleni sakhe. Umasipala uyonqaba ukwamukela iziphikiso /izethulo ezingasekeliwe noma iziphikiso/izethulo ezilethwe selwedlulile usuku lokuvala. Ukuhluleka komuntu ukufaka noma ukuletha isiphikiso/isethulo ephendula lesisaziso uyobe esevaleleka ngapandle ekuqhubekeni nokuzimbandakanya nohlelo.

Civic Offices Private Bag X1004 RICHARDS BAY 3900

MR NKOSENYE ZULU UMPHATHI KAMASIPALA

02-06-2023

SR011604

NOTICE

FORM JJJ

LOST OR DESTROYED DEED

Notice is hereby given in terms of regulation 68 of the Deeds Registries Act, 1937, of the intention to apply for the issue of a certified copy of T20595 /2000 passed by PIETERMARITZBURG DEEDS OFFICE in favour of MERLE RENE POTTIER in respect of certain PORTION 1 OF ERF 845 ESHOWE EXTENSION NUMBER 3 which has been lost or destroyed.

All interested persons having objection to the issue of such copy are hereby required to lodge the same in writing with the Registrar of Deed at Pietermaritzburg within two weeks from the date of publication of this notice.

Dated at ESHOWE this 26TH Day of May 2023

Applicant:
W.E.White Attorneys
Address: 12 Osborn Road, Eshowe, 3815
E-mail address: mfmunro@wewhite.co.za
Contact number: 035-4741177
Ref: 05N554001

02-06-2023

SR011627

• PUBLIC / LEGAL NOTICE •

NOTICE OF PUBLIC PARTCIPATION FOR PROSPECTING RIGHT AND ENVIRONMENTAL AUTHORIZATION APPLICATION

ISIZULU

Isaziso Sohlelo Lokucela Ilungelo Lokubheka Ngokufunwa ngokoMthetho WoMineral kanye NePetroleum Resources Development Act (MPRDA) (Act 28 of 2002) mayelana nokufunwa kwamalahle **kwingxenye esele yepulazi i- Reserve 3 15822** endaweni yesiFunda sikaMantshi saseu**Mkhayakude** lsifundazwe sa**Kwa-Zulu Natal.**

ISIMEMO SOKUBHALISA NOKUPHAWULA

Isaziso sikhishwa ngokomthetho wokuthuthukiswa kweziMbiwa Nezimbiwam kanye Phethiloli (MPRDA) (uMthetho wama-28 wezi-2002) kanye nemithethonqubo ye-EIA ka-2014, eshicilelwe ngaphansi kwesaziso sikahulumeni esingunombolo 982 kuGazethi No. 3822 mhla zingu-8 kuZibandlela kunyaka ka-2014, esachitshiyelwa mhla zingu-7 kuMbasa kunyaka ka-2017 futhi ngu GN 517 ngo-11 Juni 2021, sokuthi **Tomowize (Pty) Ltd** lufake isicelo seLungelo Lokuhlola amaminerali ashiwo ngenhla **DMRE Ref: KZN 30/5/1/1/2/11409 PR.**

Njengengxenye yenqubo ye-EIA, ikakhulukazi inqubo yokubamba iqhaza komphakathi kule phrojekthi ehlongozwayo,Abanentshisekelo Nabathintekayo (I&APs) bayamenywa ukuba babhalise futhi bathumele ngomusa noma yikuphi ukuphawula noma ukukhathazeka ukuze kufinyelele kwi-**Public Participation Process (PP) Officer: uNksz Boitumelo Moholola,** kusetshenziswa imininingwane yokuxhumana enikezwe ngezansi. Umphakathi uyamenywa futhi ukuthi ubuyekeze futhi uphawule mayelana Nohlaka Lombiko Wokuhlola Okuyisisekelo kanye ne-EMPr. Uhlaka lwe-BAR & EMPr luzotholakala ukuthi lubuyekezwe esikhathini sekhalenda lezinsuku ezingama-30 kusukela **ngoMsombuluko mhla zi-3 kuNtulikazi wezi-2023 ukuya ngoLwesibili mhla ziyi-1 kuNcwaba wezi-2023 (ngaphandle kwamaholide).**

Lo mbiko uzotholakala **KwaMsane Public Library** (KwaMsane Township, Nomathiya Street, Mtubatuba, 3935) kanye nase **Mtubatuba Public Library** (108 Bouganvilla road, Mtubatuba, 3935). Ikhophi ethambile iyatholakala kwa-**Singo Consulting (Pty) Ltd** uma icelwa, kusetshenziswa **imininingwane** yokuxhumana ye- PPP officer ne-Environmental Assessment Practitioner (EAP) ngezansi.

Amazwana nge-Draft BAR & EMPr kufanele athunyelwe ngaphambi komhla ziyi-**1 ku-Ncwaba 2023.**

ENGLISH

Notice of the Prospecting Right Application Process as per the Mineral and Petroleum Resources Development Act (MPRDA) (Act 28 of 2002) for the prospecting of **Coal on a portion of the remaining extent** of the farm **Reserve 3 15822** situated in the Magisterial District of **uMkhanyakude** in **Kwa-Zulu Natal Province.**

INVITATION TO REGISTER AND COMMENT

Notice is hereby given in terms of the Mineral and Petroleum Resources Development Act (MPRDA) (Act 28 of 2002) and EIA regulations 2014, published under Government Notice No. 982 in Gazette No. 3822 of 4 December 2014, amended on 7 April 2017 and by GN 517 on 11 June 2021 that Tomowize (Pty) Ltd has applied for a Prospecting Right for the above-mentioned mineral with **DMRE Ref: KZN 30/5/1/1/2/11409 PR.**

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 **Public Participation Process (PPP) Officer: Ms Boitumelo Moholola**, using the contact details provided below. The public is also invited to review and comment on the Draft Basic Assessment Report (DBAR)and Environmental Management Programme Report (EMPr). The DBAR & EMPr will be available for review for 30 days' calendar period from **Monday the 3rd of July 2023 to Tuesday the 1st of August 2023 (excluding public holidays).**

This report will be available at **KwaMsane Public Library** (KwaMsane Township, Nomathiya Street, Mtubatuba, 3935) and **Mtubatuba Public Library** (108 Bouganvilla road, Mtubatuba, 3935). A soft copy is available from **Singo Consulting (Pty) Ltd** upon request, using the contact details of the PPP Officer and Environmental Assessment Practitioner (EAP) below.

Comments on the Draft BAR & EMPr should be submitted no later than the **1st of August 2023.**

EAP, PPP OFFICER AND APPLICANT CONTACT DETAILS:

Singo Consulting (Pty) Ltd
Physical Address.: Office 870, 5 Balalaika Street, Tasbet Park Ext. 2, eMalahleni (Witbank), 1040
EAP.: Ms. Bongokuhle Sibiya
PPP. Officer.: Ms. Boitumelo Moholola
Cell No.: +27 71 130 9956
Tel No.: +27 13 692 0041
Fax No.: +27 86 514 4103
Email: boitumelo@singoconsulting.co.za

Tomowize PTY (LTD)
Physical Address: 50 Toerien Street, Klipfontein, eMalahleni, 1035
Contact person: Mr. Sonwabo Debedu
Cell No.: +27 79 494 0068
Tel No.: +27 13 692 4378
Email: sonwabo@tomowize.co.za

NOTICE OF PUBLIC PARTCIPATION FOR PROSPECTING RIGHT AND ENVIRONMENTAL AUTHORIZATION APPLICATION

ISIZULU

Isaziso sesicelo selungelo lokuhlola: Jaments (Pty) Ltd ifake isicelo eMnyangweni Wezokumbiwa Namandla **(DMRE Ref: KZN 30/5/1/1/2/11412 PR)** ngenhloso yokuhlola **amalahle**, engxenyeni yobude obusele **Farm Mdletshe 17437**, ingxenye yengxenye esele yeNdawo **Farm Lot 10 12984**, ingxenye yokuqala kanye nengxenye yendawo esele **yeFarm Horseshoe bend 11688**, ingxenye yeshumi nantathu(13), ingxenye yesilinganiso esisele lsiqiwu **sePulazi Reserve No. 3 15822**, ingxenye yengxenye yokuqala(1) kanye nengxenye yobubanzi obusele **bePulazi Mtolo 14390** kanye nengxenye yesiGaba **seFarm Reserve 12 15832** eSifundazweni sikaMantshi **eMkhanyakude naseZululand, esiFundazweni saKwazulu Natali.**

Isaziso sikhishwa ngokomthetho wokuthuthukiswa kweziMbiwa Nezimbiwam kanye Phethiloli (MPRDA) (uMthetho wama-28 wezi-2002) kanye nemithethonqubo ye-EIA ka-2014, eshicilelwe ngaphansi kwesaziso sikahulumeni esingunombolo 982 kuGazethi No. 3822 mhla zingu-8 kuZibandlela kunyaka ka-2014, esachitshiyelwa mhla zingu-7 kuMbasa kunyaka ka-2017, sokuthi **Jaments (Pty) Ltd** lufake isicelo seLungelo Lokuhlola amaminerali ashiwo ngenhla.

ISIMEMO SOKUPHAWULA NOKUVEZA IMIBONO MAYELANA NALE APPLICATIONI

Ukubhaliswa Njengabantu Abanentshisekelo Nabathintekayo: Njengengxenye yenqubo ye-EIA, ikakhulukazi Inqubo Yokubambiqhaza Komphakathi yale phrojekthi ehlongozwayo, Abanentshisekelo Nabathintekayo (I&APs) bayamenywa ukuba babhalise futhi balethe ngomusa noma yikuphi ukuphawula noma ukukhathazeka ukuze (Ulwazi Lwendawo) kufinyelelwe **kuMnuz Khodani Mathako** esebenzisa imininingwane yokuxhumana enikezwe ngezansi. Umphakathi uyamenywa ukuthi ubuyekeze futhi uphawule ngombiko owuhlaka wokuhlola okuyisisekelo kanye nombiko wohlelo lokulawulwa kwemvelo (EMPr). Uhlaka lokuqala lwe-BAR kanye ne-EMPr izotholakala ukuthi ibuyekezwe isikhathi sezinsuku ezingu-30 kusukela **ngoMsombuluko mhla zi-3 kuNtulikazi wezi-2023 kuya ngoLesibili mhla ziyi-1 kuNcwaba wezi-2023 (Ngaphandle Kwamaholide Omphakathi).** Lombiko uzotholakala kwi- **Usuthu Public Library (Road P736, Usuthu Reserve, Edengeni Area Nongoma) naku Nongoma Local Municipality (Lot 103 Main Street, Nongoma 3950) naku Big 5 Hlabisa Local Municipality (Lot 808, Off Masson Street, Hlabisa)** kanye nekhophi lephepha uma ucela kwa-**Singo Consulting (Pty) Ltd**, usebenzisa imininingwane yokuxhumana ye-EAP engezansi.

INVITATION TO COMMENT

Registration as Interested & Affected Party: As part of the EIA process, more especially the Public Participation Process (PPP) for this proposed project, Interested and Affected Parties (I&APs) are invited to register and kindly submit any comments or concerns (local knowledge) to reach **Mr Khodani Mathako** using the contact details provided below. The public is also invited to review and comment on the Draft Basic Assessment Report and Environmental Management Programme Report (EMPr). The draft BAR & EMPr will be available for review for 30 days calendar period from **Monday the 3rd of July 2023 to Tuesday the 01st of August 2023. (Excluding Public Holidays).** This report will be available at **Usuthu Public Library (Road P736, Usuthu Reserve, Edengeni Area Nongoma) and Nongoma Local Municipality (Lot 103 Main Street, Nongoma 3950) and Big 5 Hlabisa Local Municipality (Lot 808, Off Masson Street, Hlabisa)** and a soft copy upon request from **Singo Consulting (Pty) Ltd**, using the EAP's contact details below.

EAP Contact Details:

Singo Consulting (Pty) Ltd
Physical Address.: Office 870, 5 Balalaika Street, Tasbet Park Ext. 2, eMalahleni (Witbank), 1040
Candidate EAP.: Mr. Khodani Mathako
EAP.: Mr Abel Mojapelo
Cell No.: +27 76 054 1408
Tel No.: +27 13 692 0041
Fax No.: +27 86 514 4103
Email: khodani@singoconsulting.co.za

Applicant Details:

JAMENTS
Pentagon House 5 Neven Street, Model Park Emalahleni, 1035
Contact person: Mr. Bongani Given Simelane
Tel No.: +27 13 591 2120
Email: admin@jaments.co.za

Figure 11: Proof of newspaper publication.

Written notification

I&AP's and other key stakeholders were directly informed of the proposed development by e-mail with an attached Background Information Document (BID), Regulation 2.2 Map, Coordinates and KML on the 2nd of June 2023 and it is a continuous process. I&Aps are given 30 days to comment and/or raise issues of concern regarding the proposed development. Stakeholders will continue to be given an opportunity to participate in the process and express their views.

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

The proposed farms belongs to different landowners as outline on the title deed attached (see Figure 10). The landowners were notified about the proposed project through publishing of newspaper on the 2nd of June 2023 and plugging of site notices at the entrance of the farm on the 10th of June 2023 and 11th of June 2023. Consultation was done face to face on the 7th of June 2023- 11th of June 2023 through BID, landowner notification letters and title deed to notify them about the proposed prospecting right application submitted to DMRE on the proposed farms.

Site notice placement

To inform surrounding communities, affected and adjacent landowners of the proposed development, site notices were erected onsite and at visible locations close to the site, around the community, Mtubatuba Local Municipality, Mtubatuba Public Library, Department of Environmental affairs and Tourism, Big Five Hlabisa Public Library and Big Five Hlabisa Local Municipality on the 07th of June 2023-11th of June 2023.

Consultation and correspondence with I&AP's and stakeholders

Draft Basic Assessment Report (BAR) and Environmental Management Programme report (EMPr) will be available for review from Monday the 19th of July 2023 to Wednesday the 18th of August 2023 (Excluding Public Holidays). The stakeholders were be given 30 days review calendar period to raise issues/concerns about the proposed project based on the DRAFT BAR and EMPr. Copies of the Draft BAR and EMPr were delivered and shared via emails to all organs of state and relevant authorities, to registered I&APs and upon request from Singo Consulting (Pty) Ltd. The Draft BAR and EMPR was made available at Mtubatuba Local Municipality, Mtubatuba Public Library, Department of Environmental Affairs and Tourism, Big Five Hlabisa Public Library and Big Five Hlabisa Local Municipality and soft copies will also be shared via emails. Reminder emails were shared with

stakeholders who did not submit their comments they were notified that the report is being prepared for submission to Competent Authority.

Next phases of the public participation process

All comments to be received from I&APs and organs of state and responses 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 to evaluate/ assess the report to reach a decision on the application. Thereafter the registered I&Aps will be notified of the CA's decision. Stakeholder database will be updated throughout the various phases associated with the proposed project.

WinDeed Database D/O Property - List

GV, 11688, PIETERMARITZBURG

Lexis® WinDeed

Any personal information obtained from this search will only be used as per the Terms and Conditions agreed to and in accordance with applicable data protection laws including the Protection of Personal Information Act, 2013 (POPI), and shall not be used for marketing purposes.

SEARCH CRITERIA			
Search Date	2023/06/01 08:00	Farm Number	11688
Reference	-	Registration Division	GV
Report Print Date	2023/06/01 08:01	Portion Number	-
Farm Name	HORSESHOE BEND	Remaining Extent	NO
Deeds Office	Pietermaritzburg	Search Source	WinDeed Database

PORTION LIST				
Portion	Owner	Title Deed	Registration Date	Purchase Price (R)
0	MARK CHENNELLS PTY LTD	T42113/2001	2001/08/23	3 630 000
1	MARK CHENNELLS PTY LTD	T668/2000	2000/01/11	22 082 083

WinDeed Database D/O Property - List

GV, 14390, PIETERMARITZBURG

Lexis® WinDeed

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SEARCH CRITERIA			
Search Date	2023/06/01 08:16	Farm Number	14390
Reference	-	Registration Division	GV
Report Print Date	2023/06/01 08:16	Portion Number	-
Farm Name	MTOLO	Remaining Extent	NO
Deeds Office	Pietermaritzburg	Search Source	WinDeed Database

PORTION LIST				
Portion	Owner	Title Deed	Registration Date	Purchase Price (R)
0	INGONYAMA TRUST-TRUSTEES	G7/1969	1969/01/13	-
1	R S A	T451/1969	1969/01/13	-

Deeds Office Property - List

GV, 15822, PIETERMARITZBURG

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SEARCH CRITERIA			
Search Date	2023/06/01 08:11	Farm Number	15822
Reference	-	Registration Division	GV
Report Print Date	2023/06/01 08:12	Portion Number	-
Farm Name	RESERVE NO 3	Remaining Extent	NO
Deeds Office	Pietermaritzburg	Search Source	Deeds Office

PORTION LIST				
Portion	Owner	Title Deed	Registration Date	Purchase Price (R)
0	INGONYAMA TRUST-TRUSTEES	T7093/2002	-	-
11	MTUBATUBA MUNICIPALITY	T66384/2000	-	-

WinDeed Database D/O Property - List

HU, 15832, PIETERMARITZBURG

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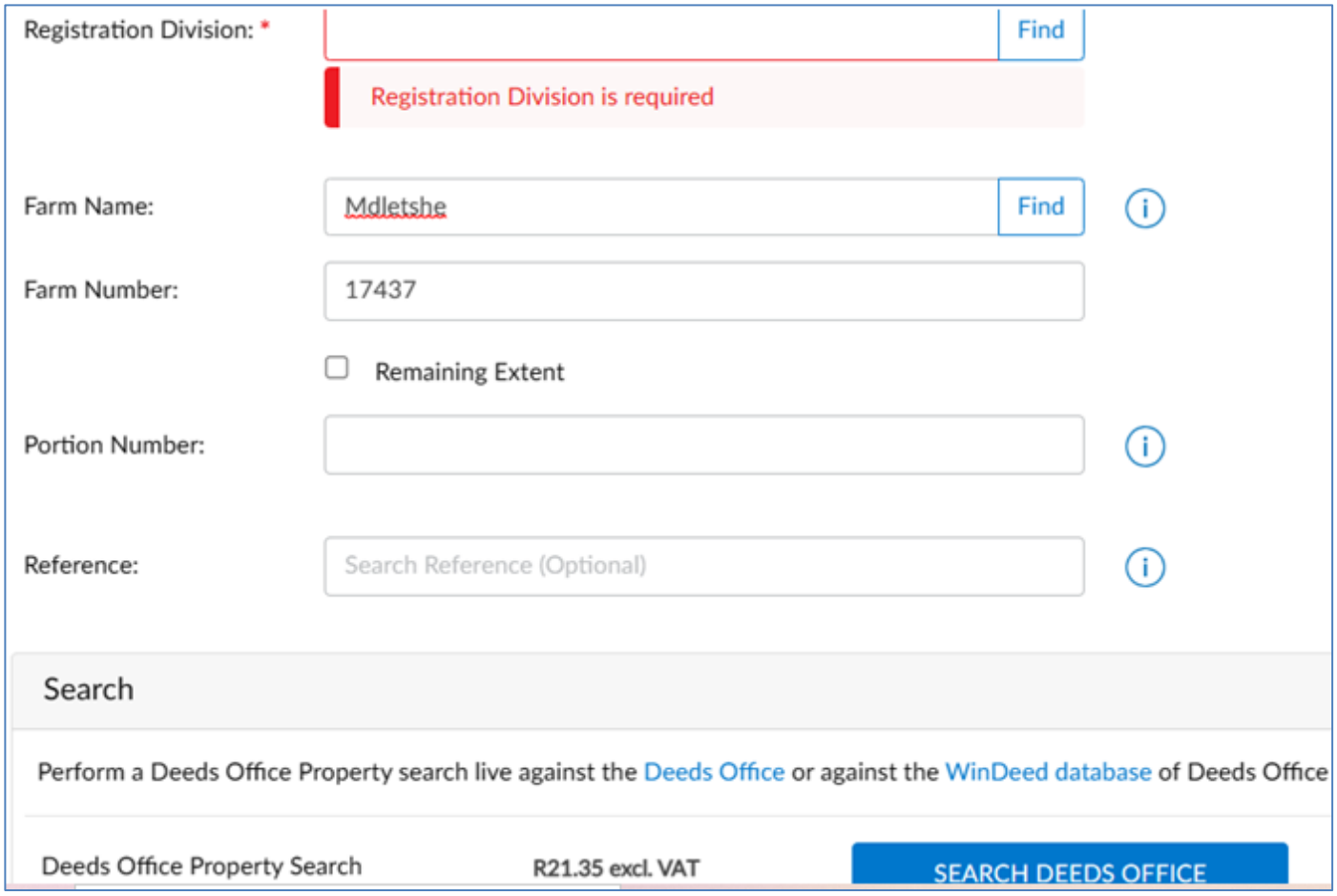
SEARCH CRITERIA

Search Date	2023/06/01 08:26	Farm Number	15832
Reference	-	Registration Division	HU
Report Print Date	2023/06/01 08:27	Portion Number	-
Farm Name	RESERVE NO 12	Remaining Extent	NO
Deeds Office	Pietermaritzburg	Search Source	WinDeed Database

PORTION LIST

Portion	Owner	Title Deed	Registration Date	Purchase Price (R)
0	INGONYAMA TRUST-TRUSTEES	T7098/2002	2002/02/18	-
1	** FOR INFO REFER TO REGISTRAR OF DEEDS **	REPLACED	-	-
5	TSHABALALA MANDLENKOZI KAIFAS	T9152/1988	1988/04/19	8 092
6	REGIONAL & LAND AFFAIRS	T3707/1989	1989/02/17	-
7	REGIONAL & LAND AFFAIRS	T3707/1989	1989/02/17	-
8	REGIONAL & LAND AFFAIRS	T3707/1989	1989/02/17	-
9	INGONYAMA TRUST-TRUSTEES	T18948/2003	2003/04/11	-
10	INGONYAMA TRUST-TRUSTEES	T18950/2003	2003/04/11	-
11	INGONYAMA TRUST-TRUSTEES	T18949/2003	2003/04/11	-
12	INGONYAMA TRUST-TRUSTEES	T18952/2003	2003/04/11	-
13	INGONYAMA TRUST-TRUSTEES	T18951/2003	2003/04/11	-
15	** FOR INFO REFER TO REGISTRAR OF DEEDS **	REPLACED	-	-
17	INGONYAMA TRUST-TRUSTEES	T64292/2000	2000/12/14	-
18	INGONYAMA TRUST-TRUSTEES	T64293/2000	2000/12/14	-
19	** FOR INFO REFER TO	REPLACED	-	-



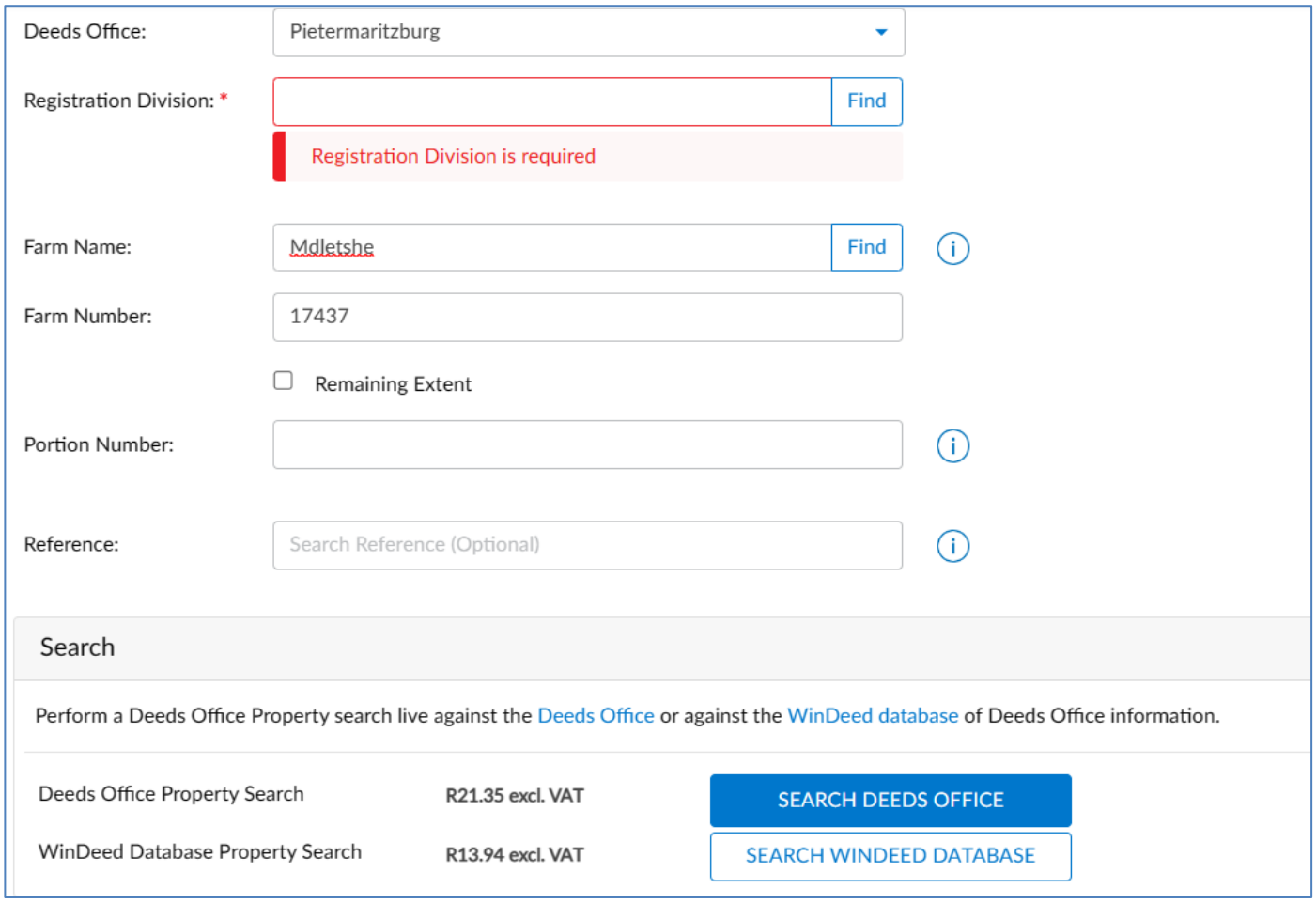


Figure12: Tittle deed of the proposed project.

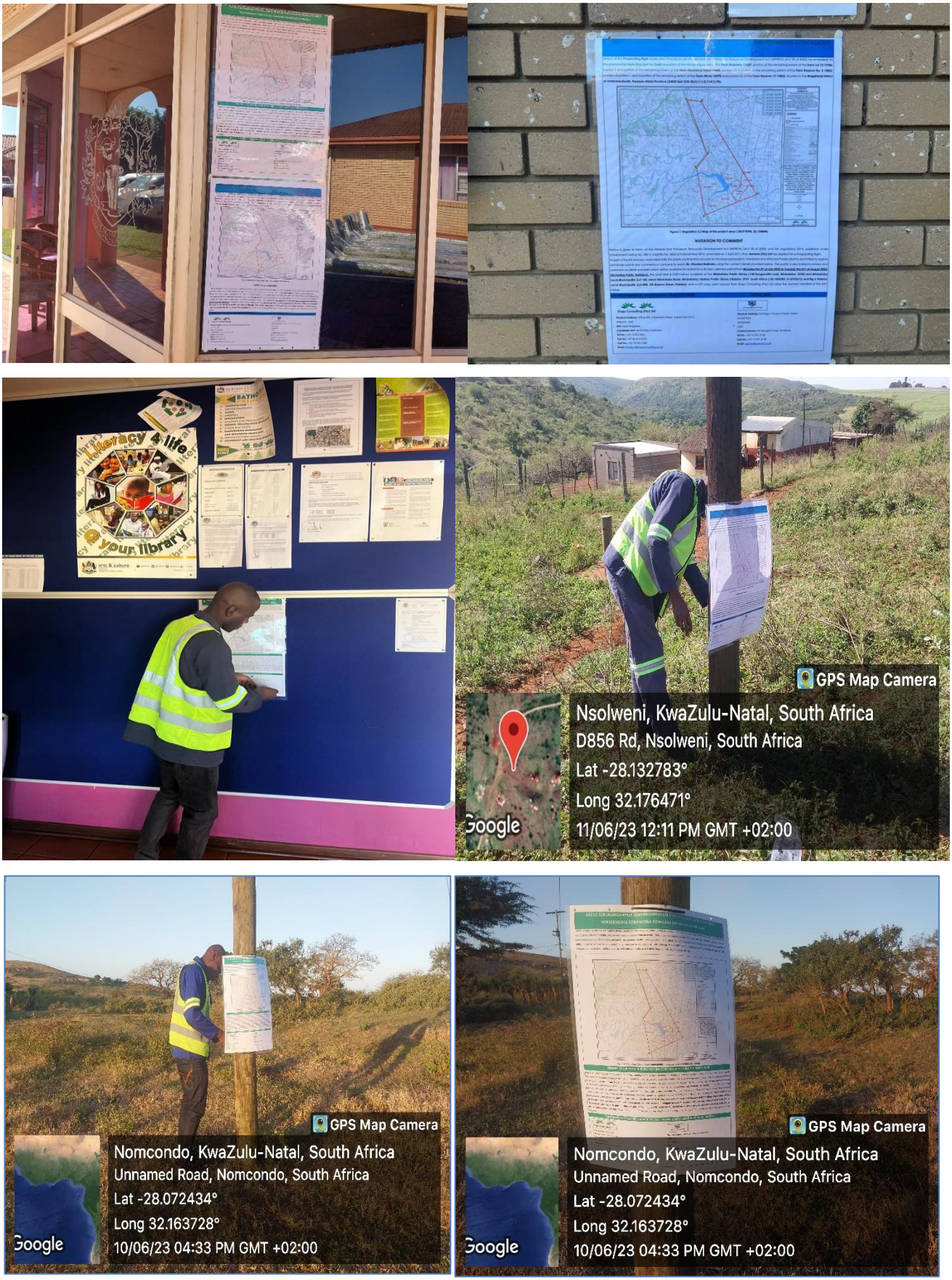


Figure 13: Plugging of site notices.

11.1 Summary of issues raised by IAPs

The over-riding objective during this consultative process has been to create an atmosphere conducive to sharing knowledge with the stakeholders to ensure that issues identified are used in a positive and constructive manner. All parties will be given the opportunity to raise their issues – be they fact or perception. The number and frequency with which issues are raised, and the extent to which they are debated gives a direct indication of the following:

- The success of the participative process.
- The perceived significance of the issues; and
- A measure of the sustainability of the outcome/solution.

All issues and comments raised by IAPs are summarized in the Comments and response Table below. The table will be updated with any comments received during the commenting period, Refer to Consultation Report.

List Authorities Identified and Notified

The following authorities have been identified and notified of the proposed Prospecting Right Application project:

- Mtubatuba Local Municipality
- Big Five Hlabisa Local Municipality.
- Kwazulu Natal Department of Water and Sanitation.
- Department of Agriculture, Forestry and Fisheries
- Department of Environmental Affairs
- Department of Land Restitution Commission
- Department of Agriculture, Rural Development and Land Reform
- South African National Roads Agency Ltd (SANRAL).
- South African Heritage Resources Agency.
- South African Biodiversity Institute
- Sasol
- Eskom SOC Limited.

Kindly note that Full Consultation is incorporated in the Consultation Report

12 Environmental attributes associated with the development footprint (Baseline Environment)

The objective of this section is to describe the type of environment that will be affected by the proposed activity. The baseline information presented below will be used to determine protection, remedial measures, and environmental management objectives. The methodology used to assess the baseline environment is described below.

An in-depth assessment of the proposed application was undertaken using the following available information:

- EIA Screening Tool.
- South African National Biodiversity Institute (SANBI).
- Google Earth.

A site assessment was conducted to confirm the information obtained through the desktop study and to assess the current state of the environment as well as the need for specialist studies. Consultation with the landowners were also utilised to determine the environmental attributes of the application area.

12.1 Geology

The Emakwezini Formation, Natal Formation, and Volksrust Formation are geological formations underlay the project area.

Emakwezini Formation

The Emakwezini Formation is a Triassic-aged sedimentary rock formation that is part of the Karoo Supergroup. It is located in the northern part of KwaZulu-Natal province, and it is known to contain several coal seams of economic interest. The formation consists mainly of sandstones, siltstones, and shales, with the coal seams occurring within the shales. The coal in this formation is generally of good quality, with low ash and sulfur content (Esterhuizen et al., 2004).

Letaba Formation

The Letaba Formation is part of the Ecca Group, which is the lowermost of the two main groups of the Karoo Supergroup. The Letaba Formation is known for its extensive coal deposits, which were formed during the Permian period, around 300 million years ago. The coal deposits are of economic importance and have been extensively mined in the region. The Formation consists primarily of sandstones, shales, and coal seams. The coal seams are interbedded with sandstones and shales and range in thickness from a few centimeters to several meters. The coal seams are

generally low- to medium-grade bituminous coals, with a relatively high ash content.

Natal Formation

The Natal Formation is also part of the Karoo Supergroup and is located in the southeastern part of South Africa. This formation is Late Permian in age and is known to contain several coal seams, as well as oil shale deposits. The formation consists of sandstones, siltstones, and shales, with the coal seams occurring within the shales. The coal in this formation is generally of good quality, with low ash and sulfur content (Esterhuizen et al., 2004).

Volksrust Formation

The Volksrust Formation is a Late Permian-aged sedimentary rock formation that is also part of the Karoo Supergroup. It is located in the eastern part of South Africa and is known to contain several coal seams of economic interest. The formation consists mainly of sandstones, siltstones, and shales, with the coal seams occurring within the shales. The coal in this formation is generally of good quality, with low ash and sulfur content (Esterhuizen et al., 2004).

Karoo Dolerite

The Karoo Dolerite is a series of igneous intrusions that occurred during the Late Permian and Early Triassic periods in South Africa. These intrusions are widespread and cover a large area of the Karoo Supergroup rocks, including the Emakwezini, Natal, and Volksrust formations. The dolerite is known to have had a significant impact on the coal deposits in the area, as it has altered the structure of the coal seams and affected the quality of the coal (Bunton et al., 2011).

Coal Seam Geology

The Emakwezini Formation, Natal Formation, and Volksrust Formation in South Africa are known to contain several coal seams of economic interest.

In the Emakwezini Formation, the coal seams occur within the shales, which are interbedded with sandstones and siltstones. The coal seams in this formation are generally thin, ranging from a few centimeters to several meters in thickness. The coal is generally of good quality, with low ash and sulfur content. The most prominent coal seam in this formation is the No. 2 Seam, which is up to 2 meters thick and is the target of most mining operations in the area (Esterhuizen et al., 2004).

In the Natal Formation, the coal seams occur within the shales, which are interbedded with sandstones and siltstones. The coal seams in this formation are generally thicker than those in the Emakwezini Formation, ranging from a few meters to more than 10 meters in thickness. The coal is generally of good quality, with low ash and sulfur content. The most prominent coal seam in this formation is the No. 2 Seam, which is up to 10 meters thick in some areas and is the target of most mining operations in the area (Esterhuizen et al., 2004).

In the Volksrust Formation, the coal seams also occur within the shales, which are interbedded with sandstones and siltstones. The coal seams in this formation are generally thicker than those in the Emakwezini Formation but thinner than those in the Natal Formation, ranging from a few meters to several meters in thickness. The coal is generally of good quality, with low ash and sulfur content. The most prominent coal seam in this formation is the No. 4 Seam, which is up to 4 meters thick and is the target of most mining operations in the area (Esterhuizen et al., 2004). Overall, the coal seams associated with these formations are important sources of energy for South Africa and have been extensively mined for several decades.

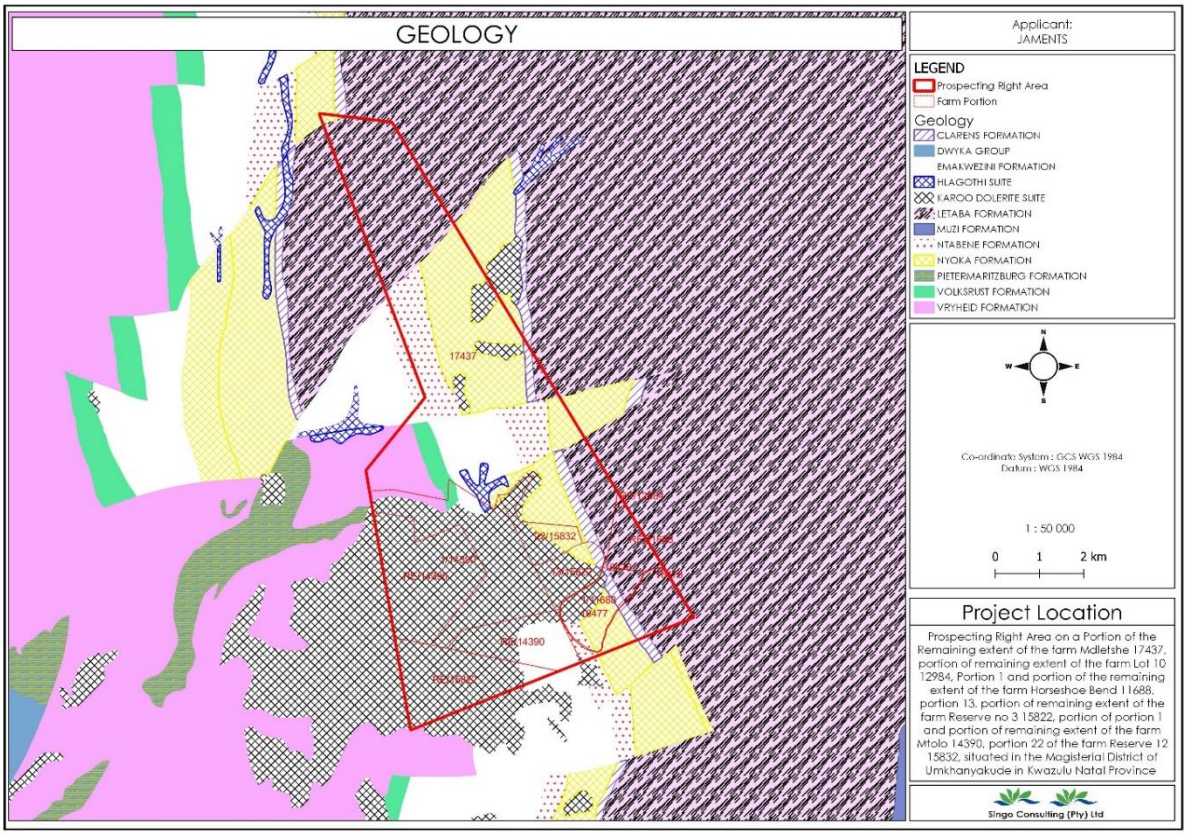


Figure 14: Geology map of the project area.

12.2 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. The proposed prospecting right area is characterized by both steep and flat slope which are having rivers, wetlands and the area is suitable for agricultural and residential activities.

The proposed project area has Hluhluwe dam, perennial rivers, and channelled valley bottom wetlands that were observed during site assessment, and they contributes to the percentage of Freshwater in South Africa. The contour lines of the proposed project area is 20m interval as indicated on Figure 15. During site assessment, the project area was covered with mountains, cultivated soya beans, sugar canes, residential area. Figure 16 below depicts the overview of the proposed project area.

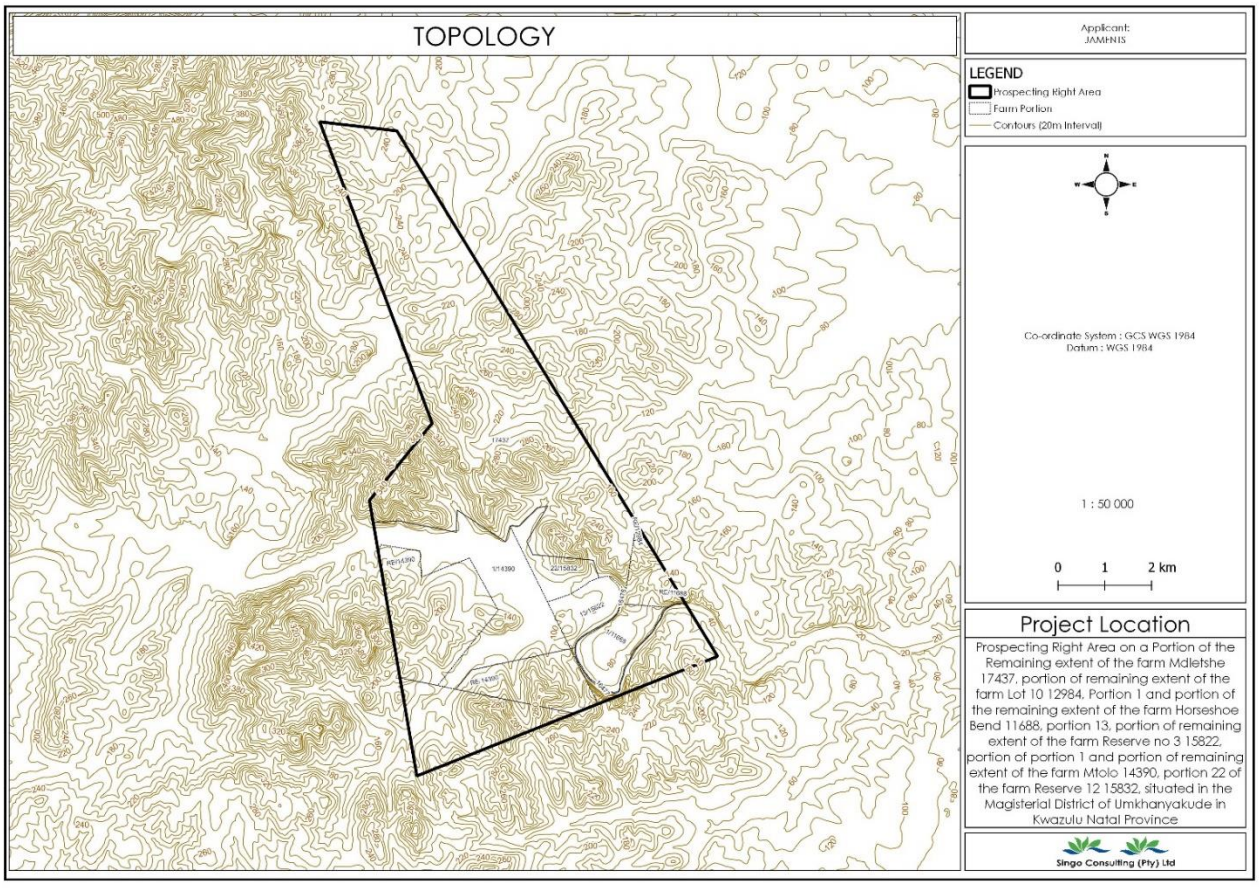


Figure 15: Topology map of the project area.

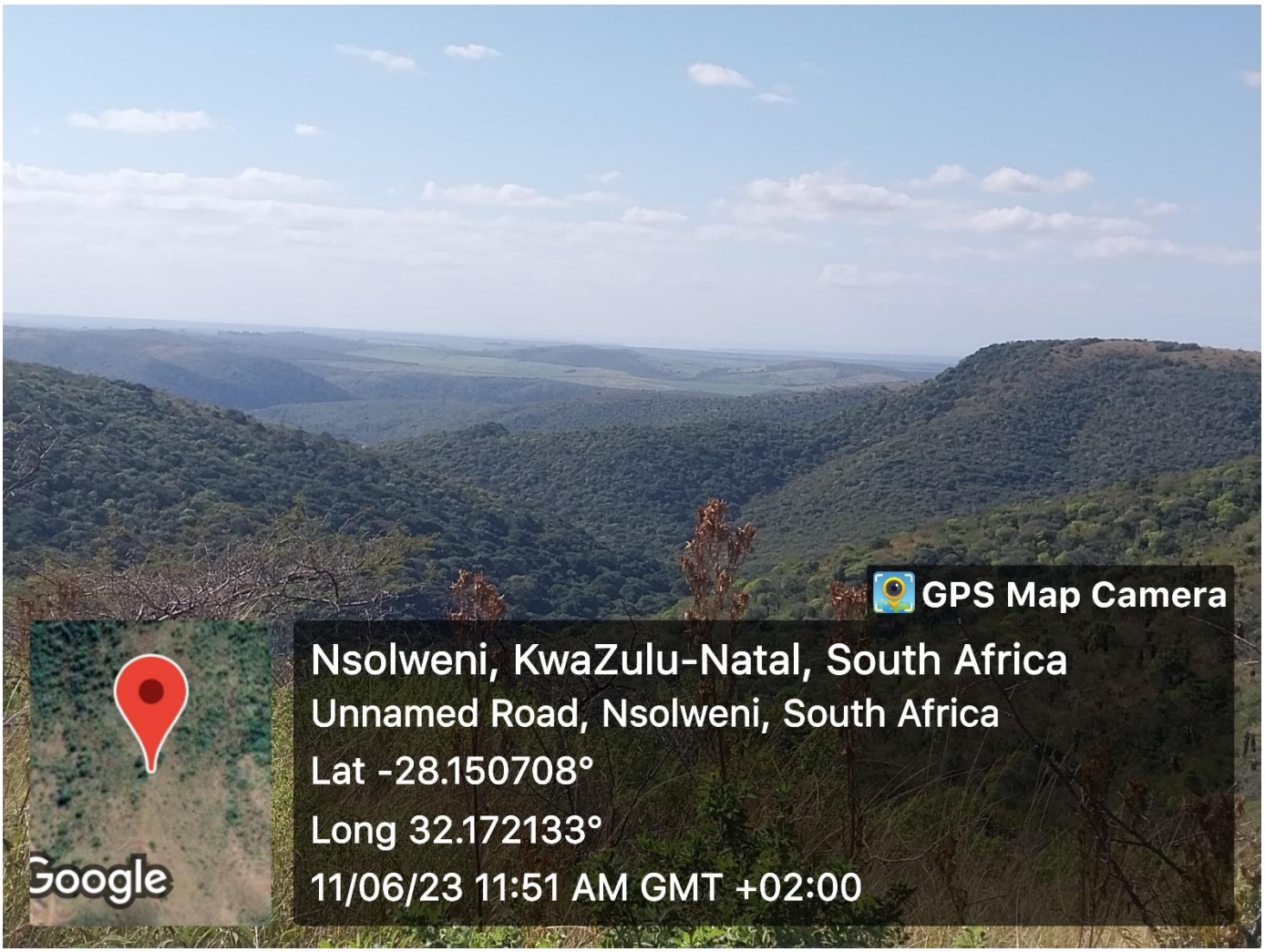


Figure 16: Overview of the proposed project area.

12.3 Climate

According to the map produced by Singo Consulting (Pty) Ltd, Database Manager, the average annual minimum temperature of the project area is less than 8°C and the mean annual precipitation range between 801 to 1000 mm (see Figure 16 and Figure 18).

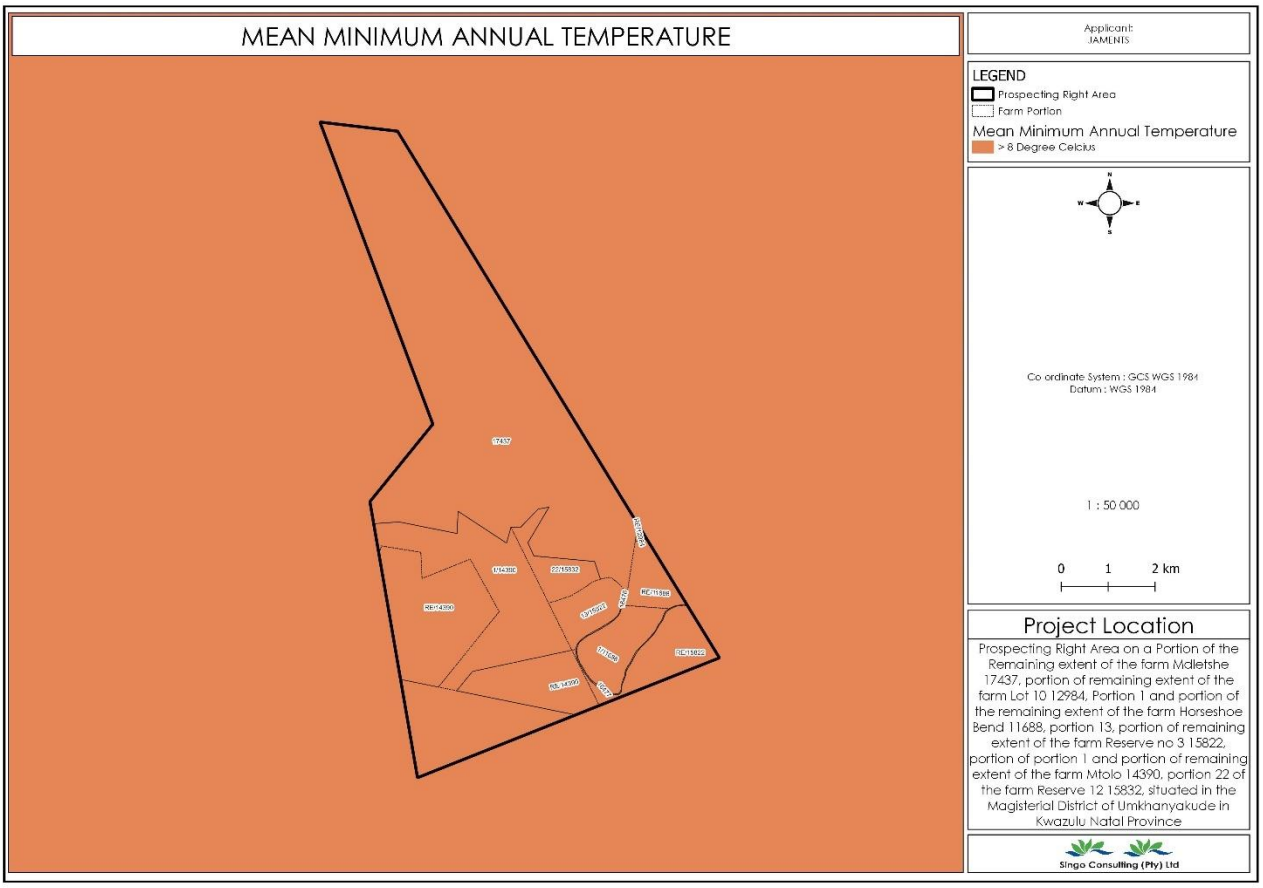


Figure 17: Temperature map of the proposed area.

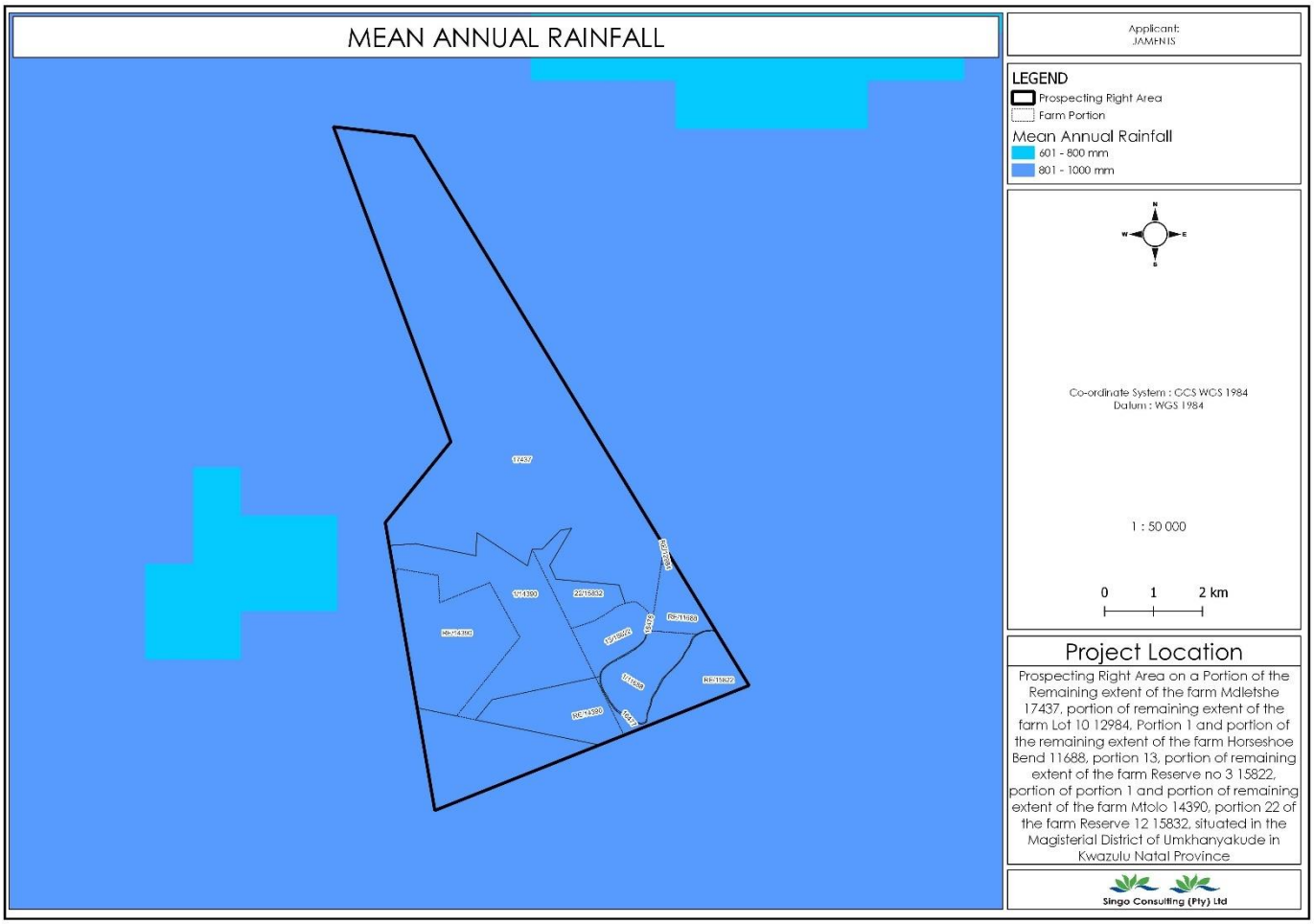


Figure 18: Depicts mean annual rainfall of the proposed area.

12.4 Soils, Land Use and Capability

According to the map produced by Singo Consulting (Pty) Ltd Database Manager, the proposed prospecting right area is largely covered with Association of with the Lithosols (shallow soils on hard or weathering rock) soils, then followed by Soils with a pedocutanic horizon and the other portion of Association of Classes 5, 6, 10, 11, 12: Undifferentiated clays soils and Freely drained structureless soils (classes 17 and 19: structureless and textural contrast soil, freely drained, structureless soils and small area is covered with association of Classes 1 to 4: Undifferentiated structureless soils (see Figure 19). Figure 20 below shows a typical example of the soil type of the proposed project area. The detailed information about the soil type and impacts of the proposed project on soil are included on the soil study conducted by specialist from Singo consulting (Pty) Ltd. The agricultural theme sensitivity of the application area is indicated as high sensitivity according to the National Web-based Environmental Screening Tool (see Figure 21). The other area of the proposed site is used for soyabeans cultivation, sugar cane farming, residential activities, and livestock grazing (see Figure 22). The land capability has not been described in detail as the impact of prospecting will not significantly affect the land capability of the area.

Association of Classes 1 to 4: Undifferentiated structureless soils.

The Freely drained, structureless soils can be defined based on their soil depth, Soil Drainage, erodibility, and natural fertility.

Soil depth

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

Soil Drainage

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

Erodibility

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

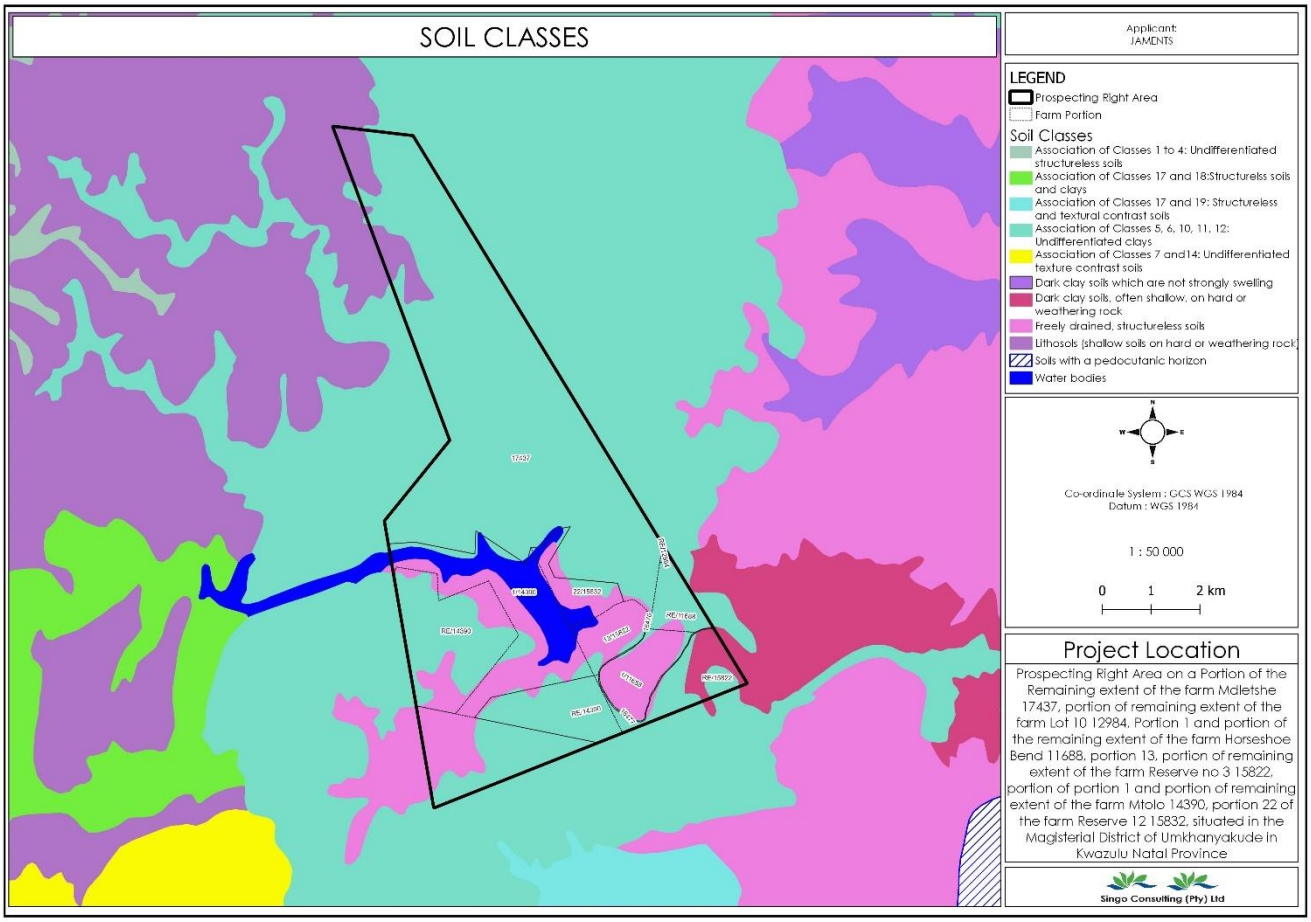
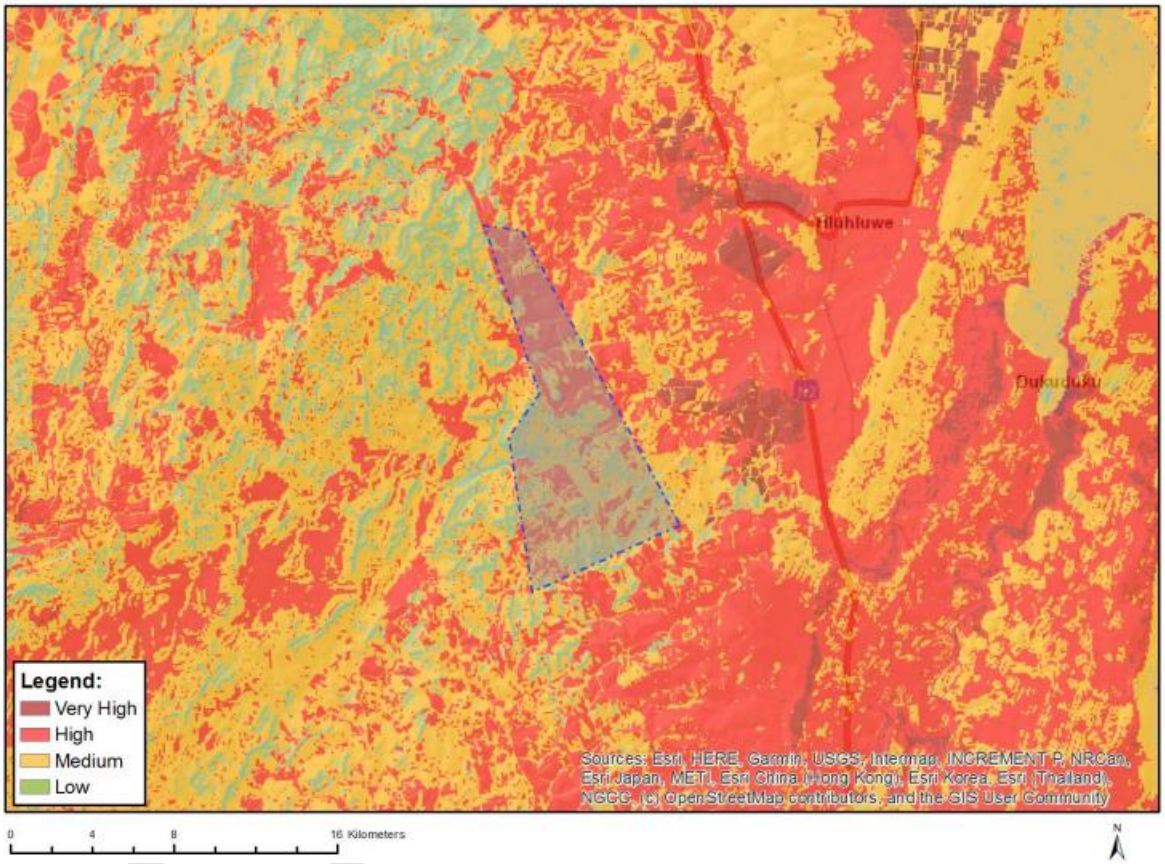


Figure 19: Soil type of the proposed project area.

Figure 20: Typical example of soil type of the project area.

MAP OF RELATIVE AGRICULTURE THEME SENSITIVITY



Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
	X		

Sensitivity Features:

Sensitivity	Feature(s)
High	Land capability;09. Moderate-High/10. Moderate-High
High	Subsistence Farming 1;Land capability;09. Moderate-High/10. Moderate-High
High	Subsistence Farming 1;Land capability;06. Low-Moderate/07. Low-Moderate/08. Moderate
High	Subsistence Farming 1;Land capability;01. Very low/02. Very low/03. Low-Very low/04. Low-Very low/05. Low
Low	Land capability;01. Very low/02. Very low/03. Low-Very low/04. Low-Very low/05. Low
Medium	Land capability;06. Low-Moderate/07. Low-Moderate/08. Moderate

Figure 21: Agricultural theme sensitivity of the application area.

12.5 Terrestrial Biodiversity

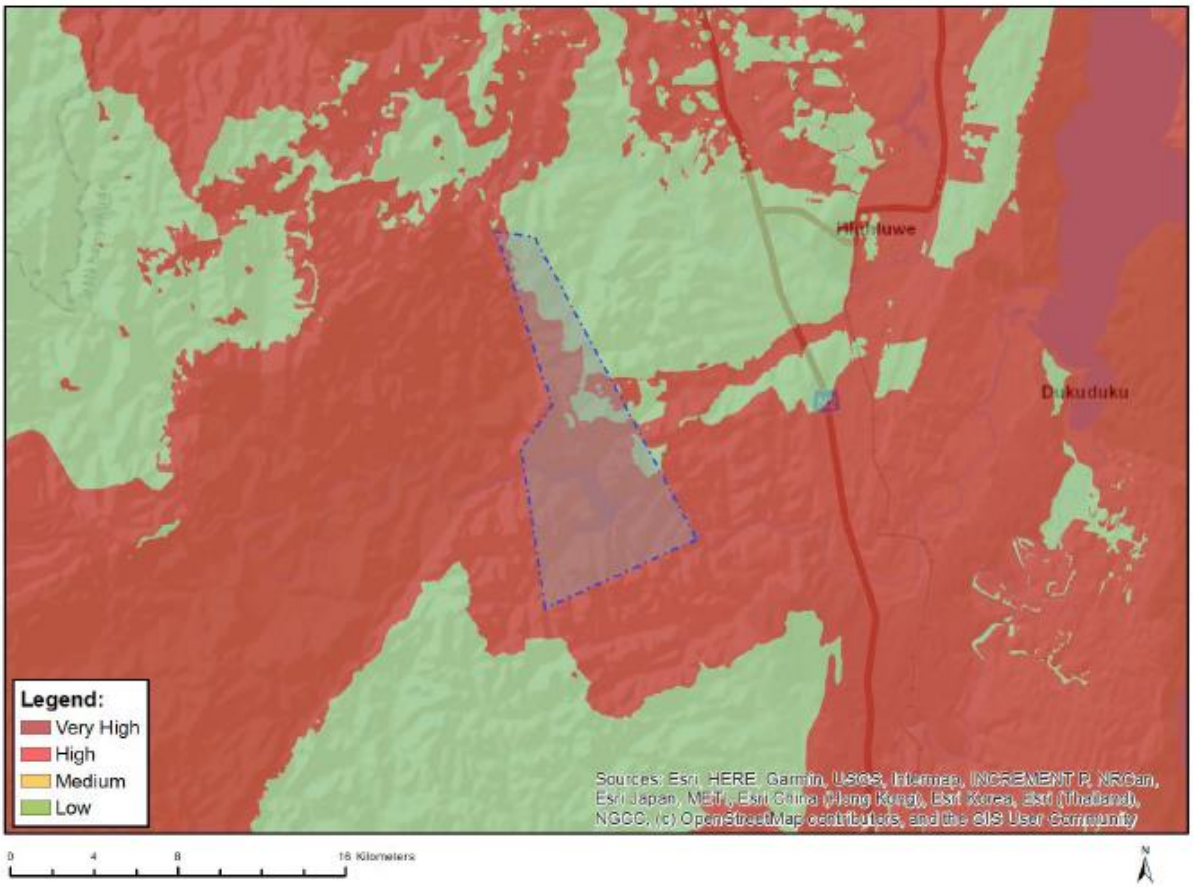
Biodiversity is a comprehensive umbrella term for the extent of nature's variety in the natural system; both in number and frequency. It is often understood in terms of the wide variety of plants, animals and microorganisms, the genes they contain and the ecosystem they form. The biodiversity we see today is the result of billions of years of evolution, shaped by natural processes and, increasingly, by the influence of humans. It forms the web of life of which we are an integral part and upon which we so fully depend. About 2.1 million species have been identified, mostly small creatures such as insects. Scientists believe that

there are about 13 million species exist on earth (Rawat and Agarwal 2015).

During desktop study, the screening report shows that the proposed project area falls in the very highly sensitive area for terrestrial biodiversity with Critical Biodiversity Area, Ecological Support Area, FEPA Subcatchments, National Forest Inventory and Protected Area Expansion Strategy (see Figure 21). The Terrestrial Biodiversity Map produced by Singo Consulting (Pty) Ltd Database Manager, shows that the proposed project area falls in the unclassified areas, and small part of the proposed areas falls in the Ecological Support Area. The area outside the proposed project area falls in the Ecological Support Area (see Figure 21).

Site assessment revealed that the proposed area is characterised of highly sensivity areas which area not yet disturbed and areas which are heavily modified due to cultivation, residential and livestock farming and grazing activities and sugar cane farming. The disturbed areas are heavily modified to an extent that they cannot be reinstated to their natural state. The area outside the proposed project area falls in the Hluhluwe Imfolozi Game Reserve. Hluhluwe Imfolozi Game Reserve has wild animals such as Wild pigs, Elephants, and Nyala etc which were observed during site visit. The game reserve falls in the protected area which is managed by Ezemvelo Wildlife. No drilling activities should be conducted within a buffer zone of Hluhluwe Imfolozi Game Reserve.

MAP OF RELATIVE TERRESTRIAL BIODIVERSITY THEME SENSITIVITY



Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
X			

Sensitivity Features:

Sensitivity	Feature(s)
Low	Low sensitivity
Very High	Critical biodiveristy area 1
Very High	Ecological support area
Very High	FEPA Subcatchments
Very High	National Forestry Inventory
Very High	Protected Areas Expansion Strategy

Figure 22: Terrestrial biodiversity theme sensitivity.

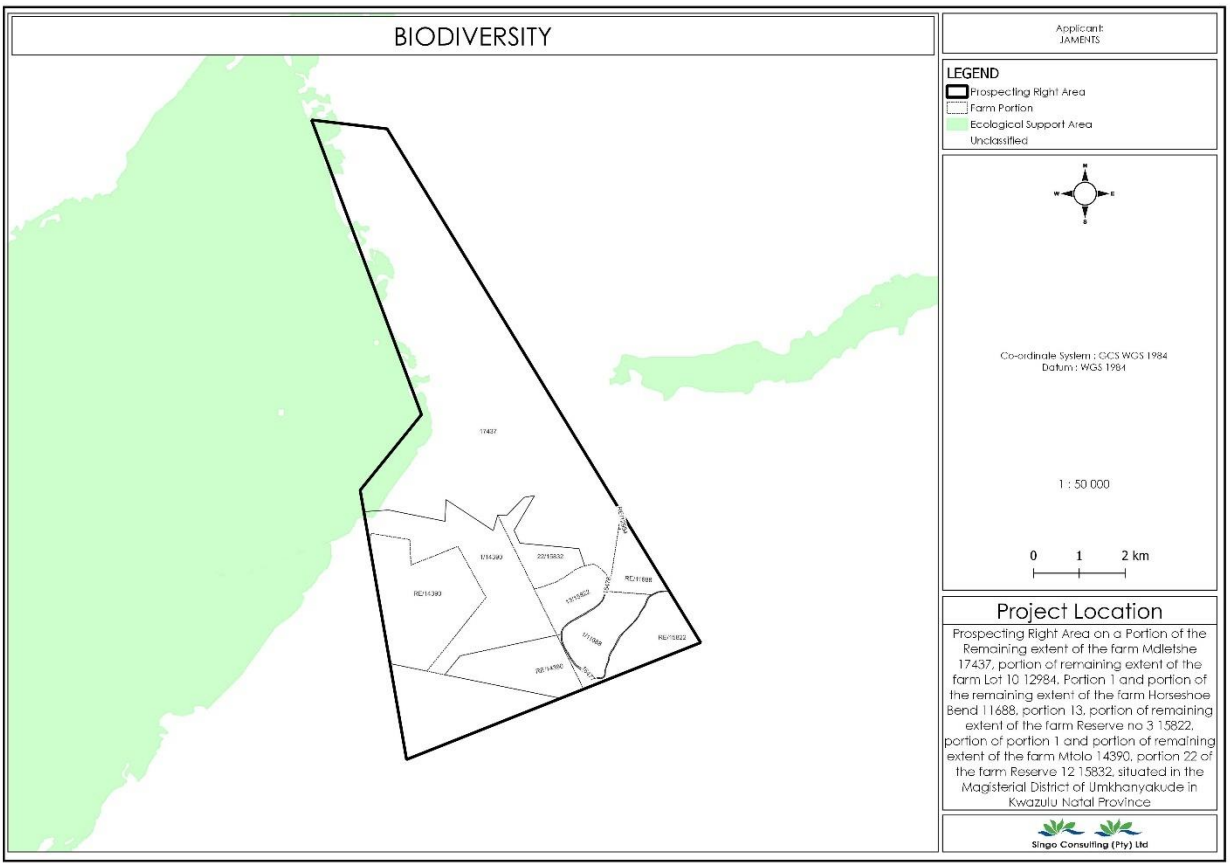


Figure 23: Terrestrial biodiversity map of the project area.

The characteristics of the grassland biome and the relevant vegetation types are discussed below:

12.5.1 Grassland Biome

Biomes are broad ecological units that represent major life zones extending over large natural areas. Biomes are further divided into bioregions, which are spatial terrestrial units possessing similar biotic and physical features, and processes at a regional scale (Rutherford, 1997). The proposed project area falls in the savanna biome (see Figure 26). Savanna biome covers approximately a fifth of the Earth's land surface and have wide socioeconomic importance regarding land use and biodiversity (Scholes, 2003). Savannas, which are the main biome in the transition from grasslands to forests, are distinguished by the cohabitation of trees (i.e., woody vegetation) and grasses (i.e., grasses and herbs). The majority of savanna ecosystems have C4 grasses and C3 trees, both of which are extremely fire- and shade-tolerant, with a few exceptions, such as the Neotropical Cerrado, where C3 grasses predominate, this savanna definition is generally accurate (Ratnam et al., 2011).

Savanna biome occupies most of the far-norhtern part of the Northern Cape, the western and northeastern parts of North-West province, extreme western parts of the Free State Province, northern Gauteng with more isolated occurences in the south of this province, almost the entire Limpopo province, northwestern and northeastern Mpumalanga, most of central and eastern Swaziland, low-altitude parts of the eastern seaboard, inland of the Indian Ocean Coalstal Belt in Kwazulu-Natal and the Eastern Cape provinces, and with the southernmost extension abutting Albany Thicket of the Komga to Albany Districts (Huntley & Walker 1982).

Savannas are largely tropic and occupy the greater area of southern continents and also some parts of the northern continnets (Huntley & Walker 1982). Most of the savannas are associated with old plantation surfaces and are belived to represent a legacy of the vegetation which flourished during the Tertiary and even earlier geolocal peridos when under hot, wet climatic conditions laterisation processes were active. Savanna types north of South Africa and Swaziland extend from southern Mozambique in the east and from the central interior of Namibia in the west through to the coast of central Angola and to the margins of evergreen tropical forest of Congo Basin and extent further north into east Africa (Cole, 1982).

Savanna in South Africa and Swaziland does not occur at high altitudes and is found mostly below 1 500 m and extending to 1800 m on parts of the highveld mainly along the southern most edges of the central Bushveld. Temperatures are therefore higher than those of the adjacent Grassland at higher altitudes. The mean daily maximum temperature for February rarely drops below 26 degrees and exceeds 32 degrees in the Kalahari region and some low-altitude parts of savanna in the east east (Schulze, 1997a).

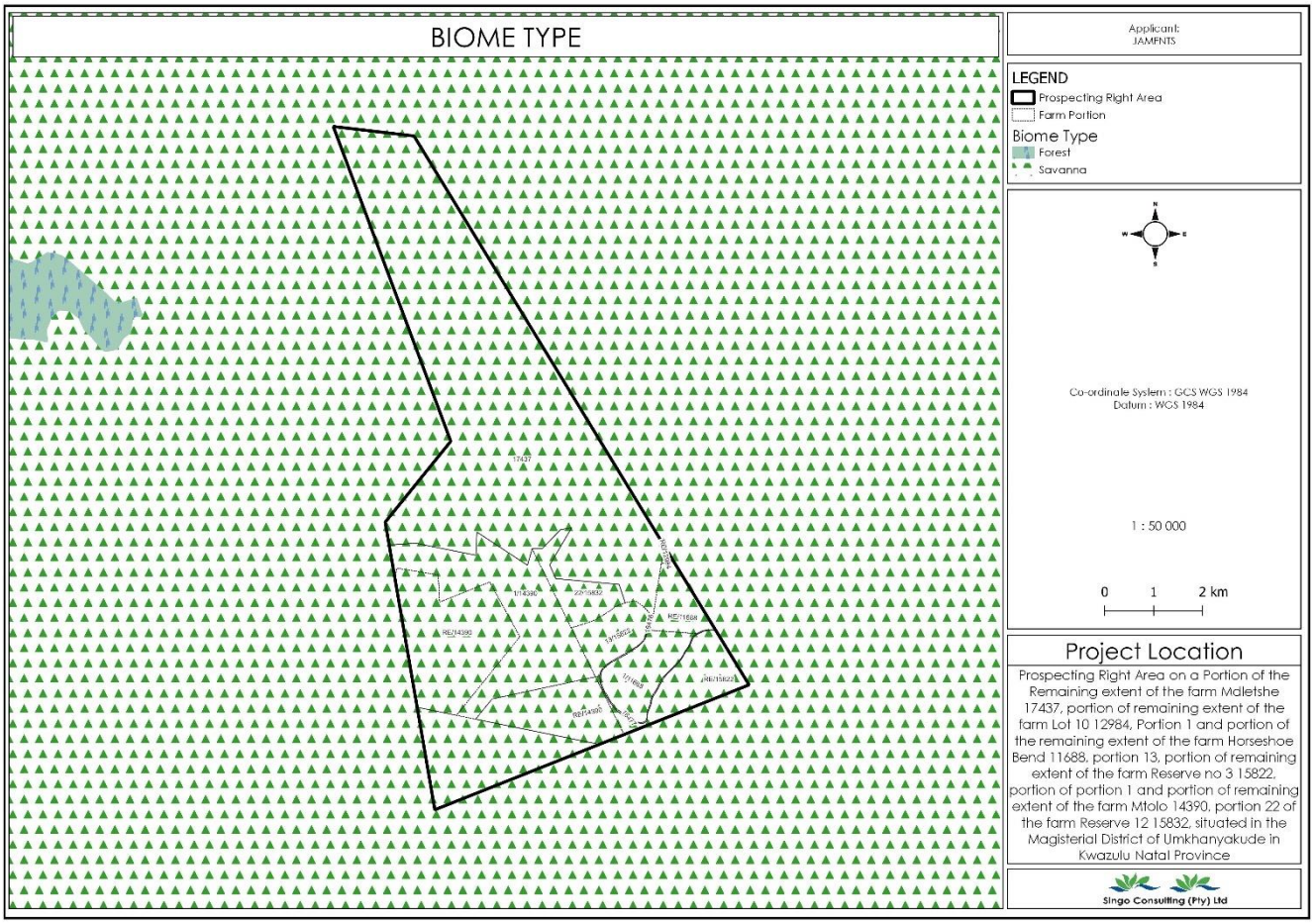


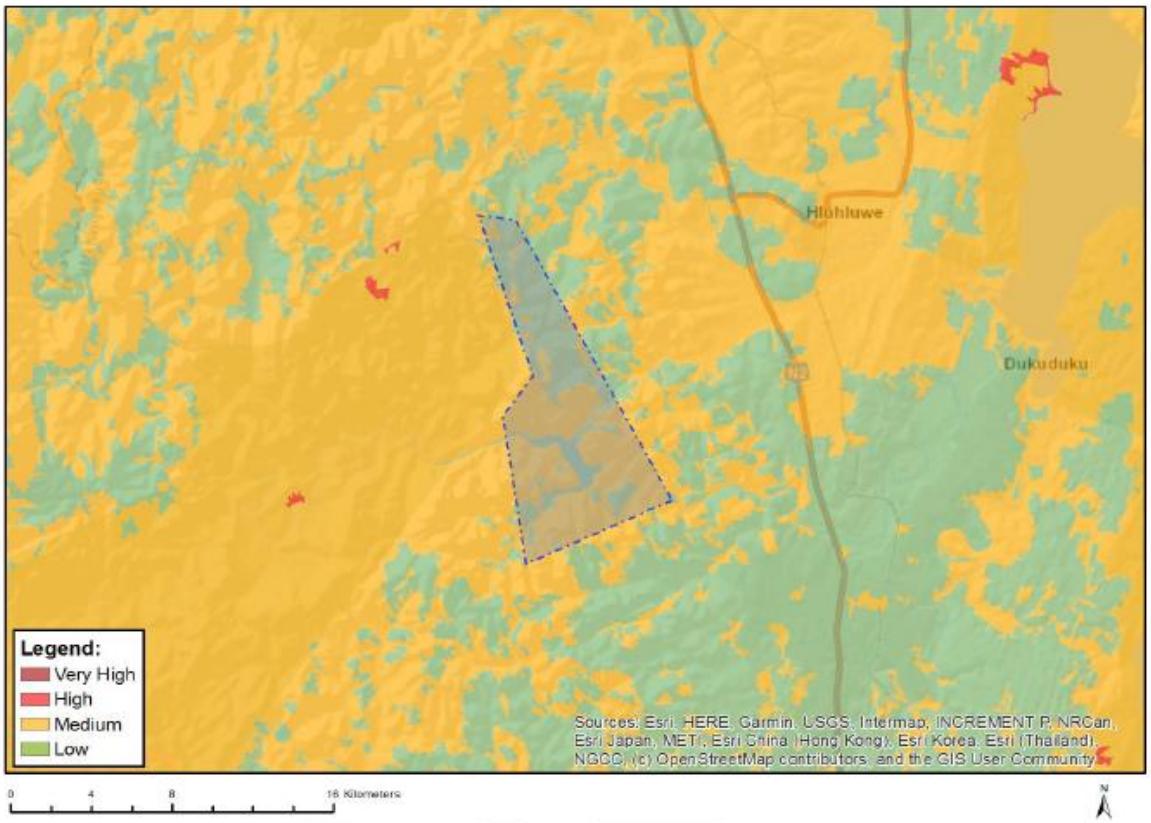
Figure 24: Biome type of the project area.

12.5.2 Protected tree species

In terms of the National Forests Act (Act No. 84 of 1998), certain tree species can be identified and declared as protected. According to the screening report, the proposed project area is of medium sensitivity for plant species with the following plant species, Albizia suluensis, Nesaea wardii, Salpinctium natalense, sensitive species 1076, Sensitive species 738, Cassipourea gummiflua var.verticillata, Sensitive species 1083, Oxygonum dregeanum subp.streyi, sensitive species 766, Mystacidium aliceae, Sensitive species 104, Sensitive species 191, Sensitive species 45, and Prunus Africana (See Figure 27).

During ground truthing no protected tree species observed onsite. The proposed area is covered with mixture of floral species of least concern and alien invasive species. The following floral species were observed onsite during site assessment, namely **(A)** *Solanum sisymbriifolium Lam*, **(B)** *Typha capensis (Rohrb.) N.E.Br.*, **(C)** *Seriphium plumosum*, **(D)** *Verbena bonariensis L*, **(E)** *Hyparrhenia hirta (L) Stapf* and **(F)** *Acacia mearnsii* (see Figure 28). This is due to heavily modified of the proposed area by cultivation, residential, grazing, workshops, and coal processing plant activities.

MAP OF RELATIVE PLANT SPECIES THEME SENSITIVITY



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

Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
		X	

Sensitivity Features:

Sensitivity	Feature(s)
Low	Low Sensitivity
Medium	Sensitive species 1252
Medium	Albizia suluensis
Medium	Nesaea wardii
Medium	Salpinctium natalense
Medium	Sensitive species 1076
Medium	Sensitive species 738
Medium	Cassipourea gummiflua var. verticillata
Medium	Sensitive species 1083
Medium	Oxygonum dregeanum subsp. streyi
Medium	Sensitive species 766
Medium	Mystacidium aliceae
Medium	Sensitive species 401
Medium	Sensitive species 191
Medium	Sensitive species 45
Medium	Prunus africana

Figure 25: Plant species theme sensitivity of the application area.

Figure 26: Floral species observed onsite.

12.5.3 Protected areas

According to the screening report, the proposed project area is characterised of Critical biodiversity area 1, Ecological support area,FEPA Subcatchments, National Forestry Inventory and Protected Areas Expansion Strategy. During site assessment the protected area was observed onsite which is the buffer zone of Hluhluwe Imfolozi Game Reserve. Hluhluwe Imfolozi Game Reserve is a protected area managed by Emvelo WildLife (see Figure 27). No drilling should be conducted in a protected area or a buffer zone of the game reserve and within close proximity to the application area and the project area is used for residential, cultivation, sugar cane farming, and livestock farming.

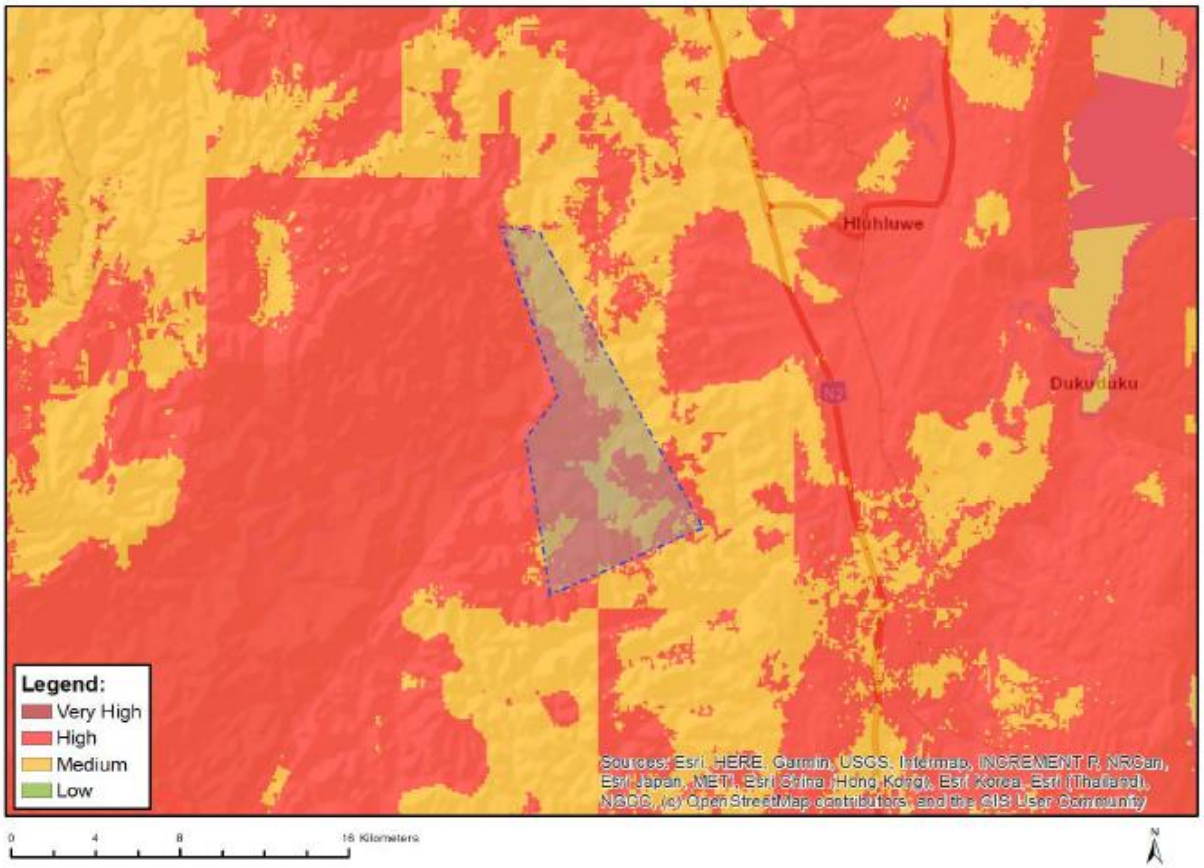
Figure 27: Hluhluwe Imfolozi Game Reserve.

12.6 Fauna

12.6.1 Mammals

The screening report shows that the proposed project area is of high sensitivity for animal species with the following animals: *Mammalia-Loxodonta Africana, Mammalia-Panthera Leo, Mammalia-Lycaon pictus, Mammalia-Nesotragus Moschatus zuluensis and Mammalia-Ourebia ourebi ourebi* (see Figure 29). During site assessment, no animals species of medium sensitivity were observed onsite, only domestic animals such as cattles, goats and donkeys were observed onsite (see Figure 30). *The mammals species of high sensitivity were observered at the Hluhluwe Imfolozi Game Reserve. The following mammal species were observed at the game reserve Nyala, Wild pigs, and Elephant* (see Figure 29). If any mammal species might be identified onsite during drilling, they will be allowed to move away from the proposed area. The areas that fall within a buffer zone of Hluhluwe Imfolozi Game Reserve should be avoided during drilling to avoid noise to animals. Drilling should be conducted in areas heavily modified due to cultivation. Pouching and hunting will be prohibited onsite.

MAP OF RELATIVE ANIMAL SPECIES THEME SENSITIVITY



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

Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
	X		

Sensitivity Features:

Sensitivity	Feature(s)
High	Aves-Terathopius ecaudatus
High	Aves-Ciconia nigra
High	Aves-Stephanoaetus coronatus
High	Aves-Falco biarmicus
High	Aves-Torgos tracheliotos
High	Aves-Polemaetus bellicosus
High	Aves-Aquila rapax
High	Aves-Gyps africanus
High	Aves-Trigonoceps occipitalis
High	Aves-Mycteria ibis
High	Mammalia-Loxodonta africana
High	Mammalia-Panthera leo
Medium	Aves-Podica senegalensis

Medium	Aves-Terathopius ecaudatus
Medium	Aves-Ciconia nigra
Medium	Aves-Stephanoaetus coronatus
Medium	Aves-Hydroprogne caspia
Medium	Aves-Aquila rapax
Medium	Aves-Gyps africanus
Medium	Insecta-Deloneura millari millari
Medium	Sensitive species 5
Medium	Mammalia-Lycaon pictus
Medium	Mammalia-Nesotragus moschatus zuluensis
Medium	Mammalia-Ourebia ourebi ourebi
Medium	Sensitive species 8
Medium	Reptilia-Crocodylus niloticus
Medium	Reptilia-Kinixys natalensis
Medium	Invertebrate-Anonychonitis freyi
Medium	Invertebrate-Arytropteris basalis

Figure 28: Mammal species theme sensitivity of the application area.

Figure 29: Domestic animals observed onsite.

Figure 30:Animals observed at game reserve (Hluhluwe Imfolozi Game Reserve)

12.6.2 Reptiles

According to the screening report, the proposed project area is characterised of reptile species of medium sensitivity with the following reptiles: *Crocodylus niloticus, and kinixys natalensis*. During site assessment, no reptile species were observed onsite and there is a Hluhluwe dam cutting through the proposed project area. The board at the entrance of the dam also shows that there are crocodiles in the dam. The DWS regulated area will be avoided during drilling to avoid disturbance to reptiles associated with the dam and contamination of the dam which might be caused by drilling. If any reptiles species might be identified during drilling, they will be allowed to move away from the project area without any harm.

12.6.3 Amphibians

According to the screening report, no amphibians species of conservation concern are known to occur in the proposed project area. No amphibians species observed during site assessment. The site might have amphibians species as there are permanent depression wetlands observed onsite and channeled valley bottom wetland observed outside the project area which provides habitat to amphibians species. Drilling will be conducted 500 m away from the wetlands identified to avoid unnecessary disturbance of habitat for amphibians.

12.6.4 Avifauna

According to the screening report, the proposed project area is of medium to high sensitivity for birds species (see Figure 29 above). During site assessment, no avifauna species were observed onsite. If avifauna species might be identified during drilling, they should not be killed or disturbed, and they will be allowed to move away from the proposed site without any harm.

12.7 Surface Water and Aquatic Ecosystems

The proposed project area falls in the Pongola-Mtamvuna water management area, and the project area falls between the following quaternary catchments: W32C, W32E, W32F, and W32G (see Figure 30). During desktop study, the screening report shows that the proposed project area falls in the very high sensitivity area for aquatic biodiversity with the following features FEPA Sub catchment, Rivers, Wetlands, wetlands lowveld Bioregion (Depression) and wetlands lowveld Bioregion (see Figure 31). The Freshwater Biodiversity Map produced by Singo Consulting (Pty) Ltd Database Manager, shows that the proposed project area falls in the other natural areas, and heavily modified area without waterbodies and wetlands. It also shows that there are CBA and ESA of wetlands outside the project area (see Figure 32). Site assessment revealed that there are channeled valley bottom wetlands, perennial rivers and dam observed onsite (see Figure 34). The wetlands, dams and rivers observed are of high ecological function and high conservation importance. A 500m buffer zone should be maintained from the wetlands and dam identified onsite and 100m buffer zone should be maintained from the rivers identified onsite to avoid triggering section 21 (I) and (c) of National Water Act (see Figure 35). No drilling should be conducted within a DWS regulated area without a water use license from DWS.

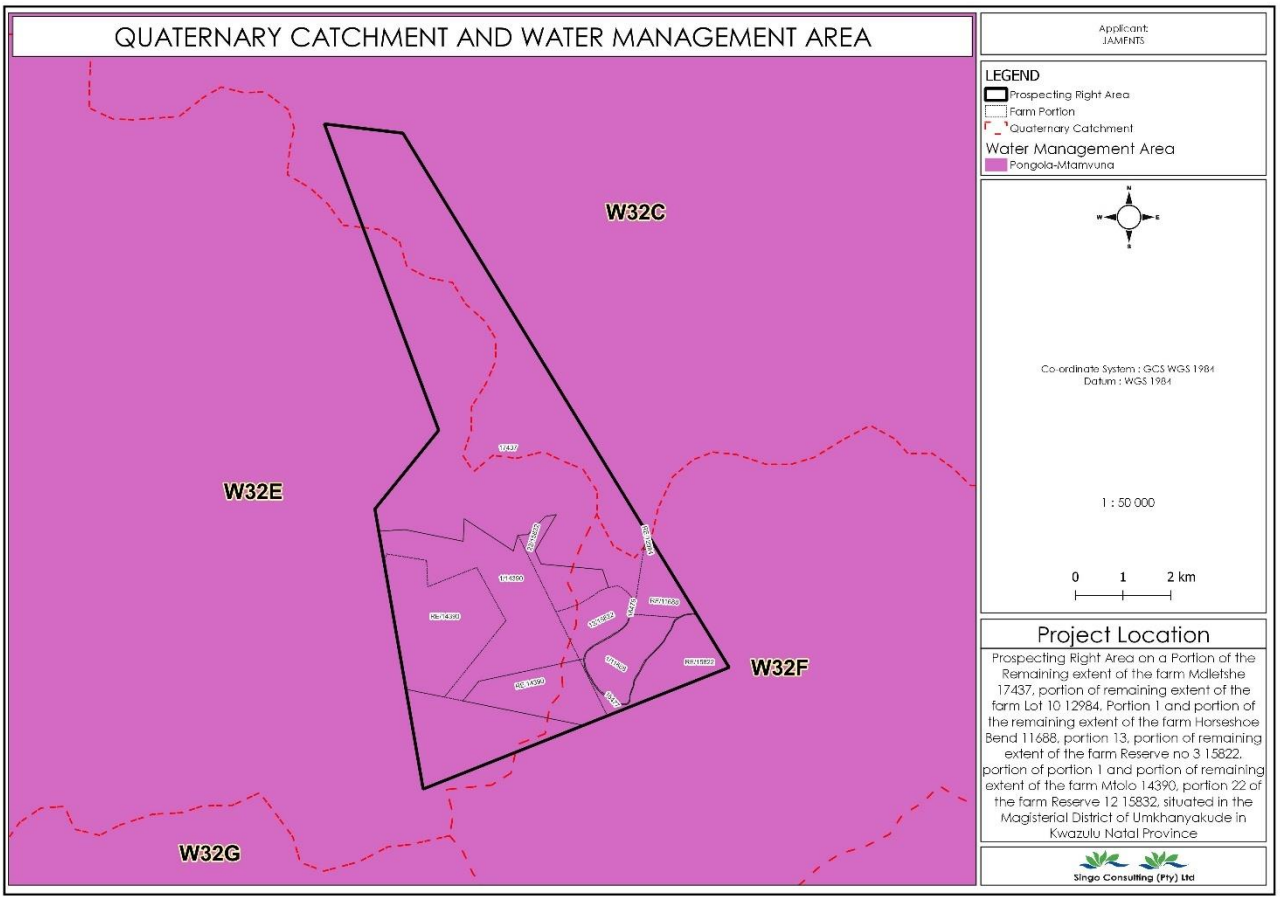
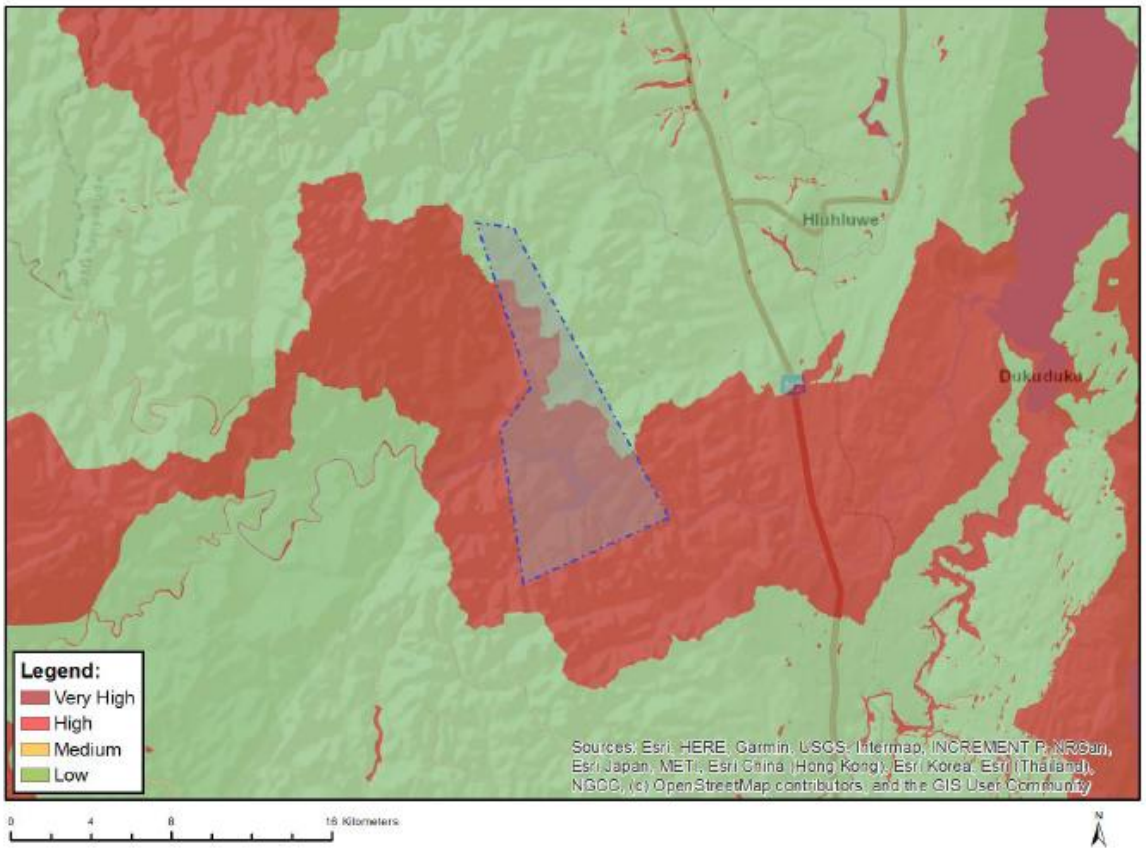


Figure 31: Quaternary catchment area map.

MAP OF RELATIVE AQUATIC BIODIVERSITY THEME SENSITIVITY



Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
X			

Sensitivity Features:

Sensitivity	Feature(s)
Low	Low sensitivity

Very High	FEPA Subcatchment
Very High	Rivers_B
Very High	Wetlands_(River)
Very High	Wetlands_Lowveld Bioregion (Depression)
Very High	Wetlands_Lowveld Bioregion (Seep)

Figure 32: Aquatic biodiversity theme sensitivity.

12.8 Groundwater

During site assessment, a drilled borehole and wells were observed onsite but only wells were working during site visit. No pump testing was performed at this stage and no water samples were taken, but groundwater quality is assumed to be good since the water is used only for domestic and agricultural purposes. Figure 35 below shows a typical example of a borehole and wells identified onsite. Groundwater uses within the project area is limited to domestic purposes and agricultural purposes such as irrigation and drinking.

Figure 33: Borehole observed onsite during site assessment.

12.9 Air Quality

In the pre-prospecting environment, there are no major sources of air pollution. Fugitive dust emissions may occur as a result of vehicle entrainment of dust from gravel roads, wind erosion from open areas and dust generated by agricultural activities. Agriculture in the area is mainly focusing on livestock farming, soya beans cultivation, and sugar cane farming. Agriculture is not anticipated to contribute significantly to ambient dust rates. There are also workshops in the proposed project area contributing significantly on dust generation through transportation of dump trucks and other heavy machineries. Due to the predominantly rural nature of the proposed project area, the air quality is regarded to be good. Obvious sources of air pollution in the greater region include the following:

1. Urban-related emissions from towns (Mtuba-tuba Town)
2. Tailpipe emissions from vehicles travelling along the main road and towns.

12.10 Noise

The application area is situated in a rural environment, with typically low levels of noise, dominated by man influenced sounds such as residential activities, livestock, and farming activities (use of farming equipment). Noise in the greater region emanates primarily from the following sources:

1. Human settlements.
2. Vehicles on the gravel roads
3. Farming equipments

12.11 Visual Aesthetics

The visual character of the landscape in and around the application area consists mainly of residential area and agricultural practices. The visual quality of the area is enhanced by dam, channeled valley bottom wetlands, rivers and areas covered with natural vegetation found inside the project area and Hluhluwe Imfolozi Game Reserve situated outside the proposed area.

The application area has a relatively steep and flat topography. The landscape is perceived as topographically steep, flat, and homogenous in colour and texture due to the vegetation cover stretching from horizon to horizon. The vegetation cover of the proposed area and hills restrict viewing corridors of the proposed area.

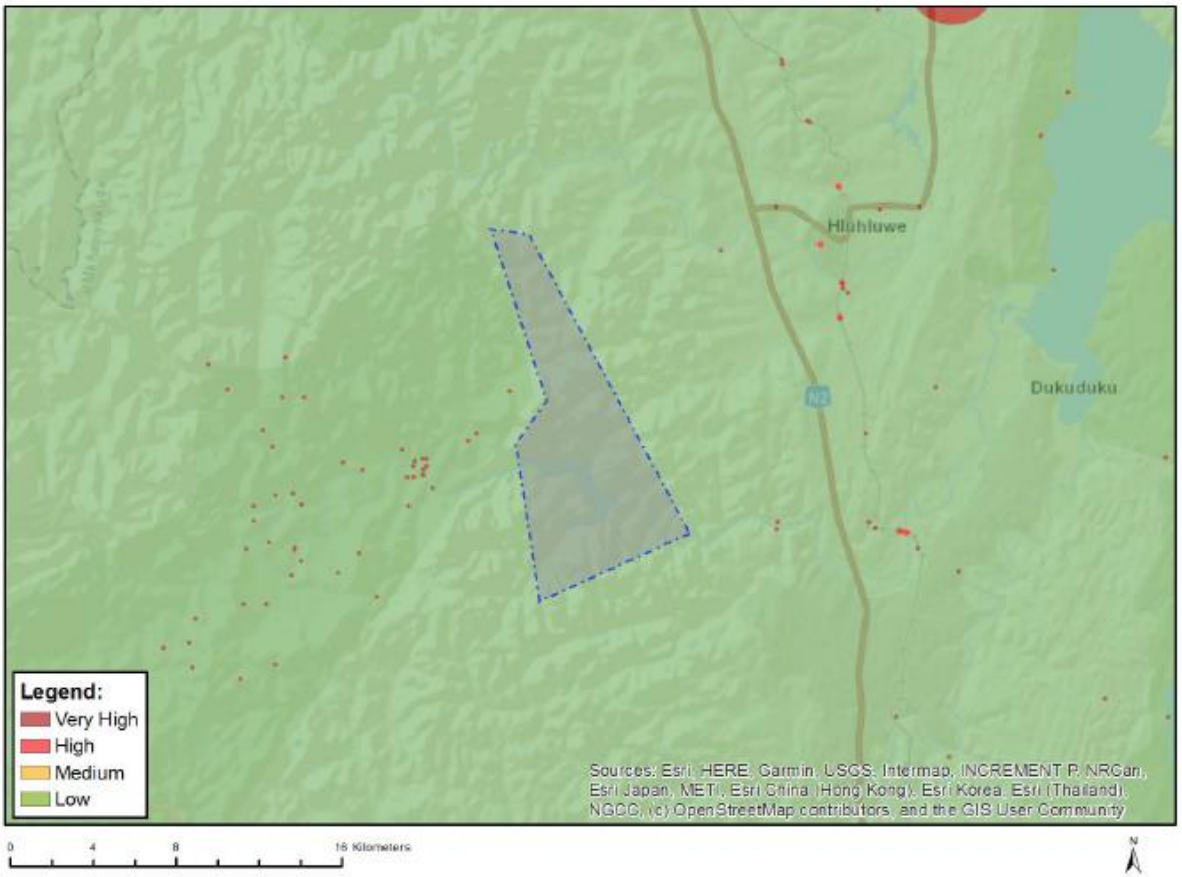
12.12 Heritage and cultural resources

According to the National Heritage Resources Act 25 of 1999, heritage resources are any place or object of cultural significance. In one familiar aspect, heritage resources refer to

buildings, monuments, landscapes, and artefacts. These resources are relatively permanent, though somewhat very tenuous, environmental features; if they are present, their integrity is highly susceptible to construction and ground disturbance activities like prospecting and mining activities. The screening report shows that the proposed project area is of low sensitivity for Archaeology and Cultural Heritage theme sensitivity (see Figure 36).

During site assessment, Archaeology and Cultural Heritage features such as old building were observed onsite (see Figure 37). Online consultation with SAHRA was conducted and SAHRA will guide if the Heritage Impact Assessment study should be conducted for the proposed project. It is recommended that heritage Impact Assessment study should be conducted by qualified Archaeology to identify all archaeological and cultural heritage features available onsite which were not identified during site assessment. Drilling activities should avoid any areas with Archaeology and Cultural Heritage features.

MAP OF RELATIVE ARCHAEOLOGICAL AND CULTURAL HERITAGE THEME SENSITIVITY



Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
			X

Sensitivity Features:

Sensitivity	Feature(s)
Low	Low sensitivity

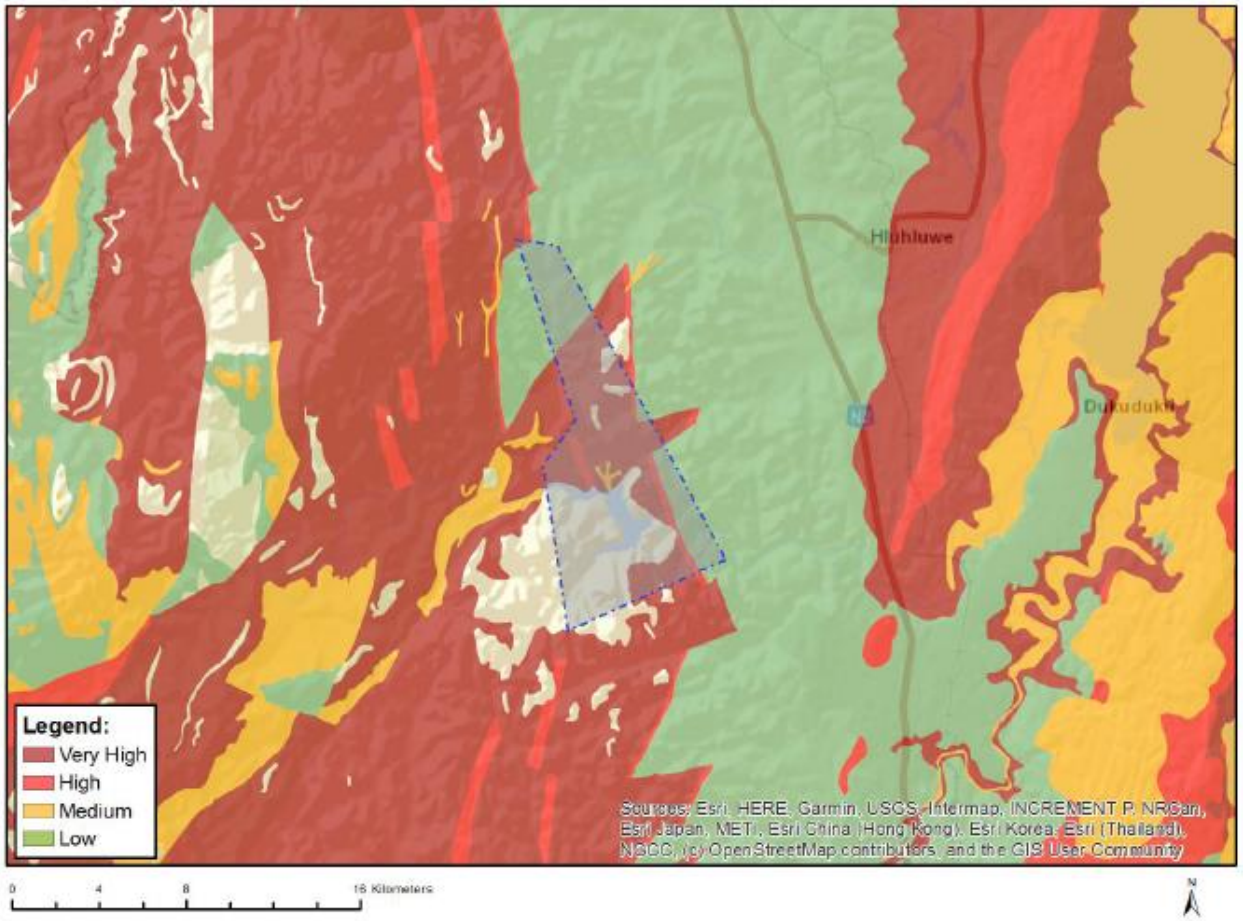
Figure 34: Archaeological and cultural heritage theme sensitivity of the application area.

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. The screening report shows that the proposed project area is of very high sensitivity for Paleontology theme sensitivity (see Figure 38).

During ground truthing, paleontological features such as graves , old buildings and houses were observed onsite. If any Paleontological features might be identified during drilling,

the area where paleontological features were identified will be demarcated and the operation will be stopped. A qualified Archeologist will be appointed to conduct Heritage Impact Assessment study to identified all Paleontological features available onsite. Online consultation with SAHRA was conducted and SAHRA will guide if the Heritage Impact Assessment study should be conducted for the proposed project. Drilling will be conducted 100m away from the identified archaeological, cultural heritage and paleontological features.

MAP OF RELATIVE PALEONTOLOGY THEME SENSITIVITY



Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
X			

Sensitivity Features:

Sensitivity	Feature(s)
High	Features with a High paleontological sensitivity
Low	Features with a Low paleontological sensitivity
Medium	Features with a Medium paleontological sensitivity
Very High	Features with a Very High paleontological sensitivity

Figure 35: Paleontology theme sensitivity of the application area.

12.13 Socio Economic Characteristics

The project falls within two local municipalities namely Bug 5 Hlabisa Loc al Municipality and Mtuba-Tuba Local Municipality, the local municipalities are located under uMkhanyakude District Municipality. nkosi Mtubatuba Municipality is one of five Category B Municipalities within the Umkhanyakude District Municipality. It is located on the North-East of the province of KwaZulu-Natal. Mtubatuba forms the Southern end of Umkhanyakude District, with the N2 almost dividing the Municipality into Mtubatuba East, and Mtubatuba West.

Inkosi Mtubatuba Municipality is bounded to the South by Mfolozi River, which separates the Municipality with Umfolozi Municipality (King Cetshwayo District Municipality) further South. On the East, Mtubatuba Municipality is bordered by the ocean, while it is bounded by the Big Five False Bay Municipality in the immediate North. Hlabisa Municipality and Hluhluwe–Umfolozi Park form the Western boundary of the Municipality.

The population is spread unevenly among the 20 municipal wards. These wards coincide with the growing settlements of Indlovu Village, KwaMsane Township, parts of Mpukunyoni, and Dukuduku Resettlement area. This ward covers mainly the commercial farmlands and is sparsely populated. nkosi Mtubatuba Municipality comprises 20 wards with 20 Ward Councillors respectively. There is one Traditional Council, known as Mpukunyoni situated to the West of the N2, the upcoming applied activities are to develop the local municipalities in terms of job opportunities that will chabge the Municipals IDP.

The study of economic development, which is generally broad in its scope, refers to the standard of living of citizens; most often measured by GDP per capita, literacy rate, and life expectancy. Economic development incorporates many elements of pure macro-economics, such as price stability, high employment, and sustainable growth. However, this is underpinned by the study of infrastructure and social development programmes, such as education, housing, and road networks. If prospecting for the mineral deposit of interest identified, mining permit or mining right will be applied, and mine operations have the potential to influence/affect the economic environment of the area positively or negatively.

Mines contribute directly towards employment, procurement, skills development, and taxes on a local, regional, and national scale. In addition, mines indirectly contribute to economic growth in the local and regional economies because the increase in the number of incomes earning people has a multiplying effect on the trade of other goods and services in other sectors. The proposed prospecting right process will provide limited job opportunities to local communities through hiring security offices from the local communities to provide safety and security services where drilling will be conducted to avoid theft. Other community members will be hired to work as drilling assistants because drilling require people who are having extensive experience and knowledge. Local

people who are having qualifications and experience in drilling will also be hired to boost drilling team and ensure drilling is conducted accordingly.

Local businesses such as community members who are heaving lighting plant, mobile toilets, mobile containers to be used as offices will be hired and used onsite during drilling. However, the introduction of a mine into an area can have undesirable implications in the surrounding environment. This is because changes occur not only to the pre-existing land uses but also to the existing associated social structures and general way of life. The closure phase of the mine can have highly negative impacts because the surrounding environment loses the economic support that it receives during the operation of the mine. To ensure the economic safety of the communities which are affected by the mining operations, mitigation measures post closure of the mine will need to consider the economic environment of the communities and address these impacts effectively.

Impacts on the socio-economic environment are expected to occur as follows:

- Economic growth.
- Education, skills development, and training.
- Employment opportunities.

12.14 Specific environmental features and infrastructure occurring on site which may require protection, remediation, management, or avoidance

The following specific environmental features and infrastructure have been identified that my require protection, remediation, management, or avoidance:

1. Dams
2. Channeled valley bottom wetlands.
3. Rivers
4. Farmhouses.
5. Graves
6. Gravel roads.
7. Powerlines.
8. Fences and gates.

Prospecting will allow for enough flexibility in drilling to avoid the environmental features and infrastructure identified above. If there is a need to conduct activities in any of these areas, then the necessary applications and/or landowner agreements will be sought and approved prior to conducting activities in these areas. In instances where boreholes will have to be situated inside watercourse buffers, the requisite authorisations will be obtained from the DWS before any activities commence. There are other Game reserves and trust surrounding the area of Umkhanyakude that are noted such as: iSimangaliso Wetland Park Authority, Private Tour operators with concessions to HiP, WildlifeACT, Global Environmental Trust, African Conservation Trust (ACT), Wilderness Leadership School, Game Rangers Association of Africa, Isibindi Africa Trails (Pty) Ltd, and the Endangered Wildlife Trust (EWT)

Description of the current land uses

During desktop study the map produced by Singo Consulting (Pty) Ltd, Database Manager shows that the proposed project area is characterised by the following, cultivation land, plantation, natural vegetation, bare land, and wetlands (see Figure 35). The current land-use of the proposed project area is characterised by residential, livestock farming and grazing, cultivation, plantation, coal processing plant, and workshops. Figure 35 below shows typical examples of current land use activities. The neighboring farms area is also used for livestock farming, cultivation, residential and mining activities.

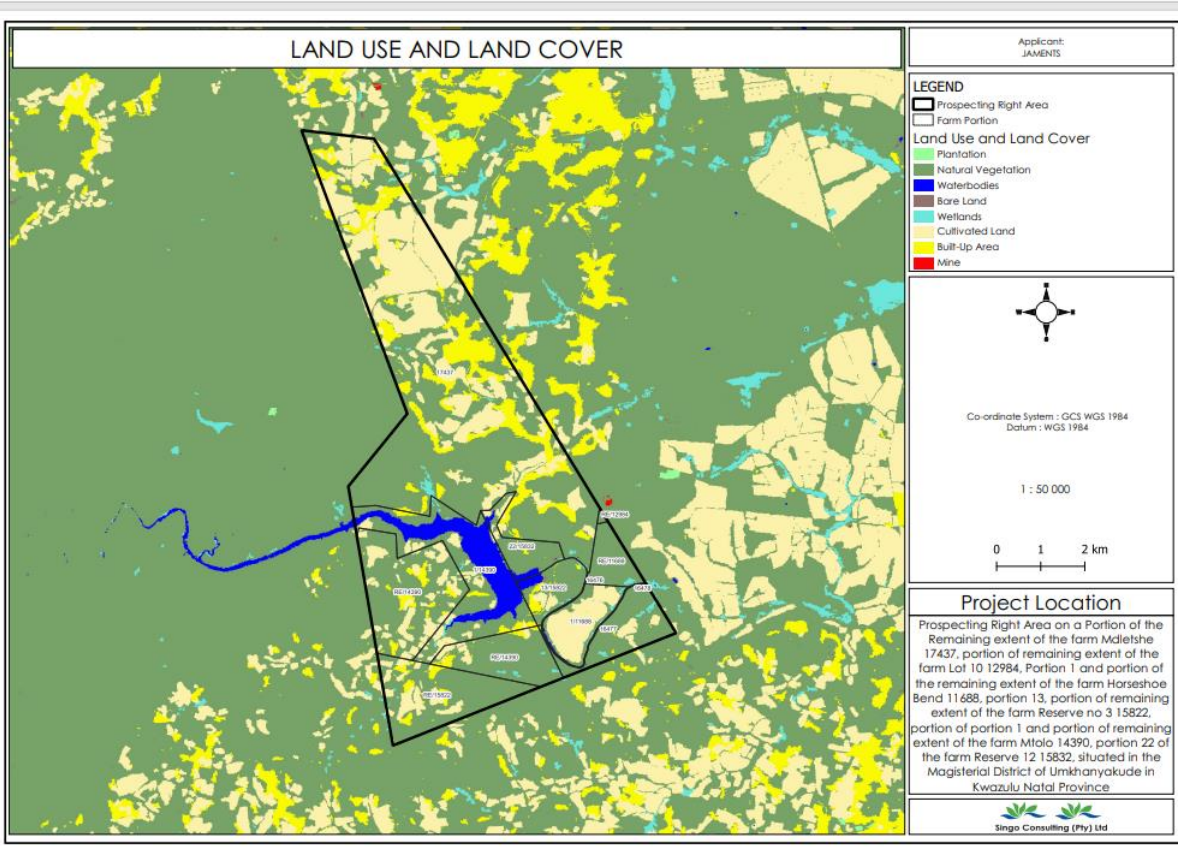


Figure 36: Landuse and landcover map of the proposed project area.

13. Impacts and risks identified.

There are other operations that are around Umkhanyakude Districts others were gained from Local Knowledge such as :Zululand Anthracite Colliery located to the west of the HiP; Imvukuzane's prospecting area to the south of the HiP, Tendele Coal Mining (Pty) Ltd's, Somkhele mining operations on the eastern boundary of the HiP; the prospecting right held by Yengo Resources (Pty) Ltd) 2 on the southwestern boundaries of the HiP; and proposed mining by Raycom Resources Pty Ltd this application was done by Singo Consulting but the application was refused by the Competent Authority southwest of the Imvukuzane prosecting area and the HiP.

Table 6 lists the potential impacts identified per environmental aspect. These impacts have been further refined and assessed according to the quantitative impact assessment methodology described in Section 13.1 below and the results, including the nature, significance, consequence, extent, duration and probability of the impactsas well as the degree to which these impacts can be reversed, are presented in Table8 in Section 14.2.

Table 6: Summary of the potential impacts identified

Aspect	Potential Impacts
Geology	The local geology will be disturbed by drilling for core samples that has a direct impact on the geological strata.

Topography	Localised dips in topography if boreholes collapse after material is replaced.
Land Capability and Use	Land use and capability will not be significantly impacted as the current land use can continue concurrent to prospecting activities.
Soils	Soil contamination from hydrocarbon spillages from the drill rig and vehicles, leakage from portable toilets and littering.
	Disturbance of soil resource caused by the movement of the drill rig, vehicles, establishment of the drill site and temporary contractor's yard.
Flora	Loss and degradation of vegetation caused by the movement of the drill rig, vehicles, establishment of the drill site and temporary contractor's yard over undisturbed areas.
	Potential invasion of alien plants on disturbed areas.
Fauna	Disturbance of animal species especially sensitive bird species nesting in and around the proposed drill sites.
	Increased human activity in the area can result in harm to animals caused by littering, accidents, and illegal hunting.
Surface water and aquatic ecosystems	Disturbance to the bed and banks of watercourses if the activity proceeds indiscriminately.
	Deterioration in surface water quality due to hydrocarbon, sewage,process water from sumps or other waste spillages ending up in surrounding watercourses.
	Irresponsible use of water and water wastage.
Groundwater	Contamination of the groundwater resources through hydrocarbons, process water and wastes seeping into the groundwater table in the event of leaks/spills.
	Drilling into the geological strata may cause cracks leading to disruption of the aquifer.
Air quality	Reduction in the ambient air quality through the creation of fugitive dust from the movement of the drill rig and vehicles as well as drilling activities.
Aspect	Potential Impacts
Noise	Increase in the ambient noise levels caused by the drilling activities and movement of vehicles.
Visual	Change in the visual characteristics of the immediate area around the drill sites and its surrounds
Heritage resources	Loss of and disturbance to archaeological / heritage / grave sites that may be encountered.
Socio economic,health and safety	Temporary employment opportunities for contractors (drilling and sample analysis)
	Theft and safety risk to surrounding landowners
	Increase potential for accidents caused by moving vehicles
	Damage to existing infrastructure incl. roads, fences and gates.
	Increase risk of veld fires

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

The methodology used determines the significance of the impacts by evaluating the consequence (extent, duration, and severity) and probability of each impact. The definitions of the terms used within the methodology are provided below, followed by the stepped approach.

Definitions

Aspect – a particular part or feature of something.

Impact – is defined as any change to the environment, whether positive or negative, resulting from a facility/project/development's products, development, and activities.

Cause/Activity – the precipitating factor resulting in a perceived impact.

Mitigation Measures – identified actions and requirements designed to be instituted to reduce the undesirable effects of a perceived impact.

Significance Level – the degree of importance of the impact on the social and/or biophysical environment; a proxy for the degree to which the impact is reversible and may cause irreplaceable loss of a resource. The approach used to determine significance makes use of value judgements to determine the degree of change on the social and/or biophysical environment, after which the consequence and likelihood of the impact are ranked to provide asignificance level.

Extent – the spatial scope of the perceived impact. (How large an area will be impacted).

Duration – the temporal scope of the perceived impact, or the period of time during which the social and/or biophysical environment is changed by the impact. (How long the impact will last).

Severity – the degree to which the natural, cultural, and/or social functions and processes of an environment may be affected or altered by a perceived impact. (How extreme/harsh the impactwill be. The degree of disturbance).

Probability – the possibility or likelihood of the impact occurring or manifesting.

13.1.1 Approach

The stepped approach used is provided below:

Step 1: The different aspects of the proposed project are identified along with the associated environmental and social impacts which may occur during the construction, operation, decommissioning and post closure phases.

Step 2: Assess the environmental and social impacts by providing a numerical score for each of the following factors using the ranking scales in Table 7:

- Extent.
- Duration.
- Severity.
- Probability
-

Step 3: Once these factors are ranked for each impact, the significance points are calculated by using the formula below.

Significant Points (SP) = Consequence (Extent + Duration + Severity) x Probability

Step 4: Mitigation measures for each impact are determined during the EIA Phase,and the above approached is repeated to determine the significance of each impact post-mitigation.

13.1.2 Significance Level

The maximum value is 100 significant points. The significance level could therefore be rated as either Very High (VH), High (H), Medium (M), Low (L), or VeryLow (VL) on the following basis:

Very Low	Negligible impact which does not require further mitigation.	SP <19
Low	Acceptable impact for which mitigation is desirable but not essential. The impact by itself is insufficient even in combination with other low impacts to prevent the implementation of the project. These impacts will result in either positive or negative medium to short term effects on the social and/or natural environment.	SP 20 - 39
Medium	An important impact which requires mitigation. The impact is insufficient by itself to prevent the implementation of the project but which in conjunction with other impacts may prevent its implementation.These impacts will usually result in either a positive or negative medium to long-term effect on the social and/or natural environment.	SP 40 - 59
High	A serious impact, if not mitigated, may prevent the implementation of the project. These impacts would be considered by society as constituting a major and usually a long-term change to the (natural &/or social) environment and result in severe negative or beneficial effects.	SP 60 - 79
Very High	A very serious impact which, if negative, may be sufficient by itself to prevent implementation of the project. The impact may result in permanent change. Very often these impacts are unmitigable and usually result in very severe negative or very beneficial effects.	SP > 80

Table 7: Variables with each category score.

CONSEQUENCE		Extent (Magnitude) of the Impact	SP
	Site	Limited to parts of the application area.	1
	Project area	Limited to within the application area.	2
	Local	Extends beyond the application area on a local scale.	3
	Regional	Extends beyond application area on a regional scale.	4
	National	Widespread, far beyond the application area (regional or greater area)	5
		Duration of the Impact	
	Immediate	One to two days.	1
	Short term	One Week to one Month.	2
	Medium term	Two Months to one Year	3
	Long term	Two to five years. Ceases with operational life of project.	4
	Permanent	Impact occurs beyond lifespan of the project.	5
		Severity of the Impact	
	Minor	Non-harmful. Impacts affect the environment in such a way that natural, cultural and/or social functionsand processes are not affected.	2
	Low	Potentially harmful. Impacts affect the environment in such a way that natural, cultural and/or socialfunctions and processes are negligibly altered.	4
	Medium	Slightly harmful. Impacts affect the environment in such a way that natural, cultural and/or social functionsand processes are slightly altered.	6

	High	Significantly Harmful. Impacts affect the environmental in such a way that natural, cultural and/or socialfunctions and processes are notably altered.	8
	Very High	Extremely harmful. Impacts affect the environmental in such a way that natural, cultural and/or socialfunctions and processes are severely altered.	10
Probability	Probabilit y		
	None	0% chance of the impact occurring.	0
	Improbable	The possibility of the impact materializing is very low.1% to 9% chance of occurrence.	1
	Low Probability	Impact not expected to occur, but conceivable.10% to 30% chance of occurrence; and Circumstances rarely encountered.	2
	Medium Probability	Impact may occur sometimes. 31 – 60% chance of occurrence. Circumstances occasionally encountered.	3
	High probability	Impact will probably occur. 61 – 90% chance of occurrence. Circumstances frequently encountered;	4
	Almost Certain	91 -100% chance of occurrence.	5

13.2 Assessment of potential impacts and risks

Refer to table 8 for the impact assessment table.

13.3 Positive and negative impacts that the proposed activity alternatives will have on the environment and the community that may be affected

No activity alternatives are considered except for the No Go Option. Should the project not be implemented, the status quo remains, and farming activities will continue unaltered with no negative impacts on the biophysical, socio economic or cultural environment. On the other hand, not proceeding with the proposed operation would have a direct consequence in that the mineable potential of the suspected reserve would not be determined.

13.4 Possible mitigation measures that could be applied and the levelof residual risk

Refer to Section 14 for the mitigation measures identified to reduce and/or minimize potential impacts and risks where they are unavoidable. It is anticipated that the mitigation measures envisaged in this report and the EMPr (Part B) will be adequate to manage the potential negative impacts on the biophysical and societal environment.

13.5 Motivation where no alternative sites were considered

With regard to location, the prospecting activities are delimited by the properties available for prospecting (i.e., not held by another company) and the geology of the surrounding area. The application area has already been determined through extensive geological research and prospecting can only take place in the area on which the right is granted.

13.6 Statement motivating the preferred site

The preliminary positions of the proposed prospecting boreholes have been sited to give a representative sample for the project area considering the buffer zones around the watercourses. Alternatives may be considered based on the findings of the geophysical investigations. At this stage, it can only be stated that invasive prospecting (drilling) will avoid watercourses, potential historical sites, graves, protected plant species if identified during drilling by the establishment of buffer zones in which no activities can take place. In instances where boreholes will have to be situated inside these buffers, the requisite authorisations will be obtained.

14 Full Description of the Process Undertaken to Identify, Assess and Rank the Impacts and Risks the Activity will impose on the Preferred Site through the Life of the Activity

This section describes the potential positive and negative environmental impacts identified for the proposed operation. The objective was to determine the significance level of each of the potential environmental impacts and to identify mitigation measures to prevent, reduce or contain the impacts during all the phases of the operation. The impacts were assessed, according to the methodology described in Section 13.1. The following key principles contained in the National Environmental Management Act (Act 107 of 1998) (NEMA), were considered during the impact assessment:

- Sustainability – development that meets the needs of the present generation without compromising the ability of future generations to meet their own needs.
- Mitigation hierarchy – avoidance of environmental impact, or where this is not possible, minimizing the impact and remediating the impact; and
- The duty of care of developers towards the environment as embodied in the NEMA(section 28) and the NWA (section 20).

The assessment methods proved adequate to determine the nature and extent of all impacts that the proposed operation may have on the natural, social, and economic environments. Based on the findings of the impact assessment, which included a thorough public participation process, a comprehensive Environmental Management Programme (EMPr) has been developed to prevent, reduce or contain the impacts of the proposed prospecting operation – see Part B EMPR - Section 5 of this report. The development and implementation of a successful EMPR has benefits beyond merely meeting legal obligations. It contributes to environmental awareness of the workforce, it can facilitate the prevention of environmental degradation, and minimise impacts when they are unavoidable.

14.1 Assessment of each identified potentially significant impact pre and post mitigation

The Impact Assessment below assesses the significance of the potential environmental impacts of each of the proposed prospecting activities, described in Section 6.2 above, pre-, and post-mitigation. All impacts of the proposed operation are expected to occur during Phase 2: Invasive Prospecting. The table further indicatesif these impacts can be reversed, degree to which these impacts could cause irreplaceable loss of resource and whether these impacts can be avoided, managed, or mitigated along with the mitigation type proposed. Through the public participation process (PPP), any issues or potential impacts identified by the IAPs will be added to the list of potential impacts.

All these impacts have been assessed as per the methodology described in Section 13.1 above and their significance determined. Impact identification has therefore been a consolidated approach based on professional experience, desktop studies and IAP (including organs of state involved the PPP) input.

Table 8: Impact assessment

Potential Impact	Aspect	Type and Nature of Impact	Reversible	Degree to whichimpact can cause irreplaceable loss of resource	Significanceif not mitigated	Can be avoided, managed / /mitigated (Yes/No)	Mitigation type	Significanceif mitigated
Core Drilling								
Cracks and disruption to geological layers	Geology	Direct Negative	Not reversible	Low	Medium	No	Control by: Plan location of invasive prospecting sites properly to avoid geological features. Start with fewer boreholes to verify non-invasive prospecting followed by more extensive drilling in areas indicating adequate resources.	Medium
Hydrocarbon contamination of soils	Soils	Direct Negative	Completelyreversible	Very low	Low	Yes	Remove any spills as soon as it occurs along with the polluted soil and dispose of it at a registered waste site. Follow the equipment's operation and maintenance procedures and all vehicles must undergo periodic maintenance and inspection. Equip vehicles on site with drip trays and place drip trays under leaky equipment. Spill kits must be available on site and personnel trained to utilizethese to clear spills immediately.	Very low
Harm/disturbance to protected faunaand flora species	Fauna andFlora	Direct Negative	Partially reversible	Low	Medium	Yes	Plan location of drill sites properly to avoid sensitive features such as water courses and rocky outcrops. Survey prospecting sites in areas with natural vegetation for any protected species known to occur in the region and either keep species in situ with 50m buffer zone to prevent inadvertent damage to these species or obtain permits to remove / destroy protected species. Do not hinder, harm, or trap animals.	Very low
Disturbance to streams and wetlands if activity proceeds indiscriminately.	Surface water and aquatic ecosystems	Direct Negative	Not reversible	Medium	Medium	Yes	No prospecting activities can take place within 100m of streams and/or 500m of wetlands unless authorisation is obtained to do so. Plan drill sites properly to avoid watercourses.	Low
Hydrocarbon contamination of surfacewater through contaminated runoff.		Direct Negative	Not reversible	Low	Medium	Yes	Remove any spills as soon as it occurs along with the polluted soil and dispose of it at a registered waste site.	Low
Irresponsible use of water and water wastage		CumulativeNegative	Not reversible	Low	Low	Yes	Recycle water from the sumps to re-use on the rig. Source water from existing lawful water use or water service provider.Use clean water responsibly.	Low

Potential Impact	Aspect	Type and Nature of Impact	Reversible	Degree to whichimpact can cause irreplaceable loss of resource	Significanc eif not mitigated	Can be avoided, managed / /mitigated (Yes/No)	Mitigation type	Significanc eif mitigated
Cracks and disruption to aquifers.	Groundwater	Direct Negativ e	Not reversible	Medium	Medium	Yes	Start with fewer boreholes to verify non-invasive prospecting followed by more extensive drilling in areas indicating adequate resources. Limit development to target rocks and reduce exposure of aquifer rocks.	Low
Potential hydrocarbon contaminationseeping to the groundwater environment.		Direct Negativ e	Not reversible	Low	Medium	Yes	Remove any spills as soon as it occurs along with the polluted soil and dispose of it at a registered waste site.	Low
Emissions into the atmosphere through use of diesel-powered equipment, machinery, and vehicles.	Air quality	Cumulativ eNegative	Not reversible	Low	Medium	Yes	Maintaining all vehicles, machinery and equipment and discontinuing use of faulty equipment.	Low
Increase in ambient noise levels.	Noise	Cumulativ eNegative	Completel yreversible	Very low	Medium	Yes	Drilling must be done in consultation with the landowners to ensurethat work schedules are communicated to them. Prospecting activities must be conducted during normal working hours (Monday – Friday - 7am – 17pm) Implement noise control measures on noisy equipment.	Low
Visual intrusion and disturbance to the sense of place.	Visual	Direct Negativ e	Completel yreversible	Very low	Low	Yes	Keep disturbed areas as small as possible. Keep the drill site neat, clean, and organized in order to maintain a tidy appearance. Remove waste off site as soon as possible or place it in closed bins in order to keep the site free from additional unsightly elements.	Very low
Loss of and disturbance to archaeological / heritage / grave sitesthat may be encountered.	Heritage	Direct Negativ e	Not reversible	High	Medium	Yes	Visually surveying drill sites for any heritage resources. Prevent activities near potential heritage sites unless necessarypermits are obtained to do so. Should any graves/ruins be found during prospecting a 100m buffer will be established and maintained around these areas.	Low
Creation of employment opportunities	Socio Economi c	Direct Positive	N/A	N/A	Medium +	Yes	Appoint local contractors where possible.	Medium +
Establishment of drill site and temporary contractors' yard								
Compaction of soils	Soils	Direct Negativ e	Completel yreversible	Very low	Low	Yes	Keep disturbed area as small as possible. Rip compacted soils.	Low
Temporary change in land use	Land use	Direct Negative	Completely reversible	Low	Low	Yes	Keep the disturbed area as small as possible.	Very low

Potential Impact	Aspect	Type and Nature of Impact	Reversible	Degree to whichimpact can cause irreplaceable loss of resource	Significanc eif not mitigated	Can be avoided, managed / /mitigated (Yes/No)	Mitigation type	Significanc eif mitigated
Disturbance/damage to vegetation andsubsequent disturbance to animal species	Flora	Direct Negativ e	Partially reversible	Low	Medium	Yes	Plan location of drill sites properly to avoid sensitive features such as watercourses and rocky outcrops. Restrict vegetation clearance. Remove vegetation during periods of low rainfall or dry periods. Relocate protected plant species for which permits are obtained rather than destroying species.	Low
Increase in dust fall out	Air quality	Cumulativ eNegative	Completel yreversible	Very low	Medium	Yes	Dust suppression procedures should be implemented to reduce and control dust on the drill site.	Low
Increase in ambient noise levels.	Noise	Cumulativ eNegative	Completel yreversible	Very low	Medium	Yes	Drilling must be done in consultation with the landowners to ensurethat work schedules are communicated to them. Prospecting activities must be conducted during normal working hours (Monday – Friday - 7am – 17pm) Implement noise control measures on noisy equipment.	Low
Visual intrusion and disturbance to the sense of place.	Visual	Direct Negativ e	Completel yreversible	Very low	Low	Yes	Keep disturbed areas as small as possible. Keep the drill site neat, clean, and organised in order to maintain a tidy appearance. Remove waste off site as soon as possible or place it in closed bins in order to keep the site free from additional unsightly elements.	Very low
Loss of and disturbance to archaeological / heritage / grave sitesthat may be encountered.	Heritage	Direct Negativ e	Not reversible	High	Medium	Yes	Visually surveying drill sites for any heritage resources. Prevent activities near potential heritage sites unless necessarypermits are obtained to do so. Should any graves/ruins be found during prospecting a 50m buffer must be established and maintained around these areas.	Low
Drill rig, machinery, and vehicle movement								
Compaction of soils	Soils	Direct Negativ e	Completel yreversible	Very low	Medium	Yes	Remain in designated roads / routes / activity areas. Where not possible, routes must be properly planned to reduce disruption to soil as far as possible.	Low
Hydrocarbon contamination of soils		Direct Negative	Completely reversible	Very low	Medium	Yes	Follow the equipment's operation and maintenance procedures and all vehicles must undergo periodic maintenance and inspection.	Low
Harm/disturbance to protected fauna		Direct	Partially	Low	Medium	Yes	Survey any off-road routes for any protected species known to occur	Low

Potential Impact	Aspect	Type and Nature of Impact	Reversible	Degree to whichimpact can cause irreplaceable loss of resource	Significanc eif not mitigated	Can be avoided, managed / /mitigated (Yes/No)	Mitigation type	Significanc eif mitigated
and flora species	Flora and Fauna	Negative	reversible				in the region and either keep species in situ with 50m buffer zone to prevent inadvertent damage to these species or obtain permits to remove / destroy protected species. Remain in designated roads as far as possible.	
Disturbance to streams and wetlands if activity proceeds indiscriminately.		Direct Negativ e	Partially reversible	Low	Low	Yes	No prospecting activities can take place within 100m of streams and/or 500m of wetlands unless authorisation is obtained to do so.	Low
Hydrocarbon contamination of surfacewater through contaminated runoff.	Surface water and aquatic ecosystems	Direct Negativ e	Not reversible	Low	Low	Yes	Follow the equipment's operation and maintenance procedures and all vehicles must undergo periodic maintenance and inspection. Leaky vehicles will not be parked over bare ground; where unavoidable, drip trays will be placed under the equipment to collectleaks. The leaky vehicles will be discontinued until repairs are made.	Low
Potential hydrocarbon contamination seeping to the groundwaterenvironment.	Groundwater	Direct Negativ e	Not reversible	Low	Low	Yes		Low
Emissions into the atmosphere through use of diesel-powered equipment, machinery, and vehicles.	Air quality	Cumulativ eNegative	Not reversible	Low	Medium	Yes	Maintaining all vehicles, machinery and equipment and discontinuing use of faulty equipment.	Low
Increase in dust fall out		Cumulativ eNegative	Completel yreversible	Very low	Medium	Yes	Dust suppression procedures should be implemented to reduce and control dust on the access road and drill site. Control the speed of operational vehicles. The drill rig must remain on site as far as possible.	Low
Increase in ambient noise levels.	Noise	Cumulativ eNegative	Completel yreversible	Very low	Medium	Yes	Drilling must be done in consultation with the landowners to ensurethat work schedules are communicated to them. Prospecting activities must be conducted during normal working hours (Monday – Friday - 7am – 17pm). Implement noise control measures on noisy equipment.	Low
Loss of and disturbance to archaeological / heritage / grave sitesthat may be encountered.	Heritage	Direct Negativ e	Not reversible	High	Medium	Yes	Visually surveying drill sites for any heritage resources. Prevent activities near potential heritage sites unless necessarypermits are obtained to do so. Should any graves/ruins be found during prospecting a 50m buffer must be established and maintained around these areas.	Low

Potential Impact	Aspect	Type and Nature of Impact	Reversible	Degree to whichimpact can cause irreplaceable loss of resource	Significanc eif not mitigated	Can be avoided, managed / /mitigated (Yes/No)	Mitigation type	Significanc eif mitigated
Damage to existing infrastructure incl. gates, roads, and fences.	Socio economic ,health andsafety	Direct Negativ e	Completel yreversible	N/A	Medium	Yes	Remain in designated roads /routes. The drilling team must always close the farm gates after entering. If infrastructure were damaged by the drill team the Applicant must repair the damages (i.e., grade farm roads that have been damaged due to use by prospecting team).	Low
Increase potential for road accidents		Direct Negativ e	Not reversible	N/A	Low	Yes	The drilling contractor's personnel will always adhere to the speed limit. No transporting will occur after sunset. Vehicles will be in roadworthy condition with reflective strips to make them clean and visible for other road users. Intersections with main tarred roads will be clearly signposted.	Very low
Water Management								
Loss of soil resource due to erosion	Soils	Indirect Negativ e	Partially reversible	Low	Low	Yes	Adequate drainage and erosion protection in the form of cut-off berms or trenches shall be provided where necessary. Effective managing of the topsoil by covering or reseeding the stockpiles to avoid erosion. Any erosion gullies must be remediated immediately.	Low
Potential contamination of surface waterresources with process water from the sumps	Surface water and aquatic ecosystems	Direct Negativ e	Not reversible	Low	Low	Yes	Use biodegradable lubricants and fluids/polymers. Maintain buffer zones around watercourses as ecological corridors and refuges.	Low
Potential contamination of groundwaterthrough process water seepage	Groundwater	Direct Negativ e	Not reversible	Low	Medium	Yes	Line sumps with the appropriate lining system. Isolate porous or highly transmissive groundwater zones through capping or grouting to prevent clean groundwater ingress or recharge of contaminated water.	Low
Storage and Handling of Dangerous goods								
Hydrocarbon contamination of soils	Soils	Direct Negative	Completely reversible	Very low	Medium	Yes	Equip vehicles on site with drip trays and place drip trays under leaky equipment.	Low
Hydrocarbon contamination of surfacewater through contaminated runoff	Surface water and aquatic ecosystems	Direct Negativ e	Not reversible	Low	Low	Yes	Spill kits must be available on site in the event of a spillage. Adhere to safe work procedure when refuelling vehicles andmachinery.	Low
Potential hydrocarbon contamination	Groundwater	Direct	Not	Low	Medium	Yes		Low

Potential Impact	Aspect	Type and Nature of Impact	Reversible	Degree to whichimpact can cause irreplaceable loss of resource	Significanc eif not mitigated	Can be avoided, managed / /mitigated (Yes/No)	Mitigation type	Significanc eif mitigated
seeping to the groundwater environment		Negative	reversible				Hydrocarbons must be stored within portable bund tanks.	
Ablution Facilities								
Potential contamination of soils and groundwater with sewage	Soils Groundwate r	Direct Negativ e	Completel yreversible	Very low	Low	Yes	Inspect, repair, and replace any damaged toilets. Appoint the necessary reputable contractor to manage portable toilets. Implement proper housekeeping and hygienic practices.	Very low
Potential contamination of surface waterwith sewage	Surface water and aquatic ecosystems	Direct Negativ e	Not reversible	Low	Low	Yes	Maintain buffer zones around watercourses as ecological corridors and refuges. Inspect, repair, and replace any damaged toilets. The portable toilets must be managed by a reputable contractor, emptied on a regular basis as needed. Toilets must be maintained in hygienic state.	Very low
Domestic Waste Management								
Potential contamination of soils with indiscriminately dumped waste or littering.	Soils	Direct Negativ e	Completel yreversible	Very low	Low	Yes	Domestic waste must be collected in waste bins that are located on site. The waste bins must be marked clearly indicating what waste must be disposed of in what bin.	Very low
Potential contamination of surface waterwith indiscriminately dumped waste or littering.	Surface water and aquatic ecosystems	Direct Negativ e	Partially reversible	Very low	Low	Yes	Employees must be encouraged to re-use, recycle, and reduce waste where possible. No burning of domestic waste may be done on site.	Very low
Potential contamination of groundwaterwith indiscriminately dumped waste or littering.	Groundwater	Direct Negativ e	Not reversible	Low	Low	Yes	Appoint reputable contractors for the removal and disposal of general waste at a licensed facility.	Low
Rehabilitation of boreholes								
Localised dips in topography if boreholes collapse after material is replaced.	Topography	Residual Negativ e	Partially reversible	Medium	Medium	Yes	Inspect and take immediate action to repair any dips by levelling and grading the disturbed area.	Low
Soil replacement and re-vegetation ofdisturbed areas	Soils	Direct Positive	N/A. Positive impact	N/A	Low +	Yes	Enhance positive impact through: Rehabilitation must be on-going as soon as drilling results arecompleted. Replaced soil should be vegetated as soon as possible, where	Medium +

Potential Impact	Aspect	Type and Nature of Impact	Reversible	Degree to whichimpact can cause irreplaceable loss of resource	Significanc eif not mitigated	Can be avoided, managed / /mitigated (Yes/No)	Mitigation type	Significanc eif mitigated
							required, to prevent erosion and establishment of weed species. Soil compaction should be avoided as far as possible but where not compacted soils must be ripped to correct any compaction.	
Permanent change of land use back topre-drilled state	Land use	Residual Positive	N/A. Positive impact	N/A	Medium +	Not necessary	N/A	Medium +
Alien plant infestation	Flora	Residual Negativ e	Completel yreversible	Low	Medium	Yes	Remove alien and invasive species that may establish around prospecting sites. Clear all vehicles coming to site of any vegetative material.	Low
Improvement of visual quality and sense of place	Visual	Residual Positive	N/A. Positive impact	N/A	Low +	Yes	Enhance positive impact through: Rehabilitation must be on-going as soon as drilling results are completed.	Medium +
Influx of people into the area								
Theft and safety risk resulting in the decrease in quality of life	Socio economic ,health andsafety	Indirect Negativ e	Not reversible	N/A	Low	Yes	Ensure farm gates are always closed. No employee will be allowed to stay over on site after working hours. No employee will be allowed to loiter around farms. The drill contractor must monitor the whereabouts of the drill team.	Low
Increase risk of veld fires		Indirect Negativ e	Reversible	Medium	Low	Yes	No employees will be allowed to make any open fires on the farms or adjacent land. Cigarette butts may not be thrown in the veld, but must be disposed of correctly. Contractors must ensure that basic fire-fighting equipment and suitably qualified/experienced personal are always available on site. Fire extinguishers shall be placed at working areas and all areas where hazardous substances are kept.	Low

14.2 Summary of specialist reports

Table 9: Summary of Baseline Studies

LIST OF BASIC STUDIES UNDERTAKEN	RECOMMENDATIONS OF SPECIALIST REPORTS	SPECIALIST RECOMMENDATIONS THAT HAVE BEEN INCLUDED IN THE EIA REPORT (Mark with an X where applicable)	REFERENCE TO APPLICABLE SECTION OF REPORT WHERE SPECIALIST RECOMMENDATIONS HAVE BEEN INCLUDED.
Soil study	• The proposed area is covered with freely drained structureless soils and are association of classes 5,6,10,11,12 and Undifferentiated clays . • It is anticipated that the coal prospecting activities will not lead to severe loss of soils and degradation of agricultural potential. • The exploration geologist will be advised to drill and sample away from the waterbody on site. • The prospecting boreholes must be cased after drilling and properly rehabilitated by cap sealing the borehole after drilling. The core of coal on the drilled boreholes should be cleared from the ground immediately after logging by a geologist, to prevent washing and leaching on the water resources during precipitation events. • Absorbent Spill kits will be made available near the drill rigs during drilling activities.	**X**	BAR & EMPr

Hydrogeology Study	• The area is made up of fractured aquifers, Hluhluwe Dam, wetlands it is recommended that during drilling, a map with fracture zones should be used so that the drilling process does not interact with water in fracture zones. • Clearing of vast amount of vegetation should be avoided, this is to prevent infiltration. • Constant availability of waste bins; Compliance of National Environmental Management: Waste Management Act 59 of 2008. • Compliance of GN 704 4(b) and 7(a) and National Water Act 36 of 1998 (Chapter 3 – Part 4, Section 1 (a)(b). • No onsite vehicle or machinery repairs such as changing oil. • No onsite storage of oil, diesel, or petrol. • A 100 meters buffer should be followed to preserve the surface water resources as the area mostly depends on surface water. • It is recommended that a plan on how surface water will be managed as this area is of steep slope, meaning that there is likely to be leaching in the borehole if not properly rehabilitated. • It is recommended that during the drilling process, the team should use a fracture zone map, to clearly point areas of fracture zones, this will help them not to drill at that point as it will contribute to groundwater contamination. • On the southern, western, and eastern direction, the contours are decreasing in value, which clearly shows that from the boundary of the study area, it is downhill, mitigation measures on how water will be managed on these areas should be clearly defined. • The area has presence of floodplains, which shows that there is occasional flooding, it is recommended that the phases of the project be scheduled during the time when there is little to no rainfall (June- July), this is to protect the water resources and financial aspect of the prospecting company. • It is recommended that the drill rig operates while standing on a non-permeable material, to avoid spillages from entering the soil and eventually the water resources. • It is recommended that there should be monitoring boreholes and regular monitoring should be implemented.	**X**	BAR & EMPr

Hydrology Study	• On site there will be regular maintenance of the mobile toilets. • Once drilling, the team will rehabilitate the area and ensure the core is out of site. • Drilling within 100 meters of water resources will be avoided. • Stormwater will be prioritised, and the management to prevent surface water contamination. • Clearing of vast amount of vegetation will be avoided, this is to preserve infiltration. • Stormwater measures which include the identified rivers, Dams and wetlands, will not be disrupted as they manage surface run off in an area, Buffer zone will be adhered to. • The drilling activity will also take into consideration the fractured aquifers in the region. • No washing of vehicles on site should be allowed. • The identified locations for sampling will be made available to the prospecting team. • During raining periods, drilling process will be paused, to avoid possible contamination of water leading to surface water bodies.	**X**	BAR & EMPr

15 Environmental impact statement

15.1 Summary of the key findings of the environmental impactassessment

The key positive and negative impacts, based on the impact assessment in Section13, are summarized below.

15.1.1 Key positive impacts

The proposed prospecting operation will create employment opportunities for contractors but due to the temporary nature the significance of the impact will only be of medium significance. As discussed under Section 8 above prospecting activities will not result in significant positive impacts but it is a precursor to possible mining activities which will have numerous economic benefits through the implementation of the SLP if mining right will be applied for the proposed area. The mining right or mining permit will be applied if the minerals deposit of interest are identified during drilling process.

15.1.2 Key negative impacts

No impacts are expected to exceed the significance of medium post mitigation. The key negative impacts are summarized below:

Surface and groundwater contamination

The significance of surface and groundwater contamination is medium as drilling activities will avoid water resources. The proposed mitigation/management measures can reduce the significance of the impact to low. The water resources found within and outside the proposed project area are dam, perennial rivers and channeld valley bottom wetlands. Due to the limited number of isolated water resources, the probability of the prospecting activities resulting in contamination is medium which can be reduced to low through the implementation of the proposed buffer zones and mitigation measures. No drilling activities will be conducted in the DWS regulated area. Therefor the potential impacts on the surface and ground water resources are rated as low pre and post mitigation.

Disturbance to protected flora and fauna species

The application area is largely covered with natural vegetation. Therefor the potential disturbance/damage to highly sensitive area, flora subsequent disturbance to fauna has a medium significance rating pre mitigation. The significance can be reduced to low by locating the drill sites in areas that can be accessed through the existing gravel roads than to create new roads. It can also be reduced through conducting drilling in areas which are already heavily modified and avoid sensitive areas.

Decrease in the ambient air quality and increase noise levels

The predominant activities in the surrounding area are cultivation, livestock farming, sugar cane farming, residential activities, and mining (situated further away from the application area), these activities are coupled with gravel roads in the area, can lead to elevated levels of dust. The proposed prospecting process will contribute to the elevated dust and noise levels in the application area with a significance rating of medium pre mitigation. The proposed mitigation/management measures can reduce the significance of the impact to low.

Damage to existing infrastructure including roads, bridges, fences, houses, and gates

There are powerlines, sewerage line, water pipeline, numerous gravel roads, fences, and gates in the proposed project area which are used by the landowners, residents, and adjacent landowners daily. Therefor the impacts has been rated as medium pre-mitigation. The proposed mitigation/management measures can reduce the significance rating to low because it will reduce the probability of the impact occurring to low.

Loss of and disturbance to archaeological/heritage/grave sites that may be encountered

Any damage caused to archaeological/heritage and paleontological sites are considered medium as archaeological/heritage and paleontological features such as old buildings and graves were observed, and their locations were recorded. Damages are not reversible; however the impact can be avoided by establishing the proposed buffer zones around the archaeological/heritage and paleontological features identified during drilling. Therefor the impact has a significant rating of low post mitigation.

15.2 Final Site Map

Preliminary positions of the proposed borehole have been proposed as detailed in Figure 37 below.

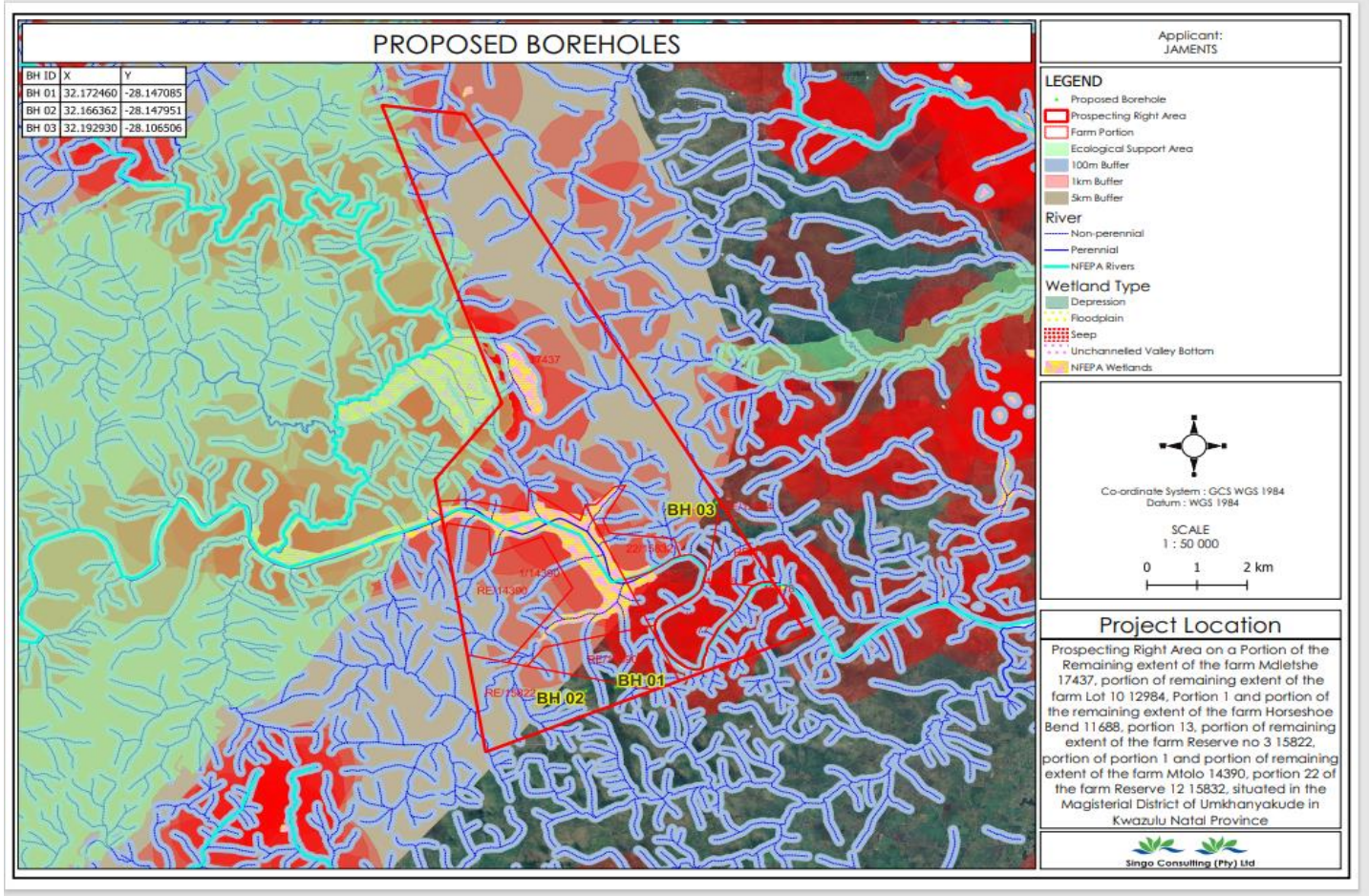


Figure 37: Proposed borehole map of the proposed project area.

15.3 Summary of the positive and negative impacts and risks of theproposed activity and identified alternatives

Most of the negative implications associated with the proposed operation are related to access and drilling, causing contamination of surface and groundwater resources, sensitive areas for terrestrial biodiversity through waste spillages, increase dust and noise levels and their associated impacts on the surrounding environment. Positive impacts are associated with the brief creation of limited jobs.

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

The overall Environmental Management objective is to minimize the potential negative environmental and societal impacts and maximise the positive socio-economic impacts of the proposed operation. The main impact management objectives and outcomes to guide and control all phases of the prospecting operation are presented below. These objectives must be attained and/ or maintained to ensure satisfactory environmental (social, economic, and biophysical) management of the operation. Environmental impact management objectives and outcomes are listed below:

- Conduct prospecting activities responsibly and ensure operation is compliant with legislative requirements.
- The drilling sites must be positioned by a geologist to ensure that it is not above any weak geological strata.
- Protect the biophysical environment as far as possible, specifically the channeled valley bottom wetlands, dams, rivers and any protected species which might be identified onsite.
- To keep, as far as possible, water of differing qualities separate within a prospecting area, so as to minimise contamination of clean run-off and surface water.
- Prevent groundwater contamination through seepage.
- Reduce compaction of soil and maintain existing arable land capability by prohibiting movement of machinery outside the designated areas.
- Preserve protected flora and fauna species which might be identified onsite.
- Ensure atmospheric and noise pollution is kept to a minimum.
- Ensure adequate rehabilitation to allow continued land use.
- Ensure socially responsible activities.
- Protect historical and cultural sites observed on site.
- Maintain high safety standards on site with reduced safety risks.
- Leave site without any incidents, safety risks, damage to infrastructure and theft to

surrounding farmers.

The specific management objectives for each potential impact identified is described in Part B: EMPr Section 5.

15.5 Aspects for inclusion as conditions of Authorisation

The impact assessment focused on the project scope as described in Section 4 which was compiled using the information provided by the Applicant. The mitigation measures identified to manage the potential impacts during the prospecting operation are contained in the EMPr. The implementation of the EMPr is a requirement in terms of NEMA and will be a condition of the Environmental Authorisation. The EMPr should form an integral part of the contract documents to ensure compliance with environmental specifications and management measures. The EMPr is not a static document, and most undergo regular monitoring and auditing as key factors and processes may change through the life of the project which could alter the proposed mitigation measures. The Applicant must ensure compliance with all relevant legislation including but not limited to:

- MPRDA, 2002 (Act 28 of 2002)
- NEMA, 1998 (Act 107 of 1998)
- National Environmental Management: Waste Act (No. 59 of 2009) GNR 921 (9 November 2013)
- National Water Act ,1998 (Act No.36 of 1998)
- National Environmental Management: Air Quality Act (Act No. 39 of 2004) GNR893 (22 November 2013)
- Noise Control Regulations (GN R154 of 1992)
- National Environmental Management: Biodiversity (Act No.10 of 2004)
- National Forest Act (No. 84 of 1998)
- National Veld and Forest Fire Act, Act 101 of 1998
- National Heritage Resources Act, Act (NHRA), 1999 (Act No. 25 of 1999)
- Hazardous Substances Act (No. 15 of 1973)
- Conservation of Agricultural Resources Act (No. 43 Of 1983)
- Mine Health and Safety Act (No. 29 of 1996)

In addition, the following conditions should be included as part of the Environmental Authorisation:

- The EMPr must be enforced throughout the prospecting operation.
- Implement a stormwater management plan in line with the provisions of GNR 704.
- No activity is to occur within 500m and 100m from the identified watercourses without the necessary authorisation under NEMA and NWA.
- Protected species must remain in situ until the necessary permits are obtained under NEM:BA.
- Heritage sites must be buffered with 100m buffer zones at all times unless the necessary

permits are obtained under SAHRA.

- Rehabilitation must be applied on an on-going basis and no sites must be left exposed for more time than necessary to obtain the necessary data.
- Appoint an Environmental Control Officer with the appropriate training and experience to monitor the implementation of the EMPr.

15.6 Description of any assumptions, uncertainties, and gaps inknowledge

15.6.1 Assumptions

The following assumptions are made:

- The information provided by the Applicant with regards to the proposed activities is correct.
- No activity is to occur within watercourses and their 500m and 100m buffer zones without the necessary authorisation under NEMA and NWA.
- Protected species will remain in situ until the necessary permits are obtained under NEM:BA.
- Heritage sites and 100m buffer zones will be preserved at all times unless the necessary permits are obtained under SAHRA.
- Planning before carrying out prospecting activities in a particular area and surveying the area before conducting invasive prospecting will occur to ensure the sensitive areas are preserved and to ensure prospecting proceeds in a manner compliant with national legislation.
- Rehabilitation will be applied on an on-going basis and no sites will be left exposed for more time than necessary to obtain the necessary data. All areas disturbed during drilling process will be rehabilitated to previous land use capability.

15.6.2 Uncertainties and gaps in knowledge

The following uncertainties and gaps in knowledge are applicable:

- once of site assessment was conducted.
- It was not always possible to involve all IAPs individually, however every effort has been made to involve as many affected stakeholders as possible.

15.7 Reasoned opinion as to whether the proposed activity should orshould not be authorised

There exist no highly significant impacts and or risks after mitigation therefor it is the consideration of the EAP that authorisation of the activity should be granted, with the understanding that legal commitment and strict adherence to the EMPr are agreed to by the Applicant.

15.7.1 Conditions that must be included in the authorisation

Please refer to Section 15.5 above

15.8 Period for which the Environmental Authorisation is required.

The EA is requested for a minimum of 3 years to a maximum period of 5 years.

16 Financial Provision

The total amount required to manage and rehabilitate the environment in respect of rehabilitation is R55 936.00 including VAT and contingencies.

CALCULATION OF THE QUANTUM

Applicant: **Jaments (Pty) Ltd**
Evaluator: **Khodani Mathakho**

Ref No: KZN 30/5/1/1/2/11412 PR
Date:20-09-2023

No.	Description	Unit	A Quantity	B Master Rate	C Multiplication factor	D Weighting factor 1	E=A*B*C*D Amount (Rands)
1	Dismantling of processing plant and related structures (including overland conveyors and powerlines)	m3	0	19	1	1	0
2 (A)	Demolition of steel buildings and structures	m2	0	271	1	1	0
2(B)	Demolition of reinforced concrete buildings and structures	m2	0	400	1	1	0
3	Rehabilitation of access roads	m2	3509,95	49	0,01	1	1719,8755
4 (A)	Demolition and rehabilitation of electrified railway lines	m	0	471	1	1	0
4 (A)	Demolition and rehabilitation of non-electrified railway lines	m	0	257	1	1	0
5	Demolition of housing and/or administration facilities	m2	0	542	1	1	0
6	Opencast rehabilitation including final voids and ramps	ha		284292	1	1	0
7	Sealing of shafts adits and inclines	m3	0	146	1	1	0
8 (A)	Rehabilitation of overburden and spoils	ha		189528	1	1	0
8 (B)	Rehabilitation of processing waste deposits and evaporation ponds (non-polluting potential)	ha	0	236054	1	1	0
8 (C)	Rehabilitation of processing waste deposits and evaporation ponds (polluting potential)	ha		685612	1	1	0
9	Rehabilitation of subsided areas	ha	0	158701	1	1	0
10	General surface rehabilitation	ha	0,216	150138	0,01	1	324,29808
11	River diversions	ha	0,216	150138	1	1	32429,808
12	Fencing	m	0	171	1	1	0
13	Water management	ha		57087	1	1	0
14	2 to 3 years of maintenance and aftercare	ha	0,9	19980	0,3	1	5394,6
15 (A)	Specialist study	Sum	0			1	0
15 (B)	Specialist study	Sum				1	0
					Sub Total 1		39868,58158

1	Preliminary and General	4784,22979	weighting factor 2 1	4784,22979
2	Contingencies	3986,858158		3986,858158
			Subtotal 2	48639,67
			VAT (15%)	7295,95
			Grand Total	**55936**

SIGN Khodani Mathakho

DATE 20/09/2023

Table 10:Financial Provision

16.1 Explain how the aforesaid amount was derived.

The environmental liability only focused on the proposed prospecting activities and was calculated using the DMRE's rule-based assessment and has factored in inflation. The closure components and size of disturbed areas provided by Jaments (Pty) Ltd in the Prospecting Work Program (PWP) was used to calculate the financial provision. The accuracy of the results and conclusions from the review are entirely reliant on the accuracy and completeness of the supplied data. The financial provision required for all the additional environmental management and monitoring, as per the EMPr will be

conducted by Jaments (Pty) Ltd where needed and will form part of their operational running costs.

16.2 Confirm that this amount can be provided for from operating expenditure

Jaments (Pty) Ltd confirms that a financial provision of R55 936.00 has been allocated and is available for the rehabilitation of the environment after prospecting has taken place. Jaments (Pty) Ltd will provide for the closure liability associated with the project through the purchase of a Bank Guarantee as allowed by the Financial Provision for Prospecting, Exploration, Mining or Production Operations Regulations, with the Bank Guarantee provided to the DMRE following authorisation of the project.

17 Undertaking

The undertaken has been fully signed and completed at the end of Part B: EMPr.

18 Specific Information required by the competent Authority

18.1 Compliance with the provisions of sections 24(4) (a) and (b) read with section 24 (3) (a) and (7) of the National Environmental Management Act (Act 107 of 1998)

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

Impact is seen as minimal if EMPr is applied to prospecting activities and prospecting sites. Impacts such as veld fires, safety and security of landowners and occupants are envisaged to be minimal. No open fires will be allowed on the prospecting site, no site camps will be established as local people will be used for any manual labour. Skilled personnel from outside the local area will be housed in town. Traffic control measures will be implemented to minimise any potentials for road accidents. It is not anticipated that the drilling activities will impact on the socio-economic conditions of the landowner /occupier, as the current land use can continue alongside the prospecting.

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

The management plan has made allowance for mitigation measures to ensure avoidance of these sites should they be encountered, as the prospecting locations will have some degree of flexibility. Where unavoidable, the EMPr stipulates that the permits must be obtained under SAHRA.

18.2 Other matters required in terms of sections 24(4) (a) and (b) of the Act

Section 24(4) (b) (i) of the Act requires the EAP to conduct an investigation of the potential consequences of impacts of alternatives to the activity on the environment and assessment of the significance of those potential consequences. This has been addressed in Section 10 above. As stipulated, the site is delimited by the prospecting rights area and the extent of the resource. Invasive prospecting area will be delimited by the data from non-invasive techniques. The approach to prospecting is environmentally responsible (by completing non-invasive techniques first) and an industrial norm (drilling is still an acceptable means for resource evaluation as required for the Mining Right or Mining Permit Application).

PART B

ENVIRONMENTAL MANAGEMENT PROGRAMME REPORT

A BAR Process was followed according to GNR 517 Regulation 19 of the NEMA EIA Regulations 2014, as amended, in support of the Prospecting Right and Environmental Authorisation application and the EMPr is thus subject to the requirements of Appendix 4 of the NEMA EIA Regulations of 2014.

The implementation of this EMPr is a requirement in terms of NEMA and will be a condition of the Environmental Authorisation, issued by the Competent Authority. The Applicant and contractors must therefore familiarise themselves with the contents of this document because failure to comply with the commitments made will constitute an offence which can lead to penalties and/or legal action.

The EMPr should form an integral part of the contract documents to ensure that the biophysical, cultural, and socio-economic environment is not adversely affected by the potential impacts resulting from the different aspects of the proposed prospecting operation. It should further be noted that the EMPr is not static, as allowances have been made for it to evolve in the future.

19 Details of EAP

The Applicant appointed Singo Consulting (Pty) Ltd as an independent Environmental Assessment Practitioner to facilitate the Environmental Authorisation process. This EMPr was compiled by Singo Consulting (Pty) Ltd for the proposed project. Please refer to section 3 of the BAR for the details of the EAP.

20 Description of the Aspects of the Activity

The prospecting right application has been submitted to prospect for Coal on portion of the remaining extent of the Farm Mdletshe 17437, portion of the remaining extent of the Farm Lot 10 12984, portion 1 and portion of the remaining extent of the Farm Horseshoe bend 11688, portion 13, a portion of the remaining extent of the Farm Reserve No. 3 15822, portion of portion 1 and a portion of the remaining extent of the Farm Mtolo 14390 and portion 22 of the Farm Reserve 12 15832, situated in the Magisterial District of Umkhanyakude in Kwazulu-Natal Province. The proposed activities on site will be approached in phases, and will include:

Phase 1: Non-invasive prospecting

Non-invasive prospecting activities will consist of:

- A desktop study and literature review.
- Obtaining historical borehole data and resource information.
- Feasibility studies.
- Geophysical site visit and survey will be conducted by a field geologist.
- Data will be extracted and plotted into geological maps identifying areas for invasive prospecting for resource determination.

Phase 2: Invasive prospecting:

The proposed timeframe associated with the invasive prospecting is expected to be no more than 5 years. Invasive prospecting activities will consist of:

- Establishment of drill site and temporary contractors' yard. This will involve:
  - Clearing of vegetation for sumps and the drill entrance point
  - Earth sumps for water recycling
  - Laydown area for drill rods, fuel and ablution facilities (chemical toilets)
  - Site office
  - Parking area
- Core drilling. (however, preliminary positions have been proposed in Figure 1 below). Cores will be sampled and assessed by the on-site geologists and core logs will be maintained.
- Rehabilitation of boreholes. Casing will be removed from the borehole on

completion thereof and the borehole sealed in accordance with "Standard Borehole Sealing Procedure" i.e.: each borehole certificated in terms of this procedure. Sealing will include:

- Removing casing- if casing is to be removed, a specialist borehole contractor will advise on appropriate techniques and associated risks.
- Backfilling- boreholes should be backfilled with clean uncontaminated material. Backfilled hole should be similar to surrounding strata.
- Seal top of borehole- backfilled borehole should be compiled with an impermeable plug to prevent entry of potentially contaminated surface run-off or other liquids.
- Record details- the depths and position of each layer of backfilling and sealing material.

- Drill rig, machinery, and vehicle movement. Existing farm roads and tracks will be utilised as far as possible however, where a road does not exist temporary access roads will be established to access a drill site after consultation with the landowner. The type of access envisaged is limited to removal of large rocks and disturbance of vegetation. Such access roads may also require 'light' grading to allow the movement of surface mobile vehicles.
- Water Management. Process and potable water will be obtained from existing lawful users, an irrigation board or water services provider. Two sumps (delivery sump & settling sump) will be installed around the drilling rigs to collect water during the drilling process and settle out the suspended solids, for recycling of the water. This water will be re-used on the rig. It is recommended that the sumpsat the drill sites be plastic lined to limit the amount of seepage of process water.
- Ablution Facilities. Portable chemical toilets will be provided within close proximityof the drilling site and serviced on a regular basis by the service provider.
- Domestic Waste Management - The drilling team will be housed off site in the nearest town. No accommodation will be provided on site. Specific areas for lunch breaks will be provided and closed bin will be provided to collect domestic waste which will be removed and disposed of by the drilling contractor at a suitable site.
- Safety and Security - Security staff will be employed once equipment has been established on site.
- Storage and Handling of Dangerous goods - During the drilling activities there will be no storage area where diesel will be stored on site. Diesel will be trucked onto site using a diesel bowser on a daily basis until prospecting concludes. Drip trays will be placed under mobile plant for the purpose of leakages.

Phase 3: Analytical assessment of prospecting data

Data will be assessed in a pre-feasibility study to determine resource estimates to commence with prefeasibility and feasibility assessments for mine planning and Mining Right Application processes.

In terms of NEMA and its EIA Regulations the above-mentioned activities trigger the listed activities presented in section A under Listed Activities and is thus subject to a Basic Assessment ("BA") andEMPR.

Composite Map

The location of the prospecting boreholes in relation to the 100m and 500m buffers around the rivers, dam, and wetlands, respectively. It must be noted that during the site inspection it was confirmed thatthere are perennial and non-perennial rivers, wetlands, and dam present in the proposed project area. refer to the proposed borehole map in section A

21 Description of impact management objectives includingmanagement statements

The following EMPr has been structured in such a manner as to provide a basis for an Environmental Management Systems (EMS) for the prospecting operation. The purpose of this Environmental Management Programme Report (EMPr) is to serve as an action plan for implementation of mitigation and management measures to ensure satisfactory environmental (biophysical, cultural and socio economic) management. More specifically, the objectives of the EMPr are to guide and control the invasive prospecting activities and should be to ensure that appropriate environmental management measures and monitoring requirements are implemented by Jaments (Pty) Ltd.

21.1 Determination of closure objectives

Post-closure land use must continue as prior to prospecting. The specific closure objectives for each environmental aspect that must be met are presented in Table 11 below.

Table 11: Closure objectives per environmental aspects.

Environmental aspect	Closure objective
Geology	All boreholes must be sealed, and the disturbed area stabilized.
Topography	The final elevation of drilled areas must be free draining.
Soils	Topsoil must be replaced over the disturbed area to restore vegetation growth and limit the risk of erosion.
Land capability and use	The disturbed areas must return to self-sustaining veld suitable for animal breeding and feeding practices.
Vegetation	Prevent the establishment and spreading of alien plant species on the disturbed areas.
Animal life	A non-aggressive environment, suitable to the natural re-habitation of indigenous animal life.
Surface water and aquatic ecosystems	Ensure that the surface water leaving the site is of acceptable quality, and enable through landscaping, as much as possible of the storm water runoff to flow off the rehabilitated areas without undue delay, to minimise infiltration without causing unacceptable erosion.
Groundwater	Ensure no contamination of the local ground water systems.
Air quality	To have rehabilitated the disturbed areas such that dust levels return to pre-drilled state through adequate vegetative cover.
Noise	The noise levels must return to the pre-drilled situation, typically in the region of 40 dB for rural areas.
Environmental aspect	Closure objective
Visual	The rehabilitated areas must resemble the pre-drilled landscape and sense of place.

21.2 Process to manage environmental impacts

Significant environmental aspects and their associated environmental impacts were identified for the proposed prospecting operation as part of the impact assessment. Consideration was given to the Impact Mitigation Hierarchy in terms of the impact management objectives. The main objective is to focus on avoiding/preventing the impact from occurring and where this is not possible to minimize the significance of the impact. Where the impact cannot be avoided and or minimized, measures have been included that focusses on the repair/restore of the environmental aspect. The identified impacts will be mitigated by implementing the measures outlined in section 5 below. The mitigation measures aim is to prevent emergencies and minimise environmental risks and impacts as far as possible.

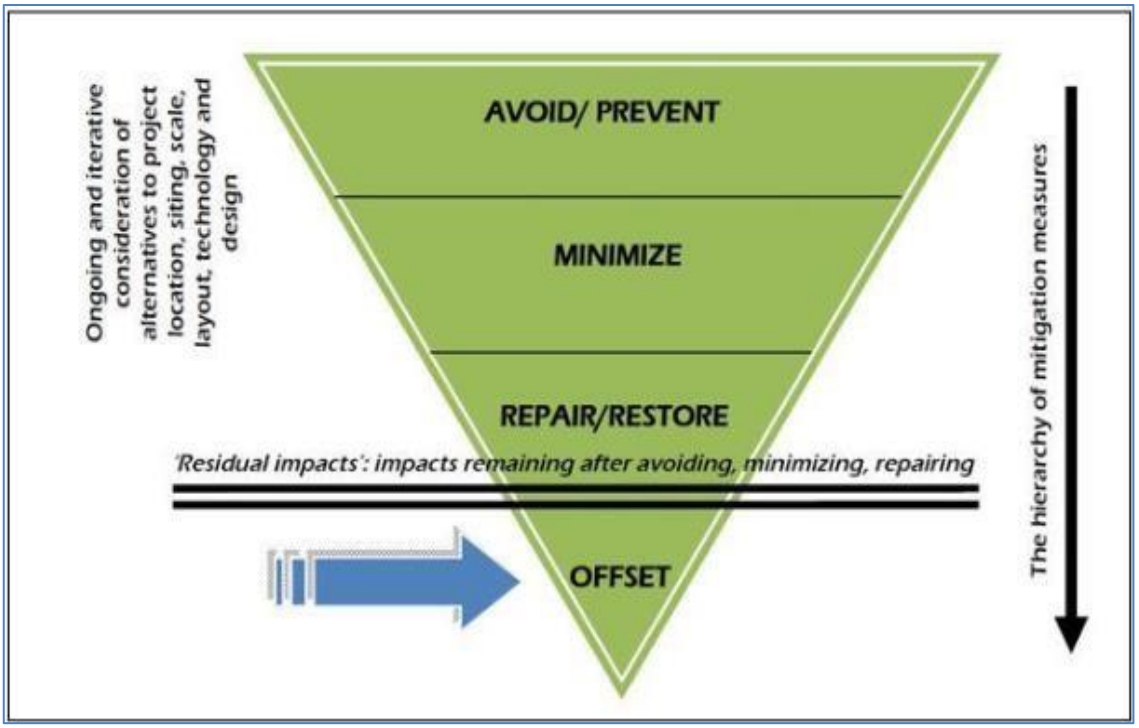


Figure 38: Schematic representation of the Mitigation Hierarchy process.

21.3 Volumes and rate of water use required for the operation

After careful consideration of the scale of operation it has been deduced that approximately 40 L will used as potable water. It is anticipated that water will be purchased from a private water filter dealer such as Oasis and brought onto the site. Water to be used onsite for drilling purpose will be trucked in using water bowser for the sole purpose of this project until prospecting concludes. This water will be bought from the municipality or licensed water supplier that sells potable water or treated industrial water for which a water sale agreement will be provided and filed onsite to ensure compliance. It is estimated that up to 18 000 litres per day could be required for diamond core drilling.

21.4 Has a water use license has been applied for?

No, a Water Use License has not been applied. The main prospecting right activities that will take place includes Drilling, Logging, Sampling and Mapping. It should be noted that these activities do not include any mining activities nor bulk sampling, and No PCD, Trenches and Berms will be constructed. The drilling activity will only take up about 1.32 ha per planned borehole, and all the planned exploration boreholes will be outside the 100m and 500m DWS regulated radius from the watercourses. No water will be abstracted from the drilled exploration boreholes. 5000L Jojo tank will be used to store water for drilling. Water to be used during drilling will be trucked in until prospecting concludes.

2.3 Impacts to be Mitigated, Management Actions, Outcomesand Standards to be Achieved

This section lists the potential impacts per environmental aspect for each of the proposed prospecting activities. For each impact, a set of mitigation/management measures have been identified along with the time period for implementation, performance criteria (compliance with standards) and standards to be achieved. The information contained in this section forms an integral part of this EMPr and must be adhered to at all times.

Table 12: Environmental Management Programme.

Potential Environmental Impact	Activity	Size and scale of disturbance	Mitigation Measures	Phase	Time period for implementation	Performance criteria (compliance with standards)	Standards to be achieved
Geology							
Cracks and disruption to geological layers.	Core drilling	25m^2 per borehole	Plan location of invasive prospecting sites properly to avoid sensitive geological features. Start with fewer boreholes to verify non-invasive prospecting followed by more extensive drilling in areas indicating adequate resources.	Operation	Once-off sign-off of drill sites or amendments to these plans before any activities take place for the duration of prospecting operations.	NEMA & MPRDA principals and regulations regarding environmental protection and rehabilitation. Standard industry practises.	The drilling sites must be positioned by a geologist to ensure that it is not above any weak geological strata.
Topography							
Localised dips in topography if boreholes collapse after material is replaced.	Rehabilitation of boreholes	0.06ha per borehole	Inspect and take immediate action to repair any dips by levelling and grading the disturbed area.	Decommissioning and closure	Once-off inspection of drilled boreholes after substantial rainfall	NEMA & MPRDA principals and regulations regarding environmental protection and rehabilitation requirements.	Restore natural catchment drainage patterns as far as possible.
Soils							
Compaction of soils	Establishment of drill sites and contractor's camp	600m^2	Keep disturbed area as small as possible. Rip compacted soils.	Construction Operation	Weekly inspections of the drill site, contractor's camp and surrounding area for the duration of prospecting activities	NEMA & MPRDA principals and regulations regarding environmental protection and rehabilitation.	Reduce compaction of soil and maintain existing arable land capability.
	Drill rig, machinery, andvehicle movement	Farm roads will be used as far as possible. Temporary Access Road (if required) will not exceed 3.5m in width	Remain in designated roads / routes / activity areas. Where not possible, routes must be properly planned to reduce disruption to soil as far as possible.	Construction Operation	Once-off sign-off of route plans or amendments to these plans before any activities take place for theduration of prospecting operations.		Prohibit movement of machinery outside designated areas.
Loss of soil resource due to erosion	Water management	6 m^2	Adequate drainage and erosion protection in the form of cut-off berms or trenches shall be provided where necessary. Effective managing of the topsoil by covering or reseeding the stockpiles to avoid erosion. Any erosion gullies must be remediated immediately.	Operation	Weekly inspections of the drill site, contractor's camp and surrounding area for the duration of prospecting activities	NEMA & MPRDA principals and regulations regarding environmental protection and rehabilitation.	Reduce erosion of soil and maintain existing arable land capability.

Potential Environmental Impact	Activity	Size and scale of disturbance	Mitigation Measures	Phase	Time period for implementation	Performance criteria (compliance with standards)	Standards to be achieved
Hydrocarbon contamination of soils	Core drilling	0.06m^2 per borehole	Remove any spills as soon as it occurs along with the polluted soil and dispose of it at a registered waste site. Spill kits must be available on site and personnel trained to utilize these to clear spills immediately.	Construction Operation Decommissioning and closure	Weekly inspections of the vehicles and storage area forthe duration of prospecting activities.	General duty of care in terms of NEMA & NEMWA	SANS / SABS / SA legislative requirements regarding vehicle and equipment maintenance and operatingrequirements.
	Drill rig, machinery and vehicle movement	Farm roads will be used as far as possible. Temporary Access Road (if required) will not exceed 3.5m in width	Follow the equipment's operation and maintenance procedures and all vehiclesmust undergo periodic maintenance andinspection.				
Potential contamination of soils with sewage	Ablution facilities	Portable chemical toilets will be used	Inspect, repair, and replace anydamaged toilets. Appoint the necessary reputable contractor to manage portable toilets. Implement proper housekeeping andhygienic practices.	Operation	Weekly inspections of portable toilet facilities for the duration of prospecting activities.	General duty of care in terms of NEMA & NEMWA	Reduced bacterial contamination and associated health effects onneighbouring areas.
Potential contamination of soils with indiscriminately dumped waste or littering.	Domestic waste management	Portable closed bins will be used	Domestic waste must be collected inwaste bins that are located on site. The waste bins must be marked clearly indicating what waste must be disposed of in what bin. Employees must be encouraged to re-use, recycle, and reduce waste where possible. No burning of domestic waste may bedone on site.	Operation	Weekly inspections of the waste bins for the duration of prospecting activities.	Dispose waste generated bythe project according to good practice waste management principles.	Attain "cradle to grave" management of waste onsite.

Potential Environmental Impact	Activity	Size and scale of disturbance	Mitigation Measures	Phase	Time period for implementation	Performance criteria (compliance with standards)	Standards to be achieved
			Appoint reputable contractors for the removal and disposal of general waste at a licensed facility.				
Soil replacement and re-vegetation of disturbed areas	Rehabilitation of boreholes	0.06ha per borehole	Rehabilitation must be on-going as soon as drilling results are completed. Replaced soil should be vegetated as soon as possible, where required, to prevent erosion and establishment of weed species. Soil compaction should be avoided asfar as possible but where not compacted soils must be ripped to correct any compaction	Operation, decommissioning and closure	Monthly once invasive prospecting commences forthe duration of prospecting. Once-off inspection of rehabilitated sites after substantial rainfall.	General duty of care in terms of NEMA and MPRDA rehabilitation standards.	Promote aeration, water infiltration and the establishment of vegetation.
Land capability and use							
Temporary change in landuse	Establishment of drill site and contractor's camp	600m^2 per borehole	Keep the disturbed area as small as possible.	Operation	Weekly inspections of the drill site, contractor's camp and surrounding area for the duration of prospecting activities	NEMA & MPRDA principals and regulations regarding environmental protection and rehabilitation.	Maintain existing land capability.
Permanent change of landuse back to pre-drilled state	Rehabilitation of boreholes	0.09ha per site	No mitigation necessary – impact is positive	Decommissioning and closure	N/A	General duty of care in terms of NEMA and MPRDA rehabilitation standards.	Restore natural catchment drainage patterns as far as possible. Restore land to arable land use.
Flora and Fauna							
Disturbance/damage to vegetation and subsequentdisturbance to animal species	Establishment of drill sites and contractor's camp	600m^2 per borehole	Plan location of drill sites properly to avoid sensitive features such as watercourses and rocky outcrops. Restrict vegetation clearance. Remove vegetation during periods oflow rainfall or dry periods.	Operation	Weekly inspections of the contractor's camp and surrounding area for the duration of prospecting activities.	General duty of care in terms of NEMA, NWA, NFA and NCNCA and must be applied when necessary.	Preservation of protected species.
Alien plant infestation	Rehabilitation of boreholes		Remove alien and invasive species that may establish around prospecting sites.	Operation Decommissioning and closure	Monthly once invasive prospecting commences for the duration of prospecting.	NEMA & MPRDA principals and regulations regarding environmental protection	

Potential Environmental Impact	Activity	Size and scale of disturbance	Mitigation Measures	Phase	Time period for implementation	Performance criteria (compliance with standards)	Standards to be achieved
			Clear all vehicles coming to site of any vegetative material.		Once-off inspection of rehabilitated sites after substantial rainfall.	and rehabilitation requirements.	
Harm/disturbance to protected fauna and floraspecies	Core drilling		Survey prospecting sites for any protected species known to occur in theregion and either keep species in situ with 50m buffer zone to prevent inadvertent damage to these species or obtain permits to remove / destroy protected species. Relocate protected plant species for which permits are obtained rather than destroying species. Do not hinder, harm or trap animals.	Operation	Once-off sign-off of borehole locations or amendments to these plans before any activities take place for the duration of prospecting operations.	NEMA & MPRDA principals and regulations regarding environmental protection and rehabilitation.	
	Drill rig, machinery, andvehicle movement	Farm roads will be used as far as possible. Temporary Access Road (if required) will not exceed 3.5m in width	Survey any off-road routes to prevent damage to red data plants. Remain in designated roads / routes / prospecting areas.	Operation	Once-off sign-off of route plans or amendments to these plans before any activities take place for theduration of prospecting operations.	General duty of care interms of NEMA.	
Surface water and aquatic ecosystems							
Disturbance to streams and wetlands if activity proceeds indiscriminately.	Core drilling	0.06m^2 per boreholes	No prospecting activities can take place within 100m of streams and/or 500m of wetlands unless authorisation is obtained to do so.	Operation	Once-off sign-off of drill sites or amendments to these plans before any activities take place for the duration of prospecting operations.	NWA will be complied with to ensure that the quantity, quality, and reliability of water required to maintain the ecological function on which human depends is maintained.	Prevent disturbance to wetlands and riparian areas.
	Drill rig, machinery, andvehicle movement	Farm roads will be used as far as possible. Temporary Access Road (if required) will not exceed 3.5m in width			Once-off sign-off of route plans or amendments to these plans before any activities take place for theduration of prospecting operations.		
Hydrocarbon contamination of surfacewater through contaminated runoff.	Core drilling	0.06 ha per boreholes	Remove any spills as soon as it occurs along with the polluted soil and dispose of it at a registered waste site.	Operation	Weekly inspections of the vehicles and storage area forthe duration of prospecting activities.	NWA will be complied with to ensure that the quantity, quality, and reliability of water required to maintain	SANS / SABS / SA legislative requirements regarding vehicle and equipment

Potential Environmental Impact	Activity	Size and scale of disturbance	Mitigation Measures	Phase	Time period for implementation	Performance criteria (compliance with standards)	Standards to be achieved
						the ecological function onwhich human depends is maintained.	maintenance and operatingrequirements.
	Drill rig, machinery andvehicle movement	Farm roads will be used as far as possible. Temporary Access Road (if required) will not exceed 3.5m in width	Follow the equipment's operation and maintenance procedures and all vehiclesmust undergo periodic maintenance andinspection. Leaky vehicles will not be parked over bare ground; where unavoidable, driptrays will be placed under the equipment to collect leaks. The leaky vehicles will be discontinued until repairs are made.				
	Storage and handling of dangerous goods	<30m^3	Equip vehicles on site with drip trays and place drip trays under leaky equipment. Spill kits must be available on site in the event of a spillage. Adhere to safe work procedure when refuelling vehicles and machinery. Hydrocarbons must be stored within portable bund tanks.	Operation	Weekly inspections of hydrocarbon storage areas forthe duration of prospecting activities.	General duty of care interms of NEMA & NWA.	
Irresponsible use of water and water wastage	Core drilling	20m^2 per borehole	Recycle water from the sumps to re-used on the rig. Source water from existing lawful water use or water service provider. Use clean water responsibly.	Operation	Monthly visual inspection of the active prospecting areas.	NWA will be complied with to ensure that the quantity, quality, and reliability of water required to maintain the ecological function on which human depends is maintained.	To keep, as far as possible, water of differing qualities separate within prospecting area, so as to minimise the contamination of clean run-off and surface water
Potential contamination ofsurface water resources with process water from the sumps	Water manageme nt	10m^2	Use biodegradable lubricants andfluids/polymers. Maintain buffer zones around watercourses as ecological corridors and refuges.	Operation			
Potential contamination ofsurface water with sewage	Ablution facilities	Portable chemical toilets will be used		Operation	Weekly inspections of portable toilet facilities for the duration of prospecting activities.	General duty of care in terms of NEMA & NEMWA	Reduced bacterial contamination and associated health effects onneighbouring areas.

Potential Environmental Impact	Activity	Size and scale of disturbance	Mitigation Measures	Phase	Time period for implementation	Performance criteria (compliance with standards)	Standards to be achieved
Potential contamination ofsurface water with indiscriminately dumped waste or littering.	Domestic waste management	Portable closed bins will be used	Inspect, repair, and replace anydamaged toilets. The portable toilets must be managed by a reputable contractor, emptied on aregular basis as needed. Toilets must be maintained in hygienic state. Inspect and clear all litter and waste. Appoint reputable contractors for the removal and disposal of general wasteat a licensed facility.	Operation	Weekly inspections of the waste bins for the duration of prospecting activities.	Dispose waste generated bythe project according to good practise waste management principles.	Attain "cradle to grave" management of waste onsite.
Groundwater							
Cracks and disruption to aquifers.	Core drilling	20m^2 per borehole	Start with fewer boreholes to verify non-invasive prospecting followed by more extensive drilling in areas indicating adequate resources. Limit development to target rocks and reduce exposure of aquifer rocks.	Operation	Once-off sign-off of drill sites or amendments to these plans before any activities take place for the duration of prospecting operations.	NEMA & MPRDA principals and regulations regarding environmental protection and rehabilitation.	The drilling sites must be positioned by a geologist to ensure that it is not above any weak geological strata.
Potential hydrocarbon contamination seeping tothe groundwater environment.	Core drilling		Remove any spills as soon as it occurs along with the polluted soil and dispose of it at a registered waste site.	Operation	Weekly inspections of the vehicles and storage area forthe duration of prospecting activities.	NWA will be complied with to ensure that the quantity, quality, and reliability of water required to maintain the ecological function on which human depends is maintained.	SANS / SABS / SA legislative requirements regarding vehicle and equipment maintenance and operatingrequirements.
	Drill rig, machinery andvehicle movement	Farm roads will be used as far as possible. Temporary Access Road (if required) will not exceed 3.5m in width	Follow the equipment's operation and maintenance procedures and all vehiclesmust undergo periodic maintenance andinspection. Leaky vehicles will not be parked over bare ground; where unavoidable, driptrays will be placed under the equipment to collect leaks. The leaky vehicles will be discontinued until repairs are made.		Weekly inspections of hydrocarbon storage areas forthe duration of prospecting activities.	General duty of care interms of NEMA & NWA.	

Potential Environmental Impact	Activity	Size and scale of disturbance	Mitigation Measures	Phase	Time period for implementation	Performance criteria (compliance with standards)	Standards to be achieved
	Storage and handling of dangerous goods	<30m^3	Equip vehicles on site with drip trays and place drip trays under leaky equipment. Spill kits must be available on site in the event of a spillage. Adhere to safe work procedure when refueling vehicles and machinery. Hydrocarbons must be stored within portable bund tanks.				
Potential contamination ofgroundwater through process water seepage	Water management	20m^2 per borehole	Line sumps with the appropriate lining system. Isolate porous or highly transmissive groundwater zones through capping or grouting to prevent clean groundwater ingress or recharge of contaminated water.	Operation Decommissioning	Monthly visual inspection of the active prospecting areas.	NWA will be complied with to ensure that the quantity, quality, and reliability of water required to maintain the ecological function on which human depends is maintained.	Prevent groundwater contamination through seepage.
Potential contamination ofgroundwater with indiscriminately dumped waste or littering.	Domestic waste management	Portable closed bins will be used	Domestic waste must be collected inwaste bins that are located on site. Employees must be encouraged to re-use, recycle, and reduce waste where possible. No burning of domestic waste may bedone on site. Appoint reputable contractors for the removal and disposal of general waste at a licensed facility.	Operation	Weekly inspections of the waste bins for the duration of prospecting activities.	Dispose waste generated bythe project according to good practise waste management principles.	Attain "cradle to grave" management of waste onsite.
Air quality							
Emissions into the atmosphere through use of diesel-powered equipment,machinery, and vehicles.	Core drilling Drill rig, machinery andvehicle movement	20m^2 per boreholes Farm roads will be used as far as possible. Temporary Access Road (if required) will not exceed 3.5m in width	Maintaining all vehicles, machinery andequipment and discontinuing use of faulty equipment.	Operation	Weekly inspections of the vehicles and machinery for the duration of prospecting activities.	SANS / SABS / SA legislative requirements regarding vehicle and equipment maintenance and operatingrequirements.	Vehicles, machinery and equipment maintained within operational specification and legislative requirements.

Potential Environmental Impact	Activity	Size and scale of disturbance	Mitigation Measures	Phase	Time period for implementation	Performance criteria (compliance with standards)	Standards to be achieved
Increase in dust fall out	Establishment of drill sites and contractor's camp	20m^2 per boreholes	Dust suppression procedures should be implemented to reduce and control dust on the access road and drill site. Control the speed of operationalvehicles. The drill rig must remain on site as faras possible.	Operation	Weekly inspections of the drill site, contractor's camp and access roads for the duration of prospecting activities.	General duty of care interms of NEMA.	Dust fallout will be managed to not exceed 600mg/m^2/day.
	Drill rig, machinery andvehicle movement	Farm roads will be used as far as possible. Temporary Access Road (if required) will not exceed 3.5m in width					
Noise							
Increase in ambient noise levels.	Core drilling	20m^2 per boreholes	Drilling must be done in consultation with the landowners to ensure that work schedules are communicated to them. Prospecting activities must be conducted during normal working hours (Monday – Friday - 7am – 17pm) Implement noise control measures on noisy equipment.	Operation	Weekly inspections of the drill site, contractor's camp, and access roads for the duration of prospecting activities	General duty of care interms of NEMA.	Prevent nuisance noise to nearby landowners / users.
	Establishment of drill sites and contractor's camp	625m^2 per site					
	Drill rig, machinery andvehicle movement	Farm roads will be used as far as possible. Temporary Access Road (if required) will not exceed 3.5m in width					
Visual							
Visual intrusion and disturbance to the sense of place.	Core drilling	20m^2 per boreholes	Keep disturbed areas as small as possible. Keep the drill site neat, clean, and organized in order to maintain a tidy appearance. Remove waste off site as soon as possible or place it in closed bins in order to keep the site free from additional unsightly elements.	Operation	Weekly inspections of the drill site and site camp for the duration of prospecting activities	Dispose waste generated bythe project according to good practise waste management principles.	Attain "cradle to grave" management of waste onsite.
	Establishment of drill sites and contractor's camp	625m^2 per site					
Improvement of visual quality and sense of place	Rehabilitation of boreholes	20m^2 per borehole	Rehabilitation must be on-going as soon as drilling results are completed.	Decommissioning	Monthly once invasive prospecting commences forthe duration of prospecting. Once-off inspection of	General duty of care interms of NEMA. MPRDA rehabilitation standards.	Restore land to arable landuse.

Potential Environmental Impact	Activity	Size and scale of disturbance	Mitigation Measures	Phase	Time period for implementation	Performance criteria (compliance with standards)	Standards to be achieved
					rehabilitated sites after substantial rainfall.		
Heritage resources							
Loss of and disturbance to archaeological / heritage /grave sites that may be encountered	Core drilling	20m^2 per boreholes	Visually surveying drill sites for any heritage resources. Prevent activities near potential heritagesites unless necessary permits are obtained to do so. Should any graves/ruins be found during prospecting a 50m buffer will be established and maintained around these areas.	Operation	Once-off sign-off of drill site locations and route plans or amendments to these plans before any activities take place for the duration of prospecting operations.	SAHRA will be complied with regarding permits for destruction and relocation or management of heritagesites, and applicable buffers.	Preservation of heritage sites.
	Establishment of drill sites and contractor's camp	625m^2 per site					
	Drill rig, machinery andvehicle movement	Farm roads will be used as far as possible. Temporary Access Road (if required) will not exceed 3.5m in width					
Socio economic, health and safety							
Creation of employment opportunities	Core drilling	20m^2 per boreholes	Appoint local contractors wherepossible.	Operation	Once off before prospectingactivities commence	N/A	Transparent communication with job seekers.
Damage to existing infrastructure incl. gates, roads, and fences	Drill rig, machinery andvehicle movement	Farm roads will be used as far as possible. Temporary Access Road (if required) will not exceed 3.5m in width	Remaining in designated roads /routes. If infrastructure were damaged by the drill team the Applicant must repair the damages (i.e., grade farm roads that have been damaged due to use by prospecting team). The drilling team must always close the farm gates after entering.	Operation Decommissioning and closure	Once-off sign-off of route plans or amendments to these plans before any activities take place for theduration of prospecting operations. Once off inspection of routes after activity in the area has ceased.	General duty of care interms of NEMA	High safety standards on site with reduced safety risks
Increase potential for road accidents	Drill rig, machinery andvehicle movement		The drilling contractor's personnel will always adhere to the speed limit. No transporting will occur after sunset. Vehicles will be in roadworthy condition with reflective strips to make them clean and visible for other road users. Intersections with main tarred roads will be clearly signposted.	Operation	Daily for the duration of prospecting operations	General duty of care interms of NEMA	Leave site without any incidents, safety risks and theft to surrounding farmers.

Potential Environmental Impact	Activity	Size and scale of disturbance	Mitigation Measures	Phase	Time period for implementation	Performance criteria (compliance with standards)	Standards to be achieved
Theft and safety risk resulting in the decrease in quality of life	Influx of people into the area	N/A	Ensure farm gates are always closed. No employee will be allowed to stayover on site after working hours. No employee will be allowed to loiter around farms. The drill contractor must monitor the whereabouts of the drill team.	Operation	Daily for the duration of prospecting operations	General duty of care interms of NEMA	
Increase risk of veld fires	Influx of people into the area	N/A	No employees will be allowed to make any open fires on the farms or adjacent land. Cigarette butts may not be thrown in the veld, but must be disposed of correctly. Contractors must ensure that basic fire-fighting equipment and suitably qualified/experienced personal are always available on site. Fire extinguishers shall be placed at working areas and all areas where hazardous substances are kept.	Operation	Daily for the duration of prospecting operations	Operations will comply with NVFFA standard proceduresand regulations	Compliance with the National Veld & Forest Fire Act (NVFFA, Act 101of 1998)

24. Financial Provision

CALCULATION OF THE QUANTUM

Applicant: **Jaments (Pty) Ltd**
Evaluator: **Khodani Mathakho**

Ref No: KZN 30/5/1/1/2/11412 PR
Date:20-09-2023

No.	Description	Unit	A Quantity	B Master Rate	C Multiplication factor	D Weighting factor 1	E=A*B*C*D Amount (Rands)
1	Dismantling of processing plant and related structures (including overland conveyors and powerlines)	m3	0	19	1	1	0
2 (A)	Demolition of steel buildings and structures	m2	0	271	1	1	0
2(B)	Demolition of reinforced concrete buildings and structures	m2	0	400	1	1	0
3	Rehabilitation of access roads	m2	3509,95	49	0,01	1	1719,8755
4 (A)	Demolition and rehabilitation of electrified railway lines	m	0	471	1	1	0
4 (A)	Demolition and rehabilitation of non-electrified railway lines	m	0	257	1	1	0
5	Demolition of housing and/or administration facilities	m2	0	542	1	1	0
6	Opencast rehabilitation including final voids and ramps	ha		284292	1	1	0
7	Sealing of shafts adits and inclines	m3	0	146	1	1	0
8 (A)	Rehabilitation of overburden and spoils	ha		189528	1	1	0
8 (B)	Rehabilitation of processing waste deposits and evaporation ponds (non-polluting potential)	ha	0	236054	1	1	0
8 (C)	Rehabilitation of processing waste deposits and evaporation ponds (polluting potential)	ha		685612	1	1	0
9	Rehabilitation of subsided areas	ha	0	158701	1	1	0
10	General surface rehabilitation	ha	0,216	150138	0,01	1	324,29808
11	River diversions	ha	0,216	150138	1	1	32429,808
12	Fencing	m	0	171	1	1	0
13	Water management	ha		57087	1	1	0
14	2 to 3 years of maintenance and aftercare	ha	0,9	19980	0,3	1	5394,6
15 (A)	Specialist study	Sum	0			1	0
15 (B)	Specialist study	Sum				1	0
					Sub Total 1		39868,58158
1	Preliminary and General		4784,22979		weighting factor 2 1		4784,22979
2	Contingencies			3986,858158			3986,858158
					Subtotal 2		48639,67
					VAT (15%)		7295,95
					Grand Total		**55936**

SIGN Khodani Mathakho

DATE 20/09/2023

Table 13:Financial Provision

24.1 Description of the closure objectives and extent to whichthey align with the baseline characterization.

The closure vision for the proposed project is to establish a safe, stable, and non-polluting post-prospecting landscape that can facilitate integrated, self-sustaining and value generating opportunities, thereby leaving a lasting positive legacy. Closure objectives identified include:

24.1.1 Geology

Ensure that all the boreholes are plugged and sealed. Rehabilitation of each of the drilling sites will focus on the plugging of the hole and stabilization of the disturbed area.

24.1.2 Topography

Ensure that the final elevation of rehabilitated areas is free draining. The localised nature of the prospecting activities means that attainingobjective will result in restoration of baseline conditions.

24.1.3 Soils and land capability

Ensure that topsoil (with vegetation clods where applicable) are replaced to the surface of rehabilitated drilled sites to maintain arable land capability and reduce risk of erosion.

By removing soil clods with vegetation, the baseline conditions will be minimally altered and will recover fully to baseline condition over a short to medium term duration.

24.1.4 Surface water and aquatic ecosystems

Ensure no sedimentation and/or chemical contamination of the surrounding surface water systems. Prevent disturbance to depression wetlands and maintain current wetland status and maintain ecological corridors associated with watercourses found within the application area.

24.1.5 Groundwater

Ensure no contamination of ground water or disturbance to ground water aquifers.

24.1.6 Flora and Fauna

Encourage indigenous vegetative growth over the disturbed areas to prevent alien plant infestation. The aim is to reduce introduction of new species or spread of existing species and to preserve protected species in situ as far as possible.

25. Confirm specifically that the environmental objectives inrelation to closure have been consulted with landowner and interested and affected parties

Post closure land use (PCLU) is determined in consultation with stakeholders so that the PCLU meets the requirements of the stakeholders, within the context of the closure plan. This activity is undertaken for the area affected by prospecting activities and integrates stakeholder requirements with risk mitigation. The draft BAR & EMP will be made available for a 30-day review and comment period. The comments received during this period will be addressed in the final report.

25.1 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

This application is for a prospecting right. Each individual drill site will impact a maximum footprint of 20m^2 and the rehabilitation actions for the drilled boreholes will be conducted after drilling of each and every borehole concludes.

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

The rehabilitation plan has been compiled with the aim to meet the primary closure objective which is to establish a safe, stable, and non-polluting post-prospecting landscape. By implementing the rehabilitation activities in line with the plan the Applicant should be able to restore the affected areas to the pre-prospecting condition.

25.3 Quantum of the financial provision required to manageand rehabilitate the environment

An applicant or holder of a right must determine and make financial provision to guarantee the availability of sufficient funds to undertake rehabilitation and remediation of the adverse environmental impacts of prospecting, exploration and mining or production operations, as contemplated in the Mineral and Petroleum Resources Development Act,2004, (MPRDA) and MPRDA Regulations to the satisfaction of the Minister responsible for mineral resources.

The environmental liability only focused on the proposed prospecting activities and was calculated using the DMRE's rule-based assessment and is estimated to be R43 426 .00 including VAT and contingencies (see Figure 44). The closure components and size of disturbed areas provided by Jaments(Pty) Ltd in the Prospecting Work Program (PWP) was used to calculate the financial provision. The accuracy of the results and conclusions from the review are entirely reliant on the accuracy and completeness of the supplied data.

CALCULATION OF THE QUANTUM

Applicant: **Jaments (Pty) Ltd**
Evaluator: **Khodani Mathakho**

Ref No: KZN 30/5/1/1/2/11412 PR
Date:20-09-2023

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1	Preliminary and General	4784,22979	weighting factor 2 1	4784,22979
2	Contingencies	3986,858158		3986,858158
			Subtotal 2	48639,67
			VAT (15%)	7295,95
			Grand Total	**55936**

SIGN Khodani Mathakho

DATE 20/09/2023

Table 14:Financial provision calculation

25.4 Confirm that the financial provision will be provided asdetermined

Jaments (Pty) Ltd will provide for the closure liability associated with the project through the purchase of a Bank Guarantee as allowed by the Financial Provision for Prospecting, Exploration, Mining or Production Operations Regulations, with the Bank Guarantee provided to the DMRE following authorisation of the project.

26. Mechanisms for monitoring compliance with and performance assessment against the environmentalmanagement programme

Regular monitoring of all the environmental management measures and components shall be carried out by the holder of the prospecting right in order to ensure that the provisions of this EMPr are adhered to. Environmental management and monitoring will be conducted where needed by in-house Environmental Managers. The anticipated monitoring program is provided in Table 13 below.

The recommended management options have been listed below:

- Provide an updated layout plan at the prospecting site indicating the final locations of the proposed drill holes.
- Demarcating each drill site to ensure activities do not take place outside this area.
- Effective managing of the topsoil by covering or reseeding the stockpiles to avoid erosion.
- Use existing roads as far as possible and if new roads need to be established it must be done in consultation with the landowner.
- Implement dust control during dry and windy days.
- Temporary toilet facilities, wastewater and refuse disposal areas mustbe established.
- Maintenance of vehicles should not take place on site.
- Prospecting operations need to be conducted at least 500m away from all wetlands identified onsite and outside the project area.
- Final disposal of domestic and hazardous waste must be done by a registered contractor.

Compliance reporting/submission of information

Table 15: Monitoring programme.

Aspect	Area to be monitored	Impacts Requiring Monitoring	Functional Requirements for Monitoring (refer to detailed description of the monitoring programs above)	Roles and Responsibilities	Monitoring and Reporting Frequency
Geology	Drilling sites	Cracks and disruption to geological layers.	1. Ensure sensitive sites are avoided or that necessary authorisations / permits are obtained where these cannot be avoided through sign-off of all onsite activity plans.	1. Geologist and site manager	1. Once-off sign-off of drilling plans or amendments to these plans before anyactivities take place for the duration ofprospecting operations.
Topography		Localised dips in topography if boreholes collapse after material is replaced.	1. Inspect drilled sites for localised dipping in topography or pooling of water	1. Environmental manager	1. Once-off inspection of drilled boreholes after substantial rainfall
Soils	Access routes	Loss of soil resource through compaction and contamination	1. Inspect all routes and prospecting sites for compacted soils, erosion, and degradation. 2. Ensure vehicles are within operation specifications to reduce risks of leaks.	1. Environmental manager 2. Environmental manager	1. Once off inspection of rehabilitated areasafter substantial rainfall. 2. Weekly inspection of all vehicle and equipment service and maintenance logbooks for the duration of prospecting operations.
	Drilling sites		1. Ensure responsible material and soil handling and replacement. 2. Ensure area is clear of hydrocarbon spills.	1. Environmental managerwith the contracting prospecting manager 2. Site manager	1. Monthly inspection once invasive prospecting commences for the duration ofprospecting. 2. Weekly inspection of all vehicle and equipment service and maintenance logbooks for the duration of prospecting operations.
	Contractor's camp		1. Using biodegradable fluids/polymers. 2. Ensure portable toilet facilities are in proper working condition, not overflowing or leaking and hygienic. 3. Ensure that all machinery and vehicles are in proper working condition with no leaking and are fully equipped with portable bunding and drip trays with a spill kits on site.	1. Prospecting manager 2. Site manager 3. Site manager	1. Weekly inspections will be conducted during the duration of the prospecting activities
Flora	Access routes	Disturbance/damage tovegetation	1. Ensure sensitive sites are avoided or that necessary authorisations / permits are obtained where these cannot be avoided through sign-off of all onsite activity plans.	1. Environmental manager and site manager	2. Once-off sign-off of drilling plans or amendments to these plans before anyactivities take place for the duration of prospecting operations.
	Drill sites	Alien plant infestation	1. Where alien and invasive species, specifically those listed under NEMBA as Category 1b species, are noted, immediate eradication actions should be undertaken.	1. Environmental manager	2. Sporadic visual inspection of rehabilitated drill sites throughout prospecting operations

Aspect	Area to be monitored	Impacts Requiring Monitoring	Functional Requirements for Monitoring (refer to detailed description of the monitoring programs above)	Roles and Responsibilities	Monitoring and Reporting Frequency
Surface waterand aquatic ecosystems	Access routes	Disturbance to streams and wetlands if activity proceeds indiscriminately.	1. Ensure sensitive sites are avoided or that necessary authorisations / permits are obtained where these cannot be avoided through sign-off of all onsite activity plans.	1. Environmental manager and site manager	2. Once-off sign-off of route plans or amendments to these plans before anyactivities take place for the duration of prospecting operations.
		Potential silt loading of surface water features.	1. Inspect all routes and prospecting sites forsoil erosion or degradation.	1. Environmental manager	2. Monthly inspection once invasive prospecting commences for the duration ofprospecting.
	Contractor's camp	Contamination of surface waterresources	1. Ensure area is clear of hydrocarbon spills. 2. Ensure portable toilet facilities are in proper working condition, not overflowing or leaking and hygienic.	1. Site manager 2. Prospecting manager	1. Weekly inspection of all vehicle and equipment service and maintenance logbooks for the duration of prospecting operations. 2. Weekly inspections of portable toilet facilities for the duration of prospecting activities.
Groundwate r	Drill sites	Groundwater contamination	1. Prevent any oil spills or leaks into borehole. 2. Lining sumps with the appropriate lining system	1. Site manager 2. Site manager	1. Daily check of oil leaks 2. Daily inspection of drilling areas.
Air quality	Access routes	Increase in dust fall out	1. Visual inspection for billowing dust clouds.	1. Environmental manager	1. Sporadic visual inspection of billowing dust clouds from prospecting areas throughout prospecting operations.
Heritage resources	Access routes	Loss of and disturbance to archaeological / heritage / grave sites that may be encountered.	1. Preserve any heritage and cultural sites encountered.	1. Environmental manager	1. Once-off survey for heritage sites on areas targeted for travel and / or drilling prior to activity in the area.
Socio economic,health and safety	Access routes	Damage to existing infrastructure and increase potential for road accidents	1. Maintain roads and intersections with public roads to reduce road incidences. 2. Ensure that on-site speed limits are enforced to reduce dust generation and road incidences.	1. Site manager 2. Site manager	1. Monthly inspections of all farm roads and intersections from the onset of operations for the duration of prospecting operations. 2. Sporadic speed inspections for the duration of prospecting operations.
	Working & hazardous substance storageareas	Increase risk of veld fires	1. Ensure that all machinery and vehicles are in proper working condition with no leaking and are fully equipped with portable bunding and drip trays with a spill kits on site. 2. No open fires should be allowed on site and serviced fire extinguishers should be provided on site.	1. Site manager 2. Prospecting manager	3. Weekly visual inspection of the active prospecting areas will commence as soon as any prospecting contractors comes to site and continue for the life of prospecting operations.

27. Indicate the frequency of the submission of the performanceassessment report

An annual performance assessment (or at a frequency stipulated in the EA) will be conducted by an independent Environmental Assessment Practitioner throughout the life of prospecting as required under NEMA. This is conducted to assess the adequacy and compliance to the EMP, EA and the relevant legislation. Based on the findings of the external audit any significant variation in the prospecting activity that will require changes to the EMP will be updated and communicated with the department before such changes are implemented.

28. Environmental Awareness Plan

The section was compiled using the Applicant's environmental policies.

28.1 Manner in which the applicant intends to inform employees of any environmental risk

The Environmental Manager, Site Manager and Prospecting Manager must be conversant in environmental legislation, with special reference to the MPRDA, NEMA, NFA, NCNCA and the NWA. The contractor/driller will be responsible for training its staff in terms of general environmental awareness. This will include basic training on the contents of this EMPR and will be conducted prior to commencement of prospecting activities. The aim of the environmental awareness training will be to highlight the potential impacts of the prospecting activities, and to highlight no-go areas. The contractor / driller will ensure that records are kept of all training sessions / inductions. The Environmental Manager will monitor these records and undertake regular follow ups. Figure 45 presents a hand-out to be made available to all personnel / laborer's on site.

Figure 8: Handout to be provided to all personnel onsite.

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

Jaments (Pty) Ltd is committed on establishing and maintaining procedures to identify potential emergency situations, respond on emergencies and to mitigate any resulting safety, health, and environmental risks. In addition, the organisation will review its emergency procedures (particularly after emergency situations) and periodically test such procedures where practicable.

Training, as detailed above, will address the specific measures and actions as listed in the EMP and also conditions of the EA. In this way, the prospecting team will be provided with the knowledge required to conduct the prospecting activities without resulting in environmental non-compliance, the liability of which would lie with Jaments (Pty) Ltd. Secondly, informing the prospecting team of the EMP will also assist the team in identifying if an impact is likely to occur / has occurred and communicate this appropriately to the Environmental Manager.

In order for appropriate action to be taken, proper communications network and reporting protocol must be established, with the prospecting team and the site manager reporting all environmental and social issues to the Environmental.

29. Specific information required by the Competent Authority

All the information requested by the Competent Authority (DMRE) to date has been included in the BAR/EMPr.

30. UNDERTAKING

The EAP herewith confirms.

(a) the information provided in the foregoing report is correct.
(b) the comments and inputs from stakeholders and I&APs have been correctly recorded in the report.
(c) the information provided to interested and affected parties and any responsesto comments or inputs made by interested and affected parties are correctly reflected in the report; and
(d) the inputs and recommendations from the specialist reports have been includedin the EIA/EMPr Report.

Signature of the environmental assessment practitioner:

Singo consulting (Pty) Ltd

Name of company:

Date:

Appendices

Appendix 1: DMRE Letters

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: KZN 30/5/1/1/2/ 11412 PR Enquiries: Mrs Nontobeko Ncama Email address: nontobeko.ncama@dmre.gov.za,

REGISTERED MAIL

THE MANAGER

JAMENTS (PTY) LTD

PRIVATE BAG X7297

EMALAHLENI

1035

Email: kenneth@singoconsulting.co.za

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 for **Coal on Portion of the remaining extent of the Farm Mdletshe 17437, Portion of the Remaining extent of the Farm Lot 10 12984, Portion 1 and Portion of the Remaining extent of the Farm Horseshoe bend 11688, Portion 13, a Portion of the Remaining extent of the Farm Reserve No.3 15822, Portion of Portion 1 and a Portion of the Remaining extent of the Farm Mtolo 14390 and Portion 22 of the Farm Reserve 12 15832** situated in the Magisterial District of **Zululand,** is hereby accepted on the above- mentioned properties, in terms of section 16 (2) of the Act.

2. 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 Su 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.

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

3.1 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.

3.2 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 **21st April 2022 (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.

4. 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* ***Zululand District Municipality.***

5. 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.

6. 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 **02nd June 2023** (**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:-

6.1 Duly signed shareholders agreements with your empowerment partner in which provision **shall** be made for entrepreneurs, local community and employees,
6.2 Share certificates,
6.3 Details relating to the equity by the BEE shareholders, Any other agreement relating to the BEE shareholding including the voting pool agreement where applicable,
6.4 Articles and memorandum of association of the company.
6.5 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.

7. Please submit within 60 days **(02nd June 2023)** 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.

8. 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 **21st April 2023 (within 30 days from the date of this letter)**

9. 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.

10. 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.

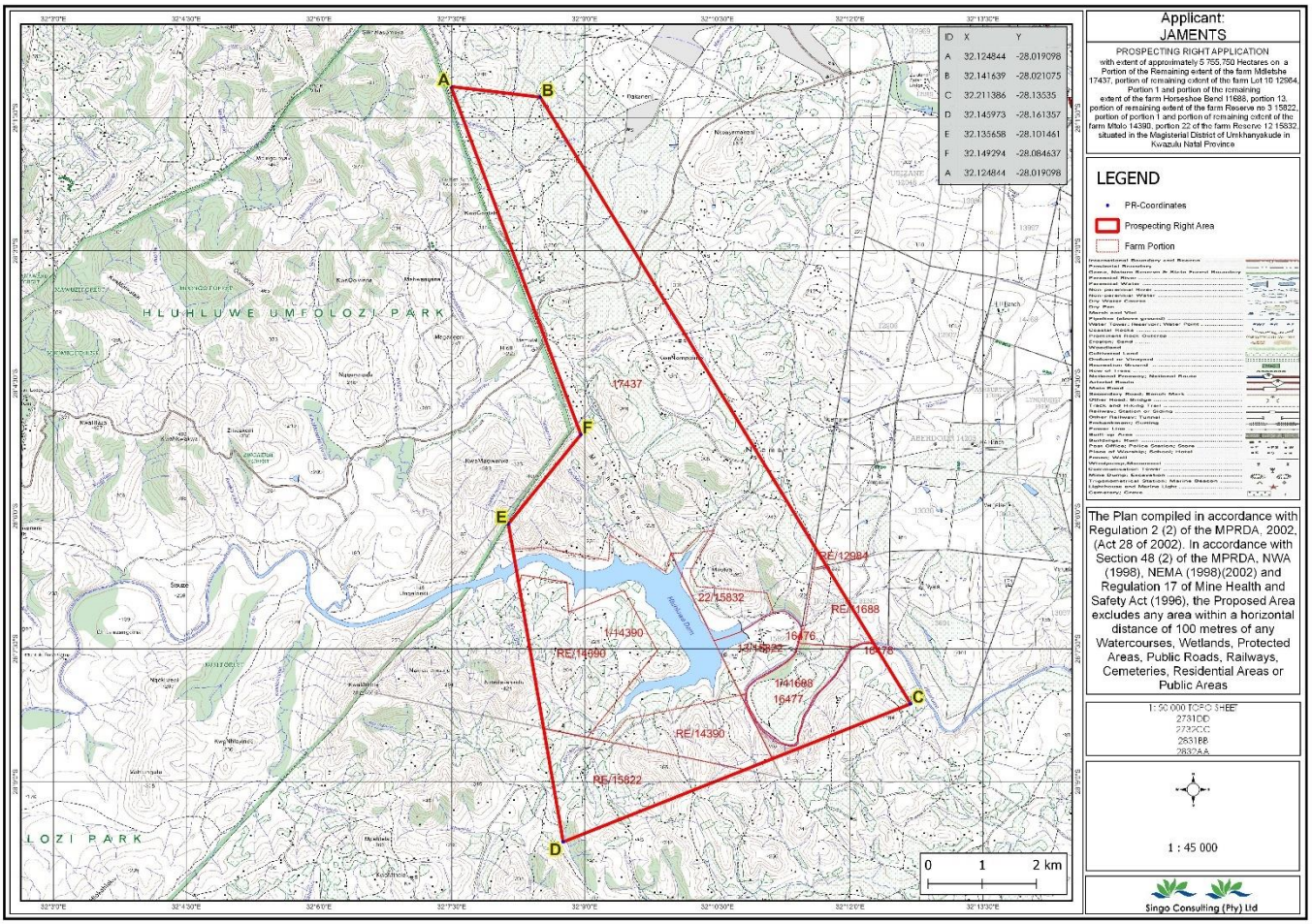
Yours faithfully,

REGIONAL MANAGER

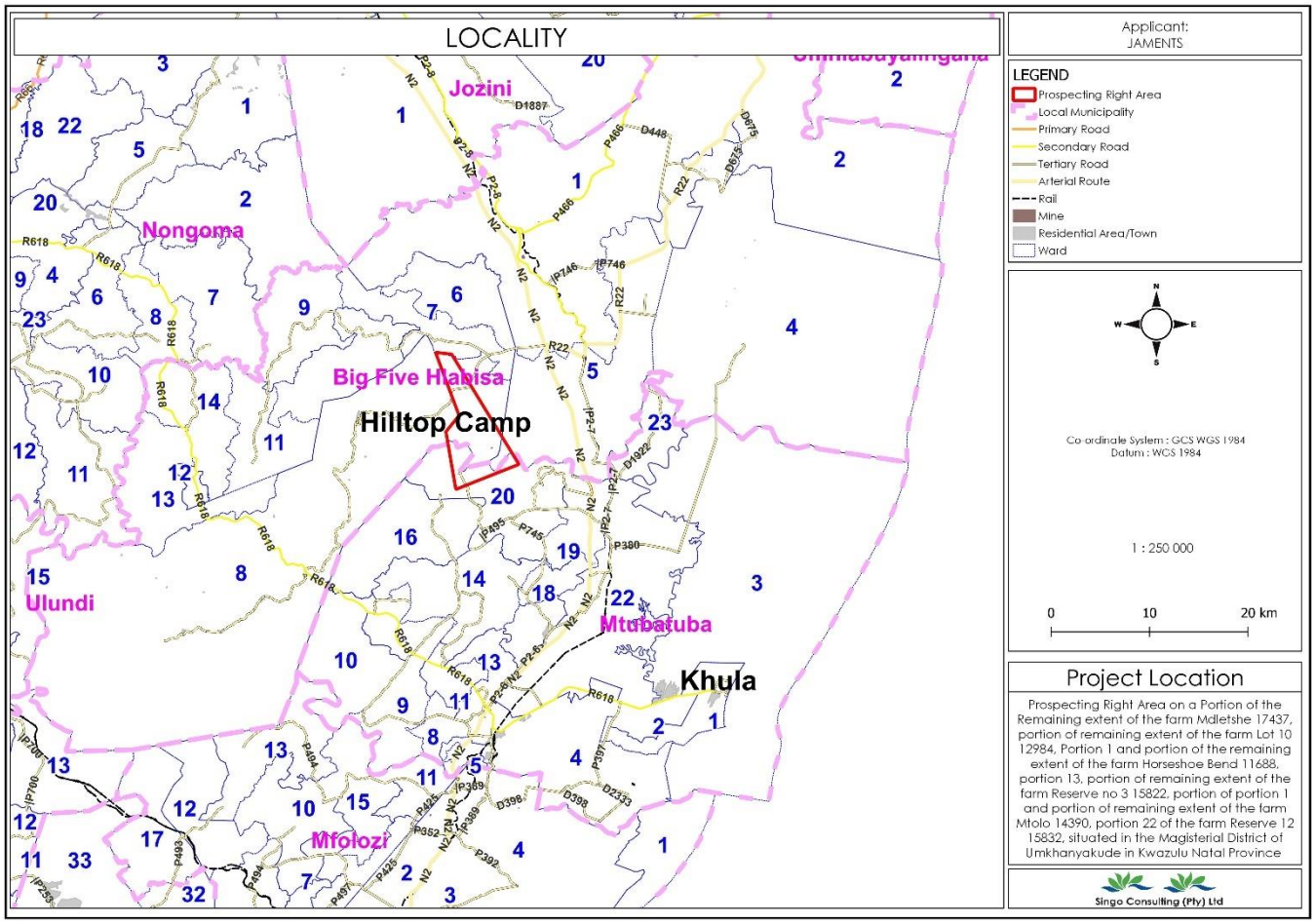
KWAZULU NATAL REGION

DATE: 24/05/2023

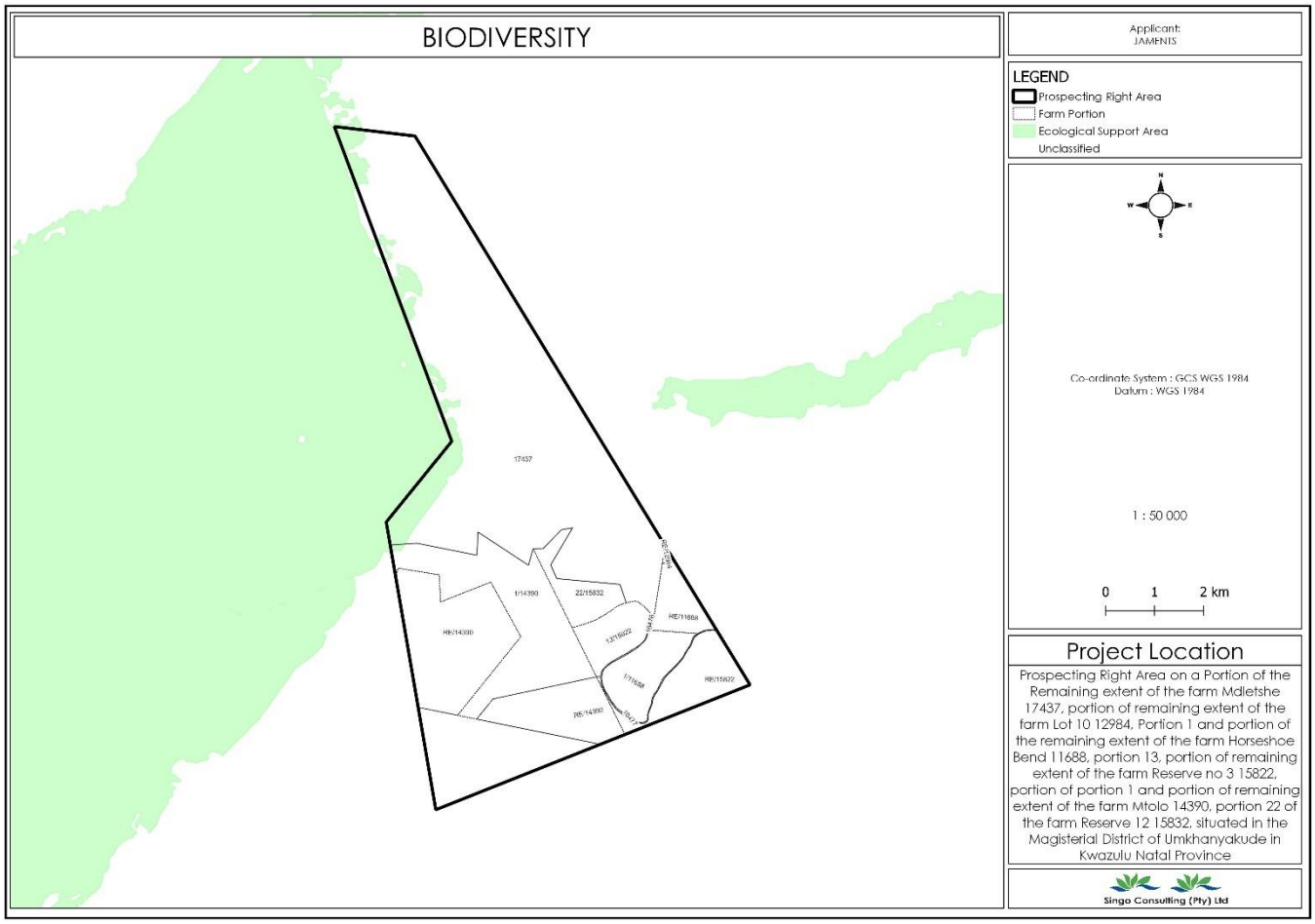
Appendix 2: Project maps



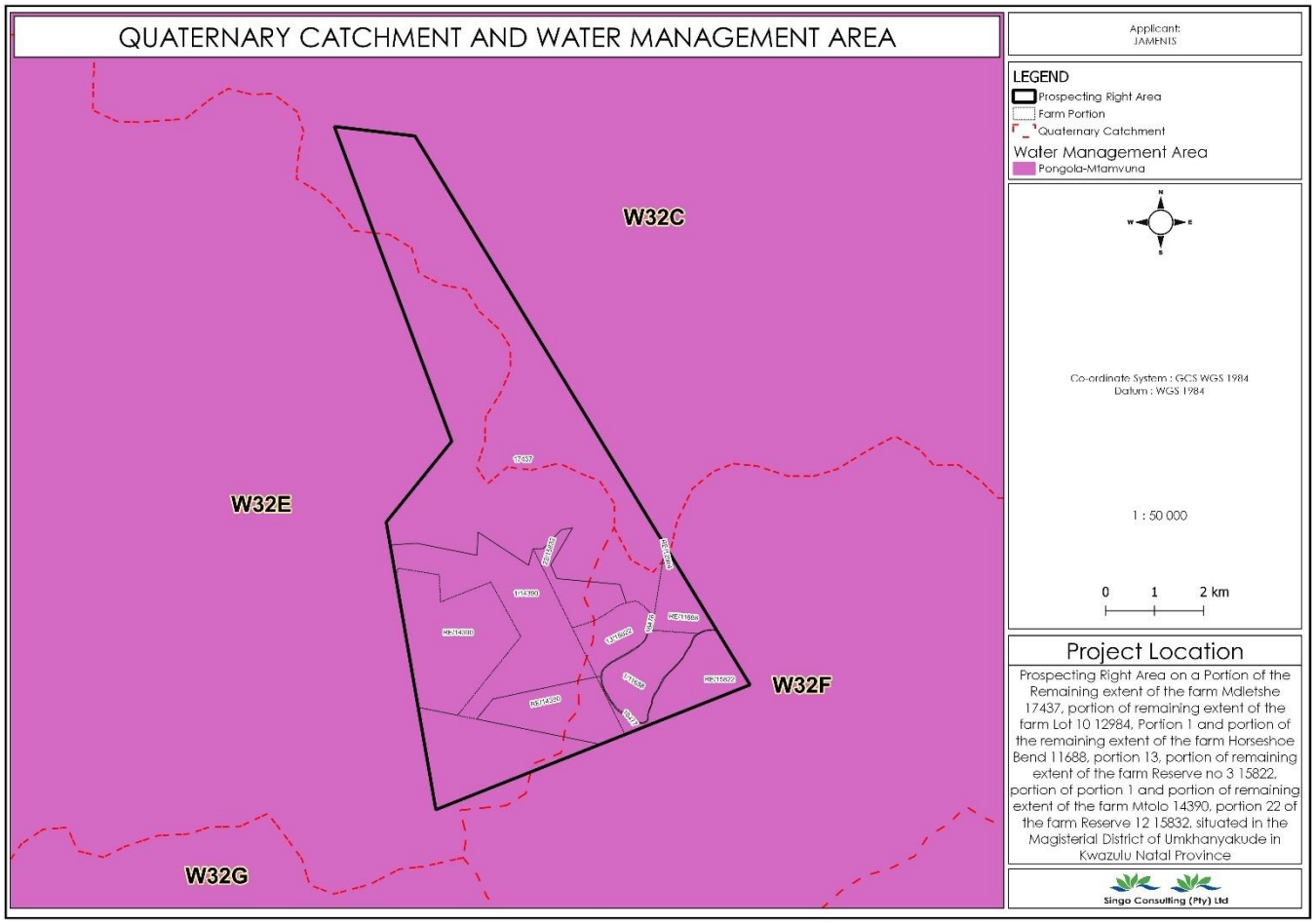
Regulation Map 2.2 Map.



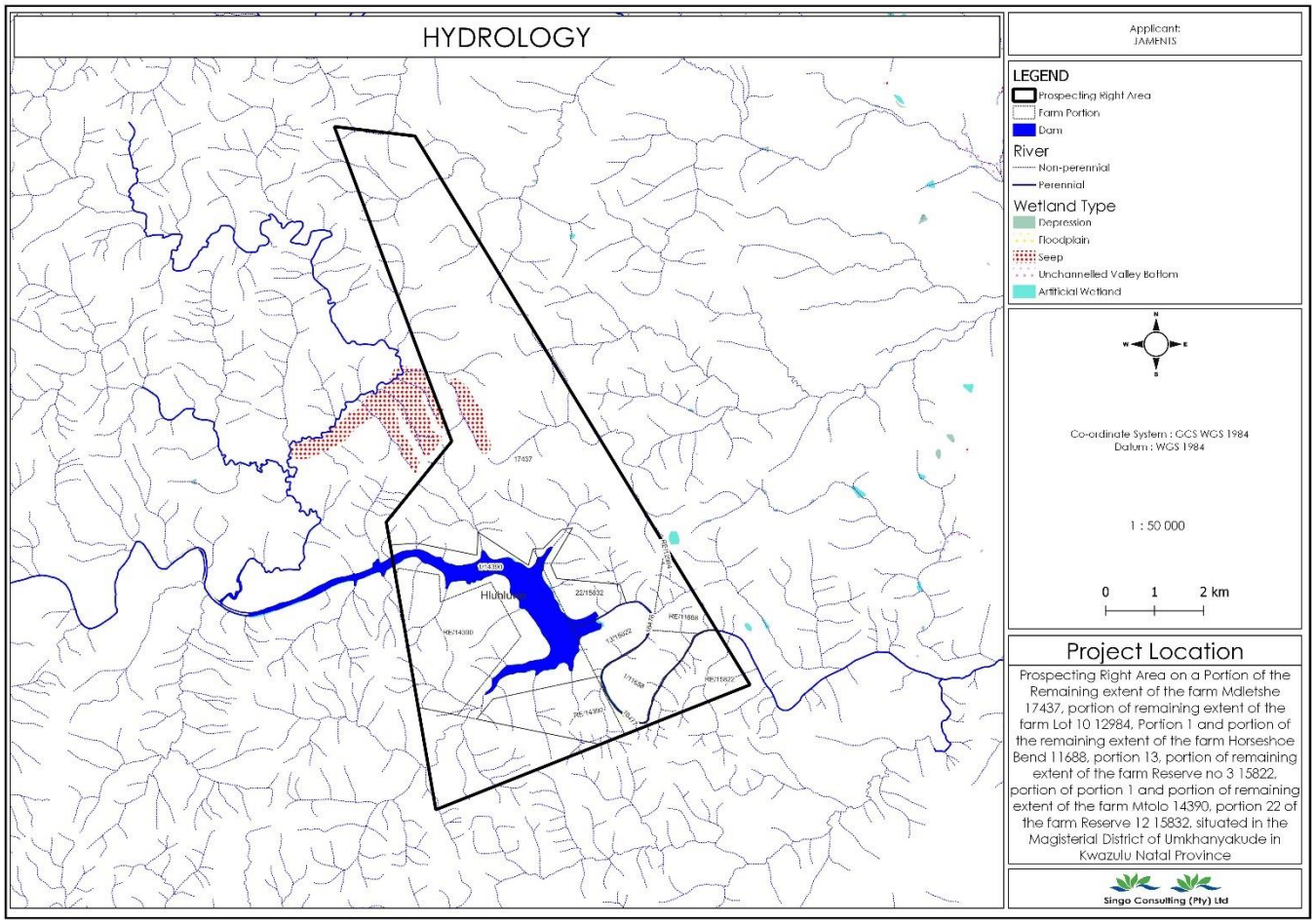
Locality Map.



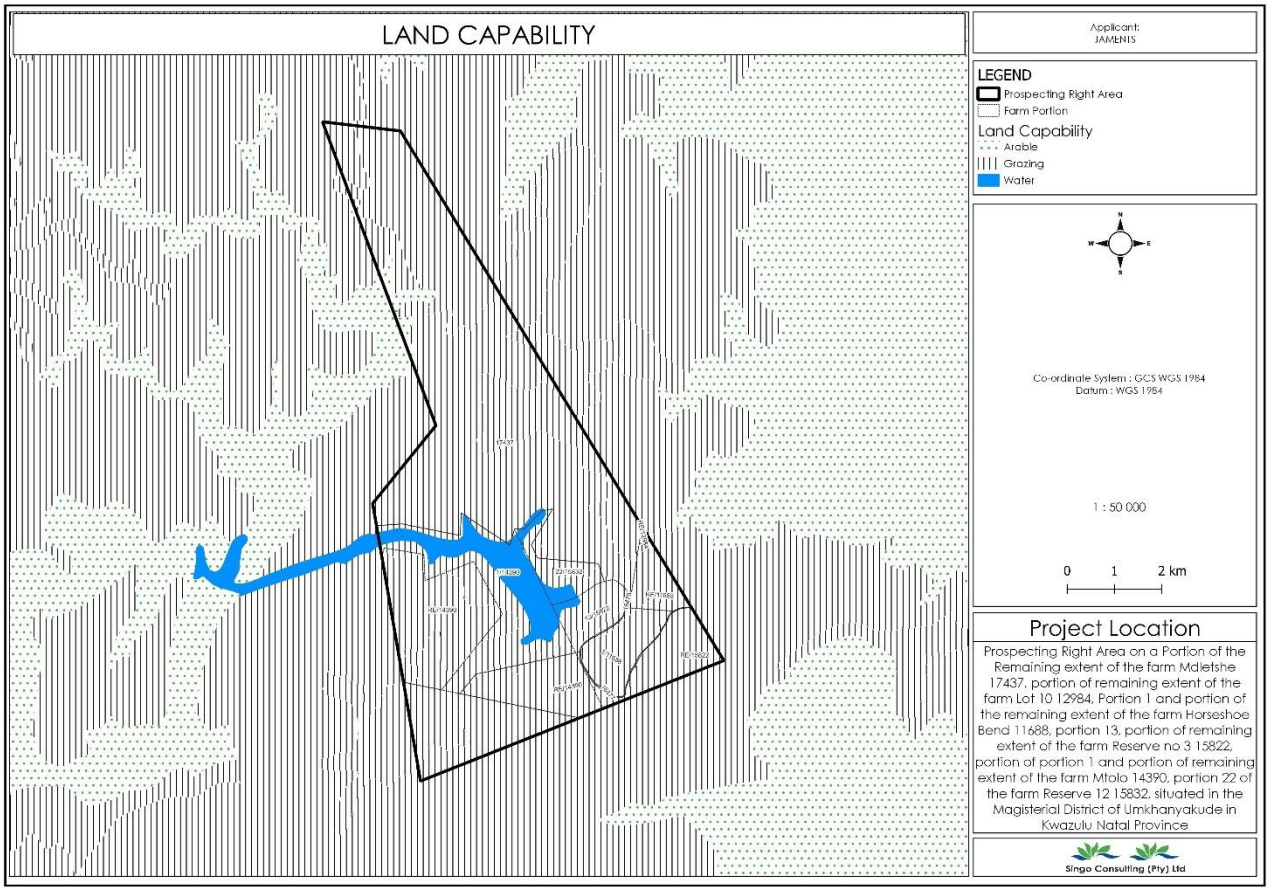
Terrestrial biodiversity map.



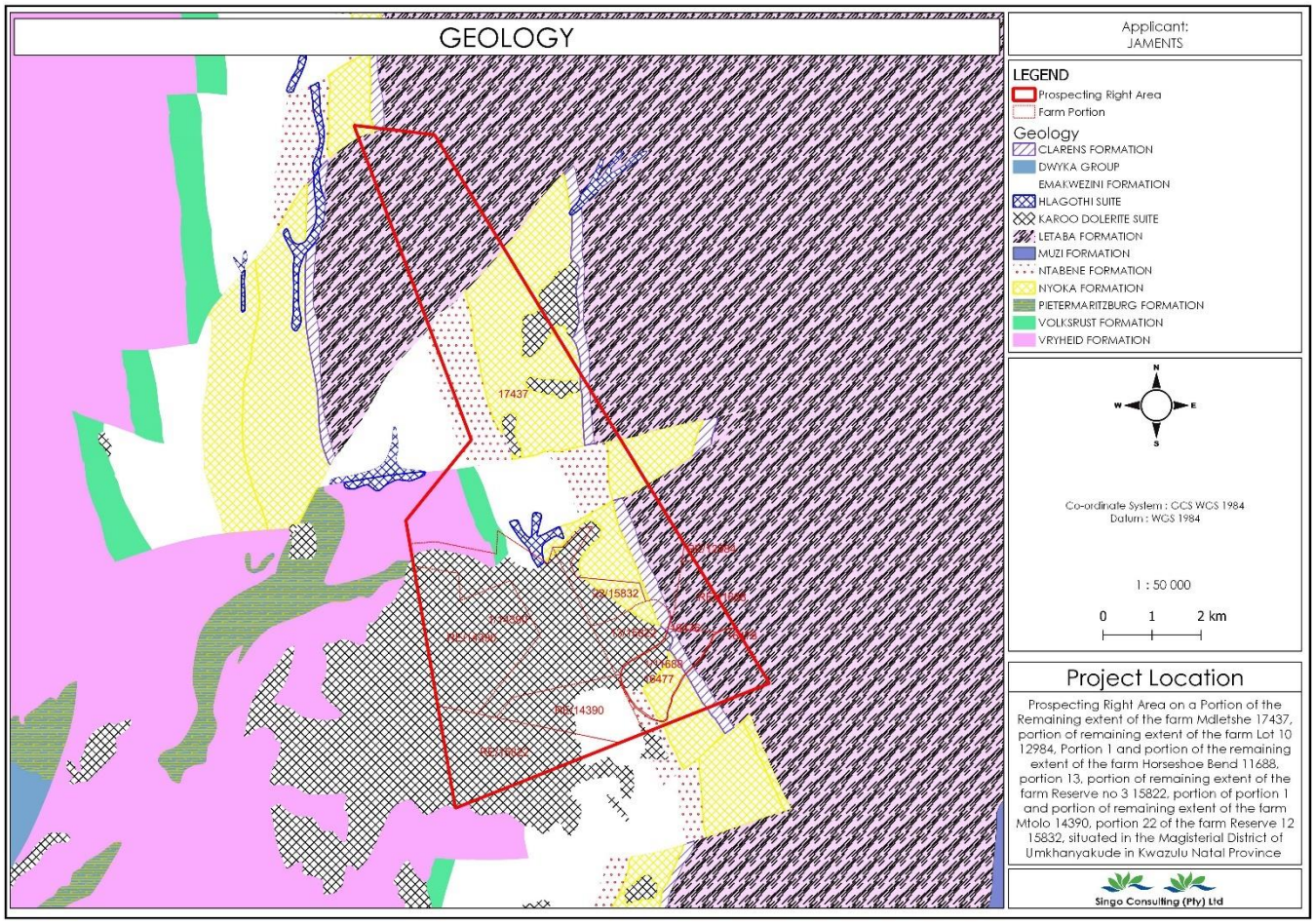
Quaternary Catchment and Water Management Areas map.



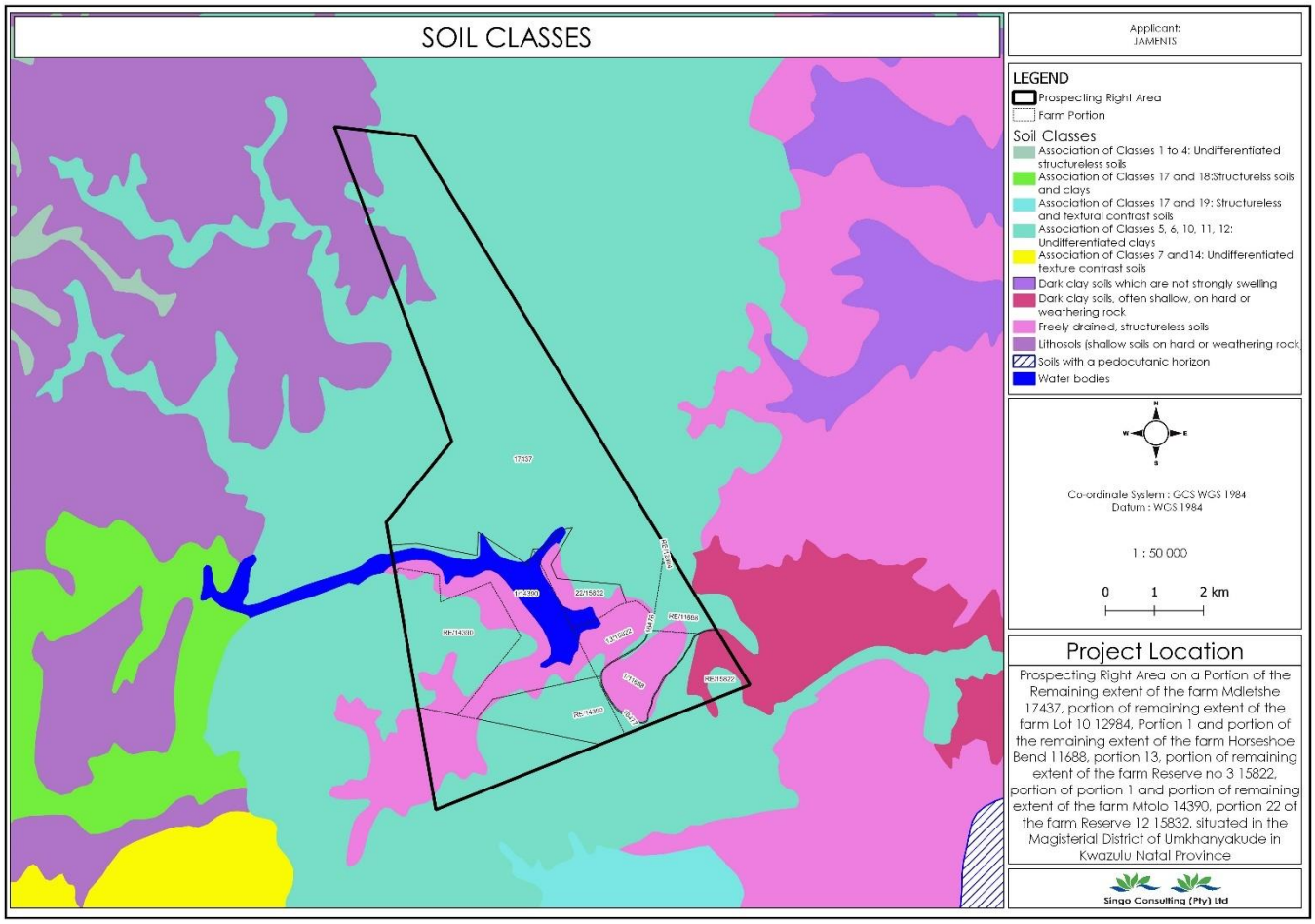
Hydrology map



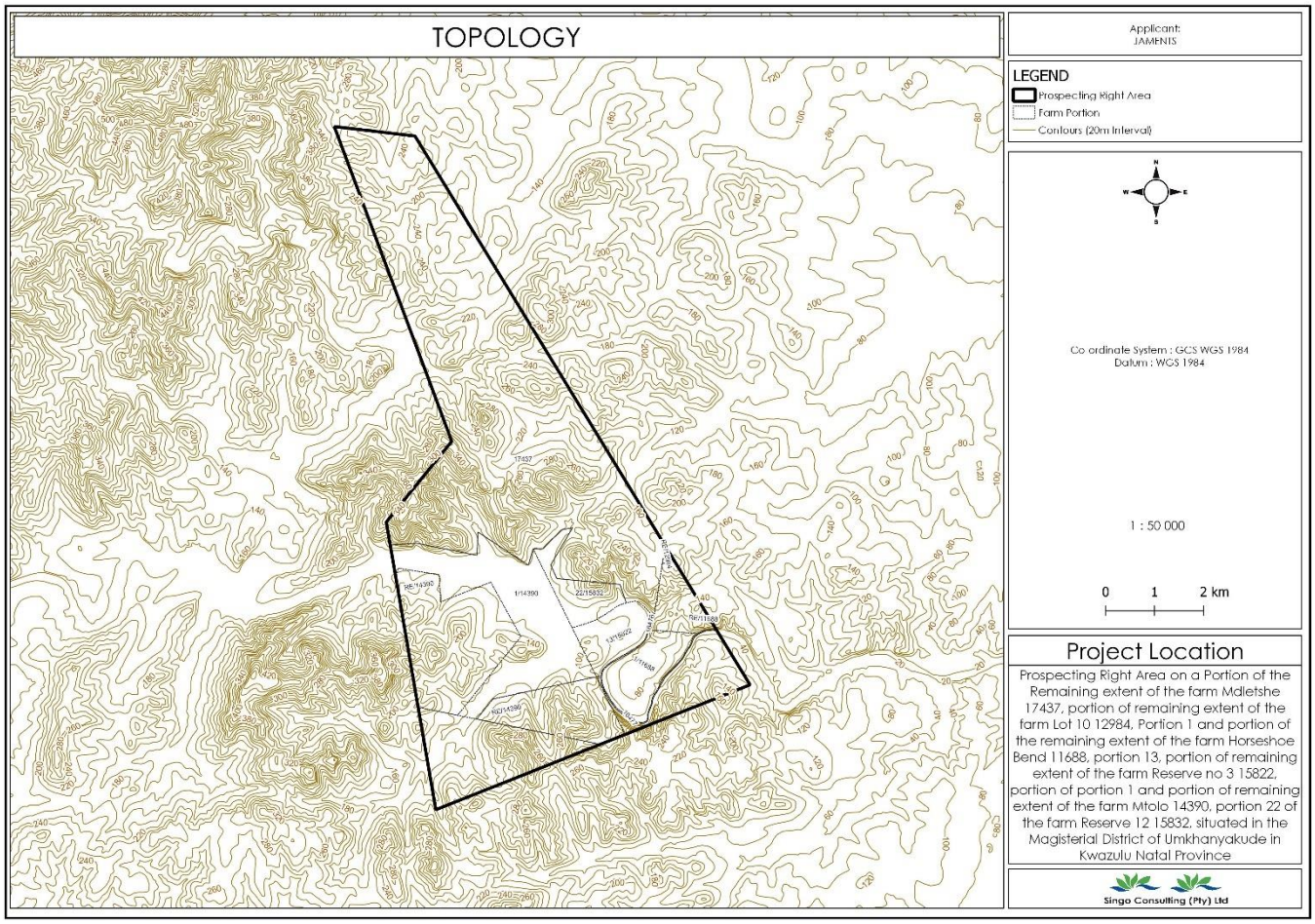
Land capability map.


GEOLOGY
Applicant:
JAMENTS
LEGEND
Prospecting Right Area
Farm Portion
Geology
CLARENS FORMATION
DWYKA GROUP
EMAKWEZINI FORMATION
HLAGOTHI SUITE
KAROO DOLERITE SUITE
LETABA FORMATION
MUZI FORMATION
NTABENE FORMATION
NYOKA FORMATION
PIETERMARITZBURG FORMATION
VOLKSRUST FORMATION
VRYHEID FORMATION
N
W
E
S
Co-ordinate System : GCS WGS 1984
Datum : WGS 1984
1 : 50 000
0 1 2 km
Project Location
Prospecting Right Area on a Portion of the Remaining extent of the farm Mdletshe 17437, portion of remaining extent of the farm Lot 10 12984, Portion 1 and portion of the remaining extent of the farm Horseshoe Bend 11688, portion 13, portion of remaining extent of the farm Reserve no 3 15822, portion of portion 1 and portion of remaining extent of the farm Mtolo 14390, portion 22 of the farm Reserve 12 15832, situated in the Magisterial District of Umkhanyakude in Kwazulu Natal Province
Singo Consulting (Pty) Ltd
17437
RE/15832
RE/14390
11688
8477

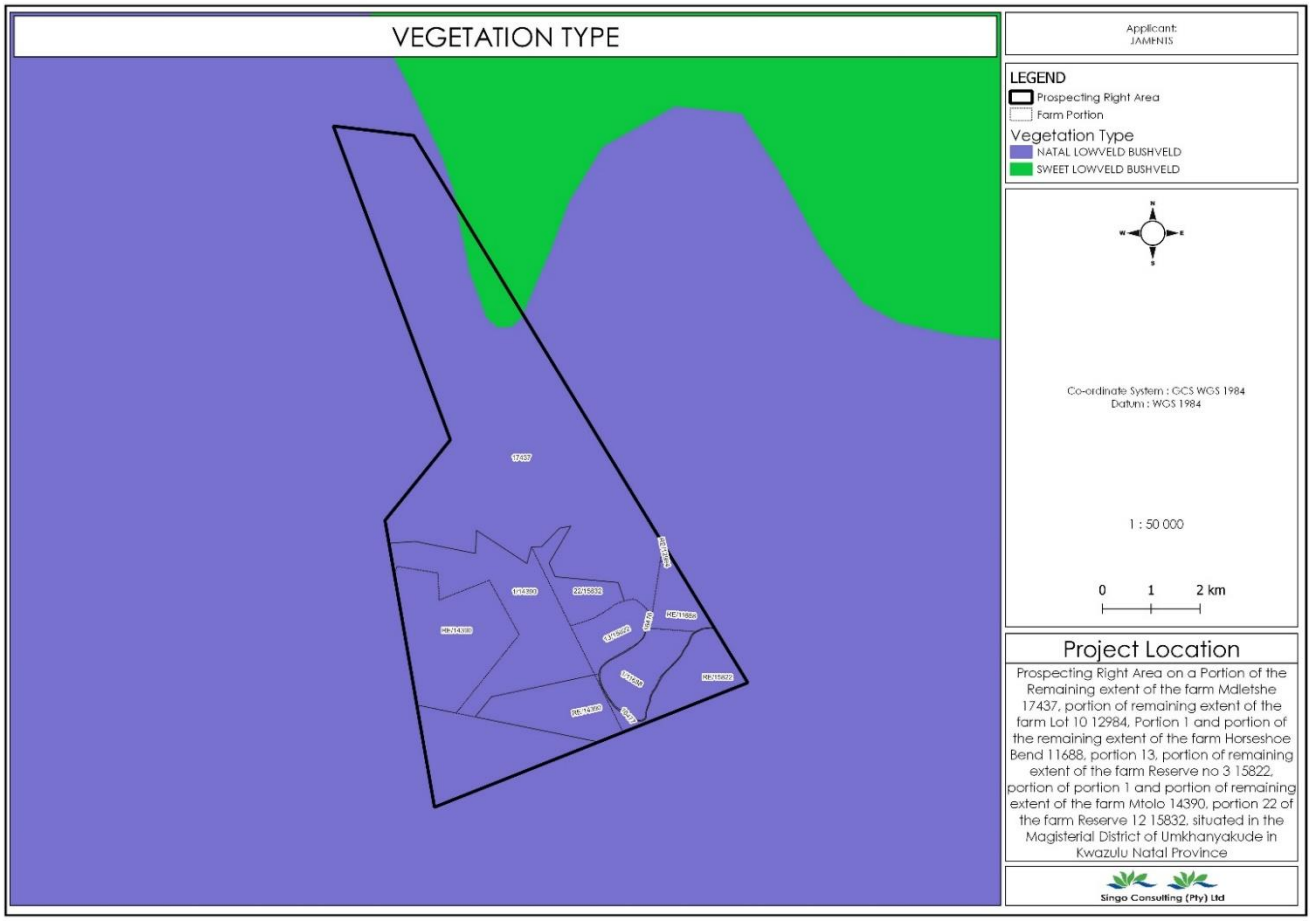
Geology map.



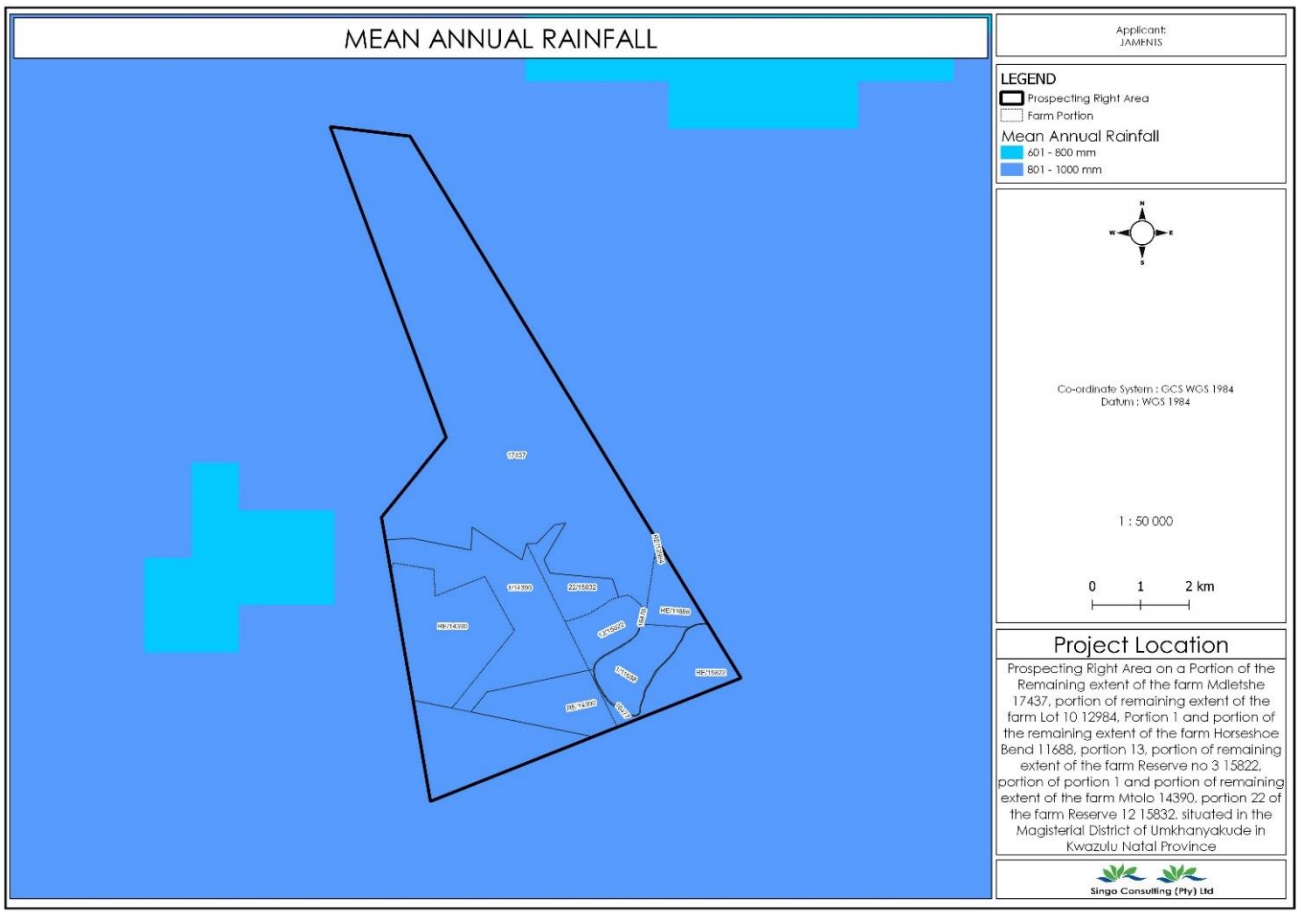
Soil classes map



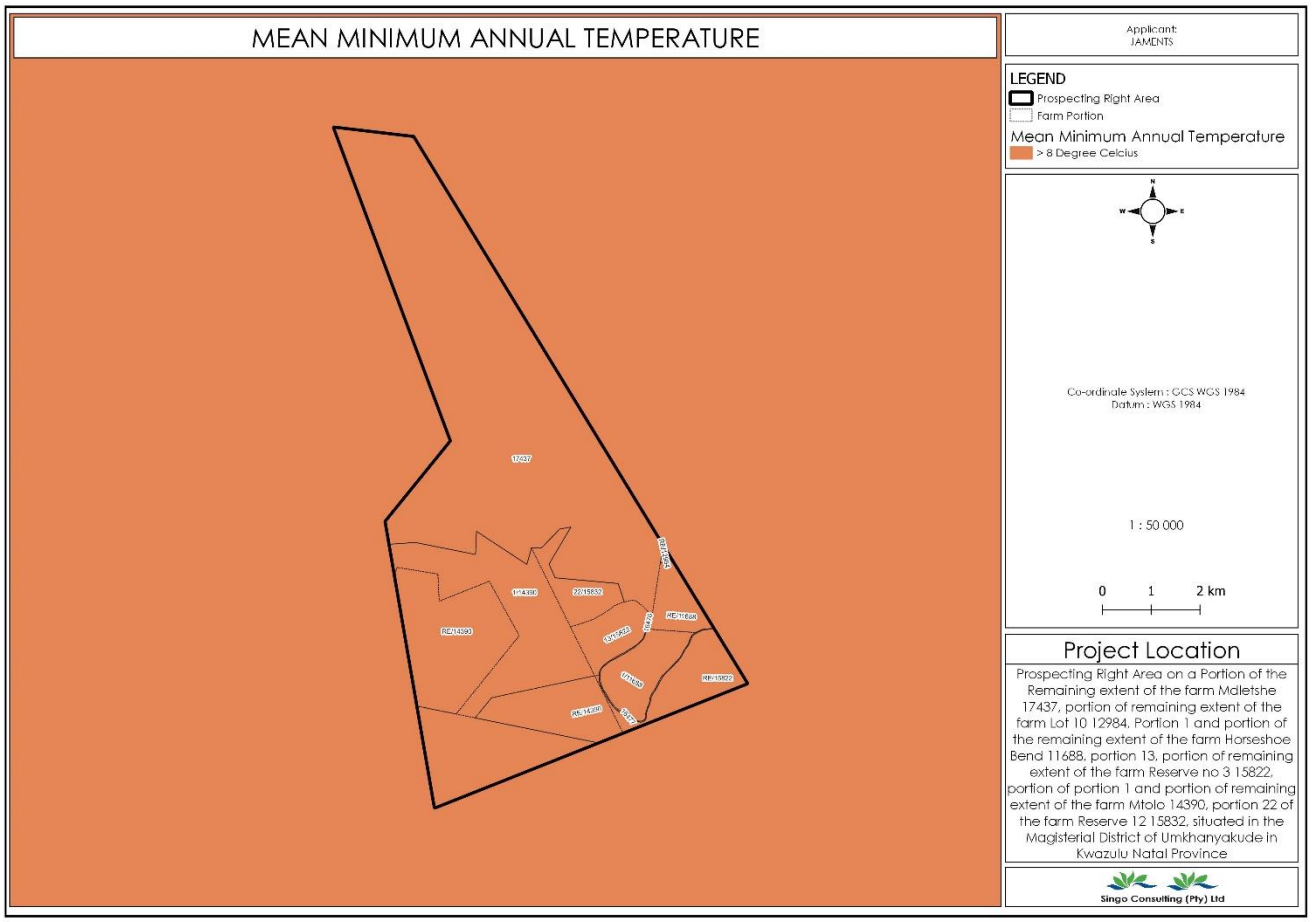
Topology map



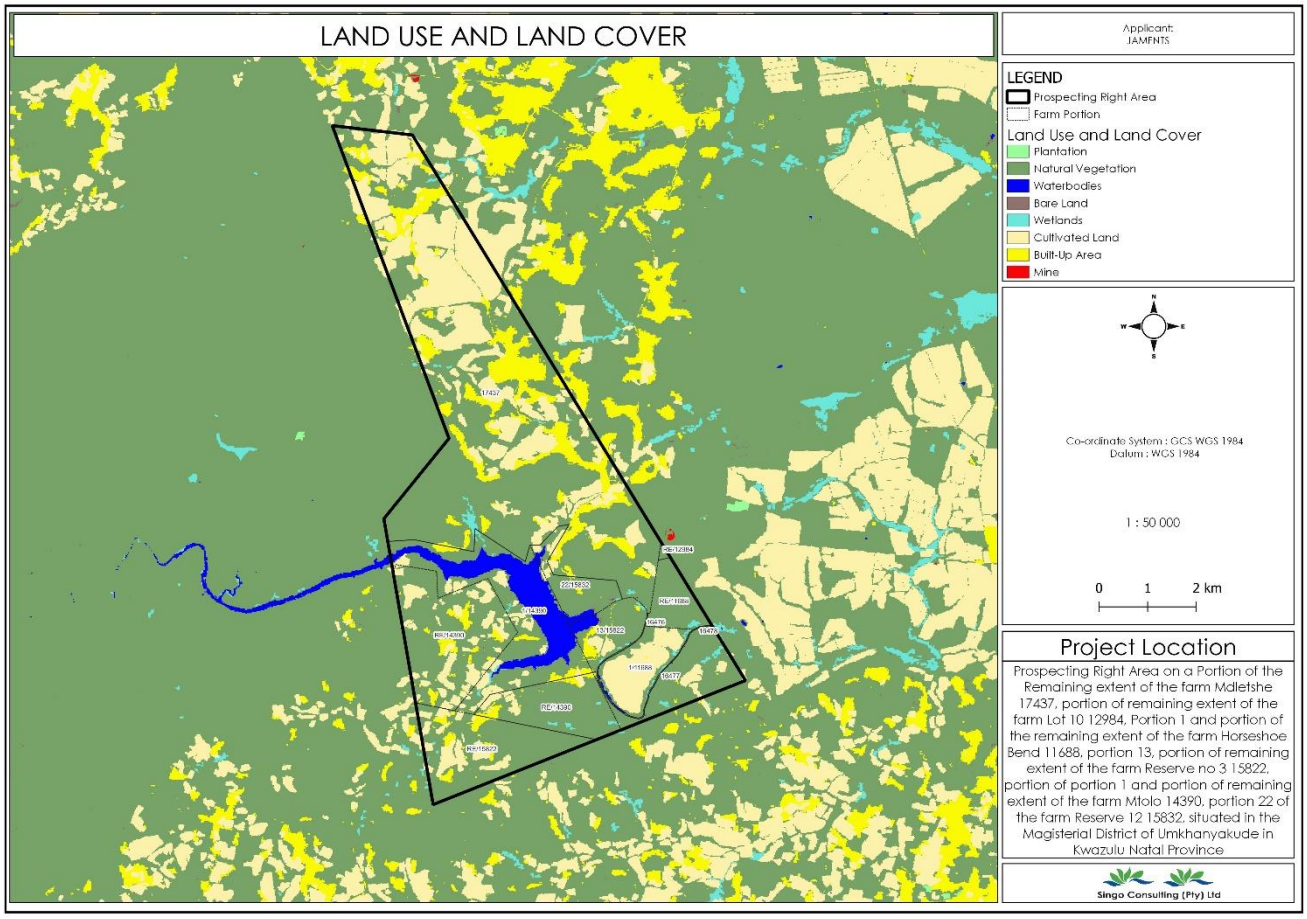
Vegetation type map.



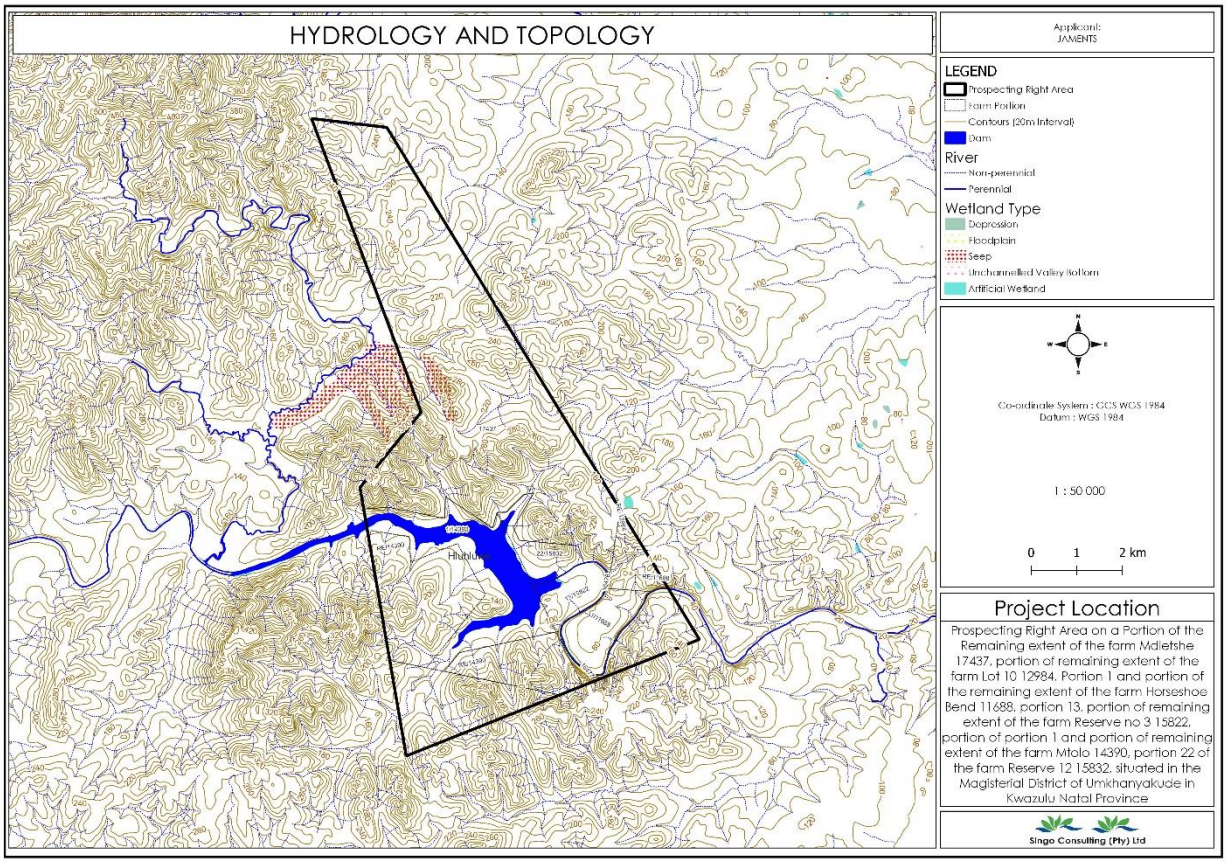
Mean annual rainfall map



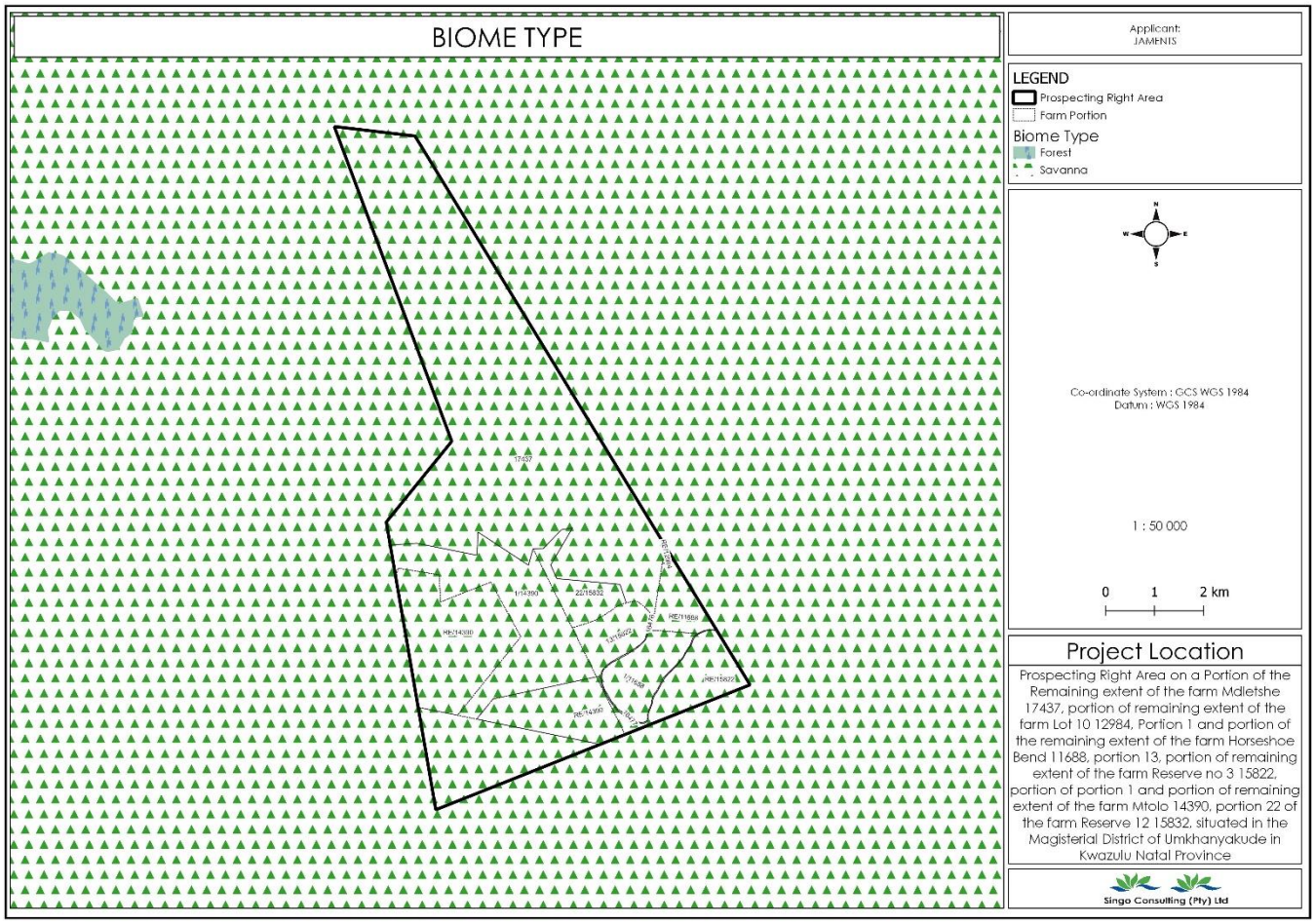
Mean annual temperature map.



Landuse and landcover map



Hydrology and topology map.



Biome type map

Appendix 3: ***Background Information Document***

BACKGROUND INFORMATION DOCUMENT

For prospecting right application on portion of the remaining extent of the Farm Mdletshe 17437, portion of the remaining extent of the Farm Lot 10 12984, portion 1 and portion of the remaining extent of the Farm Horseshoe bend 11688, portion 13, a portion of the remaining extent of the Farm Reserve No. 3 15822, portion of portion 1 and a portion of the remaining extent of the Farm Mtolo 14390 and portion 22 of the Farm Reserve 12 15832, situated in the Magisterial District of Umkhanyakude in Kwazulu-Natal Province.

DMRE REF: KZN 30/5/1/1/2/11412 PR

PREPARED FOR:

JAMENTS

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Model Park, Emalahleni,1035
Contact person: Mr. Bongani Given Simelane
Tel No.: +27 13 591 2120
Cell No.: +27 13 591 2120
Email: admin@jaments.co.za

PREPARED BY:

Singo Consulting (Pty) Ltd

Office 870, 5 Balalaika Street,
Tasbet Park Ext 2, Witbank, 1040
EAP: Abel Mojapelo
Candidate EAP: Mr. Khodani Mathako
Tel No.: +27 13 6920 041
Fax No.: +27 86 5144 103
Cell No.: +27 76 054 1408
Email: khodani@singoconsulting.co.za

2023

INTRODUCTION AND THE PURPOSE OF THIS DOCUMENT

Singo Consulting (Pty) Ltd has been appointed as an independent Environmental Consultant by **Jaments (Pty) Ltd** to conduct Environmental Impact Assessment (EIA), compile a Basic Assessment Report (BAR), compile an Environmental Management Programme report (EMPr), and undertake Public Participation Process (PPP). This is done for the process of acquiring Environmental Authorization for the proposed Prospecting right Application for coal on **portion of the remaining extent of the Farm Mdletshe 17437, portion of the remaining extent of the Farm Lot 10 12984, portion 1 and portion of the remaining extent of the Farm Horseshoe bend 11688, portion 13, a portion of the remaining extent of the Farm Reserve No. 3 15822, portion of portion 1 and a portion of the remaining extent of the Farm Mtolo 14390 and portion 22 of the Farm Reserve 12 15832, situated in the Magisterial District of Umkhanyakude in Kwazulu-Natal Province (DMRE Ref: KZN 30/5/1/1/2/11412 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, both negative and positive will be submitted and made available to the relevant Departments such as the Department of Mineral Resources 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 Activities. Be assured that your comments are of great value as they ensure that relevant issues are taken into consideration. Attached at the end of this document is a registration form, kindly complete it and send it back to

PROJECT DESCRIPTION

Prospecting right Application has been submitted for the searching (drilling) of coal resource on the properties mentioned above. This proposed prospecting Area, as seen in Figure 2 and Figure 3, is situated approximately 6.30km Southeast of Hluhluwe Game Reserve, approximately 6.75 km Southwest of Ubizane Wildlife Reserve & Zululand Safari Lodge, approximately 13.43 km Northwest of Jour 5 - Santa Lucia - Falaza Game Park, approximately 7.45km West of Emdoneni Lodge South Africa in Kwazulu Natal Province.

Prospecting activities will be undertaken over a period of five (5) years and are designed in phases, each phase conditional on the success of the previous phase. Both invasive and non-invasive methods will be implemented. Invasive are those activities which have footprint or cause harm (if not mitigated or managed properly) or those that have a physical impact on the environment, while non-invasive do not cause any harm or effects on the environment. See **Figure 1** for drilling setting and equipments example.

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

Invasive: A detailed drilling, sampling, assaying and mineralogical study will be carried out. Diamond method will be utilized to prospect Coal. To ensure or minimize impacts on the receiving environment, All the activities will be guided by the project's BAR & EMPr.

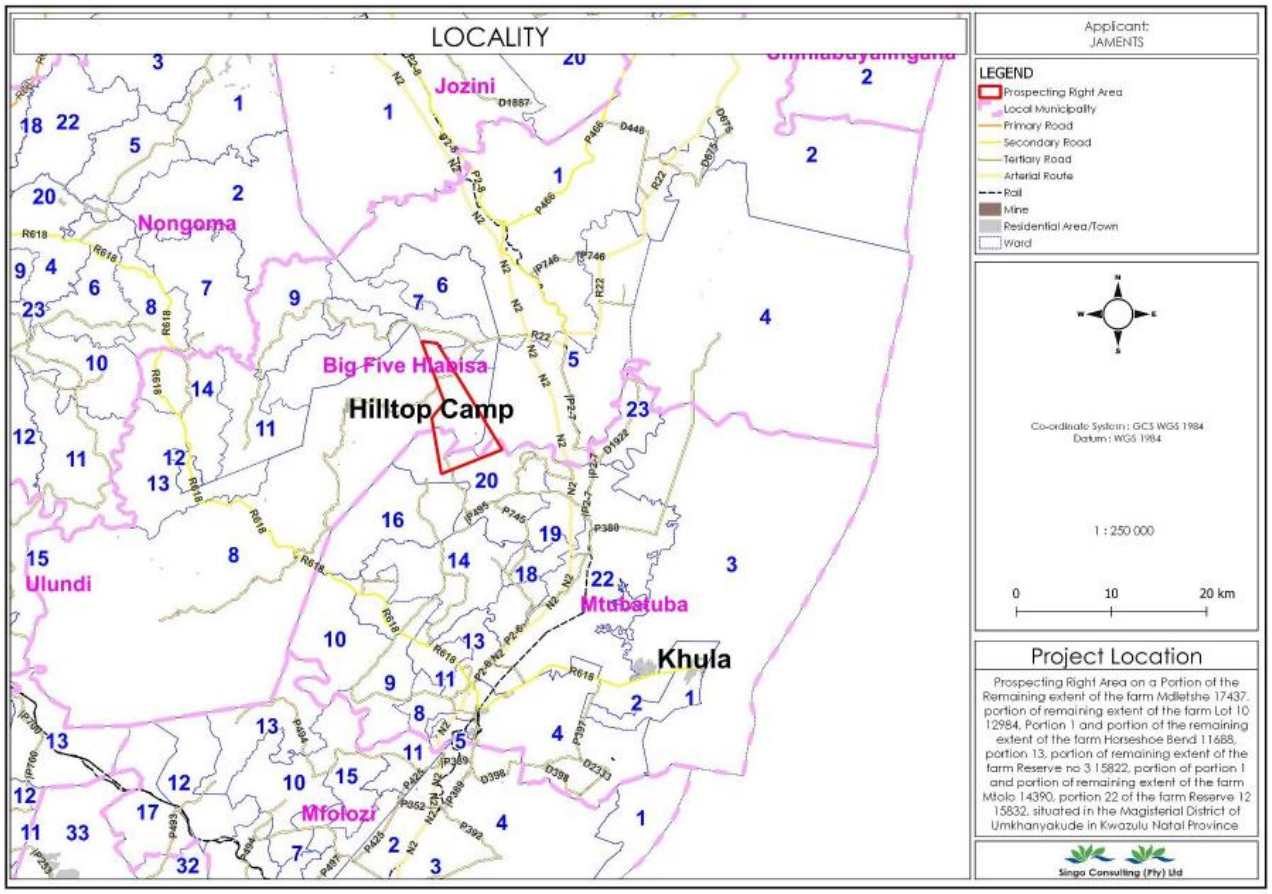

Figure 2: Locality Map of the Proposed Prospecting Right Area.

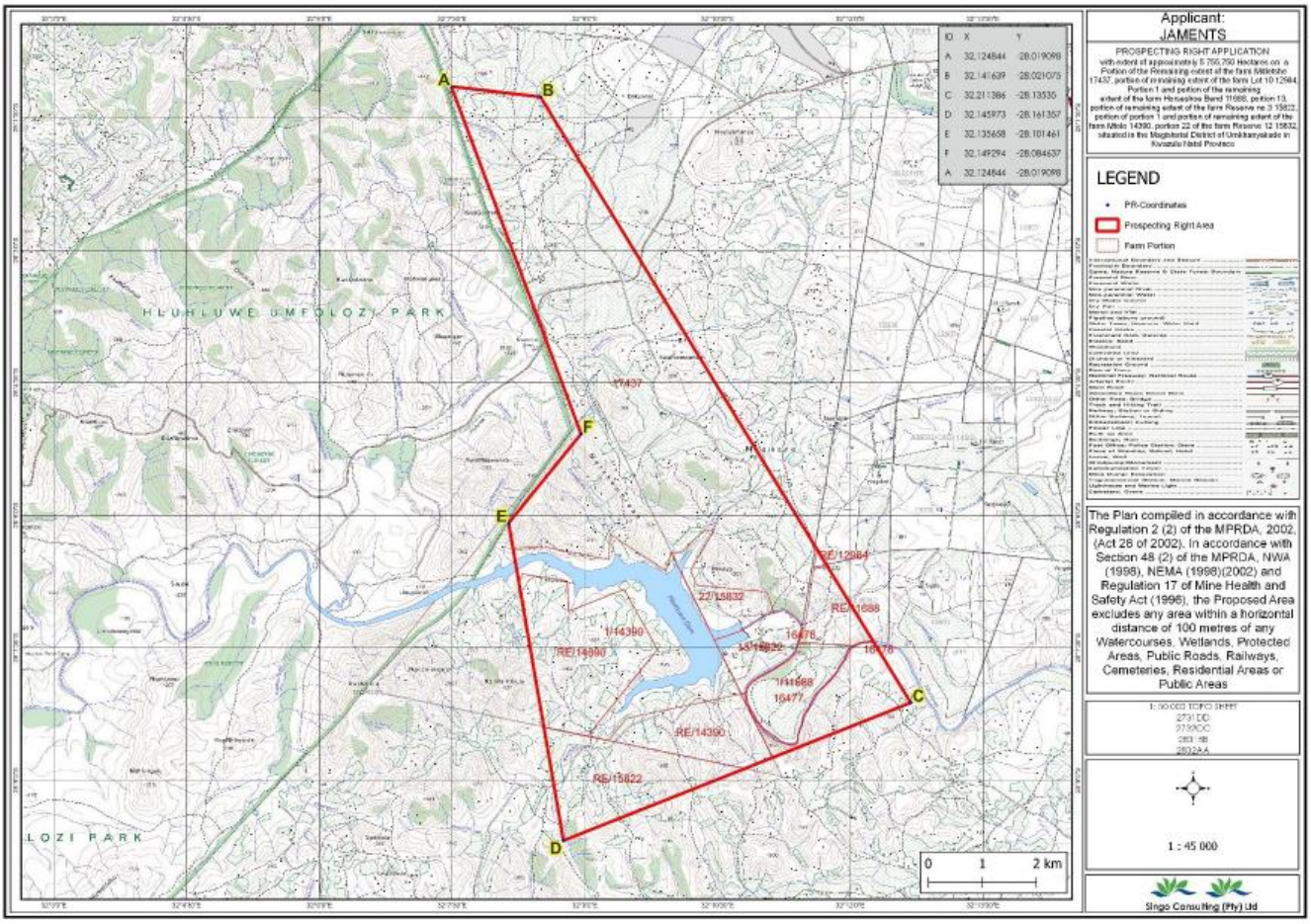

Figure 3: Regulation 2.2 Map for the proposed Area. (-28.019098, 32.124844)

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

REGULATORY FRAMEWORK

Therefore, EIA through BAR & EMPr 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 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 827 of GG NO. 36974).

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 the BAR and EMPr which will be available at the **Mtubatuba Public Library (108 Bouganvilla road, Mtubatuba, 3935) and Mtubatuba Local Municipality (Lot 105, Inkosi Mtubatuba Road, Mtubatuba), Hlabisa Public Library (Hlabisa, 3937, South Africa (-28.1435283, 31.876367)) and Big 5 Hlabisa Local Municipality (Lot 808, Off Masson Street, Hlabisa))**. A soft copy is available from **Singo Consulting (Pty) Ltd** upon request, using the contact details of the Environmental Assessment Practitioner (EAP) Mr Khodani Mathako.

Kindly note the following dates:

- Announcement of the Prospecting Right Application: **02nd of June 2023.**
- Review of Draft BAR & EMPr: **Monday the 3rd of July 2023 to Tuesday the 01st of August 2023. (with the exclusion of public holidays).**

Singo Consulting (Pty) Ltd

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Witbank, 1035.
Cell: +27 76 054 1408
Tel: +27 13 692 0041
Fax: +27 86 5144 103
Email:khodani@singoconsulting.co.za
admin@singoconsulting.co.za

REGISTRATION & COMMENT SHEET

Proposed Prospecting Right Application for Coal (DMRE Ref: KZN 30/5/1/1/2/11412 PR)

Attention: **Khodani Mathako** Email: **khodani@singoconsulting.co.za**

Date				
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.	

Appendix 3: Financial Provision

CALCULATION OF THE QUANTUM

Applicant: **Jaments (Pty) Ltd**
Evaluator: **Khodani Mathakho**

Ref No: KZN 30/5/1/1/2/11412 PR
Date:20-09-2023

No.	Description	Unit	A Quantity	B Master Rate	C Multiplication factor	D Weighting factor 1	E=A*B*C*D Amount (Rands)
1	Dismantling of processing plant and related structures (including overland conveyors and powerlines)	m3	0	19	1	1	0
2 (A)	Demolition of steel buildings and structures	m2	0	271	1	1	0
2(B)	Demolition of reinforced concrete buildings and structures	m2	0	400	1	1	0
3	Rehabilitation of access roads	m2	3509,95	49	0,01	1	1719,8755
4 (A)	Demolition and rehabilitation of electrified railway lines	m	0	471	1	1	0
4 (A)	Demolition and rehabilitation of non-electrified railway lines	m	0	257	1	1	0
5	Demolition of housing and/or administration facilities	m2	0	542	1	1	0
6	Opencast rehabilitation including final voids and ramps	ha		284292	1	1	0
7	Sealing of shafts adits and inclines	m3	0	146	1	1	0
8 (A)	Rehabilitation of overburden and spoils	ha		189528	1	1	0
8 (B)	Rehabilitation of processing waste deposits and evaporation ponds (non-polluting potential)	ha	0	236054	1	1	0
8 (C)	Rehabilitation of processing waste deposits and evaporation ponds (polluting potential)	ha		685612	1	1	0
9	Rehabilitation of subsided areas	ha	0	158701	1	1	0
10	General surface rehabilitation	ha	0,216	150138	0,01	1	324,29808
11	River diversions	ha	0,216	150138	1	1	32429,808
12	Fencing	m	0	171	1	1	0
13	Water management	ha		57087	1	1	0
14	2 to 3 years of maintenance and aftercare	ha	0,9	19980	0,3	1	5394,6
15 (A)	Specialist study	Sum	0			1	0
15 (B)	Specialist study	Sum				1	0
					Sub Total 1		39868,58158

1	Preliminary and General	4784,22979	weighting factor 2: 1	4784,22979
2	Contingencies	3986,858158		3986,858158
			Subtotal 2	48639,67
			VAT (15%)	7295,95
			Grand Total	**55936**

SIGN Khodani Mathakho

DATE 20/09/2023

Appendix 4: Screening Report and Baseline Studies