

# BASIC ASSESSMENT REPORT & ENVIRONMENTAL MANAGEMENT PROGRAMME REPORT

**PROSPECTING RIGHT APPLICATION BY AMANDLA AFRICA MINING FOR COAL ON PORTION 10 OF THE FARM ZONDERFOUT 226 IR SITUATED UNDER VICTOR KHANYE LOCAL MUNICIPALITY IN THE MAGESTRIAL DISTRICT OF DELMAS.**

**DMRE REF : MP 30/5/1/1/2 (17260) PR**



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# mineral resources & energy

Department:  
Mineral Resources and Energy  
REPUBLIC OF SOUTH AFRICA

## **BASIC ASSESSMENT REPORT AND ENVIRONMENTAL MANAGEMENT PROGRAMME REPORT**

SUBMITTED FOR ENVIRONMENTAL AUTHORIZATIONS IN TERMS OF THE NATIONAL ENVIRONMENTAL MANAGEMENT ACT, 1998 AND THE NATIONAL ENVIRONMENTAL MANAGEMENT WASTE ACT, 2008 IN RESPECT OF LISTED ACTIVITIES THAT HAVE BEEN TRIGGERED BY APPLICATIONS IN TERMS OF THE MINERAL AND PETROLEUM RESOURCES DEVELOPMENT ACT, 2002 (MPRDA) (AS AMENDED).

**NAME OF APPLICANT:** Amandla Africa Mining

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**PHYSICAL ADDRESS:** Plot 106 Eloff Delmas, Mpumalanga, 2200

**FILE REFERENCE NUMBER SAMRAD:** MP 30/5/1/1/2 (17260) PR

## DOCUMENT CONTROL

**Project Title:** Prospecting Right Application on portion 10 of the farm Zonderfout 226 IR

**Mineral** Coal

**Site Location** Delmas Magisterial District, Mpumalanga Province.

**Compiled on behalf of** Amandla Africa Mining

**Compiled By** Mr Abel Mojapelo

**Reviewed By** Dr Kenneth Singo

**Submitted to** Department of Mineral Resources and Energy

**Version** Draft

**Date** 2022

## EXECUTIVE SUMMARY

Amandla Africa Mining (the Applicant) has applied for a Prospecting Right in terms of Section 16 of the Mineral and Petroleum Resources Development Act, 2002 (Act 28 of 2002) (MPRDA) and an Application for Environmental Authorization in terms of Chapter 6 of GNR 326 promulgated under the National Environmental Management Act (Act 107 of 1998) (NEMA) to prospect for coal resource.

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

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

The landowner, Mr Philip Potgieter was consulted on the 9<sup>th</sup> of March 2022 at his workshop in Delmas. Mr Potgieter was given a BID along with a landowner notification letter, he said he will go through the documents get back to us.

The proposed Prospecting Right Area is situated over the farm Zonderfout 226 IR and is located at approximately 9.0 km North-East of Delmas and approximately 17.28 km Southwest of Kendall within the Victor Khanye Local Municipality under Delmas Magisterial District.

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

The Prospecting Right Application and Application for EA was submitted to the DMRE. The DMRE accepted the proposed application on the 22<sup>nd</sup> of March 2022. The BAR (this report) will be made available to Interested and Affected Parties (I&AP's) for comment from the **11<sup>th</sup> of April 2022 – 17<sup>th</sup> May 2022.**

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

## IMPORTANT NOTICE

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

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

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

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

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

## OBJECTIVE OF THE BASIC ASSESSMENT PROCESS

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

- a) determine the policy and legislative context within which the proposed activity is located and how the activity complies with and responds to the policy and legislative context;
- b) identify the alternatives considered, including the activity, location, and technology alternatives;
- c) describe the need and desirability of the proposed alternatives,
- d) through the undertaking of an impact and risk assessment process inclusive of cumulative impacts which focused on determining the geographical, physical, biological, social, economic, heritage, and cultural sensitivity of the sites and locations within sites and the risk of impact of the proposed activity and technology alternatives on these aspects to determine:
  - e) the nature, significance, consequence, extent, duration, and probability of the impacts occurring to; and
  - f) the degree to which these impacts—
    - can be reversed;
    - may cause irreplaceable loss of resources; and
    - can be managed, avoided or mitigated;
- g) through a ranking of the site sensitivities and possible impacts the activity and technology alternatives will impose on the sites and location identified through the life of the activity to
  - identify and motivate a preferred site, activity and technology alternative;
  - identify suitable measures to manage, avoid or mitigate identified impacts; and
  - Identify residual risks that need to be managed and monitored.

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## PART A

### SCOPE OF ASSESSMENT AND BASIC ASSESSMENT REPORT

#### 1. Contact person and correspondence address

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Item	Details
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## b) Details of Principal Reviewer



**DR NDINANNYI  
KENNETH SINGO**  
**MANAGING DIRECTOR**

**QUALIFICATIONS**

- Ph.D. Geology, Applied Environmental Mineralogy and Geochemistry (UJ)
- MSc Environmental Management (University of South Africa (UNISA))
- BSc (Hons) in Mining and Environmental Geology (UNIVEN).

**AFFILIATIONS**

- South African Council for Natural Scientific Professions (SACNASP: Earth Science)
- Geological Society of South Africa (GSSA) [Geologist and Hydrogeologist]
- Land Rehabilitation Society of Southern Africa (LaRSSA)
- South African Affiliates of the International Association for Impact Assessment (IAIAsa)
- WESSA (People Caring for the Earth)
- Environmental Assessment Practitioners Association of South Africa (EAPASA)

**EXPERIENCE**

Dr. Singo is a Principal Consultant (Earth Science), and REAP (EAPASA) in the Mining, Agricultural and Construction sector and currently works for Singo Consulting, an advisory firm based in eMalahleni. He has over 11 years' experience in diverse areas of natural resources including Geology, Geochemistry and Environmental Geochemistry. He is a coal expert with extensive experience of the Waterberg, Soutpansberg, Witbank, Highveld, and Springbok flats, as well as the Tete (Moatize) coalfield in Mozambique.

Kenneth holds an MSc in Environmental Geochemistry (University of South Africa (UNISA)), BSc (Hons) in Mining and Environmental Geology (the University of Venda), and Ph.D. (Geology, Applied Environmental Mineralogy and Geochemistry) at the University of Johannesburg. Dr. Singo has knowledge of Mine Water and Mine Environmental Management (acid mine drainage, heavy metal assessments and tailings management) in various commodities including coal, gold, magnesite and base metals (Cu, Pb, Zn). He has extensive knowledge of defunct mining waste and waste water impact assessments in communities residing in the vicinity of those mines. This knowledge was gained through MSc. Kenneth has sound knowledge of risk assessment, both in terms of human health and the environment. He is experienced in the appraisal of potential constraints, as well as devising means of mitigation through remedial strategy development, feasibility and validation.

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

### Expertise of the EAP

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

## 2. Location of the overall activity

Table 1: Project details.

<b>Farm name</b>	Zonderfout 226 IR, within portion 10
<b>Application area (ha)</b>	Approximately 91.509 ha
<b>Magisterial district</b>	Magisterial district of Delmas
<b>Distance and direction from nearest town</b>	The proposed Prospecting Right Area is situated over the farm Zonderfout 226 IR and is located at approximately 9.0 km North-East of Delmas and approximately 17.28 km Southwest of Kendall.
<b>21-digit Surveyor General codes for each farm portion</b>	TOIR00000000022600010

### 2.1 General description of the project location

The farm Zonderfout 226 IR is situated in the Delmas Magisterial district in Mpumalanga province, South Africa. The Prospecting Area, as seen in figure 1 below, is situated approximately 9.0 km North-East of Delmas and approximately 17.28 km Southwest of Kendall. The proposed area can be accessed R555 from Delmas.



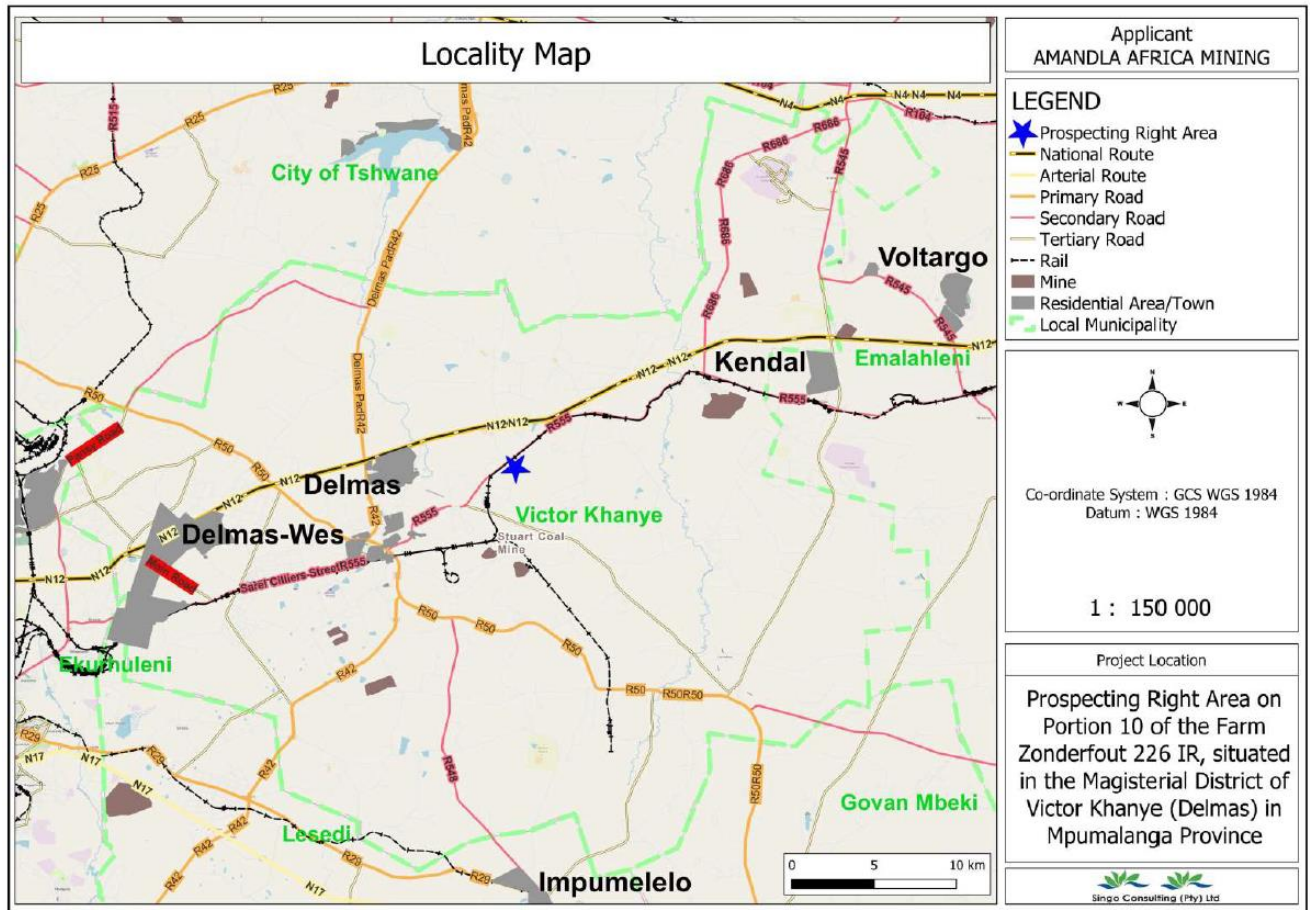


Figure 1: Locality map of the proposed project area.

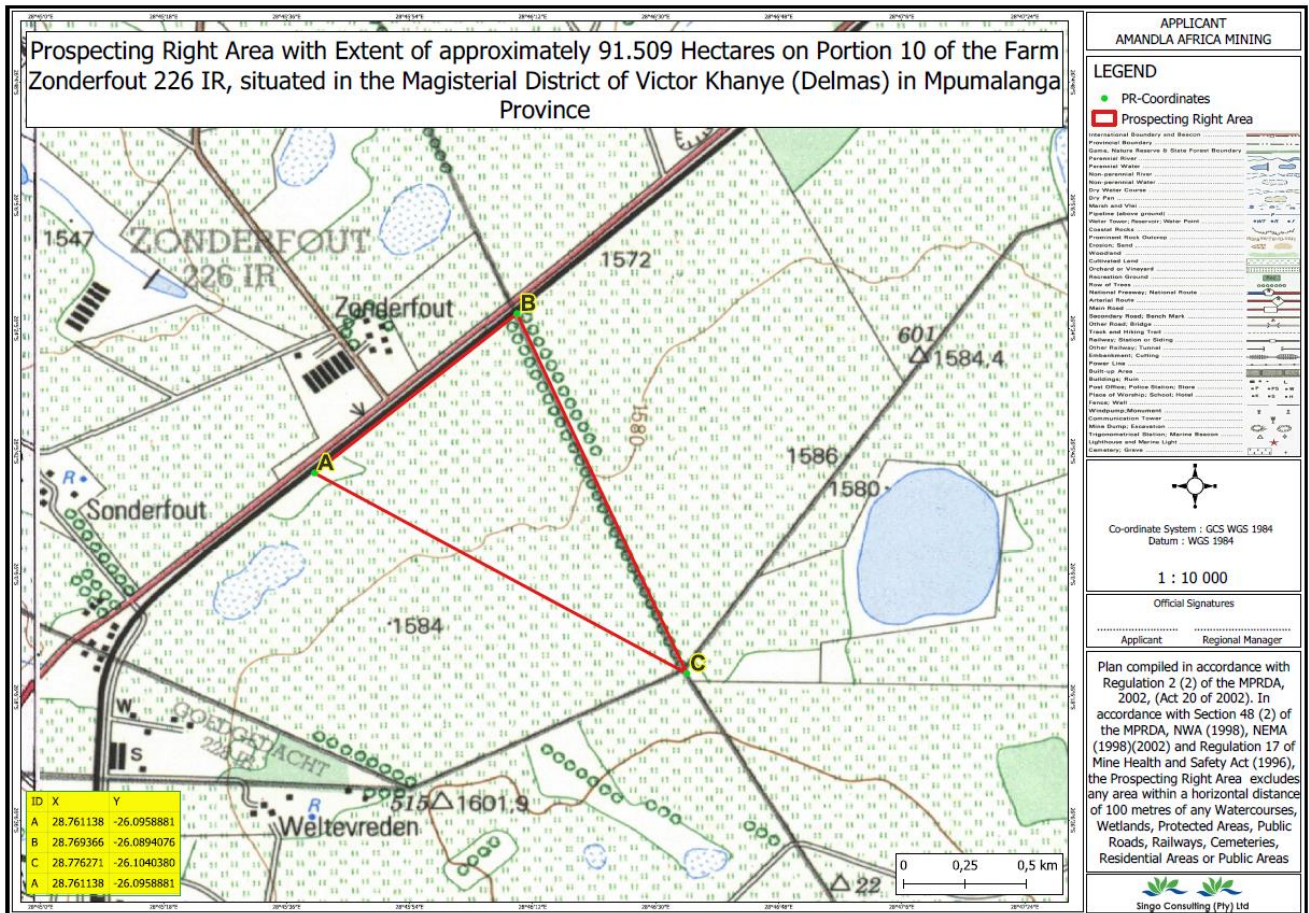


Figure 2: Map showing the exact location of project area in farm Zonderfout 226 IR.

## 2.2 Description of the scope of the proposed overall activity

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

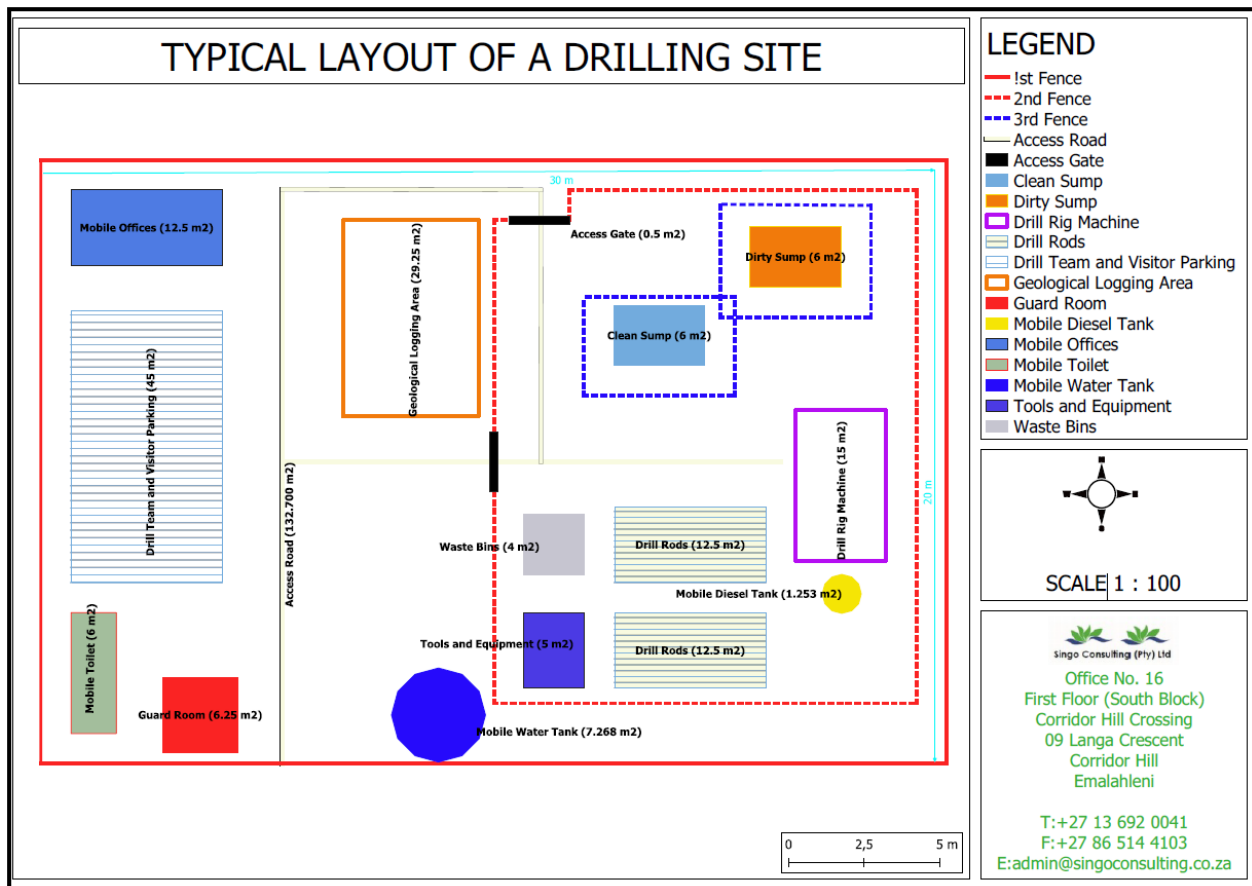


Figure 3: The drill site layout plan showing areas where specific activities will take place in the project area.

### 2.3 Listed and specified activities

Table 2: Listed and specified activities.

NAME OF ACTIVITY  (E.g. For prospecting - drill site, site camp, ablution facility, accommodation, equipment storage, sample storage, site office, access route etc...etc...etc. E.g. for mining, - excavations, blasting, stockpiles, discard dumps or dams, Loading, hauling and transport, Water supply dams and boreholes, accommodation, offices, ablution, stores, workshops, plant, storm water control, berms, roads, pipelines, power lines, conveyors, etc...etc...etc.)	Aerial extent of the Activity Ha or m <sup>2</sup>	LISTED ACTIVITY  (Mark with an X where applicable or affected).	APPLICABLE LISTING NOTICE  GNR 517, 11 June 2021	WASTE MANAGEMENT AUTHORISATION  (Indicate whether an authorisation is required in terms of the Waste Management Act). <b>(Mark with an X)</b>
Prospecting Area	91.509 ha	<b>X</b>	GNR Listing 517 Notice 1, Activity 20.	Not required
Vegetation clearing	0.9 ha		Not Listed	
Drilling	0.9 ha		Not Listed	
Access Road	0.02		Not Listed	

**Total area to be disturbed**

$9000 \text{ m}^2 \div 10000 = 0.9 \text{ ha}$

$30 * 20 = 600 \text{ m}^2$

$15 \text{ boreholes} * 600 \text{ m}^2 = 9000 \text{ m}^2$

**Table 3: Summary of drilling activities.**

Drilling method	Diamond drilling
Number of boreholes	15
Depth of boreholes	100m
Duration of drilling	A borehole takes about 4 days to complete a borehole; 15 will take at least 60 days.
Demarcated working area	0.9 ha for all 15 drilling sites

**2.4 Description of the activities to be undertaken**

Describe methodology or technology to be employed, including the type of commodity to be prospected/mined, a linear activity, and a description of the route of the activity.

**Background**

Amandla Africa Mining is requesting a Prospecting Right without bulk sampling in order to prospect for coal mineral on the aforementioned properties. The prospecting area is approximately 91.509 ha in size (refer to Figure 2).

Prospecting work will begin with a high-level desktop study and potential desktop resource evaluation. This will include a data search for any previous drilling, trenching, sampling, exploration, existing maps, and relevant historical data. Following the successful completion of this desktop study, additional drilling, trenching, and resource estimations may be performed if the results warrant it.

Coal prospecting activities will be conducted over a period of five years in the following phases:

**Phase 1A: Data collection and review**

This phase includes data collection and review of all available information relating to the project, such as property description, tenure and permitting, accessibility, climate, environmentally sensitive areas, historical work and geology. A site visit will be conducted during this phase.

## **Phase 1B: Data review report and gap analysis**

This phase involves confirming adequacy of baseline project data available to support preparation of a Bankable Feasibility Study (BFS). Upon gap analysis completion, recommendations will be made to fill the shortfall in any technical or study area that may directly impact the quality of the Bankable Feasibility study. Phase 1A and 1B (combined) will be conducted for about 1- 2 months.

## **Phase 2: Geology and resources**

This phase includes drilling, geochemical sample analysis, data verification and mineral resource estimation according to international reporting codes, such as the South African Code for Reporting of Exploration Results, Mineral Resources and Mineral Reserves (SAMREC). Data acquisition and test work in the form of diamond, percussion or directional drilling (for geochemical assay and metallurgical test work) is required to support the study. Once the geochemical analytical results have been obtained, the generation of a geological and resource model and resulting SAMREC-compliant (or similar) mineral resource estimate may be completed. The drilling programme will include at least Fifteen (15) boreholes mainly aimed at verifying the acquired historical data by obtaining reliable samples from different depths below surface. The three potential drilling methods are described in the following.

### **2.4.1.1 Diamond drilling**

Diamond core drilling uses a diamond-studded drill bit that is mounted on a cylindrical rotating shaft. A hydraulic or mechanical chuck securely holds the drill shaft and mounted drill bit, allowing it to rotate at the desired speed. The feed frame provides the necessary force to apply to the bit in order for it to cut effectively. The flush pump pushes water or other flushing fluids down the rod string, past the core barrel and core bit. This cools the bit and moves the cutting up to the surface outside the drill rod, reducing friction between the drill string and the borehole wall. The bit removes a core of rock, which moves up into the core barrel until the barrel is full. When the rod string is full, it is hoisted until the core barrel reaches the surface, where it can be emptied.



**Figure 4: A typical example of diamond core drilling rig.**

### 2.4.1.2 Directional drilling

Directional drilling directs the borehole's direction and deviation to a predetermined underground target, in this case the coal seam. A mud motor, specialized bit, and a bend near the bit are among the tools used to drill directional wells. When the entire string is not rotating, the bend directs the bit in different directions from the well bore axis; this is accomplished by pumping drilling fluid through the mud motor, which rotates the bit. Once the desired angle is reached, the entire drill string is rotated. Horizontal drilling is employed in coal prospecting. The well is drilled horizontally across the coal bed at an angle greater than 800 degrees. Core samples and strata thickness information can be obtained with this type of drilling.



Figure 5: Schematic illustration of directional drilling.

### 2.4.1.3 Reverse circulation drilling

A pneumatic reciprocating piston (known as a "hammer") drives a tungsten-steel drill bit in the Reverse Circulation (RC) drilling mechanism. RC drilling employs much larger rigs and machinery, and depths of up to 500 meters are routinely attained. Dry rock chips are ideal for RC drilling because large air compressors dry the rock out ahead of the advancing drill bit. By blowing air down the rods, the differential pressure creates air lift of the water and cuttings in the inner tube of each rod, resulting in RC. It travels through a sample hose attached to the top of the cyclone until it reaches the bell at the top of the hole. Drill cuttings travel around the inside of the cyclone until they fall through a bottom opening and are collected in a sample bag. Although RC drilling is powered by air, water is used to reduce dust and keep the drill bit sharp.



**Figure 6: An example of a truck mounted RC drill rig.**

### **Phase 3: Topographic survey**

This phase includes a topographic survey. A detailed Digital Elevation Model (DEM) with 2m accuracy contour levels is required (existing LIDAr survey results to 5cm in the xyz space with a 1cm orthoimage is available).

### **Phase 4: Geophysical investigations**

This phase involves collection of sub-surface information relative to Witbank coalfield stratigraphy; this will affirm the exact location of the coal seams and its depth; the nature and effects of dolerite intrusions; and the characteristics of the bed rock and overburden. Geophysical survey results will be interpreted with geological and drilling data to provide a firm basis for analysis of the coal seam characteristics and its potential of being converted from resource to reserves.

### **Phase 5: Mineral processing and metallurgical testing**

This phase involves following standard procedures for Feasibility studies to obtain test work results to determine the Run of Mine (RoM) ore quality. RoM ore quality is needed to establish basic beneficiation plant design criteria and start with basic engineering, layout planning, preliminary tendering and cost estimates of initial capital costs for each of the main components, production planning and operating cost estimates.

## Phase 6: Reporting

This phase includes review, interpretation, peer review, conclusions and recommendations, and the compilation of the final BFS report signed off by the Competent Person. The Mineral and Ore Reserve Report produced during this phase, will be SAMREC-compliant.

## 2.5 Ancillary activities

### 2.5.1 Access roads

The R555 touches/ form boundaries of the proposed site, allowing all project staff easy access to the project area. There will be no new access roads built for this proposed project. Following the grant of the prospecting right, the applicant will negotiate access with land / surface rights holders in order to conduct a thorough technical assessment of the prospecting region. There shall be an agreement with the landowner concerning the access and the appropriateness and time of year preferred to be executed and negotiated with him.



Figure 7: R555, next to the proposed project area.





Photo 1: R555 Road close to the proposed project area.

### 2.5.2 Water supply

Drilling mechanisms to be employed using compressed air instead of water, and therefore water will only be required by personnel on site for drinking purposes. A temporary storage tank of portable water for drinking and general usage will be provided on site. This water will be bought in water containers from water distributors such as Oasis. During the prospecting operations, best practice guidelines will be implemented so as to prevent future pollution in waterbodies.



Figure 8: Typical example of a temporary storage tank on site.

### 2.5.3 Ablution facilities

Portable toilets for ablution purposes will be put in place, minimizing potential contamination associated with underground waste pipe system. portable toilets are strong, they can be moved around during prospecting and also be removed from site after prospecting activities have been completed.



Figure 9: Shows an example of portable toilets on site.

### 2.5.4 Temporary office area

Temporary office shades will be erected on site. No electricity will be generated on site. Meals will be provided to staff and staff as no heating and / or cold facilities will be available. A shady restaurant will be provided.



Figure 10: An example of a temporary office shades.

### 2.5.5 Accommodation

Accommodation will not be provided on site, but on nearby towns (Delmas) and areas near the proposed area. Night security will be employed once the drilling equipment has been established on site.

### 2.5.6 Blasting

Blasting is the process of using explosives to break or disintegrate rocks so that they can be excavated. Blasting is out of the scope of this prospecting project as the Prospecting Works Programme (PWP) does not allow for bulk sampling, no blasting will take place. Instead, the project will entail geological mapping, exploration drilling (i.e Percussion, Diamond core, and Directional), sampling, resource modelling and resource reporting.

### 2.5.7 Storage of dangerous goods

During prospecting / drilling activities, a limited amount of diesel, oil and lubricants will be stored in the area. The only hazardous materials will be stored in any appropriate metal containers with concrete slabs next to them to prevent soil contamination. Less than 30m<sup>3</sup> will be stored in above ground diesel storage tanks.



Figure 11: Diesel storage on the ground.

## 2.6 Policy and legislative context

Table 4: Applicable legislation to this application.

Applicable Legislation and Guidelines	Reference Where Applied (i.e. where in this document has it been explained how the development complies with and responds to the legislation and policy context)	How does this Development Comply with and Respond to the Legislation and Policy Context
<b>National Environmental Management Act (No. 107 of 1998)(NEMA):</b>	This entire report is prepared as part of the prospecting right application under the NEMA, section 24	In terms of the National Environmental Management Act an Application for Environmental Authorisation subject to a Basic Assessment Report and Environmental Management Programme Report. The application was lodged at the DMRE
<b>Minerals and Petroleum resources Development Act (No.28 of 2002) (MPRDA): In support of the Prospecting Right Application submitted by Amandla Africa Mining , the applicant is required to conduct a NEMA BAR process in terms of Section 5A and Chapter 16 of the MPRDA.</b>	This entire report is prepared as part of the Prospecting Right Application under the MPRDA, section 16.	In terms of the Mineral and Petroleum Resources Development Act a Prospecting Right Application has been applied for coal resource.  The application was accepted on the <b>22<sup>nd</sup> of March 2021</b> .  DMRE Ref: <b>MP 30/5/1/1/2/(17260) PR</b>
<b>National Water Act (No. 36 of 1998) (NWA): Water may not be used without prior authorisation by the DWS. Section 21 of the National Water Act (No.36 of 1996) the NWA water uses for which authorisation is required.</b>	No Water Use Licence has been applied for this prospecting project.	No water use license is required for this Application. Any water required for drilling activities will be obtained from a legal source within the area or brought in via mobile water tanker. Appropriate dust extractions /suppression equipment will be a condition imposed on the drill contractor for their drill rigs.
<b>The National Environmental Management: Biodiversity Act (Act No. 10 of 2004 – NEMBA) Section 57 and 87</b>	Regulations published under NEMBA provides a list of protected species (flora and fauna), according to the Act (GN R. 151 dated 23 February 2007, as amended in GN R. 1187 dated 14 December 2007) which require a permit in order to be disturbed or destroyed	No applications have been submitted in terms of the National Environmental Management: Biodiversity Act.
<b>Victor Khanye Local Municipality Integrated Development Plan (IDP)</b>  <b>Strategic Development Framework (SDF)</b>	Land Claims          Alternatives	This department was consulted to ensure that the project does not take place where there is a land claim the claimants not knowing about the project. In addition to acquire the claimant's information to consult them before the project commence. No correspondence has been received.

		<p>In terms with the SDF of the Victor Khanye Local municipality, various strategies and associated policies should be adopted to ensure effective spatial development.</p> <p>The municipality must provide alternative means of support for rural/informal population in order to decrease dependence on the environment and subsistence agriculture. For this purpose, the following policies are adopted:</p> <p>Maximise economic benefit from mining industrial, business, agricultural and tourism development within the area.</p> <p>Promote a climate for economic development. Improve public and investor confidence in the region through crime reduction and infrastructure development.</p>
<p><b>Constitution of South Africa,</b>  <b>Specifically, everyone has the right:</b></p> <p><b>a) to an environment that is not harmful to their health or wellbeing; and</b></p> <p><b>b) to have the environment protected, for the benefit of present and future generations, through reasonable legislative and other measures that</b></p> <p><b>i) prevent pollution and ecological degradation;</b></p> <p><b>ii) promote conservation; and</b></p> <p><b>iii) secure ecologically sustainable development and use of natural resources while promoting justifiable economic and social development.</b></p>	<p>BAR &amp; EMPr</p>	<p>Prospecting activities will only proceed after effective consultation. All activities will be conducted in a manner that does not violate the Constitution of the Republic of South Africa.</p>
<p><b>National Heritage Resources Act, 1999</b></p>	<p>Management measures</p>	<p>Should archaeological artefacts or skeletal material be revealed in the area during development activities, such activities should be stopped, and SAHRA should be notified in order for an investigation and evaluation of the find(s) to take place.</p>

## 2.7 Need for and desirability of the proposed activities

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

<b>NEED AND DESIRABILITY OF THE PROPOSED PROJECT</b>	
<b>PART I: NEED</b>	
<b>Questions (Notice 792, NEMA, 2012)</b>	<b>Answers</b>
<p><b>1.</b> 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?</p>	<p>Yes, 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.</p> <p>However, the objectives of the Victor Khanye's integrated development plan for 2020/2021 section: re-generate – to achieve environmental well-being Fights with:</p> <ul style="list-style-type: none"> <li>• High carbon emissions from electricity generation.</li> <li>• Unsustainable natural resource usage; and</li> <li>• Uncontrolled pollution</li> </ul>
<p><b>2.</b> 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?</p>	<p>The planned activities would allow Amandla Africa Mining to extend mine life (LOM) for a large number of years and thus the benefits to local communities and South Africa as a whole for e.g., work provision and social upliftment would continue for a longer period.</p>
<p><b>3.</b> Does the community/area need the activity and the associated land use concerned? This refers to the strategic as well as local level.</p>	<p>According to the STATS SA unemployment figure has drastically increased with 8600 jobs in the municipality between 2001 and 2011.</p> <p>The Amandla Africa Mining prospecting will have a positive impact on the socio-economic conditions of the local communities involved once operations commence. The prospecting will sustain the proposed areas and once the stage of mining has been reached, it will contribute to the socio-economic development of the region as a whole through social upliftment and the creation of jobs as key agents.</p>
<p><b>4.</b> 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?</p>	<p>Yes. All infrastructure for services and capacity is sufficient for the existing and proposed prospecting/drilling activities. The proposed project will be using water through their water licence and will not rely on municipal water services. 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.</p>

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 cited IDP indicates that the community sector contributed 37.1 % of all the sectors' contribution to the GDP of Victor Khanye Local Municipality. Mining contributed 7.9% , Agriculture contributed 11.2 % trade/retail figure was at 13.6 % and construction contributed 2.9 %.
<b>PART II: DESIRABILITY</b>		
7.	Is the development the best practicable environmental option for this land/site?	Yes. Much of the region under review is undergoing transformed cultivation activities which have already had an impact on environmental management.
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?	Partially. The project is not completed in accordance with the Local Spatial Development System (SDF) and Integrated Development Plan (IDP) goals in terms of land use but does not compromise the credibility of these respective forward planning documents. In South Africa, as in Victor Khanye Local Municipality, unemployment is a big problem and prospecting should be able to provide continuity of existing employment in the prospecting area for a substantial period of time.
9.	Would the approval of this application compromise the integrity of the existing environmental management priorities for the area (e.g. as defined in EMFs), and if so, can it be justified in terms of sustainability considerations?	No, 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).	Yes. The proposed prospecting area is located at approximately 2.99 km North west of Phalannwa Colliery and 3.85 km North west of Canyon coal mine. The current infrastructure suffices for the process of prospecting.
12.	How will the development impact on people's health and well-being? (E.g. In terms of noise, odours, visual character and sense of place, etc.)?	In summary, due to the fact that this area has a high density of residents and also the military base, which is closer to the proposed area, the impacts on well-being, following mitigation, will be as follows:  • Visual: Low

		<ul style="list-style-type: none"> <li>• Dust: Low-Medium</li> <li>• Noise: Medium</li> <li>• Sense of place: Medium</li> </ul> <p>However, environmental good practice compliance policies would have limited effects.</p>
<b>13.</b>	Will the proposed activity or the land use associated with the activity being applied for, result in unacceptable opportunity costs?	No. The mining industry in South Africa has been a cornerstone of the economy for a long period of history. South Africa offers ongoing proof that mineral revenues can create sizeable benefits to the economy in countries where they are sourced. In South Africa coal has contributed to funding impressive economic growth and stability.
<b>14.</b>	Will the proposed land use result in unacceptable cumulative impacts?	No. 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 EMPr attached will serve as a method to keep the proposed project from having any serious long term cumulative impacts on the receiving environment.

## 2.8 Process followed to reach the proposed preferred alternatives within the site

This section is about the determination of the specific site layout and the location of infrastructure and activities on site, having considered the issues raised by I&APs, as well as alternatives to the initially proposed site layout.

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

### Details of all alternatives considered

With reference to the site plan provided as Figure 2 and the location of the individual activities on site, provide details of the alternatives considered with respect to:

- (a) The property on which or location where it is proposed to undertake the activity;
- (b) The type of activity to be undertaken;
- (c) The design or layout of the activity;
- (d) The technology to be used in the activity;



- (e) The operational aspects of the activity; and
- (f) The option of not implementing the activity)

The assessment is done in phases, where the activities and location of drilling and soil sampling are based on the previous phase. Therefore, the specific location and level of soil sample and basic drilling cannot be determined in advance.

The following alternatives were investigated as feasible alternatives:

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

The farm Zonderfout 226 IR is situated in Victor Khanye Local Municipality, under Delmas Magestrial District. The proposed area is located approximately at 9.0 km North-East of Delmas and approximately 17.28 km Southwest of Kendall. Refer to Figure 1 for the locality map.

- The type of activity to be undertaken

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

- The design or layout of the activity

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

- Portable ablution facilities will be used.
- Activities will be limited to the drilling of 15 boreholes to be determined by the geological formations found during prospecting.
- It is planned to use one rig for all drill holes.
- Rehabilitation will be closely controlled, and supervision will be focused.
- No changes to the layout are considered but with the geophysical survey information, the boreholes can be orientated to match the shape of the good quality of resource.

- The technology to be used in the activity

The technologies listed in the PWP have been selected as they are proven effective in the determination of resource viability within the proposed prospecting area. Some of the techniques

employed in the non-invasive prospecting will include a literature survey, field reconnaissance/mapping, and geophysics survey of the geology, outcrops. Invasive technology alternatives have also been considered. It is hereby noted that the different phases and timeframes of the prospecting herein envisaged are, by their nature, dependent on the results obtained during the preceding phases of such prospecting. The proposals set out in the Prospecting Work Programme are therefore made on the basis that results obtained during the preceding phases may necessitate reasonable changes and adaptations to such proposals, which will be reported as prescribed.

- The option of not implementing the activity

The Information available is not enough sufficient. The additional information on the resource quality, depth and thickness is need. There is a need to further investigate the presence of the resource within the project area due to unknown historic mining activities. The proposed activities have very low significance since are short term activities. The probability of occurrence of an impact was determined and most of these activities can be controlled and impacts can be reduced or avoided. The probability was also used basing on looking at other prospecting activities of similar nature.

Generally prospecting activities have low impact on the environment, these planned activities have negative impacts and can be controlled and avoided or minimised therefore the layout does not require revision. Changes In plans will be discussed with the farms and approvals will be singed.in addition to this, should economical reserves be present, and the applicant does not have the opportunity to prospect, the opportunity to utilize the said reserves for future phases will be lost.

### **2.8.1 Development footprint alternatives considered**

With reference to the site plan and the location of the individual activities on site, provide details of the alternatives considered.

Prospecting work is a two staged process; it entails invasive activities and non-invasive activities. Non-invasive activities do not have footprints because they do not include land disturbance while invasive activities cause land disturbance hence, they have footprints. In prospecting activities, footprints are caused by drilling. To mitigate the footprints of drilling activities on alternative sites identified, buffers have been developed( Figure 12) to ensure protection of water resources, infrastructures, and ecosystems on site. The following buffers must be applied, and all buffered out areas are **no-go** areas (i.e. prospecting activities must not be conducted in those areas):

- No drill site must be positioned within 500m of a wetland
- Drilling activities must be conducted out of 1:100 yr/flood line of a stream
- Drilling activities must be done at least 100m away from infrastructures

- Existing access road must be utilised to access the identified alternative sites to conduct exploration activities rather than developing new gravel roads on site.

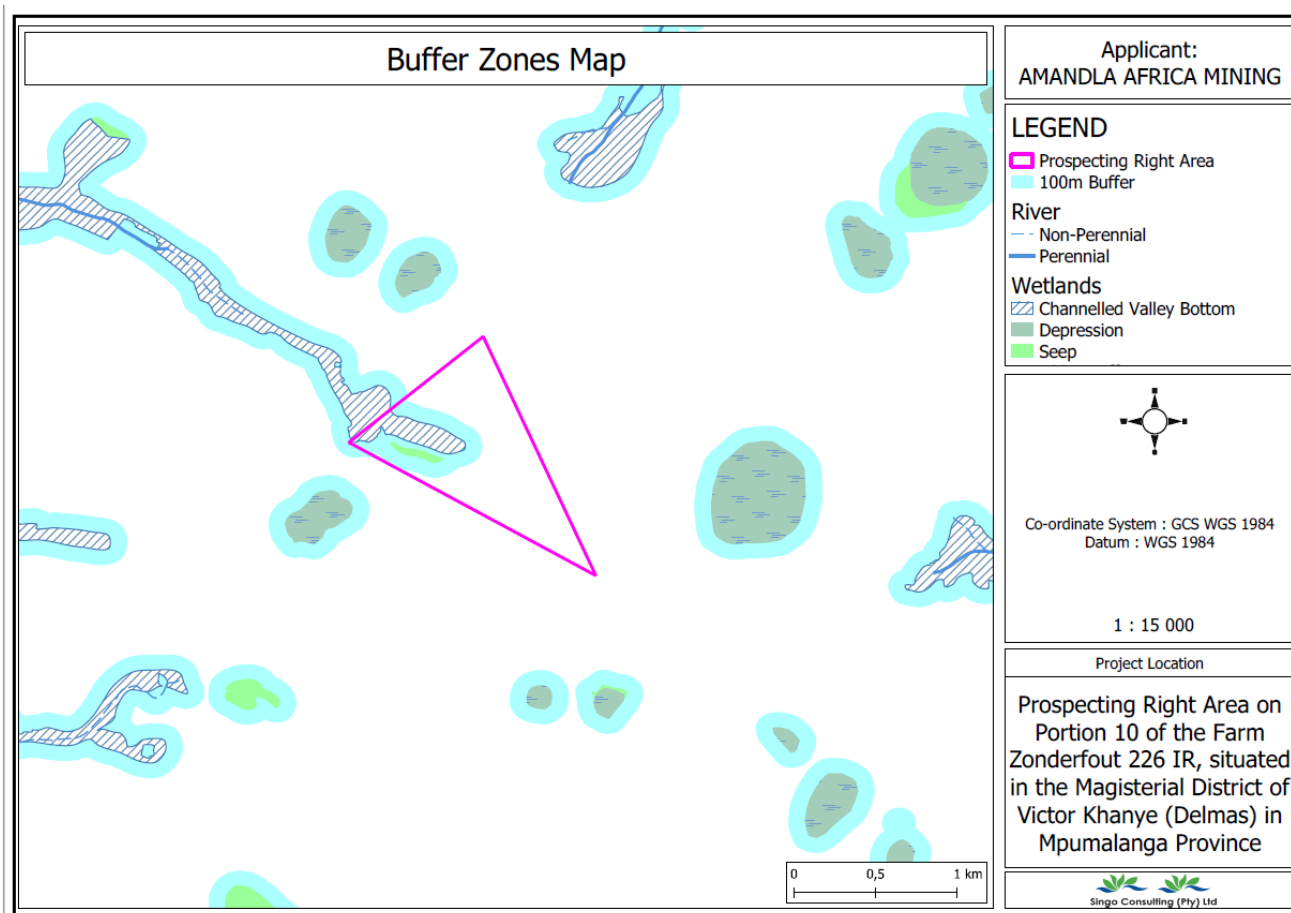


Figure 12: Shows developed buffer zone around the river with associated wetlands.

## 2.8.2 Type of activity to be undertaken

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

### 2.8.2.1 Activity design/layout

No permanent structures will be constructed since exploration is temporary in nature. Landowners will be consulted duly for access and usage to access road.

- Portable ablution will be used.
- It is planned to use one drill rig for 15 drill holes.

- Rehabilitation will be closely controlled, and supervision will be focused.
- No changes to the layout will be considered, however, the holes can be orientated to match the shape of the resources

### **2.8.2.2 Activity technology**

The technology chosen is deemed effective for exploration for this type of deposit, resource, definition and evaluation. This is inclusive of non-invasive and invasive technology. The non- invasive includes Desktop studies, Geological field mapping and Geophysical Survey whilst invasive includes prospecting boreholes for resource estimation. Prospecting will be done in interrelated phases. Alternatives will be considered once the preceding necessitate reasonable changes and adaptations.

### **2.8.2.3 Operational aspects of the activity**

Operational aspects that have been considered for the positive implementations of the PWP. Financial arrangements, appropriate equipment available and technical skills available. The proposed work plan finances will be from Amandla Africa Mining over the next 5 years. Amandla Africa Mining has insured that the financial personnel to execute prospecting work programme and tools desired.

### **2.8.2.4 Option of not implementing the activity**

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

## **2.8.3 Details of the public participation process followed**

Describe the process undertaken to consult I&APs, including public meetings and one-on-one consultation. Affected parties must be consulted, regardless of whether they attended public meetings. Information provided to affected parties must include sufficient detail of the intended operation to enable them to assess its impact on them or on the use of their land.

The Basic Assessment Report will be submitted for review to the Competent Authority (DMRE), commenting authorities, non-governmental organizations (NGOs), landowners, surrounding property owners and other identified stakeholders (see Table 5). Comments that will be received will be recorded and will reflect in the Final Basic Assessment Report and Environmental Management Programme Report.

The following public participation activities will be conducted for the proposed project to date:

- Identification of stakeholders, including property occupiers, owners and occupiers of land adjacent to the site, municipal officials and relevant state departments. All respondents have will added to the project database, which will be used throughout the process to inform the stakeholders of the project.
- Canvassing issues and concerns of the public and ensuring that all I & APs can comment on the application. The proposed project was announced as follows:
  - Site notices (size A2) advertising the proposed development and displaying the contact details of the EAP were displayed on site and at other public places on the 9<sup>th</sup> of March 2022. The site notices inform potential I&APs of the project and affords them the opportunity to comment.
  - The landowner notification letters will be distributed with a registration and comment sheet, as well as the locality map, to state departments and other potential stakeholders through emails.
  - An advert was placed in the Ridge Times Newspaper to notify the public of the proposed prospecting right application/project, inviting members of the public to register as I&APs on the project's database and notified the public of the availability of the Draft Basic Assessment Report and date of the public open day.
  - Landowners and lawful occupiers were identified, and they will be conducted.
  - A copy of the Draft Basic Assessment Report will be made available for public review for a 30-day period from 11<sup>th</sup> April 2022 to 17<sup>th</sup> May 2022.
  - All comments received during the review period will be incorporated into the final BAR & EMPr.
  - Once the DMRE has decided on Environmental Authorisation, all registered I&APs will be notified of the outcome.

## Windeed Search

### WinDeed Database D/O Property - List IR, 226, MPUMALANGA

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	2022/03/02 12:09	Farm Number	226
Reference	-	Registration Division	IR
Report Print Date	2022/03/02 12:09	Portion Number	-
Farm Name	-	Remaining Extent	NO
Deeds Office	Mpumalanga	Search Source	WinDeed Database

PORTION LIST	
Portion	Owner
0	C P POTGIETER BOERDERY PTY LTD
1	C P POTGIETER BOERDERY PTY LTD
5	RED STAR ELECTRICAL PTY LTD
6	KLAPROPS 203 PTY LTD
9	KLAPROPS 203 PTY LTD
10	** FOR INFO REFER TO REGISTRAR OF DEEDS **
12	TRANSNET LTD
13	SOUTH AFRICAN NATIONAL ROADS AGENCY LTD
14	SOUTH AFRICAN NATIONAL ROADS AGENCY LTD
15	SOUTH AFRICAN NATIONAL ROADS AGENCY LTD

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Figure 13: Windeed results for farm Zonderfout 226 IR.

# Dupies hou jaarlikse kleuteratletiek



Thabang Masango with his reward at the Ubuhle Care Athletics. (Photo: Supplied)

## Ubuhle Care hosts athletics

Ubuhle Care and Development held an athletics event on Friday, February 4. They were joined by Noah's Ark and had 1125 athletes that participated. Each crèche had a parade showing off their flags on the make-shift sport field. Activities included water racing, relay, ball catcher and the classic egg race and tug of war between the different schools. "These activities are important to children's sensorimotor development. "It is a great way for them to stimulate their growing bodies while having some well-deserved fun," said organiser, Nkuthula Ntsh.



Nathanael Basso with his gold medal. (Photo: Supplied)

Die Kleuteratletiektoernooi het amptelik afgeskop met 10 verskillende kleuterskole op Broekhorstpruit wat deelgeneem het by Laerskool Du Preez van Wyk. Sowat 370 kleuters het aan verskeie items deelgeneem. Die tema van die byeenkoms was op die plaas. Voetjies en Kroonspruit skole het die spandag aangeleed. Daar was toetsrek, hoogspring, teikenspel, fietsies, verspring en taellope.

Tjokierland se onderwyers het die heel eerste aflosbeke in die goedkiesnis gewen en het kragte geneem met vier onderwyers elk van die ander skole. Vanjaar is trefkes vir die beste kreet, beste ouers en beste onderwyersverrekening uitgedeel. Die onderwyers se items was sokspring vir 60m sowel as 60m-boonjiesak vir balans, 60m-taellope en 60m-sterloop. Daar was ook uitsonde geloue en wensters in staggewys.



Amelia Tjaard op haar bromfiorie.



Aina Mahmood jaag na die wenstreek.



Marchanelle Norden hol weg by die taellope.

**WORKS OF A JOINT PUBLIC PARTICIPATION FOR PROSPECTING RIGHT AND ENVIRONMENTAL AUTHORIZATION APPLICATION.**

Application for Prospecting Right: **Amadiba Africa Mining** has lodged an application for prospecting right (DMRE Ref: WP 30/5/17/2/ (17268) PR) for the purpose of prospecting for Coal on portion 10 of the farm Tzitzibont 236 JH, situated within West Coast Local Municipality, under Namaqualand District Municipality within the Magisterial District of Oudhooi, Namaqualand Province.

Notice is hereby given in terms of the Mineral and Petroleum Resources Development Act (MPRDA) (Act 28 of 2002) and EA regulations 2014, published under Government Notice No. 352 of 2014 of 8 December 2014, amended on 7 April 2017, that **Amadiba Africa Mining** has applied for Prospecting Right for the above mentioned mineral.

**INVITATION TO COMMENT**

Registration as Interested & Affected Party: As part of the EA process, more especially the Public Participation Process (PPP) for this proposed prospecting right project, interested and affected Parties (I&APs) are invited to register and kindly submit any comments or concerns to reach Mr Abel Mqogole by no later than **Sunday the 10th of April 2022** on the contact details provided below. The public is also invited to review and comment on the Draft Basic Assessment Report (BAR) and Environmental Management Programme report (EMPR). The Draft BAR & EMPR will be available for review for 30 days' calendar period from Monday the 11th of April 2022 to Tuesday the 17th of May 2022. The Draft BAR & EMPR will be available at: **Selmas Public Library (for Sarah Gillies & Van Riebeeckla, Delmas 2218)** and a soft copy upon request from Singo Consulting (Pty) Ltd using the detailed I&AP's contact's below, via email, Dropbox link, Google drive, WhatsApp, etc.

**ENVIRONMENTAL ASSESSMENT PRACTITIONER AND APPLICANT'S DETAILS:**

CONSULTANT'S DETAILS	APPLICANT'S DETAILS
<p><b>Singo Consulting (Pty) Ltd</b> Physical Address: Office No. 870, 5 Sabalala Street, Tzitzibont Park Cat 2, Wilmskop, 1025.</p> <p>Contact person: Mr Abel Mqogole Tel No.: +27 13 637 0041 Fax No.: +27 86 514 4103 Cell No.: +27 71 362 7894 Email: abel@singoconsulting.co.za</p>	<p><b>Amadiba Africa Mining</b> P.O. Box 2200 Delmas, Murrumbidgee, 2200</p> <p>Contact person: Maitse Tshabangu Cell No.: +13 710 1412 Email: info@amadibafrika.co.za</p>

**WORKS OF A JOINT PUBLIC PARTICIPATION FOR PROSPECTING RIGHT AND ENVIRONMENTAL AUTHORIZATION APPLICATION.**

Application for Prospecting Right: **Amadiba Africa Mining** has lodged an application for prospecting right (DMRE Ref: GP 30/5/17/2/ (18748) PR) for the purpose of prospecting for Coal on portion 13 of the farm Witkop 539 JH, situated within City of Tzitzibont Metropolitan Municipality, within the Magisterial District of Broekhorstpruit, Garden Province.

Notice is hereby given in terms of the Mineral and Petroleum Resources Development Act (MPRDA) (Act 28 of 2002) and EA regulations 2014, published under Government Notice No. 352 of 2014 of 8 December 2014, amended on 7 April 2017, that **Amadiba Africa Mining** has applied for Prospecting Right for the above mentioned mineral.

**INVITATION TO COMMENT**

Registration as Interested & Affected Party: As part of the EA process, more especially the Public Participation Process (PPP) for this proposed prospecting right project, interested and affected Parties (I&APs) are invited to register and kindly submit any comments or concerns to reach Mr Abel Mqogole by no later than **Sunday the 10th of April 2022** on the contact details provided below. The public is also invited to review and comment on the Draft Basic Assessment Report (BAR) and Environmental Management Programme report (EMPR). The Draft BAR & EMPR will be available for review for 30 days' calendar period from Monday the 11th of April 2022 to Tuesday the 17th of May 2022. The Draft BAR & EMPR will be available at: **Broekhorstpruit Community Library | 44 Market St, Erasmus Broekhorstpruit, 10200** and a soft copy upon request from Singo Consulting (Pty) Ltd using the detailed I&AP's contact's below, via email, Dropbox link, Google drive, WhatsApp, etc.

**ENVIRONMENTAL ASSESSMENT PRACTITIONER AND APPLICANT'S DETAILS:**

CONSULTANT'S DETAILS	APPLICANT'S DETAILS
<p><b>Singo Consulting (Pty) Ltd</b> Physical Address: Office No. 870, 5 Sabalala Street Tzitzibont Park Cat 2, Wilmskop 1025.</p> <p>Contact person: Mr Abel Mqogole Tel No.: +27 13 637 0041 Fax No.: +27 86 514 4103 Cell No.: +27 71 362 7894 Email: abel@singoconsulting.co.za</p>	<p><b>Amadiba Africa Mining</b> P.O. Box 2200 Delmas, Murrumbidgee 2200</p> <p>Contact Person: Maitse Tshabangu Cell: +13 710 1412 Email: info@amadibafrika.co.za</p>

**ONS WINKEL** BROEKHORSTPRUIT

KOM KRUFFEL OF SKINK IN ONS WINKEL EN MAAK 'N VERSKIL IN DIE GEMEENSAP

Spesiale aanbiedings van op ons Facebook- en Instagram-kanale. Daar gaan na Ons Winkel Broekhorstpruit Lanhamstraat 44, Broekhorstpruit

[WWW.ONSWINKEL.CO.ZA](http://WWW.ONSWINKEL.CO.ZA)

PHIL VAN LOGGENDIJKERS 082 415 9524

---

**Tutela**

Tweedehandse Winkel

Kom kruffel roms in die winkel of skink skink, skinkers en meer...

Maak 'n verskil in die gemeenskap

Hy: Seede Street in Vrededorp, Delmas

Weekdae 9:00 - 12:00 en 15:00 - 18:00

Vrydae van 9:00 tot 18:00

064 556 2215

---

**ONDERSTEUN ONS EIE OUETEHUIS DELMAS**

Ons verhoor alle leuens, stels, toets, wendings, alle glas en glasies soos wam kinders in ons...

Ten bate van Ons Eie Ouetehuis.

Rantak vir Amy Drake 076 440 4338

Figure 14: Proof on newspaper Publication( shown in red ).



Photo 2: Plugging of site notice at public space.

A request for a Land Claim Letter was e-mailed to Vusi Khoza on the 11<sup>th</sup> March 2022. No correspondence has been received.

The following have been identified as I&As:

Table 5: Identified key stakeholders.

Names of I&As	Organization	Position
Rhulani Chavalala	Department of Agriculture, Forestry and Fisheries	Assistant Resource Auditor
Vusi Khoza	Department of Rural Development and Land Reform	Official
Masala Nemukula	Department of water and sanitation	Official
Linda Zwane	Victor Khanye Local Municipality	Assistant Manager , Chief Whip office
Doreen Sithole	Department of Agriculture, Land Reform and Rural Development	Official
Aulicia Maifo	Department of Environment, Forestry, and fisheries	Official
<b>Eskom General Email:</b> 'wayleavesmou@eskom.co.za'	ESKOM	Enquiry database




Names of I&Aps	Organization	Position
Phumla Nkosi	Mpumalanga Tourism and Parks Agency	Official
Yuza Chabalala	Transnet	Official
Oliver J	SANRAL	Official
Philip Potgieter	CP Potgieter Boerdery CC	Landowner
Handre Van Niekerk	Lombardy Corporate Park	I&AP


# Summary of issues raised by I&APs




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

**Table 6: Summary of issues raised during the public comment period.**

Interested and Affected Parties List the names of persons consulted in this column, and Mark with an X where those who must be consulted were in fact consulted		Date Comments Received	Issues Raised	EAPs response to issues as mandated by the applicant	Section and paragraph reference in this report where the issues and or response were incorporated
<b>AFFECTED PARTIES</b>					
<b>Landowners/s</b>					
<b>Portion 10</b> Philip Potgieter	X	09/03/2022 (face to face)	Mr Potgieter was consulted about the proposed project and given a BID. He said hell through it and get back to us in due course.	Thank you, we will await your response.	
<b>Adjacent Landowners</b>					
Handre Van Niekerk	X	14/03/2022 (via email)	<ul style="list-style-type: none"> <li>Requested project document and he asked if there is any approval.</li> </ul>	<ul style="list-style-type: none"> <li>Background Information Document and Reg 2.2 were sent to Mr Van Niekerk via email. There is no approval, yet we are still on the application stage.</li> </ul>	

<b>Interested and Affected Parties</b> List the names of persons consulted in this column, and  Mark with an X where those who must be consulted were in fact consulted	<b>Date Comments Received</b>	<b>Issues Raised</b>	<b>EAPs response to issues as mandated by the applicant</b>	<b>Section and paragraph reference in this report where the issues and or response were incorporated</b>	
			<ul style="list-style-type: none"> <li>What are the timelines for the proposed project ?</li> </ul>	<ul style="list-style-type: none"> <li>The timelines are included in the Background Information Document.</li> </ul>	
<b>Local Municipality</b>					
 <p>Linda Zwane</p>	X	11/03/2022 (via email)	No issue raised	Consultation email together with a BID were sent.	
<b>Councillor</b>					
<b>District Municipality</b>					
<b>Community</b>					
<b>Organs of state (Responsible for infrastructure that may be affected Roads Department, Eskom, Telkom, DWA</b>					

<p><b>Interested and Affected Parties</b></p> <p>List the names of persons consulted in this column, and</p> <p>Mark with an X where those who must be consulted were in fact consulted</p>	<p><b>Date Comments Received</b></p>	<p><b>Issues Raised</b></p>	<p><b>EAPs response to issues as mandated by the applicant</b></p>	<p><b>Section and paragraph reference in this report where the issues and or response were incorporated</b></p>	
	<p>X</p>	<p>11/03/2022 (via email)</p>	<p>No issue raised</p>	<p>Consultation email together with a BID were sent.</p>	
 <p>Yuzi Chabalala</p>	<p>X</p>	<p>11/03/2022 (via email)</p>	<p>No issue raised</p>	<p>Consultation email together with a BID were sent.</p>	
 <p>Mrs Y Mkansi</p>	<p>x</p>	<p>11/03/2022 (via email)</p>	<p>No issue raised</p>	<p>Consultation email together with a BID were sent.</p>	
	<p>x</p>	<p>11/03/2022 (via email)</p>	<p>No issue raised</p>	<p>Consultation email together with a BID were sent.</p>	

<p><b>Interested and Affected Parties</b></p> <p>List the names of persons consulted in this column, and</p> <p>Mark with an X where those who must be consulted were in fact consulted</p>	<p><b>Date Comments Received</b></p>	<p><b>Issues Raised</b></p>	<p><b>EAPs response to issues as mandated by the applicant</b></p>	<p><b>Section and paragraph reference in this report where the issues and or response were incorporated</b></p>	
<p>Masala Nemukula</p>					
 <p>Vusi Khoza</p>	<p><b>X</b></p>	<p>11/03/2022 (via email)</p>	<p>No issue raised</p>	<p>Consultation email together with a BID were sent.</p>	
 <p>Doreen Sithole</p>	<p><b>X</b></p>	<p>11/03/2022 (via email)</p>	<p>No issue raised</p>	<p>Consultation email together with a BID were sent.</p>	
 <p>Phumla Nkosi</p>	<p><b>X</b></p>	<p>11/03/2022 (via email)</p>	<p>No issue raised</p>	<p>BID was sent via courier.</p>	

Interested and Affected Parties		Date	Issued	EAPs response to issues as	Section and
List the names of persons consulted in this column, and		Comments	Raised	mandated by the applicant	paragraph
Mark with an X where those who must be consulted were in fact consulted		Received			reference in
					this report
					where the
					issues and or
					response were
					incorporated
OTHER INTERESTED AND AFFECTED PARTIES					
	X				

## 2.9 The environmental attributes associated with the alternatives

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

### 2.9.2 Baseline environment

Describe the environment's current geographical, physical, biological, socio- economic and cultural character.

#### 2.9.2.3 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. The proposed prospecting area is characterized by flat surfaces topography. This can be observed on the topology map attached below. The flow of water during rainy seasons flows from the area of high elevation in the Southern side to the area of low elevation in the Northern side as it is indicated or displayed by contour lines, *Basic Hydrological Study*.

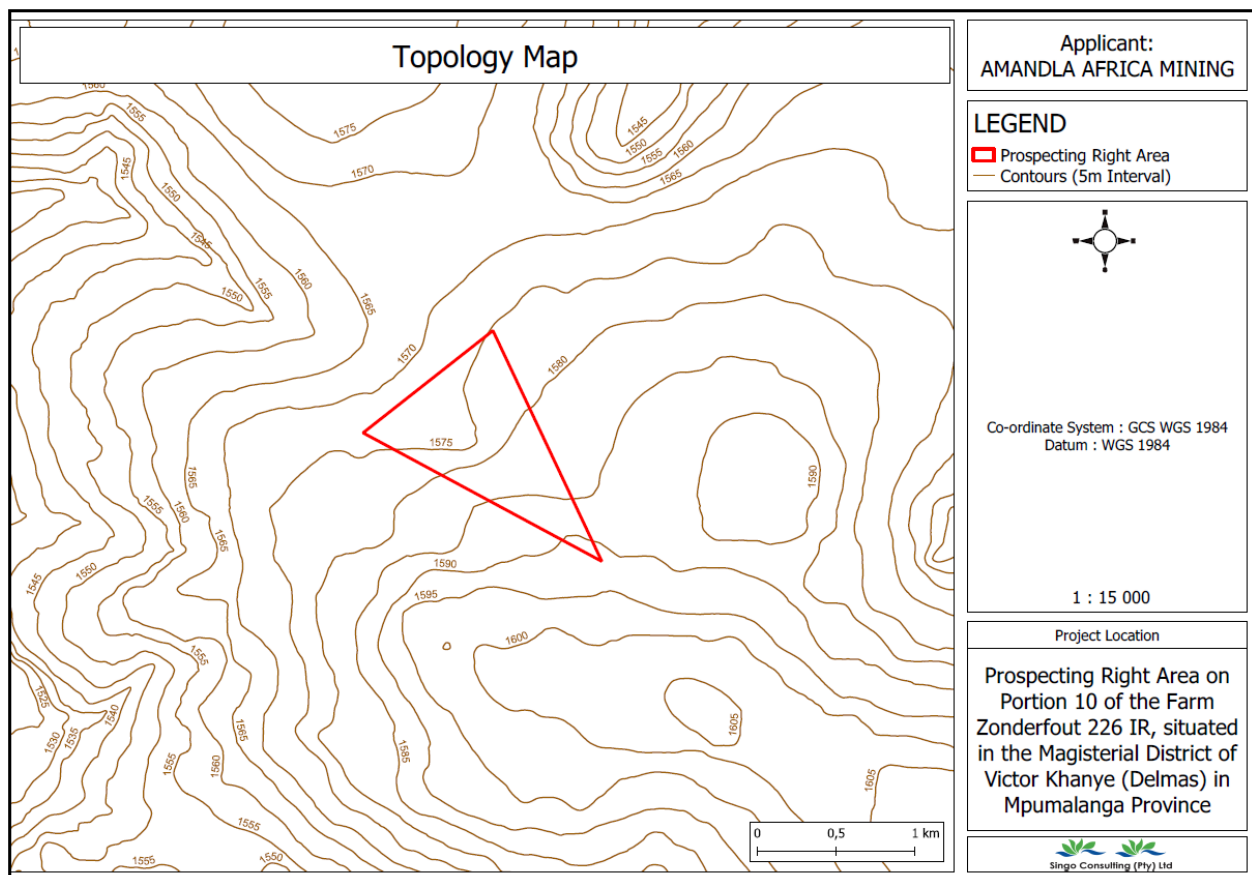


Figure 15: Topology map of the project area.

#### **2.9.2.4 Soil types**

From the soil study conducted in house, the proposed project area is entirely covered with red or yellow structureless soils with a plinthic horizon. Refer to soil map on **Figure 16** below.

##### **Red apedal soils**

These soils have a structure that is weaker than moderate blocky or prismatic in the moist state, if structure is borderline, CEC (NH<sub>4</sub>OAc, pH7) per kg soil is less than 11cmol (+)/kg soil. These soils are non-calcareous in any part of the horizon which occurs within 1500mm of the soil surface but may contain infrequent, discrete, relict lime nodules in a non-calcareous soil matrix. It does not have alluvial or aeolian stratifications. The B horizons that have uniform colours, falling within the range defined as red and that in the moist state, lack well-formed peds other than porous micro-aggregates, qualify as red apedal. The concept of these macroscopically weakly structured or structureless materials embraces that kind of weathering that takes place in a well-drained oxidizing environment to produce coatings of iron oxides on individual soil particles (hence the diagnostic red colours) and clay minerals dominated by non-swelling 1:1 type.

##### **Yellow apedal soil**

This horizon does not have grey colours in the dry state as defined for the E horizon. Although colour must be substantially uniform, some variability is permitted, for example mottles or concretions which are insufficient to qualify the horizon as a diagnostic plinthic B, faunal reworking may also result in acceptable colour variegations. It is non-calcareous within any part of the horizon which occurs within 1500mm of the surface but may contain infrequent, discrete, relict lime nodules in a non-calcareous soil matrix. Does not have alluvial or aeolian stratifications., directly underlies a diagnostic topsoil horizon or an E horizon. Yellow- brown apedal B horizons occur over approximately the same climatic spread as their red counterparts and so are also very widely distributed throughout the country. They may be found on all types of parent material.



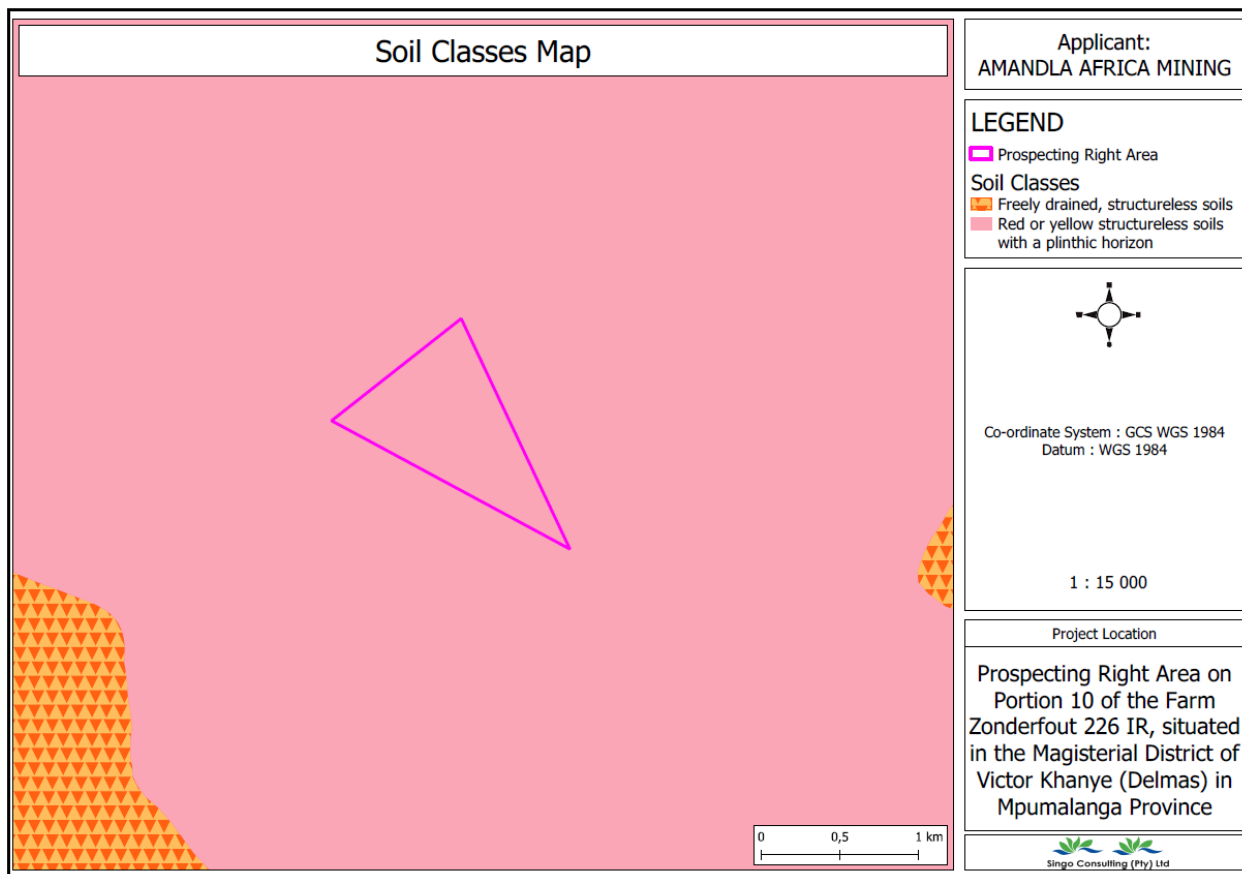


Figure 16: Soil type map of the proposed project area.



Photo 3: Pictorial depiction of soil type in the project area.

### 2.9.2.5 Geology

The proposed project is located within the Karoo Super Group. The proposed prospecting area is characterised by the sediments of the Eccca Formation of the Karoo Super Group. This formation consists of shale, sandstone, conglomerate and griff. The

The project area is within the Witbank coalfield which is hosted within the Karoo Super Group. The proposed prospecting area is characterised by consolidated sedimentary layers of the Karoo Supergroup. It consists mainly of sandstone, shale and coal beds of the Vryheid Formation of the Eccca Group and is underlain by the Dwyka Formation of the Karoo Supergroup. The Karoo sediments again are underlain at depth by felsitic lavas of the Selons River Formations of the Rooiberg Group and granite from the Lebowa Granite Suite of the Bushveld Complex. The Eccca Group, which is part of the Karoo Supergroup, comprises of sediments deposited in shallow marine and fluvio-deltaic environments with coal accumulated as peat in swamps and marches associated with these environments. The sandstone and coal layers are normally reasonable aquifers, while the shale serves as aquitards. Several layered aquifers perched on the relative impermeable shale are common in such sequences. The Dwyka Formation comprises consolidated products of glaciation (with high amounts of clay) and is normally considered to be an aquiclude. The generally horizontally disposed sediments of the Karoo Supergroup are typically undulating with a gentle regional dip to the south.

The extent of the coal is largely controlled by the pre-Karoo topography. Steep dips can be experienced where the coal butts against pre-Karoo hills. Displacements, resulting from intrusions of dolerite sills, are common. Abundant dolerite intrusions are present in the Eccca sediments. These intrusions comprise sills, which vary from being concordant to transgressive in structure, and feeder dykes. Although these structures serve as aquitards and tend to compartmentalise the groundwater regime, the contact zones with the pre-existing geological formations also serve as groundwater conduits. *Prospecting Work Programme (PWP)* .

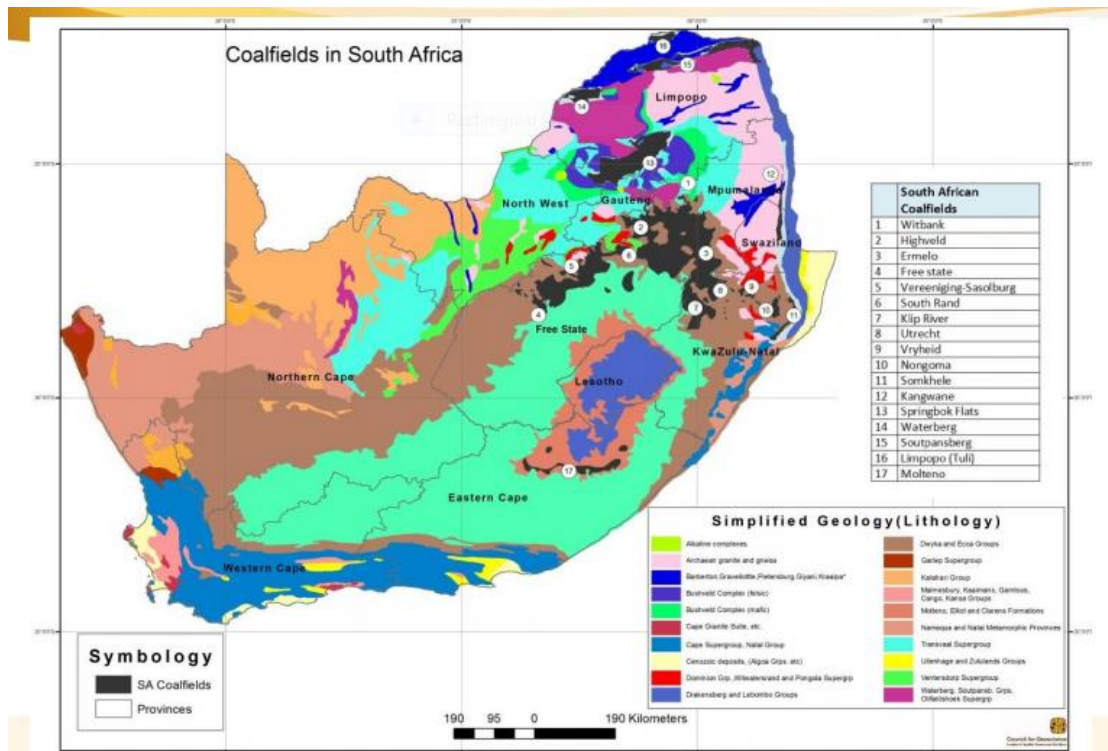


Figure 17: Coalfield map of South Africa.

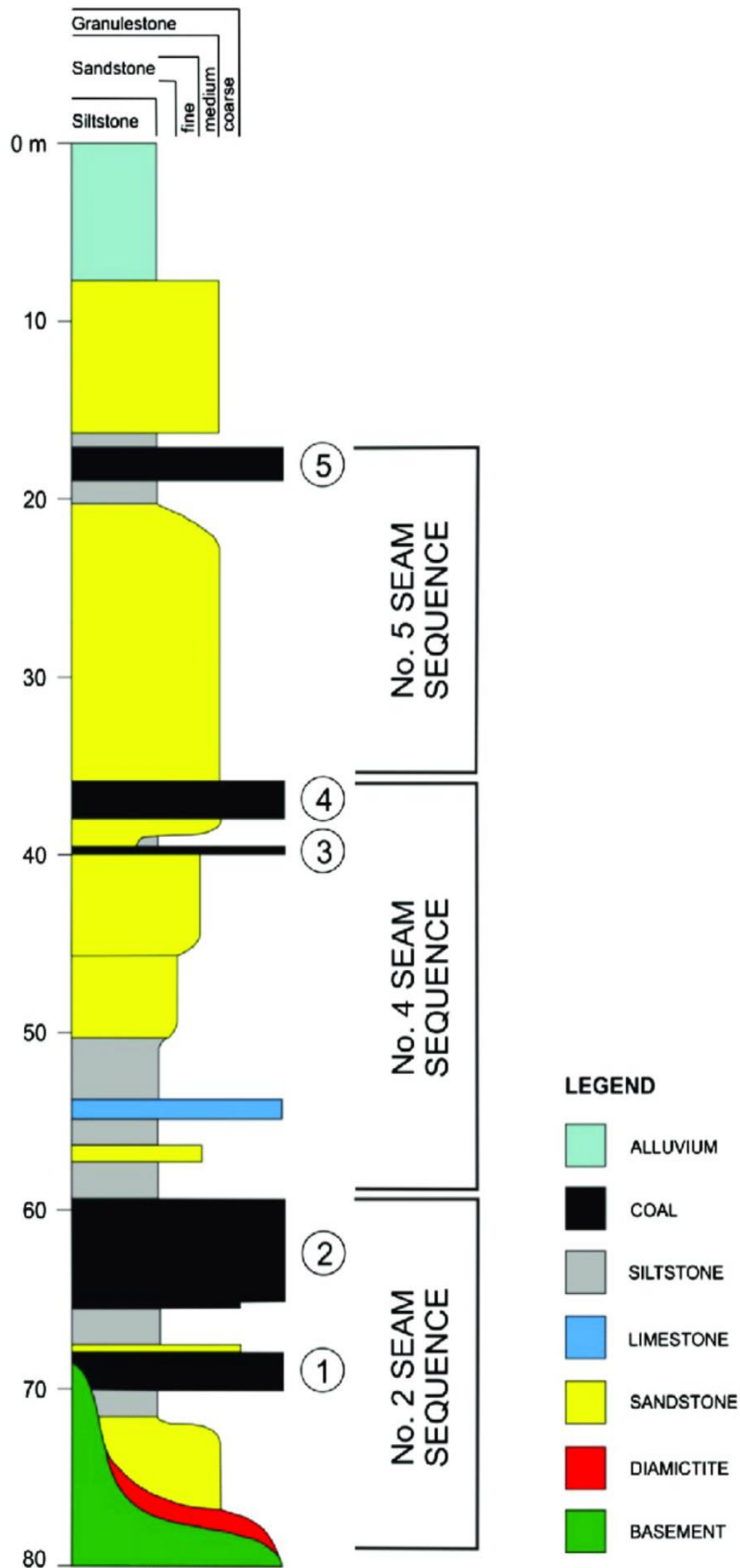
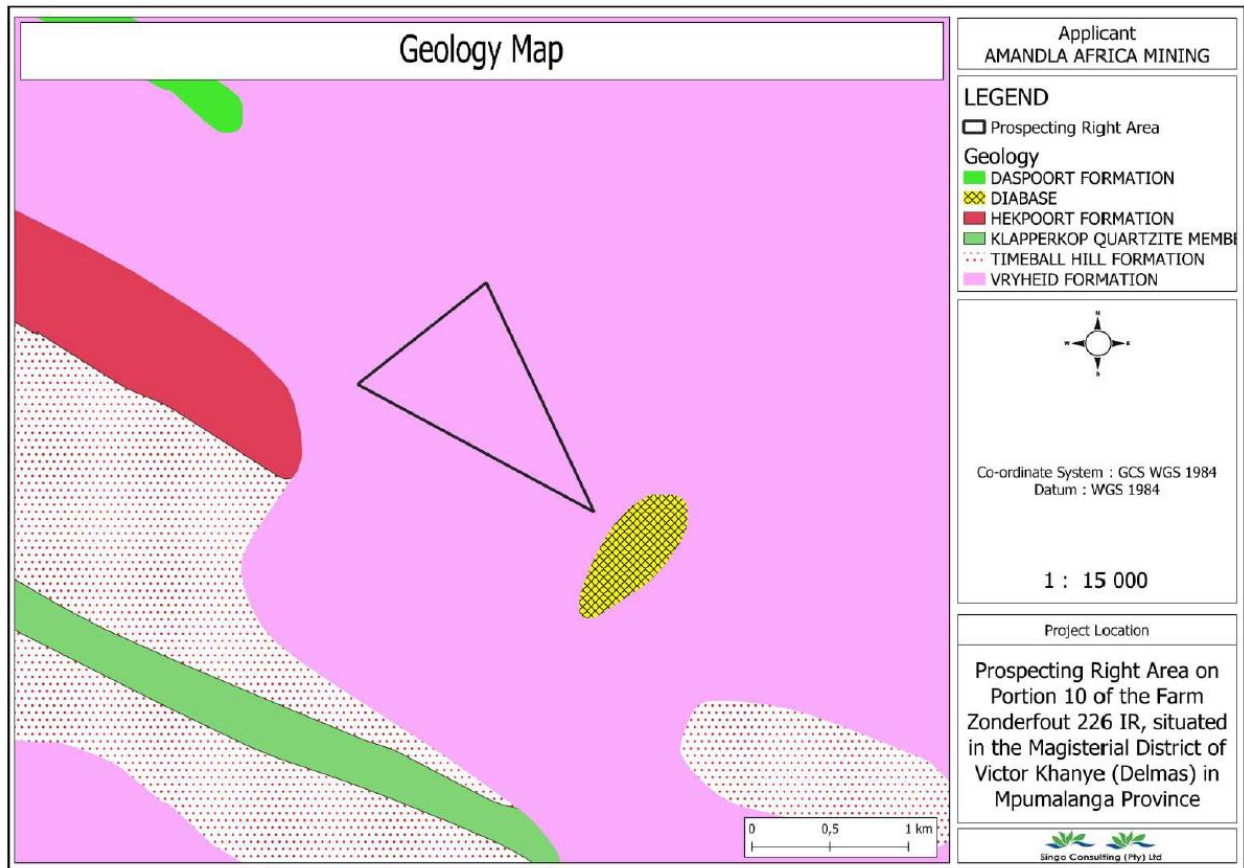


Figure 18: Stratigraphic column of the Witbank coalfield.

➤ **Local Geology**

According to the geological map of the project area below, it can be observed that the area is underlain by the Vryheid Formation which forms part of the Ecca Group within the Karoo Supergroup. The Vryheid Formation is composed of shales, sandstones, and coal seams.



**Figure 19: Geology Map of the proposed project area.**

**2.9.2.6 Climate**

Literature review has showed that climate at Delmas is tropical. Summers have significantly more rainfall than winters. According to the Köppen-Geiger climate classification, this climate is classified as Aw. **Figure 20** shows that Mean annual rainfall within a mining permit area is 601 - 800 mm and **Figure 21** shows that the Mean annual temperature in the mining permit area is -1.9 - 0 Degree Celsius

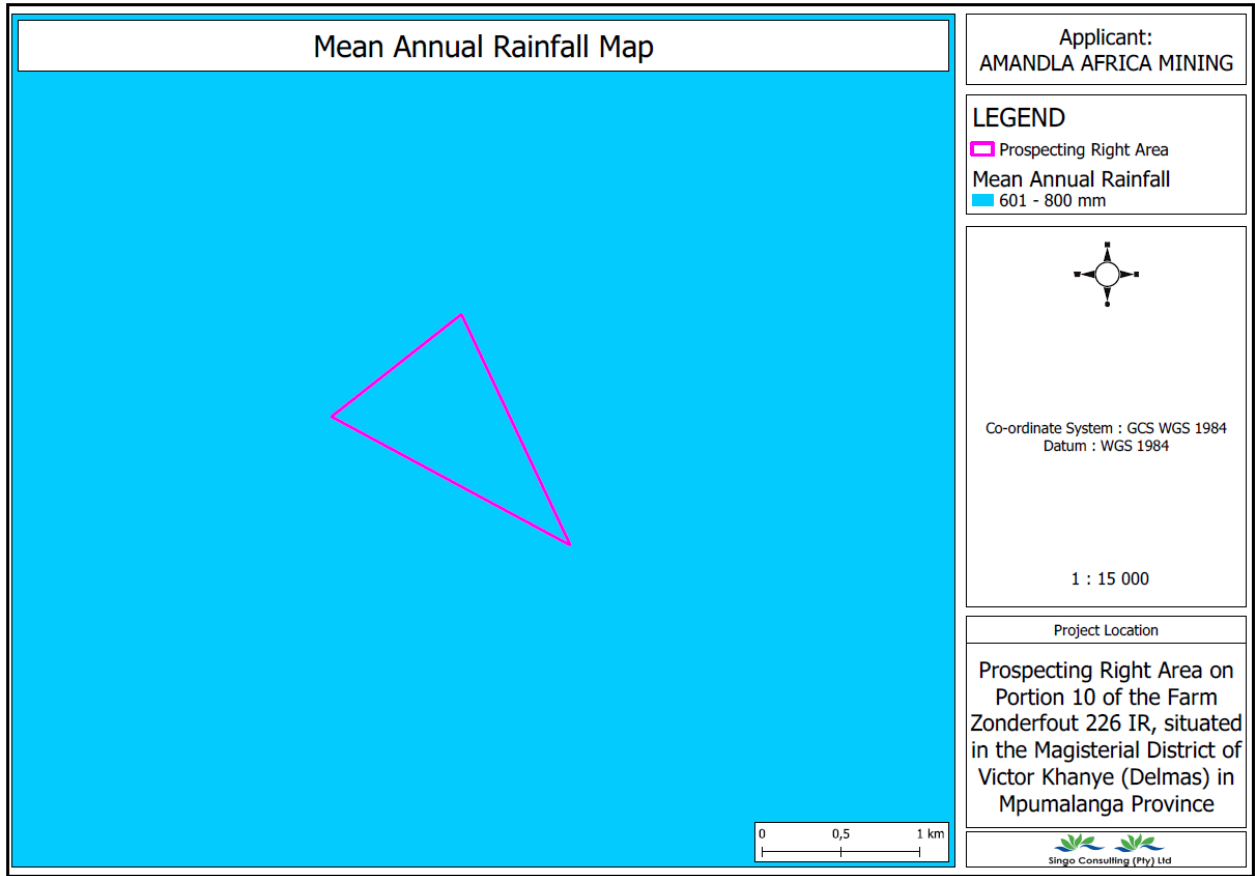


Figure 20: Mean minimum annual temperature map.

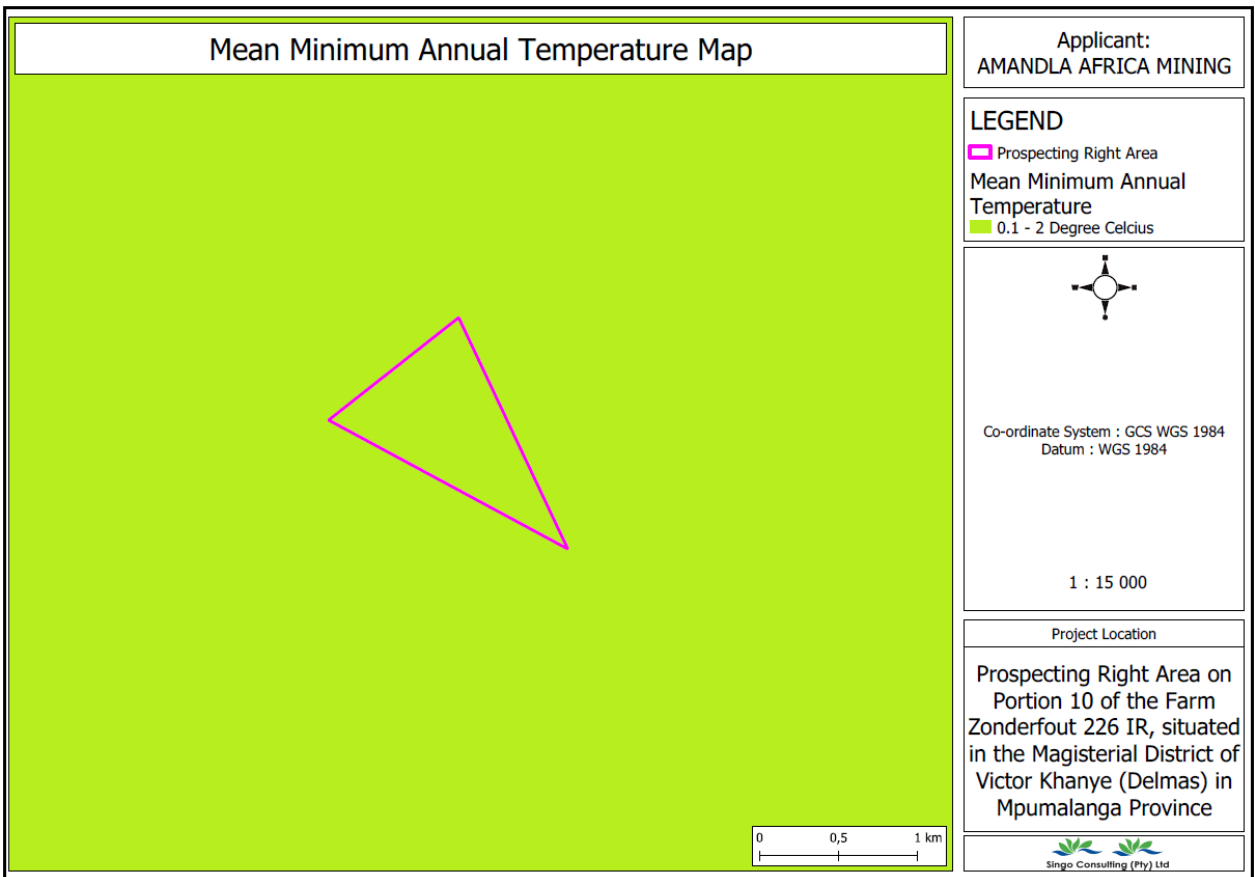
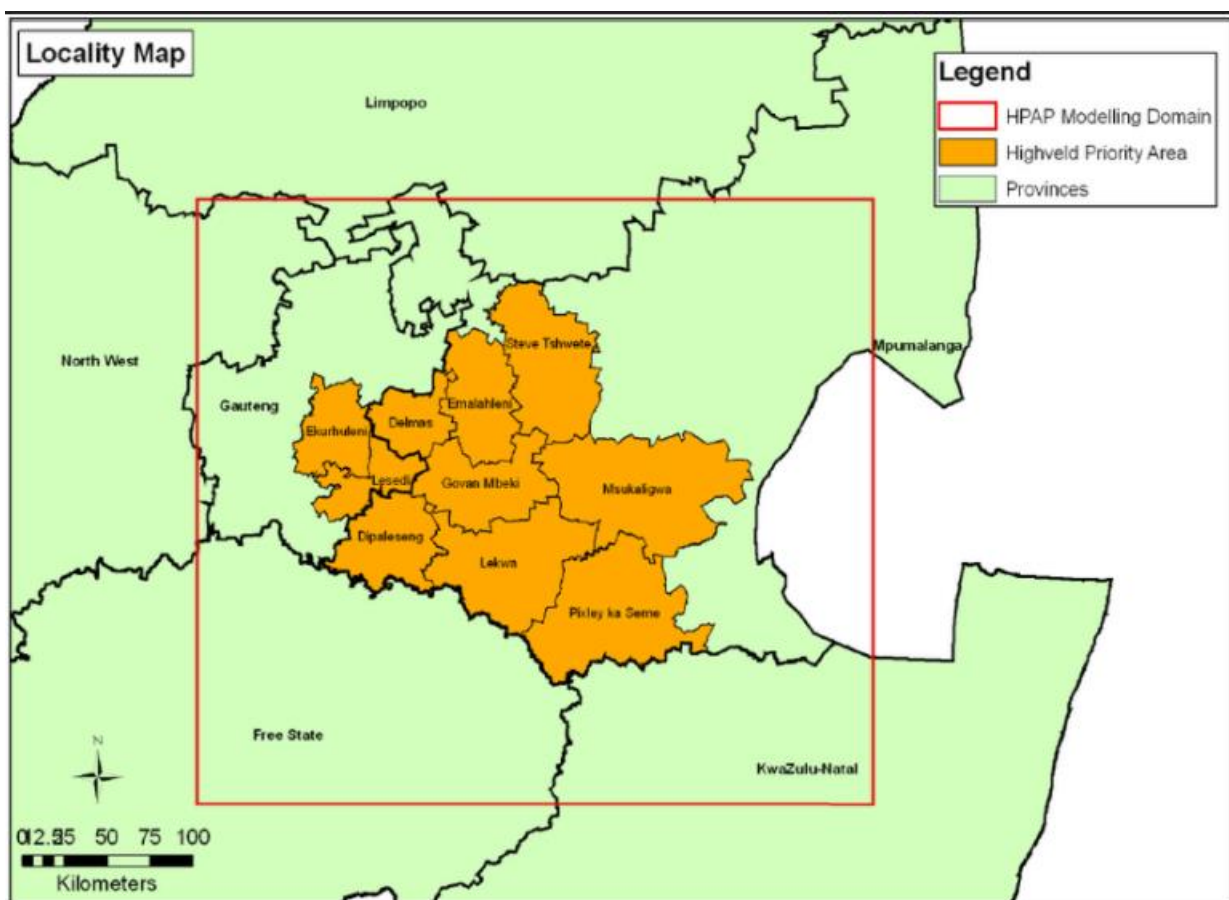


Figure 21: Mean minimum annual temperature map.

❖ **Air quality.**

The Highveld area in South Africa is associated with poor air quality, and elevated concentrations of criteria pollutants occur due to the concentration of industrial and non-industrial sources (Held et al, 1996; DEAT, 2006). The Minister of Environmental Affairs and Tourism, Martinus van Schalkwyk, therefore, declared the Highveld Priority Area (HPA) on 23 November 2007. The priority area covers 31 106 km<sup>2</sup>, including parts of Gauteng and Mpumalanga Provinces, with a single metropolitan municipality, three district municipalities, and nine local municipalities. As the area overlaps provincial boundaries, the Department of Environmental Affairs (DEA) functions as the lead agent in the management of the priority area and is required in terms of Section 19(1) of the National Environmental Management: Air Quality Act (Act 39 of 2004) (AQA) to develop an Air Quality Management Plan (AQMP) for the priority area.



**Figure 22: Locality map depicting Highveld Priority Area (HPA), showing three District Municipalities, their constituents Local Municipalities and the single Metropolitan Municipality.**

The baseline assessment for the HPA provides a succinct presentation of the major issues to be addressed, specifically highlighting the geographical areas of concern within the HPA where dedicated Air Quality Management (AQM) interventions are to be focused. The constraints and developments in the abatement technology used and available, as well as the capacity of officials who will carry the majority of the responsibility for implementation of the AQMP have also been noted as part of the baseline assessment. These issues were carried forward as gaps and

priorities into the AQMP development, of which the most significant aspect was the Logical Framework Approach (LFA) workshop.

The LFA workshop scrutinised the air quality problems identified in the baseline assessment and developed problem and objective trees, and specific interventions. The workshop outcomes were taken into detailed strategy analysis and intervention development and formed the initial draft of the AQMP. The primary motivation of the priority area AQMP is to achieve and maintain compliance with the ambient air quality standards across the HPA, using the Constitutional principle of progressive realisation of air quality improvements. The AQMP for the HPA provides the framework for implementing departments and industry to include AQM in business planning to ensure effective implementation and monitoring.

The plan has been designed at a strategic level, indicating high-level tasks for responsible parties. The specific planning at an operational level, such as budgeting, human resource allocation, and detailed activity planning, has been excluded from the plan. This is to allow parties to tailor their implementation activities to their specific context, particularly organisational constraints, while still achieving the overall objective of the AQMP. The activities listed in the plan must be unpacked further by responsible parties into organisation specific activity and intervention plans, and captured in the policy and strategic documents, such as business and investment plans, Integrated Development Plans (IDPs), and Environmental Implementation Plans (EIPs).

### **Emission sources.**

The total estimated annual emissions of fine particulate matter (PM10) on the HPA is 279 630 tons, of which approximately half is attributed to particulate entrainment on opencast mine haul roads (Table E1). The emission of PM10 from the primary metallurgical industry accounts for 17% of the total emission, with 12% of the total from power generation. By contrast, power generation contributes 73% of the total estimated oxides of nitrogen (NOx) emission of 978 781 tons per annum and 82% of the total estimated sulphur dioxide (SO2) emission of 1 633 655 tons per annum. The emission inventory for industrial sources was relatively complete and included all industries on the HPA with scheduled processes in terms of the APPA.

It is recognised that these sources comprise the major industrial sources, with non-registered sources being very small in comparison. In addition, specific methodologies were used for determining emissions from residential fuel burning, coal mining, transport, biomass burning and burning coal mines and smouldering coal dumps. Source categories where emissions could not be determined were landfills, incinerators, wastewater treatment works, tyre burning, biogenic sources, odour and agricultural dust. The issues relating to these emissions will be addressed through the implementation of the AQMP. Industrial sources in total are by far the largest



contributor of emissions in the HPA, accounting for 89% of PM10, 90% of NOx and 99% of SO2. Major industrial source contributors were grouped into the following categories:

1. Power Generation
2. Coal Mining
3. Primary Metallurgical Operations
4. Secondary Metallurgical Operations
5. Brick Manufacturers
6. Petrochemical Industry
8. Mpumalanga Industrial Sources (excluding the above)

#### ❖ **Temperature**

Air temperature is essential, both for determining the effect of plume buoyancy (the larger the temperature difference between the plume and the ambient air, the higher the plume can rise), and determining the development of the mixing and inversion layers.

The area experiences warm temperatures above 28.36°C during summer. Winter temperatures are relatively low especially in the months of June and July. Average daily maximum temperatures range from 27.9°C in February to 12.87°C in July, with daily minimum is between -1.0°C in July and 11.0°C in October.

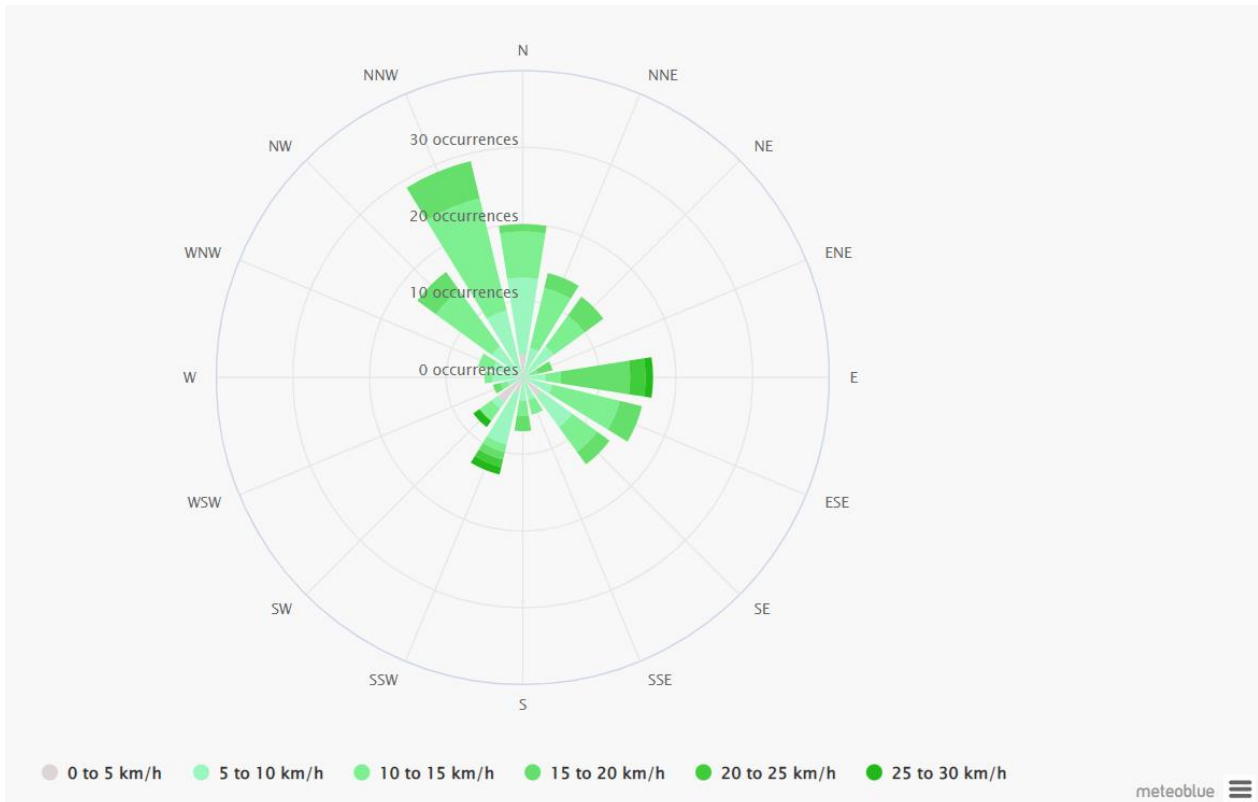
#### ❖ **Ambient Noise**

The background noise level of the surrounding area is highly impacted on by traffic travelling along the R35 road traversing the property. Due to the nature of the proposed activity, noise will be generated as a result of mechanical excavation including activities such as drilling.

Site management will notify the surrounding landowners in writing, 14 days prior to commencement of drilling activities. In order to minimise the noise impact, drilling will take place between 8:00 and 17:00 Monday – Friday, except on Saturday, Sunday & Public holidays.

#### ❖ **Wind**

The wind field was dominated by winds from the north-west; north-east; and less frequently the south-west. Calm conditions occurred less than 1% of the time. During the day, winds at higher wind speeds occurred more frequently from the easterly sector, with 0.2% calm conditions. Night-time airflow had winds also most frequently from the easterly sector but at lower wind speeds. The frequency of night-time calm conditions increased to 0.9%, relative to daytime. Summer and spring show similar wind direction profiles to the period average, while autumn and winter show the more frequent winds from the south-west. There is an increased frequency of wind speeds of 3 m/s or more during spring.



**Figure 23: Average Wind rose of Delmas, Meteoblue.**

### 2.9.2.7 Surface & Ground Water Resources

#### Groundwater

Groundwater is water that flows beneath the water table in aquifers. Though the resources are not evenly distributed by nature, the majority of the largest aquifers are located either in the humid and water-rich Congo basin or in the sparsely populated Sahara/Sahel areas.

Water is essential for most mining and processing, which is often done on a large scale, resulting in large water requirements. Water requirements are temporary in remote global locations; operations are relatively short-lived. Mines are frequently subjected to stringent regulatory requirements as a result of environmental sensitivity and social responsibility.

The main goal of the Hydrocensus is to record the available groundwater data, such as counting the number of boreholes, recording their names, conditions, and coordinates, and measuring the water levels. This aids in identifying the baseline groundwater use and users within the study area. Hydrocensus investigation of existing registered boreholes within a 1 km radius of the study area, obtained from the National Groundwater Archive (NGA).

Piper diagrams are used to determine the quality of ground water, with cations and anions represented by separate ternary plots. The cation plot's apexes are calcium, magnesium, and

sodium cations, as well as potassium cations. The anion plot's apexes are sulphate, chloride, and carbonate anions, as well as hydrogen carbonate anions. The two ternary plots are then projected onto a diamond to determine the water type.

### **Groundwater availability assessment**

#### Fractured Aquifer System

The fractured aquifer system (~15 to 40m) present in the fresh rock below the weathered zone are well cemented, and do not allow significant water flow. All groundwater movement therefore occurs along secondary structures such as fractures, cracks, and joints in the rock. These structures are best developed in sandstone and quartzite; hence the better water yielding properties of the latter rock type.

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

#### Aquifers associated with dolerite intrusive

Dolerite intrusions in the form of dykes and sills are common in the Karoo Supergroup and are often encountered in this area. These intrusions can serve both as aquifers and aquifuges. Thick, unbroken dykes inhibit the flow of water, while the baked and cracked contact zones can be highly conductive. These conductive zones effectively interconnect the strata of the Eccu sediments both vertically and horizontally into a single, but highly heterogeneous and anisotropic unit on the scale of the MRD expansion. These structures thus tend to dominate the flow of groundwater. Unfortunately, their location and properties are rather unpredictable. Their influence on the flow of groundwater is incorporated by using higher than usual flow parameters for the sedimentary rocks of the aquifer.

According to the baseline hydrology study conducted by Singo Consulting (Pty) Ltd , hydrological Map on **Figure 24** below illustrating non-perennial rive (running from southwest to northeast of the proposed area), perennial river, channelled valley Bottom, Depression & seep.

The regional hydrological setting of the project site is indicated as **Figure 25Error! Reference source not found.** The quaternary catchment is B12C. The WR2012 study, presents hydrological parameters for each quaternary catchment including area, mean annual precipitation (MAP) and mean annual runoff (MAR). Based on the WR2012 study, the project area falls within the

quaternary catchment B12C. The total catchment area of upper Olifants (include B12C )is 12500 km<sup>2</sup>.

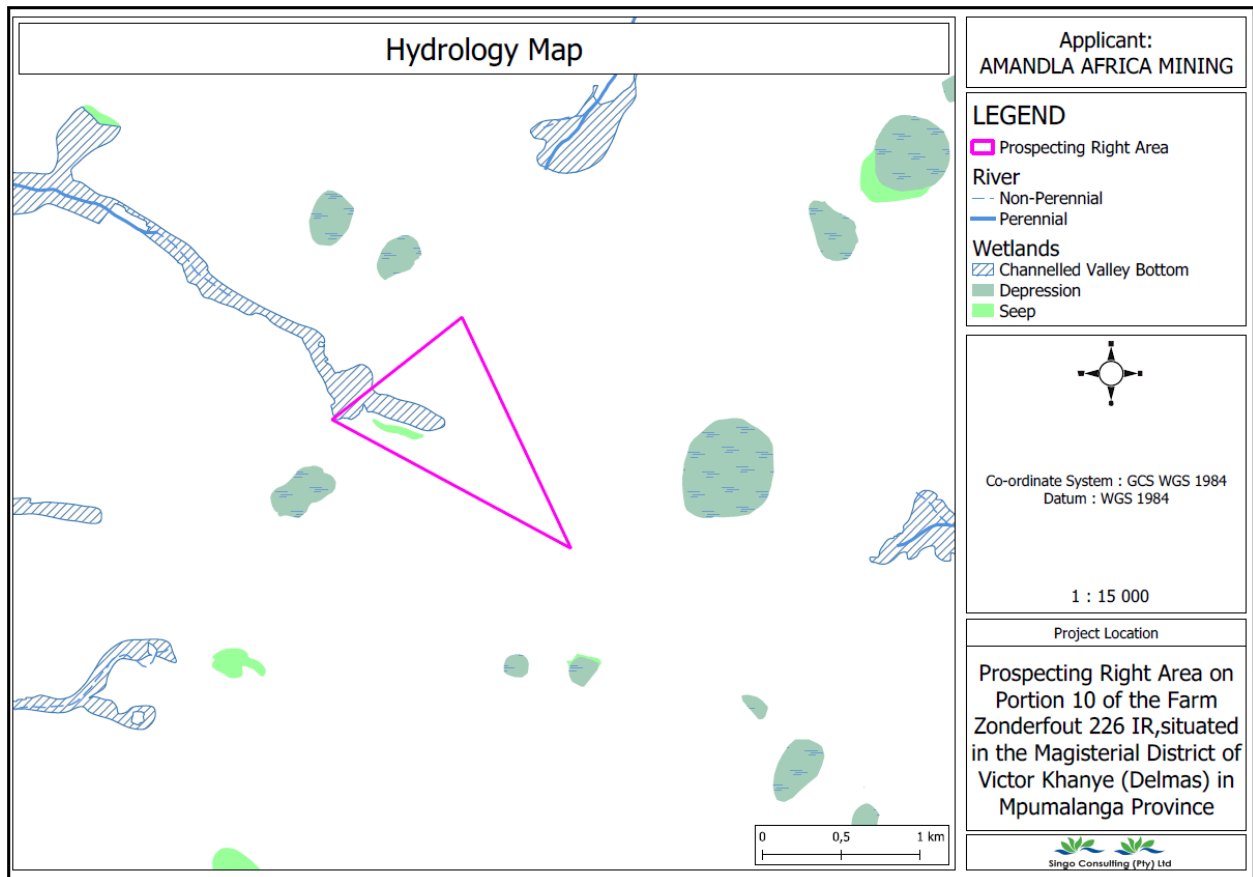


Figure 24: Hydrology map of the proposed area.

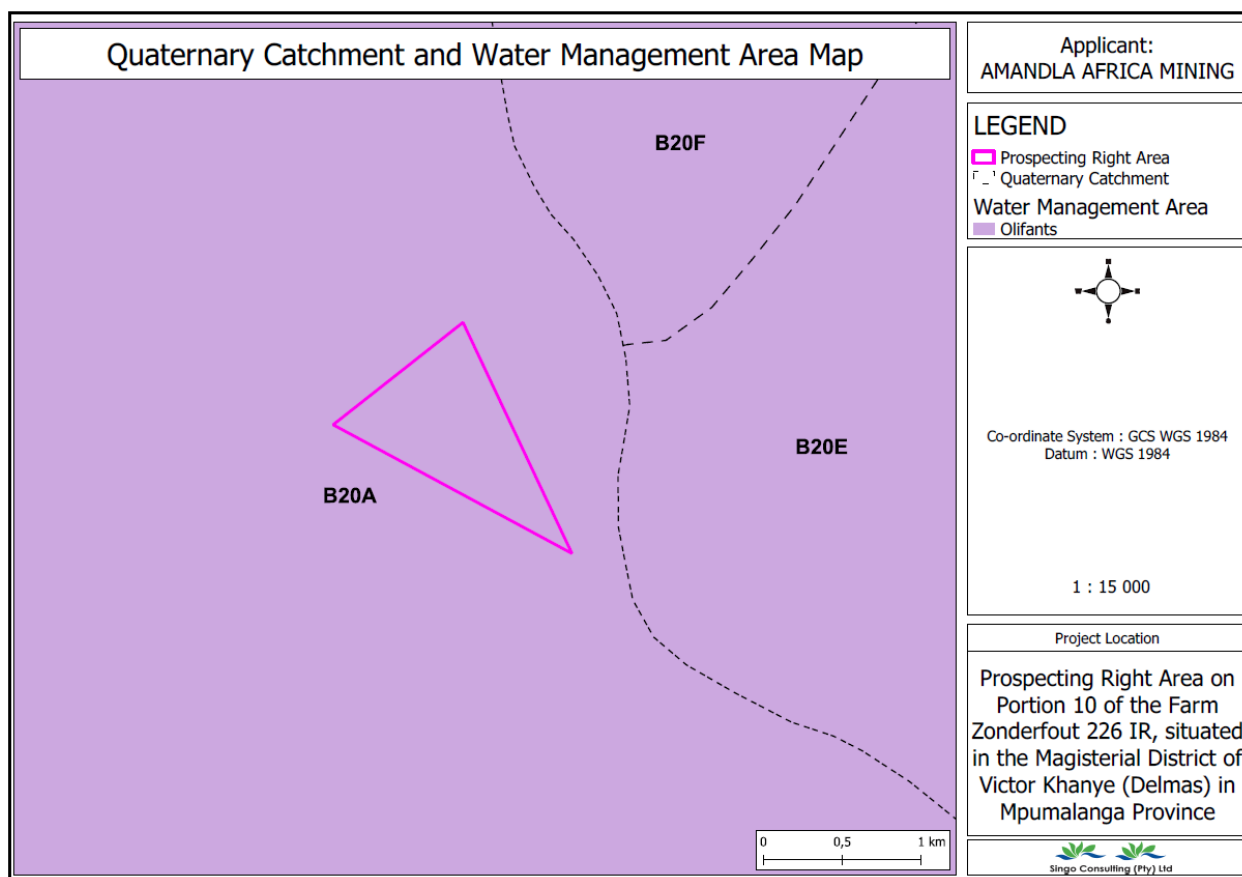


Figure 25: Quaternary Catchment and Water Management Area Map of the proposed project area.

## 2.9.2.8 Critical biodiversity areas

### 2.9.2.8.1 Flora

The proposed project area is dominated by moist cool highveld grassland and Moist sandy Highveld grassland.

#### ➤ Flora sensitivity assessment

The sensitivity assessment is an attempt to identify those parts of the project area that may be sensitive to disturbance or of high conservation value. Areas containing untransformed natural vegetation, high diversity or habitat complexity, Red List organisms or systems vital to sustaining ecological functions are considered sensitive. In contrast, any transformed area that has no importance for the functioning of ecosystems is considered to have low sensitivity.

#### ➤ Plant species noted on site

**Pachycarpus suaveolens** a showy plant known from eight historical locations that is most likely extremely rare. Because of urban expansion, one location, last collected in Gauteng in 1929, has since been lost, and this species is likely to be locally extinct in Gauteng. Urban development, crop cultivation, mining, and invasive alien plants have all significantly altered the grasslands habitat

across its range (EOO 19900 km<sup>2</sup>). Between Witbank and Carolina, habitat is steadily deteriorating due to mining.

Soweto Highveld Grassland, Steenkampsberg Montane Grassland, Eastern Highveld Grassland, and Rand Highveld Grassland are some of the most important habitats.

**MAP OF RELATIVE PLANT SPECIES THEME SENSITIVITY**



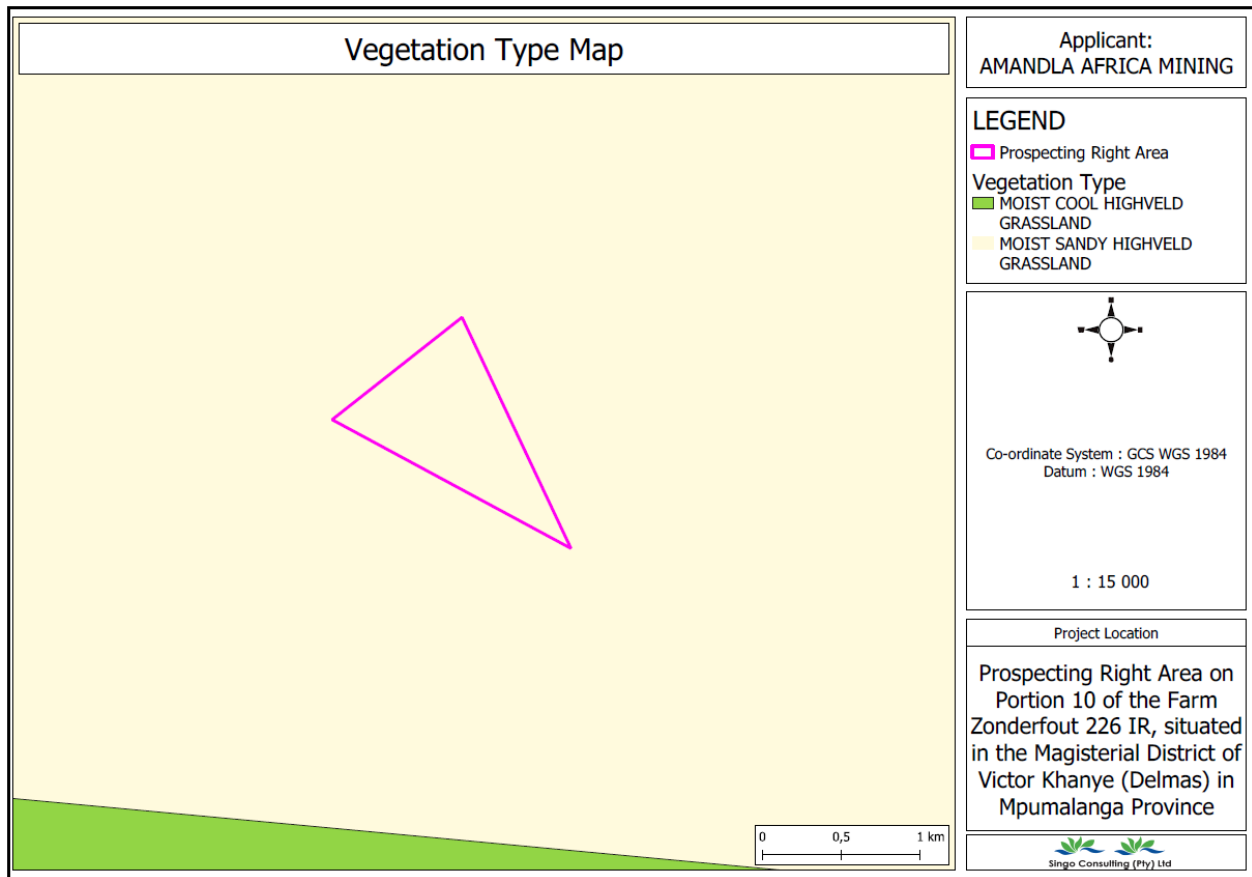
Where only a sensitive plant unique number or sensitive animal unique number is provided in the screening report and an assessment is required, the environmental assessment practitioner (EAP) or specialist is required to email SANBI at [eiadatarequests@sanbi.org.za](mailto:eiadatarequests@sanbi.org.za) 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 691
Medium	<i>Pachycarpus suaveolens</i>
Medium	<i>Brachycorythis conica</i> subsp. <i>transvaalensis</i>

Figure 26: Map of relative plant species theme sensitivity. Screening report.



**Figure 27: Vegetation map of the project area.**

According to the site's critical biodiversity map below, the proposed area is mainly dominated by Heavily modified area. Critical Biodiversity Area (CBA) irreplaceable, Critical Biodiversity Area (CBA) optimal, Ecological Support Area (ESA) ,Ecological Support Area (ESA) local corridor , Ecological Support Area (ESA) Landscape Corridor, heavily modified , Moderately Modified Areas and Other Natural Area covers small areas.

All activities to be conducted during in this project must be done with full cognizance of the critical biodiversity areas on site. No vegetation (i.e. protected, significant and vulnerable) must be removed during exploration work. Instead, drilling and all activities must be conducted in parts of the site where the land is highly transformed and has no critical habitats and water bodies.

MAP OF RELATIVE TERRESTRIAL BIODIVERSITY THEME SENSITIVITY

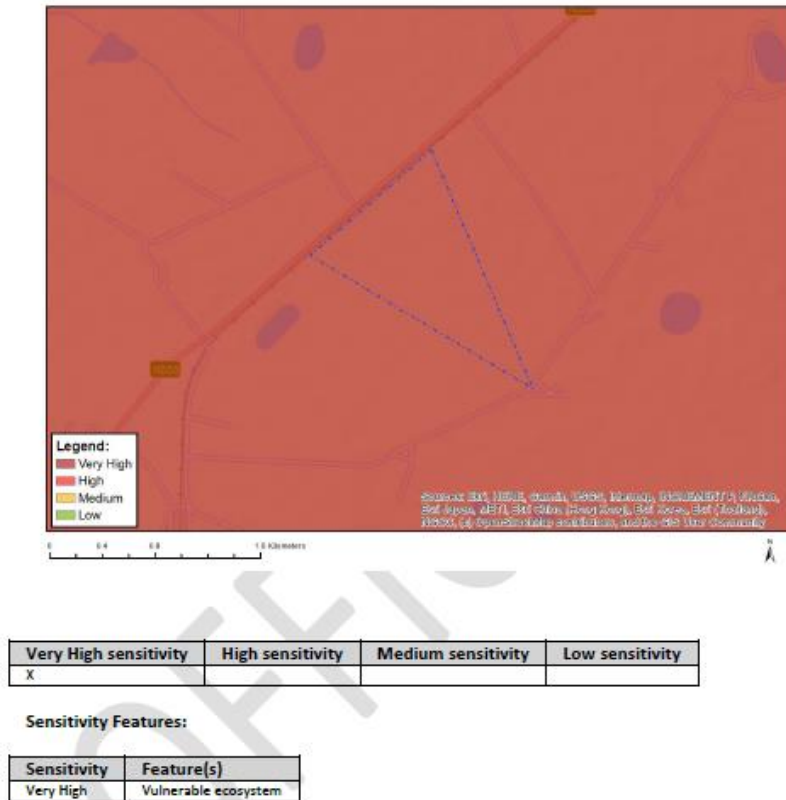


Figure 28: Map of Relative Terrestrial Biodiversity Theme Sensitivity, screening report.

Figure 28 above shows that the proposed portions affected are mainly dominated by heavily or moderately modified areas. The proposed area is also sitting on other natural areas. During prospecting, no irreplaceable vegetation will be cleared only a small portion of the area will be disturbed and after drilling rehabilitation methods will be put in place. This is to ensure that the micro and macro species that occurred there can still go back to their normal environment.





**Photo 4: Vegetation type observed. on site**

#### **2.9.2.8.2 Fauna**

The faunal communities in the project area, as well as the sensitivity of their habitats, were thoroughly investigated. The preceding flora section describes the major habitats of these faunal communities. When an animal chooses a habitat, a variety of biotic and abiotic factors come into play. These include the presence of plant species, vegetation structure, topography, pedology, climate, distance to water, the presence of rocky outcrops, trees, predators, and sufficient food. The degree of human disturbance also has an impact on habitat selection.

##### **❖ Insecta-Lepidochrysops procera**

is a species of butterfly in the Lycaenidae family. It can be found throughout South Africa, from the Kwazulu Natal midlands to Mpumalanga, Gauteng, Limpopo Province, and North West. Males have wingspans of 28-34 mm, while females have wingspans of 29-36 mm. One generation is born each year. Plants eaten by larvae include *Becium grandiflorum*, *Ocimum canum*, and *Lippia scaberrima*.



**Photo 5: Typical example of Insecta-Lepidochrysops procera.**

❖ **Mammalia-Ourebia ourebi ourebi**

Ourebi have a patchy distribution across Africa, ranging from Senegal to Ethiopia and Eritrea, and south through eastern and western Africa to Angola and the Eastern Cape of South Africa (East 1999; Carpaneto & Fusari 2000; Fischer & Linsenmair 2001; Goldspink et al. 2002; Tekalign & Bekele 2011; Brashares & Arcese 2013; Djagoun et al. 2013; Wilfred & MacColl 2014). The Ourebia still occurs widely within its former range, but its populations are becoming increasingly fragmented as it is gradually eliminated from moderately to densely settled areas and as land uses change (Everett et al. 1991; Rowe-Rowe et al. 1992; Wilfred & MacColl 2014).



**Photo 6: Mammalia- Ourebia ourebi ourebi, michaelnoonanphotography.com .**

❖ **Aves-Tyto capensis**

The African grass owl resembles the barn owl in appearance, with a heart-shaped whitish-cream facial disc and a narrow yellowish-buff rim that is densely spotted dark. The eyes are brownish-

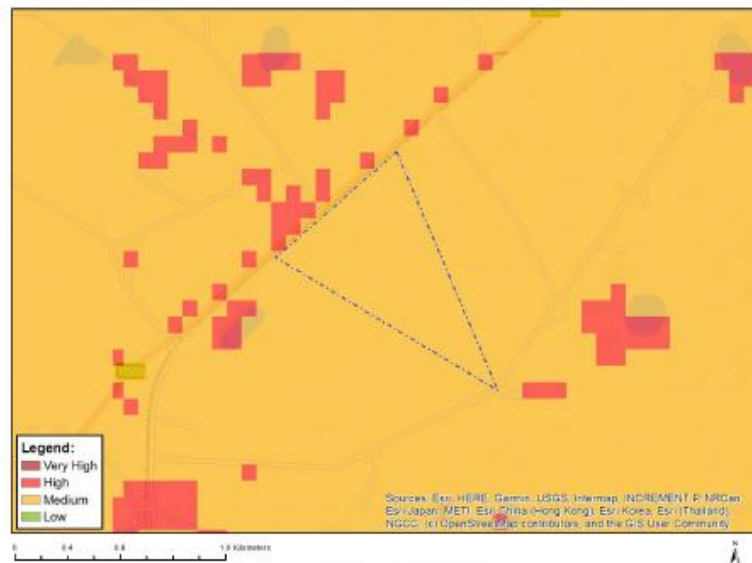
black, and the bill is whitish to pale pink. The entire upperparts, from the crown to the lower back and wing-coverts, are a uniform sooty blackish-brown with scattered small white spots and greyish flecks. The primary and secondary feathers are pale brownish-grey with dark bars and yellow bases. The short tail has uniform brown central feathers that fade to paler, almost white outer feathers with four dark bars. The underparts are whitish to buff in color with dark spots.

The legs are covered in whitish feathers that extend down to the lower third of the tarsi. The lower leg and feet are bristled and a pale yellowish-grey color. They are 38–42 cm (15–17 in) long, have wing lengths of 283–345 mm (11.1–13.6 in), and weigh between 355 and 520 g. (12.5 and 18.3 oz). Females have a significantly larger body mass and length than males, indicating a high degree of sexual dimorphism. This is due to differences in hunting techniques and brooding efficiency.



Photo 7: Aves-Tyto capensis ,[michaelnoonanphotography.com](http://michaelnoonanphotography.com) .

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](mailto: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-Tyto capensis
Medium	Invertebrate-Clonina uvarovi
Medium	Mammalia-Chrysospalax villosus
Medium	Mammalia-Crocidura maquassiensis
Medium	Mammalia-Dasymys robertsii
Medium	Mammalia-Hydricictis maculicollis

Figure 29: Map of Relative Animal Species Theme Sensitivity, Screening report.

Terrestrial fauna diversity in the site

Prospecting activities particularly drilling may result in localized loss of animal habitats-microhabitats due to disruption of the soil profile and stripping of vegetation. This will result in the temporal migration of animals away from the proposed prospecting area. Once the prospecting ceases, it is anticipated that animals will migrate back to the site.

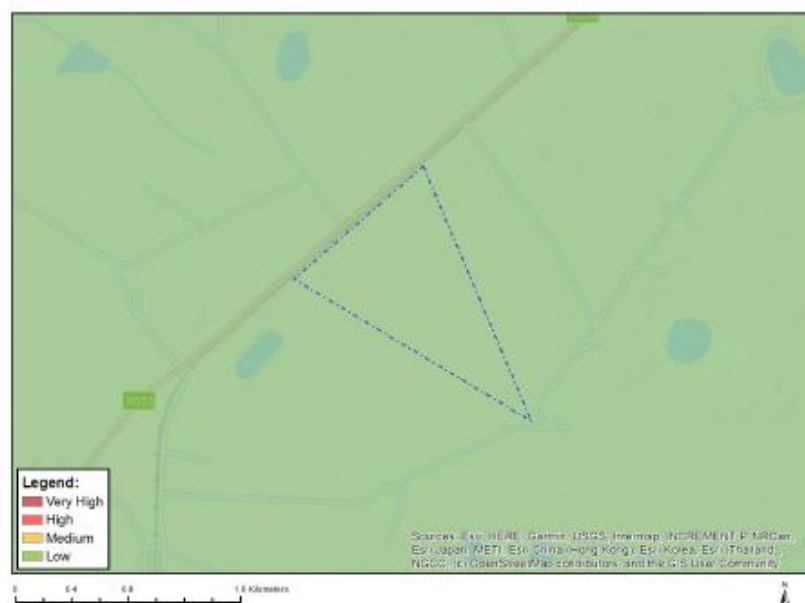
2.9.2.9 Cultural and heritage

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

Heritage sites are likely to include graveyards and historical buildings. Since heritage sites, such as graves, are not always clearly identifiable as it might consist of stone cairns, care must be exercised when prospecting.

Heritage sites or artefacts were not discovered near or in the proposed area during site assessment. Stone age sites were discovered which could be assumed they belong to the military base residential area. However, should any other heritage resources of significance be exposed during the construction or rather operational phase of the project, the South African Heritage Resources Agency (SAHRA) should be notified immediately, all development activities should be stopped, and an archaeologist accredited with the Association for Southern African Professional Archaeologist (ASAPA) should be notified to determine appropriate mitigation measures for the discovered finds. This may include obtaining the necessary authorisation (permits) from SAHRA to conduct the required mitigation measures.

**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 30: Map of relative archaeological and cultural heritage theme sensitivity.**

### 2.9.3 Description of the current land uses

The proposed prospecting area is located at 41.67 km Southwest of Kriel Power Station. There are no diverse activities on site instead the area is being utilised mainly for agricultural purposes.

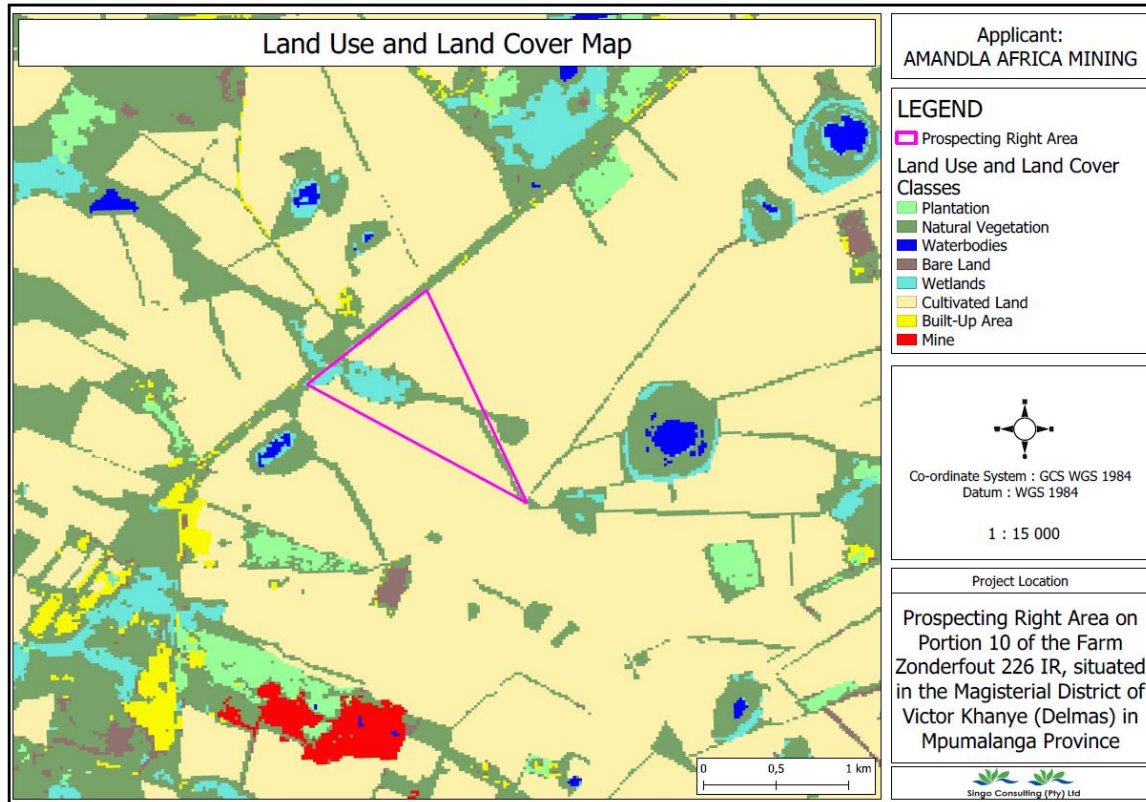


Figure 31: Land use and Land cover map of the proposed project area.



Photo 8: Picture depicting current land use on the proposed project area.

## 2.9.4 Description of specific environmental features and infrastructure on the site

The project area is distinguished by a variety of surface water bodies, a channelled valley bottom, a depression, and a seep. Man made features includes, access roads, powerlines and railway line are among the major infrastructures on site.



**Photo 9: Infrastructure on site and close proximity.**

### 3 Methodology for the assessment of the potential environment, social and cultural impacts.

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

The impact assessment process may be summarized as follows:

- ❖ Identification of proposed mining activities including their nature and duration.
- ❖ Screening of activities likely to result in impacts or risks.
- ❖ Utilization of the above-mentioned methodology to assess and score preliminary impacts and risks identified.
- ❖ Inclusion of I&AP comments regarding impact identification and assessment.
- ❖ Finalization of impact identification and scoring.

The impact significance rating methodology is guided by the requirements of the NEMA 2014 EIA Regulations (as amended). Please refer to Section 9.1 for a full description of the impact

assessment methodology. Please refer to Table 20 for a description of the activities and associated impacts.

### 3.1 The Impact Assessment Methodology

The subsections below present the approach to assessing the identified potential environmental impact with the aim of determining the relevant environmental significance.

### 3.2 Method of Assessing Impacts

The requirements of the NEMA 2014 EIA Regulations guide the impact assessment process (as amended). The Environmental Risk (ER) is calculated by comparing the Consequence (C) of each effect (which includes Nature, Extent, Duration, Magnitude, and Reversibility) to the Probability/Likelihood (P) of the impact occurring. The Environmental Risk is determined by this. Other criteria, including as cumulative impacts, public concern, and the risk of irreversible resource loss, are also considered when determining a Prioritization Factor (PF), which is then applied to the ER to establish the overall Significance (S).

### 3.3 Determination of Environmental Risk

The significance (S) of an impact is determined by applying a Prioritization Factor (PF) to the Environmental Risk (ER).

The Environmental Risk is dependent on the Consequence (C) of the particular impact and the Probability (P) of the impact occurring. Consequence is determined through the consideration of the Nature (N), Extent (E), Duration (D), Magnitude (M) and Reversibility (R) applicable to the specific impact.

For the purpose of this methodology the Consequence of the impact is represented by:

Aspect	Score	Definition
Nature	- 1	Likely to result in a negative/ detrimental impact
	+1	Likely to result in a positive/ beneficial impact
Extent	1	Activity (i.e. limited to the area applicable to the specific activity)
	2	Site (i.e. within the development property boundary),
	3	Local (i.e. the area within 5 km of the site),
	4	Regional (i.e. extends between 5 and 50 km from the site)
	5	Provincial / National (i.e. extends beyond 50 km from the site)
Duration	1	Immediate (<1 year)



	2	Short term (1-5 years)
	3	Medium term (6-15 years)
	4	Long term (the impact will cease after the operational life span of the project),
	5	Permanent (no mitigation measure of natural process will reduce the impact after construction).
<b>Magnitude/ Intensity</b>	1	Minor (where the impact affects the environment in such a way that natural, cultural and social functions and processes are not affected)
	2	Low (where the impact affects the environment in such a way that natural, cultural and social functions and processes are slightly affected)
	3	Moderate (where the affected environment is altered but natural, cultural and social functions and processes continue albeit in a modified way)
	4	High (where natural, cultural or social functions or processes are altered to the extent that it will temporarily cease) or
	5	Very high / don't know (where natural, cultural or social functions or processes are altered to the extent that it will permanently cease)
<b>Reversibility</b>	1	Impact is reversible without any time and cost
	2	Impact is reversible without incurring significant time and cost
	3	Impact is reversible only by incurring significant time and cost
	4	Impact is reversible only by incurring prohibitively high time and cost

Each individual aspect in the determination of the Consequence is represented by a rating scale as defined in **Table 7**.

**Table 7: Criteria for determination of impact Consequence.**

Aspect	Score	Definition
	5	Irreversible Impact

Once the C has been determined the ER is determined in accordance with the standard risk assessment relationship by multiplying the C and the P. Probability is rated/scored as per **Table 9**.

**Table 8: Probability scoring.**

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

The result is a qualitative representation of relative ER associated with the impact. ER is therefore calculated as follows (**Table 9**):

$$ER = C \times P$$

**Table 9: Determination of Environmental Risk.**

Consequence	5	5	10	15	20	25
	4	4	8	12	16	20
	3	3	6	9	12	15
	2	2	4	6	8	10
	1	1	2	3	4	5
		1	2	3	4	5
Probability						

The outcome of the environmental risk assessment will result in a range of scores, ranging from 1 through to 25. These ER scores are then grouped into respective classes as described in **Table 10**.

**Table 10: Significance classes.**

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

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

#### Impact Prioritization

In accordance with Appendix 3(1)(j) of the NEMA 2014 EIA Regulations (as amended) (GNR 326 of 2017), and in addition to the assessment criteria presented in the Section above, each potentially significant impact must be evaluated in terms of cumulative impacts and the degree to which the impact may cause irreplaceable resource loss.

Furthermore, public opinion and attitude about a potential development, as well as its potential consequences, must be considered during the decision-making process.

An impact Prioritization Factor (PF) will be assigned to each impact ER in order to ensure that these considerations are considered (post-mitigation). This element is used to direct the attention of the decision-making authority on the higher priority/significant issues and impacts, rather than to distract from the risk assessments. The PF will be applied to the ER score assuming that all recommended management/mitigation measures are executed.

**Table 11: Criteria for the determination of prioritization.**

Public response (PR)	Low (1)	Issue not raised in public response.
	Medium (2)	Issue has received a meaningful and justifiable public response.
	High (3)	Issue has received an intense meaningful and justifiable public response.
Cumulative Impact (CI)	Low (1)	Considering the potential incremental, interactive, sequential, and synergistic cumulative impacts, it is unlikely that the impact will result in spatial and temporal cumulative change.
	Medium (2)	Considering the potential incremental, interactive, sequential, and synergistic cumulative impacts, it is probable that the impact will result in spatial and temporal cumulative change.
	High (3)	Considering the potential incremental, interactive, sequential, and synergistic cumulative impacts, it is highly probable/definite that the impact will result in spatial and temporal cumulative change.
Irreplaceable loss of resources (LR)	Low (1)	Where the impact is unlikely to result in irreplaceable loss of resources.
	Medium (2)	Where the impact may result in the irreplaceable loss (cannot be replaced or substituted) of resources but the value (services and/or functions) of these resources is limited.
	High (3)	Where the impact may result in the irreplaceable loss of resources of high value (services and/or functions).

The value for the final impact priority is represented as a single consolidated priority, determined as the sum of each individual criterion. The impact priority is therefore determined as follows:

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

The result is a priority score which ranges from 3 to 9 and a consequent PF ranging from 1 to 2 (Table 12).

**Table 12: Determination of prioritization factor.**

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

In order to determine the final impact significance the PF is multiplied by the ER of the post mitigation scoring. The ultimate aim of the PF is to be able to increase the post mitigation environmental risk rating by a full ranking class, if all the priority attributes are high (i.e. if an impact

comes out with a medium environmental risk after the conventional impact rating, but there is significant cumulative impact potential, significant public response, and significant potential for irreplaceable loss of resources, then the net result would be to upscale the impact to a high significance (table 13).

**Table 13: 2Environmental significance rating.**

<b>Environmental Significance Rating</b>	
Value	Description
≤ 1	Very low (impact is negligible. No mitigation required)
>1≤2	Low negative (i.e. where this impact would not have a direct influence on the decision to develop in the area).
>2≤3	Moderate negative (i.e. where the impact could influence the decision to develop in the area).
>3≤4	High negative (i.e. where the impact must have an influence on the decision process to develop in the area).
>4≤5	Very high negative (impact is of highest order possible. Mitigation is required to lower impacts to acceptable levels. Potential fatal flaw)
0	No impact
>1≤2	Low positive (i.e. where this impact would not have a direct influence on the decision to develop in the area).
>2≤3	Moderate positive (i.e. where the impact could influence the decision to develop in the area).
>3≤4	
>4≤5	High positive (i.e. where the impact must have an influence on the decision process to develop in the area)

### **3.5 Assessment and Evaluation of Potential Project Impacts and Mitigation Measures.**

The following potential impacts were identified during the Basic Assessment. Mitigation measures have also been provided for each environmental aspect assessed.

The draft BAR+EMPR was made available to I&APs for review and comment and their comments and concerns have been addressed in this final report that is submitted to the DMRE for decision-making. The results of the public consultation were utilized to update the impact scores upon completion of the public review period. Furthermore, it is noted that the results of the public consultation were utilized to update the proposed potential mitigation measures.

### **3.6 Topography and Landform**

Topography refers to the surface shape and features of an area. Opencast operations will remove surface material to access and mine an orebody and this can alter the natural topography of the site. Resultant changes to the topography can in turn impact on groundwater, surface water drainage, visual character and the safety of both people and animals if not properly mitigated. If mining extraction techniques are not carried out correctly, lack of support from underlying layers could cause the surface soil profile to vertically subside to a greater or lesser degree. This could result in limitations to the viability of potential post mining land uses.

Impacts on the topography and landform within the application area are expected to occur as follows:

- ❖ Alteration of topography.
- ❖ Altered drainage patterns.
- ❖ Soil surface subsidence.

### **3.7 Significance of Impacts**

The above impacts on topography and landform will be negative but site specific. With mitigation, the impact can be controlled but not prevented and will remain low to moderate in significance.

The following mitigation types are associated with potential impacts on topography and landform:

- ❖ Control through site planning and design.
- ❖ Control through proper soil management procedures.
- ❖ Avoidance through mine design and planning (depth of mining, safety factors, overburden, and rock qualities).

### **3.8 Impact on Geology**

Geology refers to the underlying mineral structure of an area. Alterations to the natural geology could have impacts on other aspects such as groundwater and topography. Mining operations will remove the entire ore body layer which will alter the geology of the site. Resultant changes to the geology can in turn impact on groundwater, soil forms, and paleontological resources. Mining will have a permanent impact on the geology of the application area.

### **3.9 Significance of Impact**

The impact on the local geology is permanent as an entire orebody and stratigraphic unit will be removed during the mining operations. There are no mitigation measures to reduce the impact on geology as the removal of a geological unit is the goal of the activity. The impact will remain high.

The following mitigation types are associated with potential impacts on the geology:

- ❖ Control through site planning and design.
- ❖ Control through proper soil management procedures.
- ❖ Avoidance through mine design and planning (depth of mining, safety factors, overburden and rock qualities).

### **3.10 Impacts on Soil.**

Mining operations have the potential to damage soil resources through physical loss of soil and/or the contamination of soils, thereby impacting on the soils ability to sustain natural vegetation and altering land capability. Due to the increased activity of trucks and heavy machinery the possibility of soil contamination by leaking oils and fuels is increased. The contamination of soils may contribute to the contamination of surface and groundwater resources. Increased soil erosion can be caused by a loss in vegetative cover resulting in increased water runoff. This is especially likely to occur on sloping terrain. Impacts on soil structure can result in changes to soil drainage, increasing runoff and erosion, and may also result in further potential knock on effects impacting on surface and underground water resources. Loss of the topsoil resource reduces chances of successful rehabilitation and restoration.

Impacts on soil resources are expected to occur as follows:

- ❖ Erosion and sedimentation.
- ❖ Soil compaction.
- ❖ Soil pollution/contamination.

### **3.11 Significance of Impacts**

The above impacts on soil resources will be negative but site specific. With mitigation, the impact can be controlled but not prevented and will remain low to moderate in significance.

The following mitigation types have been associated with potential impacts on soil:

Avoid and control through preventative measures (soil placement, storm water infrastructure, erosion control structures).

- ❖ Avoid through implementation of EMPR mitigation measures
- ❖ Remedy through application of treatment measures (e.g. ripping).
- ❖ Avoid through preventative measures (e.g. bunding, spill kits).
- ❖ Remedy through clean-up and waste disposal.
- ❖ Modify through soil treatment if required.

### **3.11 Impacts on Land Capability**

Land capability is closely linked to the soil. Mining operations have the potential to significantly transform the land capability, often irreparably. The types of impacts related to land capability involve post mining compaction, loss of fertility, impeded soil drainage and insufficient depth of the replaced soil. In many cases, mining may result in the land capability class changing from arable to grazing post closure. The loss of potentially productive agricultural land, along with a reduction in land capability may occur as a result of site sterilisation due to mining activities. Some impacts such as acidification and loss of original soil depth and volume can be permanent and will reduce the capability post closure.

Impacts on land capability are expected to occur as follows:

- ❖ Loss of soil fertility (denitrification, loss of soil nutrient store and organic carbon stores) and loss of land capability.
- ❖ Loss of soil resource and its utilization potential.

### **3.12 Significance of Impacts**

The above impacts on land capability will be negative but site specific. They are long term impacts and are expected to last for the duration of the life of the mine and in some cases the disturbance will be permanent. With mitigation, the impact can be controlled but not prevented and some impacts will be permanent.

The following mitigation types are associated with potential impacts on land capability:

- ❖ Avoid through preventative measures (e.g. limit area of disturbance).
- ❖ Remedy through soil remediation if required (e.g. fertilizer and organic matter applications)

### **3.13 Impacts on Land Use.**

The predominant land use in the surrounding area is Shrubland. Mining activities have the potential to affect land uses within the application area and in the surrounding areas. This can be caused by physical transformation of land through direct or indirect impacts. Impacts may be related to

factors such as loss of soil, loss of biodiversity, pollution of water, dewatering, air pollution, noise pollution, and damage/destruction from blasting. The nature of opencast mining is such that it is unlikely that mining and other land uses can coexist. This means that any area utilized for opencast mining will be unavailable for other land uses.

Impacts on land use are expected to occur as follows:

- ❖ Damage/Disruption of services (such as water and power supply, etc.).
- ❖ Interference with existing land uses.

### **3.14 Significance of Impacts**

The above impacts on land use will be negative but site specific. With mitigation, the impact can be controlled but not prevented and will remain low in significance.

The following mitigation types have been associated with potential impacts on land use:

- ❖ Avoid through implementation of EMPR mitigation measures (e.g. service detection and communication with landowners).
- ❖ Remedy through repair or reinstatement of services if required.

### **Protection of fauna and flora**

The risk on the fauna and flora of the footprint area, as well as the surrounding environment, as a result of the proposed mining activities, can be reduced to low by implementing the following mitigation measures:

- The site manager must ensure that no fauna is caught, killed, harmed, sold or played with.
- Workers must be instructed to report any animals that may be trapped in the working area.
- No snares may be set or nests raided for eggs or young.
- No plants or trees may be removed without the approval of the Environmental Control Officer (ECO).

### **3.15 Motivation where no alternatives sites were considered.**

Amandla Africa Mining identified the growing need for Coal resources due to an increase in power demand, bombs creations, recreational field making and brick and concrete making. In this light, the applicant identified the proposed area as the preferred and only viable site alternative because of its immediate availability backed by data reviewed, which has proven that



the resources are available in the area. The establishment of a pit in this un-utilised area was found to be most viable.

Various project alternatives were considered during the planning phase of the project and the preferred alternatives proved to be:

- The open cast mining of the Coal identified as the most effective method to produce the desired Coal.
- The use of temporary infrastructure will reduce the impact on the environment and decrease closure objectives with regard to infrastructure decommissioning.
- It is recommended that the existing farm road connected to the provincial road (R104) immediately to the property be used as an access road.

### **3.16 Statement motivating the alternative development location within overall site.**

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

The open cast mining of the Coal has been identified as the most cost-effective method to produce the desired Coal. It is proposed that all mining-related infrastructure will be contained within the boundaries of the proposed prospecting area. As no permanent infrastructure will be established on site, the layout/position of the temporary infrastructure will be determined by the space on the proposed prospecting area.

### **3.17 Process undertaken to identify, assess and rank impacts and risk of site activities.**

Full description of the process undertaken to identify, assess and rank the impacts and risks the activity will impose on the preferred site (In respect of the final site layout plan) through the life of the activity, including (i) a description of all environmental issues and risks that were identified during the environmental impact assessment process and (ii) an assessment of the significance of each issue and risk and an indication of the extent to which the issue and risk could be avoided or addressed by the adoption of mitigation measures.

During the impact assessment process, several potential impacts were identified of each main activity in each phase. An initial significance rating was determined for each potential impact, should the mitigation measures proposed in this document not be implemented on-site. The impact assessment process continued to identify mitigation measures to address the impact that the proposed mining activity may have on the surrounding environment. A significance rating was again determined for each impact using a relevant methodology. The impact ratings listed in the following section was determined for each impact after bringing the proposed mitigation measures into consideration and therefore represents the final layout/activity proposal.



## 2.10 Summary of baseline reports

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

LIST OF STUDIES UNDERTAKEN	RECOMMENDATIONS OF SPECIALIST REPORTS	RECOMMENDATIONS THAT HAVE BEEN INCLUDED IN THE EIA REPORT (Mark with an X where applicable)	REFERENCE TO APPLICABLE SECTION OF REPORT WHERE RECOMMENDATIONS HAVE BEEN INCLUDED.
Hydrogeological study	<ul style="list-style-type: none"> <li>The prospecting right activity will take place during dry seasons where the water percentages in the surrounding streams are exceptionally low.</li> <li>Drilling activity will not be conducted within 500m from watercourses, the exploration geologists will be advised to drill and sample more than 500m from rivers and wetlands on site.</li> <li>The exploration boreholes will be cased during drilling and properly rehabilitated by cap sealing the borehole after drilling.</li> <li>Extreme caution will be taken during prospecting, owing to the river and numerous wetlands existing within and nearby the project area. No washing of any mechanical equipment or vehicles will be allowed near the water resources.</li> <li>Rivers and wetlands will be buffered as no go area, a 500m buffer will apply.</li> </ul>	<b>X</b>	Section 6.1.6 of this report

	<ul style="list-style-type: none"> <li>• The core logs of boreholes with mineral of interest should be cleared from the ground immediately after logging by the geologists to prevent washing and leaching to the water resources during rainfall.</li> <li>• Absorbent Spill kits will be made available near the drill rigs during drilling activities.</li> </ul>		
Hydrology study	<ul style="list-style-type: none"> <li>• The prospecting right activity should take place during dry seasons where the water percentages in the surrounding streams and wetlands are extremely low.</li> <li>• Drilling activity should not be conducted near the water resources; the exploration geologists will be advised to drill and sample away from rivers and wetlands on site.</li> <li>• Extreme caution should be taken during prospecting, owing to the perennial and non-perennial rivers and the wetlands, existing within the project area. No washing of any mechanical equipment's or vehicles will be allowed near the water resources.</li> <li>• All the wetlands and non-perennial streams will be buffered as "no go" area preferably a 500m buffer will apply.</li> <li>• The core logs of boreholes with mineral of interest should be cleared from the ground immediately after logging by the geologists to prevent washing and leaching to the water resources during rainfall.</li> <li>• Absorbent Spill kits will be made available near the drill rigs during drilling activities</li> <li>• To avoid soil erosion and siltation in the watercourse, vegetation will not be cleared.</li> </ul>	<b>X</b>	Section 6.1.6 of this report

### 3. Environmental impact statement

#### 3.8 Key findings of the EIA

Most of the prospecting activities are non-invasive and will have very low to negligible environmental or social impact. The invasive activities that entail the drilling of approximately 15 exploration holes will have a minimal environmental and social impact as each drill site will be confined to an area of 0.9 ha. This must be viewed in the context of the entire prospecting license area under application, which covers just 91.501 ha. Table 14 summarises the assessed impact ratings after mitigation measure implementation.

**Table 14: Summary of identified impacts**

Potential impacts (Positive: +ve; Negative: -ve)	Impact significance pre-mitigation	Impact significance post-mitigation
<b>Site establishment activities</b>		
Cultural and Heritage (-ve)	Very Low	Negligible
Noise (-ve)	Low	Very Low
Visual (-ve)	Low	Very Low
Traffic (-ve)	Very Low	Very Low
Dust fall (-ve)	Very Low	Very Low
Soil and vegetation (-ve)	Medium	Low
Animal life (-ve)	Medium	Low
Social (-ve)	Low	Very Low
Job creation (+ve)	Very Low	Very Low
<b>Exploration drilling</b>		
Noise (-ve)	Very Low	Very Low
Visual (-ve)	Very Low	Very Low
Traffic (-ve)	Low	Very Low
Dust fall (-ve)	Very Low	Very Low
Soil and Vegetation (-ve)	Low	Very Low
Animal life (-ve)	Low	Very Low
Social (-ve)	Low	Low
Job creation (+ve)	Low	Low

All identified impacts will occur for a limited time and the extent of the impacts will be localised. All identified impacts can be suitably mitigated with the residual impact ratings being of low significance. After drilling activities have been completed and the drill pads rehabilitated to predrilling status, the impacts will cease to exist.

#### 3.9 Final site map

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

Please refer to Appendix 2 for the Environmental Sensitivities Map including site layout map.

### **3.10 Positive and negative impacts, and risks of the proposed activity and alternatives**

- Destruction/loss of cultural and heritage resources during the construction/set-up phase (unlikely, as no features of cultural/heritage significance have been identified on site).
- Noise generation from construction/set-up and operational activities of drilling.
- Visual intrusion caused by the drilling activities in the largely rural setting.
- Increased traffic near the drilling site during site establishment and prospecting.
- Dust fall and nuisance from construction/set-up and drilling activities.
- Soil and vegetation disturbance from drill pad preparation during construction/set-up and operations, as contractors rehabilitate one site and move to the next.
- Animal life will be affected in the immediate vicinity of the drilling rig. It is expected that the noise and general activity will keep them away from the prospecting site.
- Friction between residents/landowners and construction personnel during.
- Employment will be created for land clearing and drilling site establishment.

### **3.11 Proposed impact management objectives and outcomes for inclusion in the EMPr**

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

The objectives of the EMPr will be to:

- Provide enough information to strategically plan the prospecting activities as to avoid unnecessary social and environmental impacts.
- Provide enough information and guidance to plan prospecting activities in a manner that would reduce impacts (both social and environmental) as far as practically possible.
- Develop an approach that ensures environmental compliance.
- Provide a management programme that is effective and practical for implementation.

Through the implementation of the proposed mitigation measures it is anticipated that the identified social and environmental impacts can be managed and mitigated effectively. Heritage/cultural resources can be managed by avoidance of known resources and through consultation with landowners/stakeholders. Contractor personnel will also be briefed of these sensitivities and consequences of any damage/removal of such features. Through the implementation of the mitigation and management measures, it is expected that:

- Noise generation can be managed through consultation, restriction of operating hours, by maintaining equipment and applying noise abatement equipment if necessary.

- Visual intrusion can be managed through consultation with landowners/ stakeholders and by suitable siting of drill pads and use of screens (natural vegetation or shade cloth, etc.).
- Traffic is managed to minimise congestion in and around the drilling site.
- Dust fall can be managed by application of wet suppression on exposed surfaces and use of water during drilling.
- Soil disturbance and clearance of vegetation at drill pad areas will be limited to the absolute minimum required and disturbed areas will be re-vegetated with indigenous species as soon as possible.
- Animal life is always protected and preserved, and the prospecting activities have limited impact on the surrounding habitat.
- Social friction with landowners can be managed by employing strong, experienced personnel with public consultation and conflict resolution skills during stakeholder consultation. All prospecting personnel will be made aware of local conditions and sensitivities and trained to treat residents with respect and courtesy.
- Employment is created during the prospecting, contributing to the local economic even if it is only on a temporary basis.

### **3.12 Aspects for inclusion as conditions of authorisation**

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

- Maintain a buffer of at least 500m from any water body and 100m away from infrastructure/ dwelling.
- Landowners and land occupiers should be engaged (re-consulted) at least 14 days prior to any site activities being undertaken once drill sites are known.
- A map detailing the drilling locations should be provided to the landowners, as well as the DMRE prior to commencement of prospecting activities.

### **3.13 Description of any assumptions, uncertainties and gaps in knowledge**

Which relate to the assessment and mitigation measures proposed?

- It is assumed that the proposed project description provided by the applicant is enough in providing the authorities with the right information regarding the project.
- It is assumed that the public consultation process to be undertaken as part of the EIA will suffice and that the application will be considered objectively based on stakeholders' response to the proposed activities.

### **3.14 Reasoned opinion as to whether the proposed activity should be authorised**

#### **3.14.2 Reasons why the activity should be authorised**

The EAP recommends that the proposed prospecting activities be authorised:

- The environmental impacts associated with the limited drilling activities are minimal, provided that the proposed mitigation is implemented.
- The spatial extent of the physical impact is less than 1 ha per drill site over a prospecting right license area of over 91.501 ha; 15 drill sites will be established during the drilling phase.
- With appropriate care and consideration, the impacts resulting from drilling can be suitably avoided, minimised or mitigated.
- By implementing the appropriate rehabilitation activities, the impacts associated with drilling can be reversed.
- Without implementation of prospecting activities, the knowledge concerning the potential mineral resource within the prospecting right area will not be confirmed.

#### **3.14.3 Conditions that must be included in the authorisation**

- Maintain a minimum 500m buffer from any water and 100m away from infrastructure/ dwelling.
- Landowners and occupiers should be consulted again at least 1 month prior to any site activities being undertaken once drill sites are known.
- A map detailing the drilling locations must be provided to the landowners and the DMRE prior to commencement of prospecting activities.
- Record must be kept of the implementation of the EMPr measures and monitoring of the efficiency of the implemented measures.
- A closure plan must be submitted to show measures to avoid, manage and mitigate environmental impacts associated with decommissioning of proposed activities.

### **3.15 Period for which the Environmental Authorisation is required.**

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

### **3.16 Undertaking**

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

An undertaking is provided at the end of this report.




### 3.17 Financial provision

State the amount required to manage and rehabilitate the environment.

A financial provision of approximately R 46686.00 which includes rehabilitation activities, has been made by **Amandla Africa Mining**. A breakdown of these costs is presented in below. The applicant undertakes to provide financial provision through funding from the personal account.

### Financial Provision

		CALCULATION OF THE QUANTUM						
Applicant: Evaluator:				Ref No.:		GP30/5/1/1/2/ 17260 PR		
		Abel Mojapelo		Date:		10-Apr-22		
No.	Description	Unit	A	B	C	D	E=A*B*C*D	
			Quantity	Master Rate	Multiplication factor	Weighting factor 1	Amount (Rands)	
1	Dismantling of processing plant and related structures (including overland conveyors and powerlines)	m3	0	19	1	1	0	
2 (A)	Demolition of steel buildings and structures	m2	0	271	1	1	0	
2(B)	Demolition of reinforced concrete buildings and structures	m2	0	400	1	1	0	
3	Rehabilitation of access roads	m2	6378,75	49	0,02	1	6251,175	
4 (A)	Demolition and rehabilitation of electrified railway lines	m	0	471	1	1	0	
4 (A)	Demolition and rehabilitation of non-electrified railway lines	m	0	257	1	1	0	
5	Demolition of housing and/or administration facilities	m2	0	542	1	1	0	
6	Opencast rehabilitation including final voids and ramps	ha	0	284292	1	1	0	
7	Sealing of shafts adits and inclines	m3	0	146	1	1	0	
8 (A)	Rehabilitation of overburden and spoils	ha	0	189528	1	1	0	
8 (B)	Rehabilitation of processing waste deposits and evaporation ponds (non-polluting potential)	ha	0	236054	1	1	0	
8 (C)	Rehabilitation of processing waste deposits and evaporation ponds (polluting potential)	ha	0	685612	1	1	0	
9	Rehabilitation of subsided areas	ha	0	158701	1	1	0	
10	General surface rehabilitation	ha	0,9	150138	0,2	1	27024,84	
11	River diversions	ha	0	150138	1	1	0	
12	Fencing	m	0	171	1	1	0	
13	Water management	ha	0	57087	1	1	0	
14	2 to 3 years of maintenance and aftercare	ha	0	19980	1	1	0	
15 (A)	Specialist study	Sum	0			1	0	
15 (B)	Specialist study	Sum				1	0	
<b>Sub Total 1</b>							<b>33276,015</b>	
1	Preliminary and General		3993,1218		weighting factor 2		3993,1218	
2	Contingencies			3327,6015	1		3327,6015	
<b>Subtotal 2</b>							<b>40596,74</b>	
Singed: Abel Mojapelo Date: 10/04/2022							<b>VAT (15%)</b>	<b>6089,51</b>
<b>Grand Total</b>							<b>46686</b>	

#### 3.17.2 Explain how the aforesaid amount was derived

Confirm that this amount can be provided for from operating expenditure. Confirm that the amount, is anticipated to be an operating cost and is provided for as such in the PWP.

The drilling contractor will be responsible for rehabilitating the drill pad once the drilling activities have been completed at each drill hole. The responsible exploration geologist will confirm the quality of rehabilitation conducted by drilling contractor and sign it off. The financial guarantee was calculated using the DMRE official financial quantum calculator. This information has been provided in the PWP that was submitted to the DMRE.

An amount of R2 295 796.00 is required to finance the PWP over a period of 3 years. The extended 2 years will be based on the results of the first 3-year drilling programme. Work will be approved on a phase-by-phase basis, dependent on the results obtained i.e, although prospecting work may be provided for financially in the budget for a specific year, it will only take place if justified. Table 15 shows a breakdown of the expected costs throughout the exploration process. The amount is also reflected in the PWP submitted to the DMRE.

**Table 15: Expenditure per activity.**

ACTIVITY	YEAR 1 Expenditure (R`)	YEAR 2 Expenditure (R`)	YEAR 3 Expenditure (R`)	YEAR 4 Expenditure (R`)	YEAR 5 Expenditure (R`)
<b>Phase 1 (Months 0 to 12)</b>					
Literature surveys	R 2 500.00	R1 500.00			
Desk top studies	R 10 000.00	R 5 000.00			
Geophysical or geotechnical work	R 10 000.00	R 4 000.00			
Research and target identification		R 5 000.00			
<b>Phase 2 (Months 13 to 24)</b>					
Invasive work, (Drilling 05 boreholes a depth of 50m)		R48 024 9.00	R48 024 9.00	R48 024 9.00	R48 024 9.00
Sampling work		R 25 000.00	R 15 000.00	R 9 000.00	R 5 000.00
Laboratory work		R 22 800.00	R 11 200.00	R 8 800.00	R 4 800.00
Analytical and modelling work			R 40 000.00	R 20 000.00	R 7 000.00
Infill work			R 25 000.00	R 15 000.00	
Bulk sampling and testing to be carried out					
<b>Phase3 (Months 25 to 60)</b>					
EIA and EMPr for mining right application				R 40 000.00	R 20 000.00
Pre-feasibility studies				R 25 000.00	R 10 000.00
Investment decision making application for mining rights				R 22 800.00	R 10 400.00
<b>Annual Total</b>	<b>R 22,500.00</b>	<b>R 543 549.00</b>	<b>R 571 449.00</b>	<b>R620 849.00</b>	<b>R 537 449.00</b>
				<b>Total Budget</b>	<b>R2 295 796.00</b>

Specific Information required by the competent Authority.

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

The EIA report must include the:

#### **3.18.2 Impact on the socio-economic conditions of any directly affected person**

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

A full consultation process was implemented during the environmental authorisation process. The purpose of the consultation is to provide affected persons the opportunity to raise potential concerns. Concerns raised have been captured and addressed in the public participation section of this report. As the final positioning of the drill sites cannot be confirmed without completion of phase 1 of the prospecting programme, a recommendation has been made to ensure that the directly affected landowners are re-consulted a minimum of one month prior to implementing invasive activities (drilling). The purpose of the re-consultation is to ensure that socio-economic impacts on directly affected persons can be raised and, where possible, addressed.

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

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

Mitigation measures proposed in this report include that no drill site will be located within 100m of any identified heritage site (which may occur during the prospecting programme) based on desktop work. Furthermore, from desktop studies undertaken, no heritage states have been identified in the area. However, comment from the South African Heritage Agency (on a national level) and from Local Heritage Resources offices will be sought to confirm the need for a Heritage Impact Assessment.

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

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

The proposed site was selected based on extensive research and following information from previous prospecting activities in the area. There are known coal deposits in the area and coal mining ( Msobo coal) is currently taking place to the immediate north of the proposed project area. In terms of the technologies proposed, the proposed prospecting has been chosen

based on the long-term success of the company in terms of their prospecting history. The prospecting activities proposed in the PWP is dependent on the preceding phase as previously discussed, therefore no alternatives are indicated, but rather a phased approach of trusted prospecting techniques.

## **PART B**

### **ENVIRONMENTAL MANAGEMENT PROGRAMME REPORT**

#### **4. Environmental management programme**

##### **4.8 Details of the EAP**

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

The requirements for the provision of the details and expertise of the EAP are included in PART B, section (1) (h).

##### **4.9 Description of the aspects of the activity**

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

The requirement to describe the aspects of the activity covered by the environmental management programme report is included in PART B, section (1)(h).

##### **4.10 Composite map**

Provide a map (attached as an Appendix) at an appropriate scale which superimposes the proposed activity, its associated structures, and infrastructure on the environmental sensitivities of the preferred site, indicating any areas that any areas that should be avoided, including buffers) Please refer to appendix 2.

for the Composite Map.

##### **4.11 Description of impact management objectives including management statements**

###### **4.11.2 Determination of closure objectives**

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

After prospecting is complete at each drill site, the site will be rehabilitated to be safe, stable, re-vegetated, non-polluting, and non-eroded and in a state that is suitable for agreed post-closure land use.

###### **4.11.3 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 be 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.

###### **4.11.4 Has a water use license has been applied for?**

No, best practice guidelines will be used for mine water management, mine water characterisation, mine water resource protection, mine water treatment and development of

mine water management model (Best Practice Guidelines: Series A, G, & H), hence a water use licence has not been applied for.

## 4.12 Impacts to be mitigated in their respective phases

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

**Table 16: Impact mitigation and rehabilitation**

Activities	Phase	Size and scale of disturbance	Mitigation measures	Compliance with standards	Implementation period
E.g. for prospecting: Drill site, site camp, ablution facility, accommodation, equipment storage, sample storage, site office, access route, etc. E.g. for mining: Excavations, blasting, stockpiles, discard dumps/dams, loading, hauling, transport, water supply dams, boreholes, accommodation, offices, ablution, stores, workshops, processing plant, storm water control, berms, roads, pipelines, power lines, conveyors, etc.	In which impact is anticipated, e.g. construction, commissioning, operational, decommissioning, closure and post-closure.	Volumes, tonnages and ha/m <sup>2</sup>	Describe how each of the recommendations herein will remedy the cause of pollution or degradation and migration of pollutants.	A description of how each of the recommendations herein will comply with any prescribed environmental management standards or practices that have been identified by Competent Authorities.	Describe the period when the measures in the environmental management programme must be implemented. Measures must be implemented when required. Rehabilitation must take place at the earliest opportunity. With regard to rehabilitation, state whether it will take place upon cessation of the individual activity or cessation of mining, bulk sampling or alluvial diamond prospecting.
<b>Site establishment activities</b> <ul style="list-style-type: none"> <li>• Vegetation clearance</li> <li>• Topsoil stripping and stockpiling</li> <li>• Drill pad compaction</li> <li>• Placement of temporary portable toilets and resting place</li> <li>• Vehicle movements</li> <li>• Waste management</li> </ul>	Construction/set-up and operational phase	20m <sup>2</sup> diamond drill holes	Any buried artifacts that may be uncovered during site activities will require such activities to stop and a qualified archaeologist will be commissioned to assess their significance and determine appropriate mitigation measures.	Heritage Act	Before and during drilling activities
	Construction/set-up and operational phase	20m <sup>2</sup> diamond drill holes	Control noise generation by maintaining equipment. Limited to daylight hours on Mondays-Saturdays and no activities on Sundays and public holidays. Maintain a buffer of 500m between drill sites and dwellings. The resting	SANS 10103 guideline	Before and during drilling activities

Activities	Phase	Size and scale of disturbance	Mitigation measures	Compliance with standards	Implementation period
			place will be located outside the 82dB Zone of the drill site.		
<b>Exploration drilling: Drilling</b> <ul style="list-style-type: none"> <li>• Drill maintenance and refuelling</li> <li>• Core sample collection and storage</li> <li>• Vehicle movements</li> <li>• Waste generation and management</li> </ul>	Construction/set-up and operational phase	20m <sup>2</sup> diamond drill holes	The drilling rig and other visually prominent items on the site will be in consultation with the landowner. Use existing vegetation as far as possible to screen the prospecting operations from view. If necessary, operations can be screened from view by erecting a shade cloth barrier.	N/A	Before and during drilling activities
	Construction/set-up and operational phase	20m <sup>2</sup> diamond drill holes	Control dust emission by ensuring drill rig employs dust suppression system. Low vehicle speeds will be enforced on unpaved surfaces. Maintain a buffer of 500m between drill sites and dwellings.	GN R. 827 (NEMAQA)	Before and during drilling activities
	Construction/set-up and operational phase	20m <sup>2</sup> diamond drill holes	Soil disturbance and vegetation clearance at drill pads will be limited to the absolute minimum required and will not be dozed/ scraped with vegetation roots left intact for later re-growth. Disturbed areas will be re-vegetated with indigenous species as soon as possible.	N/A	Before and during drilling activities



Activities	Phase	Size and scale of disturbance	Mitigation measures	Compliance with standards	Implementation period
	Construction/set-up and operational phase	0.9 ha per drill site	All operations will be carried out under the guidance of a strong, experienced manager with public consultation and conflict resolution skills, and environmental coordination where applicable. All prospecting personnel will be made aware of local conditions and sensitivities in the prospecting area and the fact that some residents may not welcome the prospecting activities.	NEMA	Before and during drilling activities

## 4.12.2 Impact Management Outcomes

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

**Table 17: Impact management**

Activities	Potential impact	Aspects affected	Phase	Mitigation type	Standard to be achieved
E.g. for prospecting: Drill site, site camp, ablution facility, accommodation, equipment storage, sample storage, site office, access route, etc. E.g. for mining: Excavations, blasting, stockpiles, discard dumps/dams, loading, hauling, transport, water supply dams, boreholes, accommodation, offices, ablution, stores, workshops, processing plant, storm water control, berms, roads, pipelines, power lines, conveyors, etc.	Including the potential impacts for cumulative impacts. E.g. dust, noise, drainage surface disturbance, fly rock, surface water contamination, groundwater contamination, air pollution etc.		In which impact is anticipated, e.g. construction, commissioning, operational, decommissioning, closure and post-closure.		
<b>Site establishment activities (-ve)</b> <ul style="list-style-type: none"> <li>• Vegetation clearance</li> <li>• Topsoil stripping and stockpiling</li> <li>• Drill pad compaction</li> <li>• Erection of office, toilets, fuel storage (if not by road tanker), water tanker, core storage</li> <li>• Vehicle movements</li> <li>• Waste management</li> </ul>	Cultural and heritage	Destruction or loss of Cultural and Heritage Resources: No cultural/ heritage artefacts have been identified on site.	Construction/ set-up	If concentrations of archaeological heritage material and human remains are uncovered during construction, all work must cease immediately. The find must be reported to a heritage specialist so that systematic and professional investigation/ excavation can be undertaken.	Heritage Act
	Noise	Noise generation	Construction/ set-up	<ul style="list-style-type: none"> <li>• Construction/setup, operational and decommissioning activities will be limited to daylight hours on Mondays to Saturdays from 08h00 – 17h00 and no activities on Sundays and public holidays.</li> <li>• Separation of distance of minimum 500m to be maintained between drill sites and dwellings.</li> <li>• Noise abatement equipment, like</li> </ul>	SANS 10103

Activities	Potential impact	Aspects affected	Phase	Mitigation type	Standard to be achieved
				<p>mufflers on diesel engines, will be maintained in good condition.</p> <ul style="list-style-type: none"> <li>If intrusive noise levels are experienced by any person at any point, the source will be moved if practical, or it will be placed in an acoustic enclosure, or an acoustic barrier will be erected between the source and the recipient.</li> </ul>	
	Visual	Visual intrusion	Construction/ set-up	<ul style="list-style-type: none"> <li>The drilling rig and other visually prominent items on site will be in consultation with the landowner.</li> <li>Make use of existing vegetation as far as possible to screen the prospecting operations from view.</li> <li>If necessary, the operations can be screened from view by erecting a shade cloth barrier.</li> </ul>	N/A
	Traffic	Increase in traffic volumes in drilling site vicinity	Construction/ set-up	<ul style="list-style-type: none"> <li>Traffic signs to be erected around the site to notify motorists of activities.</li> <li>Construction vehicles to make trips on/off site only when necessary.</li> <li>Construction vehicles to adhere to local speed limits as far as possible when driving in around site.</li> </ul>	National Traffic Act Regulations
	Dust fall	Dust fall and nuisance from activities	Construction/ set-up	<ul style="list-style-type: none"> <li>Wet suppression should be applied to ensure that no visible dust is raised by any of the prospecting operations.</li> <li>Distance of at least 500m to be maintained between drill sites and</li> </ul>	GN R. 827 (NEMAQA)

Activities	Potential impact	Aspects affected	Phase	Mitigation type	Standard to be achieved
				dwelling. <ul style="list-style-type: none"> <li>Low vehicle speeds will be enforced on unpaved surfaces.</li> </ul>	
	Soil and vegetation	The potential impact of the proposed prospecting on the vegetation would occur at proposed drilling sites and the access routes used to get to these sites.	Construction/ set-up	<ul style="list-style-type: none"> <li>The soil disturbance and vegetation clearance at drill pads will be limited to the absolute minimum required. No clear scraping (dozing) to be carried out unless necessary to establish a level drill pad.</li> <li>Clear surface vegetation to make way for the drilling rig leaving the roots intact so that vegetation can coppice and regrow.</li> <li>Disturbed areas will be re-vegetated with indigenous species as soon as possible.</li> </ul>	NEMBA
	Animal life	Animal life will be affected in the immediate vicinity of the drilling rig. It is anticipated that the noise and general activity will keep the animal life away from the site while the prospecting is ongoing.	Construction/ set-up	<ul style="list-style-type: none"> <li>Environmental awareness training sessions must be part of the workers induction and site workshops.</li> <li>If any animals are encountered, they must not be killed or injured, but removed or chased away from the site with the assistance of an animal specialist.</li> </ul>	NEMBA
	Social	Friction between residents/land owners and construction personnel.	Construction/ set-up	<ul style="list-style-type: none"> <li>All operations will be carried out under the guidance of a strong, experienced manager with public consultation and conflict resolution skills.</li> <li>All prospecting personnel will be made aware of the local conditions and sensitivities in the prospecting area and the fact that some</li> </ul>	NEMA

Activities	Potential impact	Aspects affected	Phase	Mitigation type	Standard to be achieved
				<p>residents may not welcome the prospecting activities.</p> <ul style="list-style-type: none"> <li>There will always be a strict requirement to treat residents with respect and courtesy.</li> </ul>	
	Job creation	Employment will be created for the clearing of the land and establishing the drilling site.	Construction/ set-up	No mitigation measures required.	NEMA
<b>Exploration drilling (ve)</b> <ul style="list-style-type: none"> <li>Drilling</li> <li>Drill maintenance and refueling</li> <li>Core sample collection and storage</li> <li>Vehicle movements</li> <li>Waste generation and management</li> </ul>	Noise	Noise generation	Operations	<ul style="list-style-type: none"> <li>Activities will be limited to daylight hours, Mondays-Saturdays from 08h00 – 17h00 and no activities on Sundays and public holidays.</li> <li>A distance of at least 500m to be maintained between drill sites and dwellings.</li> <li>Noise abatement equipment, like mufflers on diesel engines, will be maintained in good condition.</li> <li>If intrusive noise levels are experienced by any person at any point, the source will be moved if practical, or placed in an acoustic enclosure, or an acoustic barrier will be erected between the source and the recipient.</li> </ul>	Heritage Act
	Visual	Visual intrusion	Operations	<ul style="list-style-type: none"> <li>The drilling rig and other visually prominent items on site will be in consultation with the landowner.</li> <li>Use existing vegetation as far as possible to screen prospecting operations from view.</li> <li>If necessary, operations can be</li> </ul>	SANS 10103

Activities	Potential impact	Aspects affected	Phase	Mitigation type	Standard to be achieved
				screened from view by erecting a shade cloth barrier.	
	Traffic	Increase in traffic volumes in the drilling site vicinity	Operations	<ul style="list-style-type: none"> <li>Traffic signs to be erected on site to notify motorists of the activities.</li> <li>Construction vehicles to make trips on/off site only when necessary.</li> <li>Construction vehicles to adhere to local speed limits as far as possible when driving in around site.</li> </ul>	N/A
	Dust fall	Dust fall and nuisance from activities	Operations	<ul style="list-style-type: none"> <li>Wet suppression will be applied to ensure that no visible dust is raised by the prospecting operations.</li> <li>A distance of at least 500m to be maintained between drill sites and dwellings.</li> <li>Low vehicle speeds will be enforced on unpaved surfaces.</li> </ul>	National Traffic Act regulations
	Soil and vegetation	Soil and vegetation disturbance from drill pad preparation	Operations	<ul style="list-style-type: none"> <li>The soil disturbance and clearance of vegetation at drill pad areas will be limited to the absolute minimum required.</li> <li>No clear scraping (dozing) will be carried out unless necessary to establish a level drill pad. Surface vegetation to be cleared to make way for the drilling rig, leaving the roots intact so that vegetation can coppice and regrow.</li> <li>Disturbed areas will be re-vegetated with indigenous species as soon as possible.</li> </ul>	GN R. 827 (NEMAQA)
	Animal life	Animal life will be affected	Operations	Measures implemented during site	NEMBA

Activities	Potential impact	Aspects affected	Phase	Mitigation type	Standard to be achieved
		in the immediate vicinity of the drilling rig. It is anticipated that the noise and general activity will keep the animal life away from the site while the prospecting is ongoing.		establishment must apply in this phase as well.	
	Social	Friction between residents/landowners and construction personnel	Operations	<ul style="list-style-type: none"> <li>• All operations will be carried out under the guidance of a strong, experienced manager with public consultation and conflict resolution skills.</li> <li>• All prospecting personnel will be made aware of local conditions and sensitivities in the prospecting area and the fact that some residents may not welcome the prospecting activities.</li> <li>• There will always be a strict requirement to treat residents with respect and courtesy.</li> </ul>	NEMBA
	Job creation	Employment will be created for the clearing of the land and establishing the drilling site.	Operations	No mitigation measures required.	NEMA

## 4.13 Impact Management Actions

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

**Table 18: Impact management actions**

Activities	Potential impact	Mitigation type	Implementation period	Compliance with standards
Whether listed or not. E.g. excavations, blasting, stockpiles, discard dumps/dams, loading, hauling and transport, water supply dams/boreholes, accommodation, offices, ablution, stores, workshops, processing plant, storm water control, berms, roads, pipelines, power lines, conveyors, etc.	E.g. dust, noise, drainage surface disturbance, fly rock, surface water contamination, ground water contamination, air pollution, etc.	Modify, remedy, control or stop through, e.g. noise control measures, storm water control, dust control, rehabilitation, design measures, blasting controls, avoidance, relocation, alternative activity, etc. E.g., modify through alternative method, control through noise control, control through management and monitoring, and remedy through rehabilitation.	State when the environmental management programme measures must be implemented. Measures must be implemented when required. This must take place as soon as possible. Regarding rehabilitation, state upon cessation of the individual activity or mining, bulk sampling or alluvial diamond prospecting.	A description of how each of the recommendations in 2.11.6 read with 2.12 and 2.15.2 herein will comply with any prescribed environmental management standards or practices that have been identified by Competent Authorities.
<b>Site establishment activities</b> <ul style="list-style-type: none"> <li>• Vegetation clearance</li> <li>• Topsoil stripping and stockpiling</li> <li>• Drill pad compaction</li> <li>• Erection of office, toilets, fuel storage (if not by road tanker), water tanker, core storage</li> <li>• Vehicle movements</li> <li>• Waste management</li> </ul>	Cultural and heritage	Undertake heritage survey prior to site activities to identify cultural/heritage features and cordon these off with Chevron tape. Avoid cultural/heritage impacts by maintaining 100m buffer from any identified heritage feature. Any buried artifacts that may be uncovered during site activities will require such activities to stop and a qualified archaeologist will be commissioned to assess their significance and determine appropriate mitigation measures.	Before and after drilling activities.	Heritage Act
<b>Exploration drilling</b> <ul style="list-style-type: none"> <li>• Drilling</li> <li>• Drill maintenance and refuelling</li> <li>• Core sample collection and storage</li> </ul>	Noise	Control noise generation by maintaining equipment and limiting operation hours to daylight hours from Mondays to Saturdays (no activities on Sundays and public holidays) from 08h00 – 17h00. Maintain a buffer of 500m between drill sites and 100m away from any dwellings/infrastructure. If intrusive noise levels are experienced by any person at any point,	Before and after drilling activities.	SANS 10103



Activities	Potential impact	Mitigation type	Implementation period	Compliance with standards
<ul style="list-style-type: none"> <li>• Vehicle movements</li> <li>• Waste generation and management</li> </ul>		the source will be moved if practical, or placed in an acoustic enclosure, or an acoustic barrier will be erected between the source and the recipient.		
	Visual	The drilling rig and other visually prominent items on site will be placed in consultation with the landowner. Existing vegetation will be used as far as possible to screen the prospecting operations from view. Operations can be hidden from view by erecting a shade cloth barrier.	Before and after drilling activities.	N/A
	Dust fall	Control dust emission by ensuring drill rig employs dust suppression system. Low vehicle speeds will be enforced on unpaved surfaces.	Before and after drilling activities.	GN R. 827 (NEMAQA)
	Soil and vegetation	Soil disturbance and vegetation clearance at drill pads will be kept to the minimum required and not be dozed/scraped; vegetation roots will be left intact for regrowth. Disturbed areas will be re-vegetated with indigenous species as soon as possible.	Before and during drilling activities; disturbed areas to re-vegetated as soon as possible.	N/A
	Social	Operations will be carried out under the guidance of an experienced manager with public consultation and conflict resolution skills. All prospecting personnel will be made aware of conditions and sensitivities in the prospecting area and of the fact that some residents may not welcome the prospecting activities. Residents will always be treated with respect and courtesy.	Before and after drilling activities.	NEMA

## 5. Determination of the amount of financial provision.

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

The closure objectives are to record and communicate the results of the monitoring programme during decommissioning to the participating stakeholders, and to receive an effective closure certificate (should the prospect indicate that the resource(s) would not support a sustainable mining operation).

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

Minimise the area to be disturbed and to ensure that the areas disturbed during the prospecting activities are rehabilitated and stable, as per the commitments made in the EMPr. Sustain the pre-prospecting land use and return the site to its near natural state as far as possible.

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

After drilling has been completed in one area, the drilling team will ensure the site is reverted to its original state by implementing the measures listed in Table 19.

**Table 19: Rehabilitation measures**

Aspect/Impact	Rehabilitation measure	Monitoring frequency and responsibility
Removal of construction structures	<ul style="list-style-type: none"> <li>Clear and completely remove from site all construction plant equipment, storage containers, signage, temporary fencing, temporary services, fixtures and any other temporary works.</li> <li>Ensure that all access roads utilized during construction (which are not earmarked for closure and rehabilitation) are returned (as far as possible) to their state prior to construction.</li> </ul>	Once-off, Amandla Africa Mining
Vegetation clearing/ Replanting	<ul style="list-style-type: none"> <li>Remove any emerging alien and invasive vegetation to prevent further establishment.</li> <li>All planting work is to be undertaken by suitably qualified personnel making use of the appropriate equipment.</li> <li>Transplant during the winter (between April and September).</li> <li>Plant indigenous plants to minimize the spread of alien and invasive vegetation.</li> </ul>	When re-vegetation is done and in bloom
Topsoil replacement	<ul style="list-style-type: none"> <li>Replace and redistribute stockpiled topsoil and herbaceous vegetation, overlying grass and other fine organic matter in all disturbed areas of the prospecting site, including temporary access routes and roads. Replace topsoil to the original depth (i.e. as much as was removed prior to construction).</li> <li>Prohibiting the use of topsoil suspected to be contaminated with the seed of alien vegetation. Alternatively, the soil is to</li> </ul>	Once-off, Amandla Africa Mining

Aspect/Impact	Rehabilitation measure	Monitoring frequency and responsibility
	<p>be sprayed with specified herbicides.</p> <ul style="list-style-type: none"> <li>• Backfill planting holes with excavated material / approved topsoil, thoroughly mixed with weed free manure or compost (per volume about one quarter of the plant hole), one cup of 2:3:2 fertilizer and an approved ant and termite poison.</li> <li>• Where local soil has poor drainage, broken rock (Approx. 75 mm in diameter) must be placed to a depth of 150mm at the bottom of the planting hole prior to planting and backfilling with approved plant medium mixture.</li> </ul>	
Waste and rubble removal	<ul style="list-style-type: none"> <li>• Clear the site of all inert waste and rubble, including surplus rock, foundations and batching plant aggregates.</li> <li>• Remove from site all domestic waste and dispose of in the approved manner at a registered waste disposal site.</li> </ul>	Once-off, Amandla Africa Mining
Solid and hazardous waste	<ul style="list-style-type: none"> <li>• Store hazardous waste as indicated on the approved Environmental Management Programme Report (EMPr).</li> <li>• Dispose of all hazardous waste not earmarked for reuse, recycling or resale at a registered hazardous waste disposal site.</li> <li>• Remove from site all temporary fuel stores, hazardous substance stores, hazardous waste stores and pollution control sumps. Dispose of hazardous waste in the approved manner.</li> <li>• Do not hose oil or fuel spills into a storm water drain or sewer, or into the surrounding natural environment.</li> <li>• Dispose of all visible remains of excess cement and concrete after the completion of tasks. Dispose of in the approved manner (solid waste concrete may be treated as inert construction rubble, but wet cement and liquid slurry, as well as cement powder must be treated as hazardous waste).</li> </ul>	Once-off, Amandla Africa Mining
Erosion protection	<ul style="list-style-type: none"> <li>• Protect all areas susceptible to erosion and ensure that there is no undue soil erosion resultant from activities within and adjacent to the construction site.</li> <li>• Retain shrubbery and grass species wherever possible. Perform regular monitoring and maintenance of erosion control measures.</li> </ul>	After rainfall events

### 5.9.2 Explain why the rehabilitation plan is compatible with the closure objectives

The Company is required to make the prescribed financial provision for the rehabilitation or management of negative environmental impacts. If the Company fails to rehabilitate or manage any negative impact on the environment, the DMRE may, upon written notice to the Company, use all or part of the financial provision to rehabilitate or manage the negative environmental impact in question. The Company will specify that the drilling contractor is required to comply with all the environmental measures specified in the EMPr. This will include avoiding unnecessary disturbance of natural vegetation and the rehabilitation of each drill site, immediately after drilling

has been completed. All tracks to the drill sites must be rehabilitated at the end of the prospecting programme. The financial provision provides for the final checking of all sites before site clearance.

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

The quantum of the financial provision required is R 46 686.00. The Company must annually update and review the quantum of the financial provision (as per Regulation 54 (2) of the MPRDA).

**Confirm that the financial provision will be provided as determined**

Please refer to APPENDIX 8: Financial Provision.

for more details on the financial provision for the proposed activity.

## 5.11 Compliance monitoring against the Environmental Management Programme

Mechanisms for monitoring compliance with and performance assessment against the environmental management programme and reporting thereon, including: i) Monitoring of Impact Management Actions ii) Monitoring and reporting frequency iii) Responsible persons iv) Time period for implementing impact management actions v) Mechanism for monitoring compliance.

**Table 20: Monitoring mechanisms**

Source activity	Impacts requiring monitoring programmes	Functional monitoring requirements	Roles and responsibilities for monitoring programme execution	Monitoring and reporting frequency and periods for impact management actions implementation
All prospecting activities	N/A	Ensure that the prospecting programme is being implemented in line with the approved PWP.	Amandla Africa Mining Geologist	Submit an annual prospecting progress report to DMRE
	All commitments contained in the BAR and accompanying EMPr	Ensure commitments made within the approved BAR and EMPr are being adhered to.	Internal environmental control officer and independent EAP.	Undertake and submit an environmental performance audit every two years to DMRE.
Drilling activities	Noise	Weekly inspections will cover the following: <ul style="list-style-type: none"> <li>• Implementation of effective waste management</li> <li>• Establish and implement a stakeholder compliant register on site and ensure that all complaints are responded to promptly.</li> <li>• Ensure that an oil spill kit is readily available.</li> <li>• Ensure that all chemicals and hydrocarbons are stored within bund walls. Ensure that the fire brake is maintained.</li> <li>• Rehabilitation of drill pads.</li> <li>• Records of water intersections on</li> </ul>	Appointed drilling contractor.	Weekly inspection and reporting.
	Dust fall			
	Visual			
	Soil and vegetation			
	Social			
	Housekeeping and maintenance			
	Waste management			
Rehabilitation				

Source activity	Impacts requiring monitoring programmes	Functional monitoring requirements	Roles and responsibilities for monitoring programme execution	Monitoring and reporting frequency and periods for impact management actions implementation
		borehole logs. <ul style="list-style-type: none"> <li>Control and minimize the development of new access tracks.</li> <li>Appropriate storage and handling of topsoil.</li> </ul>		
Post-drilling	Groundwater Re-vegetation Stability Soil erosion Alien invasive species	Monitor the external boreholes within 500m from drill post drilling (if any). The drill site must be monitored 6 months until closure certificate is obtained.	Environmental Coordinator	Monitoring Report

## **5.12 Indicate performance assessment/environmental audit report submission frequency**

Environmental management procedures and mitigation measures will be monitored regularly by the Company to ensure adherence to EMPr provisions. Formal EMPr monitoring and performance assessment will be undertaken annually. Photographs taken before drilling commences and after site rehabilitation must be included in the reports.

## **5.13 Environmental Awareness Plan**

### **5.13.2 Informing employees of environmental risk that may result from their work**

Environmental awareness training courses will be provided to all personnel on site. The environmental training courses will include, amongst others:

- Awareness training for contractors and employees
- Training for staff whose tasks might have significant environmental impact
- Comprehensive training – on emergency response, spill management, etc.
- Specialised skill
- Training verification and record keeping
- Environmental issues on site
- Roles and responsibilities
- The construction environmental management measures
- Cultural awareness
- Heritage discovery procedures

All attendees must complete the entire course and, on completion, sign an attendance register. A copy of the register shall be kept on record by Amandla Africa Mining

### **5.13.3 Manner in which risks will be dealt with to avoid pollution/environmental degradation**

All employees must undergo environmental awareness training, in conjunction with EMPr implementation, to inform them of environmental risks that may result from their work and how the risks must be dealt with to avoid pollution/environmental degradation.

### **5.13.4 Specific information required by the Competent Authority**

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

Not applicable at this stage.

## 6. Undertaking

The EAP herewith confirms:

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

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Signature of the Environmental Assessment Practitioner (Singo Consulting (Pty)  
Ltd)

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Name of Company :

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Date :

**-END-**



## Appendix 1: Competent Authority Letters.



**mineral resources  
& energy**

Department:  
Minerals Resources and Energy  
REPUBLIC OF SOUTH AFRICA

Private Bag X7279, Witbank, 1035, Tel: 013 653 0500, Fax 013 690 3288  
Saveways Centre, First Floor, Mandela Drive, Witbank, 1035, Mpumalanga Province

**Directorate:** Mineral Regulation: Mpumalanga Region  
**Subdirectorato:** Mineral Laws **Enquiries:** Mugagadeli NL  
**Ref:** MP 305/1/1/2/17260PR

**EMAIL [kenneth@singoconsulting.co.za](mailto:kenneth@singoconsulting.co.za)**

The Directors  
Amandla Africa Mining (Pty) Ltd  
Private Bag X7214  
BENFLEUR  
1035

Dear Sir/Madam

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

1. Please be informed that your application for prospecting of **Coal** on **portion of portion 10 of the farm Zonderfout 226 IR** , situated in the Magisterial

Acceptance of a Prospecting Right of amandla (Pty) Limited under file reference number 17260 PR-Lucky

district of **Delmas** is hereby accepted in terms of section 16(2) of the Act as amended by section 12(b) of the Amendment Act.

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

2.1. to consult in the prescribed manner with the landowner, lawful occupier and any interested and affected party including the Land Restitution Commission and submit the result of such consultation on or before the.....

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

- 3.1. Certified copies of share certificates and share holders register
- 3.2. Certified copies of Shareholders agreements
- 3.3. Certified copies articles and memorandum of association of the company
- 3.4. Trust deed documents and letters of authority for any trust holding shares
- 3.5. Details relating to funding (all relevant agreements)
- 3.6. Any other information that may be necessary to explain and serve as evidence that the applicant meets the appropriate HDSA ownership and/or compliance requirements of the aforesaid Act and Mining Charter; **thereby including women and communities in your structure.**

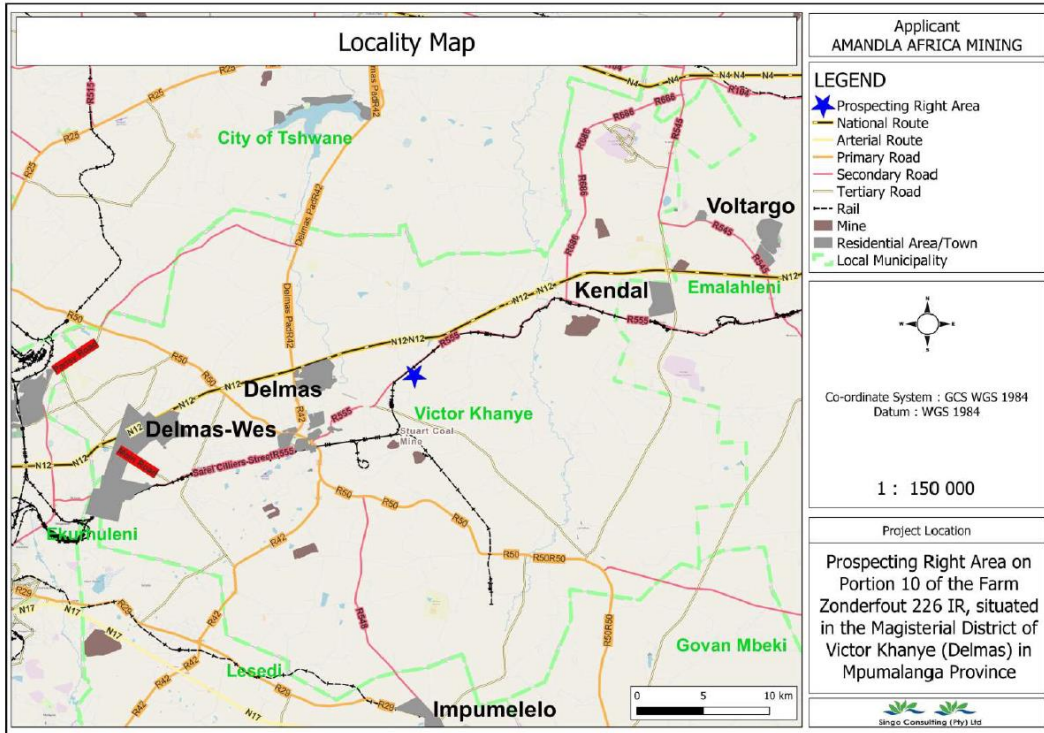
4. Please submit **within 14 days** from date of this letter for the attention of ***Mr Siyabonga Panduva 3 copies of a complete prospecting work programme prepared in terms of regulation 7 of the Mineral and Petroleum Resources Development Act, 2002 (Act no 28 of 2002): Mineral and Petroleum Development Regulation.***
  
5. Please take note that failure to adhere to the timeframe stipulated above and to submit any documentation required in terms of this notice will result into non-compliance with the provision of the Act and the Amendment Act and will result in your application being processed refusal.

Yours faithfully

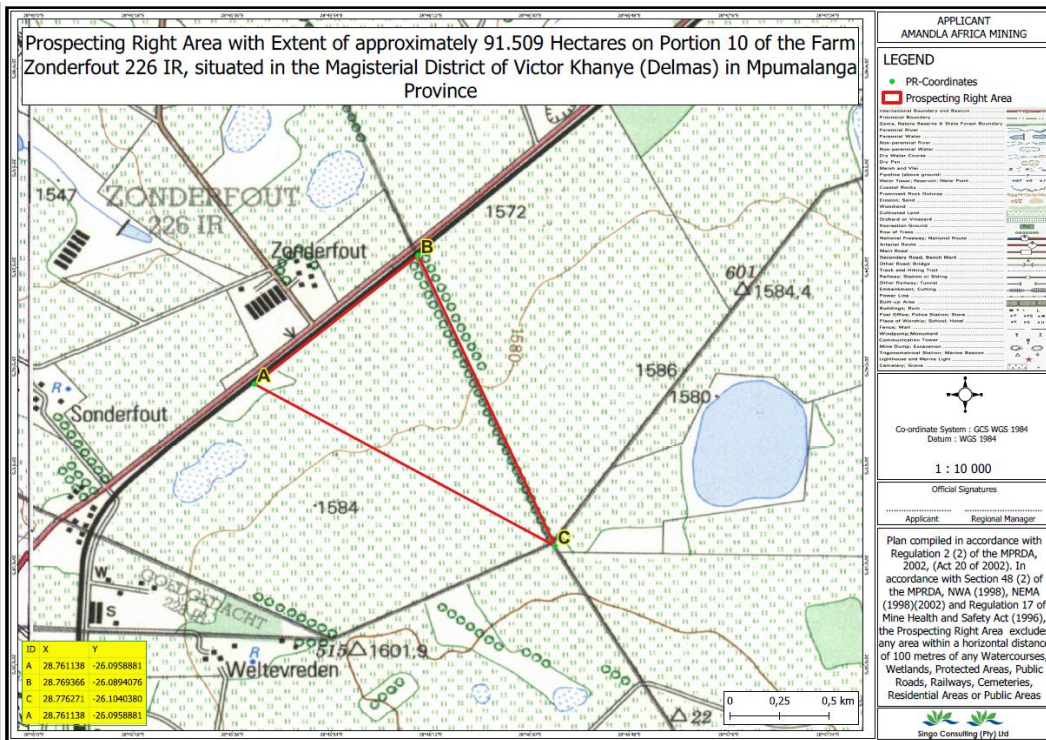


**REGIONAL MANAGER**  
**MPUMALANGA REGION**  
**DATE:** 22/05/2022

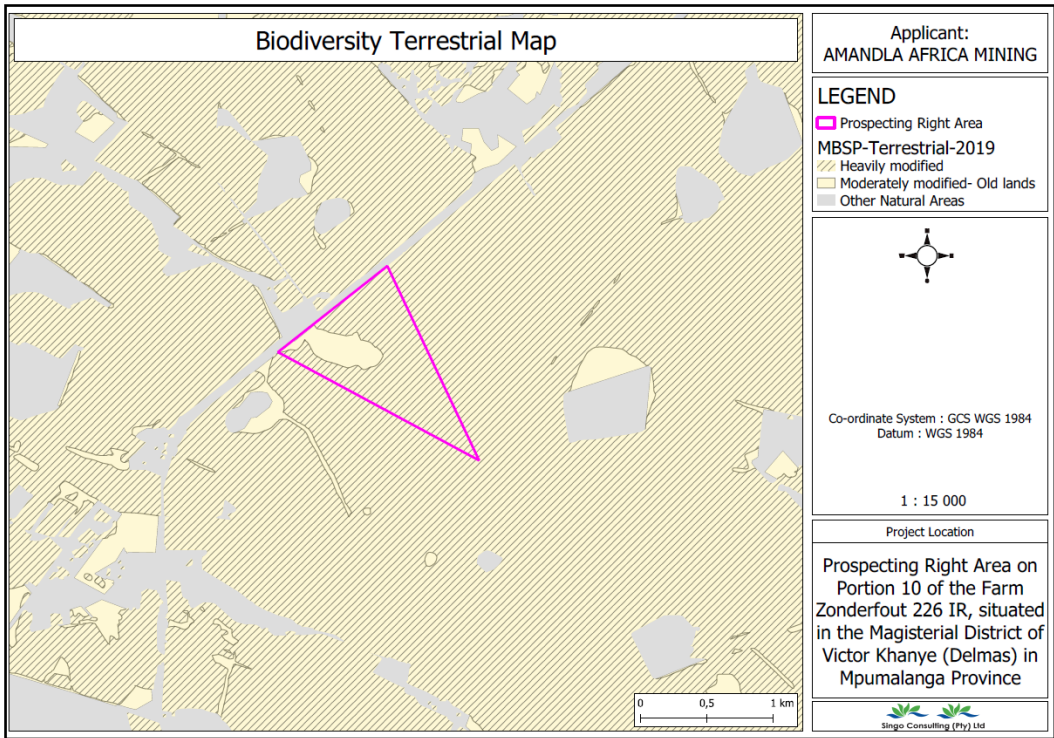
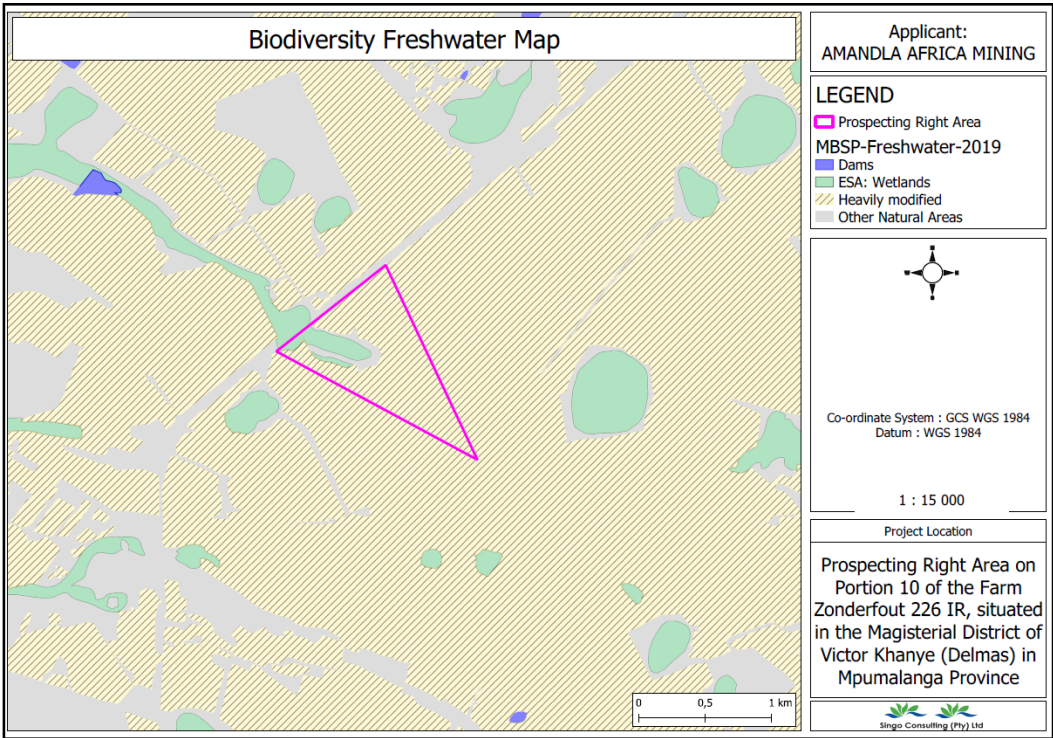
# APPENDIX 2: Project Maps



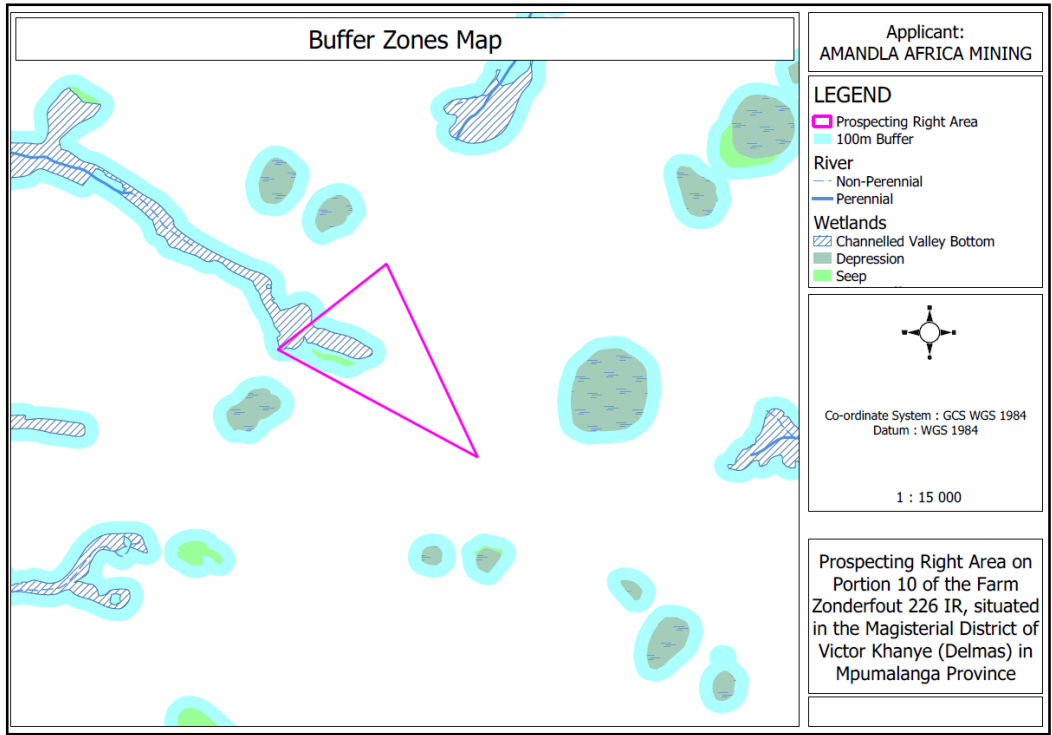
Locality Map



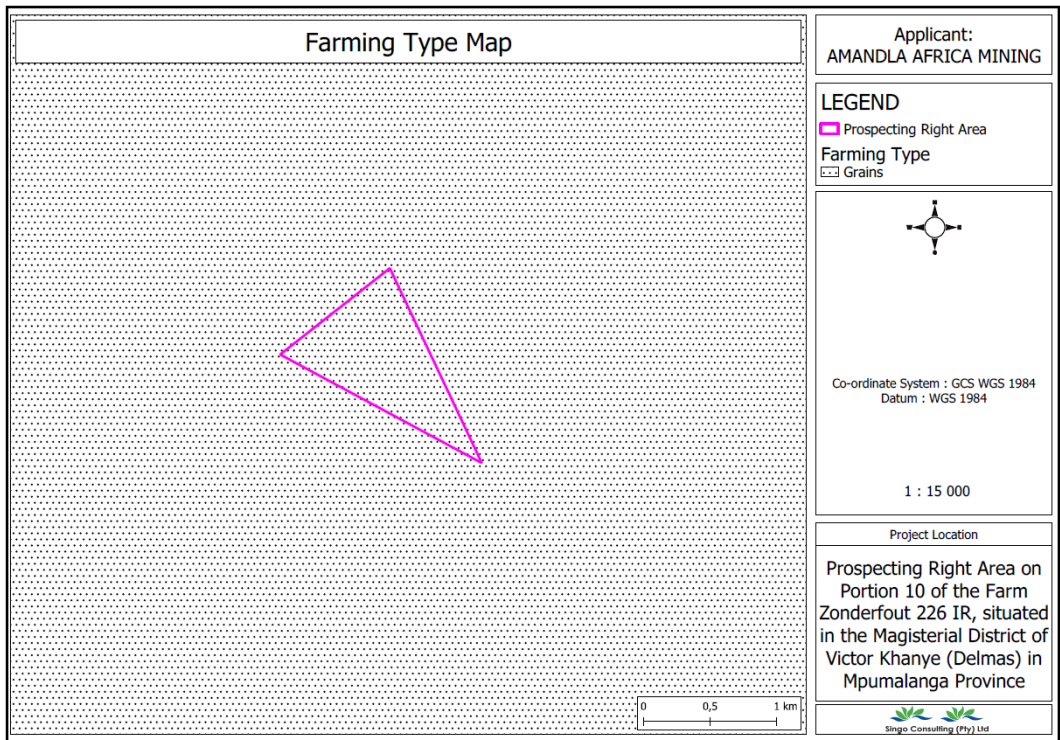
Regulation Map



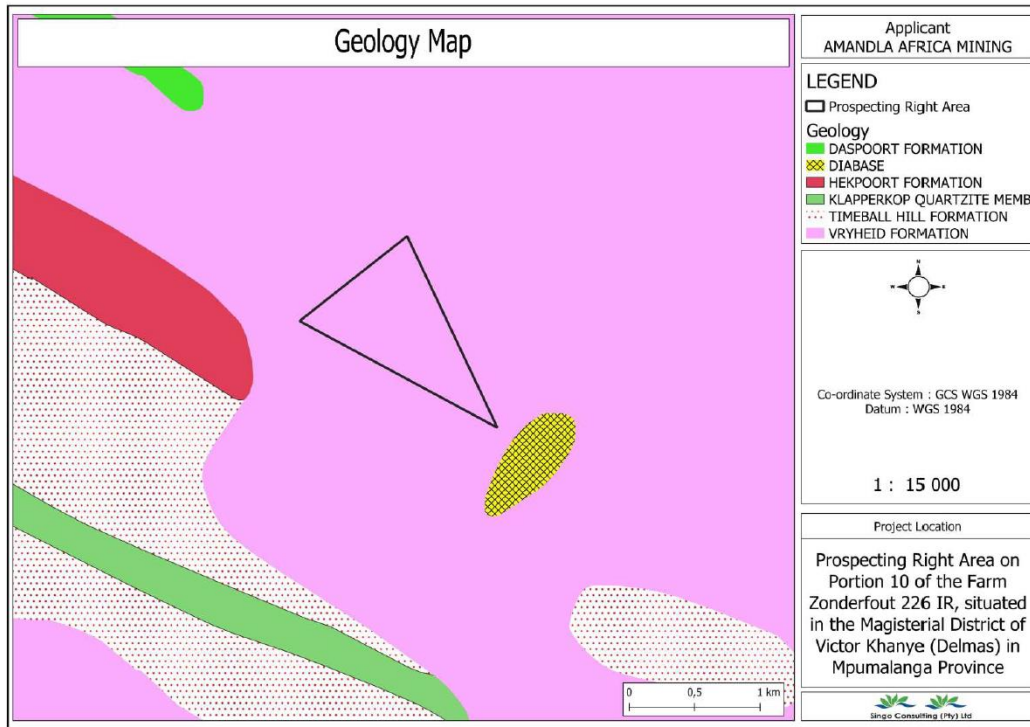
**Biodiversity Map**



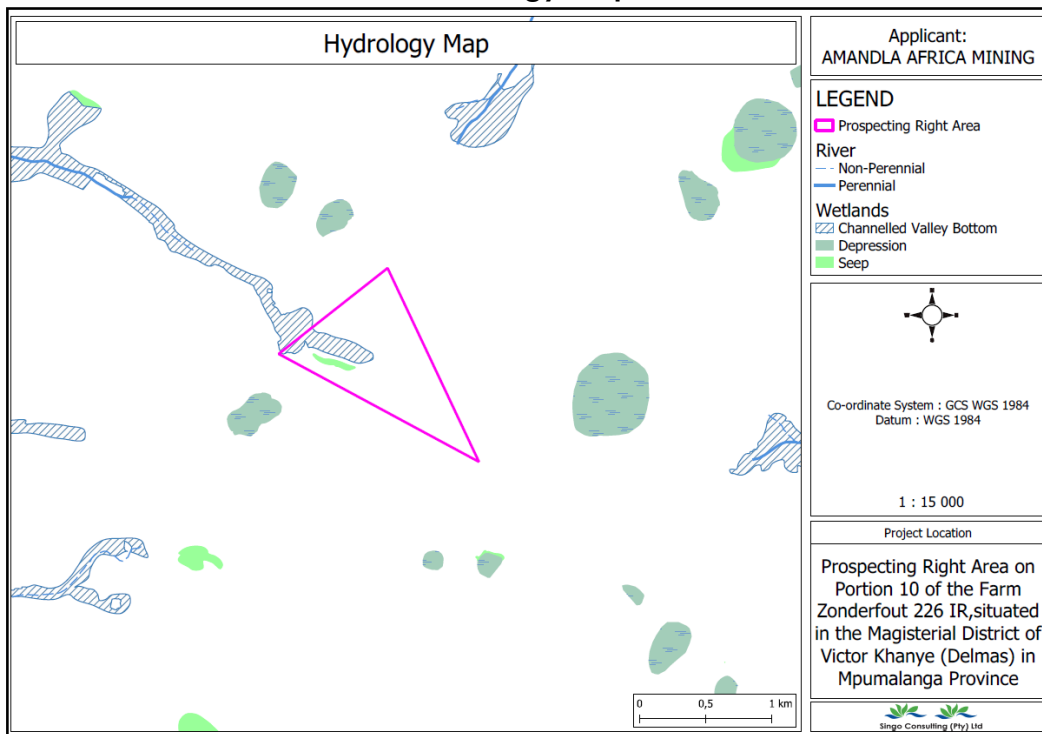
**Buffer Map**



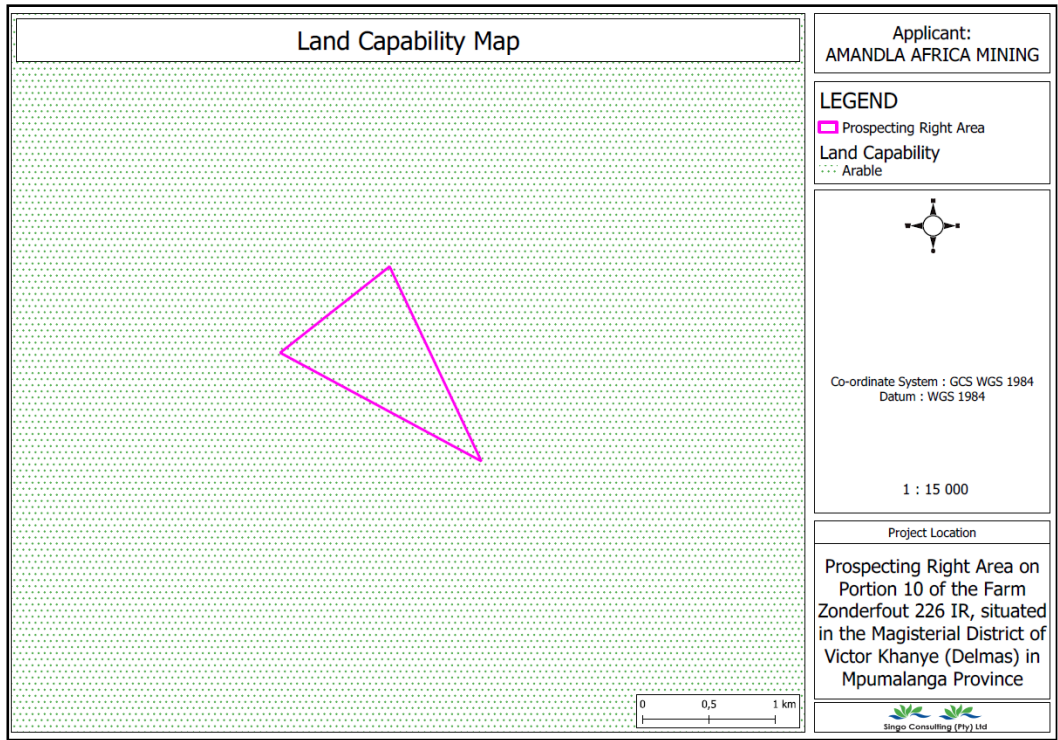
**Farming type Map**



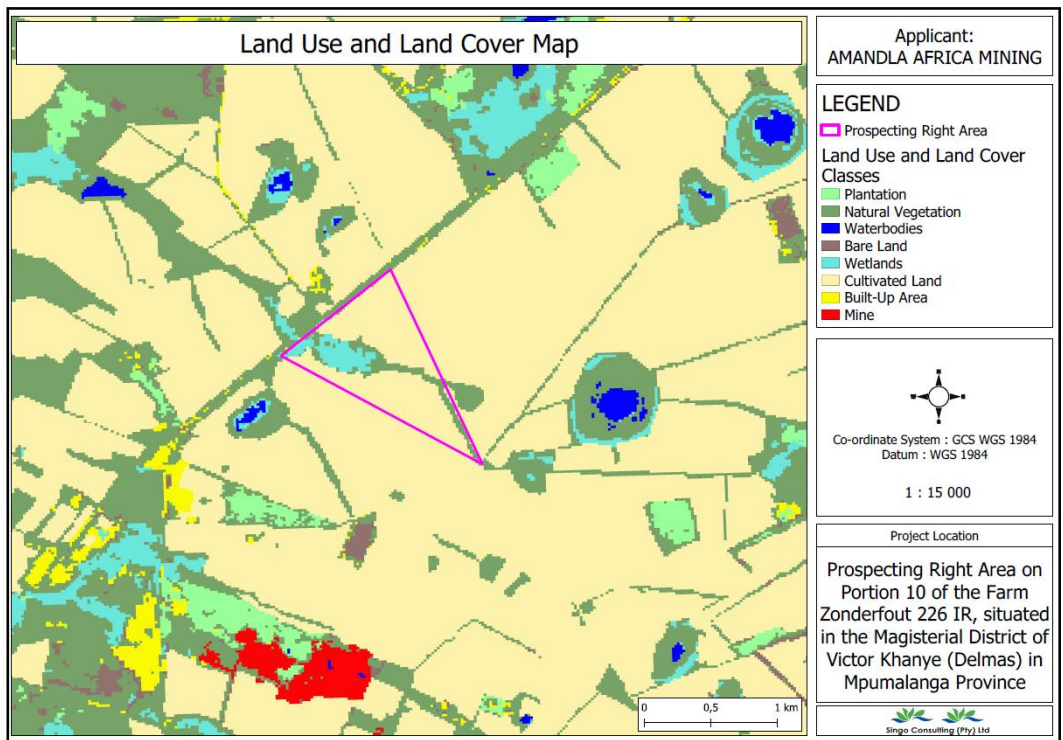
**Geology Map**



**Hydrology Map**

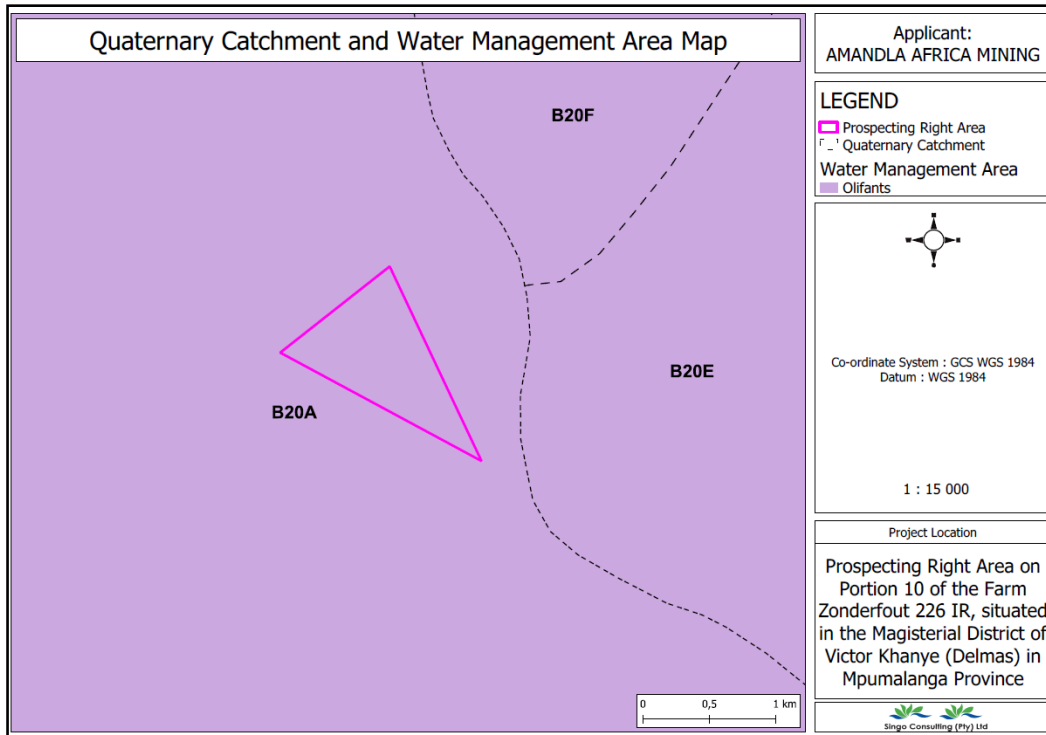


**Land Capability Map**

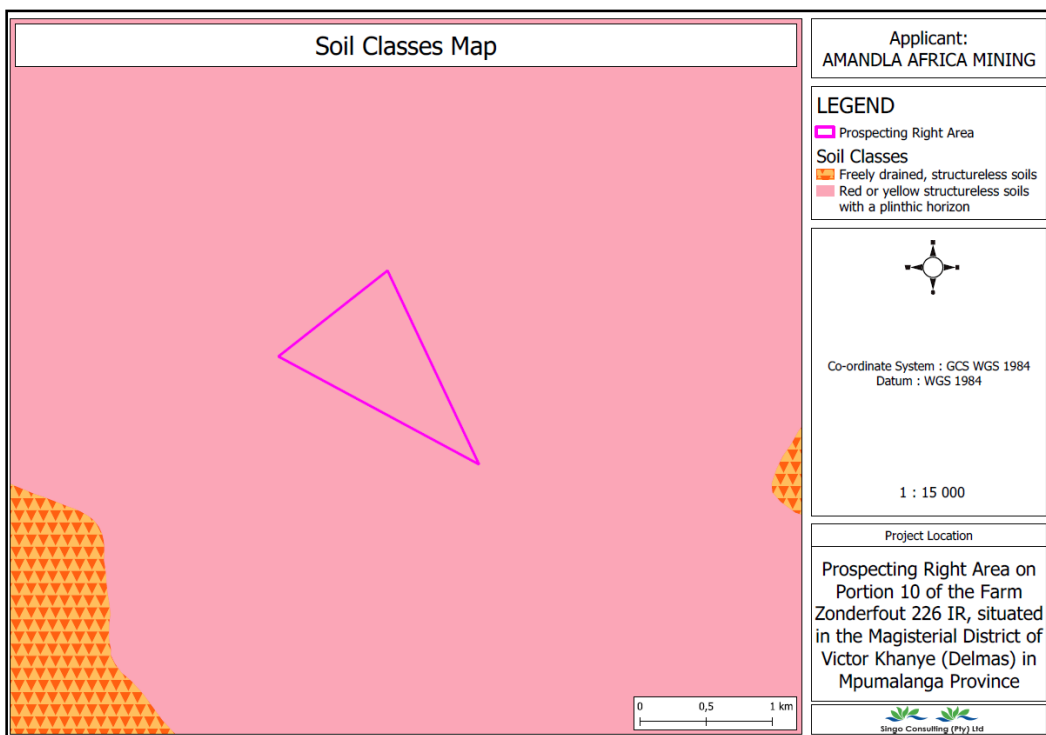


**Land Use and Land Cover Map**

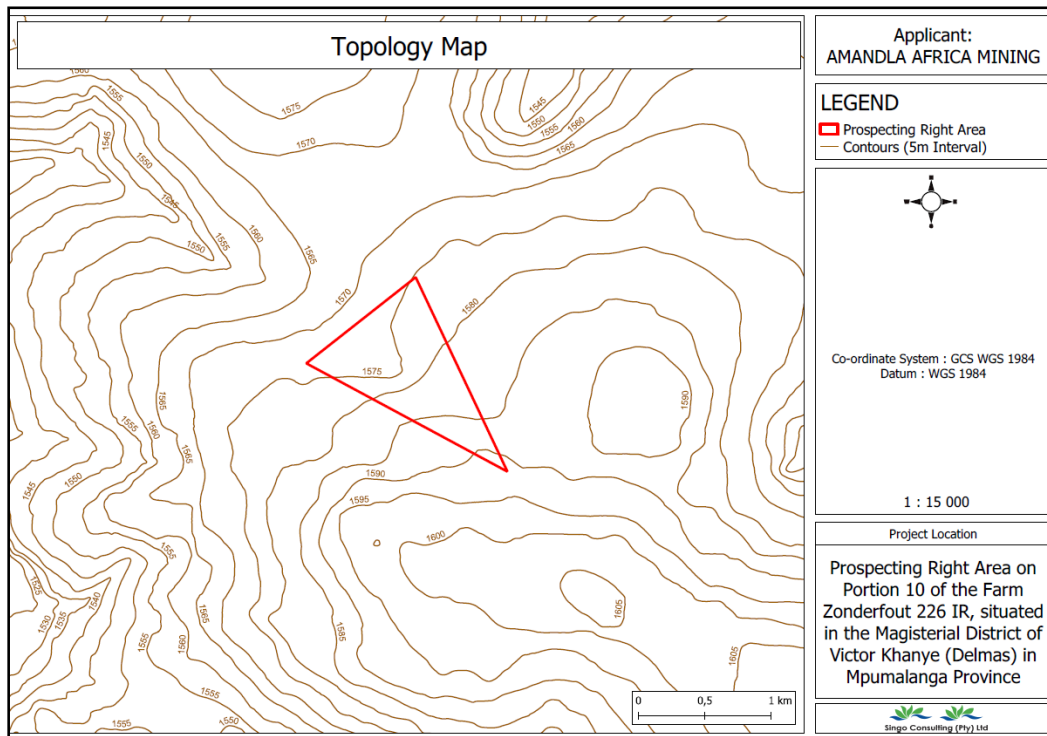




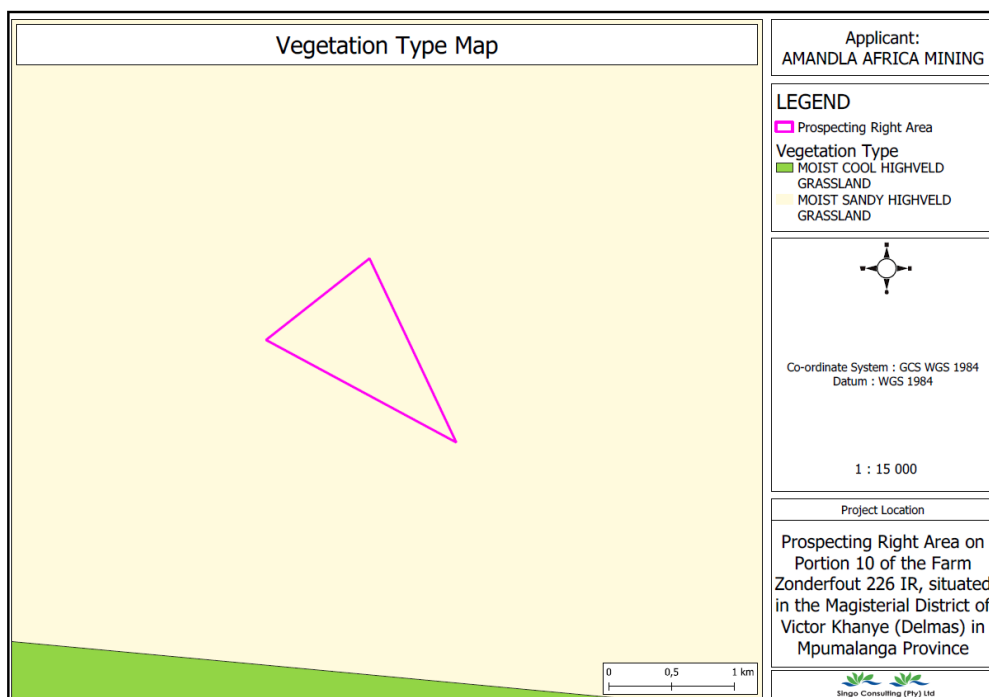
**Quaternary Catchment and Water Management Area**



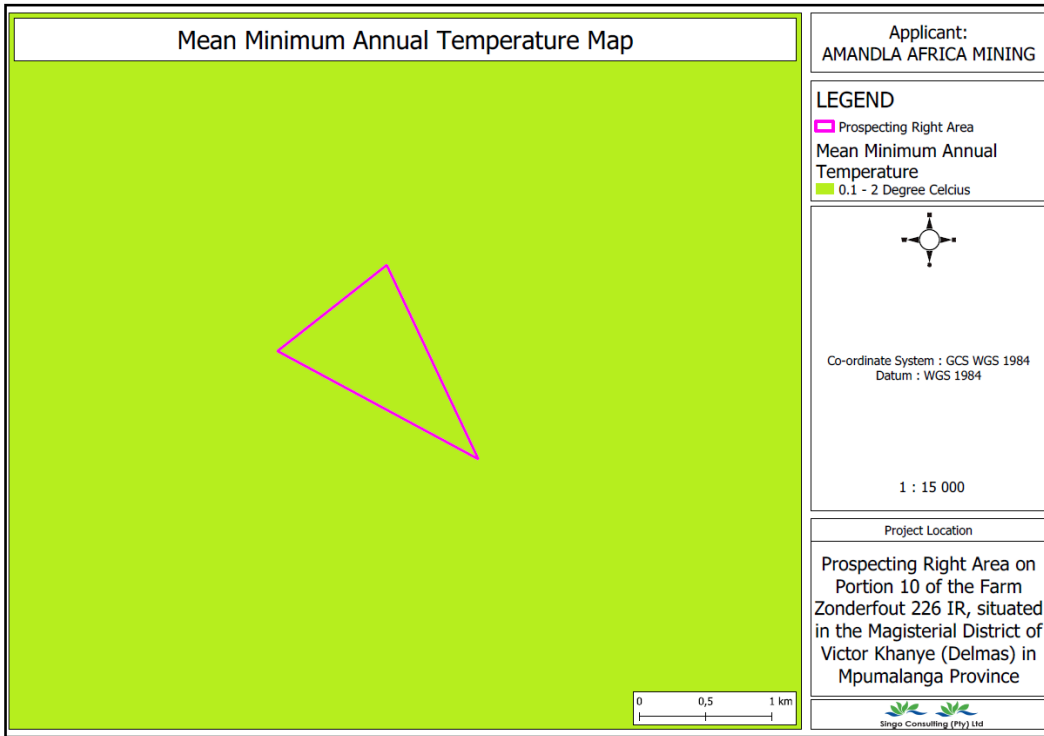
**Soil Class Map**



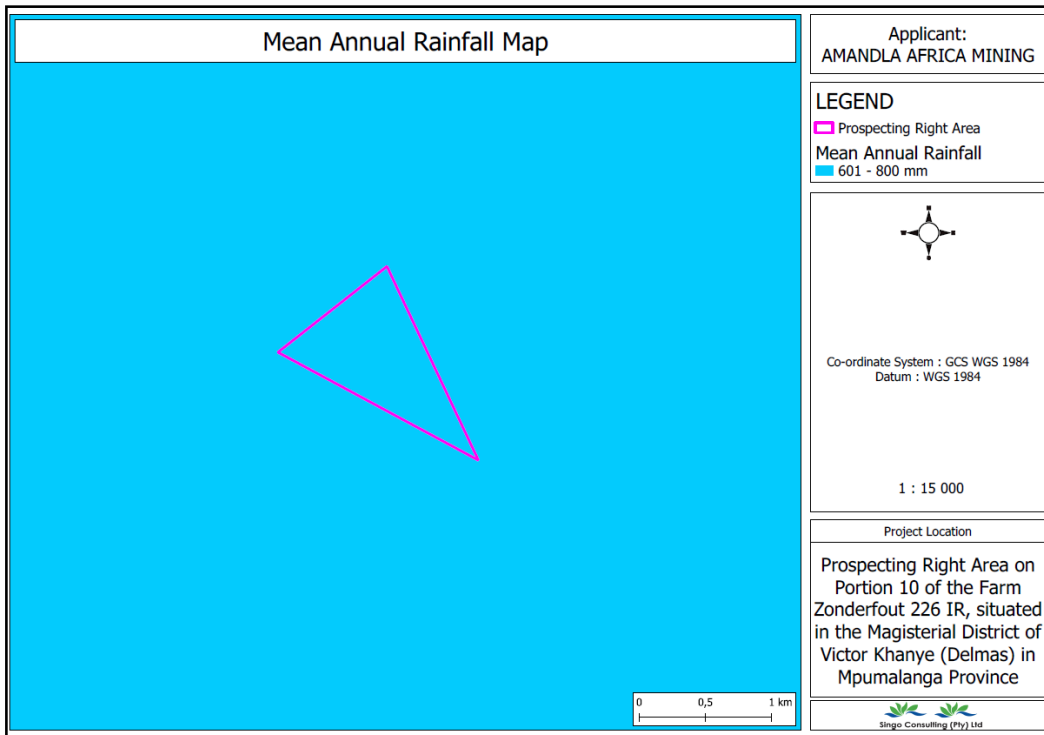
**Topology Map**



**Vegetation Map**



**Mean Minimum Annual Temperature Map**



**Mean Annual Rainfall Map**

### APPENDIX 3: Proof of Consultation and Site Assessment





# APPENDIX 4: Proof of Newspaper Publication.



Thabang Masango with his reward at the Ubuhle Care Athletics. (Photo: Supplied)

## Ubuhle Care hosts athletics

Ubuhle Care and Development held an athletics event on Friday, February 4. They were joined by Noah's Ark and had 1125 athletes that participated. Each crèche had a parade showing off their flags on the make-shift sport field. Activities included water racing, relay, ball catcher and the classic egg race and tug off war between the different schools. "These activities are important to children's sensorimotor development. "It is a great way for them to stimulate their growing bodies while having some well-deserved fun," said organiser, Nokuthula Ntuli.



Nathaniel Baesso with his gold medal. (Photo: Supplied)

## Dupies hou jaarlikse kleuteratletiek

Die Kleuteratletiekbyeenkoms het amptelik afgeskop met 10 verskillende kleuterskole op Bronkhorstpruit wat deelgeneem het by Laerskool Du Prez van Wyk. Sowat 370 kleuters het aan verskeie items deelgeneem. Die tema van die byeenkoms was op die plaas. Voertjies en Kruispruit skole het die sportdag aangebied. Daar was tourek, hoogspring, teikengooi, fietse, verspring en saellope.

Tjykkerland se onderwysers het die heel eerste aflosker in die geskiedenis gewen en het kragte gemeet met vier onderwysers elk van die ander skole. Vanjaar is trofies vir die beste kreet, beste ouerroll en beste onderwyssensitief uitgereik. Die onderwysers se items was sokspring vir 60m sowel as 60m-boontjies vir balans, 60m-saellope en 60m-eierloop. Daar was ook uitdane gehou en wenners is aangewys.



Amelia Taljaard op haar bromfietjie.



Aaira Mahmood jaag na die wenstroep.



Marchanele Nortien hou weg by die saellope.

**NOTICE OF A JOINT PUBLIC PARTICIPATION FOR PROSPECTING RIGHT AND ENVIRONMENTAL IMPACT ASSESSMENT APPLICATION.**

Application for Prospecting Right: **Amaandla Africa Mining** has lodged an application for prospecting right (DMRE Ref: MP 30/5/1/2/ (17264) PR) for the purpose of prospecting for Coal on portion 10 of the farm Danderton 226 IR, situated within Victor Khanye Local Municipality under Mankgalo District Municipality within the Magisterial District of Dikema, Mankgalo Province.

Notice is hereby given in terms of the Mineral and Petroleum Resources Development Act (MPRDA) (Act 28 of 2002) and SIA Regulations 2014, published under Government Notice No. 982 in Gazette No. 3822 of 8 December 2014, amended on 7 April 2017, that **Amaandla Africa Mining** has applied for Prospecting Right for the above-mentioned mineral.

**INVITATION TO COMMENT**

Registration as Interested & Affected Party: As part of the EIA process, more especially the Public Participation Process (PPP) for this proposed prospecting right project, interested and Affected Parties (I&APs) are invited to register and kindly submit any comments or concerns to reach **Mr Abel Mngqele** by no later than **Sunday the 10th of April 2022** on the contact details provided below. The public is also invited to review and comment on the Draft Basic Assessment Report (BAR) and Environmental Management Programme report (EMPR). The Draft BAR & EMPR will be available for review for 30 days calendar period from **Monday the 11th of April 2022 to Tuesday the 17th of May 2022**. The Draft BAR & EMPR will be available at **Delmas Public Library (for Sarah Chikwa & Van Rieboeckla, Delmas 2210)** and a soft copy upon request from **Singo Consulting (Pty) Ltd** using the detailed I&AP contact's below, via email, Dropbox link, Google drive, WhatsApp, etc.

**ENVIRONMENTAL ASSESSMENT PRACTITIONER AND APPLICANT'S DETAILS:**

CONSULTANT'S DETAILS	APPLICANT'S DETAILS
 <b>Singo Consulting (Pty) Ltd</b> Physical Address: Office No. 870, 5 Salsabaka Street, Tzabzi Park Est 2, Witbank, 1035. Contact person: Mr Abel Mngqele Tel No.: +27 13 692 0041 Fax No.: +27 13 654 4703 Cell No.: +27 71 362 7894 Email: abel@singoconsulting.co.za	 Plot 106 Dikema, Mankgalo, 2200 Contact person: Makhosi Todd Aphane Cell No.: +13 170 1472 Email: info@amaandlafrica.co.za

**NOTICE OF A JOINT PUBLIC PARTICIPATION FOR PROSPECTING RIGHT AND ENVIRONMENTAL IMPACT ASSESSMENT APPLICATION.**

Application for Prospecting Right: **Amaandla Africa Mining** has lodged an application for prospecting right (DMRE Ref: GP 30/5/1/2/ (18740) PR) for the purpose of prospecting for Coal on portion 13 of the farm Winkip 130 IR, situated within City of Tlokweng Metropolitan Municipality, within the Magisterial District of Bronkhorstpruit, Gaikgongwe Province.

Notice is hereby given in terms of the Mineral and Petroleum Resources Development Act (MPRDA) (Act 28 of 2002) and SIA Regulations 2014, published under Government Notice No. 982 in Gazette No. 3822 of 8 December 2014, amended on 7 April 2017, that **Amaandla Africa Mining** has applied for Prospecting Right for the above-mentioned mineral.

**INVITATION TO COMMENT**

Registration as Interested & Affected Party: As part of the EIA process, more especially the Public Participation Process (PPP) for this proposed prospecting right project, interested and Affected Parties (I&APs) are invited to register and kindly submit any comments or concerns to reach **Mr Abel Mngqele** by no later than **Sunday the 10th of April 2022** on the contact details provided below. The public is also invited to review and comment on the Draft Basic Assessment Report (BAR) and Environmental Management Programme report (EMPR). The Draft BAR & EMPR will be available for review for 30 days calendar period from **Monday the 11th of April 2022 to Tuesday the 17th of May 2022**. The Draft BAR & EMPR will be available at **Bronkhorstpruit Community Library | 44 Market St, Erasmus Bronkhorstpruit, 10200** and a soft copy upon request from **Singo Consulting (Pty) Ltd** using the detailed I&AP contact's below, via email, Dropbox link, Google drive, WhatsApp, etc.

**ENVIRONMENTAL ASSESSMENT PRACTITIONER AND APPLICANT'S DETAILS:**

CONSULTANT'S DETAILS	APPLICANT'S DETAILS
 <b>Singo Consulting (Pty) Ltd</b> Physical Address: Office 870, 5 Salsabaka Street, Tzabzi Park Est 2, Witbank, 1035. Contact person: Mr Abel Mngqele Tel No.: +27 13 692 0041 Fax No.: +27 13 654 4703 Cell No.: +27 71 362 7894 Email: abel@singoconsulting.co.za	 Plot 106 Dikema, Mankgalo, 2200 Contact Person: Makhosi Todd Aphane Cell: +13 170 1472 Email: info@amaandlafrica.co.za

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 KOM AANDEEL OP SKENK IN ONS WINKEL EN MAAK 'N VERSKIL IN DIE GEMEENSAP!  
 Spesiale aanbiedings kan op ons Facebook-klid gesien word. Gewen gerus na Ons Winkel Bronkhorstpruit  
 Lanhamstraat 44, Bronkhorstpruit  
**WWW.ONSWINKEL.CO.ZA**  
 PRIJ VAN LOGGERINGSRE 053 435 9330

**Tutela**  
 Tweedehandse Winkel  
 Kom snuffel rond in die winkel of skenk. Kleur, skoone en meer... Maak 'n verskil in die gemeenskap.  
 414 Seede Street in Ventersburg, Delmas  
 Weekdae 9:00 - 12:00 en 13:00 - 16:00  
 Vrydae van 9:00 tot 15:00  
 064 456 2315

**ONDERSTEUN ONS EIE OUTEHUIS DELMAS**  
 Ons verhoor alle: ledings, talle, tafels, wendings, alle glas en plastiekse saak wat in kassies is o.a.  
 Ten buite van Ons Eie Outehuus.  
 Kweek via Amy Drake  
 076 490 4334

# APPENDIX 5: Screening Report.

## SCREENING REPORT FOR AN ENVIRONMENTAL AUTHORIZATION AS REQUIRED BY THE 2014 EIA REGULATIONS – PROPOSED SITE ENVIRONMENTAL SENSITIVITY

EIA Reference number: 17260 PR

Project name: Portion 10 of the farm Zonderfout 226 IR

Project title: Portion 10 of the farm Zonderfout 226 IR

Date screening report generated: 03/03/2022 14:53:49

Applicant: Amandla Africa Mining

Compiler: Singo Consulting (Pty) Ltd

Compiler signature: 

Application Category: Mining|Prospecting rights

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## Proposed Project Location

### Orientation map 1: General location



## Map of proposed site and relevant area(s)



## Cadastral details of the proposed site

Property details:

No	Farm Name	Farm/ Erf No	Portion	Latitude	Longitude	Property Type
1	ZONDERFOUT	226	0	26°5'35.47S	28°45'36.2E	Farm
2	ZONDERFOUT	226	10	26°5'47.2S	28°46'8.13E	Farm Portion

Development footprint<sup>1</sup> vertices:

No development footprint(s) specified.

Wind and Solar developments with an approved Environmental Authorisation or applications under consideration within 30 km of the proposed area

No	EIA Reference No	Classification	Status of application	Distance from proposed area (km)
1	12/12/20/1923/2	Solar PV	Approved	18.9

<sup>1</sup> "development footprint", means the area within the site on which the development will take place and includes all ancillary developments for example roads, power lines, boundary walls, paving etc. which require vegetation clearance or which will be disturbed and for which the application has been submitted.

## Environmental Management Frameworks relevant to the application



Environmental Management Framework	LINK
Olifants EMF	<a href="https://screening.environment.gov.za/ScreeningDownloads/EMF/Zone_46,_67,_78,_80,_92,_103,_122,_129.pdf">https://screening.environment.gov.za/ScreeningDownloads/EMF/Zone_46, 67, 78, 80, 92, 103, 122, 129.pdf</a>

## Environmental screening results and assessment outcomes

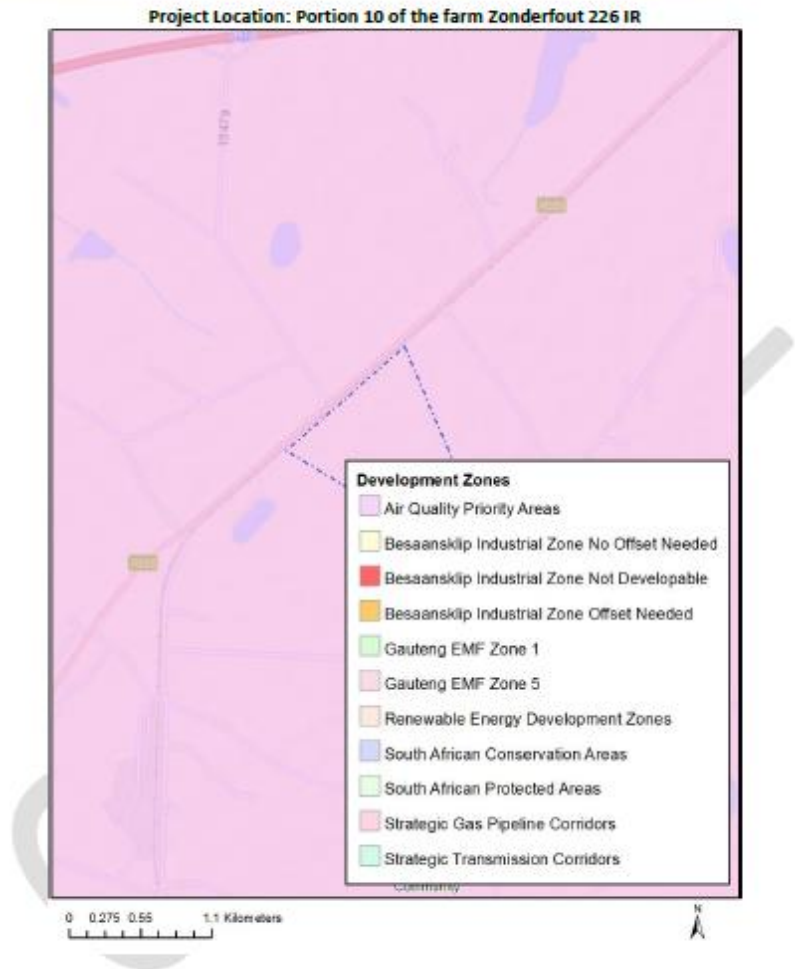
The following sections contain a summary of any development incentives, restrictions, exclusions or prohibitions that apply to the proposed development site as well as the most environmental sensitive features on the site based on the site sensitivity screening results for the application classification that was selected. The application classification selected for this report is: **Mining|Prospecting rights**.

### Relevant development incentives, restrictions, exclusions or prohibitions

The following development incentives, restrictions, exclusions or prohibitions and their implications that apply to this site are indicated below.

Incentive, restriction or prohibition	Implication
Strategic Transmission Corridor-International corridor	<a href="https://screening.environment.gov.za/ScreeningDownloads/DevelopmentZones/Combined_EGI.pdf">https://screening.environment.gov.za/ScreeningDownloads/DevelopmentZones/Combined_EGI.pdf</a>
Air Quality-Highveld Priority Area	<a href="https://screening.environment.gov.za/ScreeningDownloads/DevelopmentZones/HIGHVELD_PRIORITY_AREA_AQMP.pdf">https://screening.environment.gov.za/ScreeningDownloads/DevelopmentZones/HIGHVELD_PRIORITY_AREA_AQMP.pdf</a>

Map indicating proposed development footprint within applicable development incentive, restriction, exclusion or prohibition zones



### Proposed Development Area Environmental Sensitivity

The following summary of the development site environmental sensitivities is identified. Only the highest environmental sensitivity is indicated. The footprint environmental sensitivities for the proposed development footprint as identified, are indicative only and must be verified on site by a suitably qualified person before the specialist assessments identified below can be confirmed.

Theme	Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
Agriculture Theme		X		
Animal Species Theme		X		

Aquatic Biodiversity Theme	X			
Archaeological and Cultural Heritage Theme				X
Civil Aviation Theme		X		
Defence Theme				X
Paleontology Theme	X			
Plant Species Theme			X	
Terrestrial Biodiversity Theme	X			

### Specialist assessments identified

Based on the selected classification, and the environmental sensitivities of the proposed development footprint, the following list of specialist assessments have been identified for inclusion in the assessment report. It is the responsibility of the EAP to confirm this list and to motivate in the assessment report, the reason for not including any of the identified specialist study including the provision of photographic evidence of the site situation.

No	Specialist assessment	Assessment Protocol
1	Agricultural Impact Assessment	<a href="https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_General_Agriculture_Assessment_Protocols.pdf">https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_General_Agriculture_Assessment_Protocols.pdf</a>
2	Archaeological and Cultural Heritage Impact Assessment	<a href="https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_General_Requirement_Assessment_Protocols.pdf">https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_General_Requirement_Assessment_Protocols.pdf</a>
3	Paleontology Impact Assessment	<a href="https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_General_Requirement_Assessment_Protocols.pdf">https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_General_Requirement_Assessment_Protocols.pdf</a>
4	Terrestrial Biodiversity Impact Assessment	<a href="https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_Terrestrial_Biodiversity_Assessment_Protocols.pdf">https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_Terrestrial_Biodiversity_Assessment_Protocols.pdf</a>
5	Aquatic Biodiversity Impact Assessment	<a href="https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_Aquatic_Biodiversity_Assessment_Protocols.pdf">https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_Aquatic_Biodiversity_Assessment_Protocols.pdf</a>
6	Noise Impact Assessment	<a href="https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_Noise_Impacts_Assessment_Protocol.pdf">https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_Noise_Impacts_Assessment_Protocol.pdf</a>

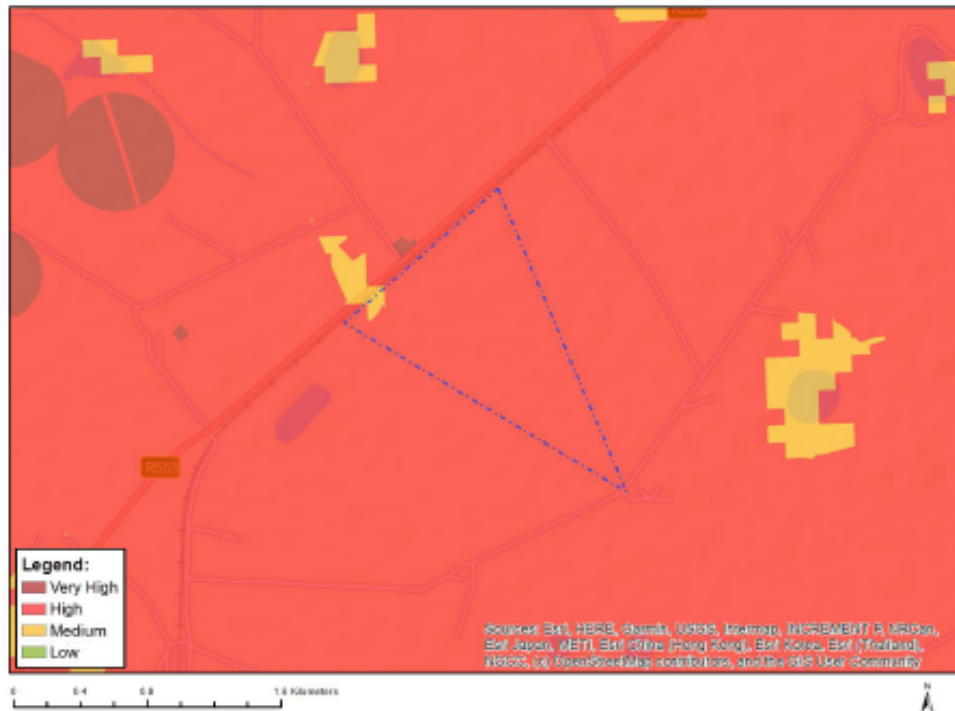
	ment	
7	Radioactivity Impact Assessment	<a href="https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_General_Requirement_Assessment_Protocols.pdf">https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_General_Requirement_Assessment_Protocols.pdf</a>
8	Plant Species Assessment	<a href="https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_Plant_Species_Assessment_Protocols.pdf">https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_Plant_Species_Assessment_Protocols.pdf</a>
9	Animal Species Assessment	<a href="https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_Animal_Species_Assessment_Protocols.pdf">https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_Animal_Species_Assessment_Protocols.pdf</a>

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## Results of the environmental sensitivity of the proposed area.

The following section represents the results of the screening for environmental sensitivity of the proposed site for relevant environmental themes associated with the project classification. It is the duty of the EAP to ensure that the environmental themes provided by the screening tool are comprehensive and complete for the project. Refer to the disclaimer.

### MAP OF RELATIVE AGRICULTURE THEME SENSITIVITY



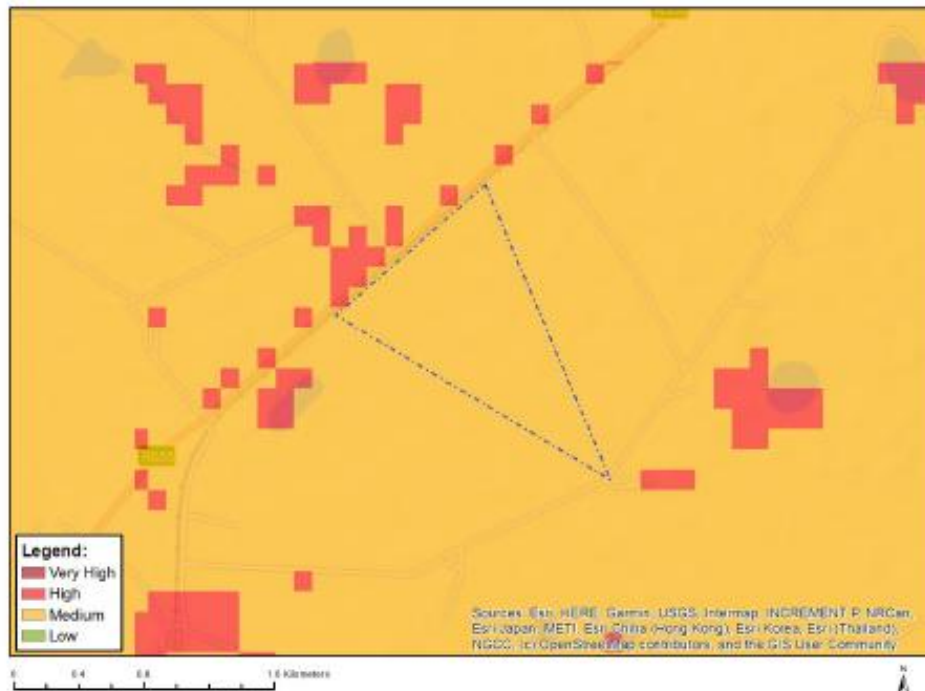
Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
	X		

#### Sensitivity Features:

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



## MAP OF RELATIVE ANIMAL SPECIES THEME SENSITIVITY



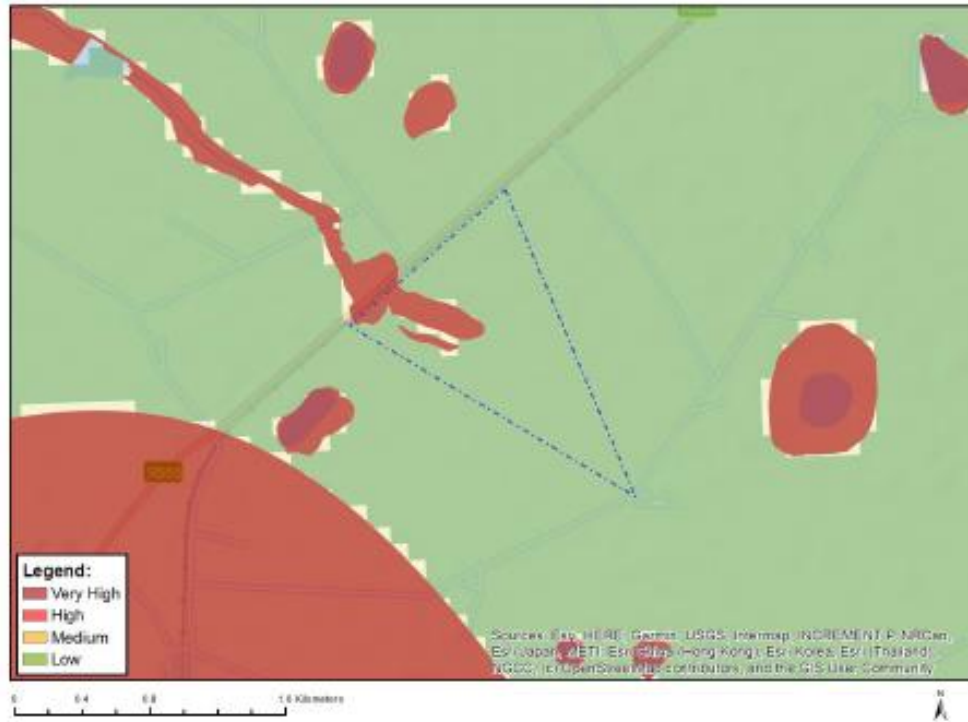
Where only a sensitive plant unique number or sensitive animal unique number is provided in the screening report and an assessment is required, the environmental assessment practitioner (EAP) or specialist is required to email SANBI at [ejadatarerequests@sanbi.org.za](mailto:ejadatarerequests@sanbi.org.za) 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-Tyto capensis
Medium	Invertebrate-Clonia uvarovi
Medium	Mammalia-Chrysospalax villosus
Medium	Mammalia-Crocidura maquassiensis
Medium	Mammalia-Dasymys robertsii
Medium	Mammalia-Hydrictris maculicollis

## 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	Wetlands and Estuaries

**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



## MAP OF RELATIVE DEFENCE THEME SENSITIVITY



Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
			X

### Sensitivity Features:

Sensitivity	Feature(s)
Low	Low Sensitivity

MAP OF RELATIVE PALEONTOLOGY THEME SENSITIVITY

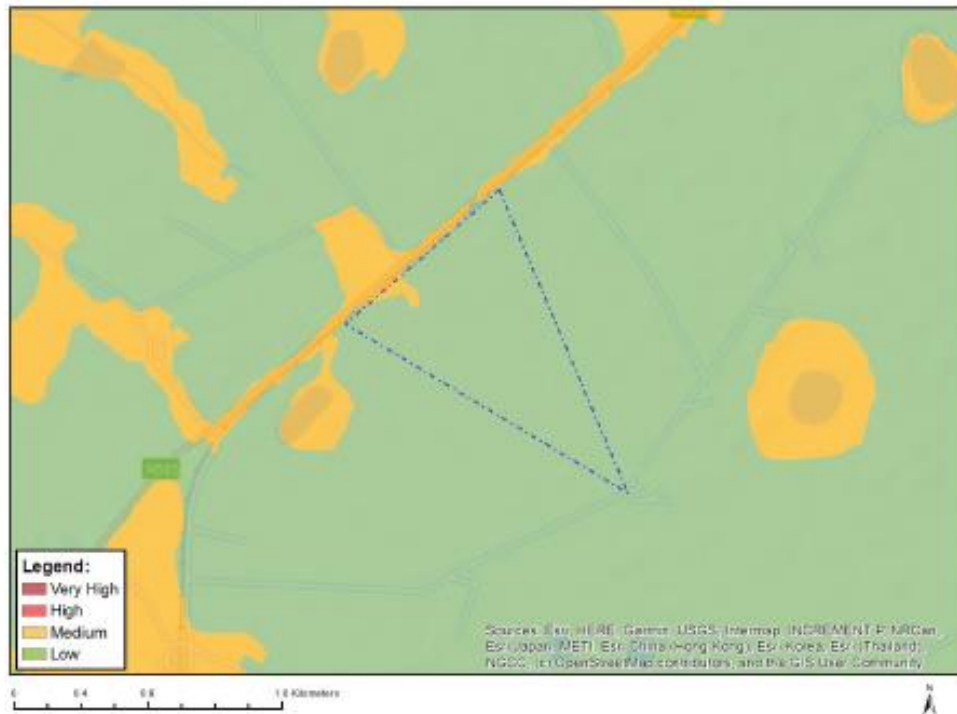


Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
X			

Sensitivity Features:

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

## MAP OF RELATIVE PLANT SPECIES THEME SENSITIVITY



Where only a sensitive plant unique number or sensitive animal unique number is provided in the screening report and an assessment is required, the environmental assessment practitioner (EAP) or specialist is required to email SANBI at [ejadatarerequests@sanbi.org.za](mailto:ejadatarerequests@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 691
Medium	<i>Pachycarpus suaveolens</i>
Medium	<i>Brachycorythis conica</i> subsp. <i>transvaalensis</i>





## **Appendix 6: EAPS CV**

(Due to POPI Act sensitive information will not be disclosed to the public)

## Appendix 7: Impact Management Outcomes.

Activity	Potential impact	Aspects affected	Phase	Mitigation type	Standard to be achieved
Whether listed or not, e.g. excavations, blasting stockpiles, discard dumps/dams, loading, hauling, transport, water supply dams/boreholes, accommodation, offices, ablution, stores, workshops, processing plant, storm water control berms, roads, pipelines, power lines, conveyors, etc.	Including the potential impacts for cumulative impacts, e.g. dust, noise, drainage surface disturbance, fly rock, surface water contamination, groundwater contamination, air pollution etc.		In which impact is anticipated e.g. construction, commissioning, operational, decommissioning, closure, post-closure.	Modify, remedy, control or stop through e.g. noise control measures, storm-water control, dust control, rehabilitation, design measures, blasting controls, avoidance, relocation, alternative activity etc. E.g. modify through alternative method. Control through noise control. Control through management and monitoring through rehabilitation.	Impact avoided, noise levels, dust levels, rehabilitation standards, end use objectives) etc.
Planning and Project Management	EMPr	Project Management	Planning	A finalized EMPr must address all authorization conditions stipulated by the DEA (and other commenting authorities). EMPr must encompass all environmental impact mitigation measures as identified in the final BAR.	MPRDA & NEMA
	Appointment of Environmental Officer	Project Management	Planning	The Amandla Africa Mining environmental geologist will serve as the Environmental Officer during construction, given the short duration of construction and the low Amandla Africa Mining environmental geologist will be responsible for monitoring the compliance of the construction workers and employees on site with the EMPr and ensure their co-operation.	MPRDA & NEMA
	Permits and Permissions		Planning	Victor Khanye Local Municipality must ensure that all licensing, permits or certificates required for the project are obtained and in place prior to the commencing of any construction activities on site.	MPRDA & NEMA

Activity	Potential impact	Aspects affected	Phase	Mitigation type	Standard to be achieved
	Emergency Response Planning	Safety and health personnel on site	Planning	Plan all emergency responses including: <ul style="list-style-type: none"> <li>• Response procedures to fires, explosions, or any accidents that will require rapid medical responses; and</li> <li>• Responses to community and stakeholder concerns and communication procedures with potentially affected parties (I&amp;AP).</li> </ul>	MPRDA & NEMA
	Project Schedule	Undertaking the project in a timeous manner	Planning	Plan and develop a construction sequence to alleviate noise generation during the construction phase.	N/A
	Method statement	Project Management	Planning	Ensure that a method statement has been compiled and submitted to the Site/Construction manager.	N/A
	Grievances	Project Management	Planning	Develop grievance mechanisms for the recording and management of complaints and grievances specifically including (but not limited to) grievances from those living in the area.	N/A
	Records and Administration	Project Management	Planning	Ensure the following are up to date and available on site: <ul style="list-style-type: none"> <li>• A complaint registers.</li> <li>• An approved method statements.</li> <li>• Copies of the EMPr.</li> <li>• Environmental Permits and authorizations.</li> <li>• Copies of weekly checklists, compliance reports, incidence reports and corrective action reports.</li> <li>• Photographs of areas of concern (photos of non-compliance areas as well corrective action).</li> <li>• Attendance registers of environmental awareness training.</li> </ul>	

Activity	Potential impact	Aspects affected	Phase	Mitigation type	Standard to be achieved
	Recruitment of Labour	Project Management	Planning	<ul style="list-style-type: none"> <li>Where possible, the contractor must make use of local labour in support of the local economy.</li> <li>Advertise employment opportunities adequately, so as not to limit application opportunities.</li> <li>Implement a transparent process of recruiting construction staff, following pre-established and accepted criteria.</li> </ul>	Basic Conditions of Employment Act, No. 75 of 1997 (as amended)
<b>PRE-DRILLING/EXPLORATION</b>					
	Site establishment	Project Management	Planning	<ul style="list-style-type: none"> <li>The Contractor must, in agreement with the Construction Manager, decide upon an area for the location of a construction camp. The construction camp should be properly demarcated and fenced, and be adequately sized, with enough space for site offices, construction vehicles, equipment, material and waste storage areas</li> <li>The construction camp must be located in an area with minimal damage or disturbance to the environment.</li> <li>Establish 'NO-GO' areas- where no construction personnel, equipment/machinery or vehicles are permitted. Any identified Environmental Sensitive or important areas should be designated as 'NO-GO' areas.</li> </ul>	
	Site Housekeeping	Project Management	Planning	<ul style="list-style-type: none"> <li>The construction camp should always be kept clean and orderly.</li> </ul>	
	Ablution Facilities	Project Management	Planning	<ul style="list-style-type: none"> <li>Enough toilet facilities should be provided near construction camp. The toilets should be</li> </ul>	

Activity	Potential impact	Aspects affected	Phase	Mitigation type	Standard to be achieved
				<p>properly covered and ventilated and should contain hand washing facilities.</p> <ul style="list-style-type: none"> <li>• Portable toilets should be properly secured to the grounds to avoid toppling in the case of a wind/storm event.</li> <li>• Ensure that all toilets function properly and are in a hygienic state. The toilets should be cleaned and emptied regularly.</li> <li>• Ensure that there are no spillages when toilets get cleaned and emptied.</li> <li>• Urination on site should be strictly prohibited.</li> </ul>	
<p><b>Site establishment activities (-ve):</b></p> <ul style="list-style-type: none"> <li>• Vegetation clearance</li> <li>• Topsoil stripping &amp; stockpiling</li> <li>• Drill pad compaction</li> <li>• Erection of office, toilets, fuel storage (if not by road tanker), water tanker, core storage</li> <li>• Vehicle movements</li> </ul> <p>Waste management</p>	Cultural and heritage	Destruction or loss of Cultural and Heritage Resources: No cultural/heritage artefacts have been identified on site	Construction/set-up	<ul style="list-style-type: none"> <li>• Environmental Permits and authorizations.</li> <li>• Copies of weekly checklists, compliance reports, incidence reports and corrective action reports.</li> </ul>	Heritage Act
	Noise	Noise Generation	Construction/set-up	<ul style="list-style-type: none"> <li>• Photographs of areas of concern (photos of non-compliance areas as well corrective action).</li> </ul>	SANS 10103
	Visual	Visual intrusion	Construction/set-up	<ul style="list-style-type: none"> <li>• Attendance registers of environmental awareness training.</li> </ul>	N/A
	Traffic	Increase in traffic volumes near the drilling	Construction/set-up	<ul style="list-style-type: none"> <li>• Traffic signs to be put around the site to notify motorist of the activities</li> </ul>	National Traffic Act Regulations

Activity	Potential impact	Aspects affected	Phase	Mitigation type	Standard to be achieved
		site		<ul style="list-style-type: none"> <li>Construction vehicles to make trips on/off site only when necessary</li> <li>Construction vehicles to adhere to local speed limits as far as possible when driving in around site</li> </ul>	
	Signage	Traffic volumes, safety	Construction/ set-up	<ul style="list-style-type: none"> <li>The construction management needs to communicate the commencement and duration of construction activities to the community.</li> <li>Clear signage needs to be put up to make and keep the community awareness of construction activities to prevent any hazardous occurrences.</li> <li>Provide adequate safety warning signage on the roads.</li> </ul>	National Traffic Act Regulations
	Dust fall	Dust fall and nuisance from activities	Construction/ set-up	<ul style="list-style-type: none"> <li>Wet suppression should be applied to ensure that no visible dust is raised by any of the prospecting operations;</li> <li>Separation of distance of minimum 500m, to be maintained between drill sites and dwellings; and</li> <li>Low vehicle speeds will be enforced on unpaved surfaces.</li> </ul>	GN R. 827 (NEMAQA)
	Soil and vegetation	The potential impact of the proposed prospecting on the vegetation would occur at proposed drilling sites and the	Construction/ set-up	<ul style="list-style-type: none"> <li>The soil disturbance and clearance of vegetation at drill pad areas will be limited to the absolute minimum required; No clear scraping (dozing) be carried out unless necessary to establish a level drill pad.</li> <li>Rather that surface vegetation is cleared to make way for the drilling rig leaving the roots intact so that vegetation can coppice and</li> </ul>	NEMBA

Activity	Potential impact	Aspects affected	Phase	Mitigation type	Standard to be achieved
		access routes used to get to these sites.		regrow; and <ul style="list-style-type: none"> <li>Disturbed areas will be re-vegetated with locally indigenous species as soon as possible.</li> </ul>	
	Animal life	Animal life will be affected in the immediate vicinity of the drilling rig. It is anticipated that the noise and general activity will keep the animal life away from the site while the prospecting is ongoing.	Construction/ set-up	<ul style="list-style-type: none"> <li>Environmental awareness training sessions should be part of the workers' induction and site workshops; and</li> <li>If any animals are encountered they must not be killed or injured, but should rather be removed or chased away from the site with the assistance of an animal specialist</li> </ul>	NEMBA
	Social	Friction between local residents/land owners and construction personnel	Construction/ set-up	<ul style="list-style-type: none"> <li>All operations will be carried out under the guidance of a strong, experienced manager with proven skills in public consultation and conflict resolution;</li> <li>All prospecting personnel will be made aware of the local conditions and sensitivities in the prospecting area and the fact that some of the residents may not welcome the</li> <li>prospecting activities in the area;</li> <li>There will always be a strict requirement to treat residents with respect and courtesy.</li> </ul>	NEMA
	Job creation	Employment will be created for the clearing of the land and	Construction/ set-up	<ul style="list-style-type: none"> <li>No mitigation measures required.</li> </ul>	NEMA

Activity	Potential impact	Aspects affected	Phase	Mitigation type	Standard to be achieved
		establishing the drilling site.			
	Storage and Disposal of Waste	Safety and aesthetic/ visual aspects of the property, as well as waste disposal practices	Construction/ set-up	<ul style="list-style-type: none"> <li>• Litter generated by construction workers must be collected in containers that are clearly labelled and disposed of weekly at registered waste disposal sites.</li> <li>• Enough weather- and vermin- proof bins should be placed on site for the disposal of solid waste. Littering on site should be strictly prohibited. The burning of waste on site should also be prohibited.</li> <li>• All waste generated from construction activities (building rubble, solid and liquid waste etc.), should be disposed of as frequently at an appropriately licensed refuse facility.</li> <li>• Minimize waste generation, e.g. by providing re-usable items and refillable containers (e.g. for drinking water) and adopt a 'cradle to grave' responsibility for wastes.</li> <li>• Comply with legal requirements for waste management and pollution control and employ "good housekeeping" and monitoring practices.</li> </ul>	National Waste Act
	Hazardous Waste	Safety and aesthetic/ visual aspects of the property, as well as waste disposal practices.	Construction/ set-up	<ul style="list-style-type: none"> <li>• Any hazardous waste that may be generated should be separated from general waste and stored in clearly marked and properly sealed secondary containers.</li> <li>• Any hazardous waste generated should be disposed of accordance with the Hazardous Chemical Substances Regulations, 1995 (Regulation 15).</li> </ul>	National Waste Act



Activity	Potential impact	Aspects affected	Phase	Mitigation type	Standard to be achieved
	Spills and Leaks	Safety and aesthetic/ visual aspects of the property, as well as waste disposal practices.	Construction/ set-up & Operation	<ul style="list-style-type: none"> <li>Any equipment that is leaking should be temporarily decommissioned and removed from the construction site to a surface with an impermeable surface and waste water collection system.</li> <li>Spill response kits must be readily available and accessible to all personnel on site.</li> </ul>	National Waste Act
	PPE			<ul style="list-style-type: none"> <li>Always Ensure that all persons on site use Personal Protective Equipment (PPE) , this including safety boots, safety vests, protective masks etc.</li> </ul>	Employment Act
	Illegal Fires			<ul style="list-style-type: none"> <li>Ensure that no fires are ignited on site unless required for construction purposes, in which case the EC should designate areas for the fires. The designated areas should be as far as possible from vegetation.</li> </ul>	NEMA
	Erosion	The properties of the receiving environment and ensuring that the ground is not susceptible to erosion beyond that which can be rehabilitated.	Construction/ set-up & Operation	<ul style="list-style-type: none"> <li>Ensure that erosion management and sediment controls are strictly implemented from the beginning of site clearing activities.</li> <li>All topsoil stockpiles (if any) must be protected against wind, erosion and seeds, i.e. by use of shade cloth or netting.</li> <li>Topsoil stockpiles should not exceed 2 m in height.</li> </ul>	NEMA
<b>PRE-DRILLING/EXPLORATION</b>					
<b>Exploration drilling (ve)</b> <ul style="list-style-type: none"> <li>Drilling</li> <li>Drill maintenance and refueling</li> </ul>	Noise	Noise generation	Operations	<ul style="list-style-type: none"> <li>Construction/setup, operational and decommissioning activities will be limited to daylight hours on Mondays to Saturdays from 08h00 – 17h00 and no activities on Sundays</li> </ul>	Heritage Act

Activity	Potential impact	Aspects affected	Phase	Mitigation type	Standard to be achieved
<ul style="list-style-type: none"> <li>Core sample collection and storage</li> <li>Vehicle movements</li> </ul> Waste generation and management				and public holidays. <ul style="list-style-type: none"> <li>Separation of distance of minimum 500m, but preferably 1000m to be maintained between drill sites and dwellings; Noise abatement equipment, such as mufflers on diesel engines, will be maintained in good condition.</li> <li>If intrusive noise levels are experienced by any person at any point, the source of the noise will be moved if practical, or it will be placed in an acoustic enclosure, or an acoustic barrier will be erected between the source and the recipient.</li> </ul>	
	Visual	Visual intrusions	Operations	<ul style="list-style-type: none"> <li>The drilling rig and other visually prominent items on the site will be in consultation with the landowner;</li> <li>Make use of existing vegetation as far as possible to screen the prospecting operations from view; and</li> <li>If necessary, the operations can be screened from view by erecting a shade cloth barrier.</li> </ul>	SANS 10103
	Traffic	Increase in traffic volumes near the drilling site	Operations	<ul style="list-style-type: none"> <li>Traffic signs to be put around the site to notify motorist of the activities</li> <li>Construction vehicles to make trips on/off site only when necessary</li> <li>Construction vehicles to adhere to local speed limits as far as possible when driving in around site</li> </ul>	N/A
	Dust fall	Dust fall and nuisance from activities	Operations	<ul style="list-style-type: none"> <li>Wet suppression will be applied to ensure that no visible dust is raised by any of the prospecting operations;</li> <li>Separation of distance of minimum 500m, to</li> </ul>	National Traffic Act Regulations

Activity	Potential impact	Aspects affected	Phase	Mitigation type	Standard to be achieved
				<p>be maintained between drill sites and 100m from dwellings; and</p> <ul style="list-style-type: none"> <li>• Low vehicle speeds will be enforced on unpaved surfaces.</li> </ul>	
	Soil and vegetation	Soil and vegetation disturbance from drill pad preparation	Operations	<ul style="list-style-type: none"> <li>• The soil disturbance and clearance of vegetation at drill pad areas will be limited to the absolute minimum required; No clear scraping (dozing) be carried out unless necessary to establish a level drill pad. Rather that surface vegetation be cleared to make way for the drilling rig leaving the roots intact so that vegetation can coppice and regrow; and</li> <li>• Disturbed areas will be re vegetated with locally indigenous species as soon as possible.</li> </ul>	GN R. 827 (NEMAQA)
	Animal life	Animal life will be affected in the immediate vicinity of the drilling rig. It is anticipated that the noise and general activity will keep the animal life away from the site while the prospecting is ongoing.	Operations	<ul style="list-style-type: none"> <li>• Measures implemented during site establishment should apply in this phase as well.</li> </ul>	NEMBA
	Social	Friction between residents/land owners and	Operations	<ul style="list-style-type: none"> <li>• All operations will be carried out under the guidance of a strong, experienced manager with proven skills in public consultation and</li> </ul>	NEMBA

Activity	Potential impact	Aspects affected	Phase	Mitigation type	Standard to be achieved
		construction personnel		<p>conflict resolution;</p> <ul style="list-style-type: none"> <li>All prospecting personnel will be made aware of the local conditions and sensitivities in the prospecting area and the fact that some of the residents may not welcome the prospecting activities in the area;</li> <li>There will always be a strict requirement to treat residents with respect and courtesy.</li> </ul>	
	Job creation	Employment will be created for the clearing of the land and establishing the drilling site.	Operations	<ul style="list-style-type: none"> <li>No mitigation measures required.</li> </ul>	Basic Conditions of Employment Act, No. 75 of 1997 (as amended)
<b>DECOMMISSIONING AND REHABILITATION</b>					
Rehabilitation of the drill sites and surroundings	Removal of construction structures	Ensuring the receiving environment is not impacted on any further, by dismantling machinery and equipment appropriately.	Rehabilitation	<ul style="list-style-type: none"> <li>Clear and completely remove from site all construction plant equipment, storage containers, signage, temporary fencing, temporary services, fixtures and any other temporary works; and</li> <li>Ensure that all access roads utilized during construction (which are not earmarked for closure and rehabilitation) are returned (as far as possible) to their state prior to construction.</li> </ul>	NEMA
	Waste and Rubble Removal	Visual aspects by preventing any further pollution.	Rehabilitation	<ul style="list-style-type: none"> <li>Clear the site of all inert waste and rubble, including surplus rock, foundations and batching plant aggregates.</li> <li>Load and haul excess spoil and inert rubble to fill in borrow pits / dongas or to dump sites indicated / approved by an environmental control specialist</li> </ul>	National Waste Act

Activity	Potential impact	Aspects affected	Phase	Mitigation type	Standard to be achieved
				<ul style="list-style-type: none"> <li>Remove from site all domestic waste and dispose of in the approved manner at a registered waste disposal site.</li> </ul>	
	Solid and Hazardous Waste			<ul style="list-style-type: none"> <li>Store hazardous waste as indicated in the approved Environmental Management Programme Report.</li> <li>Dispose of all hazardous waste not earmarked for reuse, recycling or resale at a registered hazardous waste disposal site.</li> <li>Remove from site all temporary fuel stores, hazardous substance stores, hazardous waste stores and pollution control sumps. Dispose of hazardous waste in the approved manner.</li> <li>Do not hose oil or fuel spills into a storm water drain or sewer, or into the surrounding natural environment.</li> <li>Dispose of all visible remains of excess material when exiting the site.</li> </ul>	National Waste Act
	Erosion protection		Rehabilitation	<ul style="list-style-type: none"> <li>Protect all areas susceptible to erosion and ensure that there is no undue soil erosion resultant from activities within and adjacent to the construction site.</li> <li>Retain shrubbery and grass species wherever possible.</li> <li>Perform regular monitoring and maintenance of erosion control measures.</li> </ul>	NEMA

## APPENDIX 8: Financial Provision.



Applicant:  
Evaluator:

Abel Mojapelo

### CALCULATION OF THE QUANTUM

Ref No.: GP30/5/1/1/2/ 17260 PR  
Date: 10-Apr-22

No.	Description	Unit	A	B	C	D	E=A*B*C*D
			Quantity	Master Rate	Multiplication factor	Weighting factor 1	Amount (Rands)
1	Dismantling of processing plant and related structures (including overland conveyors and powerlines)	m3	0	19	1	1	0
2 (A)	Demolition of steel buildings and structures	m2	0	271	1	1	0
2(B)	Demolition of reinforced concrete buildings and structures	m2	0	400	1	1	0
3	Rehabilitation of access roads	m2	6378,75	49	0,02	1	6251,175
4 (A)	Demolition and rehabilitation of electrified railway lines	m	0	471	1	1	0
4 (A)	Demolition and rehabilitation of non-electrified railway lines	m	0	257	1	1	0
5	Demolition of housing and/or administration facilities	m2	0	542	1	1	0
6	Opencast rehabilitation including final voids and ramps	ha	0	284292	1	1	0
7	Sealing of shafts adits and inclines	m3	0	146	1	1	0
8 (A)	Rehabilitation of overburden and spoils	ha	0	189528	1	1	0
8 (B)	Rehabilitation of processing waste deposits and evaporation ponds (non-polluting potential)	ha	0	236054	1	1	0
8 (C)	Rehabilitation of processing waste deposits and evaporation ponds (polluting potential)	ha	0	685612	1	1	0
9	Rehabilitation of subsided areas	ha	0	158701	1	1	0
10	General surface rehabilitation	ha	0,9	150138	0,2	1	27024,84
11	River diversions	ha	0	150138	1	1	0
12	Fencing	m	0	171	1	1	0
13	Water management	ha	0	57087	1	1	0
14	2 to 3 years of maintenance and aftercare	ha	0	19980	1	1	0
15 (A)	Specialist study	Sum	0			1	0
15 (B)	Specialist study	Sum				1	0
<b>Sub Total 1</b>							<b>33276,015</b>
1	Preliminary and General		3993,1218		<b>weighting factor 2</b>		3993,1218
					1		
2	Contingencies			3327,6015			3327,6015
<b>Subtotal 2</b>							<b>40596,74</b>
<b>VAT (15%)</b>							<b>6089,51</b>
<b>Grand Total</b>							<b>46686</b>

Singed: Abel Mojapelo  
Date: 10/04/2022