

**BASIC ASSESSMENT REPORT & ENVIRONMENTAL MANAGEMENT
PROGRAMME REPORT**

**PROSPECTING RIGHT APPLICATION FOR COAL ON PORTION 13 OF THE FARM WITKLIP
539 JR UNDER THE MAGESTRIAL DISTRICT OF BRONKHORSTSPRUIT, GAUTENG
PROVINCE.**

Prepared For:



Department of Minerals Resources & Energy

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2017



DMR Ref: GP 30/5/1/1/2 (10749) 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).

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DOCUMENT CONTROL

Project Title: Prospecting right and Environmental Authorisation application for Coal on portion 13 of the farm Witklip 539 JR.

Mineral Coal

Site Location Magisterial District of Bronkhorspruit, Gauteng Province.

Compiled For Amandla Africa Mining

Compiled By Abel Mojapelo

Reviewed By Dr Kenneth Singo

Submitted to Department of Mineral Resources and Energy

Version Draft

Date 2022

Disclaimer

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

Singo Consulting acts as an advisor to the Amandla Africa Mining and exercises all reasonable skill and care in the provision of its professional services in a manner consistent with the level of care and expertise exercised by members of the environmental profession.

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Where site inspections, testing or fieldwork have taken place, the report is based on the information made available by the Amandla Africa Mining or their nominees during the visit, visual observations and any subsequent discussions with regulatory authorities. The validity and comprehensiveness of supplied information has not been independently verified and, for the purposes of this report, it is assumed that the information provided to Singo Consulting is both complete and accurate. It is further assumed that normal activities were being undertaken at the site on the day of the site visit(s), unless explicitly stated otherwise.

These views do not generally refer to circumstances and features that may occur after the date of this study, which were not previously known to Singo Consulting (Pty) Ltd or had the opportunity to assess.

EXECUTIVE SUMMARY

Singo Consulting (Pty) Ltd has been appointed as an independent Environmental Consultant by Amandla Africa Mining (Pty) Ltd to conduct Environmental Impact Assessment (EIA), Compile an Environmental Management Programme report (EMPr) and undertake Public Participation Process (PPP). This is done for processes of acquiring Environmental Authorization for the proposed prospecting Right Application within Portion 13 of the farm Witklip 539 JR, under the Magisterial District of Bronkhorspruit, Gauteng Province. (DMRE Ref: GP 30/5/1/1/2/10749 PR).

The proposed project area is situated in Bronkhorspruit under City of Tshwane Metropolitan Municipality. The proposed area is situated approximately 11.55 km South east of Bronkhorspruit and the proposed area can be accessed using R960 road from Erasmus.

This Proposed right application requires authorization in terms of the following interlinked pieces of legislation: the Mineral and Petroleum Resources Development Act, 2002 (MPRDA, Act 28 of 2002), as amended and the National Environmental Management Act, 1998 (NEMA, Act 107 of 1998), as amended. These pieces of core legislation stipulate the required studies, reports, and legal processes to be conducted and the results thereof are to be submitted to the relevant authorities for approval prior to commencement.

Stakeholders were consulted through emails. The stakeholders that engaged thus far are (Adjacent landowners, landowner) who are to objecting to the project. Other stakeholders did not comment or raise issues thus far. A site notice, BID and Reg 2.2 map was left at the farm gate for adjacent landowner's attention since most of the gates were locked.

Portion 13 of the farm Witklip 539 JR is owned by Mr. Hans Van Rensburg, during the site assessment we acquired the contact details of Mr. Van Rensburg from the farm manager. The land owner was later consulted through emails and he requested to have a face to face meeting. Farm workers were also consulted at the compound and given the Background Information Document.

The farm is used for agricultural purposes, Transnet petroleum pipeline was also observed during the site assessment.

During site assessment the area was found to be ESA Local Corridor, CBA important Area and CBA Irreplaceable area. There is a water course situated within the Proposed area project area. There are no archaeological or heritage resources identified at the surface on site during site assessment however if any heritage resources are identified during prospecting all activities will be ceased and contact SAHRA immediately.

Environmental Specialist Studies

A comprehensive assessment was undertaken in support of the Prospecting Right Application.

The following baseline studies will be conducted, namely:

- Hydrogeological Study.
- Hydrological Study.
- Soils Study.

Alternatives

Prospecting is carried out in phases where the drilling and trenching activities and position to the sample soil depend on the previous phase. Therefore, it is difficult to predetermine the specific locations and scale of soil sampling and core drilling. Figure 1 demonstrates the total prospecting field Areas of risk to be avoided are also shown on the sensitivity maps in this report.

As feasible alternatives the following alternatives were investigated:

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

Amandla Africa Mining is a mining company that conducts mining immediately north to northwest of the study area and also has brick factories situated to the south of the study area. The infrastructure and services are therefore available in close proximity to the field of research. However, geological details suggested that the region can contain shale weathered to clay on the surface. The clay present in the area can be used in various applications with numerous quarries and brickworks located in the area, hence the purpose of Amandla Africa Mining to search along with coal for the clay mineral to can supply of form partnership with Amandla Africa Mining. The site is therefore, the preferred site and alternative sites were not considered.

- b) **The type of activity to be undertaken**

Potential land uses on the study area should not be affected by prospecting operations that are to take place. If the prospecting results suggest a viable reserve (coal and general clay) is available, the competent authority /ies must perform a detailed social and environmental impact assessment to secure environmental and mining right in compliance with the legislation. As part of the social and environmental impact assessments, alternative land uses for the mining would be investigated accordingly.

- c) **The design or layout of the activity**

The specific locations of intrusive drilling activities will be determined during Phase 1 of the Prospecting Work Programme. See Figure 2. All infrastructure to be developed will be mobile and temporary.

d) The technology to be used in the activity

Prospecting research would initially include a high-level review of desktops and future evaluation of desktop tools in terms of emerging technologies. This will include searching data for any previous drilling, trenching, sampling, exploration, existing maps and relevant useful historical data. Desktop research to be conducted will include the analysis of geological records, data prospecting, plans / maps, aerial photos, maps of topography, land use and any other geological details specific to the particular region.

More potential exploration, trenching and resource assessments will be conducted after successful completion of this desktop analysis, if the findings warrant it. The type of invasive prospecting practices was defined on the basis of the historical effectiveness of the methods to be used. Nonetheless, the prospecting activities are, as mentioned above, based on the preceding (non-invasive) step and thus no alternatives are suggested but rather a phased approach of trusted prospecting techniques.

Diamond core exploration is expected to be carried out step by step. In the desktop analysis, expected borehole depths will be calculated but drilling operations are projected to be carried out down to fairly shallow depths. Logging and sampling of the center of the borehole will be done to assess the area. Trenching may include digging trenches by means of graders and excavators down to approximately 3 meters below level. Mapping of the trench walls is then carried out.

e) The operational aspects of the activity

No permanent facilities are required, including water , electricity, or sewerage installations. All the infrastructure to be built, including generators, portable toilets and water tanks, will be mobile and temporary.

f) The option of not implementing the activity

A development must be ecologically sustainable, and must also support socio-economic development, according to Section 24 of the Constitution of Government.

Failure to enforce the prospecting activities would result in a loss of mineral resource knowledge present on the study area. If commercially viable reserves exist in the study region and the applicant is unable to explore, the potential will be lost to use the reserves for future mining and brick making, i.e. the resources will be sterilized and the resulting socio-economic benefits will be lost.

The proposed prospecting activities have the potential to adversely affect both the ecological environment as well as the area's social environment. However, as demonstrated by the impact evaluation, these impacts can theoretically be avoided, reduced, mitigated and controlled from low to very low levels.

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 the 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.

TABLE OF CONTENTS

IMPORTANT NOTICE.....	8
OBJECTIVE OF THE BASIC ASSESSMENT PROCESS.....	9
PART A.....	14
SCOPE OF ASSESSMENT AND BASIC ASSESSMENT REPORT.....	14
1. Contact person and correspondence address.....	14
2. Location of the overall activities.....	15
2.1 Description of the scope of the proposed overall activities.....	18
2.2 Listed and specified activities.....	19
2.3 Description of the activities to be undertaken.....	19
2.3.1 Phase 1A: Data collection and review.....	20
2.3.2 Phase 1B: Data review report and gap analysis.....	20
2.3.3 Phase 2: Geology and resources.....	20
.....	23
2.3.4 Phase 3: Topographic survey.....	23
2.3.5 Phase 4: Geophysical investigations.....	23
2.3.6 Phase 5: Mineral processing and metallurgical testing.....	23
2.3.7 Phase 6: Reporting.....	24
2.4 Auxiliary Activities.....	24
2.4.1 Access roads.....	24
2.4.2 Ablution facilities.....	25
2.4.3 Temporary office area.....	26
2.4.4 Accommodation.....	26
2.4.5 Blasting.....	26
2.4.6 Storage of dangerous goods.....	26
2.5 Policy and legislative context.....	28
2.6 Need for and desirability of the proposed activities.....	32
2.7 Process followed to reach the proposed preferred alternatives within the site.....	36
2.8 Type of activity to be undertaken.....	36
2.8.2 Operational aspects of the activity.....	37
2.8.3 Option of not implementing the activity.....	38
2.8.4 Details of the public participation process followed.....	38
2.9 Summary of issues raised by I&APs.....	44
2.10 The environmental attributes associated with the alternatives.....	53
3.1.1 Gradient and landscape context.....	53

3.1.2	Climate	53
3.1.3	Geology.....	58
3.2	Hydrological Status of study area	62
	Surface Water	62
	Hydrogeology	63
	Shallow weathered aquifer.....	64
	Fractured aquifer	64
3.3	Land Capability and Land Use	67
3.4	Biodiversity	69
3.4.2	Fauna	69
3.4.3	Vegetation and Ecosystems	69
3.5	Heritage Resources	71
3.6	General air quality in Gauteng.....	71
3.12	Impacts and associated activities	81
3.12.1	Methodology used in determining and ranking the nature, significance, consequences, extent, duration and probability of potential environmental impacts and risks	81
3.13	Assessment of each identified potentially significant impact and risk	86
3.14	Summary of baseline reports	97
3.15	Environmental impact statement	100
3.16	Final site map	100
3.16.1	Positive and negative impacts, and risks of the proposed activity and alternatives	101
3.16.2	Proposed impact management objectives and outcomes for inclusion in the EMPr ...	101
3.16.3	Aspects for inclusion as conditions of authorisation	102
3.17	Undertaking.....	104
3.18	Financial provision	104
	Calculation of the quantum	105
3.19	Specific Information required by the competent Authority.	109
3.19.1	The EIA report must include the:.....	109
4.	PART B	110
4.1	Environmental management programme	110
4.2	Impacts to be mitigated in their respective phases	112
4.3	Impact Management Outcomes	116
4.4	Impact Management Actions.....	124
4.5	Determination of the amount of financial provision.....	127
4.6	Environmental Assessment Practitioners	130
4.7	Compliance monitoring against the Environmental Management Programme	131
4.8	Indicate performance assessment/environmental audit report submission frequency	133

FIGURES

Figure 1. Map showing locality of the proposed project.	16
Figure 2: Regulation map of the proposed prospecting areas.....	17
Figure 3: The drill site layout plan showing areas where specific activities will take place in the project area.	18
Figure 4: Typical example of Diamond Core drill rig and drill bits.	21
Figure 5: A typical illustration of Directional drilling.	21
Figure 6: A Reverse Circulation drill rig.	22
Figure 7: proposed borehole map.	23
Figure 8: Access roads to the proposed project areas.	24
Figure 9: Example of water storage tanks.	25
Figure 10: An image showing a typical example of mobile toilets.	25
Figure 11: Temporary offices shade.	26
Figure 12: Example of an above-ground diesel storage tanks.....	27
Figure 13: Proof of newspaper publication in Streeknuus (red rectangle).	41
Figure 14: Windeed results.	42
Figure 15: Placement of site notices.	43
Figure 16: Average temperature and precipitation in Bronkhorspruit.....	54
Figure 17: Mean Annual Rainfall map of the proposed area.....	55
Figure 18: Mean Minimum Annual Temperatures	56
Figure 19: Wind rose of Bronkhorspruit.	57
Figure 20: Topography of the prospecting right area.	58
Figure 21: Geological map of the area.....	60
Figure 22: Soil Class Map.	61
Figure 23: Type of soil found on site during site assessment.	62
Figure 24: Presentation of the WMA, sub-WMA and catchments relevant to the study area.	63
Figure 25: Aquifer classification of South Africa.....	65
Figure 26: Hydrological map for the proposed prospecting area.....	66
Figure 27: Hydrological buffer map of the proposed area.....	67
Figure 28: Land use map for the proposed prospecting area.	68
Figure 29: Biodiversity map of the proposed project area.....	69
Figure 30: Type of vegetation found on the proposed project area during site visit.	70
Figure 31: VEGETATION MAP OF THE PROJECT AREA.	70
Figure 32: Major sources of atmospheric particles and/gases in Gauteng.....	73
Figure 33: Population Composition	75
Figure 34: Education levels in the city of Tshwane Metropolitan Municipality.....	76
Figure 35: GVA-R Average Annual Growth of the city of Tshwane Metropolitan Municipality.....	76
Figure 36: Average Income of households within city of Tshwane Metropolitan Municipality.....	77
Figure 37: Economic Sectoral Contribution within the City of Tshwane Metropolitan Municipality Metropolitan Municipality.....	78
Figure 38: Current Land use within and around the proposed area.	79
Figure 39: Land Use Classes of the Study Area.....	80

TABLES

Table 1: Location of the prospecting area.	15
Table 2: Listed and specified activities.	19
Table 3: Applicable Legislation to this application.	28

Table 4: Need and desire	33
Table 5: Identified key stakeholders.....	43
Table 6: Summary of issues raised during the public comment period.....	44
Table 7: Aquifer characterization.....	65
Table 8: The following are potential impacts associated with the prospecting activity:.....	81
Table 9: Criteria used to determine the consequence of the impact.	82
Table 10: Method used to determine the consequence score	82
Table 11: Probability classification.....	83
Table 12: Impact status and confidence classification.....	83
Table 13: Types of impact	83
Table 14: Definitions of impact significance	84
Table 15: Impact assessment.	86
Table 16: Summary of identified impacts.	100
Table 17: Expenditure per activity.	107
Table 18: Impact mitigation and rehabilitation.	112
Table 19: Impact management.	116
Table 20: Impact management actions.	124
Table 21: Rehabilitation measures.	128
Table 22: Monitoring mechanisms.....	131

APPENDICES

Appendix 1: PROJECT MAPS	137
Appendix 2: Proof of newspaper Publication.....	149
Appendix 3: Site Pictures & Plugging of site notices	150
Appendix 4. IMPACT MANAGEMENT OUTCOMES	153
Appendix 5: EAPS CV.....	175

PART A

SCOPE OF ASSESSMENT AND BASIC ASSESSMENT REPORT

1. Contact person and correspondence address

a) Details of the Environmental Assessment Practitioner

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b) EAP Manager and Project Reviewer

Education

Kindly refer to Company`s profile on Appendix J.

2. Location of the overall activities

The following table presents the location and associated cadastral details associated with the area in question.

Table 1: Location of the prospecting area.

Farm name(s)	Portion 13 of the farm Witklip 539 JR		
Application area (ha)	Approximately 254.294 ha		
Magisterial District	Bronkhorspruit		
Distance and direction from nearest town	Town	Distance (km)	Direction
	Erasmus	8.86 km	South East
	Bronkhorspruit	11 km	South East
21-digit Surveyor General Code for each farm portion	TOJR00000000053900013		

Locality map (Show nearest town, scale not smaller than 1:250,000)

The proposed project area is situated at approximately 8.86 km southeast of Erasmus and 11 km south east of Bronkhorspruit under City of Tshwane Metropolitan Municipality. The proposed project area can be accessed using R960 from Erasmus town.

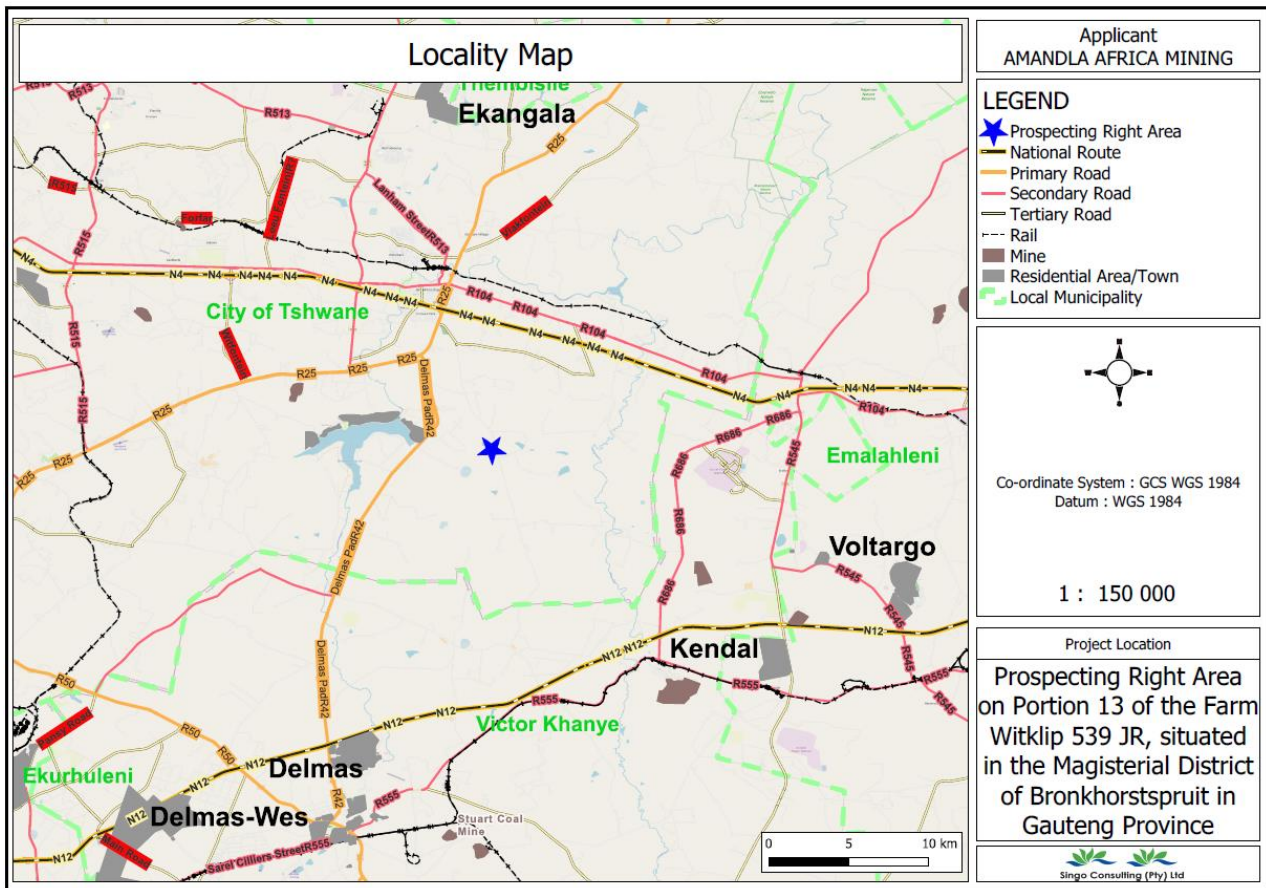


FIGURE 1. MAP SHOWING LOCALITY OF THE PROPOSED PROJECT.

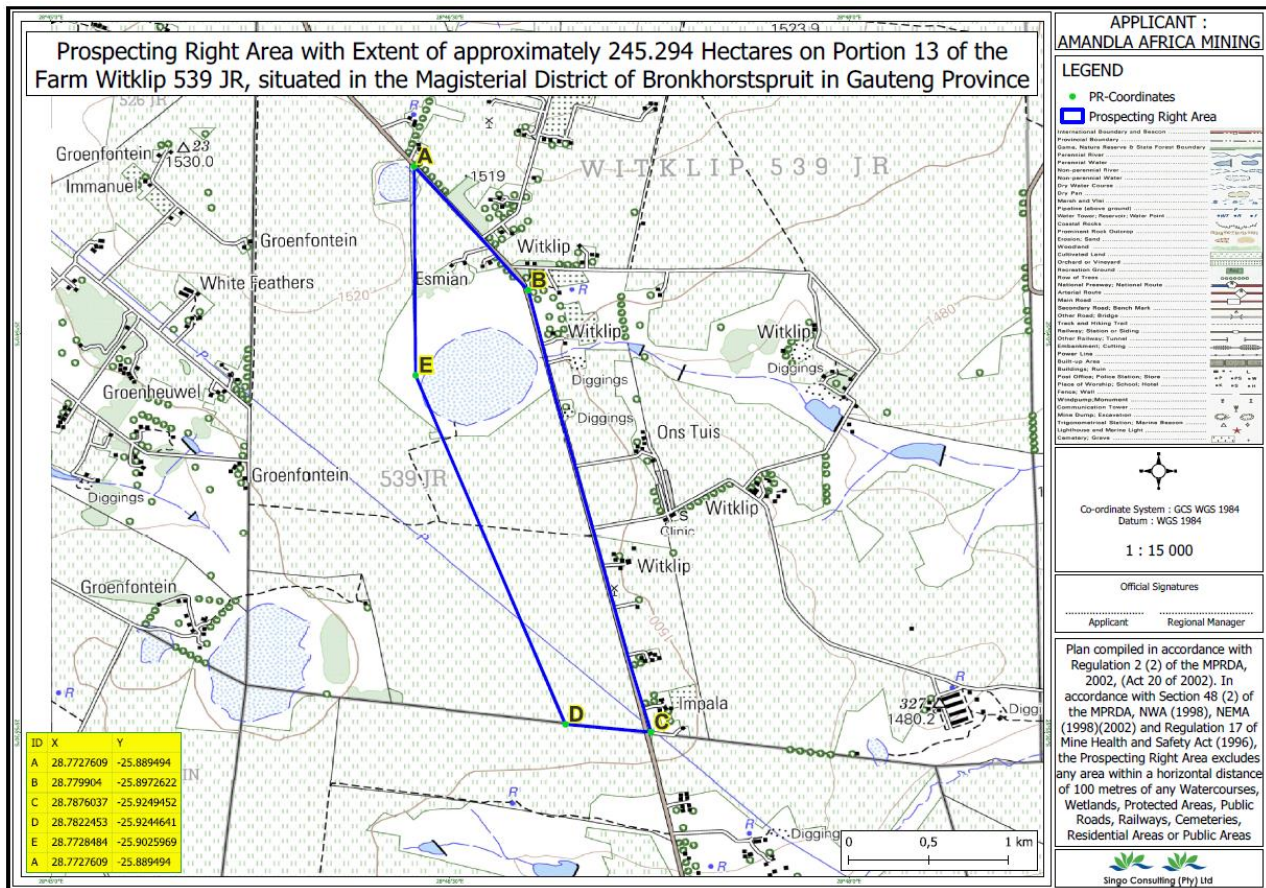


FIGURE 2: REGULATION MAP OF THE PROPOSED PROSPECTING AREAS.

2.1 Description of the scope of the proposed overall activities

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

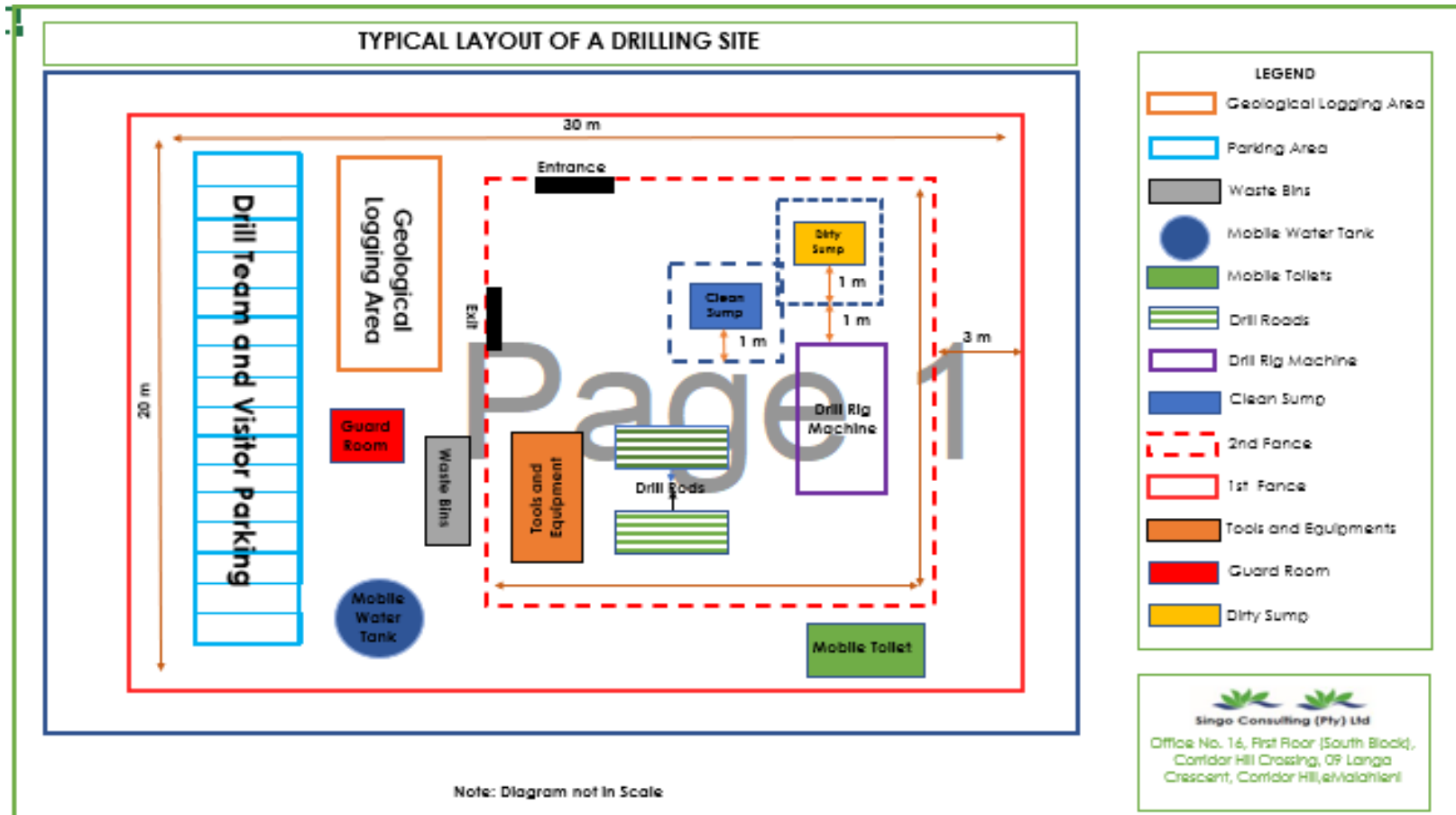


FIGURE 3: THE DRILL SITE LAYOUT PLAN SHOWING AREAS WHERE SPECIFIC ACTIVITIES WILL TAKE PLACE IN THE PROJECT AREA.

2.2 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 ²	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). (Mark with an X)
Prospecting Area	245.294 ha	X	GNR 517 Listing Notice 1, Activity 20.	Not required
Vegetation clearing	0.9 ha		Not Listed	
Drilling	0.9 ha		Not Listed	
Access	0.02 ha		Not Listed	

Total area to be disturbed.

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

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

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

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

2.3 Description of the activities to be undertaken

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

2.3.1 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.

2.3.2 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.

2.3.3 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 program will include at least five boreholes (Table 2) 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.

Diamond drilling

Diamond core drilling comprises a drill bit studded with diamond, which is mounted on a cylindrical rotating shaft. A hydraulic or mechanical chuck holds the drill shaft and mounted drill bit firmly, allowing it to rotate at the desired speed. The feed frame applies the necessary force to exert the right pressure on the bit for effective cutting. The flush pump passes water or other flushing fluids down the rod string and past the core barrel and core bit. This cools the bit and carries the cutting up to the surface outside the drill rod, reducing friction between the drill string and the borehole wall. The bit cuts out a core of rock, which moves up into the core barrel until the barrel is filled. When full, the rod string is hoisted until the core barrel reaches the surface where it can be emptied.



FIGURE 4: TYPICAL EXAMPLE OF DIAMOND CORE DRILL RIG AND DRILL BITS.

Directional drilling

Directional drilling controls the borehole direction and deviation to a predetermined underground target, in this case the coal seam. Tools utilized in achieving directional wells includes a mud motor, specialized bit and a bend near the bit. The bend directs the bit to different directions from the well bore axis when the entire string is not rotating; this is achieved by pumping drilling fluid through the mud motor, which, in turn, rotates the bit. Once the planned angle is achieved, the complete drill string is rotated. In coal prospecting, horizontal drilling is utilized. The well is drilled horizontally across the coal bed, at an angle that exceeds 800 degrees. In this type of drilling, core samples and strata thickness information can be obtained.

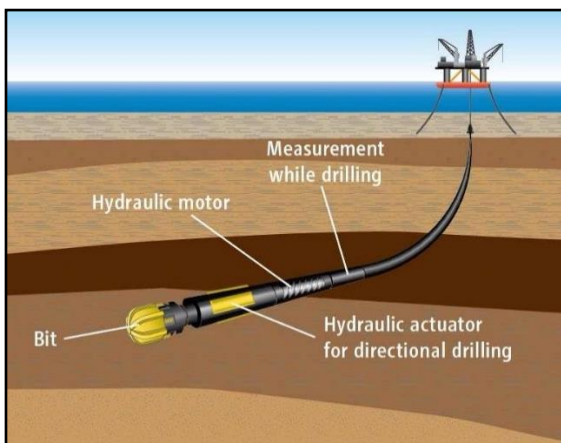


FIGURE 5: A TYPICAL ILLUSTRATION OF DIRECTIONAL DRILLING.

Reverse circulation drilling

The Reverse Circulation (RC) drilling mechanism is a pneumatic reciprocating piston (known as a “hammer”) driving a tungsten-steel drill bit. RC drilling utilizes much larger rigs and machinery and depths of up to 500 m are routinely achieved. RC drilling ideally produces dry rock chips, as large air compressors dry the rock out ahead of the advancing drill bit RC is achieved by blowing air

down the rods, the differential pressure creating air lift of the water and cuttings in the inner tube of each rod. It reaches the bell at the top of the hole, then moves through a sample hose attached to the top of the cyclone. The drill cuttings travel around the inside of the cyclone until they fall through an opening at the bottom and are collected in a sample bag. Although RC drilling is air-powered, water is used to reduce dust, keep the drill bit cool, assist in pushing cutting back upwards, and when collaring a new hole.



FIGURE 6: A REVERSE CIRCULATION DRILL RIG.

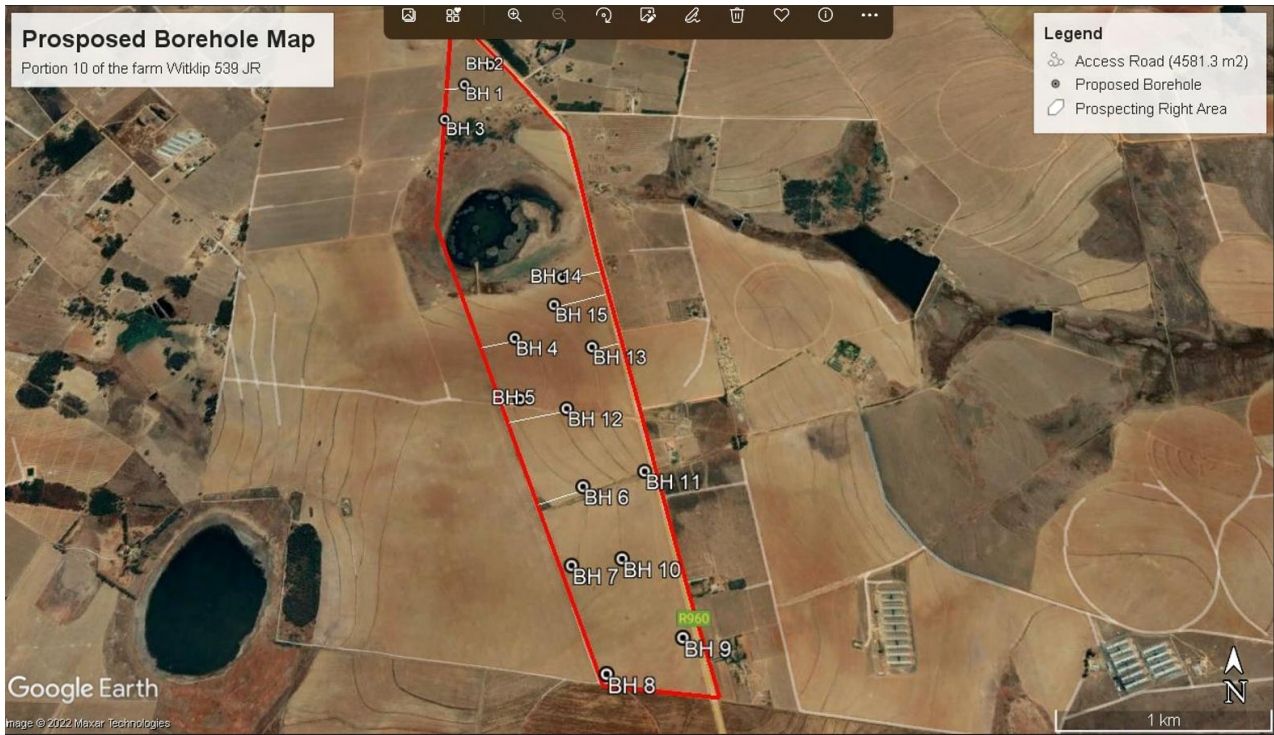


FIGURE 7: PROPOSED BOREHOLE MAP.

2.3.4 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 ortho-image is available).

2.3.5 Phase 4: Geophysical investigations

This phase involves collection of sub-surface information. It was evident that the study area was underlain by two (2) lithostratigraphic units, namely the: Dwyka Group overlain by the Vryheid Formation of the Karoo Group; this will affirm the exact location of the coal and general clay together with depths.

2.3.6 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.

2.3.7 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.

2.4 Auxiliary Activities

2.4.1 Access roads

There is an existing access road from R960, forming part of the boundary on the right-hand side the proposed project area, which gives all project personnel easy access to the drill site. As such, no new access roads will be constructed for the proposed activity. Once the prospecting right has been granted, the applicant will negotiate access with the land owner to conduct a detailed technical evaluation of the prospecting area. A contract will be drawn up and negotiated with the land owner regarding access and the suitability and time of year that is preferred for prospect drilling.



FIGURE 8: ACCESS ROADS TO THE PROPOSED PROJECT AREAS.

Water supply

There is Blesbokspruit River that passes on the Eastern side of the proposed prospecting area at approximately 5.63 km. The proposed drilling methods will utilize water as water use license is being applied for. A temporary storage tank on site will be provided for potable water for drinking and general use. The project is planned in a way that restrict hampering with water courses e.g. wetlands will not be disturbed during the prospecting process and other water courses.



FIGURE 9: EXAMPLE OF WATER STORAGE TANKS.

2.4.2 Ablution facilities

Portable toilets will be installed on site for ablation purposes and they will be removed after the prospecting period.



FIGURE 10: AN IMAGE SHOWING A TYPICAL EXAMPLE OF MOBILE TOILETS.

2.4.3 Temporary office area

A temporary shaded site office will be erected at the drill sites. No electricity will be generated on-site with generators. Meals will be provided to the staff and workers as no heating and/or cold storage facilities will be available. A shaded eating area will be provided.



FIGURE 11: TEMPORARY OFFICES SHADE.

2.4.4 Accommodation

Accommodation for staff and workers will not be provided on site, but in nearby towns around Bronkhorspruit. Further accommodation will be arranged with farm owner where there are farmhouses. Night security staff will be employed once equipment has been established on site to ensure that the equipment's are always safe after use.

2.4.5 Blasting

As the Prospecting Works Programme (PWP) does not allow for bulk sampling, no blasting will take place.

2.4.6 Storage of dangerous goods

During drilling activities, limited quantities of diesel fuel, oil and lubricants will be stored on site. The only dangerous goods that will be stored in any significant quantity is diesel fuel. Less than 30m³ will be stored in above-ground diesel storage tanks.



FIGURE 12: EXAMPLE OF AN ABOVE-GROUND DIESEL STORAGE TANKS.

2.5 Policy and legislative context

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

Table 3: Applicable Legislation to this application.

Applicable legislation and guidelines used to compile the report	Reference where applied	How does this development comply with and respond to the policy and legislative context
<p>A description of the policy and legislative context within which the development is proposed, including an identification of all legislation, policies, plans, guidelines, spatial tools, municipal development planning frameworks and instruments that are applicable to this activity and are to be considered in the assessment process.</p>		<p>E.g. In terms of the National Water Act a Water Use License has/ has not been applied for.</p>
<p>Legislation</p>		
<p>NEMA, No 107 of 2017 (as amended) Listing Activity 20 of Listing Notice 1 in terms of Regulation 983 of 2014</p>	<p>Prospecting activities</p>	<p>In terms of the NEMA, No 107 of 2017 (as amended), an application for Environmental Authorization was submitted to the DMRE. The application was acknowledged by the DMRE, DMRE ref: (GP 30/5/1/1/2/10749 PR). The DMRE, as the administrator, requests the submission of the Basic Assessment Report and EMPr within 90 days of the acknowledgement letter. Amandla Africa Mining appointed Singo Consulting (Pty) Ltd as an independent EAP to undertake the Basic Assessment Process associated with the Prospecting Right Application. All potential impacts of the proposed prospecting activities have been assessed. The EMPr includes mitigation measure implementation, which will apply throughout prospecting.</p>
<p>Constitution of South Africa, 1996 (Act No. 108 of 1996) [as amended]</p> <ul style="list-style-type: none"> • Section 24; 	<p>Prospecting activities</p>	<p>An EMPr for proposed prospecting activities has been drafted to ensure that prospecting activities are conducted in such a manner that significant environmental impacts are avoided. Where significant impacts cannot be</p>

Applicable legislation and guidelines used to compile the report	Reference where applied	How does this development comply with and respond to the policy and legislative context
<p>everyone has a right to:</p> <p>an environment that is not harmful to their health or wellbeing; and have the environment protected, for the benefit of present and future generations, through reasonable legislative and other measures that: prevent pollution and ecological degradation promote conservation secure ecologically sustainable development and use of natural resources while promoting justifiable economic and social development.</p>		<p>avoided, they will be minimized and mitigated to protect the environmental right of South Africans.</p>
<p>MPRDA, No 28 of 2002 Section 16 (as amended)</p>	<p>Prospecting activities</p>	<p>The applicant submitted a Prospecting Right Application to the DMRE, which the DMRE acknowledged (GP 30/5/1/1/2/10749 PR). The conditions and requirements attached to the granting of the prospecting right will apply to the prospecting activities.</p>
<p>NEMA Biodiversity Act, 2004</p>		<p>The EMPr will regulate the applicant's implementation of biodiversity management measures. This is particularly relevant to all species of the Highveld Grassland family and Grassland Biome of South Africa (Low and Rebelo, 1996) in which the project area falls.</p>
<p>National Water Act (NWA), Act 36 of 1998</p>	<p>N/A</p>	<p>Water use license is not being applied for in this application. Water required for drilling activities will be obtained from a legal source in the area or brought in via a mobile water tanker. Appropriate dust extraction/suppression equipment will be a condition imposed on the drill contractor for drill rigs.</p>
<p>National Environmental Management: Waste Act, Act 59</p>	<p>Management measures</p>	<p>Waste generation will be minimized by ensuring employees of the drilling</p>

Applicable legislation and guidelines used to compile the report	Reference where applied	How does this development comply with and respond to the policy and legislative context
of 2008 (NEMWA) (as amended)	environmental awareness plan	contractor are subjected to the appropriate environmental awareness campaign before drilling commences. All waste generated during the drilling activities will be disposed of in a responsible legal manner. Proof of legal disposal will be maintained on site.
National Heritage Resources Act (NHRA), 25 of 1999	Management measures	Should archaeological artefacts or skeletal material be discovered in the area during development activities, activities will be stopped, and the South African Heritage Resource Agency (SAHRA) will be notified for an investigation and evaluation of the discoveries.
NEMA: Government Notice. 805 Companion Guideline on the Implantation of the Environmental Impact Assessment Regulations, 2010, October 2012.	The application for Environmental Authorisation is submitted in terms of the EIA Regulations.	In order for the EMPR to be processed, an Environmental Authorization should be applied.
Municipal plans and policies		
City of Tshwane Metropolitan Municipality Draft Integrated Development Plan (IDP) 2017/21	Land use Socio-economic baseline information and need and desirability for the development.	The prospecting and mining of key minerals like coal and/ clay are highlighted in the IDP. It also highlights the need to preserve the natural environment in the area by conducting mineral exploration that is minimally invasive to the environment.
City of Tshwane Metropolitan Municipality Regional Spatial Development	Land Use	The applicant acknowledges the need to maximize economic benefit from mining, industrial, business, agricultural and tourism development in the

Applicable legislation and guidelines used to compile the report	Reference where applied	How does this development comply with and respond to the policy and legislative context
Framework (RSDF): Region 3		area and promote a climate for economic development in line with the municipal development frameworks.
Standards, guidance and spatial tools		
South African National Biodiversity Institute (SANBI) Biodiversity GIS (bgis.sanbi.org)	Baseline environmental description.	Used during desktop research to identify sensitive environments in the prospecting rights area.
Seri Ed ESRI 2011. ArcGIS Desktop: Version 9.3.1. Redlands, CA: Environmental Systems Research Institute	Baseline environmental description and mapping.	Used during desktop research to map the locality and sensitive environments in the prospecting right area.

2.6 Need for and desirability of the proposed activities.

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

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

Although prospecting activities are not labour intensive, few people will be hired to assist with general activities. The services required can also be sourced locally depending on their availability thus growing the economy of Bronkhorstspuit. With the existence of different mines located near the prospecting area collaboratively with the geological information, the area has the potential of the coal resources. Amandla Africa Mining intends to start mining after the prospecting right application has been granted.

Prospecting activities are needed to:

- Confirm and obtain additional information concerning potential targets through non-invasive (e.g. desktop studies) and minimally invasive (e.g. drilling) activities.
- Assess if the resource can be extracted in an environmentally, socially and economically viable manner. Prospecting activities should prove that there are feasible minerals to allow mining, a new mine may be developed, which would generate extensive employment opportunities in an area where employment is required.

The Department of Environmental Affairs has released an updated Need and Desirability Guideline Document dated 2017. Need and desirability is based on the principle of sustainability, set out in the Constitution and in NEMA, and provided for in various policies and plans, including the National Development Plan 2030 (NDP). Addressing the need and desirability of a development is a way of ensuring sustainable development – in other words, that a development is ecologically sustainable and socially and economically justifiable – and ensuring the simultaneous achievement of the triple bottom-line.

The concept of “need and desirability” relates to, amongst others, the nature, scale and location of development being proposed, as well as the wise use of land. While essentially, the concept of “need and desirability” can be explained in terms of the general meaning of its two components in which need primarily refers to time and desirability to place (i.e. is this the right time and is it the right place for locating the type of land-use/activity being proposed?), “need and desirability” are interrelated and the two components collectively can be considered in an integrated and holistic manner.

Having regard to the above, the need for and desirability of an application must be dealt with separately and in detail, inter alia the following questions:

TABLE 4: NEED AND DESIRE

NEED AND DESIRABILITY OF THE PROPOSED PROJECT	
PART I: NEED	
Questions (Notice 792, NEMA, 2012)	Answers
1.	<p>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 City of Tshwane Metropolitan Municipality's integrated development plan for 2017/2018 – 2020/2021 (Volume 3 of 3), section: re-generate – to achieve environmental well-being Fights with:</p> <ul style="list-style-type: none"> • High carbon emissions from electricity generation; • Unsustainable natural resource usage; and • Uncontrolled pollution
2.	<p>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>
3.	<p>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>Unemployment within the City of Tshwane Metropolitan Municipality is high, according to the IDP of City of Tshwane Metropolitan Municipality it was stated that, in 2015, the unemployment rate in City of Tshwane Metropolitan Municipality (based on the official definition of unemployment) was 29.72%, which is an increase of 0.868 percentage points. The unemployment rate in City of Tshwane Metropolitan Municipality is higher than that of Gauteng. The unemployment rate for South Africa was 25.28% in 2015, which is a decrease of 1.27 percentage points from 26.55% in 2005.</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>

4.	Are the necessary services with adequate capacity currently available (at the time of application) or must additional capacity be created to cater for the development?	Yes. All infrastructure for services and capacity 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.
5.	Is this development provided for in the infrastructure planning of the municipality, and if not what will the implication be on the infrastructure planning of the municipality (priority and placement of the services and opportunity cost)?	The development is not provided for in the infrastructure planning of the municipality as it is a small development of local importance. Thus, the proposed project will not have any implications for the infrastructure planning, as no services and/or infrastructure needs to be upgraded or created to cater for this project. The proposed project will be making use of mobile structures.
6.	Is the project part of a national programme to address an issue of national concern or importance?	The mining sector is a significant contributor to the National GDP as well as a massive employer of people. The mining sector contributed 10% of the GVA of the local economy during 2010 and 1.2% towards the local economy's employment. The average annual GVA growth between 1995 and 2010 is -8.5% with an annual average formal employment contribution of 1.1% during the same period. In addition, The National Development Plan (NDP) Vision for 2030 offers a long-term perspective. It defines a desired destination and identifies the role different sectors of society need to play in reaching that goal. The main goals highlighted in the NDP which pertain to the proposed project are employment. Chapter 6 of the National Development Plan highlights an "inclusive rural economy" and the objectives of this plan are to create jobs in mining and industry and activating rural economies through service to small and micro mining.

PART II: DESIRABILITY

7.	Is the development the best practicable environmental option for this land/site?	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 City of Tshwane Metropolitan 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.	How will the activity of the land use associated with the activity being applied for, impact on sensitive natural and cultural areas (built and rural/natural environment)?	A cultural heritage impact assessment is being conducted by integrated specialist services. The outcomes of the specialist study will be included in the Final Bar.
11.	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: <ul style="list-style-type: none"> • Visual: Low • Dust: Low-Medium • Noise: Medium • Sense of place: Medium However, environmental good practice compliance policies would have limited effects.
12.	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 and clay have contributed to funding impressive economic growth and stability.
14.	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 EMP attached will serve as a method to keep the proposed project from having any serious long term cumulative impacts on the receiving environment.

2.7 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 carried out in phases where the drilling and trenching activities and position to the sample soil depend on the previous process. Therefore, it is difficult to predetermine the exact positions and degree of soil sampling and diamond core drilling. Sensitive areas to be avoided are also indicated on maps in this report. Invasive prospecting planned in protected areas and buffer zones should be placed with an appropriate trained ecologist to prevent or mitigate the loss of any sensitive plants or ecosystems that occur in such areas.

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.

Amandla Africa Mining is applying to prospect for coal on Portion 13 of the Farm of the Farm Witklip 539 JR .Based on existing knowledge of the geology and the mineral deposits occurrence in the area, the site was identified based on knowledge of the said deposits and as such, no site alternatives have been considered for the proposed activities. The following buffers will be applied to the final site selection:

- No drill site will be positioned within 50m of a structure (within 500m for wetland)
- Existing access roads will be utilised to access the drill sites.

2.8 Type of activity to be undertaken

Techniques were chosen based on the long-term success of the selected drilling method and prospecting process. The prospecting activities proposed in the PWP depend on the preceding phase. As such, alternatives are not provided, but rather a phased approach of trusted prospecting techniques.

Amandla Africa Mining intends to prospect for coal. Infrastructure and resources are available in close proximity to the study area, however a communication amongst the applicant and already existing neighbouring mine would have to take place in order for Amandla Africa Mining to make use of the already existing infrastructures in the future. In addition, geological information indicated that the area potentially contains coal.

2.8.1.1 Activity design/layout

The preferred site layout ensures that break areas and ablution facilities are located away from the drilling activities to minimize noise impact. Site establishment will be done with closure in mind, ensuring that only the required size is disturbed. Due to the location of the proposed drilling, no camp site will be required. The drilling contractor can use existing accommodation in the area.

2.8.1.2 Activity technology

The method and techniques that will be employed for the investigation of potential targets and deposits are suitable for the proposed prospecting activities. They will be selected based on their minimal invasiveness, which will have a minimal impact on the environment. Prospecting operations on the study area won't affect any potential land uses. If the prospecting results suggest a viable reserve is available, the competent authority / ies must perform a detailed social and environmental impact assessment to secure environmental and mining rights in compliance with the legislation. When part of the social and environmental impact assessments, potential land uses for the mining will be explored. Activity design or lay-out. Throughout Phase 1 of the Prospecting Work Program the precise locations for invasive drilling operations will be established. Any infrastructure to be built would be temporary and mobile.

To sum up, prospecting work will initially include a high-level analysis of the desktop and a possible assessment of the desktop tools. This will involve scanning data for any past drilling, trenching, sampling, discovery, current maps and related historical data. Computer research will include analysis of geological records, data prospecting, plans / maps, aerial photography, Maps of topography and any other associated geological details concerning a particular region.

More potential exploration, trenching and resource assessments will be conducted after successful completion of this desktop analysis, if the findings warrant it. The kind of intrusive prospecting practices is calculated on the basis of the historical effectiveness of the methods to be used. Nonetheless, the prospecting activities are, as mentioned above, based on the preceding (non-invasive) step and thus no alternatives are suggested but rather a phased approach of trusted prospecting techniques.

Diamond core exploration is expected to be carried out step by step. During the desktop analysis, expected borehole depths will be calculated but drilling operations are projected to be carried out down to fairly shallow depths. Logging and sampling of the centre of the borehole will be done to assess the area. Trenching may include digging down trenches for excavation, using graders and excavators, to about 3 meters below the surface. Mapping of the trench walls will then be carried out.

2.8.2 Operational aspects of the activity

No permanent facilities are required, including, electricity, or sewerage installations. All the infrastructure to be placed, including generators, portable toilets, and also water tanks, will be mobile and temporary.

2.8.3 Option of not implementing the activity

A construction must be ecologically sustainable, and must also promote socioeconomic growth, according to Section 24 of the Constitution. Failure to enforce the prospecting activities would result in the loss of mineral resource knowledge present on the study area. If commercially viable reserves exist in the study region and the applicant is unable to explore, the potential will be lost to use the reserves for future mining i.e. the resources will be sterilized and the resulting socio-economic benefits lost.

The prospecting practices proposed have the potential to adversely impact the natural ecosystem as well as the area's social climate. However, as demonstrated by the impact evaluation, these impacts can theoretically be avoided, reduced, mitigated and controlled at low and very low levels.

2.8.4 Details of the public participation process followed

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

A Public Participation Process is undertaken for the proposed prospecting. The process is undertaken to ensure compliance with regard to the requirements in terms of the Mineral and Petroleum Resources Development Act, 2002 (Act No. 28 of 2002) [as amended] (MPRDA), the National Environmental Management Act, 1998 (Act No. 107 of 1998) [as amended] (NEMA), the National Environmental Management: Waste Act, 2008 (Act No 59 of 2008) [as amended] (NEMWA), the National Water Act, 1998 (Act No. 36 of 1998) [as amended] (NWA) and Environmental Impact Assessment Regulations (2014) [as amended].

Tasks undertaken for the Public Participation Process (PPP)

The study section offers a summary of the activities performed so far for the PPP. All PPPs undertaken comply with the specifications of the NEMA and EIA Regulations (2014), [as amended]. It also outlines the next steps in the PPP and makes recommendations for the tasks to be carried out during the environmental assessment phase of the authorisation process for the community. To date the PPP tasks performed for the proposed prospecting project include:

IDENTIFICATION OF KEY INTERESTED AND AFFECTED PARTIES (AFFECTED AND ADJACENT LANDOWNERS) AND OTHER STAKEHOLDERS (ORGANS OF STATE AND OTHER PARTIES)

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

Interested and Affected parties (I&APs) representing the following sectors of society have been identified:

- National, provincial and local government;
- Industry and mining;
- Agriculture, including local landowners (affected and adjacent);
- Tourism;
- Community Based Organisations;
- Non-Governmental Organisations;
- Water bodies;
- Commerce; and
- Other stakeholders.

FORMAL NOTIFICATION OF THE APPLICATION TO INTERESTED AND AFFECTED PARTIES (INCLUDING ALL AFFECTED AND ADJACENT LANDOWNERS) AND OTHER STAKEHOLDERS

The Basic Assessment Report will be submitted for review to the Competent Authority, commenting authorities, non-governmental organizations (NGOs), landowners, surrounding property owners and other identified stakeholders. Comments received will be recorded and are reflected in this Final Basic Assessment Report. The detailed public participation process and the Consultation Report.

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

AFFECTED AND ADJACENT LANDOWNERS) AND OTHER STAKEHOLDERS

The project was announced as follows:

- Newspaper advertisement

Publication of media advertisement (English) in the Steerknuus on the 11th of March 2022. Refer to **Error! Reference source not found.** for proof of newspaper notice placement.

- Site notice placement

In order to inform surrounding communities, affected and adjacent landowners of the proposed development, A2 site notices were erected on site, at visible locations close

to the site, along R555, at Bronkhorspruit Public Library notice board and at City of Tshwane Metropolitan Municipality on the 24th of March 2022. Notification to and consultation with landowners and/or lawful occupiers.

- Hans Van Rensburg (Landowner) was consulted through email; he was given BID and Landowner notification letter.



Thabisieng 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, Nokuhula Ntuli.



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

Dupies hou jaarlikse kleuteratletiek

Die Kleuteratletiek byeenkoms het amptelik afgeskop met 10 weeklêende kleuterskole op Brookhorstgras 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 Kruisgras skole het die sportdag aangebied. Daar was soutrek, hoogspring, teikengooi, fietse, verspring en eueloep.

Tjakkertland se onderwyers het die heel eerste atleetklub in die geskiedenis gewen en het kragte geneem met vier onderwyers elk van die ander skole. Vanjaar is profers vir die beste kreet, beste oorskulde en beste onderwyersverduideligings. Die onderwyers se items was sokspring vir 60m sowel as 60m-boontjiesak vir balans, 60m-eueloep en 60m-eierloep. Daar was ook uitdane gehou en wensters is aangewys.



Amelia Tajaard op haar bromfietjie.



Aaira Mahmood jaag na die wenstreep.



Marchanelle Norden hol weg by die eueloep.

NOTICE 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: MP 30/5/1/1/2/ 117266) for the purpose of prospecting for Coal on portion 10 of the Farm Zandfont 226 08, situated within Victor Khashe Local Municipality, under Muziwa District Municipality within the Magalies District of Orange-Frederiksdorp Province.

Notice is hereby given in terms of the Mineral and Petroleum Resource Development Act (MPRDA) (Act 28 of 2002) and EA regulations 2014, published under Government Notice No. 982 in Gazette No. 3632 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 the 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 Majoqelo** 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 **Selma's Public Library (at Sarai Ollien & Van Nieboek, Delmas 2219)** and a self-copy upon request from **Singo Consulting (Pty) Ltd** using the detailed EAP'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>Singo Consulting (Pty) Ltd Physical Address: Office No. 876, 5 Sabakaba Street, Tzabzi Park Est 2, Witbank, 1255.</p> <p>Contact person: Mr Abel Majoqelo Tel No. +27 13 692 0041 Fax No. +27 13 6514 4703 Cell No. +27 71 362 7894 Email: abel@singoconsulting.co.za</p>	<p>Amadiba Africa Mining Pretoria Unit 106 Delmas, Mamelong, 2300</p> <p>Contact person: Makhosi Eddi Aphane Cell No. + 11 110 1412 Email: info@amadibafrica.co.za</p>

NOTICE 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 30/5/1/1/2/ 110740) for the purpose of prospecting for Coal on portion 13 of the Farm Winkiel 530 08, situated within City of Tzaneba Metropolitan Municipality, within the Magalies District of Brookhorstgras, Gauteng Province.

Notice is hereby given in terms of the Mineral and Petroleum Resource Development Act (MPRDA) (Act 28 of 2002) and EA regulations 2014, published under Government Notice No. 982 in Gazette No. 3632 of 8 December 2014, amended on 7 April 2017, that **Amadiba Africa Mining** has applied for Prospecting Right for the above-mentioned mineral.

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<p>Singo Consulting (Pty) Ltd Physical Address: Office No. 876, 5 Sabakaba Street Tzabzi Park Est 2, Witbank, 1255.</p> <p>Contact person: Mr Abel Majoqelo Tel No. +27 13 692 0041 Fax No. +27 13 6514 4703 Cell No. +27 71 362 7894 Email: abel@singoconsulting.co.za</p>	<p>Amadiba Africa Mining Pretoria Unit 106 Delmas, Mamelong, 2300</p> <p>Contact Person: Makhosi Eddi Aphane Cell: + 11 110 1412 Email: info@amadibafrica.co.za</p>

ONS WINKEL **BRONKHORSTGRAS**

KOM SNUFFEL OF SKIEK IN ONS WINKEL EN MAAK 'N VERSKIL IN DIE GEMEENSAP

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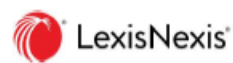
FIGURE 13: PROOF OF NEWSPAPER PUBLICATION IN STREEKNUUS (RED RECTANGLE).

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SEARCH CRITERIA			
Search Date	2022/03/02 12:05	Farm Number	539
Reference	-	Registration Division	JR
Report Print Date	2022/03/02 12:06	Portion Number	-
Farm Name	-	Remaining Extent	NO
Deeds Office	Pretoria	Search Source	WinDeed Database

PORTION LIST				
Portion	Owner	Title Deed	Registration Date	Purchase Price (R)
1	RENSBURG JOHANNES THEODORUS JANSEN VAN			
2	HANS VAN RENSBURG BOERDERY CC			
3	** FOR INFO REFER TO REGISTRAR OF DEEDS **			
4	SHIPENE INV NO 8 PTY LTD			
5	** FOR INFO REFER TO REGISTRAR OF DEEDS **			
6	HANS VAN RENSBURG BOERDERY CC			
7	RENSBURG JOHANNES THEODORUS JANSEN VAN			
8	RENSBURG JOHANNES THEODORUS JANSEN VAN			
9	RENSBURG JOHANNES THEODORUS JANSEN VAN			
10	HANS VAN RENSBURG BOERDERY CC			
12	FLOOY VERONICA BEATRICE DU			
13	HANS VAN RENSBURG BOERDERY CC			
14	STEYN MARELIZE MAGDALENA			
15	WET PHOEBE AMILLIA DE			
16	PRINSLOO IGNATIUS MICHAEL			

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Page 1 of 2

FIGURE 14:WINDEED RESULTS.



FIGURE 15: PLACEMENT OF SITE NOTICES.

The following have been identified as I&Aps

Identified key stakeholders

The following authorities have been identified and notified of the proposed prospecting right project:



- City of Tshwane Metropolitan Municipality.
- Gauteng Department of Economic Development, Environment and Tourism
- Department of Water and Sanitation.
- Department of Rural Development and Land Reform.
- Department of Agriculture, Forestry and Fisheries.
- Department of Mineral Resources and Energy.
- Department of Forestry, Fisheries, and the Environment
- South African National Roads Agency Ltd (SANRAL).
- Department of Tourism
- Eskom SOC Limited.
- SARHA
- Transnet
- Other Interested and Affected Parties



2.9 Summary of issues raised by I&APs



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



Table 5: Summary of issues raised during the public comment period


I&APs List the names of persons consulted in this column. 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 issues and/or responses were incorporated	
Land owner/s and lawful occupiers					
Portion 13 Hans Van Rensburg Boerdery CC	X	24/03/2022 (via email)	Mr Van Rensburg requested a face to face meeting on the 14 th of April at the farm Witklip.	I am available on that day for the meeting, I will contact you few days prior to the meeting.	
Adjacent Landowner					
Portion 14 M Steyn	X	24/03/2022(face to face)	Ms Steyn Requested project documents.	Ms Steyn Was consulted and given a BID.	
Government Departments and Municipalities					
Local Municipality					


I&APs List the names of persons consulted in this column. 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 issues and/or responses were incorporated
 <p>CITY OF TSHWANE IGNITING EXCELLENCE</p> <p>Dorcus S Thabang Moe Kemmine M Rudzani M</p>	X 11/02/2022(via email)	No issue raised	Consultation email together with a BID were sent.	
 <p>GAUTENG PROVINCE AGRICULTURE AND RURAL DEVELOPMENT REPUBLIC OF SOUTH AFRICA</p>	X 11/03/2022 (Via email)	No issue raised	Consultation email together with a BID were sent.	



I&APs List the names of persons consulted in this column. 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 issues and/or responses were incorporated
Makhulo Steven				
 Masala Nemukula	X 11/03/2022 (Via email)	No issue raised	Consultation email together with a BID were sent.	
	X 11/03/2022 (via email)	No issue raised	Consultation email together with a BID were sent.	

I&APs List the names of persons consulted in this column. 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 issues and/or responses were incorporated
 <p>Livhuwani Ndou</p>	X 11/03/2022 (via email)	No issue raised	Consultation email together with a BID were sent.	
 <p>Wayleaveeskom</p>	X 11/03/2022 (via email)	No issue raised	Consultation email together with a BID were sent.	
Department of Agriculture, Fisheries and Forestry (DAFF)	X 11/03/2022 (via email)	No issue raised	Consultation email together with a BID were sent.	

I&APs List the names of persons consulted in this column. 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 issues and/or responses were incorporated
Land Use and Soil Management Ms Mmakola Phyllistas				
 <p>GAUTENG PROVINCE Agriculture and Rural Development REPUBLIC OF SOUTH AFRICA</p> Belot, Boniswa	x 11/03/2022 (via email)	No issue raised	Consultation email together with a BID were sent.	
 <p>agriculture, land reform & rural development Department: Agriculture, Land Reform and Rural Developm REPUBLIC OF SOUTH AFRICA</p> Cindy Benyane	X 11/03/2022 (via email)	No issue raised	Consultation email together with a BID were sent.	
SAHRA				

I&APs List the names of persons consulted in this column. 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 issues and/or responses were incorporated
 https://sahris.sahra.org.zw	X	No issue raised	11/03/2022, Online application was completed on Sahra website.	
Community				
Other Interested and/or Affected Parties				
Marinda Le roux	X	<ul style="list-style-type: none"> Requested to be registered as interested & affected party. How will prospecting activities affect us in terms of noise and dust. 	<ul style="list-style-type: none"> Note that you have been registered as an interested and affected party. The drill rig will be fitted with a silencer to minimize the noise and dust suppressant will be used through prospecting activities to reduce dust. 	

I&APs List the names of persons consulted in this column. 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 issues and/or responses were incorporated
		<ul style="list-style-type: none"> Will the mining activities take place close to the area surrounding the dam or river and has WUL been applied for? 	<ul style="list-style-type: none"> activities that will take place includes Drilling, Logging, Sampling and Mapping will only be applied for only if section 21 activities have been triggered. 	
Martin Ferreira	X 07/04/2022 (Via email)	Requested to be registered as I&AP and a copy of Draft BAR & EMPr.	Note that you have registered as an interested and affected party, a copy of draft BAR & EMPr will be shared with you as soon as review period commence.	
 <p data-bbox="224 1257 560 1281">Bronkhorstspuit Catchment Forum</p> <p data-bbox="179 1297 336 1326">Cara Stokes</p>	X 06/04/2022 (via email)	Requested to be registered as an interested and affected party.	Kindly note that you have been registered as an I&AP, see the attached BID to register your comments.	

I&APs List the names of persons consulted in this column. 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 issues and/or responses were incorporated
Chairperson				
Susara Prinsloo Snr DC Manager Massmart powered by Walmart 	X 07/04/2022 (via email)	Please register me as an interested and affected party and please forward a copy of draft BAR &EMPr.	Note that you have been registered as an interested and affect party, a copy of draft BAR & EMPr will be forwarded to you as soon as review period commence.	
 Bonanza Resort & Marina Justin Cook	X 07/04/2022 (via email)	<ul style="list-style-type: none"> • We run a resort, blasting, dust and enviromental problem will cause unrest at the resort. • Water will be polluted. • How will this affect my business ? 	<ul style="list-style-type: none"> • Prospecting activities have minimal damages, dust suppressant will be used to minimize the dust. Prospecting activities does not entail blasting. • Water bodies will not disturbed, there will be no activities taking place 100m within any water body. • Your business will not be affected by the prospecting activities as the it is located at approximately 3,5 km away from the proposed project area. 	

I&APs List the names of persons consulted in this column. 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 issues and/or responses were incorporated
Mandla Lucky	X 11/04/2022 (via WhatsApp)	<ul style="list-style-type: none"> I'm looking for job opportunities there how can I apply ? 	<ul style="list-style-type: none"> Please note that prospecting activities does not entail a lot of job opportunities. Find the attached BID to register comments. 	

2.10 The environmental attributes associated with the alternatives

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

Amandla Africa Mining applied for a Prospecting Right over the area of interest in the close vicinity of the . Based on outcomes of that studies and results seen on the neighbouring mine, the possibility of encountering further coal and general clay resources was identified on the property and is subject to this Prospecting Right application.

The company for prospecting on the property as discussed in this report is to determine the presence of coal and general clay, whether it is feasible and justify further studies towards a Mining Right. No alternatives are available that will have an impact on a different setting than the environment discussion provided in the following.

3. Baseline Environment

3.1 Type of environment affected by the proposed activity

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

3.1.1 Gradient and landscape context

The average elevation for the Moot Plains Bushveld, in which the majority of the study area is located, varies between 1050 and 1450 mamsl while the elevation for the Gold Reef Mountain Bushveld, in which a small section of the study area is located, varies between 1200 and 1750 mamsl. The topography of the study area is characterised by flat terrain and the average elevation is 1320 mamsl and it is noted that the northern boundary is more elevated as it borders the Magaliesberg. The most prominent geomorphological feature in the area is the Magaliesberg Mountain range, which runs from West to East immediately to the North of the study area. The Magaliesberg Mountain range is a National Protected Area. The Magaliesberg Mountain range rises to approximately 1800 mamsl at its highest point.

3.1.2 Climate

In Bronkhorstspuit, the summers are long, warm, and partly cloudy and the winters are short, cold, dry, and clear. Over the course of the year, the temperature typically varies from 4°C to 27°C and is rarely below 1°C or above 31°C. The warm season lasts for 6.1 months, from September 19 to March 23, with an average daily high temperature above 25°C. The hottest month of the year in Bronkhorstspuit is January, with an average high of 29°C and low of 15°C. The cool season lasts for 2.1 months, from May 30 to August 1, with an average daily high

temperature below 19°C. The coldest month of the year in Bronkhorstspuit is July, with an average low of 2°C and high of 19°C.

The wetter season lasts 5.4 months, from October 15 to March 28, with a greater than 27% chance of a given day being a wet day. The month with the most wet days in Bronkhorstspuit is December, with an average of 15.9 days with at least 1 millimeter of precipitation. The drier season lasts 6.6 months, from March 28 to October 15. The month with the fewest wet days in Bronkhorstspuit is July, with an average of 0.4 days with at least 1 millimeter of precipitation. The month with the most days of rain alone in Bronkhorstspuit is December, with an average of 15.9 days. Based on this categorization, the most common form of precipitation throughout the year is rain alone, with a peak probability of 53% on December 17.

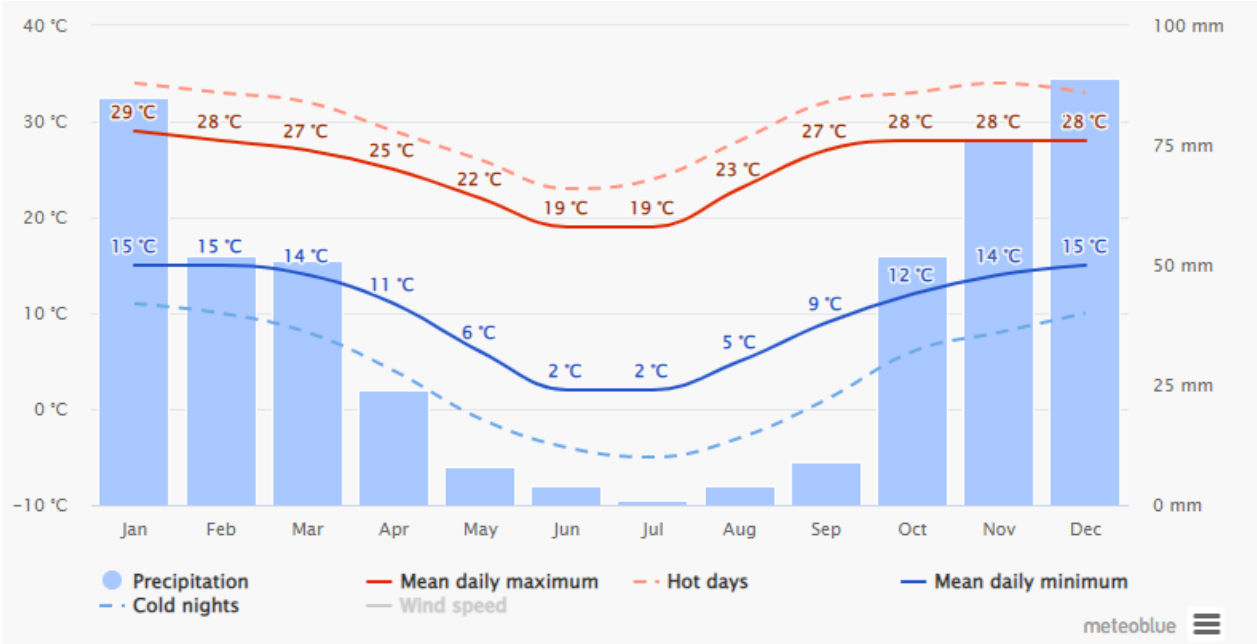


FIGURE 16: AVERAGE TEMPERATURE AND PRECIPITATION IN BRONKHORSTSPUIT.

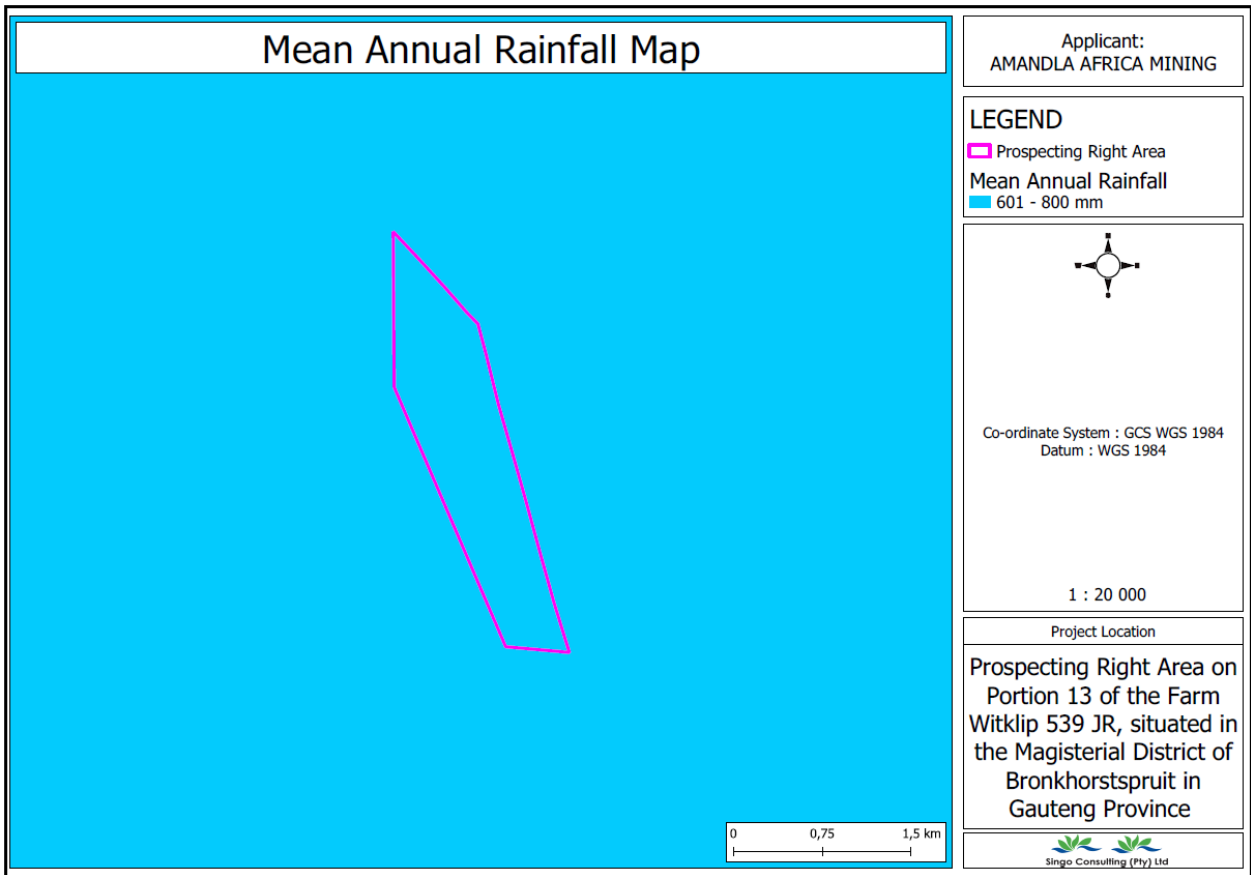


FIGURE 17: MEAN ANNUAL RAINFALL MAP OF THE PROPOSED AREA

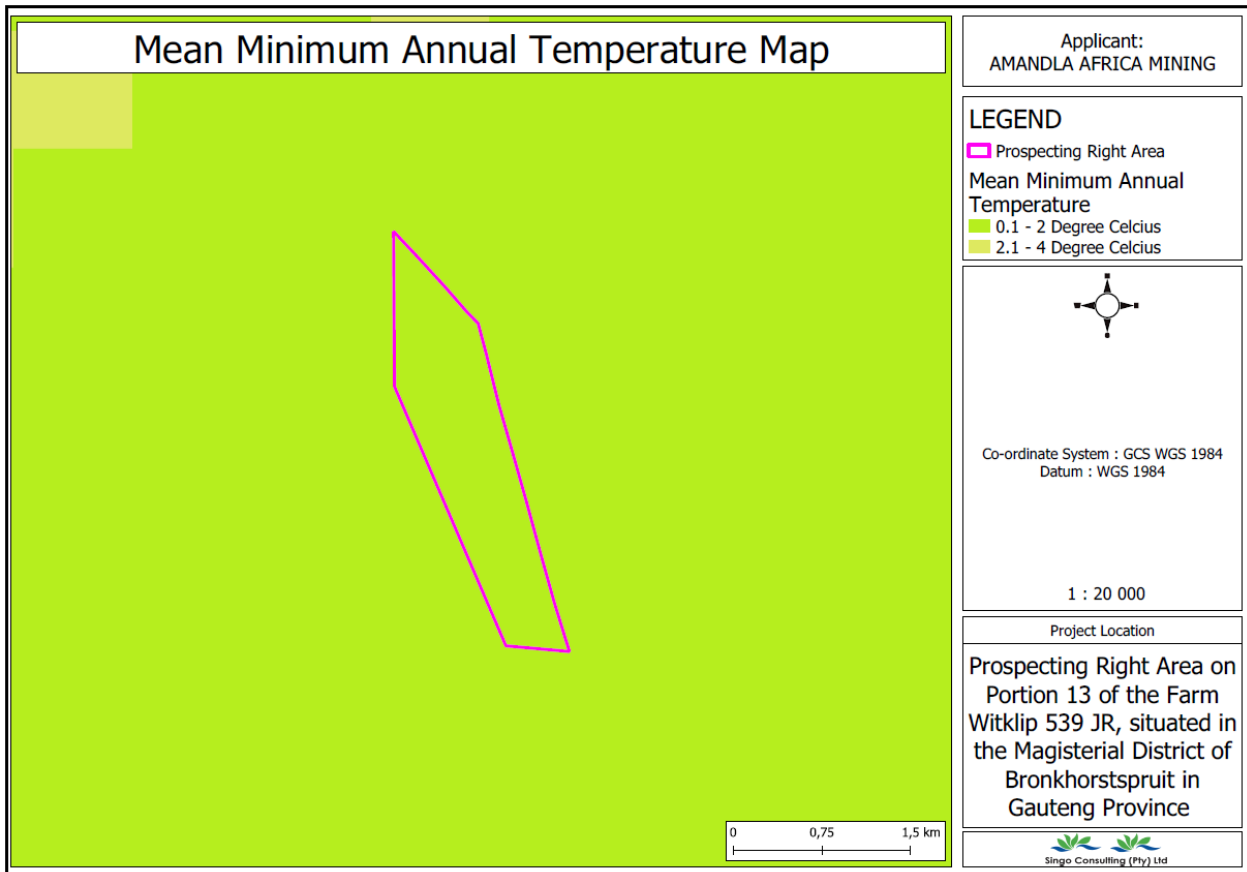


FIGURE 18: MEAN MINIMUM ANNUAL TEMPERATURES

❖ **Monthly Mean Wind Direction and Speed**

The predominant wind direction for this region, occurring for ±35% of the year, arises from a north-westerly to northerly direction. Secondary less frequent components arise from the south-westerly and easterly sectors, recording winds for more than 5% of the year (from each sector). The strong gusts (>8.7m/s) recorded for this station are most frequently associated with winds from these prominent sectors. On average, calm periods are recorded as occurring 2.2% of the year. During a year, the frequency of northerly winds remains prominent, with an increase in frequency of occurrence (>20% in a single month) and strength from August to December. The decrease in the frequency of occurrence of northerly winds in January is coupled with an increase in occurrence of easterly winds, until March. Thereafter, the prominent wind direction is from the south-western and north-western quadrants, between May and July. Gusts of wind are recorded between June and December, predominantly arising from the south south-western and northern sectors. **Figure 19** below provides an annual average wind rose for the region.

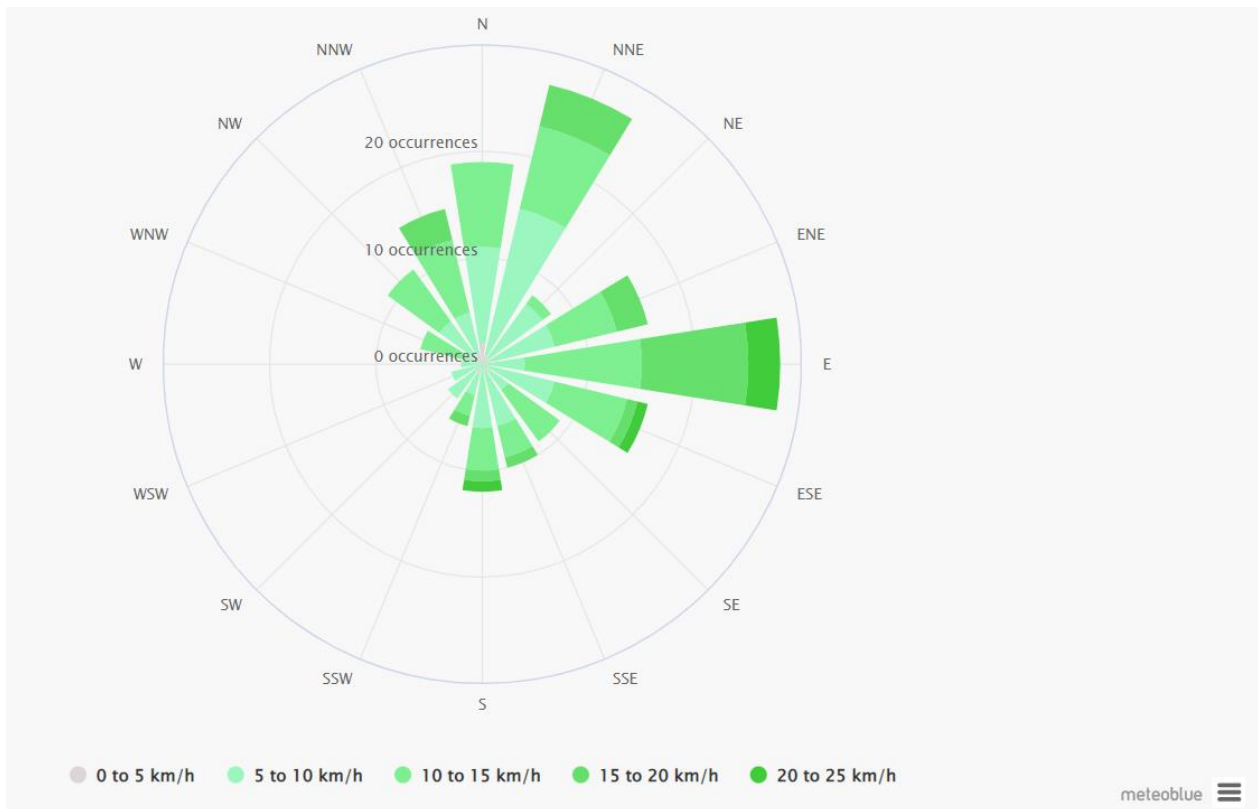


FIGURE 19: WIND ROSE OF BRONKHORSPRUIT.

❖ Topography and drainage

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 situated within a region with moderately high ground level topography. This can be observed on the topology map attached below as the altitude is generally on average of 1560-1645 metres above sea level. The flow of water during rainy seasons flows from the area of high elevation to the area of low elevation as it is indicated or displayed by contour lines.

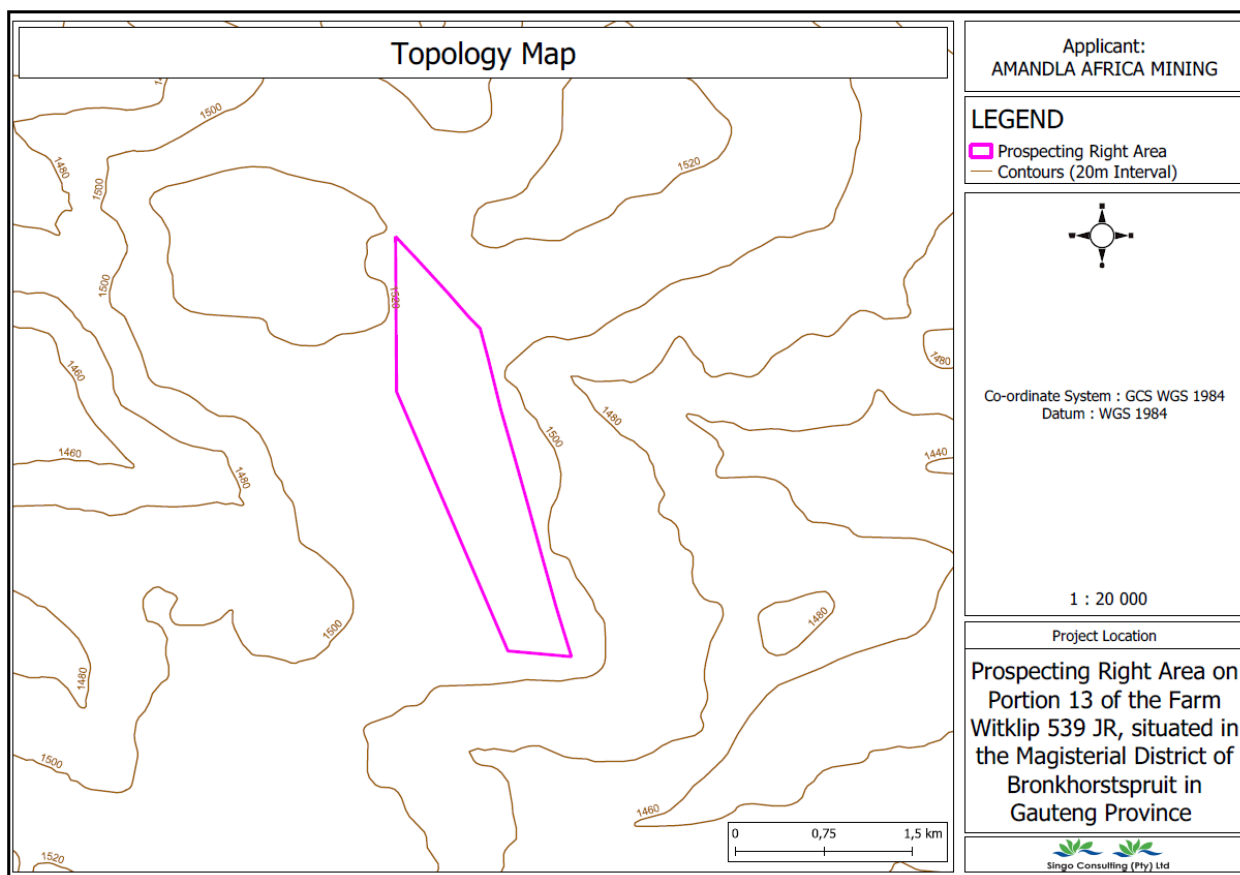


FIGURE 20: TOPOGRAPHY OF THE PROSPECTING RIGHT AREA.

3.1.3 Geology

The proposed project area follows under the main Karoo supergroup. The geology of the study site is characterized by Vryheid Formation under Eccca group.

Karoo Supergroup

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

Dwyka Group

The rocks of the Dwyka Group in South Africa are amongst the most important glaciogenic deposits from Gondwana. This Group is named for exposures along the Dwyka River east of Laingsburg and

forms the basal succession of the Karoo Supergroup. Dwyka Group strata are mostly contained within bedrock valleys incised into Archean to lower Palaeozoic bedrock (Visser, 1990; Visser and Kingsley, 1982; Von Brunn, 1996). The lithologies in the areas underlying the coalfields of South Africa consist of a heterolithic arrangement of massive and stratified polymictic diamictites, conglomerates, sandstones and dropstone-bearing varved mudstones. The easily identifiable lithologies form a good marker below the coal bearing Eccca Group. In the distal sector of the MKB these sedimentary strata accumulated largely as ground moraine associated with continental ice sheets and is generally composed of basal lodgement and supraglacial fills. These deposits are generally massive, but crude horizontal bedding occurs in places towards the top (Tankard et al., 1982).

Eccca Group

In the 1970s a number of studies (Cadle, 1974; Hobday, 1973, 1978; Mathew, 1974; Van Vuuren and Cole, 1979) showed that the Eccca Group could be subdivided into several informal units based on the cyclic nature of the sedimentary fills. In 1980 the South African Committee for Stratigraphy (SACS, 1980) introduced a formal lithostratigraphic nomenclature for the Eccca Group in the northern, distal sector of the MKB, which replaced the previously used informal Lower, Middle and Upper subdivisions with the Pietermaritzburg Shale Formation, the Vryheid Formation, and the Volksrust Shale Formation.

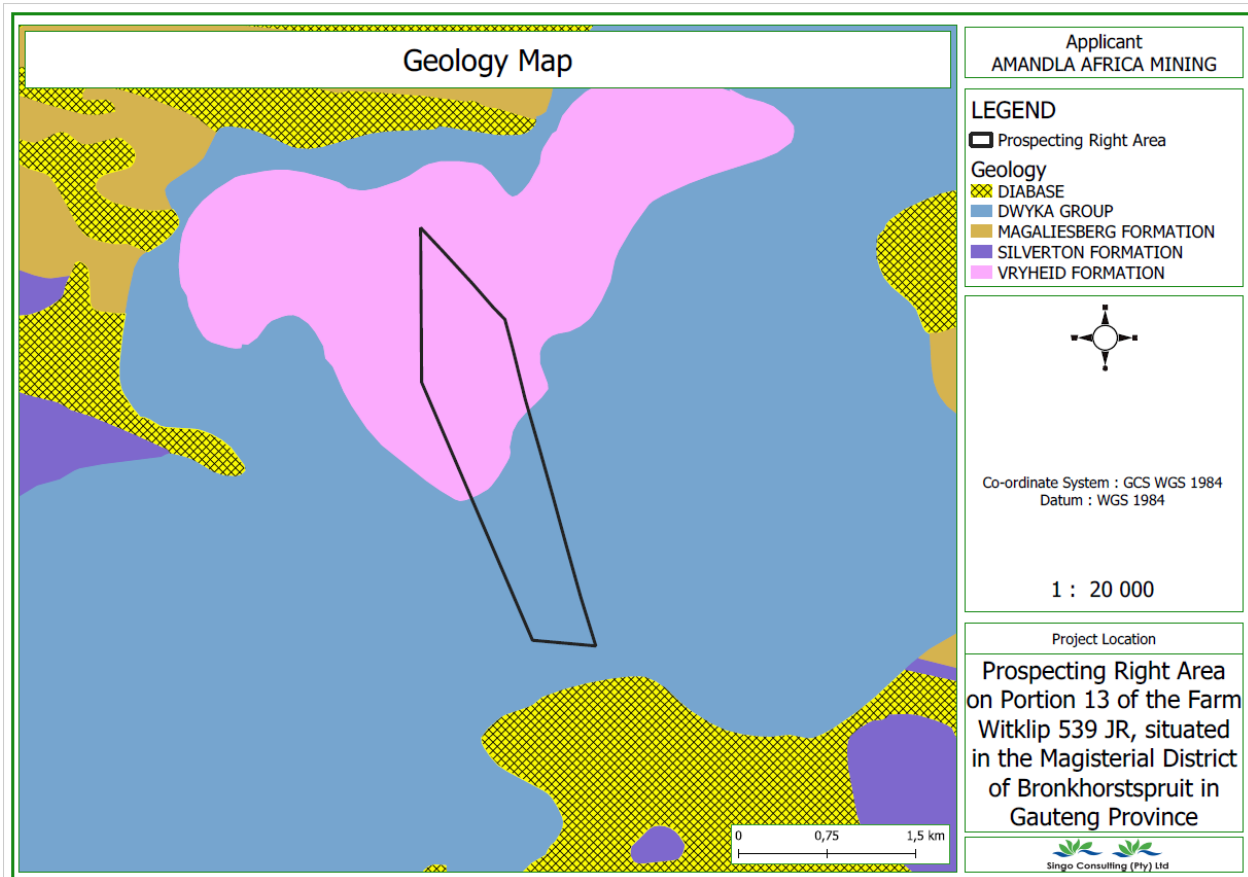


FIGURE 21: GEOLOGICAL MAP OF THE AREA.

❖ Soils

According to the baseline soil study conducted by Singo Consulting (Pty) Ltd in 2022, the soil classes map in **Figure 22: Soil Class Map**. below, shows that the prospecting right area is largely covered with Freely drained, structureless soils, the soil classes in the proposed area can be described based on their soil depth, Soil Drainage, erodibility, and natural fertility.

Soil depth

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

Soil Drainage

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

Erodibility

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

Natural Fertility

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

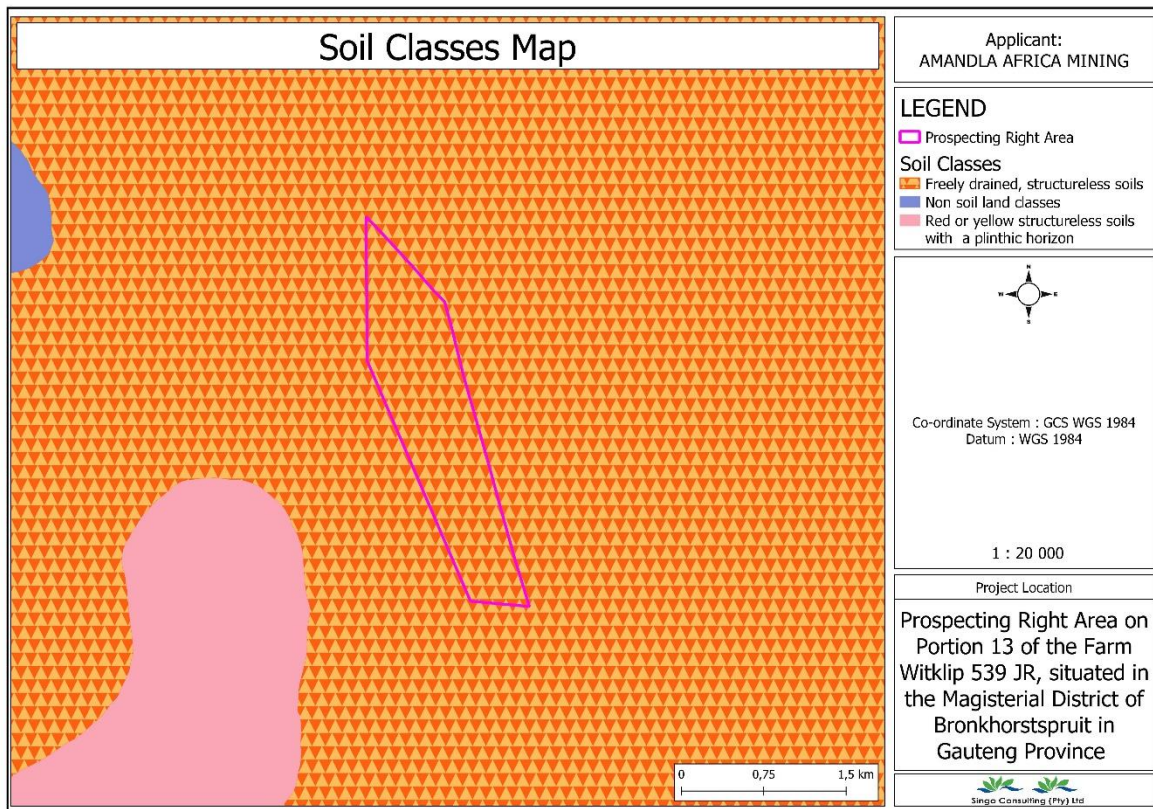


FIGURE 22: SOIL CLASS MAP.



FIGURE 23: TYPE OF SOIL FOUND ON SITE DURING SITE ASSESSMENT.

3.2 Hydrological Status of study area

Surface Water

From the study conducted in house the proposed area falls within Olifants Management Area (WMA) , within the B20 F & B20D quaternary catchment (Figure 22). The WR2012 study, presents hydrological parameters for each quaternary catchment including area, mean annual precipitation (MAP) and mean annual runoff (MAR). The total catchment area of B20D is 478.3 km² with MAP of 680 millimetre (mm). The total catchment area of B20F is 497.2 km² with MAP of 661 millimetre (mm).

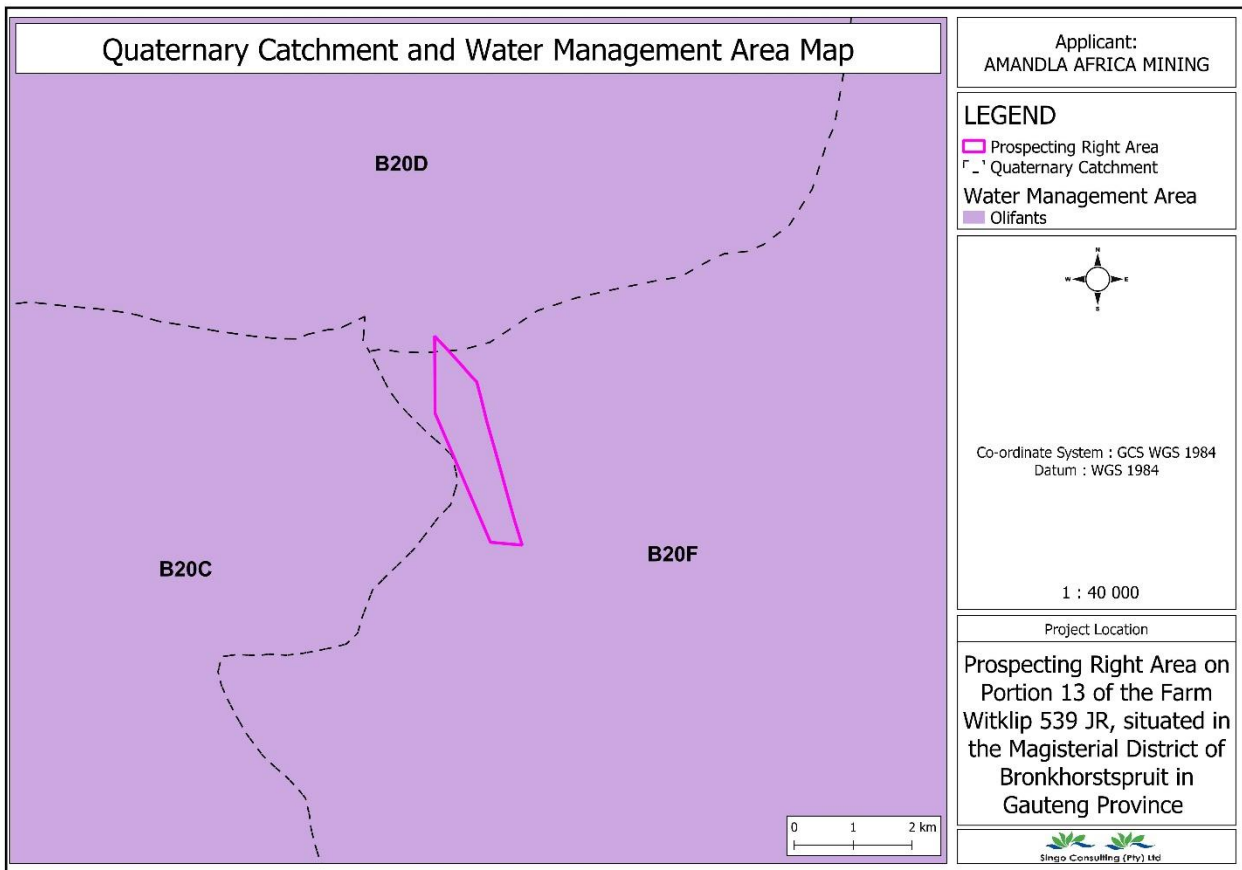


FIGURE 24: PRESENTATION OF THE WMA, SUB-WMA AND CATCHMENTS RELEVANT TO THE STUDY AREA.

Hydrogeology

Geologically the site is underlain by the Rayton Formation. Extensive aquitards with efficient porosity and permeability are formed by the Pretoria group quartzites at outcrop areas if weathering had occurred. The joints and fractures in the quartzites determines the potential for groundwater occurrence.

During groundwater exploration, the targeted areas should be at the zones of weathering and fractured areas within the quartzites as weathering and fracturing are potential aspects that may increase the aquifer potential. The thickness of Pretoria Group quartzites may reach up to 300 m but the depth of weathering is thin (up to 15 m), it can be concluded that groundwater users in the area tap their water from these weathered/fractured quartzitic aquifer. The average recharge values assigned to quartzite in outcrop areas is $\pm 10\%$ of the mean annual precipitations (MAP) (Groundwater Decision Tool). The natural/background water quality is commonly within target water quality limits.

Shallow weathered aquifer

Quartzite/shale and sandstone complexes are found to generally have low transmissivities, except if weathered and form extensive aquitards in outcrop areas. The sandy soil horizon is expected to allow for rapid infiltration into the vadose zone during precipitation events at recharge. High runoff rates are expected on the steep slopes to the east towards the Bronkhorstspuit. Streams that converge at right angles are common in jointed, folding or faulted quartzites. Folding leads to a high degree of fracturing and the shallow weathered aquifer is thought to have developed a high fracture density due to folding. The main source of recharge into the shallow alluvial aquifer is rainfall that infiltrates the aquifer through the unsaturated zone. Vertical movement of water is faster than lateral movement in this system as water moves predominantly under the influence of gravity. Groundwater recharge was estimated to be an average of 10% of mean annual precipitation. The commonly expected values of porosity and hydraulic conductivity are 0.05 and 0.1 m/day, respectively. This aquifer is thought to be the main productive aquifer in the area.

Fractured aquifer

At depth, Pretoria Group quartzites are generally competent rock and tend to develop good jointing systems. Primary porosity is virtually inexistent, and the presence of water is generally limited to secondary structures, i.e. joints and fractures whereas both the porosity and the hydraulic conductivity of these aquifers are known to be low. The commonly expected values of porosity and hydraulic conductivity are 0.035 and 0.01 m/day, respectively. Movement of groundwater in this aquifer occurs primarily in secondary structures such as faults and fractures. The Pretoria Group quartzites are low-yielding aquifers, with a low groundwater development potential at depths greater than 40 m below the surface.

Surface hydrology

The figure below illustrates aquifer classification of different areas in South Africa. It can be deduced that the project area comprises of minor aquifers and the dominant water source is a surface water. Table 8 interprets the meaning of the aquifer classification and when an area is said to have a minor aquifer it means that the aquifer is Moderately yielding aquifer of acceptable quality or high yielding aquifer of poor-quality water.

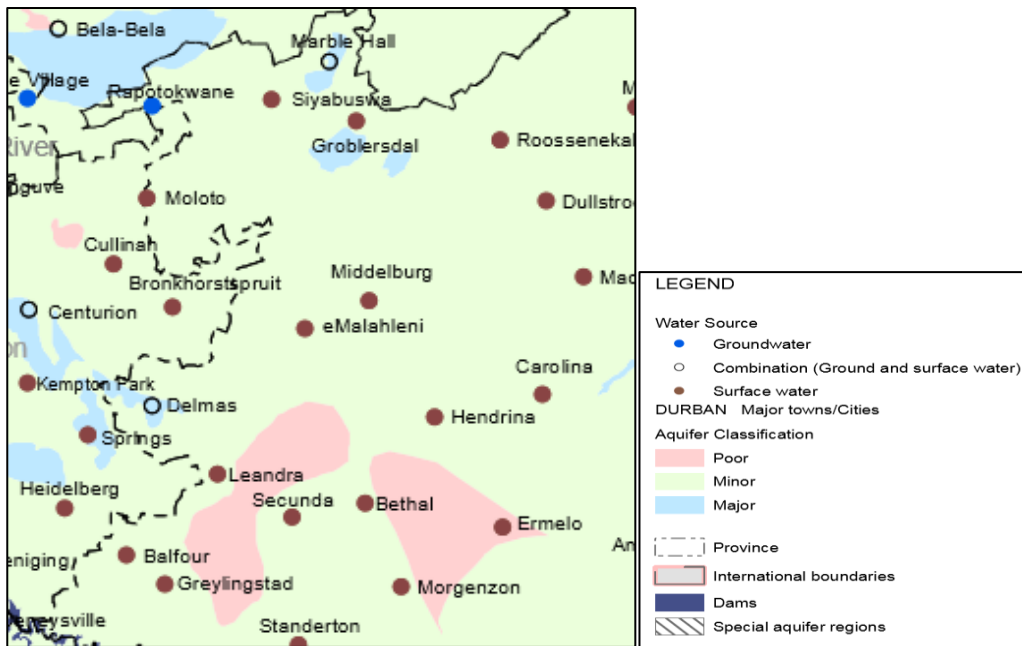


Figure 25: Aquifer classification of South Africa

TABLE 6: AQUIFER CHARACTERIZATION

Aquifer	Description
Sole source aquifer	An aquifer used to supply 50% or more of urban domestic water for a given area, for which there are no reasonably available alternative sources should this aquifer be impacted upon or depleted.
Major aquifer region	High-yielding aquifer of acceptable quality water.
Minor aquifer region	Moderately yielding aquifer of acceptable quality or high yielding aquifer of poor-quality water.
Poor aquifer region	Insignificantly yielding aquifer of good quality or moderately yielding aquifer of poor quality, or aquifer that will never be utilized for water supply and that will not contaminate other aquifers.
Special aquifer region	An aquifer designated as such by the Minister of Water

The hydrology surrounding the proposed area is of vital importance as well. In this context hydrology is all the surface waters appearing within and nearby the proposed project area, where a potential to be impacted upon by the project exist. The hydrology map, illustrates that the following water bodies exists within and nearby the project area:

- Non perennial River
- Channelled Valley Bottom
- Depression

These are important natural water resources that should not be disturbed by anthropogenic activities. For this project where prospecting right poses a risk on them, there should be measures and guidelines put in place that will protect the water resources in this area to ensure optimal conservation of water. The prospecting right should take place during dry seasons where the water percentages are very low. Drilling activity should not be conducted near these water resources, the exploration geologists will be advised to drill and sample away from rivers and wetlands on site. See Buffer Map Below.

Extreme caution should be taken during prospecting, owing to the perennial river and numerous wetlands existing within and nearby the project area. No washing of any mechanical equipment's or vehicles will be allowed near the water resources, and all the perennial and non-perennial rivers will be buffered as no go area preferably a 500m buffer will apply.

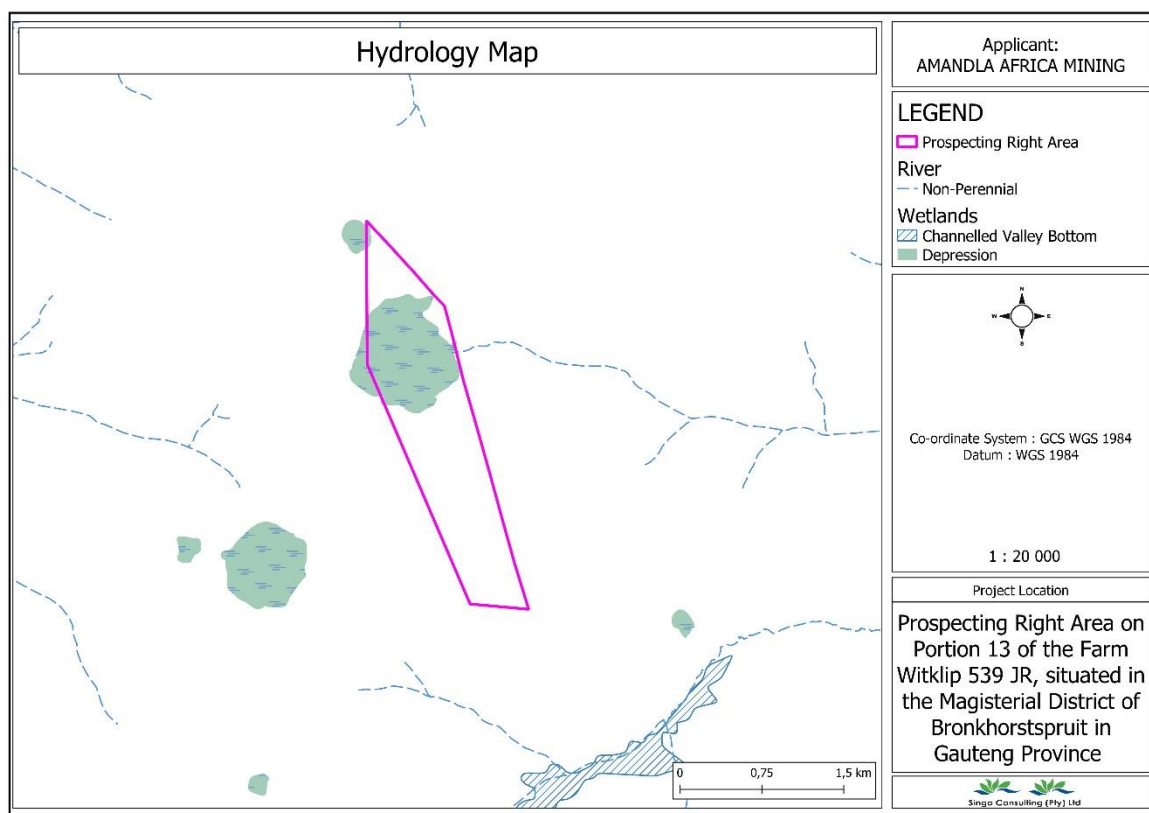


FIGURE 26: HYDROLOGICAL MAP FOR THE PROPOSED PROSPECTING AREA.

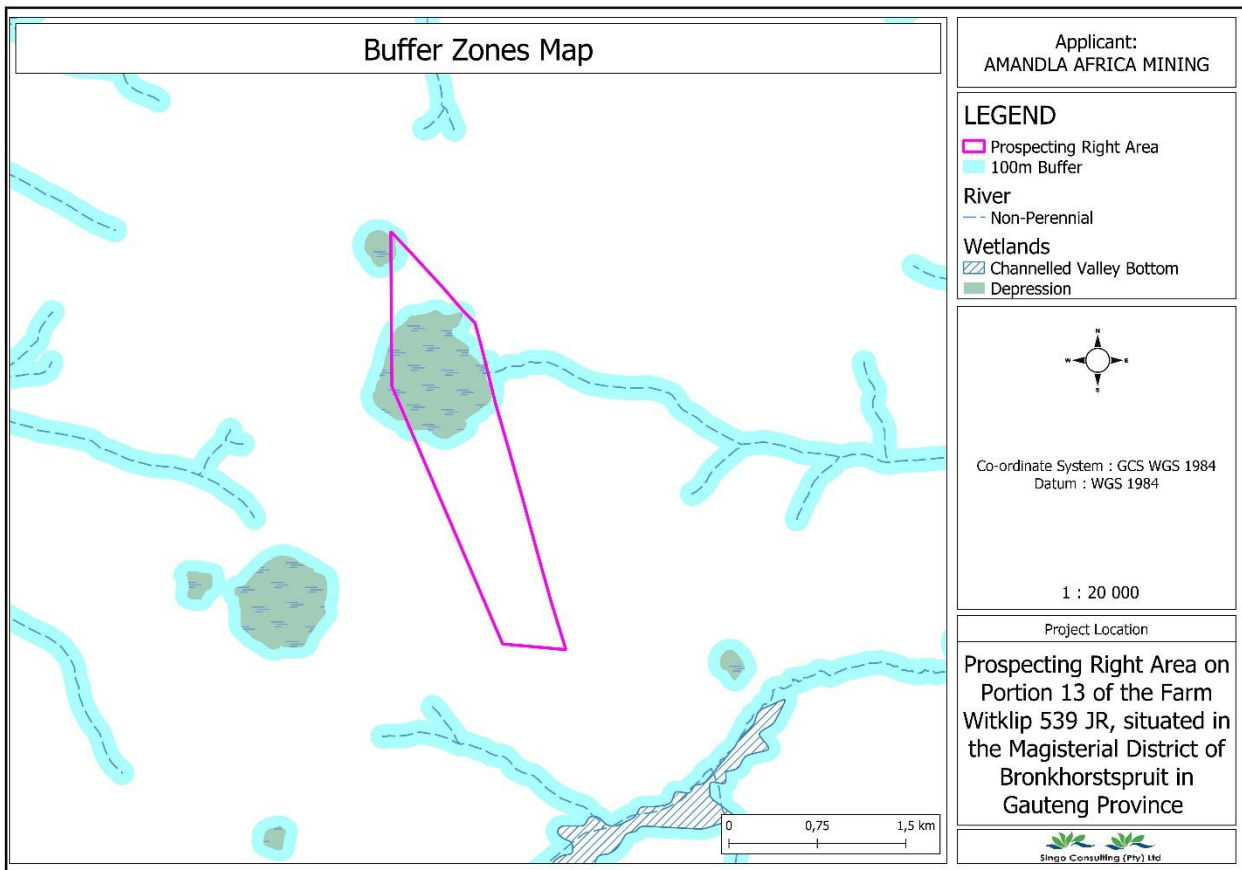


FIGURE 27: HYDROLOGICAL BUFFER MAP OF THE PROPOSED AREA.

3.3 Land Capability and Land Use

The map in **Error! Reference source not found.** illustrates a variety of land uses that is currently taking place in the proposed prospecting right area. The area is entirely dominated by cultivated land (Maize). The prospecting right activity possess a lower risk in these soil types as the prospecting activity are short term activities and no huge excavation impact will be caused by this activity.

Where the land use is currently cultivation, drilling will only take place after the reaping period is over to avoid destroying the crops. Because of numerous waterbodies in place, drilling will also be conducted during dry season when the water percentage is low in the wetlands and non-perennial streams within the project area.

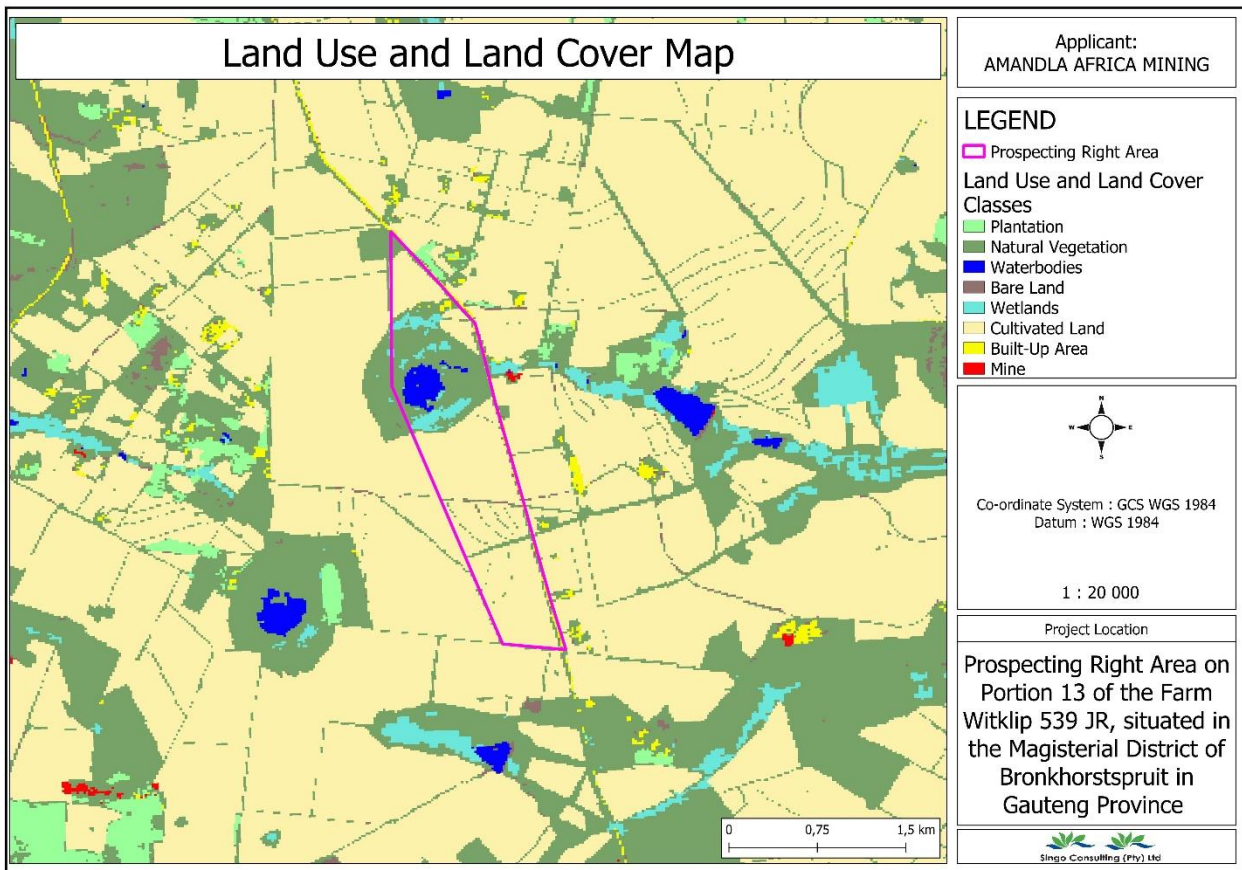


FIGURE 28: LAND USE MAP FOR THE PROPOSED PROSPECTING AREA.

3.4 Biodiversity

3.4.1 Ecoregion

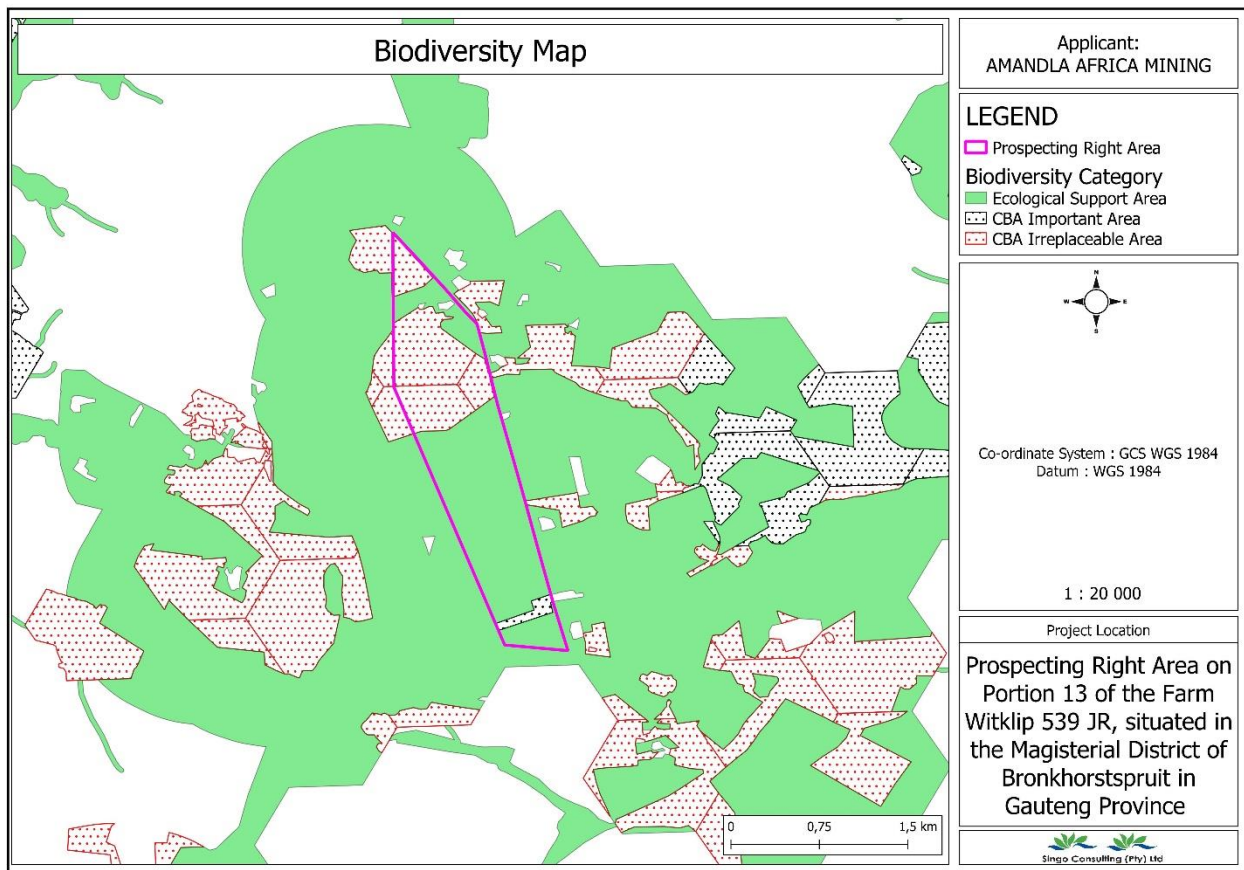


FIGURE 29: BIODIVERSITY MAP OF THE PROPOSED PROJECT AREA.

3.4.2 Fauna

In order to provide an indication of the potential faunal diversity on-site, the following reference material was used:

3.4.3 Vegetation and Ecosystems



Figure 30: Type of vegetation found on the proposed project area during site visit.

3.4.4 Flora

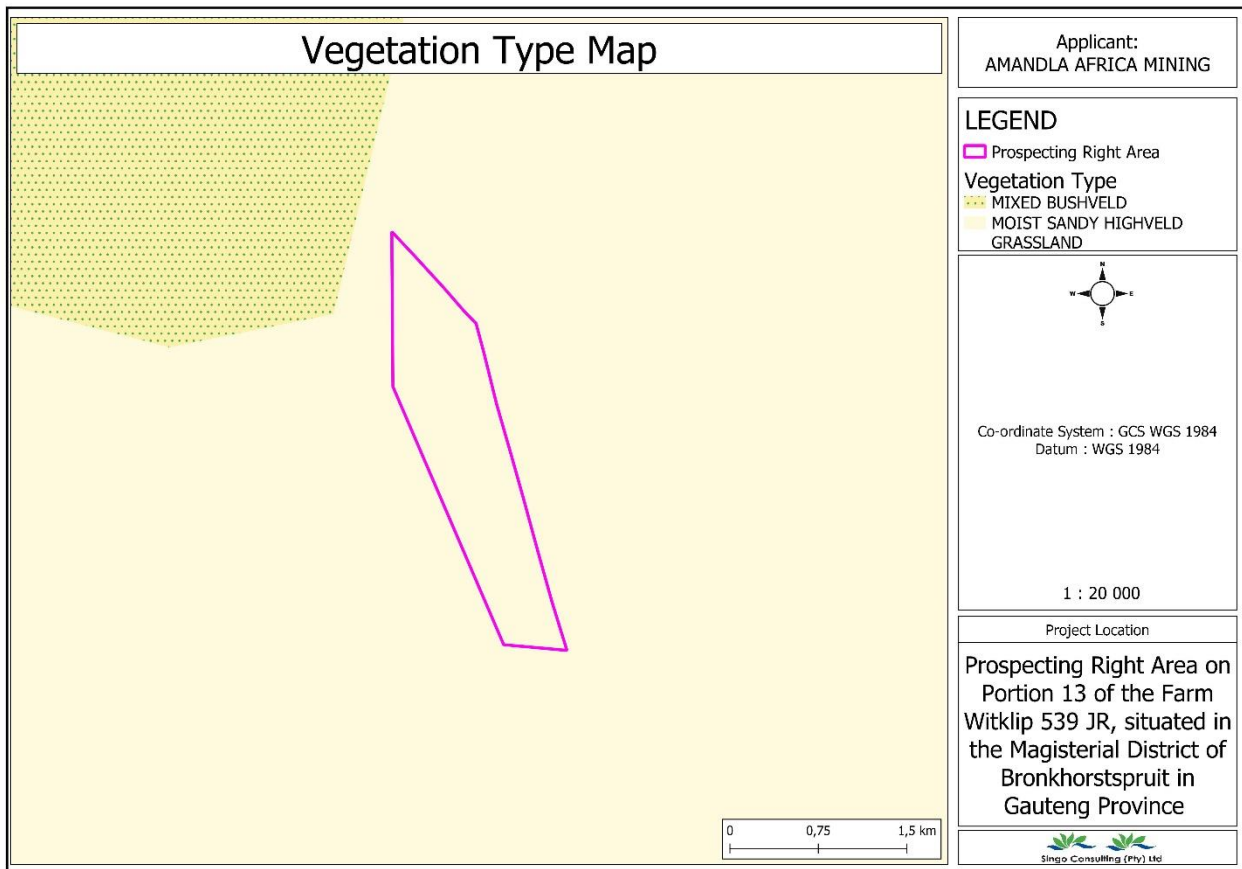


FIGURE 31: VEGETATION MAP OF THE PROJECT AREA.

3.5 Heritage Resources

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

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 during site assessment. 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.

3.6 General air quality in Gauteng

There is currently a total of 679 Scheduled Processes in Gauteng, of which EMM houses almost half (40%). The two district municipalities (Sedibeng and West Rand) are the least industrialised. Iron and steel processes are the most common industrial operation within Gauteng, followed by ceramic processes and waste incineration. Power generation is number four, with cement and lead processing both fifth on the list. Industrial activities and coal fired power stations contribute to, amongst others, sulphur dioxide, particulates and oxides of nitrogen, and are significant sources of emissions specifically in highly industrialised areas such as EMM and the Vaal Triangle. Coal fired boilers were identified as the major health risk source in Gauteng contributing significantly to respiratory hospital admissions.

Domestic fuel burning has been identified as one of the most significant sources of atmospheric emissions impacting on human health and well-being. This is due to the level of release of these emissions within the breathing zone of people. Domestic fuel burning presented the most significant source of respiratory hospital admissions and premature hospitalities in Gauteng. The main pollutants of concern associated with domestic fuel burning are fine particulates (PM10) and sulphur dioxide. A study done in Soweto indicated that domestic coal combustion contributed ~70% of the ambient total particulate matter (PM10) loading, and in the Vaal Triangle it was found to contribute on average 37% to the atmospheric particulate load, rising to 65% in winter.

Vehicle exhaust emissions were estimated to be a significant urban air pollution source, specifically close to busy roads, contributing to greenhouse gasses (CO₂, CO, CH₄ and NO_x), particulate matter

(carbon and lead), ozone precursors (NO_x and VOCs) and sulphur dioxide. Vehicle emissions also tend to peak in the early morning and evenings, at which time atmospheric dispersion potentials are reduced. Vehicle emissions were identified as a main contributor to respiratory hospitalisations and excess leukaemia cases in Gauteng.

Windblown dust from mine tailings dams has remained a source of concern in Gauteng, specifically for areas located downwind of these sources. Aside from health risks and nuisance associated with dust, gold tailings also contain compounds such as cyanide and heavy metals, increasing the health risk potential.

Although based on limited information, waste facilities were identified as potential "toxic hotspots" due to the nature of these sources and odour potential.

In summary, the following can be concluded:

- The main contributing sources to particulates are industrial, commercial and institutional sources comprising 57% of the total emissions, with domestic fuel burning second highest at 20%.

- It should be noted that none of the mining / quarry operations or the brickworks in the province have been quantified to date and these are sources likely to contribute significantly to particulate emissions.

- The main contributing sources of SO₂ in the province include the industrial, commercial and institutional sources (31%), electricity generation (30%), vehicle emissions (21%) and domestic fuel burning (18%).

- Vehicle tailpipe emissions are the predominant source of NO_x contributing 48% to the total provincial emissions. Industrial, commercial and institutional sources are the second largest source group resulting in 41% of the total NO_x emissions.

- Similarly, to NO_x, carbon monoxide is mainly a result of vehicle tailpipe emissions (57%). The second and third largest contributors are domestic fuel burning (16%) and industrial, commercial and institutional sources (15%).

- Benzene is mainly released by vehicle combustion, resulting in 86% of the total emissions. The total emissions from benzene could be higher than reflected in this report due to the increase in traffic on the roads and the phasing out of leaded fuel resulting in the wider use of unleaded fuel, which has higher benzene content.



FIGURE 32: MAJOR SOURCES OF ATMOSPHERIC PARTICLES AND/GASES IN GAUTENG

3.7 Noise and Dust Sources

➤ Noise sources and baseline

Prospecting and associated activities often emit significant noise levels which can become a nuisance or health risk when not properly managed. This impact may affect not only to the prospecting area, but also to the surrounding land users and occupiers. The most sensitive receptors identified for the project area are the landowners and lawful occupiers of the study area itself, surrounding communities including land users, mine workers, industry, residential areas and permanent small holding homesteads and settlements. The local area is predominantly occupied by mining, agricultural, military and residential land uses. The main noise generation activities of the proposed activities during all phases are:

- ✓ Construction phase:
 - Construction of temporary water handling infrastructure and other required infrastructure; and
 - Loading and off-loading of movable infrastructure.
- ✓ Operational phase:
 - Transportation of materials;
 - Excavations;
 - Drilling; and

- Loading and off-loading of equipment and materials.
- ✓ Closure or care and maintenance phase:
 - Limited amount of vehicles moving around the site; and
 - Decommissioning of temporary infrastructure.

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

➤ **Dust Sources and baseline**

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

- Landowners and lawful occupiers of the study area;
 - Adjacent Landowners
- Surrounding communities including land users, mine workers, industry, residential areas and permanent agricultural holding homesteads and settlements including inter alia:

➤ **Aesthetic Quality**

It is important to bear in mind that determining a visual resource in absolute terms is not achievable. Evaluating a landscape's visual quality is both complex and challenging, as many quality standards apply and it is largely subjective, with individuals basing evaluations on experiences, their social level and their cultural background. Furthermore, natural features are inherently variable. Climate, season, atmospheric conditions, region and sub-region all affect the attributes that comprise the landscape. Visual Absorption Capacity (VAC) can be described as the ability of an area to absorb physical modifications. Factors affecting VAC include inter alia, vegetation, the built environment, existing infrastructure and topography. In terms of these factors, the receiving environment is perceived to have a low to medium VAC.

The prospecting activities will not modify the physical characteristics of the landscape significantly, and can easily be rehabilitated upon completion. Prospecting on the property will not be totally out of place in the local area, as there are already existing mining activities occurring to the north of the study area and therefore, partially compatible with the surrounding land uses.

3.8 Socio-Economic Environment

➤ Demographics

With an estimated 3.31 million population in city of Tshwane Metropolitan municipality housed 5.8 % and 24.1 % of south Africa's and Gauteng's population in 2017 respectively. Between 2007 and 2017, the population rate growth in the city of Tshwane Metropolitan Municipality averaged 2.92 % per annum, which is close to double the growth rate of South Africa as a whole (1.56%). Gauteng's average annual growth rate came in just under at 2.57% over the same period.

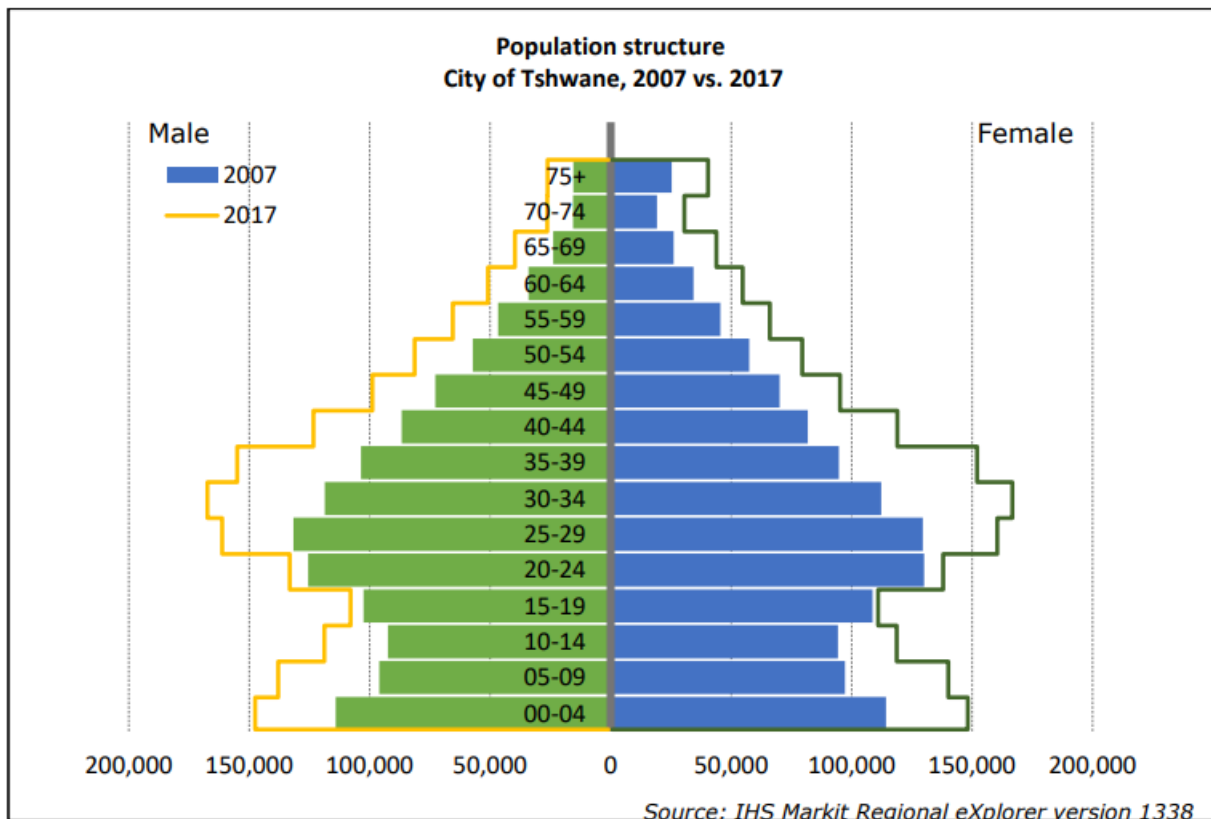


FIGURE 33: POPULATION COMPOSITION

	City of Tshwane	of Gauteng	National Total	City of Tshwane as % of province	City of Tshwane as % of national
No schooling	78,800	280,000	2,360,000	28.1%	3.3%
Grade 0-2	22,100	101,000	702,000	22.0%	3.2%
Grade 3-6	111,000	506,000	3,170,000	21.9%	3.5%
Grade 7-9	256,000	1,230,000	6,060,000	20.7%	4.2%
Grade 10-11	457,000	2,180,000	8,270,000	21.0%	5.5%
Certificate / diploma without matric	14,600	58,200	192,000	25.0%	7.6%
Matric only	802,000	3,300,000	10,400,000	24.3%	7.7%
Matric certificate / diploma	226,000	753,000	2,150,000	30.0%	10.5%
Matric Bachelor's degree	201,000	612,000	1,520,000	32.9%	13.3%
Matric Postgrad. degree	109,000	314,000	722,000	34.7%	15.1%

Source: IHS Markit Regional eXplorer version 1338

FIGURE 34: EDUCATION LEVELS IN THE CITY OF TSHWANE METROPOLITAN MUNICIPALITY

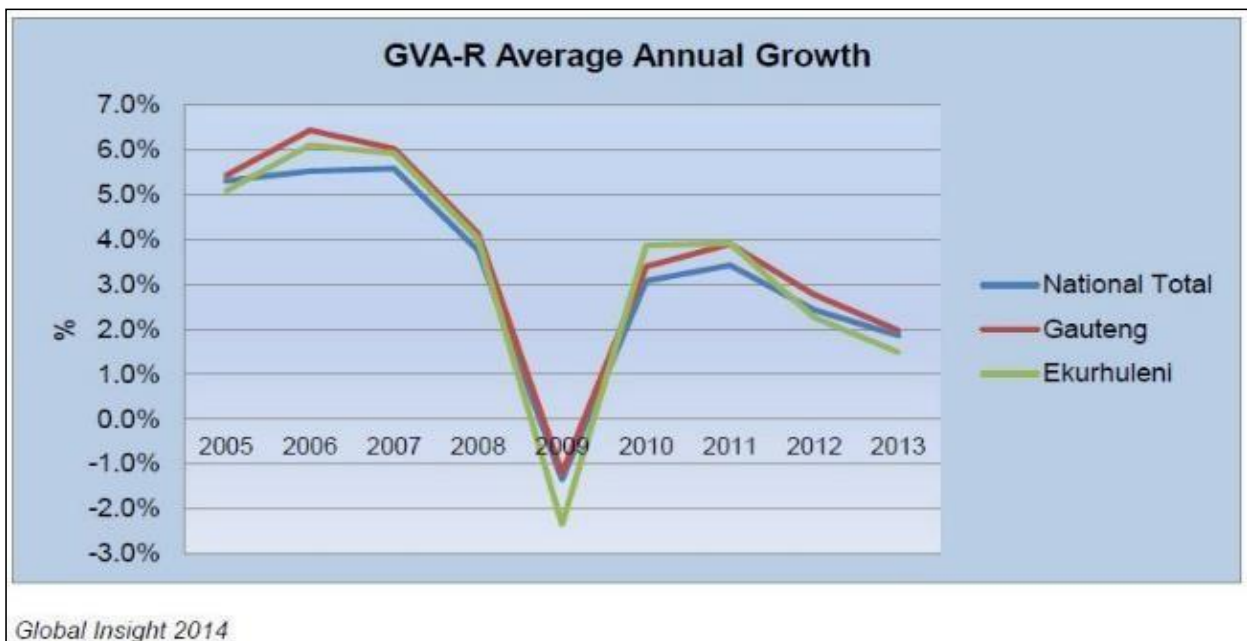


FIGURE 35: GVA-R AVERAGE ANNUAL GROWTH OF THE CITY OF TSHWANE METROPOLITAN MUNICIPALITY

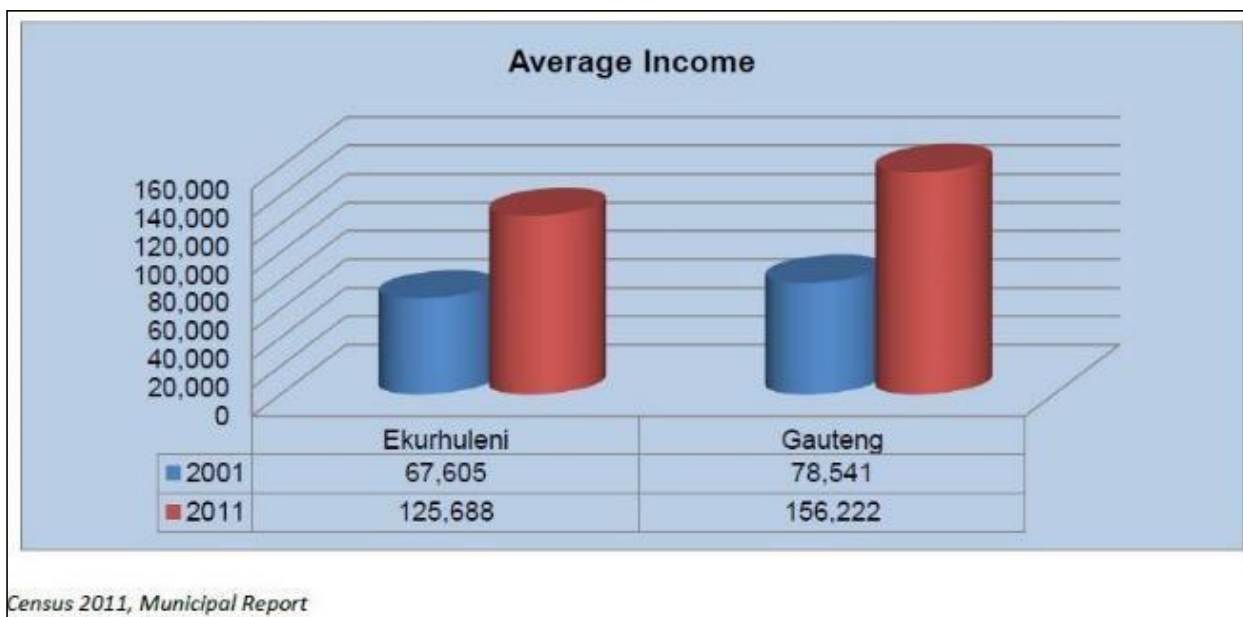


FIGURE 36: AVERAGE INCOME OF HOUSEHOLDS WITHIN CITY OF TSHWANE METROPOLITAN MUNICIPALITY

In South Africa, high unemployment (25.4% in quarter three of 2014) coincides with low economic growth (1.4% in quarter three of 2014). The same conditions are evident in City of Tshwane Metropolitan Municipality. The municipality has the highest unemployment rate in the Gauteng Province, compared to other metros. According to StatSA, unemployment in City of Tshwane Metropolitan Municipality, currently stands at 28.8%. This is higher than the national rate and can be attributed, among other factors, to internal migration with individuals being attracted to City of Tshwane Metropolitan Municipality in search of employment. 36.9% of the unemployed are youth. 72% of the population is economically active. Another factor contributing to unemployment in the municipality is the declining contribution of the manufacturing sector to the economy of the municipality. City of Tshwane Metropolitan Municipality manufacturing sector declined by 9.3% between 2004 and 2014. A closer look into manufacturing shows that the sub-sectors of fuel, petroleum, chemical, rubber, metal, machinery and household appliances suffered major declines during this period. However, manufacturing remains an important sector to City of Tshwane Metropolitan Municipality's economy, specifically metal products, machinery and household appliances sub-sectors, which has been the main driver behind output (**Figure 38**).

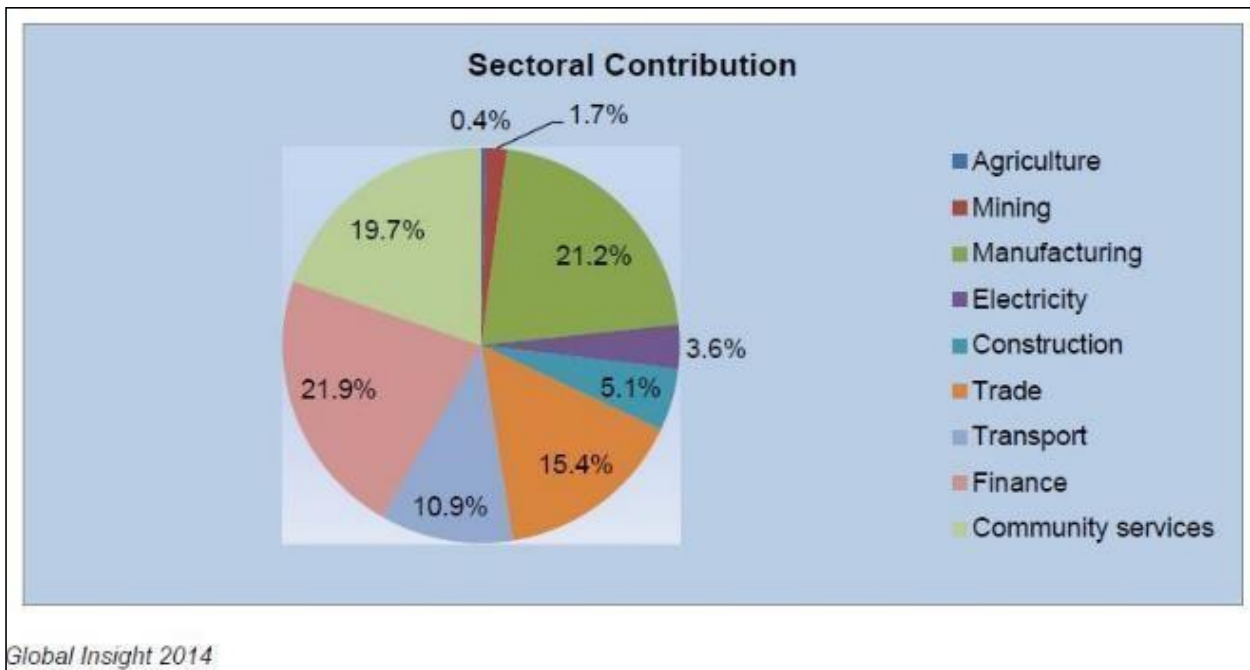


FIGURE 37: ECONOMIC SECTORAL CONTRIBUTION WITHIN THE CITY OF TSHWANE METROPOLITAN MUNICIPALITY

Household income and per capita income exceed the national average by 10% and 33% respectively. The percentage of people living in poverty nationally is 44.4%, compared to 24.2% in Metropolitan Municipality

(Source: Global Insight Regional eXplorer (ReX) v.351). Income levels in City of Tshwane Metropolitan Municipality are above national average (which is to be expected for most urban areas in South Africa), but below that of the Gauteng province's average. In the northern service delivery region, 16% of households have no income, compared to 25% in the southern and eastern regions. In the north, 44% of households have an annual income of less than R19 200, compared to 60% in the southern and eastern regions. While the northern region has both high and low income, the latter in informal settlements, the eastern and southern regions are characterised by middle to high income areas, as well as low income in the informal settlements.

The majority of people living below the poverty line live on the urban periphery, far away from job opportunities and social amenities. Nearly a third of the approximately 1.5 million people living in City of Tshwane Metropolitan Municipality live in poverty. Currently unemployment is estimated at 40%, which is unacceptably high. Many people are forced to resort to desperate measures in order to merely survive. The majority of people below the poverty line live on the urban periphery, far from mainstream job opportunities and urban amenities, and in informal settlements without basic services.

3.9 Description of the current land uses

The majority of the study area is cultivated. Surrounding land uses include inter alia:

- Bonanza Resort to the west of the study area;



FIGURE 38: CURRENT LAND USE WITHIN AND AROUND THE PROPOSED AREA.

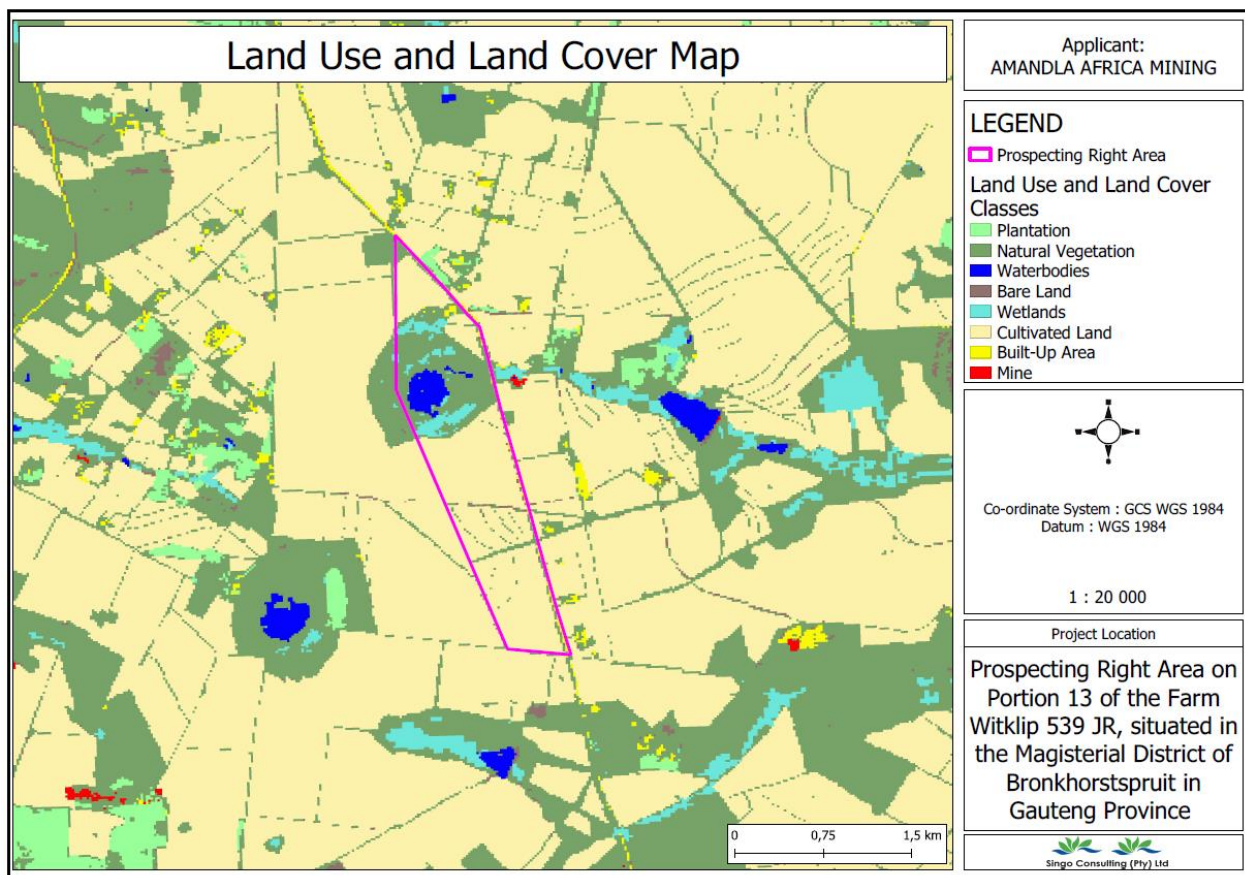


FIGURE 39: LAND USE CLASSES OF THE STUDY AREA

3.10 Description of specific environmental features and infrastructure on the site

Environmental Features

The major sensitive features within the study area include:

- Houses and residents on the small holdings;
- Potential heritage objects or buildings;

Infrastructure on the study area and in close proximity

- Transnet Gas pipeline
- Bonanza resort
- Compound

Powerlines

- A powerlines were observed which provide electricity to the homesteads on the proposed area and surrounding areas.

3.11 Environmental and current land use

map (Show all environmental, and current land use features)

3.12 Impacts and associated activities

Table 7: The following are potential impacts associated with the prospecting activity:

Potential impacts	Phase	Reversible	Irreplaceable damage	Can impact be avoided
Disturbance to heritage/cultural features on site	Construction/ set-up; operational	No	Yes	Yes
Noise caused by the drilling rig travelling to and being established on each site, the diesel engine driving the drill, vehicles going to and from the drilling site and the voices of the drilling crew.	Construction/ set-up; operational	Yes	No	No
Visual disturbance caused by the drilling rig and other equipment, soil stockpiles, signage and demarcations around site, etc.	Construction/ Set-up; Operational	Yes	No	No
Traffic disturbances caused by increase of vehicle movement around the drilling site.	Construction/ Set-up; Operational	Yes	No	Yes
Dust generated by the drilling operation and vehicles travelling over unpaved areas	Construction/Set-up; Operational	Yes	No	No
Disturbance soil and vegetation in the project area	Construction/ Set-up; Operational	Yes	No	No
Disturbance to animal life in the vicinity	Construction/ Set-up; Operational	Yes	No	Yes
Friction between local residents/landowners and prospecting personnel	Construction/ Set-up; Operational	Yes	No	Yes

It is not anticipated that the prospecting activities will have any lasting material effects on existing land uses on the prospecting areas or any other areas in their vicinity.

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

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

This section provides the detailed methodology used for the assessment of the significance of potential environmental impacts in the EIA. This methodology allows for the identified potential impacts to be analyzed in a systematic manner, with significance rating (from insignificant to very high) assigned to each potential impact. The significance of an impact is defined as a combination of the consequence of the impact occurring and the probability that the impact will occur. The criteria used to determine impact consequence include extent, intensity and duration of the impact and are presented in table 11.

Table 8: Criteria used to determine the consequence of the impact.

Rating	Definition of rating	Score
Extent – The area in which the impact will be experienced		
Local	Confined to project or study area or part thereof (e.g. site)	1
Regional	The region, which may be defined in various ways, e.g. cadastral, catchment, topographic	2
(Inter)national	Nationally or beyond	3
Intensity – The magnitude/size of impact		
Low	Site-specific and wider natural and/or social functions and processes are negligibly altered	1
Medium	Site-specific and wider natural and/or social functions and processes continue albeit in a modified way	2
High	Site-specific and wider natural and/or social functions or processes are severely altered	3
Duration – The time frame for which the impact will be experienced		
Short-term	For the duration of project activities / up to 2 years	1
Medium-term	2 to 15 years	2
Long-term	More than 15 years	3

The combined score of these three criteria corresponds to a consequence rating, as set out in table 12. (Note that the lowest possible consequence score is 3.)

Table 9: Method used to determine the consequence score

Combined score (A+B+C)	3 – 4	5	6	7	8-9
Consequence rating	Very low	Low	Medium	High	Very high

Once the consequence is derived, the probability of the impact occurring is considered, using the probability classifications presented in Table 13.

Table 10: Probability classification

Probability of impact – The likelihood of the impact occurring	
Improbable	< 40% chance of occurring
Possible	40%-70% chance of occurring
Probable	> 70%-90% chance of occurring
Definite	> 90% chance of occurring

The overall significance of impacts is determined by considering consequence and probability using the rating system prescribed in table 13.

Finally, the impacts are considered in terms of their status (positive or negative) and the confidence in the ascribed impact significance rating is noted. The classification for considering the status of impacts and the confidence in assessment is laid out in table 14.

Table 11: Impact status and confidence classification.

Status of impact	
Indication whether the impact is adverse (negative) or beneficial (positive)	+ ve (positive – a 'benefit')
	- ve (negative – a 'cost')
	Neutral
Confidence of assessment	
The degree of confidence in predictions based on available information, the environmental consultant's judgment and/or specialist knowledge.	Low
	Medium
	High

Different types of impacts were also considered in the impact ratings, as listed in table 15.

Table 12: Types of impact

Direct	Impacts that result from the direct interaction between a project activity and the receiving environment (e.g. dust generation which affects air quality).
Indirect	Impacts that result from other (non-project) activities but which are facilitated as a result of the project or impacts that occur as a result of subsequent interaction of direct project impacts within the environment (e.g. reduced water supply that affects crop production and subsequently impacts on subsistence-based livelihoods).
Cumulative	Impacts that act together with current or future potential impacts of other activities or proposed activities in the area / region that affect the same resources and / or receptors (e.g. combined effects of waste water discharges from more than one project into the same water resource, which may be acceptable individually, but cumulatively result in a reduction in water quality quality).

There is no statutory definition of 'significance' and its determination is therefore necessarily partially subjective. Criteria for assessing the significance of impacts arise from the following key elements.

Status of compliance with relevant local legislation, policies and plans, any relevant or industry policies, environmental standards or guidelines and internationally accepted best practice:

The consequence of the change to the biophysical or socio-economic environment (e.g. loss of habitats, decrease in water quality) expressed, wherever practicable, in quantitative terms. For socio-economic impacts, the consequence must be viewed from the perspective of those affected, by considering the likely perceived importance of the impact and the ability of people to manage and adapt to the change.

The nature of the impact receptor (physical, biological, or human). Where the receptor is physical (e.g. a water resource) its quality, sensitivity to change and importance must be considered. Where the receptor is biological, its importance (e.g. its local, regional, national or international importance) and its sensitivity to the impact must be considered. For a human receptor, the sensitivity of the household, community or wider societal group must be considered along with their ability to adapt to and manage impact effects.

The probability that the identified impact will occur. This is estimated based upon experience and / or evidence that such an outcome has previously occurred.

The impact significance rating also reflects the need for mitigation. While low significance impacts may not require specific mitigation measures, high significance negative impacts demand that adequate measures be put in place, to reduce the residual significance (impact significance rating, after mitigation), as described in Table 16.

Table 13: Definitions of impact significance

Insignificant	The potential impact is negligible, and no mitigation measures or environmental management is required.
Very low and low	No specific mitigation measures required, beyond normal environmental good practices.
Medium	Specific mitigation measures should be devised, to reduce the impact significance to an acceptable level. If mitigation is not possible, compensation measures should be considered.
Very high	Specific mitigation measures should be identified and implemented, to reduce the impact significance to an acceptable level. If such mitigation is not possible, very high significance negative impacts should be considered in the project's authorization process.

Note that impact significance will be rated in the prescribed way both without and with the effective implementation of the recommended mitigation measures.

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

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

Currently, there is no alternative layout. Should we receive comments that warrant changing site layout. The invasive activities that entail the drilling of at least 15 exploration holes will have a minimal environmental and social impact as the drill site will be confined to an area of approximately 0.9 ha (9000m²) of the 245,294 hectares (Ha) sized property. This needs to be viewed in the context of the entire prospecting license area under application which covers and it needs to be kept in mind that of the identified impacts will occur for a limited time and the extent of the impacts will be localized. All the identified impacts can be suitably mitigated with the residual impact ratings being of low significance. After drilling activities have been completed and the drill pads rehabilitated to predrilling status, the impacts will cease to exist. These impacts are listed in Table 16 Impact Assessment.

3.13 Assessment of each identified potentially significant impact and risk

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

Table 14: Impact assessment.

Name of activity	Potential impact	Aspects affected	Phase	Significance				Mitigation type	Significance
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 and groundwater contamination, air pollution, etc.		In which impact is anticipated, e.g. construction, commissioning, operational, decommissioning, closure and post-closure.	If not mitigated				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	If mitigated
Site establishment activities	Cultural and Heritage (-ve)	Destruction or loss of Cultural	Construction/ set up	1	1	1	3 VL	If concentrations of archaeological heritage	Negligible

Name of activity	Potential impact	Aspects affected	Phase	Significance					Mitigation type	Significance
Vegetation clearance Topsoil stripping & stockpiling Drill pad compaction Erection of office, toilets, fuel storage (if not by road tanker), water tanker, core storage Vehicle movements Waste management		and Heritage Resources: No cultural/heritage artefacts have been identified on site							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.	
	Noise (-ve)	Noise generation	Construction/ set up	1	3	1		5 (L)	Construction/setup, operational and decommissioning activities will be limited to daylight hours on Mondays to Saturdays and no activities on Sundays and public holidays 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,	3(VL)

Name of activity	Potential impact	Aspects affected	Phase	Significance				Mitigation type	Significance	
								<p>will be maintained in good condition.</p> <p>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.</p>		
	Visual (-ve)	Visual intrusion	Construction/ set up	1	3	1		5 (L)	<p>The drilling rig and other visually prominent items on the site will be located in consultation with the landowner;</p> <p>Make use of existing vegetation as far as possible to screen the prospecting operations from view; and</p> <p>If necessary, the operations can be screened from view by erecting a shade cloth barrier.</p>	3(VL)
	Traffic (-ve)	Increase in traffic volumes near the	Construction/ set up	1	2	1		4 (VL)	Traffic signs to be put around the site to notify motorist	3(VL)

Name of activity	Potential impact	Aspects affected	Phase	Significance					Mitigation type	Significance
		drilling site							of the activities Construction vehicles to make trips on/off site only when necessary Construction vehicles to adhere to local speed limits as far as possible when driving in around site	
	Dust fall (-ve)	Dust fall & nuisance from activities	Construction/ set up	2	3	1		6 (M)	Wet suppression should be applied to ensure that no visible dust is raised by any of the prospecting operations; Separation of distance of minimum 500m, but preferably 1000m to be maintained between drill sites and dwellings; and Low vehicle speeds will be enforced on unpaved surfaces.	3(VL)
	Soil and Vegetation (-ve)	The potential impact of the proposed prospecting on the vegetation would occur at	Construction/ set up	1	3	2		6 (M)	The soil disturbance and clearance of vegetation at drill pad areas will be limited to the absolute minimum required No clear scraping (dozing)	5 (L)

Name of activity	Potential impact	Aspects affected	Phase	Significance					Mitigation type	Significance
		proposed drilling sites and the access routes used to get to these sites.							<p>be carried out unless necessary to establish a level drill pad.</p> <p>Rather that surface vegetation is cleared to make way for the drilling rig leaving the roots intact so that vegetation can coppice and regrow.</p> <p>Disturbed areas will be re-vegetated with locally indigenous species as soon as possible.</p>	
	Animal life (-ve)	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	1	3	2		6 (M)	<p>Environmental awareness training sessions should be part of the workers' induction and site workshops; and</p> <p>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</p>	5 (L)
	Social (-ve)	Friction between local	Construction/ set	1	2	2		5	All operations will be carried out under the guidance	4 (VL)

Name of activity	Potential impact	Aspects affected	Phase	Significance				Mitigation type	Significance	
		residents/land owners and construction personnel	up					(L)	<p>of a strong, experienced manager with proven skills in public consultation and conflict resolution;</p> <p>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</p> <p>There will be a strict requirement to treat residents with respect and courtesy always.</p>	
	Job creation (+ve)	Employment will be created for the clearing of the land and establishing the drilling site.	Construction/ set up	2	1	1		4 (VL)	No mitigation measures required.	4 (VL)
Exploration drilling Drilling Drill maintenance & refueling	Noise (-ve)	Noise generation	Operations	1	2	1		4 (VL)	Construction/setup, operational and decommissioning activities will be limited to daylight hours on	3(VL)

Name of activity	Potential impact	Aspects affected	Phase	Significance				Mitigation type	Significance
Core sample collection & storage Vehicle movements Waste generation & management								<p>Mondays to Saturdays and no activities on Sundays and public holidays.</p> <p>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.</p> <p>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.</p>	

Name of activity	Potential impact	Aspects affected	Phase	Significance					Mitigation type	Significance
	Visual (-ve)	Visual intrusion	Operations	1	2	1	Definite	4 (VL)	<p>The drilling rig and other visually prominent items on the site will be in consultation with the landowner.</p> <p>Make use of existing vegetation as far as possible to screen the prospecting operations from view; and</p> <p>If necessary, the operations can be screened from view by erecting a shade cloth barrier.</p>	3(VL)
	Dust fall (-ve)	Dust fall & nuisance from activities	Operations	1	2	1	Definite	4 (VL)	<p>Wet suppression will be applied to ensure that no visible dust is raised by any of the prospecting operations;</p> <p>Separation of distance of minimum 500m, but preferably 1000m to be maintained between drill sites and dwellings; and</p> <p>Low vehicle speeds will be enforced on unpaved surfaces.</p>	3(VL)

Name of activity	Potential impact	Aspects affected	Phase	Significance					Mitigation type	Significance
	Soil and Vegetation (-ve)	Soil and vegetation disturbance from drill pad preparation	Operations	1	2	2	Definite	5 (L)	<p>The soil disturbance and clearance of vegetation at drill pad areas will be limited to the absolute minimum required.</p> <p>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.</p> <p>Disturbed areas will be re vegetated with locally indigenous species as soon as possible.</p>	3(VL)

Name of activity	Potential impact	Aspects affected	Phase	Significance					Mitigation type	Significance
	Animal life (-ve)	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	1	2	2	Definite	5 (L)	Measures implemented during site establishment should apply in this phase as well.	4(VL)

Name of activity	Potential impact	Aspects affected	Phase	Significance					Mitigation type	Significance
				1	2	2	Definite	5 (L)		
	Social (-ve)	Friction between local residents/land owners and construction personnel	Operations	1	2	2	Definite	5 (L)	<p>All operations will be carried out under the guidance of a strong, experienced manager with proven skills in public consultation and conflict resolution;</p> <p>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;</p> <p>There will be a strict requirement to treat residents with respect and courtesy at all times.</p>	5 (L)
	Job creation (+ve)	Employment will be created for the clearing of the land and establishing the drilling site.	Operations	2	2	1	Definite	5 (L)	No mitigation measures required	5 (L)

3.14 Summary of baseline reports

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

LIST OF STUDIES UNDERTAKEN	RECOMMENDATIONS OF BASELINE REPORTS	BASELINE RECOMMENDATIONS THAT HAVE BEEN INCLUDED IN THE EIA REPORT (Mark with an X where applicable)	REFERENCE TO APPLICABLE SECTION OF REPORT WHERE SPECIALIST RECOMMENDATIONS HAVE BEEN INCLUDED.
Hydrogeological study	<ul style="list-style-type: none"> • The prospecting right activity will take place during dry seasons where the water percentages in the surrounding streams are exceptionally low. • Prospecting activity will not be conducted within 500m from watercourses, the exploration geologists will be advised to map and sample more than 500m from rivers and wetlands on site. • Extreme caution will be taken during prospecting, owing to the river and numerous wetlands existing within and nearby the project area. No washing of any mechanical equipment or vehicles will be allowed near the water resources. • Rivers and wetlands will be buffered as no go area, a 500m buffer will apply. • Absorbent Spill kits will be made available at time during prospecting activities. 	X	

Hydrology study	<ul style="list-style-type: none"> • The prospecting right activity should take place during dry seasons where the water percentages in the surrounding streams and wetlands are extremely low. • Prospecting activity should not be conducted near the water resources; the exploration geologists will be advised to prospect and sample away from rivers and wetlands on site. • Extreme caution should be taken during prospecting, owing to the perennial and non-perennial rivers and the wetlands, existing within the project area. No washing of any mechanical equipment's or vehicles will be allowed near the water resources. • All the wetlands and non-perennial streams will be buffered as "no go" • To avoid soil erosion and siltation in the watercourse, vegetation will not be cleared. 	X	
Soil Studies	<ul style="list-style-type: none"> • The land use on the investigation site is covered largely by waterbodies, natural as well as mine land use type. • The Granite prospecting infrastructure will have less impact on soils and footprint will be minimal. • It is anticipated that the Granite prospecting activities will not lead to severe loss of soils and degradation of agricultural potential. • It is highly recommended to do rehabilitation after completion of all activities. • And all the wetlands and non-perennial rivers will be buffered as "no go" area preferably a 500 m buffer will apply 	X	

	<ul style="list-style-type: none">• No washing of any mechanical equipments or vehicles should be allowed 500 m from the water resources.		
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3.15 Environmental impact statement

Summary of the key findings of the environmental impact assessment

The majorities 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 hectares (9000 m²). This needs to be viewed in the context of the entire prospecting license area under application which covers just 245,294 ha. The assessed impact ratings after implementation of the mitigation measures above are summarized as follows:

Table 15: Summary of identified impacts.

Potential impacts (Positive: +ve; Negative: -Ve)	Impact significance pre-mitigation	Impact significance post-mitigation
Site establishment activities		
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
Exploration drilling		
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 the identified impacts will occur for a limited and the extent of the impacts will be localized. All the identified impacts can be suitably mitigated with the residual impact ratings being of low significance. After drilling activities have been completed and the drill pads rehabilitated to predrilling status, the impacts will cease to exist.

3.16 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.

The specific locations of intrusive drilling activities will be determined during Phase 1 of the Prospecting Work Programme. All infrastructure to be developed will be mobile and temporary. No prospecting will be conducted on the sensitive northern portions of the study area. Please refer to Appendix B.

3.16.1 Positive and negative impacts, and risks of the proposed activity and alternatives

Destruction or loss of Cultural and Heritage Resources during the construction/setup phase (although this is 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.

Increase in traffic volumes near the drilling site during site establishment and prospecting.

Dust fall & nuisance from construction/set-up and drilling activities.

Soil and vegetation disturbance from drill pad preparation during the construction/set-up and operational phase 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 anticipated that the noise and general activity will keep animals away from the site during prospecting.

Friction between residents/landowners and construction personnel during.

Employment will be created for the clearing of the land and establishing the drilling site.

3.16.2 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 sufficient information to strategically plan the prospecting activities as to avoid unnecessary social and environmental impacts.

Provide sufficient information and guidance to plan prospecting activities in a manner that would reduce impacts (both social and environmental) as far as practically possible.

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 though

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 and 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 locally indigenous species as soon as possible.
- Animal life is protected and preserved at all times and the prospecting activities have limited impact on the surrounding habitat.

Social friction with landowners can be managed by employing strong, experienced personnel with skills in public consultation and conflict resolution during stakeholder consultation phases. 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.

3.16.3 Aspects for inclusion as conditions of authorisation

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

Maintain a minimum 500m (preferably 1000m) buffer from any infrastructure or dwelling;

Landowners and land occupiers should be engaged (re-consulted) at least 1 month prior to any site activities being undertaken once drill sites are known; and

A map detailing the drilling locations should be provided to the landowners as well as the DMR prior to commencement of prospecting activities.

Description of any assumptions, uncertainties and gaps in knowledge

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

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

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

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

Which relate to the assessment and mitigation measures proposed?

- All information provided to EAP, by the applicant and I&APs was correct and valid at the time that it was provided;
- The investigations undertaken by specialists during the BA process, indicate the development site as suitable and technically acceptable, with exclusion of sensitive areas;
- It is not always possible to involve all I&APs individually, however, every effort has been made to involve as many affected stakeholders as possible during this time of a pandemic (Covid-19);
- The information provided by the applicant and specialists was accurate and unbiased; and
- The scope of this investigation is limited to assessing the environmental impacts associated with the prospecting activity.

3.16.5 Reasoned opinion as to whether the proposed activity should /should not be authorised

- ❖ Reasons why the activity should be authorised or not

It is the opinion of the EAP that the proposed prospecting activities should be authorized.

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

This report shows that the proposed development has the potential to provide socio-economic benefits to the local and regional communities. The EAP therefore recommends that the proposed

activities be approved on condition that the EMPR is strictly implemented and monitored for compliance and that the northern portions of the study area are excluded from prospecting.

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

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

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

❖ Conditions that must be included in the authorization

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

3.17 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.

3.18 Financial provision

State the amount required to manage and rehabilitate the environment.

A financial provision of approximately R 46 686 which includes rehabilitation activities has been made by Amandla Africa Mining . A breakdown of these costs is presented in the table below. The applicant undertakes to provide financial provision through funding from the personal account.

Calculation of the quantum

		CALCULATION OF THE QUANTUM						
Applicant: Evaluator:		Abel Mojapelo		Ref No.: Date:		GP30/5/1/1/2/ 17260 PR 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	
Sub Total 1							33276,015	
1	Preliminary and General		3993,1218		weighting factor 2 1		3993,1218	
2	Contingencies			3327,6015			3327,6015	
Subtotal 2							40596,74	
VAT (15%)							6089,51	
Grand Total							46686	

Singed: Abel Mojapelo
Date: 10/04/2022

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 Mining work programme, Financial and Technical Competence Report or PWP as the case may be.

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 the 3-year period. The extended 2 years will be based on the results of the first 3-year drilling program. 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 19 shows a breakdown of the expected costs throughout the exploration process. The amount is also reflected in the PWP submitted to the DMRE.

Table 16: Expenditure per activity.

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

					Timeframe outcome	for
	Data processing and validation	Exploration Geologist	Month 17-18	Stratigraphic correct borehole data Analytical correct borehole data	Month 20 – 22 Month 20 - 22	Exploration Geologist /Database administrator Exploration Geologist /Database administrator
	Lithofacies and coal quality modelling	Exploration Geologist	Month 22-24	Contour maps Reserve breakdown	Month 22-24	Exploration Geologist /Modeler
	Inspection/Consultation with landowners	Mining Rights officer	Month 16-17	Rehabilitation clearance certificate	Month 16 - 17	Land Tenure Specialist / Environmental officer
Phase 3: Invasive Prospecting						
	Diamond drilling (5 borehole)	Exploration Geologist	Month 25	Borehole core data Coal core samples Rock core samples Coal core analyses Rock core analyses	Month 25 Month 25-60	Exploration Geologist Laboratory analyst
	Directional drilling (Optional)	Exploration Geologist	Month 24-30	Lithological data	Month 24-60	Exploration Geologist
	Geophysical survey (Optional)	Geophysicist Exploration Geologist	Month 25-27	Lithology data Structural data	Month 25-60	Geophysicist
	Geohydrological survey (Optional)	Geohydrologist Exploration Geologist	Month 25-26	Borehole water yield Water samples	Month 29-60	Geohydrologist
Phase 3: Non-invasive Prospecting						
	Consultation with landowners	Mining Rights officer	Month 24	Legal agreement	Month 24	Land Tenure Specialist
	Data processing and validation	Exploration Geologist	Month 29-30	Stratigraphic correct borehole data Analytical correct borehole data	Month 32 – 60 Month 32 - 60	Exploration Geologist /Database administrator Exploration Geologist /Database administrator
	Lithofacies and Coal	Exploration Geologist	Month 34-36	Contour maps Reserve breakdown	Month 34-60	Exploration Geologist /Modeler
	Inspection/consultation with landowners	Land Tenure Specialist	Month 28-29	Rehabilitation clearance certificate	Month 28 - 60	Land Tenure Specialist / Environmental officer

3.19 Specific Information required by the competent Authority.

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

3.19.1 The EIA report must include the:

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 has been implemented during the environmental authorization process. The purpose of the consultation is to provide affected persons the opportunity to raise any potential concerns. Concerns raised has been captured and addressed within 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 program, a recommendation has been made to ensure that the directly affected landowners are re_consulted a minimum of 1 month prior to implementing invasive activities (drilling). The purpose of the re_consultation is to ensure that socio_economic impacts on directly affected persons can be raised and where possible addressed.

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 50m of any identified heritage site (which may add up during the prospecting program) based on the desktop work underdone. Furthermore, from desktop studies undertaken, old housing heritage states have been identified in the area. However, comment from 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.

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

4. PART B

ENVIRONMENTAL MANAGEMENT PROGRAMME REPORT

4.1 Environmental management programme

4.1.1 Details of the EAP

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

It is confirmed that the requirements for the provision of the details and expertise of the EAP are already included in PART B, section (1)(h).

4.1.2 Description of the aspects of the activity

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

It is confirmed that the requirement to describe the aspects of the activity that are covered by the environmental management program is already included in PART B, section (1)(h).

4.1.3 Composite map

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

Refer to Appendix B.

4.1.4 Description of impact management objectives including management statements

- ❖ Determination of closure objectives.

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

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

The closure objectives include:

- Ensure that there are no safety risks associated with the drill boreholes through drill hole capping and backfilling;
- Rehabilitate any pollution that occurred through hazardous spills or waste materials and remove the source of the pollution;

- Establish an area that is not susceptible to soil erosion;
- Re-vegetate disturbed areas with endemic plant species that occur naturally within the area.

4.1.5 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.

4.1.6 Has a water use license been applied for?

No, a water use license will only be applied if section 21 activities are triggered.

4.2 Impacts to be mitigated in their respective phases

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

Table 17: 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 ²	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 program 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.
Site establishment activities Vegetation clearance Topsoil stripping and stockpiling Drill pad compaction Placement of temporary portable toilets and resting place	Construction/setup and operational phase	20m ² 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	Heritage Act	Before and during drilling activities

Activities	Phase	Size and scale of disturbance	Mitigation measures	Compliance with standards	Implementation period
Vehicle movements Waste management	Construction/setup and operational phase	20m ² diamond drill holes	mitigation measures. Control noise generation by maintaining equipment. Limited to daylight hours on Mondays to Saturdays and no activities on Sundays and public holidays. Maintain a buffer of 500m between drill sites and dwellings. The resting place shall be located outside of the 82dB Zone of the drill site.	SANS 10103 guideline	Before and during drilling activities
Exploration drilling: Drilling Drill maintenance and re-fueling Core sample collection and storage Vehicle movements Waste generation and management	Construction/setup and operational phase	20m ² diamond drill holes	The drilling rig and other visually prominent items on the site will be located in consultation with the landowner; Make use of existing vegetation as far as possible to screen the prospecting operations from view; and If necessary, the operations can be screened from view by	N/A	Before and during drilling activities

Activities	Phase	Size and scale of disturbance	Mitigation measures	Compliance with standards	Implementation period
			erecting a shade cloth barrier		
	Construction/setup and operational phase	20m ² 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 500mbetween drill sites and dwellings	GN R. 827 (NEMAQA)	Before and during drilling activities
	Construction/setup and operational phase	20m ² diamond drill holes	The soil disturbance and clearance of vegetation at drill pad areas will be limited to the absolute minimum required and will not be dozed or scraped with vegetation roots left intact for later re growth; and Disturbed areas will be vegetated with locally 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/setup and operational phase	0.09 Ha per drill site	All operations will be carried out under the guidance of a strong, experienced manager with proven skills in public consultation and conflict resolution, including environmental coordinator where applicable; All prospecting personnel will be made aware of the local conditions and sensitivities in the prospecting area and the fact that some of the local residents may not welcome the prospecting activities in the area.	NEMA	Before and during drilling activities

4.3 Impact Management Outcomes

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

Table 18: 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.		
Site establishment activities (-ve) Vegetation clearance Topsoil stripping and stockpiling Drill pad compaction Erection of office, toilets, fuel storage (if not by road tanker), water tanker, core storage Vehicle movements	Cultural and heritage	Destruction or loss of Cultural and Heritage Resources: old housing cultural/ heritage artefacts have been identified closer to the 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

Activities	Potential impact	Aspects affected	Phase	Mitigation type	Standard to be achieved
Waste management	Noise	Noise generation	Construction/ set-up	<p>Construction/setup, operational and decommissioning activities will be limited to daylight hours on Mondays to Saturdays and no activities on Sundays and public holidays.</p> <p>Separation of distance of minimum 500m, but preferably 1 000m to be maintained between drill sites and dwellings.</p> <p>Noise abatement equipment, such as mufflers on diesel engines, will be maintained in good condition.</p> <p>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.</p>	SANS 10103
	Visual	Visual intrusion	Construction/ set-up	<p>The drilling rig and other visually prominent items on the site will be located in consultation with the landowner.</p> <p>Make use of existing vegetation as far as possible to screen the prospecting operations from view.</p>	N/A

Activities	Potential impact	Aspects affected	Phase	Mitigation type	Standard to be achieved
				If necessary, the operations can be screened from view by erecting a shade cloth barrier.	
	Traffic	Increase in traffic volumes in drilling site vicinity	Construction/ set-up	Traffic signs to be put around the site to notify motorist of the activities. Construction vehicles to make trips on/off site only when necessary. Construction vehicles to adhere to local speed limits as far as possible when driving in around site.	National Traffic Act Regulations
	Dust fall	Dust fall and nuisance from activities	Construction/ set-up	Wet suppression should be applied to ensure that no visible dust is raised by any of the prospecting operations. Separation of distance of minimum 500m, but preferably 1 000m to be maintained between drill sites and dwelling. Low vehicle speeds will be enforced on unpaved surfaces.	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 access routes used to get to these sites.	Construction/ set-up	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 is	NEMBA

Activities	Potential impact	Aspects affected	Phase	Mitigation type	Standard to be achieved
				<p>cleared to make way for the drilling rig leaving the roots intact so that vegetation can coppice and regrow.</p> <p>Disturbed areas will be re-vegetated with locally indigenous species as soon as possible.</p>	
	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	<p>Environmental awareness training sessions should be part of the workers' induction and site workshops.</p> <p>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.</p>	NEMBA
	Social	Friction between residents/land owners and construction personnel.	Construction/ set-up	<p>All operations will be carried out under the guidance of a strong, experienced manager with proven skills in public consultation and conflict resolution.</p> <p>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</p>	NEMA

Activities	Potential impact	Aspects affected	Phase	Mitigation type	Standard to be achieved
				<p>activities in the area.</p> <p>There will be a strict requirement to treat residents with respect and courtesy at all times.</p>	
	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
<p>Exploration drilling (ve)</p> <p>Drilling</p> <p>Drill maintenance and refueling</p> <p>Core sample collection and storage</p> <p>Vehicle movements</p> <p>Waste generation and management</p>	Noise	Noise generation	Operations	<p>Activities will be limited to daylight hours on Mondays to Saturdays and no activities on Sundays and public holidays.</p> <p>Separation of distance of minimum 500m, but preferably 1 000m to be maintained between drill sites and dwellings; Noise abatement equipment, such as mufflers on diesel engines, will be maintained in good condition.</p> <p>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.</p>	Heritage Act
	Visual	Visual intrusion	Operations	The drilling rig and other visually	SANS 10103

Activities	Potential impact	Aspects affected	Phase	Mitigation type	Standard to be achieved
				<p>prominent items on the site will be located in consultation with the landowner.</p> <p>Make use of existing vegetation as far as possible to screen the prospecting operations from view.</p> <p>If necessary, the operations can be screened from view by erecting a shade cloth barrier.</p>	
	Traffic	Increase in traffic volumes in the drilling site vicinity	Operations	<p>Traffic signs to be put around the site to notify motorist of the activities.</p> <p>Construction vehicles to make trips on/off site only when necessary.</p> <p>Construction vehicles to adhere to local speed limits as far as possible when driving in around site.</p>	N/A
	Dust fall	Dust fall and nuisance from activities	Operations	<p>Wet suppression will be applied to ensure that no visible dust is raised by any of the prospecting operations.</p> <p>Separation of distance of minimum 500m, but preferably 1000m to be maintained between drill sites and dwellings.</p> <p>Low vehicle speeds will be enforced on unpaved surfaces.</p>	National Traffic Act regulations
	Soil and vegetation	Soil and vegetation disturbance from drill pad	Operations	The soil disturbance and clearance of vegetation at drill pad areas will	GN R. 827 (NEMAQA)

Activities	Potential impact	Aspects affected	Phase	Mitigation type	Standard to be achieved
		preparation		<p>be limited to the absolute minimum required.</p> <p>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.</p> <p>Disturbed areas will be re vegetated with locally indigenous species as soon as possible.</p>	
	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	Measures implemented during site establishment should apply in this phase as well.	NEMBA
	Social	Friction between residents/land owners and construction personnel	Operations	<p>All operations will be carried out under the guidance of a strong, experienced manager with proven skills in public consultation and conflict resolution.</p> <p>All prospecting personnel will be made aware of the local conditions and sensitivities in the prospecting area and the fact</p>	NEMBA

Activities	Potential impact	Aspects affected	Phase	Mitigation type	Standard to be achieved
				<p>that some of the residents may not welcome the prospecting activities in the area.</p> <p>There will be a strict requirement to treat residents with respect and courtesy at all times.</p>	
	Job creation	Employment will be created for the clearing of the land and establishing the drilling site.	Operations	No mitigation measures required.	NEMA

4.4 Impact Management Actions

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

Table 19: 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.
Site establishment activities Vegetation clearance Topsoil stripping and stockpiling Drill pad compaction Erection of office, toilets, fuel storage (if not by road tanker), water tanker, core storage Vehicle movements Waste management	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 50m 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

Activities	Potential impact	Mitigation type	Implementation period	Compliance with standards
Exploration drilling Drilling Drill maintenance and refueling Core sample collection and storage Vehicle movements Waste generation and management	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). Maintain a buffer of 500m-1 000m between drill sites and dwellings. 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.	Before and after drilling activities.	SANS 10103
	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	Before and after drilling activities.	NEMA

Activities	Potential impact	Mitigation type	Implementation period	Compliance with standards
		<p>conditions and sensitivities in the prospecting area and of the fact that some residents may not welcome the prospecting activities. Residents will be treated with respect and courtesy at all times.</p>		

4.5 Determination of the amount of financial provision.

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

The closure objectives 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).

The closure objectives include:

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

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

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

This Basic Assessment Report and Environmental Management Programme is subjected to a public consultation period, whereby I&APs are given 30 days to comment.

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

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

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

In short, 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 23 below.

Table 20: Rehabilitation measures.

Aspect/Impact	Rehabilitation measure	Monitoring frequency and responsibility
Removal of construction structures	<p>Clear and completely remove from site all construction plant equipment, storage containers, signage, temporary fencing, temporary services, fixtures and any other temporary works.</p> <p>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.</p>	Once-off, Amandla Africa Mining
Vegetation clearing/ Replanting	<p>Remove any emerging alien and invasive vegetation to prevent further establishment.</p> <p>All planting work is to be undertaken by suitably qualified personnel making use of the appropriate equipment.</p> <p>Transplant during the winter (between April and September).</p> <p>Plant indigenous plants to minimize the spread of alien and invasive vegetation.</p>	When re-vegetation is done and in bloom
Topsoil replacement	<p>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).</p> <p>Prohibiting the use of topsoil suspected to be contaminated with the seed of alien vegetation. Alternatively, the soil is to be sprayed with specified herbicides.</p> <p>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.</p> <p>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.</p>	Once-off, Amandla Africa Mining
Waste and rubble removal	<p>Clear the site of all inert waste and rubble, including surplus rock, foundations and batching plant aggregates.</p> <p>Remove from site all domestic waste and dispose of in the approved manner at a registered waste disposal site.</p>	Once-off, Amandla Africa Mining
Solid and hazardous waste	<p>Store hazardous waste as indicated on the approved Environmental Management Programme (EMPR).</p> <p>Dispose of all hazardous waste not earmarked for reuse, recycling or resale at a registered hazardous waste disposal site.</p> <p>Remove from site all temporary fuel stores, hazardous substance stores, hazardous waste stores and pollution control sumps.</p> <p>Dispose of hazardous waste in the approved manner.</p>	Once-off, Amandla Africa Mining

	<p>Do not hose oil or fuel spills into a storm water drain or sewer, or into the surrounding natural environment.</p> <p>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).</p>	
Erosion protection	<p>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.</p> <p>Retain shrubbery and grass species wherever possible. Perform regular monitoring and maintenance of erosion control measures.</p>	After rainfall events

4.5.4 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 EMP. This will include avoiding unnecessary disturbance of natural vegetation and the rehabilitation of each drill site, immediately after drilling has been completed. All tracks to the drill sites must be rehabilitated at the end of the prospecting programme. Due to the small extent and fairly short-term period of the prospecting activities and as shown in the Environmental Impact Assessment, the impacts will be of a low or very low significance. Rehabilitation will be conducted concurrently and will include borehole capping and re-vegetation. Detailed mitigation measures are provided in the EMPR to ensure the closure objectives are met. The financial provision provides for the final checking of all sites before site clearance.

4.5.5 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. The Company must annually update and review the quantum of the financial provision (as per Regulation 54 (2) of the MPRDA). The financial Quantum Calculation is found under Appendix H.

4.5.6 Confirm that the financial provision will be provided as determined

The financial provision will be provided as determined.

The applicant submits that is able to fund the planned prospecting and rehabilitation thereof from its budget. It is confirmed that the amount for financial provision is anticipated to be an operating cost and is provided in the PWP.

4.6 Environmental Assessment Practitioners

Singo Consulting (Pty) Ltd has been appointed on behalf of Amandla Africa Mining as the independent environmental consultants to undertake the Public Participation Process and compile the Basic Assessment Report and Environmental Management Programme (EMPR) for this application process.

4.7 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 21: 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 BA Report 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: Implementation of effective waste management Establish and implement a stakeholder compliant register on site and ensure that all complaints are responded to promptly. Ensure that an oil spill kit is readily available. Ensure that all chemicals and	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
		<p>hydrocarbons are stored within bundwalls. Ensure that the fire brake is maintained.</p> <p>Rehabilitation of drill pads.</p> <p>Records of water intersections on borehole logs.</p> <p>Control and minimize the development of new access tracks.</p> <p>Appropriate storage and handling of topsoil.</p>		
Post-drilling	<p>Groundwater</p> <p>Re-vegetation</p> <p>Stability</p> <p>Soil erosion</p> <p>Alien invasive species</p>	Monitor the external boreholes within 500m from drill post drilling (if any). The drill site must be monitored 6 monthly until closure certificate is obtained.	Environmental Coordinator	Monitoring Report

4.8 Indicate performance assessment/environmental audit report submission frequency

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

Environmental Awareness Plan

How employees will be informed of any environmental risk which 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

Job specific training – training for personnel performing tasks which could cause potentially significant environmental impacts

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 remain for the entire course and, on completion, sign an attendance register. A copy of the register shall be kept on record by Amandla Africa Mining .

Manner in which risks will be dealt with to avoid pollution or environmental degradation

All employees must be provided with environmental awareness training to inform them of any environmental risks which may result from their work and the how the risks must be dealt with to avoid pollution or the degradation of the environment. This should be in conjunction with the implementation of the EMP.

Specific information required by the Competent Authority

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

Not applicable at this stage.

Undertaking

The EAP herewith confirms:

The correctness of the information provided in the reports

The inclusion of comments and inputs from stakeholders and I&APs

The inclusion of inputs and recommendations from the specialist reports where relevant

That the information provided by the EAP to interested and affected parties and any responses by the EAP to comments or inputs made by interested and affected. Parties are correctly reflected herein

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

Name of company

Date

APPENDIX 1: COMPETENT AUTHORITY LETTER.



Private Bag X 5, Braamfontein, 2017 Cnr De Korte and De beer Street, 78 Mineralia Building, Braamfontein, 2017.
Tel: 011 358 9700 Email Nkosinathi.Mahlaba@dmr.gov.za, Ref No: GP 30/5/1/1/2 (10749) PR

From: Mineral Regulation: Gauteng Office

Enquiries: Nkosinathi Mahlaba

By Registered Mail

Amandla Africa Mining

Plot 06

Eloff Delmas

Mpumalanga

2211

Attention: Mr E Aphane

Email: info@amandlaafrica.co.za

ACKNOWLEDGEMENT OF RECEIPT OF AN APPLICATION FOR AN ENVIRONMENTAL AUTHORISATION FOR THE PROPOSED PROSPECTING ACTIVITIES FOR COAL, IN TERMS OF REGULATION 16 OF THE NATIONAL ENVIRONMENTAL MANAGEMENT ACT, 1998 (ACT 107 OF 1998) (NEMA): ENVIRONMENTAL IMPACT ASSESSMENT (EIA) REGULATIONS, 2014, ON PORTION 13 OF THE FARM WITKLIP 539 JR, SITUATED IN THE MAGISTERIAL DISTRICT OF BRONKHORTSPRUIT.

1. The above-mentioned application lodged on **15 February 2022** as received by this Department refers.
2. The Department hereby acknowledges receipt of an application for an **Environmental Authorisation** in respect of the above-mentioned proposed project.
3. Only activities listed on the application will be considered when issuing the environmental authorisation and the onus is on the applicant to ensure that **all activities** related to the proposed project are included on the application.

Amandla Africa Mining (Pty) Ltd: GP 30/5/1/1/2 (10749)PR

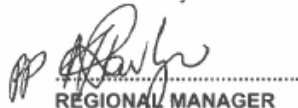
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4. You are required, in terms of regulation 19(1) of the EIA Regulations, 2014, to submit a Basic Assessment Report (BAR) within 90 days from the date of receipt of the application by this Department. However, you may not be required to submit the BAR contemplated in the EIA Regulations, 2014 if your application for a prospecting right, in terms of section 16 of the MPRDA, is refused.

Kindly note that, in terms of section 24F of the NEMA, no activity listed in the EIA Regulations, 2014 may commence without an Environmental Authorisation.

This Department reserves the right to revise its initial comments and request further information from you based on any new or revised information received.

Yours faithfully



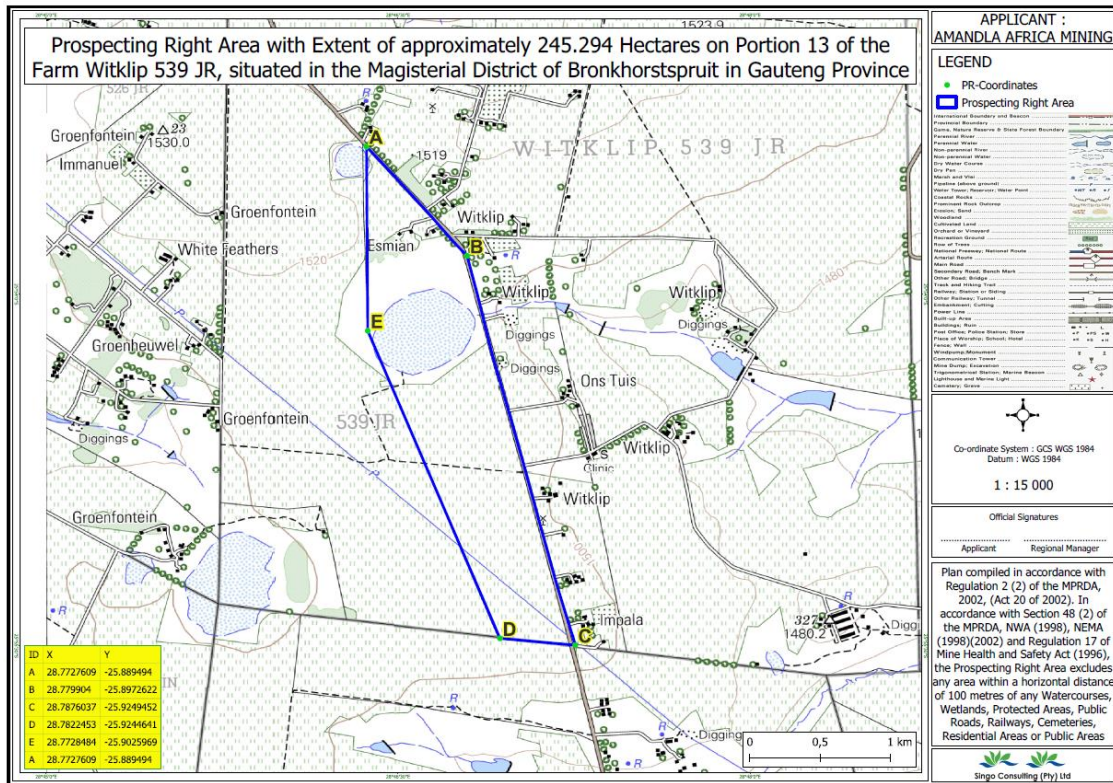
REGIONAL MANAGER
MINERAL REGULATION
GAUTENG REGION

DATE: 20/02/2022

Please quote this office file number for any correspondence as reference.

Cc: Singo Kenneth	EAP	kenneth@singoconsulting.co.za
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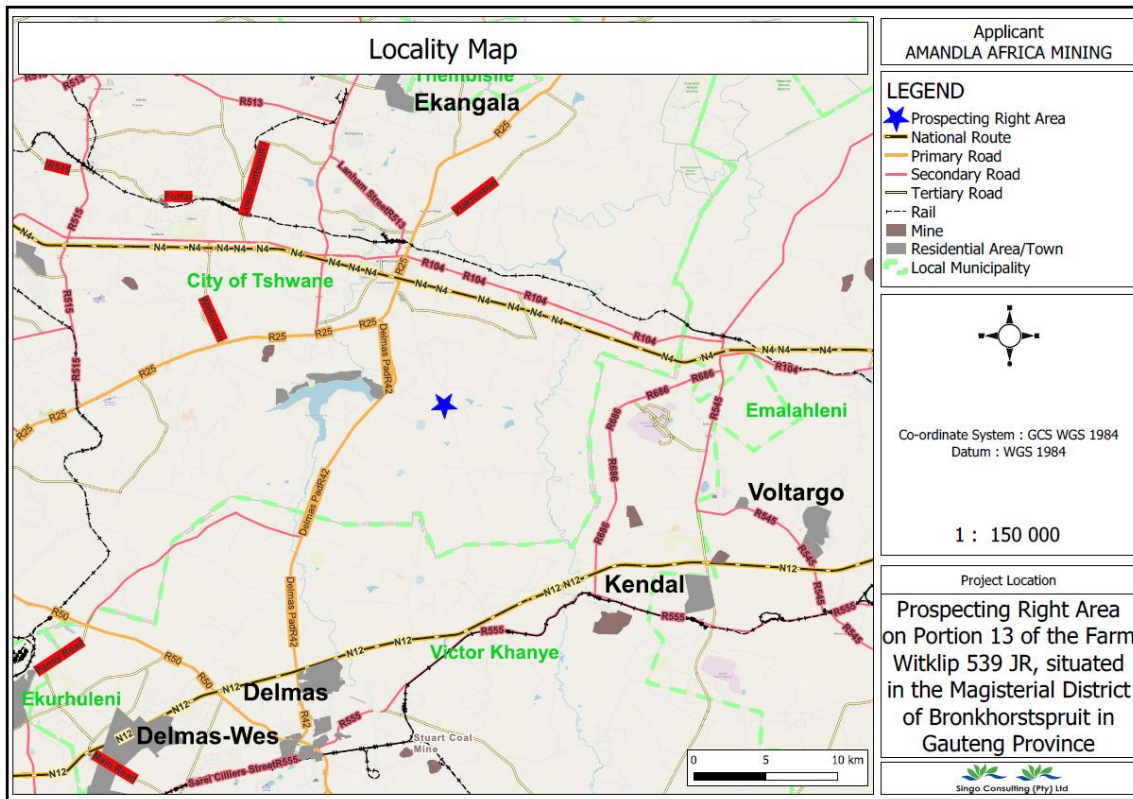
APPENDIX 2: PROJECT MAPS



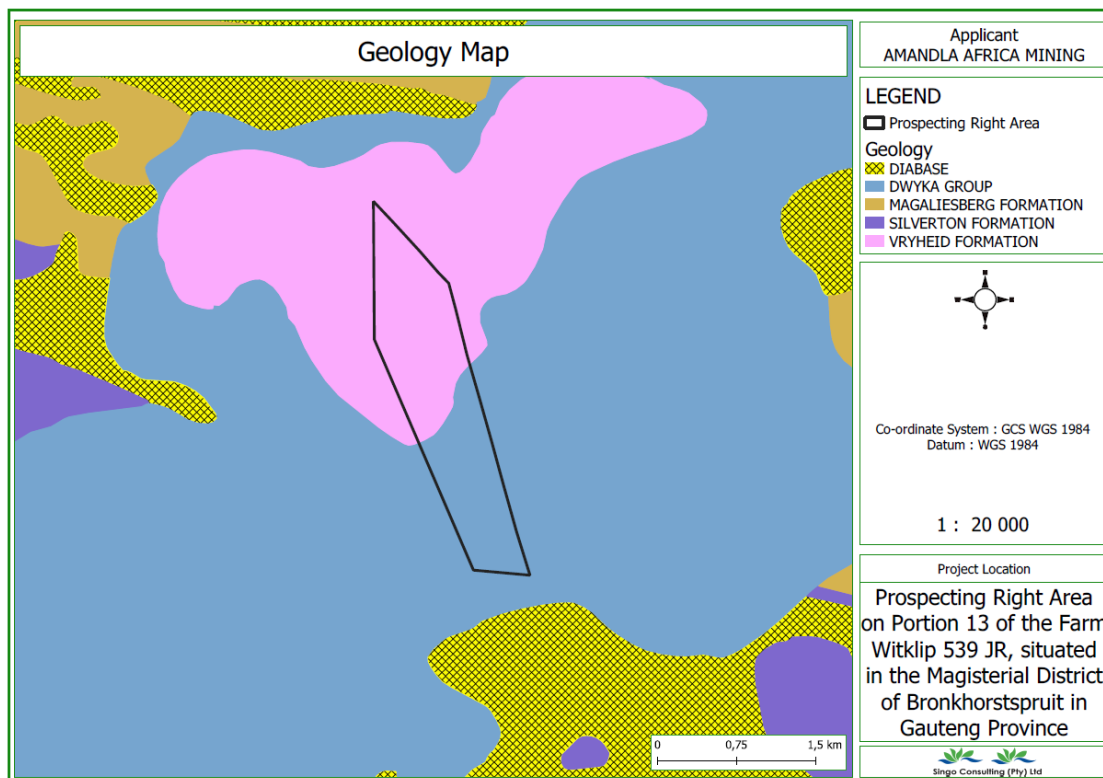
Regulation map for the proposed project areas.



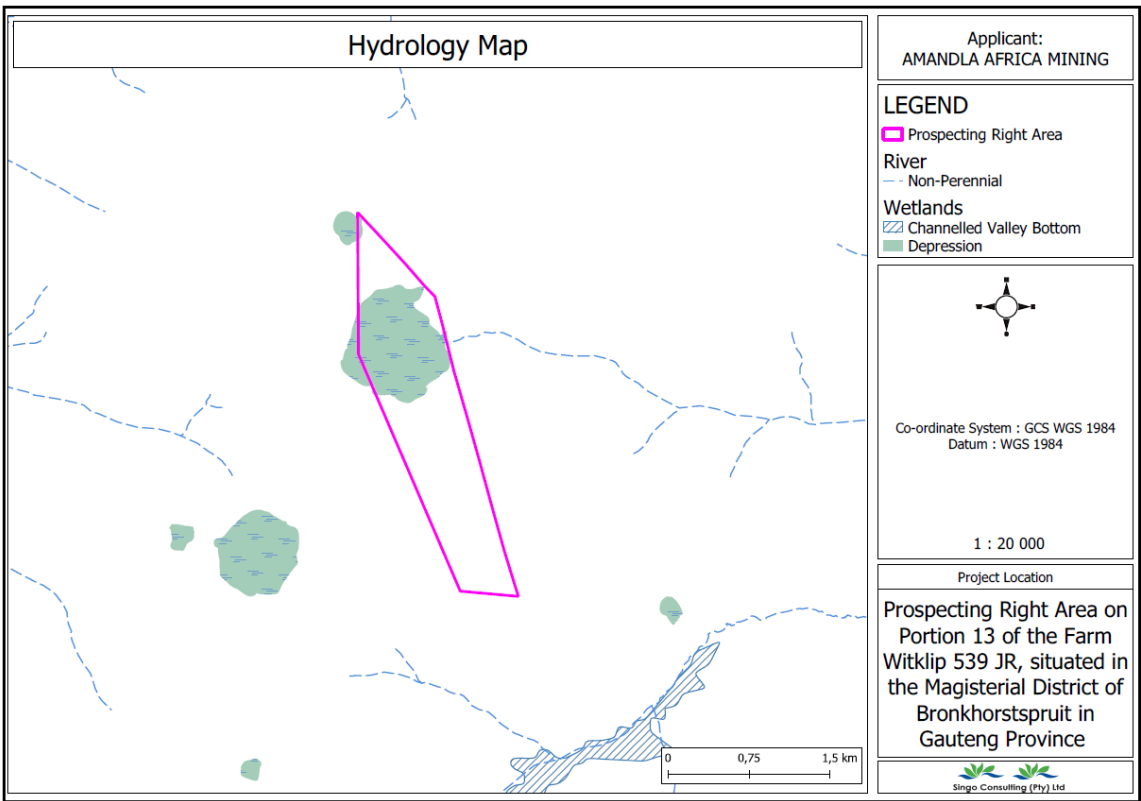
Google Earth Map of the project areas.



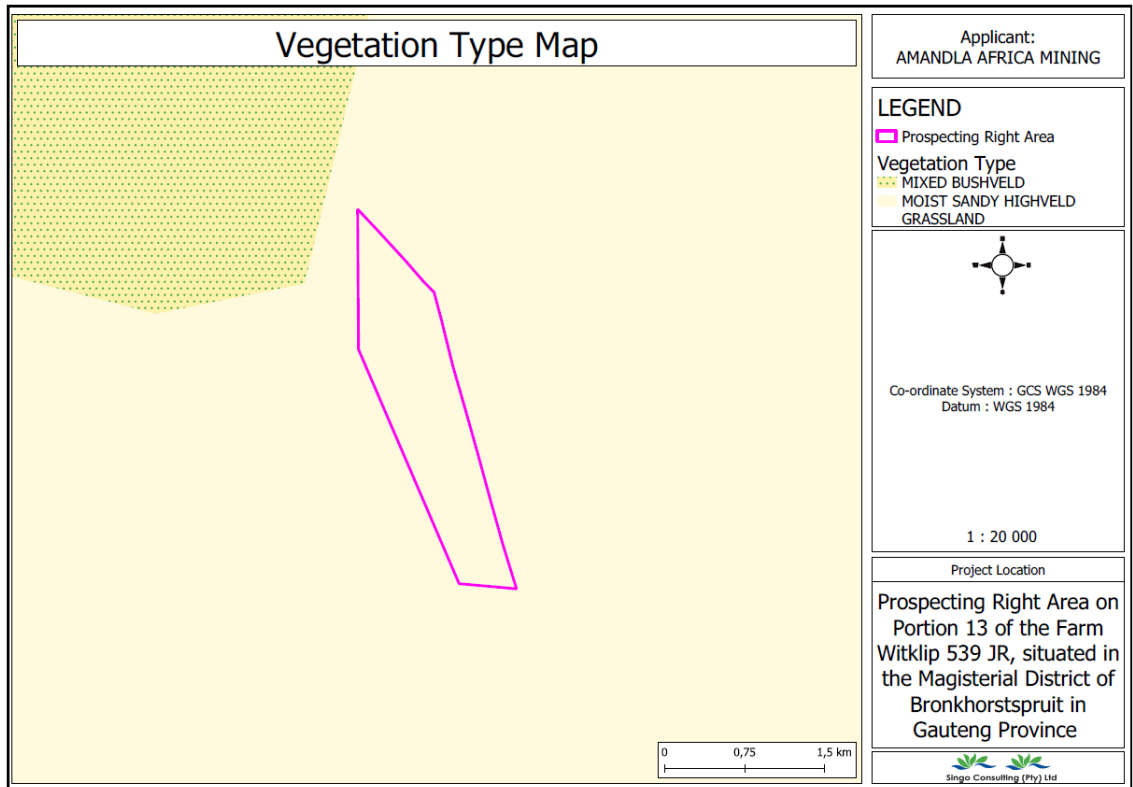
Locality Map



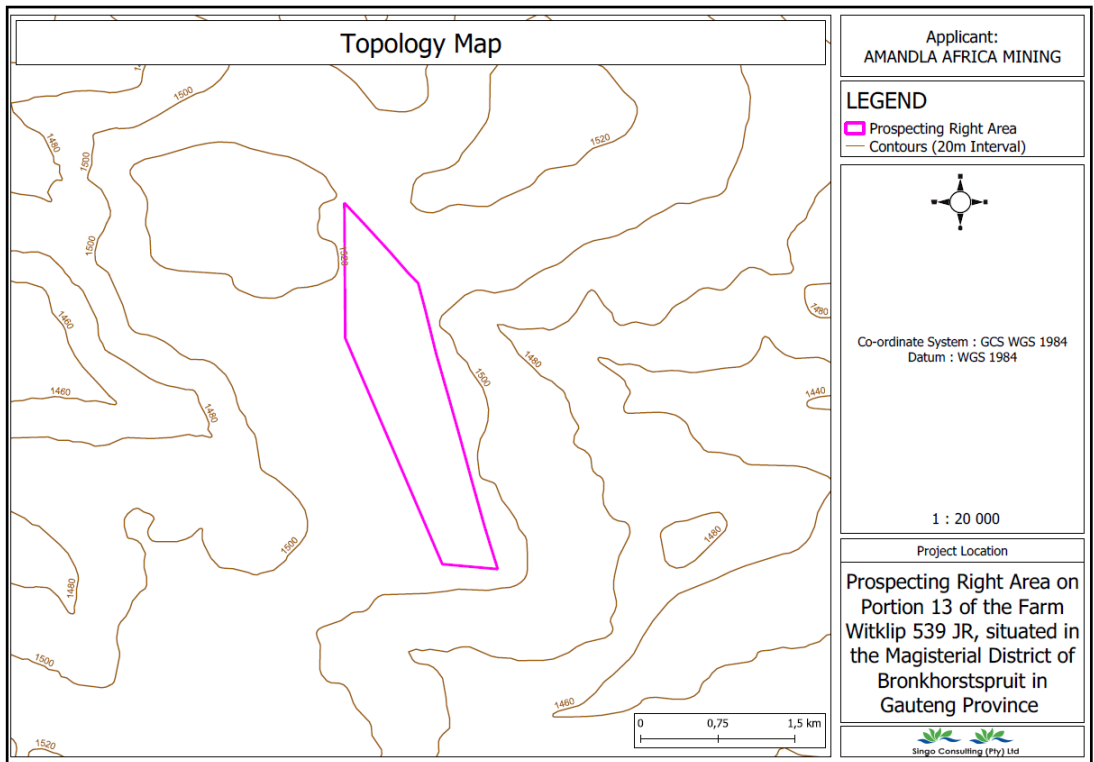
Geology map



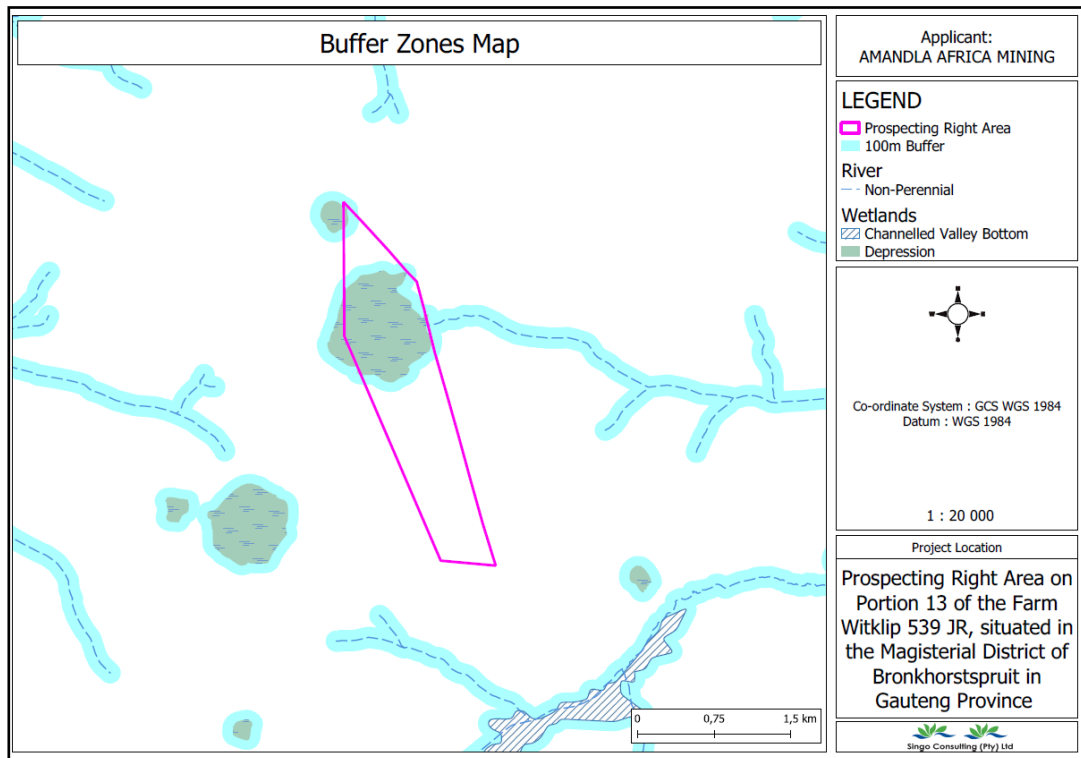
Hydrological map



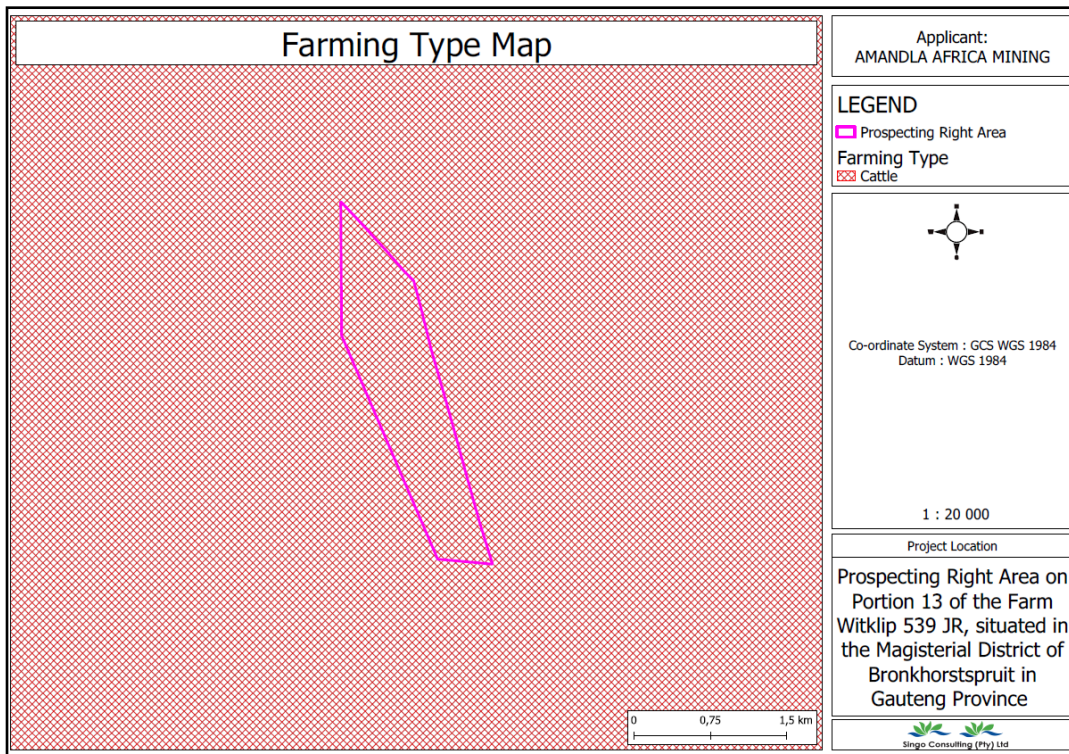
Vegetation map



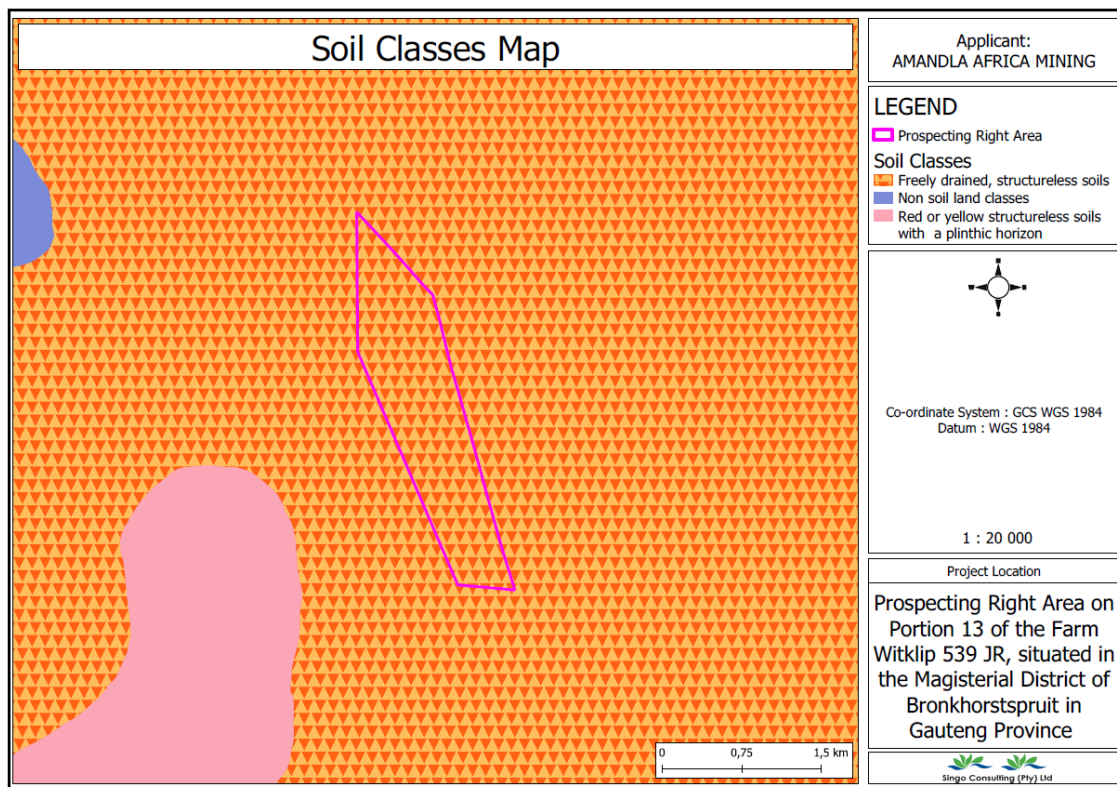
Topology Map



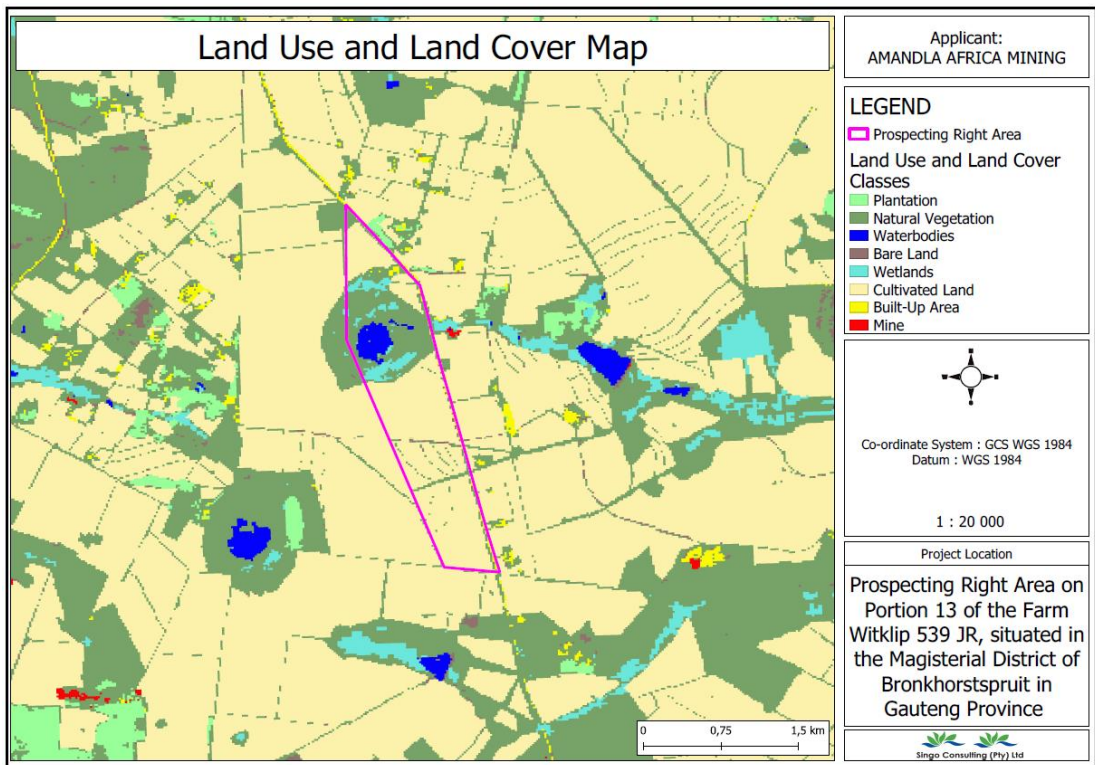
Buffer Map



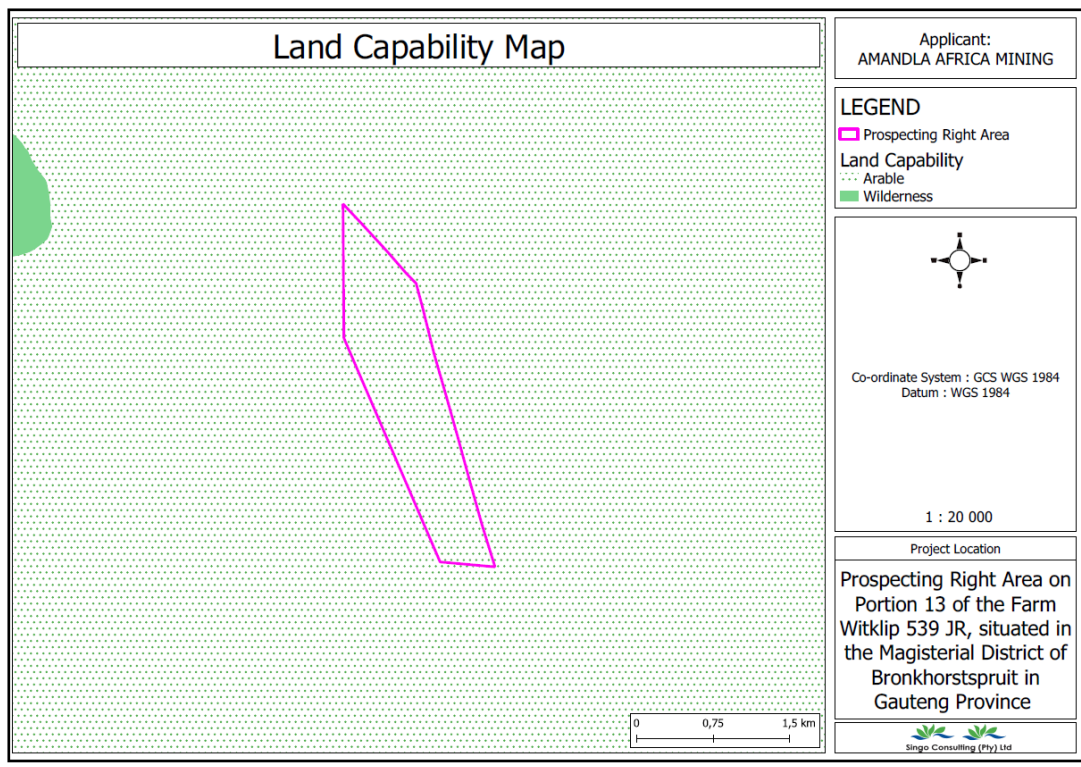
Farming Type



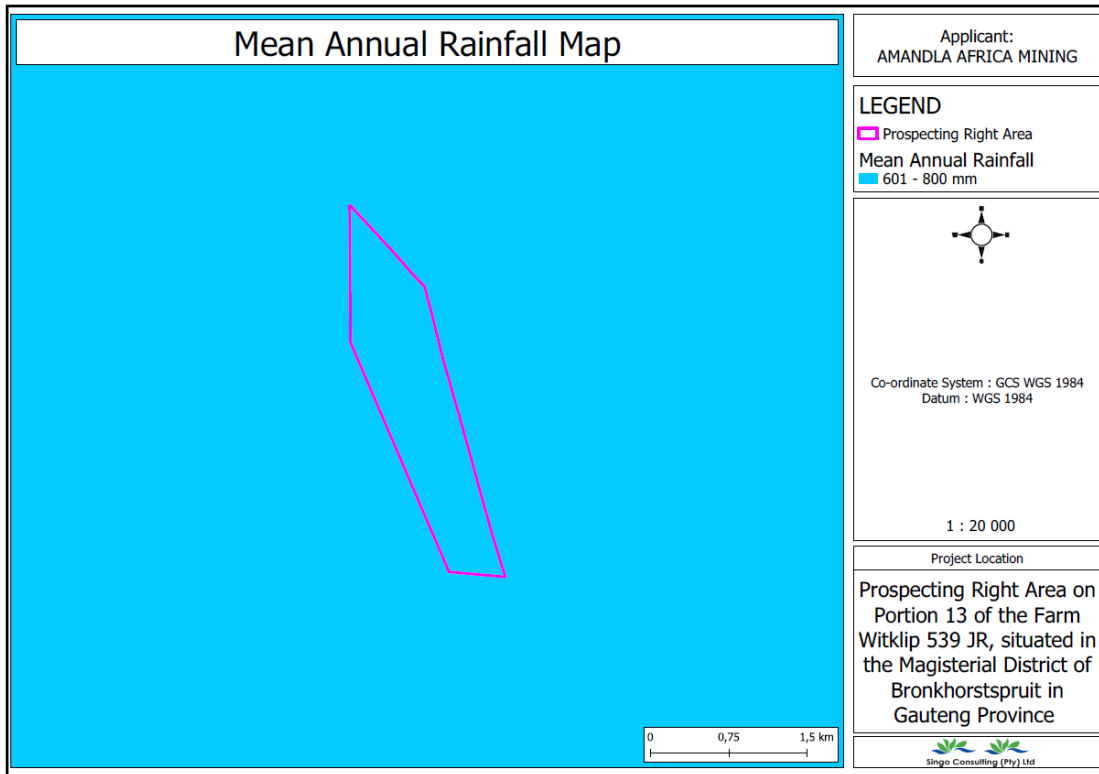
Soil Classes



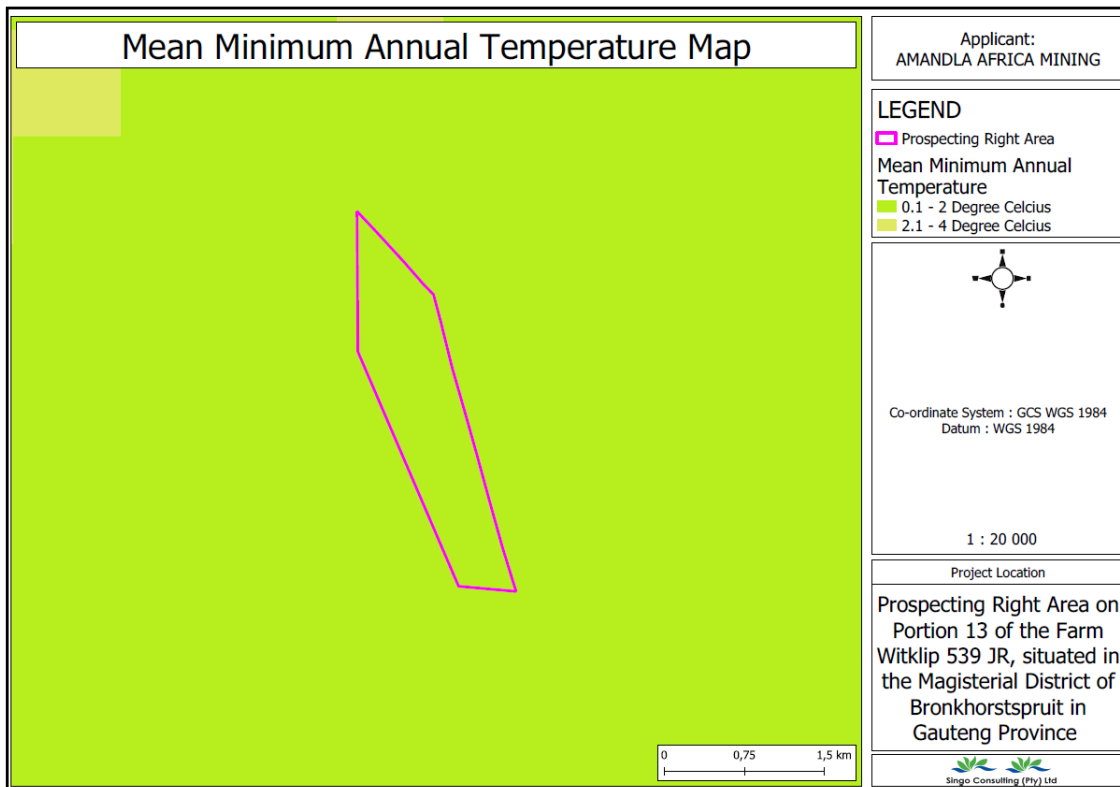
Land Use Classes



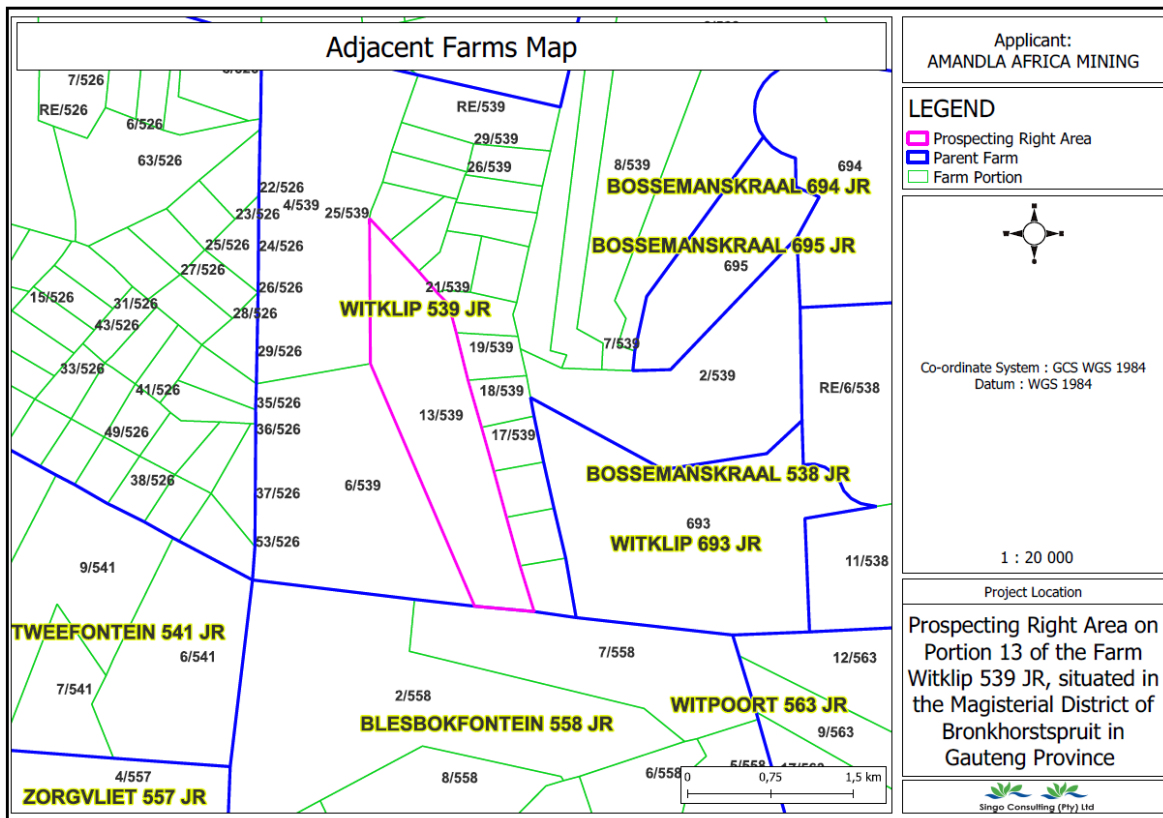
Land capability map



Mean annual rainfall map



Mean minimum annual temperature map



Adjacent farms map

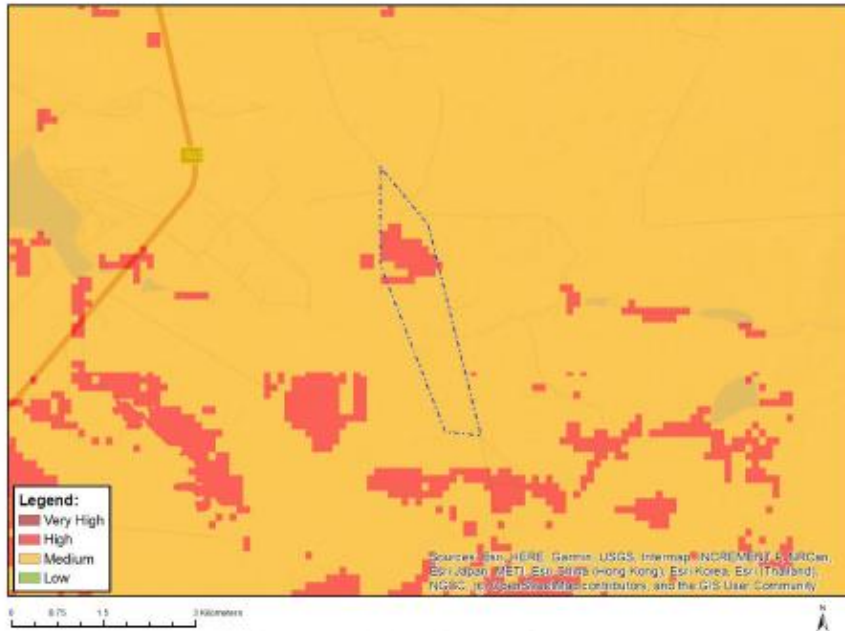
MAP OF RELATIVE AGRICULTURE THEME SENSITIVITY



Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
X			

Map of relative agriculture theme sensitivity.

MAP OF RELATIVE ANIMAL SPECIES THEME SENSITIVITY

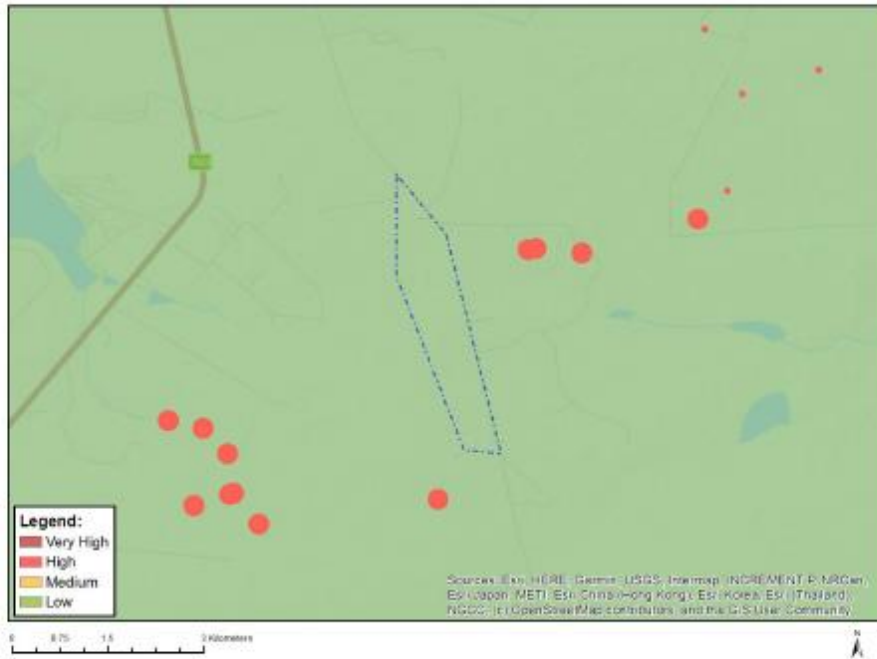


Where only a sensitive plant unique number or sensitive animal unique number is provided in the screening report and an assessment is required, the environmental assessment practitioner (EAP) or specialist is required to email SANBI at eiadatarequests@sanbi.org.za listing all sensitive species with their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

Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
	X		

Map of relative animal species theme sensitivity.

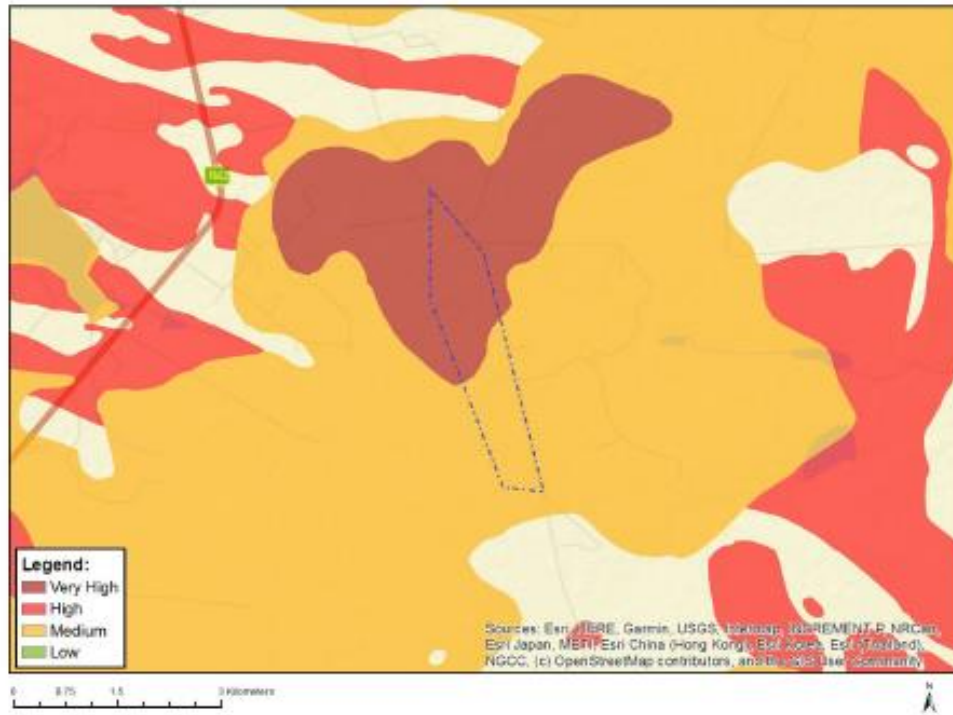
MAP OF RELATIVE ARCHAEOLOGICAL AND CULTURAL HERITAGE THEME SENSITIVITY



Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
			X

Map of relative archaeological and cultural heritage theme sensitivity

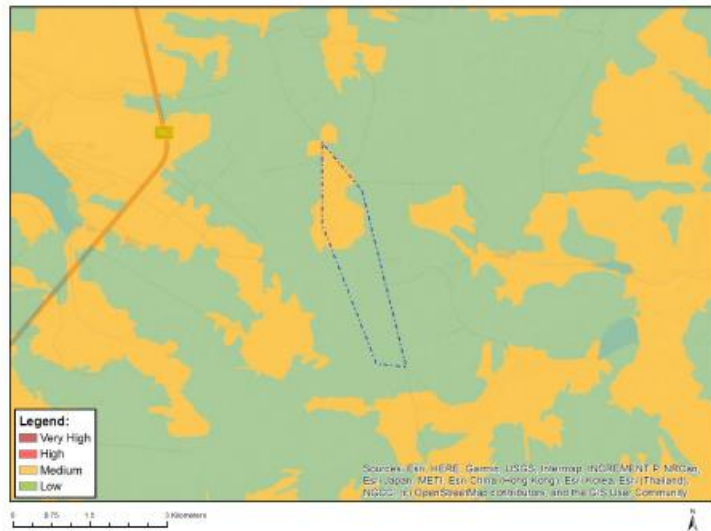
MAP OF RELATIVE PALEONTOLOGY THEME SENSITIVITY



Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
X			

Map of relative palaeontology theme 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 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	

Map of relative plant species theme sensitivity

MAP OF RELATIVE TERRESTRIAL BIODIVERSITY THEME SENSITIVITY



Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
X			

Map of relative terrestrial biodiversity theme sensitivity.



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 sports 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 Broekhorstgruut wat deelgeneem het by Laerskool Du Preez van Wyk. Sowaal 570 kleuters het aan verskeie items deelgeneem. Die tema van die byeenkoms was op die plus. Voorties en Kroonspruit skole het die sportdag aangebied. Daar was toustrek, hooppomp, teikempoot, fietse, vespriep en saellope.

Tjokkerland se onderwysers het die heel eerste aflossker in die geskiedenis gewen en het kragte gemeen met vier onderwysers elk van die ander skole. Vanjaar is sjoofers vir die beste kunst, beste oerdras en beste onderwysersawoos uitgedaal. Die onderwysers se items was soksporing vir 60m sowel as 60m-boortjensak vir balans, 60m-saellope en 60m-eisloep. Daar was ook uitdare gehou en weners is aangewys.



Amelia Taljaard op haar bromfopie.



Aaira Mahmood jaag na die wenstreef.



Marchanelle Norden hol weg by die saellope.

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

Application for Prospecting Right: **Amandla Africa Mining** has lodged an application for prospecting right (DMRE Ref: NP 20/5/17/2 (17288) PR) for the purpose of prospecting for Coal at plot/area 10 in the Farm Tsondabot 224, situated within Nkomo Local Municipality, under Mankwato District Municipality within the Magisterial District of Ditsabulo, Mopani Province.

Notice is hereby given in terms of the Mineral and Petroleum Resources Development Act (MPRDA) Act 28 of 2002 and EIA regulations 2014, published under Government Notice No. 382 of 8 December 2014, amended on 7 April 2017, that **Amandla 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 Mqopolo 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 (Dr Sarah Chibwe & Van Rieboeckla, Delmas 2318)** and a soft copy upon request from Singo Consulting (Pty) Ltd using the detailed I&AP contact below, via email, Dropbox, Google drive, WhatsApp, etc.

ENVIRONMENTAL ASSESSMENT PRACTITIONER AND APPLICANT'S DETAILS:

CONSULTANT'S DETAILS	APPLICANT'S DETAILS
<p>Singo Consulting (Pty) Ltd Physical Address: Plot No. 870, 5 Sabakala Street, Tzabeni Park Est 7, Witbank, 2935.</p> <p>Contact person: Mr Abel Mqopolo Tel No. +27 13 052 0047 Fax No. +27 13 054 4103 Cell No. +27 71 362 7894 Email: abel@singoconsulting.co.za</p>	<p>NP 20/5/17/2 (17288) PR Delmas Mopani, 2300</p> <p>Contact person: Makoto Tshabane Cell No. +27 13 10 1412 Email: info@amandlafrica.co.za</p>

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

Application for Prospecting Right: **Amandla Africa Mining** has lodged an application for prospecting right (DMRE Ref: GP 20/5/17/2 (16740) PR) for the purpose of prospecting for Coal on portion 13 of the Farm Winkler 139 B, situated within City of Ekurhuleni Metropolitan Municipality, within the Magisterial District of Bronkhorstgruut, Gauteng Province.

Notice is hereby given in terms of the Mineral and Petroleum Resources Development Act (MPRDA) Act 28 of 2002 and EIA regulations 2014, published under Government Notice No. 382 of 8 December 2014, amended on 7 April 2017, that **Amandla 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 Mqopolo 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 **Brookhorstgruut Community Library (44 Market St, Erasmus Brookhorstgruut, 1620)** and a soft copy upon request from Singo Consulting (Pty) Ltd using the detailed I&AP contact below, via email, Dropbox, Google drive, WhatsApp, etc.

ENVIRONMENTAL ASSESSMENT PRACTITIONER AND APPLICANT'S DETAILS:

CONSULTANT'S DETAILS	APPLICANT'S DETAILS
<p>Singo Consulting (Pty) Ltd Physical Address: Plot No. 870, 5 Sabakala Street, Tzabeni Park Est 7, Witbank, 2935.</p> <p>Contact person: Mr Abel Mqopolo Tel No. +27 13 052 0047 Fax No. +27 13 054 4103 Cell No. +27 71 362 7894 Email: abel@singoconsulting.co.za</p>	<p>NP 10/5/17/2 (16740) PR Delmas, Mopani, 2300</p> <p>Contact Person: Makoto Tshabane Cell: + 13 10 1412 Email: info@amandlafrica.co.za</p>

BRONKHORSTGRUUT

JONS WINKEL

WINKEL

WINKEL SNUFFEL OF SKINK IN ONS WINKEL EN MAAK 'N VERSKIL IN DIE GEWENSKAP. Spesiale aanbiedings kom op ons Facebook- en Instagram-pagene. Kom gesels op Ons Winkel, Bronkhorstgruut, Lanhamstraat 44, Bronkhorstgruut.

WWW.ONSWINKEL.CO.ZA

PIET VAN LOGGERENBERG 085 481 9938

Tutela

Tweedehandse Winkel

Kom snuffel rond in die winkel of skenk. Klein, skoon en meer... Maak 'n verskil in die gemeenskap.

Hy: Seede Street en Vardaan, Delmas
Weekdae 9:00 - 12:00 en 13:00 - 16:00
Vrydae van 8:00 tot 15:00
081 258 2318

ONDERSTEUN ONS EIE OUPTEHUIS DELMAS

Ons verheer alle: Griep, oars, talle, verjaarsdae, glasies, sakes, woordeboek, en meer...

Ten bate van Ons Eie Oupthuis.

Maatskappij vir Amy Drake
079 489 6336

APPENDIX 4: SITE PICTURES & PLUGGING OF SITE NOTICES





APPENDIX 5. 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	EMP	Project Management	Planning	A finalized EMP must address all authorization conditions stipulated by the DEA (and other commenting authorities). The EMP should also 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 (EO) during construction, given the short duration of construction and the low significance impacts which are envisaged. The PCMT environmental geologist will be responsible for monitoring the compliance of the construction workers	MPRDA & NEMA

Activity	Potential impact	Aspects affected	Phase	Mitigation type	Standard to be achieved
				and employees on site with the EMP and ensure their co-operation.	
	Permits and Permissions		Planning	City of Tshwane Metropolitan 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
	Emergency Response Planning	Safety and health personnel on site	Planning	Plan all emergency responses including: Response procedures to fires, explosions, or any accidents that will require rapid medical responses; and Responses to community and stakeholder concerns and communication procedures with potentially affected parties (I&AP).	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:	

Activity	Potential impact	Aspects affected	Phase	Mitigation type	Standard to be achieved
				<p>A complaints register.</p> <ul style="list-style-type: none"> •An approved method statement. <p>Copies of the EMP.</p> <p>Environmental Permits and authorizations.</p> <p>Copies of weekly checklists, compliance reports, incidence reports and corrective action reports.</p> <ul style="list-style-type: none"> •Photographs of areas of concern (photos of non-compliance areas as well corrective action). <p>Attendance registers of environmental awareness training.</p>	
	Recruitment of Labor	Project Management	Planning	<p>Where possible, the contractor must make use of local labour in support of the local economy.</p> <p>Advertise employment opportunities adequately, so as not to limit application opportunities.</p> <p>Implement a transparent process of recruiting construction staff, following pre-established and accepted criteria.</p>	Basic Conditions of Employment Act, No. 75 of 1997 (as amended)
PRE-DRILLING/EXPLORATION					
	Site establishment	Project Management	Planning	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	

Activity	Potential impact	Aspects affected	Phase	Mitigation type	Standard to be achieved
				<p>demarcated and fenced, and be adequately sized, with sufficient space for site offices, construction vehicles, equipment, material and waste storage areas</p> <p>The construction camp must be located in an area with minimal damage or disturbance to the environment.</p> <p>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.</p>	
	Site Housekeeping	Project Management	Planning	The construction camp should be kept clean and orderly at all times.	
	Ablution Facilities	Project Management	Planning	<p>Enough toilet facilities should be provided near construction camp. The toilets should be properly covered and ventilated, and should contain hand washing facilities.</p> <p>Portable toilets should be properly secured to the grounds to avoid toppling in the case of a wind/storm event.</p> <p>Ensure that all toilets function properly and are in a hygienic state. The toilets should be cleaned and emptied</p>	

Activity	Potential impact	Aspects affected	Phase	Mitigation type	Standard to be achieved
				regularly. Ensure that there are no spillages when toilets get cleaned and emptied. Urination on site should be strictly prohibited.	
Site establishment activities (-ve): Vegetation clearance Topsoil stripping & stockpiling Drill pad compaction Erection of office, toilets, fuel storage (if not by road tanker), water tanker, core storage Vehicle movements Waste management	Cultural and heritage	Destruction or loss of Cultural and Heritage Resources: No cultural/heritage artefacts have been identified on site	Construction/ set-up	Environmental Permits and authorizations. Copies of weekly checklists, compliance reports, incidence reports and corrective action reports.	Heritage Act
	Noise	Noise Generation	Construction/ set-up	Photographs of areas of concern (photos of non-compliance areas as well corrective action).	SANS 10103
	Visual	Visual intrusion	Construction/ set-up	Attendance registers of environmental awareness training.	N/A
	Traffic	Increase in traffic volumes in the vicinity of the drilling site	Construction/ set-up	Traffic signs to be put around the site to notify motorist of the activities Construction vehicles to make trips on/off site only when necessary Construction vehicles to adhere to local	National Traffic Act Regulations

Activity	Potential impact	Aspects affected	Phase	Mitigation type	Standard to be achieved
				speed limits as far as possible when driving in around site	
	Signage	Traffic volumes, safety	Construction/ set-up	<p>The construction management needs to communicate the commencement and duration of construction activities to the community.</p> <p>Clear signage needs to be put up to make and keep the community awareness of construction activities so as to prevent any hazardous occurrences.</p> <p>Provide adequate safety warning signage on the roads.</p>	National Traffic Act Regulations
	Dust fall	Dust fall & nuisance from activities	Construction/ set-up	<p>Wet suppression should be applied to ensure that no visible dust is raised by any of the prospecting operations;</p> <p>Separation of distance of minimum 500m, but preferably 1000m to be maintained between drill sites and dwellings; and</p> <p>Low vehicle speeds will be enforced on unpaved surfaces.</p>	GN R. 827 (NEMAQA)
	Soil and vegetation	The potential impact of the proposed prospecting on the vegetation would occur at	Construction/ set-up	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 absolutely necessary to establish a level drill pad.	NEMBA

Activity	Potential impact	Aspects affected	Phase	Mitigation type	Standard to be achieved
		proposed drilling sites and the access routes used to get to these sites.		Rather that surface vegetation is cleared to make way for the drilling rig leaving the roots intact so that vegetation can coppice and regrow; and Disturbed areas will be re-vegetated with locally indigenous species as soon as possible.	
	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	Environmental awareness training sessions should be part of the workers' induction and site workshops; and 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	NEMBA
	Social	Friction between local residents/land owners and construction personnel	Construction/ set-up	All operations will be carried out under the guidance of a strong, experienced manager with proven skills in public consultation and conflict resolution; All prospecting personnel will be made aware of the local conditions and sensitivities in the prospecting area	NEMA

Activity	Potential impact	Aspects affected	Phase	Mitigation type	Standard to be achieved
				<p>and the fact that some of the local residents may not welcome the prospecting activities in the area; There will be a strict requirement to treat local residents with respect and courtesy at all times.</p>	
	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
	Storage and Disposal of Waste	Safety and aesthetic/ visual aspects of the property, as well as waste disposal practices	Construction/ set-up	<p>Litter generated by construction workers must be collected in containers that are clearly labeled, and disposed of weekly at registered waste disposal sites.</p> <p>Sufficient 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.</p> <p>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.</p> <p>Minimize waste generation, e.g. by</p>	National Waste Act

Activity	Potential impact	Aspects affected	Phase	Mitigation type	Standard to be achieved
				<p>providing re-usable items and refillable containers (e.g. for drinking water) and adopt a 'cradle to grave' responsibility for wastes.</p> <p>Comply with legal requirements for waste management and pollution control and employ "good housekeeping" and monitoring practices.</p>	
	Hazardous Waste	Safety and aesthetic/ visual aspects of the property, as well as waste disposal practices.	Construction/ set-up	<p>Any hazardous waste that may be generated should be separated from general waste and stored in clearly marked and properly sealed secondary containers.</p> <p>Any hazardous waste generated should be disposed of accordance with the Hazardous Chemical Substances Regulations, 1995 (Regulation 15).</p>	National Waste Act
	Spills and Leaks	Safety and aesthetic/ visual aspects of the property, as well as waste disposal practices.	Construction/ set-up & Operation	<p>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.</p> <p>Spill response kits must be readily available and accessible to all personnel on site.</p>	National Waste Act
	PPE			Ensure that all persons on site use Personal Protective Equipment (PPE) at all times, this including safety boots,	Employment Act

Activity	Potential impact	Aspects affected	Phase	Mitigation type	Standard to be achieved
				safety vests, protective masks etc.	
	Illegal Fires			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.	NEMA

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		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.

Activity	Potential impact	Aspects affected	Phase	Mitigation type	Standard to be achieved
	contamination, air pollution etc.				
Planning and Project Management	EMP	Project Management	Planning	A finalized EMP must address all authorization conditions stipulated by the DEA (and other commenting authorities). The EMP should also 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 (EO) during construction, given the short duration of construction and the low significance impacts which are envisaged. The PCMT environmental geologist will be responsible for monitoring the compliance of the construction workers and employees on site with the EMP and ensure their co-operation.	MPRDA & NEMA
	Permits and Permissions		Planning	City of Tshwane Metropolitan Municipality must ensure that all licensing, permits or certificates required for the project are obtained and in place prior to the	MPRDA & NEMA

Activity	Potential impact	Aspects affected	Phase	Mitigation type	Standard to be achieved
				commencing of any construction activities on site.	
	Emergency Response Planning	Safety and health personnel on site	Planning	Plan all emergency responses including: Response procedures to fires, explosions, or any accidents that will require rapid medical responses; and Responses to community and stakeholder concerns and communication procedures with potentially affected parties (I&AP).	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	N/A

Activity	Potential impact	Aspects affected	Phase	Mitigation type	Standard to be achieved
				including (but not limited to) grievances from those living in the area.	
	Records and Administration	Project Management	Planning	<p>Ensure the following are up to date and available on site:</p> <p>A complaints register.</p> <ul style="list-style-type: none"> •An approved method statement. <p>Copies of the EMP.</p> <p>Environmental Permits and authorizations.</p> <p>Copies of weekly checklists, compliance reports, incidence reports and corrective action reports.</p> <ul style="list-style-type: none"> •Photographs of areas of concern (photos of non-compliance areas as well corrective action). <p>Attendance registers of environmental awareness training.</p>	
	Recruitment of Labor	Project Management	Planning	Where possible, the contractor must make use of local labour in support of the local economy.	Basic Conditions of

Activity	Potential impact	Aspects affected	Phase	Mitigation type	Standard to be achieved
				<p>Advertise employment opportunities adequately, so as not to limit application opportunities.</p> <p>Implement a transparent process of recruiting construction staff, following pre-established and accepted criteria.</p>	<p>Employment Act, No. 75 of 1997 (as amended)</p>
PRE-DRILLING/EXPLORATION					
	Site establishment	Project Management	Planning	<p>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 sufficient space for site offices, construction vehicles, equipment, material and waste storage areas</p> <p>The construction camp must be located in an area with minimal damage or disturbance to the environment.</p> <p>Establish 'NO-GO' areas- where no construction personnel, equipment/machinery or vehicles are permitted. Any identified Environmental</p>	

Activity	Potential impact	Aspects affected	Phase	Mitigation type	Standard to be achieved
				Sensitive or important areas should be designated as 'NO-GO' areas.	
	Site Housekeeping	Project Management	Planning	The construction camp should be kept clean and orderly at all times.	
	Ablution Facilities	Project Management	Planning	<p>Enough toilet facilities should be provided near construction camp. The toilets should be properly covered and ventilated, and should contain hand washing facilities.</p> <p>Portable toilets should be properly secured to the grounds to avoid toppling in the case of a wind/storm event.</p> <p>Ensure that all toilets function properly and are in a hygienic state. The toilets should be cleaned and emptied regularly.</p> <p>Ensure that there are no spillages when toilets get cleaned and emptied.</p> <p>Urination on site should be strictly prohibited.</p>	

Activity	Potential impact	Aspects affected	Phase	Mitigation type	Standard to be achieved
Site establishment activities (-ve): Vegetation clearance Topsoil stripping & stockpiling Drill pad compaction Erection of office, toilets, fuel storage (if not by road tanker), water tanker, core storage Vehicle movements Waste management	Cultural and heritage	Destruction or loss of Cultural and Heritage Resources: No cultural/heritage artefacts have been identified on site	Construction/ set-up	Environmental Permits and authorizations. Copies of weekly checklists, compliance reports, incidence reports and corrective action reports.	Heritage Act
	Noise	Noise Generation	Construction/ set-up	Photographs of areas of concern (photos of non-compliance areas as well corrective action).	SANS 10103
	Visual	Visual intrusion	Construction/ set-up	Attendance registers of environmental awareness training.	N/A

Activity	Potential impact	Aspects affected	Phase	Mitigation type	Standard to be achieved
	Traffic	Increase in traffic volumes in the vicinity of the drilling site	Construction/ set-up	<p>Traffic signs to be put around the site to notify motorists of the activities</p> <p>Construction vehicles to make trips on/off site only when necessary</p> <p>Construction vehicles to adhere to local speed limits as far as possible when driving in around site</p>	National Traffic Act Regulations
	Signage	Traffic volumes, safety	Construction/ set-up	<p>The construction management needs to communicate the commencement and duration of construction activities to the community.</p> <p>Clear signage needs to be put up to make and keep the community aware of construction activities so as to prevent any hazardous occurrences.</p> <p>Provide adequate safety warning signage on the roads.</p>	National Traffic Act Regulations
	Dust fall	Dust fall & nuisance from activities	Construction/ set-up	Wet suppression should be applied to ensure that no visible dust is raised by any of the prospecting operations;	GN R. 827 (NEMAQA)

Activity	Potential impact	Aspects affected	Phase	Mitigation type	Standard to be achieved
				<p>Separation of distance of minimum 500m, but preferably 1000m to be maintained between drill sites and dwellings; and</p> <p>Low vehicle speeds will be enforced on unpaved surfaces.</p>	
	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	<p>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 absolutely necessary to establish a level drill pad.</p> <p>Rather that surface vegetation is cleared to make way for the drilling rig leaving the roots intact so that vegetation can coppice and regrow; and</p> <p>Disturbed areas will be re-vegetated with locally indigenous species as soon as possible.</p>	NEMBA
	Animal life	Animal life will be affected in the immediate vicinity of the drilling rig. It is	Construction/ set-up	<p>Environmental awareness training sessions should be part of the workers' induction and site workshops; and</p> <p>If any animals are encountered they must not be killed or injured, but should rather</p>	NEMBA

Activity	Potential impact	Aspects affected	Phase	Mitigation type	Standard to be achieved
		<p>anticipated that the noise and general activity will keep the animal life away from the site while the prospecting is ongoing.</p>		<p>be removed or chased away from the site with the assistance of an animal specialist</p>	
	<p>Social</p>	<p>Friction between local residents/land owners and construction personnel</p>	<p>Construction/ set-up</p>	<p>All operations will be carried out under the guidance of a strong, experienced manager with proven skills in public consultation and conflict resolution;</p> <p>All prospecting personnel will be made aware of the local conditions and sensitivities in the prospecting area and the fact that some of the local residents may not welcome the prospecting activities in the area;</p> <p>There will be a strict requirement to treat local residents with respect and courtesy at all times.</p>	<p>NEMA</p>

Activity	Potential impact	Aspects affected	Phase	Mitigation type	Standard to be achieved
	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
	Storage and Disposal of Waste	Safety and aesthetic/ visual aspects of the property, as well as waste disposal practices	Construction/ set-up	<p>Litter generated by construction workers must be collected in containers that are clearly labeled, and disposed of weekly at registered waste disposal sites.</p> <p>Sufficient 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.</p> <p>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.</p> <p>Minimize waste generation, e.g. by providing re-usable items and refillable containers (e.g. for drinking water) and</p>	National Waste Act

Activity	Potential impact	Aspects affected	Phase	Mitigation type	Standard to be achieved
				<p>adopt a 'cradle to grave' responsibility for wastes.</p> <p>Comply with legal requirements for waste management and pollution control and employ "good housekeeping" and monitoring practices.</p>	
	Hazardous Waste	Safety and aesthetic/ visual aspects of the property, as well as waste disposal practices.	Construction/ set-up	<p>Any hazardous waste that may be generated should be separated from general waste and stored in clearly marked and properly sealed secondary containers.</p> <p>Any hazardous waste generated should be disposed of accordance with the Hazardous Chemical Substances Regulations, 1995 (Regulation 15).</p>	National Waste Act
	Spills and Leaks	Safety and aesthetic/ visual aspects of the property, as well as waste disposal practices.	Construction/ set-up & Operation	<p>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.</p> <p>Spill response kits must be readily available and accessible to all personnel on site.</p>	National Waste Act

Activity	Potential impact	Aspects affected	Phase	Mitigation type	Standard to be achieved
	PPE			Ensure that all persons on site use Personal Protective Equipment (PPE) at all times, this including safety boots, safety vests, protective masks etc.	Employment Act
	Illegal Fires			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.	NEMA

APPENDIX 6: EAPS CV

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

