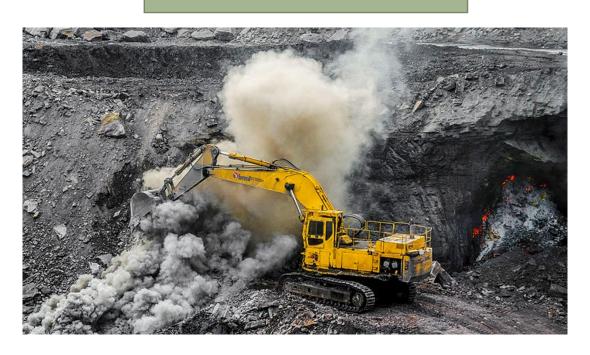
BASIC ASSESSMENT REPORT & ENVIRONMENTAL MANAGEMENT PROGRAMME REPORT

PROSPECTING RIGHT APPLICATION BY MULELU MATAMELA MINERALS (PTY) LTD FOR COAL ON THE REMAINING EXTENT THE FARM KROMDRAAI 263 IR SITUATED UNDER WITBANK LOCAL MUNICIPALITY IN THE MAGISTERIAL DISTRICT OF HOEVELDRIF.

DMRE REF: MP 30/5/1/1/2 (16771) PR



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BASIC ASSESSMENT REPORT AND ENVIRONMENTAL MANAGEMENT PROGRAMME REPORT

SUBMITTED FOR ENVIRONMENTAL AUTHORIZATIONS IN TERMS OF THE NATIONAL ENVIRONMENTAL MANAGEMENT ACT, 1998 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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FILE REFERENCE NUMBER SAMRAD: MP 30/5/1/1/2 (16771) PR

DOCUMENT CONTROL				
Project Title:	Prospecting Right Application on remaining extent of the farm Kromdraai 263 IR			
Mineral	Coal			
Site Location	Hoeveldrif Magisterial District, Mpumalanga Province.			
Compiled on behalf of	Mulelu Matamela Minerals (Pty) Ltd			
Compiled By	Ms Takalani Rakuambo			
Reviewed By	Dr Kenneth Singo			
Approved By				
Submitted to	Department of Mineral Resources and Energy			
Version	Draft			
Date	2021			

EXECUTIVE SUMMARY

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

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

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

The proposed Prospecting Right Area is situated over the farm Kromdraai 263 IR and is located at approximately 26.89 km South-East North of Delmas and Approximately 22.81 km South-West of Ogies within the EMalahleni Local Municipality under the Hoeveldrif Magisterial District.

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

The Prospecting Right Application and Application for EA was submitted to the DMRE. The DMRE accepted the proposed application on the 26th of October 2021. The BAR (this report) will be made available to Interested and Affected Parties (I&AP's) for comment from the 12 of December 2021 to the 28 of January 2022. All comments received during this period will be included in the final BAR & EMPr to be submitted to the DMRE for adjudication.

IMPORTANT NOTICE

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

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

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

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

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

OBJECTIVE OF THE BASIC ASSESSMENT PROCESS

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

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

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PART A

SCOPE OF ASSESSMENT AND BASIC ASSESSMENT REPORT

1. Contact person and correspondence address

a) Details of the Project EAP

Item	Details	
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Name of Company	Singo Consulting (Pty) Ltd	
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Fax no	086 514 4103	
Email Address	takalani@singoconsulting.co.za	

b) Details of Principal Reviewer



DR NDINANNYI KENNETH SINGO

MANAGING DIRECTOR

QUALIFICATIONS

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

AFFILIATIONS

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

EXPERIENCE

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

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

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

Expertise of the EAP

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

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

2. Location of the overall activity

Farm name	Kromdraai 263 IR, within Remaining Extent	
Application area (ha)	Approximately 155, 76 ha	
Magisterial district	Magisterial district of Hoeveldrif	
	The Proposed right Prospecting area is situated	
Distance and direction from nearest town	approximately 26.89 km South-East North of Delmas	
	and Approximately 22.81 km South-West of Ogies.	
21-digit Surveyor General code for each	TOIR0000000026300000	
farm portion	1011100000000025500000	

2.1 General description of the project location

The farm Kromdraai 263 IR is situated in the Magisterial district of Hoeveldrif in Mpumalanga province, South Africa. The Prospecting Area, as seen in figure 1 below, is situated approximately 26.89 km South-East North of Delmas and Approximately 22.81 km South-West of Ogies.

The proposed area can be accessed using a gravel/unnamed road from R 580.

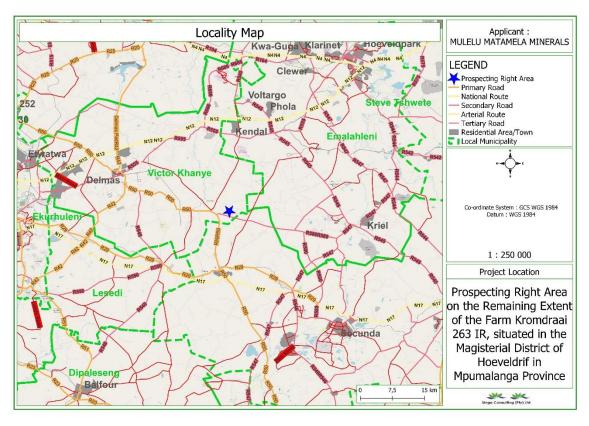


Figure 1: Locality map of the proposed project area.

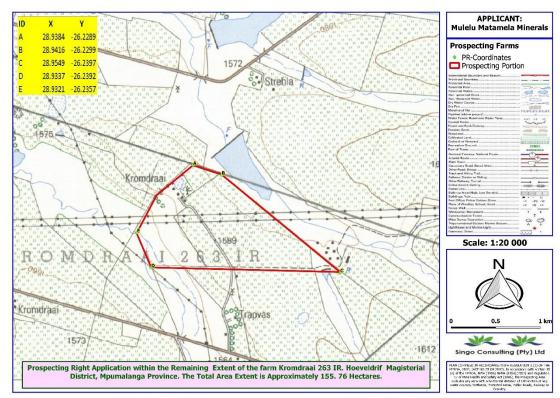


Figure 2: Map showing the exact location of project area in farm Kromdraai 263 IR.

2.2 Description of the scope of the proposed overall activity

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

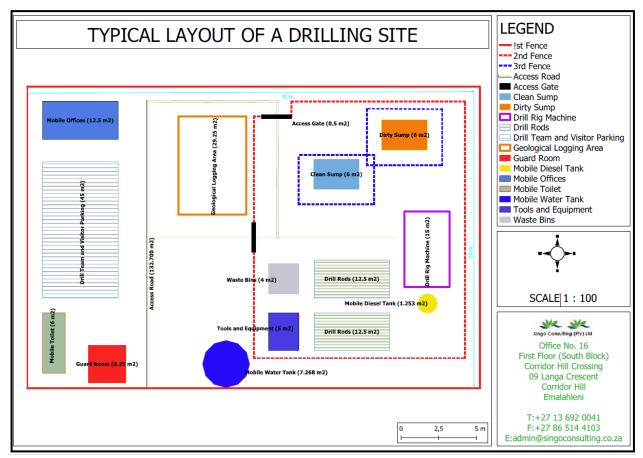


Figure 3: The drill site layout plan showing areas where specific activities will take place in the project area.

2.3 Listed and specified activities

Table 1: Listed and specified activities

(E.g. For prospecting - drill site, site camp, ablution facility, accommodation, equipment storage, sample storage, site office, access route etcetc. 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, etcetc.)	Aerial extent of the Activity Ha or m ²	applicable or affected).		WASTE MANAGEMENT AUTHORISATION (Indicate whether an authorisation is required in terms of the Waste Management Act). (Mark with an X)
Prospecting Area	155.76 ha	X	GNR 327 Listing Notice 1, Activity 20.	Not required
Vegetation clearing	0.9 ha		Not Listed	
Drilling	0.9 ha		Not Listed	

Total area to be disturbed

9000 m²÷10000=**0.9ha** 30*20=600m² 15 boreholes* 600m²=9000 m²

Table 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; 15	
	will take at least 60 days.	
Demarcated working area	0.9 ha for all 15 drilling sites	

2.4 Description of the activities to be undertaken

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

Background

Mulelu Matamela Minerals (Pty) Ltd is applying for a Prospecting Right without bulk sampling, to prospect for Coal mineral on the aforementioned properties. The area demarcated for the prospecting covers an area of approximately 155.764 ha (refer to figure 2).

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

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

Phase 1A: Data collection and review

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

Phase 1B: Data review report and gap analysis

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

Phase 2: Geology and resources

This phase includes drilling, geochemical sample analysis, data verification and mineral resource estimation according to international reporting codes, such as the South African Code for Reporting of Exploration Results, Mineral Resources and Mineral Reserves (SAMREC). Data acquisition and test work in the form of diamond, percussion or directional drilling (for geochemical assay and metallurgical test work) is required to support the study. Once the geochemical analytical results have been obtained, the generation of a geological and resource model and resulting SAMREC-compliant (or similar) mineral resource estimate may be completed. The drilling programme will include at least sixteen (16) boreholes mainly aimed at verifying the acquired historical data by obtaining reliable samples from different depths below surface. The three potential drilling methods are described in the following.

2.4.1.1 Diamond drilling

Diamond core drilling 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: A typical example of diamond core drilling rig.

2.4.1.2 Directional drilling

Directional drilling controls the borehole direction and deviation to a predetermined underground target, in this case the coal seam. Tools utilised in achieving directional wells includes a mud motor, specialised 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 utilised. 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: Schematic illustration of directional drilling.

2.4.1.3 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 utilises 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: An example of a truck mounted RC drill rig.

Phase 3: Topographic survey

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

Phase 4: Geophysical investigations

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

Phase 5: Mineral processing and metallurgical testing

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

Phase 6: Reporting

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

2.5 Ancillary activities

2.5.1 Access roads

Access road to the proposed prospecting area is gravel road from R580. For this proposed project, no new access roads will be developed. The applicant will negotiate access with land / surface rights holders after the prospecting right has been granted to carry out a thorough technical assessment of the prospecting region. There shall be an agreement with the landowner concerning the access and the appropriateness and time of year preferred to be executed and negotiated with him.

2.5.2 Water supply

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



Figure 7: Typical example of a temporary storage tank on site.

2.5.3 Ablution facilities

Portable toilets for ablution purposes will be placed on site, decreasing potential contamination connected with the erection of underground waste pipes. portable toilets are dynamic, they can be moved from the drill site to drill. Upon the end of prospecting, portable toilets will be removed from the site readily.



Figure 8: Shows an example of portable toilets on site.

2.5.4 Temporary office area

A temporary shaded site office will be erected at the drill site. No electricity will be generated on-site. 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 9: An example of a temporary office shades.

2.5.5 Accommodation

Accommodation for staff and workers will not be provided on site, but in nearby towns near the project area. Night security staff will be employed once equipment has been established on site.

2.5.6 Blasting

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

2.5.7 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 are diesel fuel which will be kept in appropriate steel containers with concrete slabs around them to prevent soil contamination. Less than $30m^3$ will be stored in above-ground diesel storage tanks.



Figure 10: Diesel storage.

2.6 Policy and legislative context

Table 3: Applicable legislation to this application

Applicable Legislation and Guidelines	Reference Where Applied (i.e. where in this document has it been explained how the development complies with and responds to the legislation and policy context)	How does this Development Comply with and Respond to the Legislation and Policy Context
National Environmental Management Act (No. 107 of 1998)(NEMA):	This entire report is prepared as part of the prospecting right application under the NEMA, section 24	In terms of the National Environmental Management Act an Application for Environmental Authorisation subject to a Basic Assessment Report and Environmental Management Programme Report. The application was lodged at the DMRE
Minerals and Petroleum resources Development Act (No.28 of 2002) (MPRDA): In support of the Prospecting Right Application submitted by Mulelu Matamela Minerals (Pty) Ltd, the applicant is required to conduct a NEMA BAR process in terms of Section 5A and Chapter 16 of the MPRDA.	This entire report is prepared as part of the Prospecting Right Application under the MPRDA, section 16.	In terms of the Mineral and Petroleum Resources Development Act a Prospecting Right Application has been applied for coal resource. The application was accepted on the 26th of October 2021. DMRE Ref: MP 30/5/1/1/2 (16771) PR

National Water Act (No. 36 of 1998) (NWA): Water may not be used without prior authorisation by the DWS. Section 21 of the National Water Act (No.36 of 1996) the NWA water uses for which authorisation is required. The National Environmental Management: Biodiversity Act (Act No. 10 of 2004 – NEMBA) Section 57 and 87	No Water Use Licence has been applied for this prospecting project. Regulations published under NEMBA provides a list of protected species (flora and fauna), according to the Act (GN R. 151 dated 23 February 2007, as	No water use license is required for this Application. Any water required for drilling activities will be obtained from a legal source within the area or brought in via mobile water tanker. Appropriate dust extractions /suppression equipment will be a condition imposed on the drill contractor for their drill rigs. No applications have been submitted in terms of the National Environmental Management: Biodiversity Act.
	amended in GN R. 1187 dated 14 December 2007) which require a permit in order to be disturbed or destroyed	
EMalahleni Local Municipality Integrated Development Plan (IDP) Strategic Development Framework (SDF)	Land Claims	This department was consulted to ensure that the project does not take place where there is a land claim the claimants not knowing about the project. In addition to acquire the claimant's information to consult them before the project commence.
	Alternatives	In terms with the SDF of the EMalahleni Local Municipality, various strategies and associated policies should be adopted to ensure effective spatial development. The municipality must provide alternative means of support for rural/informal population in order to decrease dependence on the environment and subsistence agriculture. For this purpose, the following policies are adopted: Maximise economic benefit from mining industrial, business, agricultural and tourism development within the area. Promote a climate for economic development. Improve public and investor confidence in the region through crime reduction and infrastructure development.

Constitution of South Africa,	BAR & EMPr	Prospecting activities will only
Specifically, everyone has the right:		proceed after effective
a) to an environment that is not harmful to their health or wellbeing; and b) to have the environment protected, for the benefit of present and future generations, through reasonable legislative and other measures that i) prevent pollution and ecological degradation; ii) promote conservation; and iii) secure ecologically sustainable development and use of natural resources while promoting justifiable economic and social development.		consultation. All activities will be conducted in a manner that does not violate the Constitution of the Republic of South Africa.
National Heritage Resources Act, 1999	Management measures	Should archaeological artefacts or skeletal material be revealed in the area during development activities, such activities should be halted, and SAHRA notified in order for an investigation and evaluation of the find(s) to take place.

2.7 Need for and desirability of the proposed activities

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

	NEED AND DESIRABILITY OF THE PROPOSED PROJECT				
	PART I: NEED				
Q	Questions (Notice 792, NEMA, Answers 2012)				
1.	Is the land use associated with the activity being applied for considered within the timeframe intended by the existing approved SDF agreed to be the relevant environmental authority?	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. However, the objectives of the EMalahleni's integrated development plan for 2020/2021 section: re-generate – to achieve environmental well-being Fights with: • High carbon emissions from electricity generation; • Unsustainable natural resource usage; and			

	Uncontrolled pollution			
2.	Should the development, or if applicable, expansion of the town/area concerned in terms of this land use occurs here at this point in time?	The planned activities would allow Mulelu Matamela Minerals (Pty) Ltd 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.		
3.	Does the community/area need the activity and the associated land use concerned? This refers to the strategic as well as local level.	According to the STATSA unemployment figure has drastically increased with 8600 jobs in the municipality between 2001 and 2011. The Mulelu Matamela Minerals (Pty) Ltd 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.		
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 cited IDP indicates that the community sector contributed 37.1 % of all the sectors' contribution to the GDP of EMalahleni Local Municipality. Mining contributed 7.9%, Agriculture contributed 11.2 % trade/retail figure was at 13.6 % and construction contributed 2.9 %.		
	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	Partially. The project is not completed in accordance with the Local Spatial Development		

9.	integrity of the existing approved and credible IDP and SDF as agreed to by the relevant authorities? Would the approval of this application compromise the integrity of the existing environmental management priorities for the area (e.g. as	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 EMalahleni Local Municipality, unemployment is a big problem and prospecting should be able to provide continuity of existing employment in the prospecting area for a substantial period of time. No, the integrity of the existing environmental management priorities for the area will not be compromised by this development.	
defined in EMFs), and if so, can it be justified in terms of sustainability considerations?			
10.	Do location factors favour this land use at this place? (this relates to the contextualization of the proposed land use on this site within its broader context).	Yes. The study area proposed for prospecting is Currently used for cultivation and vegetated area.	
12.	How will the development impact on people's health and well-being? (E.g. In terms of noise, odours, visual character and sense of place, etc.)?	In summary, due to the fact that this area has a high density of residents and also the military base, which is closer to the proposed area, the impacts on well-being, following mitigation, will be as follows: • Visual: Low	
		Dust: Low-Medium	
		Noise: Medium	
		Sense of place: Medium	
		However, environmental good practice compliance policies would have limited effects.	
13.	Will the proposed activity or the land use associated with the activity being applied for, result in unacceptable opportunity costs?	No. The mining industry in South Africa has been a cornerstone of the economy for a long period of history. South Africa offers ongoing proof that mineral revenues can create sizeable benefits to the economy in countries where they are sourced. In South Africa coal has contributed to funding impressive economic growth and stability.	
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 EMPr attached will serve as a method to keep the proposed project from having any serious ling term cumulative impacts on the receiving environment.	

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

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

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

Details of all alternatives considered

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

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

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

The following alternatives were investigated as feasible alternatives:

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

The farm Kromdraai 263 IR is located in EMalahleni Local Municipality. The proposed area is located approximately 26.89 km South-East North of Delmas and Approximately 22.81 km South-West of Ogies. See Figure 1 for the locality map.

o The type of activity to be undertaken

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

The design or layout of the activity.

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

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

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

• The option of not implementing the activity

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

2.8.1 Development footprint alternatives considered

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

Prospecting work is a two staged process; it entails invasive activities and non-invasive activities. Non-invasive activities do not have footprints because they do not include land disturbance while invasive activities cause land disturbance hence, they have footprints. In prospecting activities, footprints are caused by drilling. To mitigate the footprints of drilling activities on alternative sites identified, buffers have been developed (Figure 11) to ensure protection of water resources, infrastructures, and ecosystems on site. The following buffers must be applied, and all buffered out areas are **no-go** areas (i.e. prospecting activities must not be conducted in those areas):

- No drill site must be positioned within 500m of a wetland
- Drilling activities must be conducted out of 1:100 /flood line of a stream
- Drilling activities must be done at least 100m away from infrastructures
- Existing access road must be utilised to access the identified alternative sites to conduct exploration activities rather than developing new gravel roads on site.

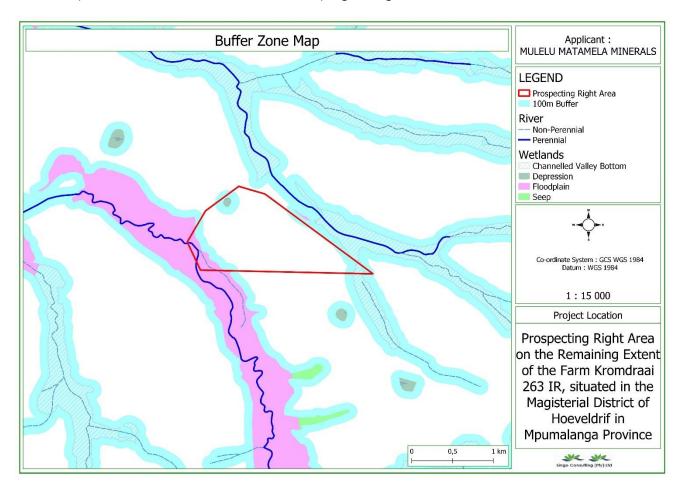


Figure 11: Shows developed buffer zone around the river with associated wetlands.

2.8.2 Type of activity to be undertaken

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

2.8.2.1 Activity design/layout

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



Figure 12: Pictorial example of drill site design or layout.

2.8.2.2 Activity technology

The technology to be employed relates to drilling and geophysical investigations. Drilling will be done using reverse circulation and core drilling while geophysical survey will be limited to downhole survey. Percussion (open hole) boreholes will be drilled and geophysical surveyed to gather additional

geological information between other boreholes. For this purpose, down-hole geophysical instruments and methods will be used to gather coal thickness and quality information from the coal seam and overlying strata. Diamond drilling operations will be carried out for retrieving core samples and laboratory analyses will be performed on the core samples to establish the coal quality and rock properties. These methods have been selected based on their minimal invasiveness, which will have a minimal impact on the environment.

2.8.2.3 Operational aspects of the activity

Drilling will be done over a period of 30 days, during daylight hours to minimise risk exposure. If necessary, drilling can be timed to occur during school terms or holidays, as may be required in certain instances by stakeholders. The time of implementing drilling activities during the day may be reconsidered in consultation with landowners. Ideally, drilling will occur continuously, until a hole is completed. If necessary, certain holes can be drilled for 12 hours during the day, with no drilling occurring during the night.

2.8.2.4 Option of not implementing the activity

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

2.8.3 Details of the public participation process followed

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

The Basic Assessment Report will be submitted for review to the Competent Authority, commenting authorities, non-governmental organizations (NGOs), landowners, surrounding property owners and other identified stakeholders (see Table 4). Comments received were recorded and are reflected in this Final Basic Assessment Report.

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

Identification of stakeholders, including property occupiers, owners and occupiers of land
adjacent to the site, municipal officials and relevant state departments. All respondents have
been added to the project database, which was used throughout the process to inform the
stakeholders of the project.

- Canvassing issues and concerns of the public and ensuring that all I & APs can comment on the application. The proposed project was announced as follows:
- Site notices (size A2) advertising the proposed development and displaying the contact details of the EAP were displayed on site and at other public places on the 23^{rd of} November 2021. The site notices inform potential I&APs of the project and affords them the opportunity to comment.
- The notification letter was distributed with a registration and comment sheet, as well
 as the locality map, to state departments and other potential stakeholders through
 emails.
- An advert was placed in Witbank Newspaper to notify the public of the proposed prospecting right application/project, inviting members of the public to register as I&APs on the project's database and notified the public of the availability of the Draft Basic Assessment Report and date of the public open day.
 - Landowners and lawful occupiers were identified, and they were consulted.
- A copy of the Draft Basic Assessment Report will be made available for public review for a 30-day period from 12th December 2021 to 28th January 2022.
- All comments received during the review period will be incorporated into the final BAR & EMPr.
- Once the DMRE has decided on Environmental Authorisation, all registered I&APs will be notified of the outcome.

Windeed Search

Farm List



2021/11/29 11:29 MPUMALANGA Date Requested Deeds Office

Registration Division IR Farm Name Farm Number 263

NOT SELECTED Remaining Extent

PORTIO		T'' D	B : 4 (: B :	B . B
Portion	Owner	Title Deed	Registration Date	Purchase Price (R)
1	TORERO INV 1 PTY LTD	T17016/2015	2015/11/23	26 000 000
2	C.H. BOSHOFF FAMILIE TRUST	T22871/1999	1999/03/03	1 879 400
3	** FOR INFO REFER TO REGISTRAR OF DEEDS **	REPLACED	-	-
4	FARM HOUSE HOLDINGS PTY LTD	T15709/2018	2018/12/07	18 000 000
5	BEZUIDENHOUT DANIEL JACOBUS OPPERMAN	T11900/2012	2012/10/30	ESTATE
6	BEZUIDENHOUT DANIEL JACOBUS OPPERMAN	T11899/2012	2012/10/30	ESTATE
7	C.H. BOSHOFF FAMILIE TRUST	T22871/1999	1999/03/03	1 879 400
8	C H BOSHOFF FAMILIE TRUST	T13121/2018	2018/10/16	CRT
9	** FOR INFO REFER TO REGISTRAR OF DEEDS **	REPLACED	-	-
10	** FOR INFO REFER TO REGISTRAR OF DEEDS **	REPLACED	-	-
11	TORERO INV 1 PTY LTD	T17016/2015	2015/11/23	26 000 000
12	SPRINGBOKLAAGTE MINING PTY LTD	T9083/2012	2012/08/16	6 650 000
13	BEZUIDENHOUT DANIEL JACOBUS OPPERMAN	T11898/2012	2012/10/30	ESTATE
14	RETHA BOSHOFF BOERDERY PTY LTD	T15271/2018	2018/11/30	9 500 000
15	C.H. BOSHOFF FAMILIE TRUST	T22871/1999	1999/03/03	1 879 400
18	BEZUIDENHOUT DANIEL JACOBUS OPPERMAN	T11897/2012	2012/10/30	ESTATE

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Figure 13: Windeed results for farm Kromdraai 263 IR

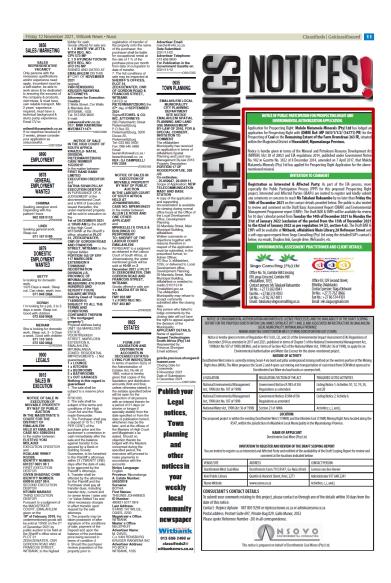


Figure 14: Proof on newspaper Publication(shown in red).









Figure 15: Proof of Site Notice Placement.

The following have been identified as I&Aps:

Table 4: Identified key stakeholders.

Names of I&Aps	Organization		
Rhulani Chavalala	Department of Agriculture, Forestry and Fisheries		
Vusi Khoza	Department of Rural Development and Land Reform		
Seani Nevondo	Department of water and sanitation		
Alucia Maifo	Department of Environmental Affairs		
Fakqude Oq	Mpumalanga Provincial Government		
Doreen Sithole	Department of Agriculture, Land Reform and Rural Development		
Eskom General Email:			
'wayleavesmou@eskom.co.za'	ESKOM		
Livhuwani Ndou	Transnet		
Yuza Chabalala	Hansiei		
Oliver J	SANRAL		

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.

Interested and Affected Parties List the names of persons consulted in this column, and Mark with an X where those who must be consulted were in fact consulted AFFECTED PARTIES				EAPs response to issues as mandated by the applicant	Section and paragraph reference in this report where the issues and or response were incorporated
Landowners/s					
Remaining Extent C.H Boshoff Familie Trust Representative JM Property and Mineral Rights Consultant.	Х	01/12/2021 (e mail)	find attached the Letter of Responses written on behalf of my client.	comments have been acknowledged and it will be attended to	
Adjacent Landowners					
Lawful occupiers of the land					

Interested and Affected Parties List the names of persons consulted in this column, and Mark with an X where those who must be consulted were in fact consulted		Date Comments Received	Issued Raised	EAPs response to issues as mandated by the applicant	Section and paragraph reference in this report where the issues and or response were incorporated
Local Municipality					
EMALAHLENI LOCAL MUNICIPALITY	X	13/11/2021 (email)	No issue raised.	Consultation email together with a BID were sent.	
Councillor					
District Municipality					
Community					
Organs of state (Responsible for infrastructure that may be affected Roads Department, Eskom, Telkom, DWA					
Eskom	Х	13/11/2021 (email)	No issue raised	Consultation email together with a BID were sent.	

Interested and Affected Parties List the names of persons consulted in this column, and Mark with an X where those who must be consulted were in fact consulted		Date Comments Received	Issued Raised	EAPs response to issues as mandated by the applicant	Section and paragraph reference in this report where the issues and or response were incorporated
TRANSNEF delivering freight reliably	x	13/11/2021 (email)	No issue raised.	Consultation email together with a BID were sent.	
SANRAL SOUTH AFRICAN NATIONAL ROADS AGENCY SIC LTD PRES NA. 1000/00064/20	x	13/11/2021 (email)	No issue raised.	Consultation email together with a BID were sent.	
water & sanitation Department: Water and Sanitation REPUBLIC OF SOUTH AFRICA	X	13/11/2021 (email)	No issue raised.	Consultation email together with a BID were sent.	

Interested and Affected Parties List the names of persons consulted in this column, and Mark with an X where those who must be consulted were in fact consulted		Date Comments Received	Issued Raised	EAPs response to issues as mandated by the applicant	Section and paragraph reference in this report where the issues and or response were incorporated
environment, forestry & fisheries Department: Environment, Forestry and Fisheries REPUBLIC OF SOUTH AFRICA	x	13/11/2021 (email)	No issue raised.	Consultation email together with a BID were sent.	
agriculture, land reform & rural development Department: Agriculture, Land Reform and Rural Development REPUBLIC OF SOUTH AFRICA	X	13/11/2021 (email)	No issue raised.	Consultation email together with a BID were sent.	
rural development & land reform Department: Rural Development and Land Reform REPUBLIC OF SOUTH AFRICA	x	13/11/2021 (email)	No issue raised.	Consultation email together with a BID were sent.	
Mpumalanga TOURISM AND PARKS AGENCY	X	24/11/2021 (email)	comment will be attended to.	attached sensitivity maps and species status report. I would like to highlight the presence of several wetlands within the proposed prospecting area, the proposed prospecting activity can significantly affect their functioning.	

Interested and Affected Parties List the names of persons consulted in this column, and Mark with an X where those who must be consulted were in fact consulted		Date Comments Received	Issued Raised	EAPs response to issues as mandated by the applicant	Section and paragraph reference in this report where the issues and or response were incorporated
	x	13/11/2021 (email)	No issue raised.	Consultation email together with a BID were sent.	
OTHER INTERESTED AND AFFECTED PARTIES					
DR Dinana Reid inc.	X	16/11/2021 (email)	send me copy of the acceptance letter	Copy of acceptance letter was sent.	

2.9 The environmental attributes associated with the alternatives

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

2.9.2 Baseline environment

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

2.9.2.3 Topography

The proposed prospecting area is characterized by gentle slopes surfaces and as the map shows, there are no mountains or hills near or within the project area. This can be observed on the topography map attached below. The flow of water during rainy seasons flows from the area of high elevation to the area of low elevation as it is indicated by contour lines.

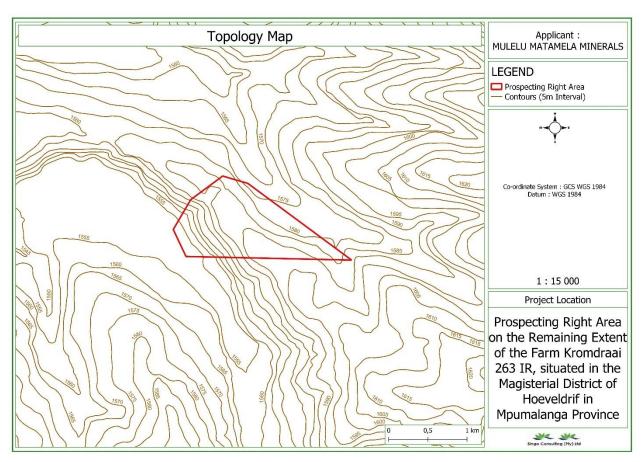


Figure 16: Topographic map of the proposed project area.

2.9.2.4 Soil types

The proposed project area is entirely covered with Freely drained, structureless soils. The Freely drained, structureless soils can be defined based on their soil depth, Soil Drainage, erodibility, and natural fertility.

Soil depth

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

Soil Drainage

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

Erodibility

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

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.

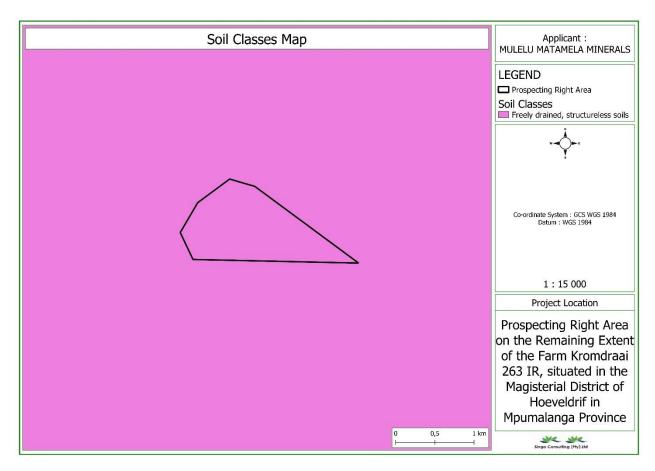


Figure 17: Soil type map of the proposed project area.



Figure 18: Pictorial depiction of soil type in the project area.

2.9.2.5 Geology

Regional Geology

Karoo Supergroup

The main Karoo Supergroup basin covers over 50% of South Africa's surface and consists of five age-based groups, which show a change of depositional environment in time. These groups are the Dwyka (glacial), Ecca (shallow marine and coastal plain), Beaufort (non-marine fluvial), Stormberg (aeolian) and the volcanic Lebombo or Drakensberg groups (Johnson et al., 2006). The proposed project area falls within the Witbank coalfield. Sediments of Vryheid and Dwyka formations underlay the area which was deposited on a glaciated Pre-Karoo basement consisting of Rooiberg felsites. The deposit is preserved as an outlier underlying the small hill known as

Vlooikop, surrounded by strata of the Dwyka Group (mainly tillites and varved mudstones/shales). The Vryheid formation is essentially an interbedded succession of sandstone with lesser gritstone, siltstone and mudstone, which contains five coal seams of the Witbank coalfield.

• Ecca Group

In the 1970s a number of studies (Cadle, 1974; Hobday, 1973, 1978; Mathew, 1974; Van Vuuren and Cole, 1979) showed that the Ecca 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 Ecca 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.

In general, the coal deposits in South Africa are hosted in the Karoo Supergroup, which was deposited in the Gondwana basin that covered parts of Africa, Antarctica, South America and Australia. The basal stratigraphy of the Karoo Supergroup comprises the Dwyka Group, which is a Late Carboniferous to Early Permian (~320 Ma) sequence of glacial and periglacial sediments, including diamictite, till moraine, conglomerate, sandstone, mudstone and varved shale. This is overlain by the Ecca Group, which is an Early to Late Permian (~260 Ma) sequence comprising sandstone, siltstone, mudstone and significant coal seams deposited in a terrestrial basin on a gently subsiding shelf platform.

Vryheid Formation

The thickness of the Vryheid Formation generally thins towards the north, west and south for a maximum of 500 m. However, the marked variations in thickness can be witnessed in the northern and north-western margins of the basin where the formation rests directly on the uneven pre-Karoo topography. The Vryheid formation is characterised by different lithofacies, which are mainly arranged in upward-coarsening cycles, which are essentially of deltaic origin.

According to Johnson et. al (2006), the base of an idealised coarsening-upward deltaic cycle in the eastern part of the formation consists of dark-grey, muddy siltstone resulting from shelf suspension deposition in anoxic water of moderate depth. Prodelta sediments are represented by alternations of bioturbated, immature sandstones, dark siltstones and mudstones of a centimetre to decimetre scale. The Vryheid Formation can be subdivided into a lower fluvial-dominated deltaic interval, a middle fluvial interval and an upper fluvial-dominated deltaic interval in the eats (Tavener-Smith et al., 1988a). These subdivisions

correspond approximately to the "lower sandstones", "coal zone" and "upper sandstone" of Blignaut and Furter (1940).

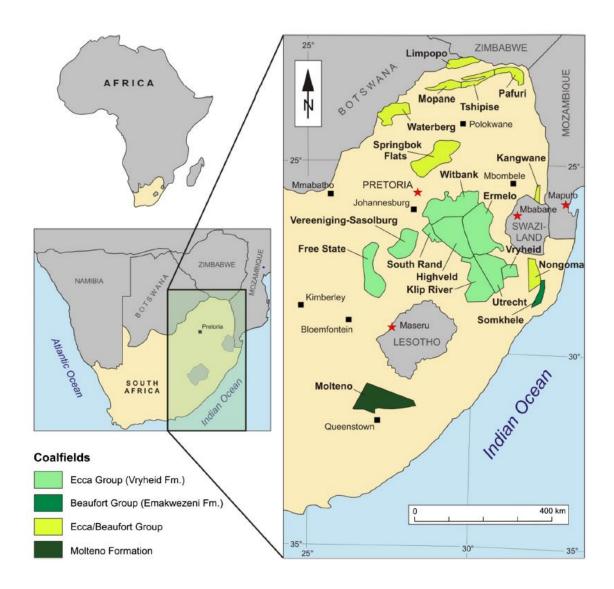


Figure 19: South African Coalfields (modified from Snyman, 1988)

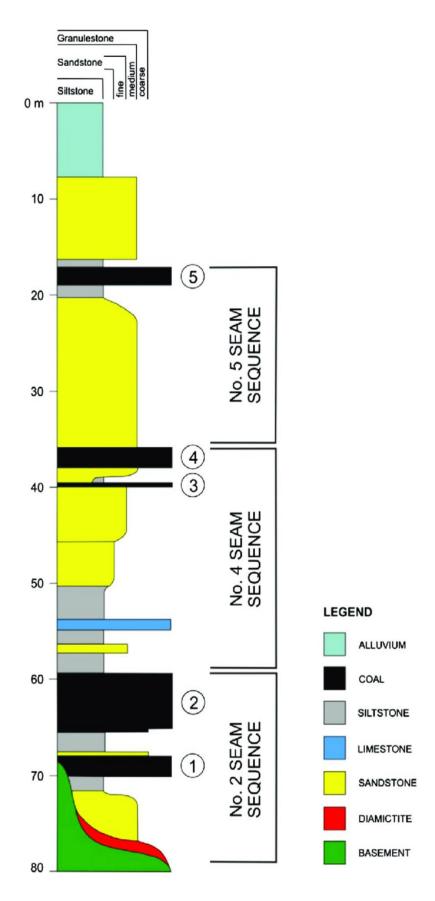


Figure 20: Stratigraphic column of the Witbank coalfield.

Local Geology

The proposed Prospecting Right area is situated in the Central Block of Witbank Coalfields. The coalfield lithology comprises sediments of the Dwyka and Vryheid Formations of the coal-bearing Ecca Group, Karoo Supergroup. The sediments have been deposited on undulating pre-Karoo age basement, which had a significant influence on the nature, distribution and thickness of the sedimentary formations and coal measures. The geology of the study area is dominated by near horizontally bedded successions of shales, sandstones and coal layers.

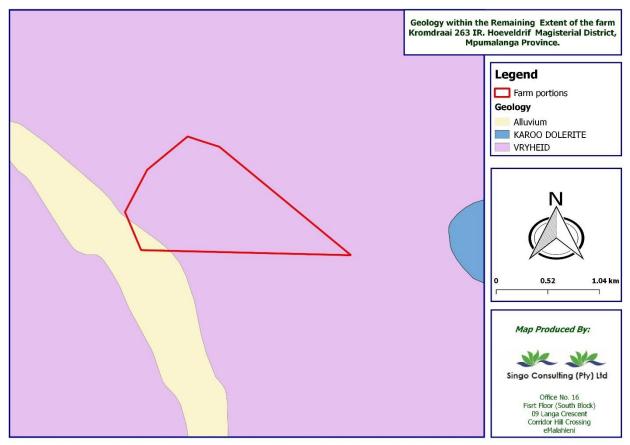


Figure 21: Geological Map of the project area.

2.9.2.6 Climate

Regional Climate

The proposed opencast mining area is in the Mpumalanga Highveld Region approximately 1 600m above sea level. Overall, the climate of this region is described as a summer rainfall area, where summers are mild to warm, whilst winters are cool to cold and dry.

Local Climate

Emalahleni lies at about 1478 m above sea level, the climate is warm and temperate. The Köppen-Geiger system classifies this climate as Cwb. In winter, there is much less rainfall than in summer. In Emalahleni, the average annual temperature is 16.5°C and the rainfall is around 714 mm. The driest month is June, with about 6 mm of precipitation. The most precipitation falls in January reaching

an average of 126 mm. With an average of 20.1 °C, January is the warmest month and July has the lowest average temperature of the year (10.4 °C). In Figure 20, the mean minimum annual temperature is shown, and Figure 21 shows the mean annual rainfall (Climate data.org).

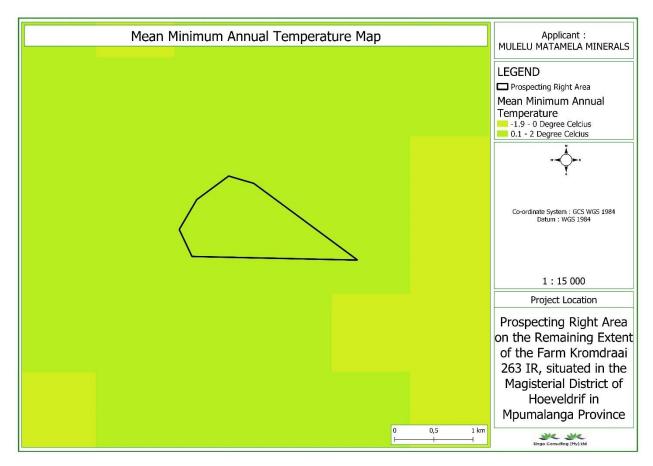


Figure 22: Mean minimum annual temperature of the prospecting right area.

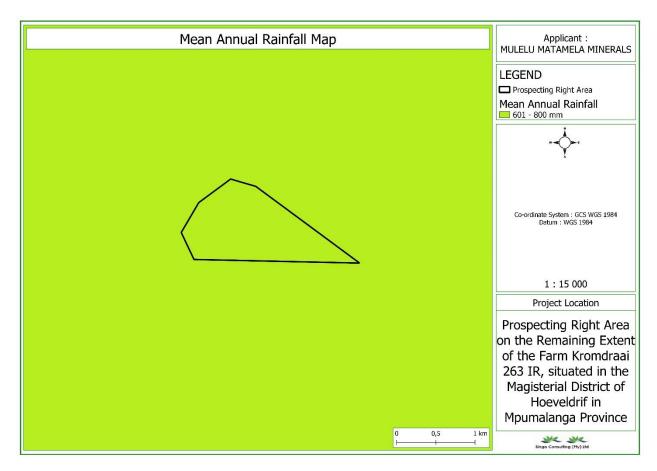


Figure 23: Mean annual rainfall of mining permit area.

2.9.2.7 Wind Direction and Speed

The winter months in the Highveld are characterised by calm, stable and dry conditions which are conducive to the formation of temperature inversions. Winds are generally light, with strong gusty westerly winds associated with the passage of weather disturbances. The prevailing winds, however, predominate from the north-west, north-east and east during summer and from the north-west and south-west in winter.

2.9.2.8 Air Quality

Mpumalanga experiences a wide range of both natural and anthropogenic sources of air pollution ranging from veld fires to industrial processes, agriculture, mining activities, power generation, paper and pulp processing, vehicle use and domestic use of fossil fuels. Different pollutants are associated with each of the above activities, varying from volatile organic compounds and heavy metals to dusts and odours. The mining permit area is located within a region of mining activities and these activities result in a significant negative impact on air quality in the area and require specific air quality management actions to rectify the situation.

Ambient air quality in Mpumalanga is strongly influenced by regional atmospheric movements, together with local climatic and meteorological conditions. The most important of these

atmospheric movement routes are the direct transport towards the Indian Ocean and the recirculation over the sub-continents (Scholes, 2002). It is these climatic conditions and circulation movements that are responsible for the distribution and dispersion of air pollutants within Mpumalanga and between neighbouring provinces and countries bordering South Africa.

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

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

2.9.2.9 Surface & Ground Water Resources

Hydrology refers to any surface waters that appear inside and around the planned project region and may be impacted by the project. The hydrology map, illustrates that the following water bodies exists within and nearby the project area:

- Channelled valley-bottom wetland
- Non-perennial river
- Perennial river
- Perennial river
- Floodplain
- Depression

These are valuable natural water resources that should not be harmed by human activity. There will be procedures and guidelines put in place for this project if prospecting right poses a risk to them in order to conserve the water resources in this area and achieve effective water conservation. During dry seasons, when water percentages in water bodies are unusually low, the prospecting right will be exercised. Drilling will not take place near these water resources; instead, exploratory geologists will be directed to drill and sample away from the site's rivers and wetlands. A 100m buffer will apply around the water bodies present within the prospecting right area.

The project area is in the Olifants Management Areas (WMA). The quaternary catchment of the project area is B20E. The WR2012 study, presents hydrological parameters for each quaternary catchment including area, mean annual precipitation (MAP) and mean annual runoff (MAR). Based on the WR2012 study, the project area falls within the quaternary catchment of B20E. The total catchment area of B20E is 620 km2 with MAP of 661 millimetre (mm).

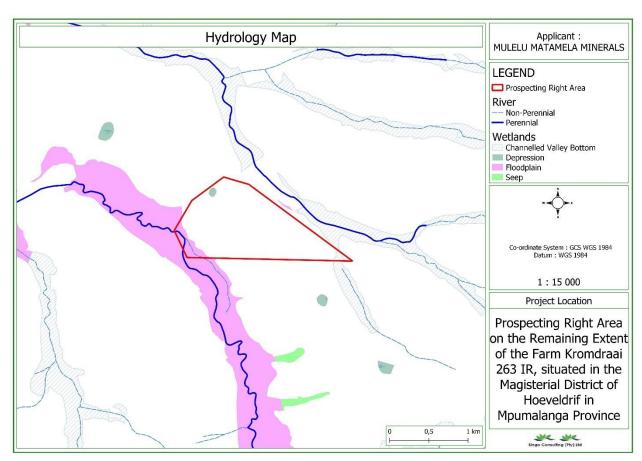


Figure 24: Hydrology map of the project area.

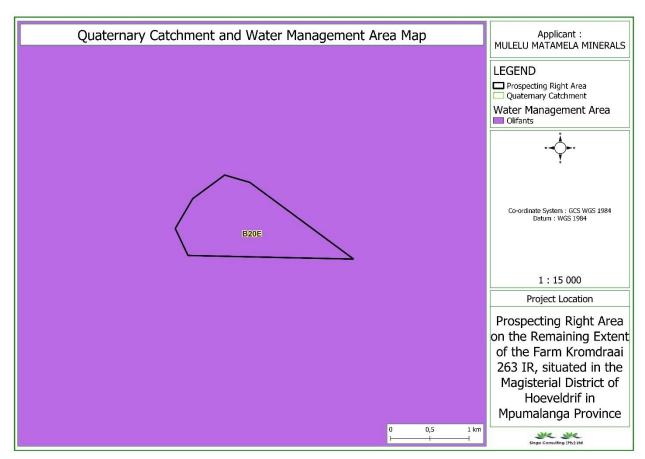


Figure 25: Quaternary Catchment and Water Management Area Map.

2.9.2.10 Flora

The proposed area is located in the Moist Cool Highveld Grassland. This vegetation is distributed in Mpumalanga and Gauteng on plains between Belfast (in the east) and the eastern side of Johannesburg (in the west) and extends to Bethal and Ermelo) and Springs.

The climatic conditions of the vegetation unit are strongly seasonal summer rainfall, with very dry winters. The MAP (650-900 mm, averaging 726 mm) is relatively uniform across most of the unit, but increases significantly in the extreme south-east. The coefficient of variation in MAP is 25% across most of the unit but drops to 21% in the east and south-east. Frost occurs about thirteen to forty-two days, but longer at higher elevations. This vegetation type is listed as Endangered with approximately 0.9 % conservation target conserved in nature reserves. About 60 % of this vegetation unit is remaining, whilst transformation has reached approximately 40 %.

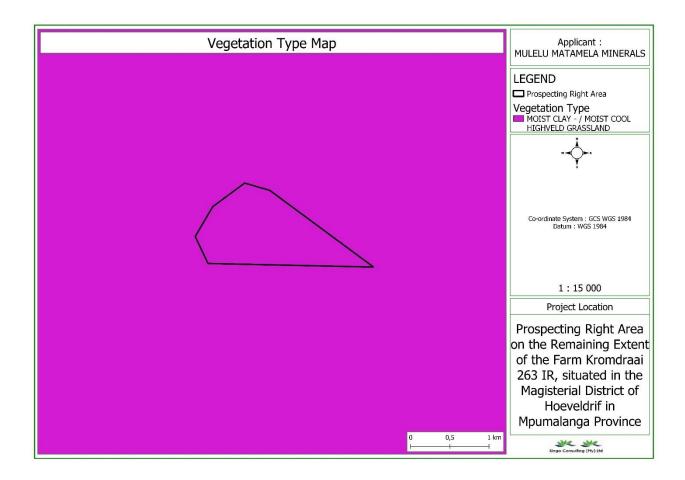


Figure 26: Vegetation map of the project area.

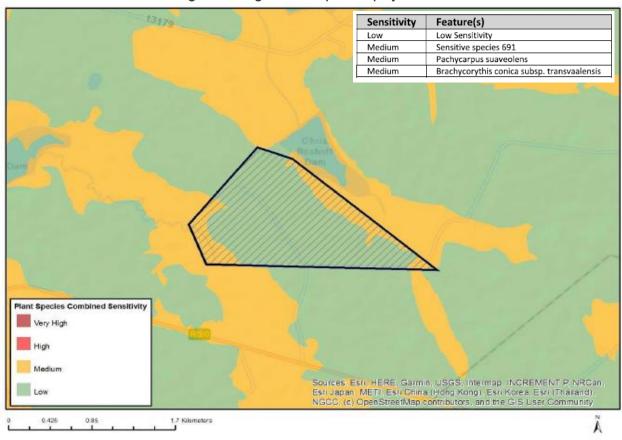


Figure 27: Plant Species Theme Sensitivity Map from Screening Tool.

2.9.2.11 Fauna

Domestic fauna was observed during site assessment such as cows and birds like doves although no wild fauna was observed at the time of the site inspection. Should any wild fauna enter the mining area there will be no impact on the proposed mining activity as they will be able to move away or through the site, without being harmed.

The fauna at the site will not be impacted by the proposed processing activity, as they will be able to move away from or through the site unharmed. Workers must be educated and managed to ensure that no fauna at the site is harmed. Upon commencement of the proposed processing activities, the processing area will be fenced off to prevent livestock, such as cattle from wandering into the work areas.



Figure 28: Type of animals found on site during assessment.

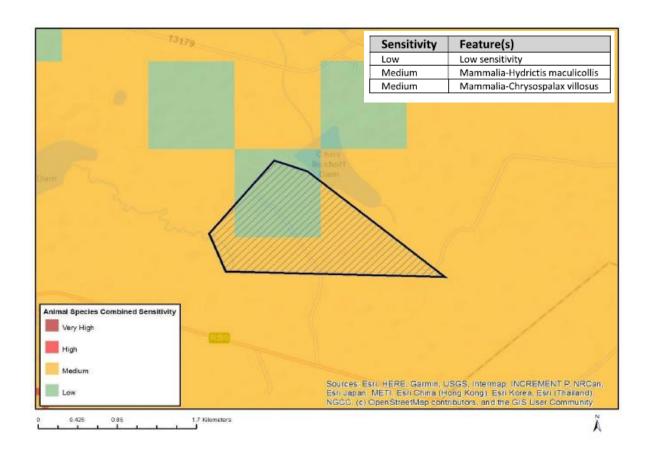


Figure 29: Animal Species Theme Sensitivity Map from Screening Tool

2.9.2.12 Critical Biodiversity

The permit area is situated in a heavily modified or moderately modified and other natural areas see map below Figure 33. The permit area is heavily modified transformed area, biodiversity function has been lost to the point that they are not worth considering for conservation.

There are no critical species will be affected by the proposed project as there are critical plants and sensitivity within and around the proposed mining permit. Therefore, critical species will be harmed even though identified during the operation of proposed project as Eco will be onsite every day to monitor the operation. Although the area is characterized by Moist Cool Highveld Grassland according to the GIS specialist, the area is heavily modified by other activities which leads to vanished of these Moist Cool Highveld grassland mentioned on the vegetation type section.

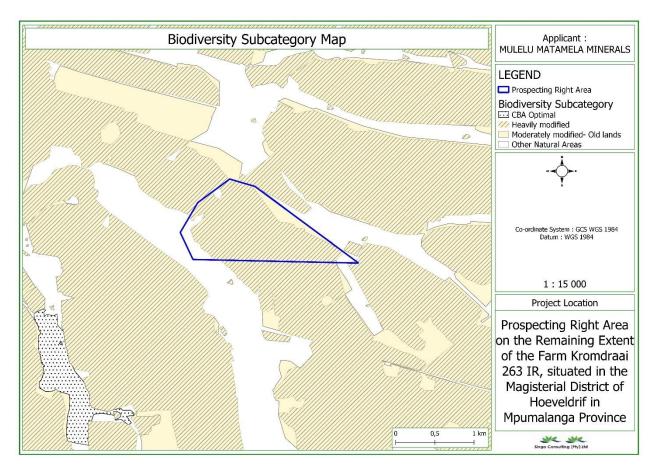


Figure 30: Critical Biodiversity map of the project area.

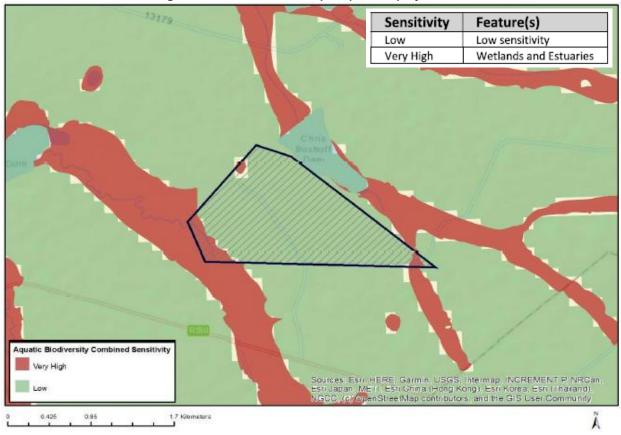


Figure 31: Biodiversity combined sensitivity map from screening report.

2.9.2.13 Cultural and heritage

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

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

Should, however, any heritage resources of significance be exposed during prospecting, the South African Heritage Resources Authority (SAHRA) should be notified immediately, all development activities should be stopped, and an archaeologist accredited with the Association for Southern African Professional Archaeologist (ASAPA) should be notified to determine appropriate mitigation measures for the discovered finds. This may include obtaining the necessary authorisation (permits) from SAHRA to conduct the required mitigation measures.

2.9.3 Description of the current land uses

The surrounding land use on the proposed project area are associated with cultivated area, natural vegetation and built-up area. The project Area is located, is situated approximately 26.89 km South-East North of Delmas and Approximately 22.81 km South-West of Ogies. The proposed area can be accessed using a gravel/unnamed road from R 580.

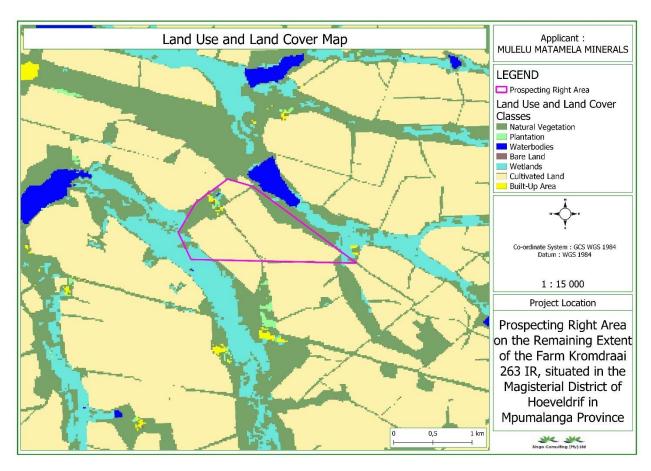


Figure 32: Land use and Land cover map of the proposed project area.

2.9.4 Description of specific environmental features and infrastructure on the site

The project area is characterized by various water bodies, cultivated land, natural vegetation and built-up area. Major infrastructures powerlines.



Figure 33: Infrastructure on site (power line).

2.9.5 Environmental and current land use map

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

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

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 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 in the prospecting areas or any other areas in their vicinity.

2.9.6 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 were 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 analysed 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 (see Table 6).

Table 6: 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 7. (Note that the lowest possible consequence score is 3.)

Table 7: 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 8.

Table 8: 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 9. 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 9.

Table 9: 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	Low					
vailable information, the environmental consultant's judgment and/or specialist	Medium					
knowledge.	High					

Different types of impacts were considered in the impact ratings (see Table 10).

Table 10: 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/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 water quality reduction).

There is no statutory definition of significance and its determination is therefore partially subjective. Criteria for assessing impact significance arise from compliance status with relevant local legislation, policies and plans; 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) was 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 sensitivity to the impact must be considered. For a human receptor, the sensitivity of the household, community or wider society must be considered along with their ability to adapt to and manage impact effects.

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

The impact significance rating 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 11.

Table 11: 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 must be devised to reduce the impact significance to an acceptable level. If mitigation is not possible, compensation measures must be considered.
Very high	Specific mitigation measures must be identified and implemented to reduce the impact significance to an acceptable level. If such mitigation is not possible, very high significance negative impacts must be considered in the project's authorization process.

The impact significance will be rated in the prescribed way, with and without the effective implementation of the recommended mitigation measures.

2.9.7 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 an alternative layout. **Mulelu Matamela Minerals (Pty) Ltd** will implement site changes to prevent negative effects. 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 of the 1128.67 ha property. This must be viewed in the context of the entire prospecting license area under application, and it must be kept in mind that some of the identified impacts will occur for a limited time and will have localised impacts. 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.

2.10 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 I&APs.

Table 12: Impact assessment

Name of activity	Potential impact	Aspects affected	Phase	Significance			ce		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.	Ifr	not n	nitigo	ated		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 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 (-ve)	Destruction/loss of cultural and heritage resources: No cultural/heritag e artefacts have been identified on site	Construction/ set-up	1	1	1		3 (VL)	 If concentrations of archaeological heritage material and human remains are uncovered during construction, work must cease immediately. Finds must be reported to a heritage specialist so that systematic and professional investigation/excavation can be undertaken. 	Negligible
Waste management	Noise (-ve)	Noise generation	Construction/ set-up	1	3	1		5 (L)	Construction/set-up, operational and decommissioning activities will	3(VL)

Name of activity	Potential impact	Aspects affected	Phase	Si	Significance				Mitigation type	Significance
									 be limited to daylight hours, from 08h00 to 17h00. Mondays-Saturdays, and no activities on Sundays and public holidays. Separation of at least 500m, (preferably 1 000m) to be maintained between drill sites and dwellings. Noise abatement equipment, like mufflers on diesel engines, will be kept in good condition. 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. 	
	Visual (-ve)	Visual intrusion	Construction/ set-up	1	3	1		5 (L)	 The drilling rig and other visually prominent items on site will be in consultation with the landowner. Use existing vegetation as far as possible to screen prospecting operations from view. If necessary, operations can be screened from view by erecting a shade cloth barrier. 	3(VL)
	Traffic (-ve)	Increase in traffic volumes	Construction/	1	2	1		4 (VL)	Traffic signs to be put around the site to notify motorists of	3(VL)

Name of activity	Potential impact	Aspects affected	Phase	S	igni	fica	nce		Mitigation type	Significance
	near the drilling site	set up						 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 and nuisance from activities	Construction/ set-up	2	3	3 1		6 (M)	 Wet suppression should be applied to ensure that no visible dust is raised by the prospecting operations. Separation of at least 500m (preferably 1 000m) to be maintained between drill sites and dwellings. 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 proposed drilling sites and the access routes used to get to these sites.	Construction/ set up	1	3	3 2		6 (M)	 Soil disturbance and clearance of vegetation at drill pads will kept to the absolute minimum. No clear scraping (dozing) will be carried out unless necessary to establish a level drill pad. Rather that surface vegetation is cleared to make way for the drilling rig leaving the roots intact so that vegetation can coppice and regrow. 	5 (L)

Name of activity	Potential impact	Aspects affected	Phase	Sig	nifi	icance			Mitigation type	Significance
									Disturbed areas will be revegetated with indigenous species as soon as possible.	
	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 animals away from the site during prospecting.	Construction/ set up	1	3	2		6 (M)	 Environmental awareness training sessions must be part of the workers' induction and site workshops. If any animals are encountered they must not be killed or injured but removed/chased away from the site with the assistance of an animal specialist. 	5 (L)
	Social (-ve)	Friction between residents/land owners and construction personnel	Construction/ set-up	1	2	2		5 (L)	 All operations will be carried out under the guidance of a strong, experienced manager with public consultation and conflict resolution skills. All prospecting personnel will be made aware of local conditions and sensitivities in the prospecting area and the fact that some residents may not welcome the prospecting activities. There will be a strict requirement to always treat residents with respect and courtesy. 	4 (VL)
	Job creation	Employment will	Construction/	2	1	1		4	No mitigation measures required.	4 (VL)

Name of activity	Potential Aspects affected impact		Phase	Significance				Mitigation type	Significance
	(+ve)	be created for the clearing of the land and establishing the drilling site.	set-up				(VL)		
 Exploration drilling Drilling Drill maintenance and refueling Core sample collection and storage Vehicle movements Waste generation and management 	Noise (-ve)	Noise generation	Operations	1	2	1	4 (VL)	 Construction/set-up, operational and decommissioning activities will be limited to daylight hours, from 08h00 to 17h00 .Mondays-Saturdays, and no activities on Sundays and public holidays. Separation of at least 500m (preferably 1 000m) to be kept between drill sites and dwellings. Noise abatement equipment, like mufflers on diesel engines, will be maintained in good condition. If intrusive noise levels are experienced by any person at any point, the source of the noise will be moved if practical, or placed in an acoustic enclosure, or an acoustic barrier will be erected between the source and the recipient. 	3(VL)

Name of activity	Potential impact	Aspects affected	Phase	Sig	gnifi	icand	се		Mitigation type	Significance
	Visual (-ve)	Visual intrusion	Operations	1	2	1	Definite	4 (VL)	 The drilling rig and other visually prominent items on the site will be placed in consultation with the landowner. Use existing vegetation where possible to screen prospecting operations from view. If necessary, operations can be screened from view by erecting a shade cloth barrier. 	3(VL)
	Dust fall (-ve)	Dust fall and nuisance from activities	Operations	1	2	1	Definite	4 (VL)	 Wet suppression will be applied to ensure that no visible dust is raised by any of the prospecting operations; Separation of at least 500m (preferably 1 000m) to be kept between drill sites and dwellings. Low vehicle speeds will be enforced on unpaved surfaces. 	3(VL)

Name of activity	Potential impact	Aspects affected	Phase Significance			e		Mitigation type	Significance	
	Soil and Vegetation (- ve)	Soil and vegetation disturbance from drill pad preparation	Operations	1	2	2	Definite	5 (L)	 The soil disturbance and clearance of vegetation at drill pad areas will be limited to the minimum required. No clear scraping (dozing) to be carried out unless necessary to establish a level drill pad. Surface vegetation should rather be cleared to make way for the drilling rig leaving the roots intact so that vegetation can regrow. Disturbed areas will be revegetated with indigenous species as soon as possible. 	3(VL)
	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 during prospecting.	Operations	1	2	2	Definite	5 (L)	Measures implemented during site establishment should apply in this phase too.	4(VL)

Name of activity	Potential impact	Aspects affected	Phase	Siç	gnifi	canc	e		Mitigation type	Significance
	Social (-ve)	Friction between residents/land owners and construction personnel	Operations	1	2	2	Definite	5 (L)	 All operations will be carried out under the guidance of a strong, experienced manager with public consultation and conflict resolution skills. All prospecting personnel will be made aware of the local conditions and sensitivities in the prospecting area and the fact that some residents may not welcome the prospecting activities. There will always be a strict requirement to treat residents with respect and courtesy. 	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)

2.11 Summary of specialist reports

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

LIST OF STUDIES UNDERTAKEN	RECOMMENDATIONS OF SPECIALIST REPORTS	SPECIALIST RECOMMENDATIONS THAT HAVE BEEN INCLUDED IN THE EIA REPORT (Mark with an X where applicable)	REFERENCE TO APPLICABLE SECTION OF REPORT WHERE SPECIALIST RECOMMENDATIONS HAVE BEEN INCLUDED.
Hydrogeological study	 It may be determined that the prospecting activity will have a low impact on water resources because mitigation measures will be strictly undertaken before the project begins. During dry seasons, when the water percentages in the neighbouring streams are very low, the prospecting right activity will take place. Drilling will not take place within 100 meters of waterways, and exploratory geologists will be instructed to drill and sample more than 100 meters away from rivers and wetlands on the property. During drilling, the exploration boreholes will be cased, and the boreholes will be appropriately rehabilitated by cap sealing the borehole after drilling. Because to the river and various wetlands inside and around the project area, extreme caution will be exercised when prospecting. There will be no washing of mechanical equipment or automobiles near water supplies. Rivers and wetlands will be designated as no-go zones with a 100-meter barrier. 	X	Appendix 9

	The project area is located in the Olifants Management Areas			
	(WMA), and the project area's quaternary catchment is B20E. The			
	geologists will clear the core logs of boreholes with mineral of			
	interest from the earth soon after logging to prevent washing and			
	leaching into the water resources during rainfall.			
	During drilling operations, absorbent spill kits will be placed			
	around the drill rigs.			
Hydrology study	The proposed area is covered with association of Freely drained,	X	Appendix 9	
	structureless soils.			
	It is anticipated that the coal prospecting activities will not lead			
	to severe loss of soils and degradation of agricultural potential.			
	It is anticipated that the coal prospecting activities will not lead			
	to severe loss of soils and degradation of agricultural potential.			
	It is anticipated that the coal prospecting activities will not lead			
	to severe loss of soils and degradation of agricultural potential.			
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	to severe loss of soils and degradation of agricultural potential.			
	It is anticipated that the coal prospecting activities will not lead			
	to severe loss of soils and degradation of agricultural potential.			

3. Environmental impact statement

3.8 Key findings of the EIA

Most of the prospecting activities are non-invasive and will have very low to negligible environmental or social impact. The invasive activities that entail the drilling of approximately 15 exploration holes will have a minimal environmental and social impact as each drill site will be confined to an area of 0.9 ha. This must be viewed in the context of the entire prospecting license area under application, which covers just 1128.67 ha. Table 13 summarises the assessed impact ratings after mitigation measure implementation.

Table 13: Summary of identified impacts

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

3.9 Final site map

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

Environmental Sensitivities Map including site layout map.

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

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

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

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

The objectives of the EMPr will be to:

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

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

3.12 Aspects for inclusion as conditions of authorisation

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

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

3.13 Description of any assumptions, uncertainties and gaps in knowledge

Which relate to the assessment and mitigation measures proposed?

• It is assumed that the proposed project description provided by the applicant is enough in providing the authorities with the right information regarding the project.

 It is assumed that the public consultation process to be undertaken as part of the EIA will suffice and that the application will be soldiered objectively based on stakeholders' response to the proposed activities.

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

3.14.2 Reasons why the activity should be authorised

The EAP recommends that the proposed prospecting activities be authorised:

- The environmental impacts associated with the limited drilling activities are minimal, provided that the proposed mitigation is implemented.
- The spatial extent of the physical impact is less than 1 happer drill site over a prospecting
 right license area of over 1128.67 ha; 15 drill sites will be established during the drilling
 phase.
- With appropriate care and consideration, the impacts resulting from drilling can be suitably avoided, minimised or mitigated.
- By implementing the appropriate rehabilitation activities, the impacts associated with drilling can be reversed.
- Without implementation of prospecting activities, the knowledge concerning the potential mineral resource within the prospecting right area will not be confirmed.

3.14.3 Conditions that must be included in the authorisation

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

3.15 Period for which the Environmental Authorisation is required.

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

3.16 Undertaking

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

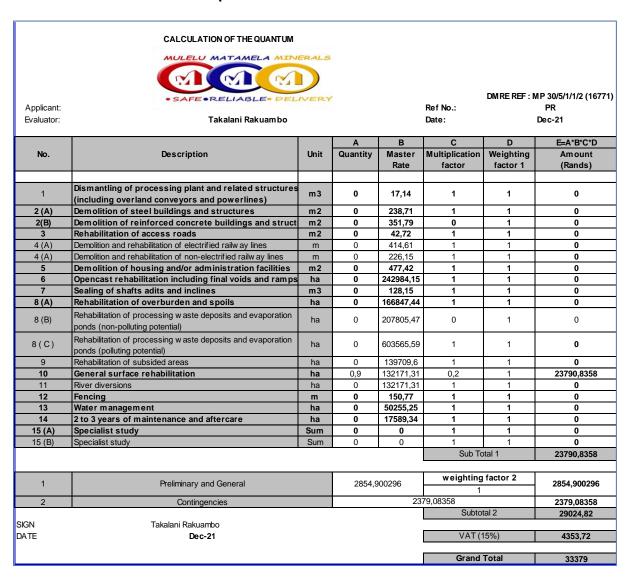
An undertaking is provided at the end of this report.

3.17 Financial provision

State the amount required to manage and rehabilitate the environment.

A financial provision of approximately R 333 79.00, which includes rehabilitation activities, has been made by **Mulelu Matamela Minerals (Pty) Ltd**. A breakdown of these costs is presented in 3.17.2. The applicant undertakes to provide financial provision through funding from the personal account.

3.17.2 Calculation of the quantum



3.17.3 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.

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

An amount of R2 295 796.00 is required to finance the PWP over a period of 3 years. The extended 2 years will be based on the results of the first 3-year drilling programme. Work will be approved on a phase-by-phase basis, dependent on the results obtained i.e, although prospecting work may be provided for financially in the budget for a specific year, it will only take place if justified. Table 14 shows a breakdown of the expected costs throughout the exploration process. The amount is also reflected in the PWP submitted to the DMRE.

Table 14: Expenditure per activity.

ACIVITY	YEAR 1 Expenditure	YEAR 2 Expenditure	YEAR 3 Expenditure	YEAR 4 Expenditure	YEAR 5 Expenditure
	(R`)	(R`)	(R`)	(R`)	(R`)
Phase 1 (Months 0 to 12)					
Literature surveys	R 2 500.00	R1 500.00			
Desk top studies	R 10 000.00	R 5 000.00			
Geophysical or geotechnical work	R 10 000.00	R 4 000.00			
Research and target identification		R 5 000.00			
Phase 2 (Months 13 to					
24)					
Invasive work, (Drilling 05					
boreholes a depth of			R48 024 9.00	R48 024 9.00	R48 024 9.00
50m)		R48 024 9.00			
Sampling work		R 25 000.00	R 15 000.00	R 9 000.00	R 5 000.00
Laboratory work		R 22 800.00	R 11 200.00	R 8 800.00	R 4 800.00
Analytical and					
modelling work			R 40 000.00	R 20 000.00	R 7 000.00
Infill work			R 25 000.00	R 15 000.00	
Bulk sampling and testing to be carried out					

Phase3 (Months 25 to 60)					
EIA and EMP for mining					
right application				R 40 000.00	R 20 000.00
Pre-feasibility studies				R 25 000.00	R 10 000.00
Investment decision making application for mining rights				R 22 800.00	R 10 400.00
Annual Total			R 571		R 537
	R 22,500.00	R 543 549.00	449.00	R620 849.00	449.00
				Total Budget	R2 295 796.00

Specific Information required by the competent Authority.

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

The EIA report must include the:

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

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

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

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

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

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

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

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

The proposed site was selected based on extensive research and following information from previous prospecting activities in the area. There are known coal deposits in the area and coal mining (Msobo coal) is currently taking place to the immediate north of the proposed project area. In terms of the technologies proposed, the proposed prospecting has been chosen based on the long-term success of the company in terms of their prospecting history. The prospecting activities proposed in the PWP is dependent on the preceding phase as previously discussed, therefore no alternatives are indicated, but rather a phased approach of trusted prospecting techniques.

PART B

ENVIRONMENTAL MANAGEMENT PROGRAMME REPORT

4. Environmental management programme

4.8 Details of the EAP

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

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

4.9 Description of the aspects of the activity

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

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

4.10 Composite map

Provide a map (attached as an Appendix) at an appropriate scale which superimposes the proposed activity, its associated structures, and infrastructure on the environmental sensitivities of the preferred site, indicating any areas that any areas that should be avoided, including buffers) Please refer to Error! R eference source not found. for the Composite Map.

4.11 Description of impact management objectives including management statements

4.11.2 Determination of closure objectives

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

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

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

Limited water will be consumed by the surface dust suppression activities (water mist added for dust suppression when required). If diamond drilling is to take place, then it is estimated that up to 30 000 litres per day could be required.

4.11.4 Has a water use license has been applied for?

There are no boreholes located on the site. However due to lack of sufficient rainfall (drought) water will not be given for drilling purpose. Hence, air flush is preferred by the client. In case, where the water will be given, it is anticipated that water will be brought onto the site, will be sourced from the private water dealer. No WUL is needed.

4.12 Impacts to be mitigated in their respective phases

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

Table 15: 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 programme must be implemented. Measures must be implemented when required. Rehabilitation must take place at the earliest opportunity. With regard to rehabilitation, state whether it will take place upon cessation of the individual activity or cessation of mining, bulk sampling or alluvial diamond prospecting.
 Site establishment activities Vegetation clearance Topsoil stripping and stockpiling Drill pad compaction Placement of temporary portable toilets and resting place 	Construction/set-up and operational phase	20m² diamond drill holes	Any buried artifacts that may be uncovered during site activities will require such activities to stop and a qualified archaeologist will be commissioned to assess their significance and determine appropriate mitigation measures.	Heritage Act	Before and during drilling activities
 Vehicle movements Waste management 	Construction/set-up and operational phase	20m ² diamond drill holes	Control noise generation by maintaining equipment. Limited to daylight hours on Mondays-Saturdays and no activities on Sundays and public holidays. Maintain a buffer of 500m between drill sites and dwellings. The resting	SANS 10103 guideline	Before and during drilling activities

Activities	Phase	Size and scale of disturbance	Mitigation measures	Compliance with standards	Implementation period
			place will be located outside		
			the 82dB Zone of the drill site.		
 Exploration drilling: Drilling Drill maintenance and refuelling Core sample collection and storage Vehicle movements Waste generation and management 	Construction/set-up and operational phase	20m ² diamond drill holes	The drilling rig and other visually prominent items on the site will be in consultation with the landowner. Use existing vegetation as far as possible to screen the prospecting operations from view. If necessary, operations can be screened from view by erecting a shade cloth barrier.	N/A	Before and during drilling activities
	Construction/set-up and operational phase	20m² diamond drill holes	Control dust emission by ensuring drill rig employs dust suppression system. Low vehicle speeds will be enforced on unpaved surfaces. Maintain a buffer of 500m between drill sites and dwellings.	GN R. 827 (NEMAQA)	Before and during drilling activities
	Construction/set-up and operational phase	20m ² diamond drill holes	Soil disturbance and vegetation clearance at drill pads will be limited to the absolute minimum required and will not be dozed/ scraped with vegetation roots left intact for later re-growth. Disturbed areas will be re-vegetated with indigenous species as soon as possible.	N/A	Before and during drilling activities

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

4.12.2 Impact Management Outcomes

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

Table 16: 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), 	Cultural and heritage	Destruction or loss of Cultural and Heritage Resources: No cultural/ heritage artefacts have been identified on site.	Construction/ set-up	If concentrations of archaeological heritage material and human remains are uncovered during construction, all work must cease immediately. The find must be reported to a heritage specialist so that systematic and professional investigation/ excavation can be undertaken.	Heritage Act
water tanker, core storage Vehicle movements Waste management	Noise	Noise generation	Construction/ set-up	 Construction/setup, operational and decommissioning activities will be limited to daylight hours on Mondays to Saturdays from 08h00 – 17h00 and no activities on Sundays and public holidays. Separation of distance of minimum 500m to be maintained between drill sites and dwellings. Noise abatement equipment, like 	SANS 10103

Activities	Potential impact	Aspects affected	Phase	Mitigation type	Standard to be achieved
				mufflers on diesel engines, will be maintained in good condition. If intrusive noise levels are experienced by any person at any point, the source will be moved if practical, or it will be placed in an acoustic enclosure, or an acoustic barrier will be erected between the source and the recipient.	
	Visual	Visual intrusion	Construction/ set-up	 The drilling rig and other visually prominent items on site will be in consultation with the landowner. Make use of existing vegetation as far as possible to screen the prospecting operations from view. If necessary, the operations can be screened from view by erecting a shade cloth barrier. 	N/A
	Traffic	Increase in traffic volumes in drilling site vicinity	Construction/ set-up	 Traffic signs to be erected around the site to notify motorists of 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. Distance of at least 500m to be maintained between drill sites and 	GN R. 827 (NEMAQA)

Activities	Potential impact	Aspects affected	Phase	Mitigation type	Standard to be achieved
				dwelling.Low vehicle speeds will be enforced on unpaved surfaces.	
	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 vegetation clearance at drill pads will be limited to the absolute minimum required. No clear scraping (dozing) to be carried out unless necessary to establish a level drill pad. Clear surface vegetation to make way for the drilling rig leaving the roots intact so that vegetation can coppice and regrow. Disturbed areas will be re-vegetated with indigenous species as soon as possible. 	NEMBA
	Animal life	Animal life will be affected in the immediate vicinity of the drilling rig. It is anticipated that the noise and general activity will keep the animal life away from the site while the prospecting is ongoing.	Construction/ set-up	 Environmental awareness training sessions must be part of the workers induction and site workshops. If any animals are encountered, they must not be killed or injured, but removed or chased away from the site with the assistance of an animal specialist. 	NEMBA
	Social	Friction between residents/land owners and construction personnel.	Construction/ set-up	 All operations will be carried out under the guidance of a strong, experienced manager with public consultation and conflict resolution skills. All prospecting personnel will be made aware of the local conditions and sensitivities in the prospecting 	NEMA

Activities	Potential impact	Aspects affected	Phase	Mitigation type	Standard to be achieved
				 area and the fact that some residents may not welcome the prospecting activities. There will always be a strict requirement to treat residents with respect and courtesy. 	
	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
 Exploration drilling (ve) Drilling Drill maintenance and refueling Core sample collection and storage Vehicle movements Waste generation and management 	Noise	Noise generation	Operations	 Activities will be limited to daylight hours, Mondays-Saturdays from 08h00 – 17h00 and no activities on Sundays and public holidays. A distance of at least 500m to be maintained between drill sites and dwellings. Noise abatement equipment, like mufflers on diesel engines, will be maintained in good condition. 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. 	Heritage Act
	Visual	Visual intrusion	Operations	 The drilling rig and other visually prominent items on site will be in consultation with the landowner. Use existing vegetation as far as possible to screen prospecting operations from view. 	SANS 10103

Activities	Potential impact	Aspects affected	Phase	Mitigation type	Standard to be achieved
				 If necessary, operations can be screened from view by erecting a shade cloth barrier. 	
	Traffic	Increase in traffic volumes in the drilling site vicinity	Operations	 Traffic signs to be erected on site to notify motorists 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. 	N/A
	Dust fall	Dust fall and nuisance from activities	Operations	 Wet suppression will be applied to ensure that no visible dust is raised by the prospecting operations. A distance of at least 500m to be maintained between drill sites and dwellings. Low vehicle speeds will be enforced on unpaved surfaces. 	National Traffic Act regulations
	Soil and vegetation	Soil and vegetation disturbance from drill pad preparation	Operations	 The soil disturbance and clearance of vegetation at drill pad areas will be limited to the absolute minimum required. No clear scraping (dozing) will be carried out unless necessary to establish a level drill pad. Surface vegetation to be cleared to make way for the drilling rig, leaving the roots intact so that vegetation can coppice and regrow. Disturbed areas will be re-vegetated with indigenous species as soon as possible. 	GN R. 827 (NEMAQA)

Activities	Potential impact	Aspects affected	Phase	Mitigation type	Standard to be achieved
	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 must apply in this phase as well.	NEMBA
	Social	Friction between residents/land-owners and construction personnel	Operations	 All operations will be carried out under the guidance of a strong, experienced manager with public consultation and conflict resolution skills. All prospecting personnel will be made aware of local conditions and sensitivities in the prospecting area and the fact that some residents may not welcome the prospecting activities. There will always be a strict requirement to treat residents with respect and courtesy. 	NEMBA
	Job creation	Employment will be created for the clearing of the land and establishing the drilling site.	Operations	No mitigation measures required.	NEMA

4.13 Impact Management Actions

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

Table 17: 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 100m buffer from any identified heritage feature. Any buried artifacts that may be uncovered during site activities will require such activities to stop and a qualified archaeologist will be commissioned to assess their significance and determine appropriate mitigation measures.	Before and after drilling activities.	Heritage Act
 Exploration drilling Drilling Drill maintenance and refuelling Core sample collection and storage 	Noise	Control noise generation by maintaining equipment and limiting operation hours to daylight hours from Mondays to Saturdays (no activities on Sundays and public holidays) from 08h00 – 17h00. Maintain a buffer of 500m between drill sites and 100m away from any dwellings/infrastructure. If intrusive noise levels are experienced by any person at any point,	Before and after drilling activities.	SANS 10103

Activities	Potential impact	Mitigation type	Implementation period	Compliance with standards
Vehicle movementsWaste generation and management		the source will be moved if practical, or placed in an acoustic enclosure, or an acoustic barrier will be erected between the source and the recipient.		
	Visual	The drilling rig and other visually prominent items on site will be placed in consultation with the landowner. Existing vegetation will be used as far as possible to screen the prospecting operations from view. Operations can be hidden from view by erecting a shade cloth barrier.	Before and after drilling activities.	N/A
	Dust fall	Control dust emission by ensuring drill rig employs dust suppression system. Low vehicle speeds will be enforced on unpaved surfaces.	Before and after drilling activities.	GN R. 827 (NEMAQA)
	Soil and vegetation	Soil disturbance and vegetation clearance at drill pads will be kept to the minimum required and not be dozed/scraped; vegetation roots will be left intact for regrowth. Disturbed areas will be revegetated with indigenous species as soon as possible.	Before and during drilling activities; disturbed areas to re-vegetated as soon as possible.	N/A
	Social	Operations will be carried out under the guidance of an experienced manager with public consultation and conflict resolution skills. All prospecting personnel will be made aware of conditions and sensitivities in the prospecting area and of the fact that some residents may not welcome the prospecting activities. Residents will always be treated with respect and courtesy.	Before and after drilling activities.	NEMA

5. Determination of the amount of financial provision.

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

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

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

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

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

After drilling has been completed in one area, the drilling team will ensure the site is reverted to its original state by implementing the measures listed in Table 18.

Table 18: Rehabilitation measures

Aspect/Impact	Rehabilitation measure	Monitoring frequency and responsibility
Removal of construction structures	 Clear and completely remove from site all construction plant equipment, storage containers, signage, temporary fencing, temporary services, fixtures and any other temporary works. 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. 	Once-off, Mulelu Matamela Minerals (Pty) Ltd
Vegetation clearing/ Replanting	 Remove any emerging alien and invasive vegetation to prevent further establishment. All planting work is to be undertaken by suitably qualified personnel making use of the appropriate equipment. Transplant during the winter (between April and September). Plant indigenous plants to minimize the spread of alien and invasive vegetation. 	When re-vegetation is done and in bloom
Topsoil replacement	 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). Prohibiting the use of topsoil suspected to be contaminated with the seed of alien vegetation. Alternatively, the soil is to 	Once-off, Mulelu Matamela Minerals (Pty) Ltd

Aspect/Impact	Rehabilitation measure	Monitoring frequency and responsibility
	 be sprayed with specified herbicides. 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. 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. 	
Waste and rubble removal	 Clear the site of all inert waste and rubble, including surplus rock, foundations and batching plant aggregates. Remove from site all domestic waste and dispose of in the approved manner at a registered waste disposal site. 	Once-off, Mulelu Matamela Minerals (Pty) Ltd
Solid and hazardous waste	 Store hazardous waste as indicated on the approved Environmental Management Programme Report (EMPr). Dispose of all hazardous waste not earmarked for reuse, recycling or resale at a registered hazardous waste disposal site. Remove from site all temporary fuel stores, hazardous substance stores, hazardous waste stores and pollution control sumps. Dispose of hazardous waste in the approved manner. Do not hose oil or fuel spills into a storm water drain or sewer, or into the surrounding natural environment. Dispose of all visible remains of excess cement and concrete after the completion of tasks. Dispose of in the approved manner (solid waste concrete may be treated as inert construction rubble, but wet cement and liquid slurry, as well as cement powder must be treated as hazardous waste). 	Once-off, Mulelu Matamela Minerals (Pty) Ltd
Erosion protection	 Protect all areas susceptible to erosion and ensure that there is no undue soil erosion resultant from activities within and adjacent to the construction site. Retain shrubbery and grass species wherever possible. Perform regular monitoring and maintenance of erosion control measures. 	After rainfall events

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

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

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

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

The quantum of the financial provision required is R 43388.00. The Company must annually update and review the quantum of the financial provision (as per Regulation 54 (2) of the MPRDA). See 3.17.2 for the financial Quantum Calculation.

5.11 Confirm that the financial provision will be provided as determined

The financial provision will be provided as determined. Mechanisms for monitoring compliance with a performance assessment against the EMPr.

5.12 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 19: 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.	Mulelu Matamela Minerals (Pty) Ltd Geologist	Submit an annual prospecting progress report to DMRE
	All commitments contained in the BAR and accompanying EMPr	Ensure commitments made within the approved BAR and EMPr are being adhered to.	Internal environmental control officer and independent EAP.	Undertake and submit an environmental performance audit every two years to DMRE.
Drilling activities	Noise	Weekly inspections will cover the	Appointed drilling contractor.	Weekly inspection and reporting.
	Dust fall	 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 hydrocarbons are stored within bund walls. Ensure that the fire brake is maintained. Rehabilitation of drill pads. Records of water intersections on 		
	Visual			
	Soil and vegetation			
	Social			
	Housekeeping and maintenance			
	Waste management			
	Rehabilitation			

Impacts requiring monitoring programmes	Functional monitoring requirements	Roles and responsibilities for monitoring programme execution	Monitoring and reporting frequency and periods for impact management actions implementation
	 borehole logs. Control and minimize the development of new access tracks. Appropriate storage and handling of topsoil. 		
Groundwater Re-vegetation Stability Soil erosion	Monitor the external boreholes within 500m from drill post drilling (if any). The drill site must be monitored 6 months until closure certificate is obtained.	Environmental Coordinator	Monitoring Report
	Groundwater Re-vegetation Stability	borehole logs. Control and minimize the development of new access tracks. Appropriate storage and handling of topsoil. Groundwater Re-vegetation Stability Soil erosion Stability Control and minimize the development of new access tracks. Monitor the external boreholes within 500m from drill post drilling (if any). The drill site must be monitored 6 months until closure certificate is obtained.	Functional monitoring requirements for monitoring programme for monitoring programme execution

5.13 Indicate performance assessment/environmental audit report submission frequency

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

5.14 Environmental Awareness Plan

5.14.2 Informing employees of environmental risk that may result from their work

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

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

All attendees must complete the entire course and, on completion, sign an attendance register. A copy of the register shall be kept on record by Mulelu Matamela Minerals (Pty) Ltd

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

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

5.14.4 Specific information required by the Competent Authority

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

Not applicable at this stage.

6. Undertaking

The EAP herewith confirms:

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

Signature of the Environmental Assessment Practitioner (Singo Consulting (Pty)	
Ltd)	
Name of Company :	
December 2021	

Date:

Appendix 1: Competent Authority Letters



Private Bag X7279, Witbank, 1035, Tel: 013 653 0500, Fax 013 690 3288, Saveways Centre, First Floor, Mandela Drive, Witbank, 1035, **From:** Directorate: Mineral Regulation: Mpumalanga Region, **Enquiries:** Mr TV Mphekgwane Email Address: Vincent.Mphekgwane@dmre.gov.za Manager **Ref:** MP 30/5/1/1/2/**16771PR.**

BY EMAIL/FAX

Kenneth@singoconsulting.co.za

The Director/s

Mulelo Matamela Minerals (Pty) Ltd

P/Bag X7297

Highveld Mall

Emalahleni

1035

FAX NO: 086 5144103

Dear Sir/Madam

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

- Please be informed that your application for prospecting of Coal on the remaining extent of the farm Kromdraai 263 , Situated in the Magisterial Nkangala is hereby accepted in terms of section 16(2) of the Act as amended by section 12(b) of the Amendment Act.
- Please take notice that in terms of section 16(4) of the Act as amended by section 12(d)(a) and 12(d)(b) of the Amendment Act, you are required to:-

Acceptance of a prospecting right under file reference number 16771PR.

- 2.1. to consult in the prescribed manner with the landowner, lawful occupier and any interested and affected party, the Land Restitution Commission and submit the result of such consultation within 30 working days from the date of the signature below.
- 3. You are in terms of section 17(1) of the Act as amended by section 13(c) of the Amendment Act required to give effect to the objects referred to in section 2(d) of the Act to ensure that you are BBBEE compliant. Therefore, please submit on or before to this office for the attention of the writer hereon any documentation proving such including but not limited to: -
 - 3.1. Certified copies of share certificates and share holders register
 - 3.2. Certified copies of Shareholders agreements
 - 3.3. Certified copies articles and memorandum of association of the company
 - 3.4. Trust deed documents and letters of authority for any trust holding shares
 - 3.5. Details relating to funding (all relevant agreements)
 - 3.6. Any other information that may be necessary to explain and serve as evidence that the applicant meets the appropriate HDSA ownership and/or compliance requirements of the aforesaid Act and Mining Charter; thereby including women and communities in your structure.
- 4. Please submit within 14 days from date of this letter for the attention of Mr Ntshele Phasha 3 copies of a complete prospecting work programme prepared in terms of regulation 7 of the Mineral and Petroleum Resources Development Act, 2002 (Act no 28 of 2002): Mineral and Petroleum Development Regulation.
- 5. Your attention is also drawn to the provisions of Section 17(1) (e) of the MPRDA, which provides that the minister may grant an application for a prospecting right if the applicant is not in contravention of any relevant provision of this Act. Section 19(2) (f) places an obligation on the holder of a prospecting right to pay the prescribed prospecting fees, as per regulation 76 of the MPRDA. You are therefore reminded to ensure that payment of all prospecting fees for all the prospecting right that you hold, are up to date, failing which this may have a negative impact on the outcome of your current application.

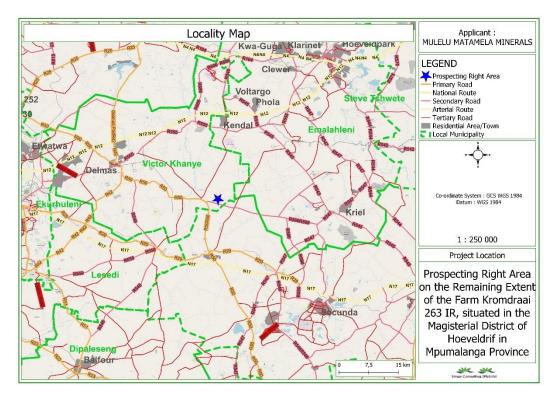
Acceptance of a prospecting right under file reference number 16771PR.

- 6. In light of the minimum requirements as stipulated on Regulation 16 (1) and 16(2) of the EIA Regulations, your application for an Environmental Authorisation was incomplete as it was not accompanied by this acceptance letter as per Sub Regulation 16(1)(ix) and considering that it is now completed by this acceptance letter, you are hereby required to submit the documents as stipulated on Regulation 19 (1) to 19(8) of the EIA Regulations (Only in cases where Basic Assessment Report is applicable) or Regulations 21 (Scoping Report) and Regulation 23 (EIR and EMPr) (In case of Scoping and Environmental Impact Report). All timeframes are effective from the date of this letter.
- 7. Please take note that failure to adhere to the timeframe stipulated above and to submit any documentation required in terms of this notice will result into non-compliance with the provision of the Act and the Amendment Act and will result in your application being processed refusal.

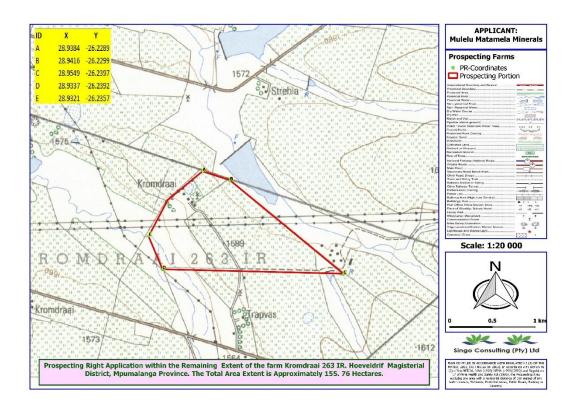
Yours faithfully:

REGIONAL MANAGER
MPUMALANGA REGION
DATE: 26 10 2021

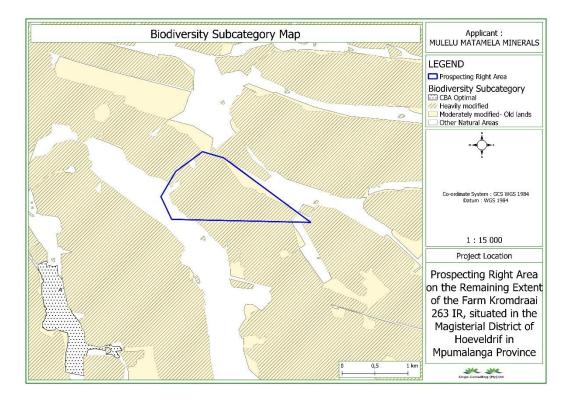
Appendix 2: Project Maps



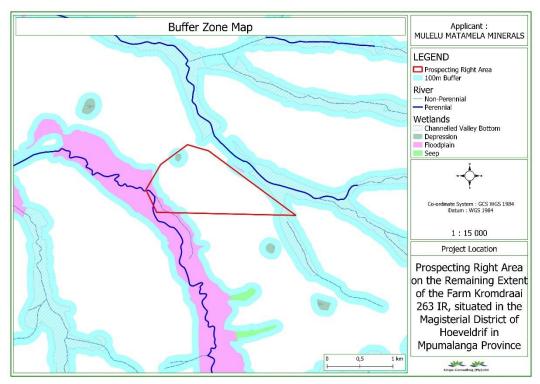
Locality Map



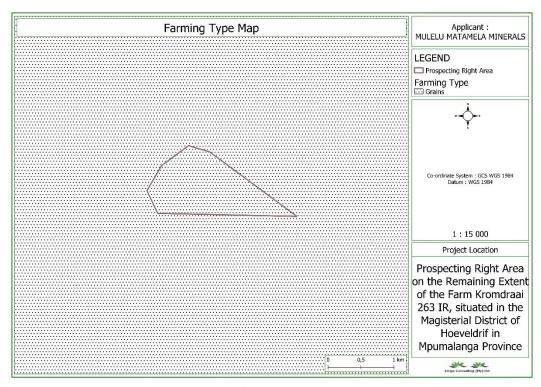
Regulation Map



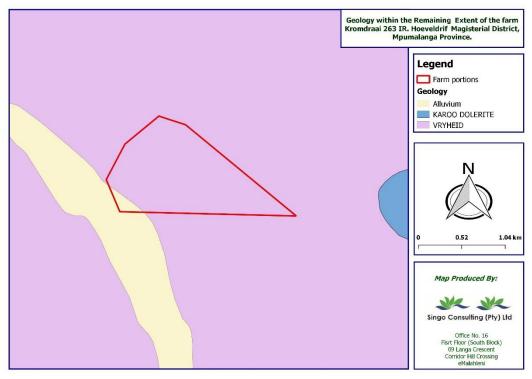
Biodiversity Map



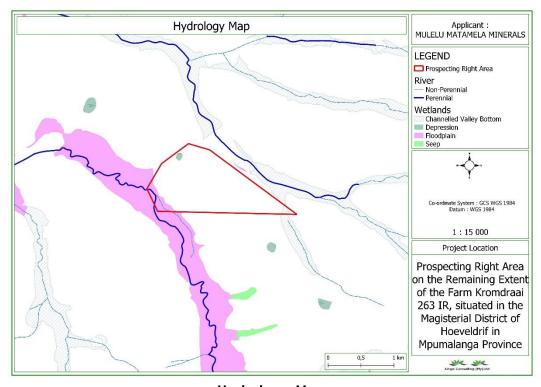
Buffer Map



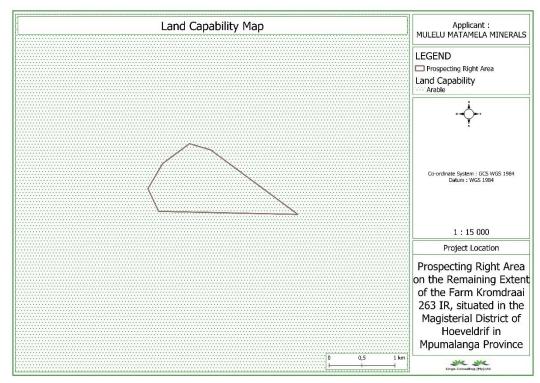
Farming type Map



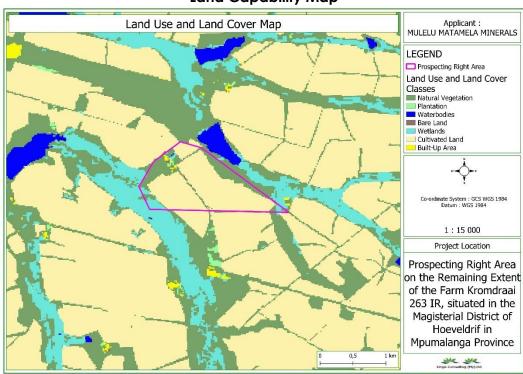
Geology Map



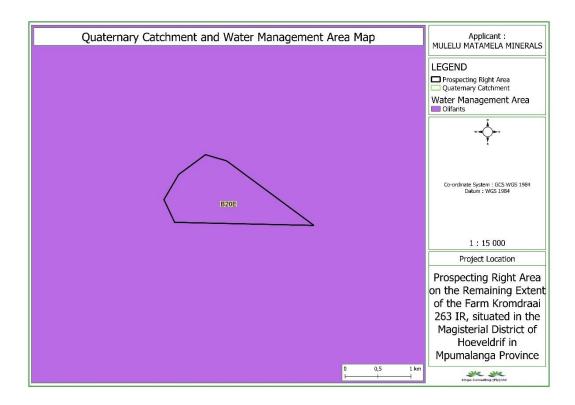
Hydrology Map



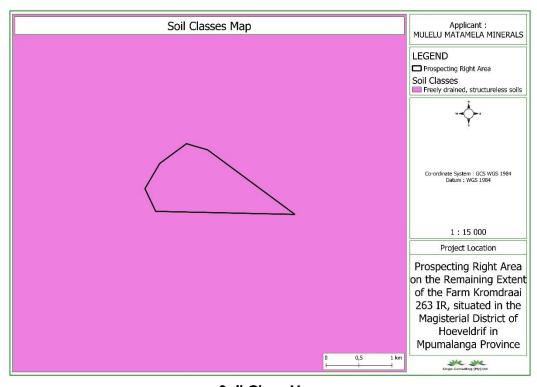
Land Capability Map



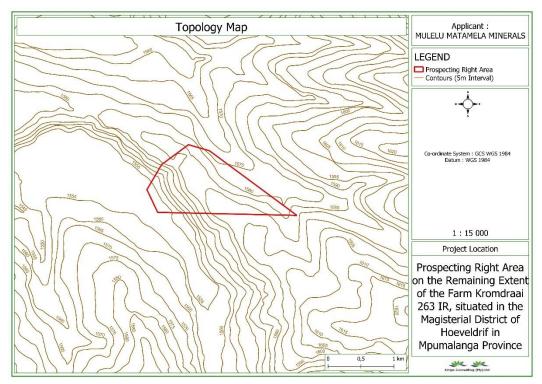
Land Use and Land Cover Map



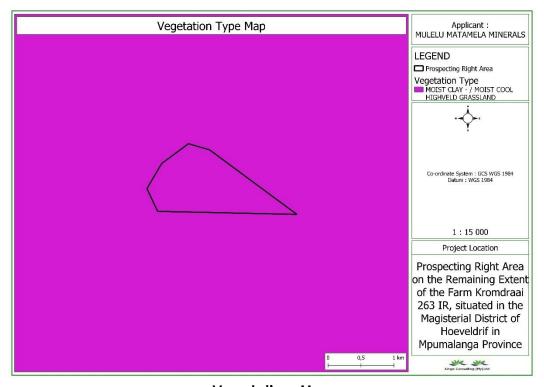
Quaternary Catchment and Water Management Area



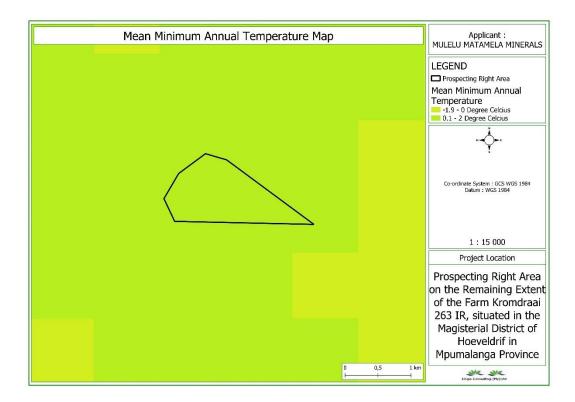
Soil Class Map



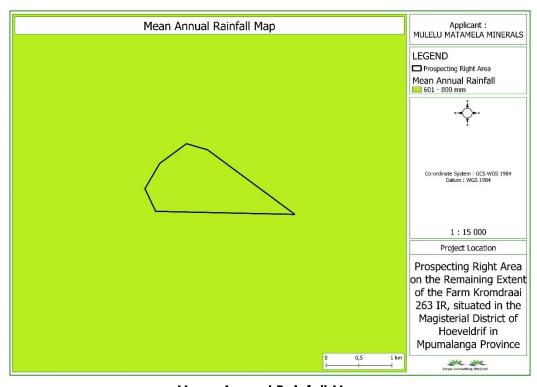
Topology Map



Vegetation Map



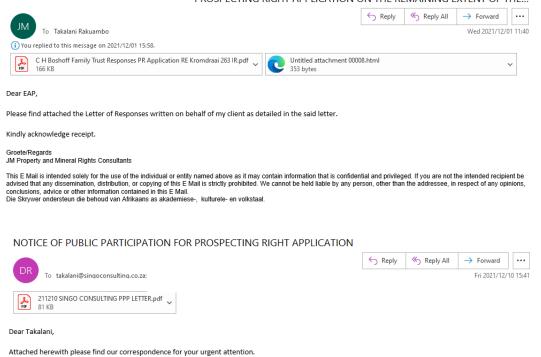
Mean Minimum Annual Temperature Map



Mean Annual Rainfall Map

Appendix 3: Consultation with Landowner

PROSPECTING RIGHT APPLICATION ON THE REMAINING EXTENT OF THE...



Regards,

Appendix 4: Background Information Document (BID)

BACKGROUND INFORMATION DOCUMENT

Proposed Prospecting Right Application for coal on the remaining extent of the farm Kromdraai 263 IR.

Magisterial District of Hoeveldrif; Mpumalanga

Prepared by:
Singo Consulting (Pty) Ltd



INTRODUCTION AND THE PURPOSE OF THIS DOCUMENT.

Singo Consulting (Pty) Ltd has been appointed as an independent Environmental Consultant by Mulelu Matamela Minerals (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 for coal on farm Kromdraai 263 IR, in the Magisterial District of Hoeveldrif, Mpumalanga Province. DMRE Ref: MP 30/5/11/12 (16771) PR.

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

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

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

PROJECT DESCRIPTION

Prospecting Right Application has been submitted for the prospecting of coal on the property mentioned above. This Prospecting Area, as seen in figure 1 below, is situated approximately 26.89 km South-East North of Delmas and Approximately 22.81 km South-West of Ogies.

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

REGULATORY FRAMEWORK

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

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

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

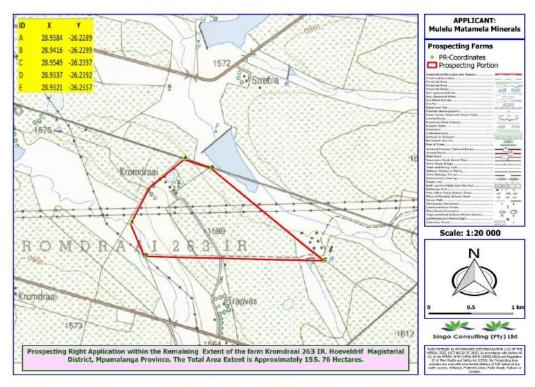


Figure 1: Regulation map of the proposed project.

BASIC AND ENVIRONMENTAL IMPACT ASSESSMENT PROCESSES

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

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

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

PUBLIC PARTICIPATION PROCESS

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

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

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

For this specific proposed project, I&APs will be given a period of 30 days to comment and raise issues/concerns with regards to the BAR and EMPr which will be available at the Witbank, eMalahleni Main Library, 28 Hofmeyer Street and via email upon request.

Kindly note the following dates:

- Announcement of the Prospecting Right Application: 12th November 2021
- Stakeholder engagement and consultation: 12th November 2021 – 11th December 2021
- Review of Draft BAR & EMPr:
- 12th December 2021 28th January 2022 (exclusion period from the 15th of December until the 5th of January as per Regulation 3 contained in PPP Guidelines of NEMA, EIA Regulations).



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

Corridor Hill, Emalahleni Cell: +27 82 767 4011 Tel: +27 13 692 0041 Fax: +27 86 5144 103

Email: takalani@singoconsulting.co.za admin@sinaoconsultina.co.za

REGISTRATION & COMMENT SHEET

Proposed Prospecting Right Application for coal on the remaining extent of the farm Kromdraai 263 IR within the Magestrial District of Hoeveldrif, Mpumalanga Province. DMRE Ref: MP 30/5/1/1/2/16771 PR

Attention: Takalani Rakuambo Email: takalani@singoconsulting.co.za

	1					
Date						
Title	Name		Surna	me		
Company						
Designation	1					
Address						
Tel No.			Fax	No.		
E-mail			Cel	No.		
I would like "X"):	to receive my notific	ations be (mark with	Post		E-mail: Fax:	
Please india	ate why you would	have an interest in the	above	-men	tioned proje	ct.
Please prov	ide your comments	and questions here:				
	•	•				
Plansa faal	free to attach a sep	arate document				
		k may be interested a	nd affec	ted r	narties:	
Full name	any person you min	· ·	mpany	T T	Janies.	
			прапу			
Address						
E-mail		Co	ntact			
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0856 SALES / MARKETING

SALES REPRESENTATIVE

REPRESENTATIVE
VACAN' Denocessery qualifications
recessery qualifications
apply. Incumbent must be
a self-starter, be able to
work alone & be dedicated
to ensuring the success of
the company & products,
with trimes, & must have
own reliable transport. Mn
register, must have
self-starter, because the company & such above
self-starter, and the company & such above
self-starter, and the company & products,
such trimes, and the company & such above
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EMPLOYMENT

0878 WANTED

11 have 062 028 0110 ZV000239

071 167 0189 ZV000236

0879 DOMESTIC WANTED

work. 1/2/3 Days a week. Sleep out. Can clean, wash, iron. 071 848 2894 2V00024

DORAH sing for a job, 3 to 5 week. Sleep out. with children 072 658 8908

MERIAM

071 110 1410 072 592 9844

0900 LEGALS

0915 SALES IN EXECUTION

NOTICE OF SALE IN
EXECUTION OF
MOVABLE PROPERTY
BY WAY OF PUBLIC
AUCTION
IN THE MAGISTRATE'S
COURT FOR THE
DISTRICT OF
EMALAHLEN HELD AT EMALAHLENI CASE NO: 6389/2014 CUTION CREDITOR

RGALANE WINKY KGOBE IDENTITY NUMBER: 691227 0601 08 1 FIRST EXECUTION DEBTOR GIVEN SHADRAC CH

DEBTOR
GIVEN SHADRAC CHIBI
IDENTITY NUMBER:
600916 5327 08 6
SECOND EXECUTION
DEBTOR
NTOMBI MABASO
THIRD EXECUTION
DEBTOR
Pursuant to a ...

DEBTOR
Pursuant to a judgment of the MAGISTRATE COURT, EMALAHLENI

the MICRISTONIA COURT, EMALAHLENI given on the 19° of February 2019, the undermentioned goods will be sold at 10'90 on the 2° of Libert 2000 on th

Friday 12 November 2021, Witbank News • Nuus

JOZI, WILDIAIT NEWS - bidder for cash, Goods offered for sale are: 1.1 X WHITE VW JETTA WITH REG. NO: CPV 573 MP. 2.1 X HYUNDAI TUCSON WITH REG. NO: JFD 315 MP SIGNED AND DATED AT EMALAHLENI ON THIS 4™ DAY OF NOVEMBER 2021 2021 (signed) VAN RENSBURG

VAN RÉNSBURG KRUGER RAKWENA ATTORNEYS Attorneys for Execution Creditor 2 Wells Street, Cnr Wells & Mandela Ave WITBANK, 1035 Tel: 013 656 9600 E-mail:

irakwena@vrkr.co.za REF: MNR RAKWENA/ MVE/MAT11471 OS015339

NOTICE OF SALE
IN THE HIGH COURT OF
SOUTH AFRICA
KWAZULU- NATAL
DIVISION,
PIETERMARITZBURG
CASE NUMBER

In the matter between: FIRST RAND BANK LIMITED EXECUTION CREDITOR

and SATHIA SIVAN PILLAY EXECUTION DEBTOR IN PURSUANCE OF A JUDGEMENT of the abovementioned Court and a Writ of Execution issued thereafter, the under-mentioned property will be sold in execution on the

the 1st of DECEMBER 2021 at 10h00 AM by the sheriff of the High Court
WITBANK at the Sheriff's
office, situated at PLOT
31, ZEEKOEWATER,
CNR OF GORDON ROAD
AND FRANCOIS
STREET, WITBANK to the
highest higher. of the High Court WITBANK at the Sh highest bidger.
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TATERSION OF TOWNSHIP TOWNSHIP TOWNSHIP TREGISTRATION DIVISION J.S. PRIVING A.S. PR

ONED: RESIDENTIAL PROVEMENTS - (Not

IMPHOVEMENTS - (Not guaranteed):
1 x LOUNGE
1 x KTCHEN
3 x BEDROOMS
2 x BATHROOMS
2 x OUT GARAGES
Nothing in this regard is guaranteed
1. The sale shall be subject to a reserve price of

subject to a reserve price of F700 000. 2. The saids shall be 3. The Purchaser shall pay 6. The Purchaser shall pay 6. The Saids shall be 3. The Purchaser shall pay 1. The Saids and the saids and the balance shall be 3. The Saids shall be 3. The 3. The Saids shall be 3. The 3. The Saids shall be 3. The 3. T to be approved by the Plaintiff s Attorneys. 4. Transfer shall be effected by the attorneys for the Plaintiff and the Purchaser shall pay all transfer duty, current and /or arrear levies / rates and /or Value Added Tax and other necessary charces

taken possesion of after signature of the condition of sale, payment of the Deposit and upon the belance of the purchase price being secured in terms of condition 4 6. Should the purchaser recieve possesion of the property prior to

JUS
registration of transfer of the property onto the name of the purchaser, the property of the name of the purchaser, but the property of the purchase price and the rate of 1 % of the purchase price per month from date of occupation to date of transfer.

7. The full conditions of sale may be inspected at SHERIFFS OFFICES, PLOT 31,

sale may be inspecied.

SHERIEF S OFFICES,

SHERIEF S OFFICES,

SHERIEF S OFFICES,

ZEEKOEWATER, CNR

DEFORM ON THE SHERIEF,

WITBANK

DATED at

PIETERMARITZBURG the

PIETERMARITZBURG the

ZP day of SEPTEMBER

AUTORNEYS

205 Fietermaritz Street

Pietermaritzburg

Email: lauran@stowell.co.za/

NOTICE OF SALES IN EXECUTION OF MOVABLE PROPERTY BY WAY OF PUBLIC IN THE ALCOUNT OF SOUTH AFRICA HELD AT JOHANNESBURG CASE NO: MPEMIS94/21 In the matter between: ALLEN LE ROUX AND ONE OTHER APPLICANT and

MPHIKELELI'S CIVILS & MPHIKELELTS CIVILS & BUILDINGS CO. RESPONDENT TO: SHERIFF OF THE LABOUR COURT TO: SHERIFF OF THE LABOUR COURT EMALARLEM CONTROLLING CONTROLLING COURT COURT

WITBANK. Goods offered in sale are: 1 x MAZDA BT 50 REG NO: FMY 833 MP 1 x FORD REG NO: FKF 403 MP

ZV000232

0925 ESTATES

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LOUIDATION AND
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LYBIC FOR INSPECTION
In terms of section 35(6) of the Administration of Estates Act, No 66 of the Administration of the Included In the Administration of the Included Inc

Notice Language: English Surname: BOTHA BOTHA First Names: THEUNIS JOHANNES ID Number: 480421 5017 08 9 480421 5017 08 9 Last Address: STAND 147 WILGE, OGIES, 2230 Magistrate's Office WITBANK Master's Office NELSPRUIT Advertiser Name: M. DAVEL C.o VAN RENSBURG KRI IGER RAKWENA INC

KRUGER RAKWENA Advertiser Address PO BOX 5 WITBANK, 1035

Advertiser Email: marche@vikr.oo.za Date Submitted: 2021/11/02 Advertiser Telephone: 013 856 9600 For Publication in the Government Gazette on: 2021/11/12

TOWN PLANNING

EMALAHLENI LOCAL
MUNICIDALITY
CITY PLANNING
DEPARTMENT
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an application in terms of
eMalahleni Spatial
Planning and Land Use
Management By-law 2016
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Management By-law 2016

Property Description: PORTION 17 OF ROODEPOORTJIE, 326

ROODEPOORTJIE, 326
/JS
Co-ordinates:
- 25.959947, 29.000111
Scope of Application: NEW
TELECOMMUNICATION
MAST AND BASE
STATION

and TOM BASE

A copy of the application
and supporting
documentation is available
for viewing during normal
foliophous at the Office of
office hours at the Office of
office, Development
Planning
29 Mandels Street, Main
Municipal Building,
Written comments or
objections together with
reasons therefore in
respect of the application
to prescribed format, to:
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must be submitted, in the prescribed format, to: Admin Officer, PO Box 3, ethaliahleni, 103 per service of the prescribed The eMalahleni Municipality may refuse to accept comments submitted after the closing

date. Any person who failed to lodge comments by the closing date will not have the right to appeal against the decision of the Municipality.
APPLICANT DETAILS:

gcinile.precious.she huawei.com Closing Date for Comments:

Publish your Legal notices. Town planning and other notices in your weekly

local community newspaper

013 656 2490 or classifieds2@ witbanknews.co.za

Classifieds | Geklassifiseerd 11

S NOTICES

Application for Prospecting Right: Mulelu Matamela Minerals (Pty) Ltd has lodged an application for Prospecting Right with (DMRE Ref: MP 30/5/1/1/2/(16771) PR) for the Prospecting of Coal on the Remaining Extent of the Farm Kromdraal 263 IR, situated within the Magisterial District of Neweldriff, Mpumalanga Province.

Notice is hereby given in terms of the Mineral and Petroleum Resource Development Act (MPRDA) (Act 28 of 2002) and EIA regulations 2014, published under Government Notice No. 982 in Gazette No. 3922 of 8 December 2014, amended on 7 April 2017, that Mulelu Matamela Minerals (Pty) Ltd has applied for Prospecting Right Application for the abovementioned mineral.

Registration as Interested & Affected Party: As part of the EIA process, mo Registration as Interested & Affected Party: As part of the EIA process, more especially the Public Participation Process (PPP) for this proposed Prospecting IRIQH project, Interested and Affected Parties (I&APs) are invited to register and kindly submit any comments or concerns to reach Ms Takahalm Rakusumbo ps to later than Friday the 10th of December 2021 on the contact details provided below. The public is also invited to review and comment on the Draft Basic Assessment Report (IBARD) and Environmental Management Programme report (EMPP). The Draft BAR & EMPF will be available for review for 30 days' calendar period from Tuesday the 14th of December 2021 to Monday the 31st of January 2022 (set with 150 ms of the period from the 15th of December 2021 to the 2021 of January 2022 as per regulation 54 (2), section 4.6). The Draft BAR & EMPF will be available at Withstank, edablation Main Library 28 Homper's Street and a soft copy upon request from Singo Consulting (Pty) Ltd using the detailed EAP's contact's below, it emails, Dropbox link, Google drive, Welfransfer, etc.



Office No. 16, Corridor Hill Crossing 09 Langa Crescent, Corridor Hill eMalafileni, 1035. Contact person: Ms Takalani Rakuambo Tel No.: +27 13 692 0041 Fax No.: +27 86 514 4103 Cel No.: +27 82 767 4011 Fmail : takalani@singocon

Latvillas (Makhado) Contact person: Siaga Elelwani Tel No: +27 73 762 8866 Fax No: +27 86 514 4103 Email : ele siaga@om>²⁷

NOTICE OF ENVIRONMENTAL AUTHORISATION AND WATER USE LICENCE PROCESSES AND THE AVAILABILITY OF THE DRAFT SCOPING REPORT FOR THE PROPOSED DORSTFONTEIN COLL MINES OPENIOSE (PIT 1 AND 2) AND ASSOCIATED INFRASTRUCTURE IN EMALAHENI LOCAL MINING PRICE MEMBRANDE OF THE MEMBRAND FROM THE MEMBRAND FROM THE OF THE MEMBRAND FROM THE OF THE MEMBRAND FROM THE OF THE OFFICE OFFICE OF THE OFFICE OF THE OFFICE OF THE OFFICE OFFI

nsulting on za

Notice is hereby given in terms of Regulation 40 (1) (b), (2), and (3) of the Environmental Impact Assessment (EIA) Regulations of December 2014 as amended in 2017 and 2021, published in terms of Chapter 5 of the National Environmental Management Act 1998(Act No. 107 of 1998) (MEMA), and in terms of Section (2) of the National Water Act, 1998 (act Soil 1998), to pulpy for an Environmental Authorisation and Water Use Licence for the above-mentioned project

NATURE OF ACTIVITY

rstfontein West mine is currently mining Seam 4 via bord and pillar underground mining method on the western portion of the Mini Right Area (MRA). The Mine proposes the Seam 2 and 4 open cast mining and transportation of coal mined from DCM West opencast to Dorstfontein East Mine via haul trucks or conveyor belt.

EGISLATION	REGULATION /SECTION OF THE ACT	TRIGGERED LISTED ACTIVITIES
ational Environmental Management ct, 1998 (Act No. 107 of 1998)	Government Notices R.983 of EIA Regulations as amended	Listing Notice 1: Activities 10, 12, 19, 24, and 28
ational Environmental Management ct, 1998 (Act No. 107 of 1998	Government Notices R.984 of EIA Regulations as amended	Listing Notice 2: Activity 6.
ational Water Act, 1998 (Act 36 of 1998)	Section 21 of NWA	Activities; c, i, and j.

LOCATION: within the existing Dorstfontein West (119MR) and Dorstfontein East (51MR) Mining Right Area located along the

NAME OF APPLICANT

INVITATION TO REGISTER AND REVIEW OF THE DRAFT SCOPING REPORT You are invited to register as an Interested and Affected Party and notified of the availability of the Draft Scoping Report for review and

comment at the locations indicated below:

VENUE/SITE	ADDRESS	CONTACT PERSON
Dorstfontein West Coal Mine	Dorstfontein Farm 71IS R547, Ga-Nala (Kriel)	Lorenzo van den Heever
Kriel Public Library	Quintin & Heinrich Street, Kriel, 2271	Administrator 017 648 2241
Nsovo Website	www.nsovo.co.za	Activities; c, i, and j.

CONSULTANT'S CONTACT DETAILS

To submit your comments relating to this project, please contact us through any of the details within 30 days from the

Contact : Rejoice Aphane 087 803 9294 or rejoice@nsovo.co.za or admin@nsovo.co.za Postal address: Postnet Suite 697, Private Bag X29, Gallo Manor, 2052 Please quote Reference Number - 20) in all correspondence.



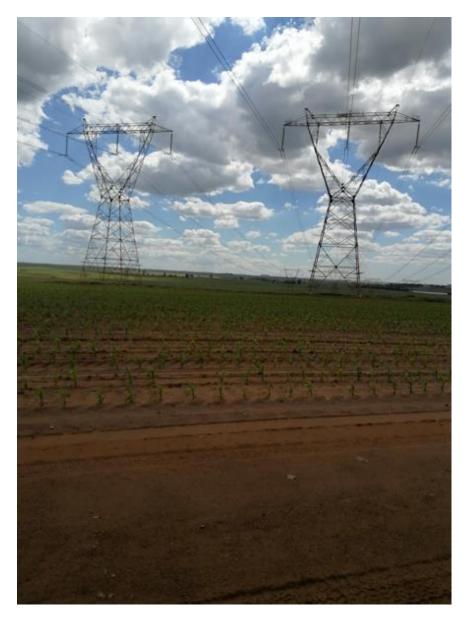
This notice is prepared on behalf of Dorstfontein Coal Mines (Pty) Ltd.

Appendix 6: Proof of Site Assessment.















Appendix 7: Proof of Submissions.



3X PWP Copies

Applicant: Mulelu Matamela Minerals
(Pty) Ltd

DMRE REF: MP 30/5/1/1/2/ (16771) PR

Submitted for Prospecting Right on the Remaining extent of the farm Kromdraai 263 IR situated in the Magisterial District of Witbank, Mpumalanga Province.

Stamp here and scan back to: lizah@singoconsulting.co.za

Cc: admin@singoconsulting.co.za, kenneth@singoconsulting.co.za









Company details (BBBEE & Share Certificate)

Applicant: Mulelu Matamela Minerals (Pty) Ltd

DMRE REF: MP 30/5/1/1/2/ (16771) PR

Submitted for Prospecting Right on the Remaining extent of the farm Kromdraai 263 IR situated in the Magisterial District of Witbank, Mpumalanga Province.

Stamp here and scan back to: lizah@singoconsulting.co.za
Cc: admin@singoconsulting.co.za, kenneth@singoconsulting.co.za





Appendix 8: 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, commissionin g, operational, decommissio ning, 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, rehabilitatio n standards, end use objectives) etc.
Planning and Project Management	EMPr	Project Management	Planning	A finalized EMPr must address all authorization conditions stipulated by the DEA (and other commenting authorities). EMPr must encompass all environmental impact mitigation measures as identified in the final BAR.	MPRDA & NEMA
Env	Appointment of Environmental Officer	Project Management	Planning	The Mulelu Matamela Minerals (Pty) Ltd environmental geologist will serve as the Environmental Officer during construction, given the short duration of construction and the low Mulelu Matamela Minerals (Pty) Ltd environmental geologist will be responsible for monitoring the compliance of the construction workers and employees on site with the EMPr and ensure their co-operation.	MPRDA & NEMA
	Permits and Permissions		Planning	EMalahleni Local Municipality must ensure that all licensing, permits or certificates required for the project are obtained and in place prior to the commencing of any construction activities on	MPRDA & NEMA

Activity	Potential impact	Aspects affected	Phase	Mitigation type	Standard to be achieved
				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 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: A complaint registers. An approved method statements. Copies of the EMPr. Environmental Permits and authorizations. Copies of weekly checklists, compliance reports, incidence reports and corrective action reports. Photographs of areas of concern (photos of non-compliance areas as well corrective action). Attendance registers of environmental 	

Activity	Potential impact	Aspects affected	Phase	Mitigation type	Standard to be achieved
				awareness training.	
	Recruitment of Labour	Project Management	Planning	 Where possible, the contractor must make use of local labour in support of the local economy. Advertise employment opportunities adequately, so as not to limit application opportunities. Implement a transparent process of recruiting construction staff, following pre-established and accepted criteria. 	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 demarcated and fenced, and be adequately sized, with enough space for site offices, construction vehicles, equipment, material and waste storage areas The construction camp must be located in an area with minimal damage or disturbance to the environment. 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. 	
	Site Housekeeping	Project Management	Planning	The construction camp should always be kept clean and orderly.	
	Ablution Facilities	Project	Planning	Enough toilet facilities should be provided	

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	near construction camp. The toilets should be properly covered and ventilated and should contain hand washing facilities. Portable toilets should be properly secured to the grounds to avoid toppling in the case of a wind/storm event. Ensure that all toilets function properly and are in a hygienic state. The toilets should be cleaned and emptied regularly. Ensure that there are no spillages when toilets get cleaned and emptied. Urination on site should be strictly prohibited. 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	Construction/ set-up	Traffic signs to be put around the site to notify	National Traffic Act

Activity	Potential impact	Aspects affected	Phase	Mitigation type	Standard to be achieved
		near the drilling site		 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 	Regulations
	Signage	Traffic volumes, safety	Construction/ set-up	 The construction management needs to communicate the commencement and duration of construction activities to the community. Clear signage needs to be put up to make and keep the community awareness of construction activities to prevent any hazardous occurrences. Provide adequate safety warning signage on the roads. 	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, to be maintained between drill sites and dwellings; and 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	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 cleared to make way for the drilling rig leaving the roots 	NEMBA

Activity	Potential impact	Aspects affected	Phase	Mitigation type	Standard to be achieved
		sites and the access routes used to get to these sites.		 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 and the fact that some of the residents may not welcome the prospecting activities in the area; There will always be a strict requirement to treat residents with respect and courtesy. 	NEMA
	Job creation	Employment will be created for the clearing of	Construction/ set-up	No mitigation measures required.	NEMA

Activity	Potential impact	Aspects affected	Phase	Mitigation type	Standard to be achieved
		the land and establishing the drilling site.			
	Storage and Disposal of Waste	Safety and aesthetic/visual aspects of the property, as well as waste disposal practices	Construction/ set-up	 Litter generated by construction workers must be collected in containers that are clearly labeled and disposed of weekly at registered waste disposal sites. Enough weather- and vermin- proof bins should be placed on site for the disposal of solid waste. Littering on site should be strictly prohibited. The burning of waste on site should also be prohibited. 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. Minimize waste generation, e.g. by providing re-usable items and refillable containers (e.g. for drinking water) and adopt a 'cradle to grave' responsibility for wastes. Comply with legal requirements for waste management and pollution control and employ "good housekeeping" and monitoring practices. 	National Waste Act
	Hazardous Waste	Safety and aesthetic/ visual aspects of the property, as well as waste disposal practices.	Construction/ set-up	 Any hazardous waste that may be generated should be separated from general waste and stored in clearly marked and properly sealed secondary containers. Any hazardous waste generated should be disposed of accordance with the Hazardous Chemical Substances Regulations, 1995 	National Waste Act

Activity	Potential impact	Aspects affected	Phase	Mitigation type	Standard to be achieved
	Spills and Leaks	Safety and aesthetic/visual aspects of the property, as well as waste disposal practices.	Construction/ set-up & Operation	 (Regulation 15). 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. Spill response kits must be readily available and accessible to all personnel on site. 	National Waste Act
	PPE			Always Ensure that all persons on site use Personal Protective Equipment (PPE), 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
	Erosion	The properties of the receiving environment and ensuring that the ground is not susceptible to erosion beyond that which can be rehabilitated.	Construction/ set-up & Operation	 Ensure that erosion management and sediment controls are strictly implemented from the beginning of site clearing activities. All topsoil stockpiles (if any) must be protected against wind, erosion and seeds, i.e. by use of shade cloth or netting. Topsoil stockpiles should not exceed 2 m in height. 	NEMA
PRE-DRILLING/EXPLORATION					
Exploration drilling (ve)DrillingDrill maintenance and	Noise	Noise generation	Operations	Construction/setup, operational and decommissioning activities will be limited to daylight hours on Mondays to Saturdays from	Heritage Act

Activity	Potential impact	Aspects affected	Phase	Mitigation type	Standard to be achieved
refueling Core sample collection and storage Vehicle movements Waste generation and management				 08h00 – 17h00 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, will be maintained in good condition. 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. 	
	Visual	Visual intrusions	Operations	 The drilling rig and other visually prominent items on the site will be 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 erecting a shade cloth barrier. 	SANS 10103
	Traffic	Increase in traffic volumes near the drilling site	Operations	 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 	N/A
	Dust fall	Dust fall and nuisance from activities	Operations	Wet suppression will be applied to ensure that no visible dust is raised by any of the prospecting operations;	National Traffic Act Regulations

Activity	Potential impact Aspects affected Phase		Mitigation type	Standard to be achieved	
				 Separation of distance of minimum 500m, to be maintained between drill sites and 100m from dwellings; and Low vehicle speeds will be enforced on unpaved surfaces. 	
	Soil and vegetation	Soil and vegetation disturbance from drill pad preparation	Operations	 The soil disturbance and clearance of vegetation at drill pad areas will be limited to the absolute minimum required; No clear scraping (dozing) be carried out unless necessary to establish a level drill pad. Rather that surface vegetation be cleared to make way for the drilling rig leaving the roots intact so that vegetation can coppice and regrow; and Disturbed areas will be re vegetated with locally indigenous species as soon as possible. 	GN R. 827 (NEMAQA)
	Animal life	Animal life will be affected in the immediate vicinity of the drilling rig. It is anticipated that the noise and general activity will keep the animal life away from the site while the prospecting is ongoing.	Operations	Measures implemented during site establishment should apply in this phase as well.	NEMBA
	Social	Friction between residents/land	Operations	All operations will be carried out under the guidance of a strong, experienced manager	NEMBA

Activity	Potential impact	Aspects affected	Phase	Mitigation type	Standard to be achieved
		owners and construction personnel		 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 and the fact that some of the residents may not welcome the prospecting activities in the area; There will always be a strict requirement to treat residents with respect and courtesy. 	
	Job creation	Employment will be created for the clearing of the land and establishing the drilling site.	Operations	No mitigation measures required.	Basic Conditions of Employment Act, No. 75 of 1997 (as amended)
DECOMMISSIONING AND RE	HABILITATION				
Rehabilitation of the drill sites and surroundings	Removal of construction structures	Ensuring the receiving environment is not impacted on any further, by dismantling machinery and equipment appropriately.	Rehabilitation	 Clear and completely remove from site all construction plant equipment, storage containers, signage, temporary fencing, temporary services, fixtures and any other temporary works; and 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. 	NEMA
	Waste and Rubble Removal	Visual aspects by preventing any further pollution.	Rehabilitation	 Clear the site of all inert waste and rubble, including surplus rock, foundations and batching plant aggregates. Load and haul excess spoil and inert rubble to fill in borrow pits / dongas or to dump sites indicated / approved by an environmental 	National Waste Act

Activity	Potential impact	Aspects affected	Phase	Mitigation type	Standard to be achieved
				 control specialist Remove from site all domestic waste and dispose of in the approved manner at a registered waste disposal site. 	
	Solid and Hazardous Waste			 Store hazardous waste as indicated in the approved Environmental Management Programme Report. Dispose of all hazardous waste not earmarked for reuse, recycling or resale at a registered hazardous waste disposal site. Remove from site all temporary fuel stores, hazardous substance stores, hazardous waste stores and pollution control sumps. Dispose of hazardous waste in the approved manner. Do not hose oil or fuel spills into a storm water drain or sewer, or into the surrounding natural environment. Dispose of all visible remains of excess material when exiting the site. 	National Waste Act
	Erosion protection		Rehabilitation	 Protect all areas susceptible to erosion and ensure that there is no undue soil erosion resultant from activities within and adjacent to the construction site. Retain shrubbery and grass species wherever possible. Perform regular monitoring and maintenance of erosion control measures. 	NEMA

Appendix 9: Financial Provision

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	CALCULATION OF THE QUANTUM	ERALS	i i				
Applicant: Evaluator:	• SAFE • RELIABLE • DEL	VERY			Ref No.: Date:		P 30/5/1/1/2 (16771) PR Dec-21
No.	Description	Unit	A Quantity	B Master Rate	C Multiplication factor	D Weighting factor 1	E=A*B*C*D Amount (Rands)
1	Dismantling of processing plant and related structures (including overland conveyors and powerlines)	m3	0	17,14	1	1	0
2 (A)	Demolition of steel buildings and structures	m2	0	238,71	1	1	0
2(B)	Demolition of reinforced concrete buildings and struct	m2	0	351.79	Ö	1	0
3	Rehabilitation of access roads	m2	ō	42.72	1	1	0
4 (A)	Demolition and rehabilitation of electrified railw ay lines	m	0	414.61	1	1	0
4 (A)	Demolition and rehabilitation of non-electrified railw ay lines	m	0	226,15	1	1	0
5	Demolition of housing and/or administration facilities	m2	0	477,42	1	1	0
6	Opencast rehabilitation including final voids and ramps	ha	0	242984,15	1	1	0
7	Sealing of shafts adits and inclines	m3	0	128,15	1	1	0
8 (A)	Rehabilitation of overburden and spoils	ha	0	166847,44	1	1	0
8 (B)	Rehabilitation of processing waste deposits and evaporation ponds (non-polluting potential)	ha	0	207805,47	0	1	0
8(C)	Rehabilitation of processing waste deposits and evaporation ponds (polluting potential)	ha	0	603565,59	1	1	0
9	Rehabilitation of subsided areas	ha	0	139709,6	1	1	0
10	General surface rehabilitation	ha	0,9	132171,31	0,2	1	23790,8358
11	River diversions	ha	0	132171,31	1	1	0
12	Fencing	m	0	150,77	1	1	0
13	Water management	ha	0	50255,25	1	1	0
14	2 to 3 years of maintenance and aftercare	ha	0	17589,34	1	1	0
15 (A)	Specialist study	Sum	0	0	1	1	0
15 (B)	Specialist study	Sum	0	0	1	1	0
ı					Sub To	otal 1	23790,8358
1	Preliminary and General			900296	weighting factor 2 2854,900296		2854,900296
2	Contingencies			2379,08358			2379,08358
SIGN	Takalani Rakuambo				Subto	tal 2	29024,82
DATE	i akaiani Rakuambo Dec-21				VAT (15%)	4353,72
					Grand	Total	33379

Appendix 10: Special Studies