

DRAFT REPORT

2022

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BASIC ASSESSMENT REPORT

AND

ENVIRONMENTAL MANAGEMENT PROGRAMME REPORT

SUBMITTED FOR ENVIRONMENTAL AUTHORIZATION IN TERMS OF THE NATIONAL ENVIRONMENTAL 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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Reference SAMRAD No : DMRE Ref: MP 30/5/1/1/3 13284 MP

DOCUMENT CONTROL

Project Title: Mining Permit Application on portion of portion 32 of the farm Blesboklaagte 296

JS

Minerals Coal

Site Location Magisterial district of Witbank, Mpumalanga Province

Compiled on Wakwa Ndlondlo (Pty) Ltd

behalf of

Compiled By Ms Valentine Mhlanga

Reviewed By Dr Kenneth Singo

Version 1 Draft BAR & EMPR

Submitted to Stakeholders

Date 2022

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EXECUTIVE SUMMARY

The purpose of this document is to provide supporting environmental insights to an application for a coal mining permit at portion of Portion 32 of the farm Blesboklaagte 296 JS in the eMalahleni Local Municipality, Ward No 14 which is under the Witbank District Municipality, Mpumalanga Province (DMRE Ref: MP 30/5/1/1/3/ 13284 MP). The total mining site covers an area of 5 hectares. The proposed site can be accessed via the gravel road joining the unnamed tar road which extends from the R544 provincial road leading straight towards the proposed mining area. It was discovered that the landowner according to windeed search results was no longer the surface owner and there are transferring of land processes underway and that we had to consult the new landowner who is now Eyethu Coal. Since there is no evidence proving this at the moment, both companies are being consulted.

It is worth noting that the proposed mining project will comply with the undertaking of activities that are considered as listed activities in terms of the National Environmental Management Act, 1998 (Act 107 of 1998) as amended. In terms of the above-mentioned legislation, an integrated application for an environmental authorisation and waste management license was submitted to the MP Department of Mineral Resources in DMRE Ref: MP 30/5/1/1/3/ 13284 MP.

The application was accepted on the 15th of June 2022; hence, a basic environmental assessment was undertaken in support of the environmental authorisation application for the proposed mining permit. In view of the above, Wakwa Ndlondlo (Pty) Ltd, have appointed Singo Consulting (Pty) Ltd as an independent Environmental Assessment Practitioner to undertake and manage the environmental authorisation application. The DMRE outlined that prior to Wakwa Ndlondlo (Pty) Ltd limited under file reference number 13284 application, there are other accepted applications by Lehlabile 2017 Trading and Projects (Pty) limited under file reference number 17007PR and received application by Popup Investment 15 (Pty) limited under file reference number 17130PR, Eyethu Coal (Pty) limited under file reference number 17140PR which remains a decision by DMRE to either grant or refuse and should any of the above applications become successful, Wakwa Ndlondlo (Pty) Ltd limited will automatically fall away.

The Department of Environmental Affairs (DEA) has identified the need for the alignment of environmental authorisations and has promulgated a single environmental management system under NEMA whereby the DMRE has become the competent authority for the authorisation of mining-related projects under the NEMA Environmental Impact Assessment (EIA) Regulations 326 of 2017. This will result in simultaneous decisions in terms of NEMA, the National Environmental

Management: Waste Act (Act No. 59 of 2008)(NEMWA) and other environmental management Acts.

The public participation process (PPP) and stakeholder engagement process, as part of the Environmental Authorisation process was conducted in terms of Section 41 of NEMA: EIA regulation 326 of 2017 which provides clear guidelines for PPP and stakeholder engagement during Basic Assessment process. One of the general objectives of integratedenvironmental management is to ensure an "adequate and appropriate opportunity for public participation in decisions that may affect the environment". The PPP is primarily aimed at affording Stakeholders and Interested and Affected Parties (I&APs) an opportunity to gain an understanding of the project. In addition, to afford an opportunity to inform and consult with the landowners, I&APs and to provide them with the necessaryinformation about the proposed project. Thus, they can make informed decisions as to whether proceed or decline and to weigh the consequences of the project.

Before an EAP submits a final report, an opportunity must be provided to registered I&AP's access to comment on the report prior to the submission of the final report to the competent authority for approval. Stakeholders and I&APs will therefore be invited to participate in the public review of the Draft BAR from 31st of August 2022 to the 30th of September 2022 (period of 30 days). Three copies will be placed at the at Lynville Public Library (Vector Road, Lynville, Emalahleni, 1034, South Africa), Klarinet Public Library (Blesboklaagte 296-Js, Emalahleni, South Africa) and Emalahleni Local Municipality (Mandela Street eMalahleni 1034) for all the communities in proximity. Other copies will be delivered to the identified stakeholders. After the public review period, the report will be updated with comments received from stakeholders, I&AP's as well as comments received during the public participation meeting.

This document provides a basic assessment study with identified environmental impacts, mitigation measures and Environmental Management Plan (EMP) for the proposed miningpermit application. This document focuses on providing an insight of the proposed activities and their potential impact on the receiving environment, and how the identified potential impacts will be managed. This document is compiled in line with the NEMA: EIA Regulation 326 of 2017.

As a result of subsidence, the exposed coal that is underground results in a certain smell that occurs due to spontaneous combustion which is a process of self-heating without the application of external heat. When coal encounters oxygen, the oxidation process starts, and heat is produced. This on its own shows how much the mining permit area holds the desired mineral.

1. IMPORTANT NOTICE

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

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

In terms of section 16(3)(b) of the EIA Regulations, 2014, any report submitted as part of an application must be prepared in a format that may be determined by the Competent Authority and in terms of section 17 (1) (c) the competent Authority must check whether the application has considered 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 thereofto compile the information required herein. (Unprocessed supporting information maybe 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.

2. Objective of the basic assessment process

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

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

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PART A:

SCOPE OF ASSSSMENT AND BASIC ASSESSMENT REPORT

a) Contact Person and correspondence address

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i) Details of the EAP

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Company Name Singo Consulting (Pty) Ltd

ii) The qualifications of the EAP assistant

(With evidence attached as Appendix)

Ms Valentine Mhlanga

North-West University, BSc Hons in Environmental Sciences (Geography and Environmental Management)

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iii) Details of the EAP who reviewed the report:

Dr Kenneth Singo

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

Name of Practitioner	Dr N.K Singo
Designation	Principal EAP
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DR. N.K Singo is a registered competent person with the South African Council for Natural Scientific Professions (SACNASP: Earth Science Reg. No: 400069/16), Geological Society of South Africa (GSSA), the Land Rehabilitation Society of Southern Africa (LaRSSA) and South African Affiliates of the International Association for Impact Assessment, Kenneth holds an MSc in Environmental

Management (University of South Africa (UNISA) & a BSc (Hons) in Mining & Environmental Geology the University of Venda).

He has just recently qualified for his Ph.D. (Geology, Applied Environmental Mineralogy and Geochemistry) at the University of Johannesburg. He worked for Malatleng Mining CC as Geologist Consultant and Environmental Analyst. In search for growth, he joined Noondezi Coal Company in Mozambique. Tete Coal basin as Leading Project Geologist. He worked for Anglo American Thermal Coal as a Senior Project Geologist. He is the Managing Director and Principal Consultant for Singo Consulting (Pty) Ltd

Kenneth has knowledge of Mine Water and Mine Environmental Management (acid mine drainage, heavy metal assessments and tailings management) in various commodities including Silica (general), 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, Kenneth 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.

2

Singo Consulting (Pty) Ltd is a growing organization in the field of geological sciences, environmental sciences, and environmental management. This organization has provided sound practicable solutions to unavoidable environmental problems, particularly those triggered by human activities. This is achieved by tackling environmental problems using various fields of applied science, such as chemistry, hydrology, environmental geology, geochemistry, geophysics, and soil sciences. This leads to proper and sound environmental impact assessments and the production of enforceable environmental management plans. This organization has conducted over 26 successful Environmental Impact Assessments (basic assessments) in various provinces of South Africa, basic assessment reports and environmental management plans (EMPs) which protect and promote the sustainable utilization of environment.

b) Location of the overall Activity.

Table 1: Location of overall activity

Farm Name	Portion of portion 32 of the farm Blesboklaagte 296 JS
Application area (Ha)	5 Ha
Magisterial district	Witbank district
Distance and direction from nearest town	Approximately 1.65 km Northeast of Klarinet
	Approximately 4.32 km Southwest of Emalahleni Town
21-digit Surveyor General Code for each	T0JS0000000029600032
farm portion	

c.) Locality map

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

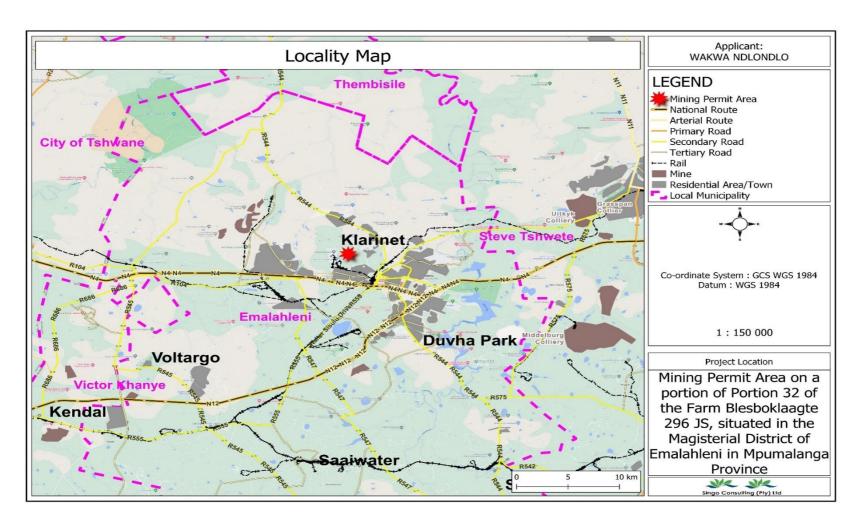


Figure 1: Locality Map of the proposed site (Singo Consulting (Pty) Ltd, 2022)

Details of the proposed project

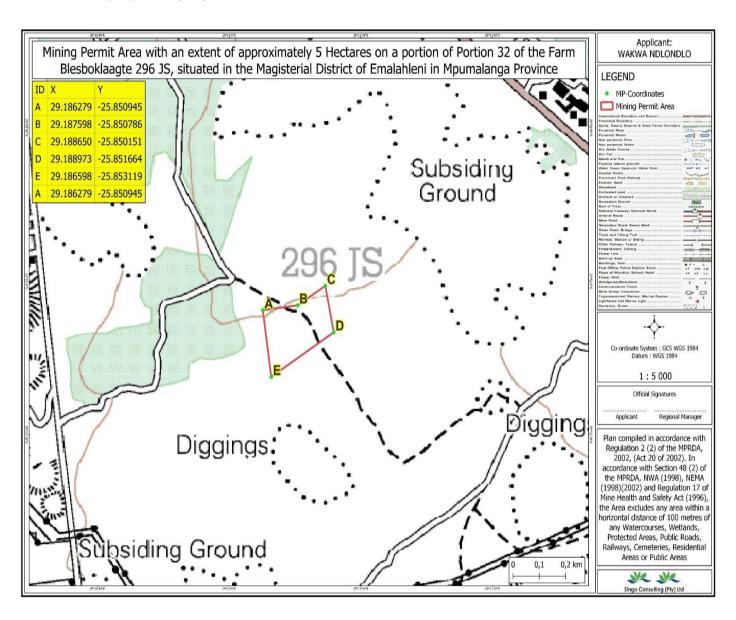


Figure 2: Reg 2.2 (-25.850945; 29.186279) (Singo Consulting (Pty) Ltd, 2022)



Figure 3: Google Earth map of the proposed project area

Table 2: Details of the farm and landowner

PORTION	OWNER	TITLE DEED
32	ANGLO OPERATIONS	T120750/1999
	(PTY) LTD	

Table 3: Mining permit boundary co-ordinates

ID	LATITUDE	LONGITUDE
A	-25.850945	29.186279
В	-25.850786	29.187598
С	-25.850151	29.188650
D	-25.853119	29.186598

Proposed mine site

The proposed site is located within Klarinet township in eMalahleni Local Municipality, Ward No 14. It is under the Nkangala District Municipality, Mpumalanga Province. The mining application includes portion of Portion 32 of the farm Blesboklaagte 296 JS. The site can be accessed through the R554 road (Carmen Street) followed by a gravel road that is directly opposite the Witbank Aeronautical Association.

d.) DESCRIPTION OF THE SCOPE OF THE PROPOSED OVERALL ACTIVITY

The method that will be employed is a very basic form of open cast mining, and a 5-ha area will be demarcated for mining activities. Blasting and subsequent mining of the orebody utilizing a truck and shovel operation will be conducted. The mined coal will be crushed and screened utilising a mobile crushing and screening plant that will be established within the boundaries of the mining area. A front-end loader will be utilized to load the material into haulage trucks. The mine will operate for a two (2) year permit period with an option to renew for three (3) periods each of which may not exceed one year. The coal will be stored and delivered to Eskom power stations such as Arnot, Duvha, and Kusile via trucks and trailers. All activities will be contained within the boundaries of the mining site.

The project infrastructure and activities will include the following:

- Site clearance.
- Removal of topsoil and overburden and stockpiling.
- Site establishment, including the establishment of an access route, mobilisation of equipment and preparation of area for mining.
- Excavation of an open pit.
- · Blasting.
- Loading zone.
- Dust control.
- · Crushing and screening.
- Hauling and transporting of coal.
- Ablution facilities and waste storage area.
- Rehabilitation of site and post-closure monitoring.

Mine design plans including structures to be temporarily erected, offices required for the mining operations including the location of residue deposits. The following mininglayout plan will be used in the mining activity. An area of 0.20 Ha (2000m²) will be utilised for setting all equipment and resources necessary for the operation. The site will be fence and notice with be plugged to alert trespasses about the danger on the site. Figure 2 below the mine setting layout that will be following through the duration of a mining.



Figure 4: Mine layout Plan (Singo Consulting (Pty) Ltd, 2022)

i.) LISTED ACTIVITIES (IN TERMS OF THE NEMA EIA REGULATIONS)

The proposed mining activity triggers activities listed in NEMA GNR 517/2021: Listing Notice 1 as follows:

Activity 21: "Any activity including the operation of that activity which requires a mining permit in terms of section 27 of the Mineral and Petroleum Resources Development Act, 2002 (Act No. 28 of 2002), including associated infrastructure, structures and earthworks directly related

to the extraction of a mineral resource, including activities for which an exemption has been issued in terms of section 106 of the Mineral and Petroleum Resources Development Act, 2002 (Act No. 28 of 2002)".

Activity 27: The clearance of an area of 1 hectare or more, but less than 20 hectares of indigenous vegetation, except where such clearance of indigenous vegetation is required for -(i) the undertaking of a linear activity; or (ii) maintenance purposes undertaken in accordance with a maintenance management plan.

Table 4: Summary of NEMA Listed activities being applied for:

NAME OF ACTIVITY E.g., for prospecting: drill site, site camp, ablution facility, accommodation, equipment storage, sample storage, site office and access route; and for mining: excavations, blasting, stockpiles, discard dumps/ dams, loading, hauling, transport, water supply dams and boreholes, accommodation, offices, ablution, stores, workshops, processing plant, storm water control, berms, roads, pipelines, power lines and conveyors.	activity	Listed activity Mark with X where applicable or affected	Applicable listing notice (GN 517/2021)
Mining Permit Application	5На	X	GN 517/2021 Activity 21:
Vegetation Clearance	5 Ha	X	GN 517/2021 Activity 27
Overburden stockpile	0.09На	Х	Not listed
Access road	0.03Ha	Х	Not listed
Topsoil stockpile	0.09На	Х	Not listed
ROM stockpile area	0.07Ha	Х	Not listed
Dirty water trench	0.03Ha	Х	Not listed
Mobile offices	0.02Ha	Х	Not listed
Mobile sanitation area	0.01Ha	Х	Not listed

Pollution Control Dam (PCD) construction	0.06Ha	X	Not listed
Product Stockpile Area	0.07Ha	X	Not listed
Crushing & Screening	0.06Ha	X	Not listed
Box cut, strip 1 and strip 2	4.47Ha	X	Not listed
Drilling and Blasting	4.47Ha	X	Not listed
Coal extraction	4.47Ha	X	Not listed
A closure certificate in terms of section 43 of the mineral petroleum Resources Development Act,	5 Ha	X	Not listed
2002 (Act 28, 2002)			
Rehabilitation	5 Ha	X	Not listed

iv) Description of activities to be undertaken

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

The mining method proposed involves open cast extraction of coal from a proposed mine. The proposed mine at the site will be worked by cutting a bench which will be progressed in a north-easterly direction. The mining methods will include blasting with explosives to loosen the hard rock (overburden) when necessary. The material will be loaded with excavators and hauled to the mobile crushing and screening plants that will be established within the project area. The coal will be stockpiled and transported to clients via trucks and trailers. All activities will be contained within the boundaries of the mining site.



Figure 5: Opencast mining (Singo Consulting, 2021)

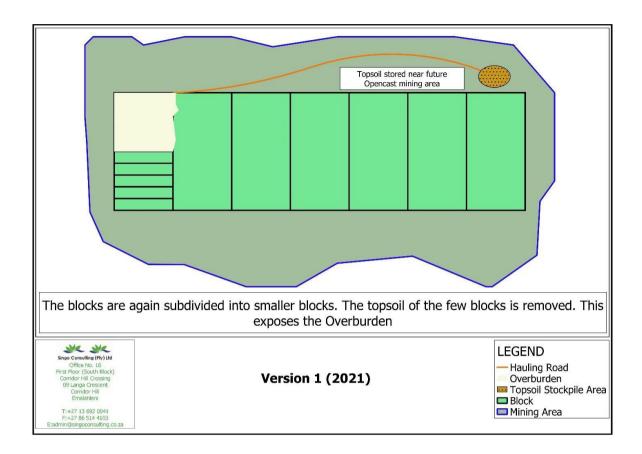


Figure 6: Topsoil removal (Singo Consulting (Pty) Ltd, 2022)

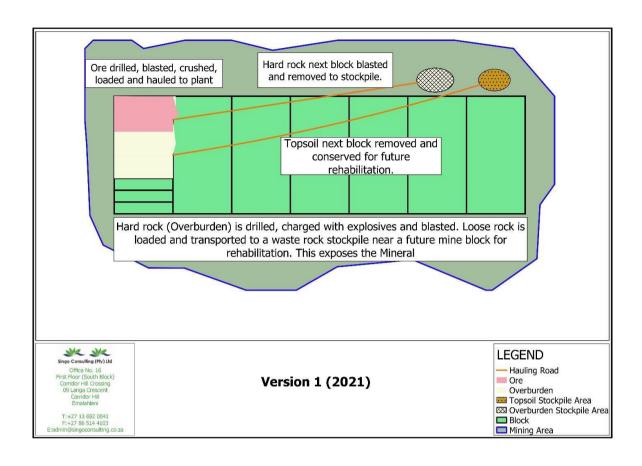


Figure 7: Overburden blasting and removal (Singo Consulting (Pty) Ltd, 2021)

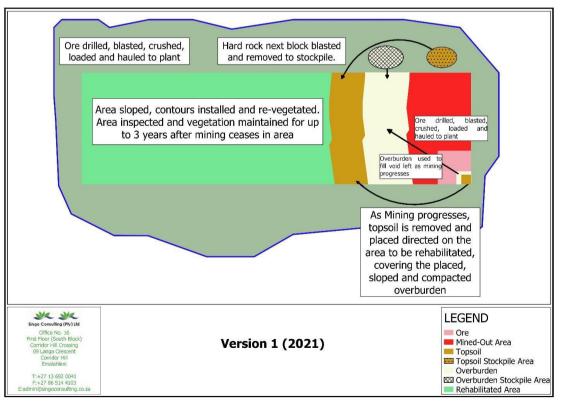


Figure 8: Backfilling and rehabilitation stage

Description of construction, operational, and decommissioning phases. The following section serves as a summary of the three phases which have been described in more details in section 2 of this document.

Phase	Activity no	Activity	
Construction	1	Site clearing: Removal of topsoil and vegetation	
	2	Construction of any surface infrastructure, e.g., Haul roads,	
		pipes, storm water diversion berms (incl. transportation of	
		materials and stockpiling)	
	3	Free digging and development of initial box cut for mining	
	4	Temporary storage of hazardous products (fuel, explosives)	
		and waste	
Operation	5	Removal of overburden and backfilling when possible	
		(incl. drilling/free digging of hard overburden and stockpiling)	
	6	Use and maintenance of haul roads.	
	7	Extraction of Coal	
	8	Water use and storage on site	
	9	Storage, handling, and treatment of hazardous products	
		(fuel, explosives, oil) and waste activities (waste, discard)	
	10	Concurrent replacement of overburden, topsoil and re-	
		vegetation	
Decommissioning	11	Removal of all infrastructure (incl. transportation off site)	
	12	Rehabilitation (spreading of soil, re-vegetation and profiling)	
	13	Installation of post-closure water infrastructure	
	14	Environmental monitoring of decommissioning activities	
	15	Storage, handling, and treatment of hazardous products	
		(fuel, explosives, oil) and waste activities (waste discard)	
Post-closure	16	Rehabilitation and post-closure monitoring	

1.1 CONSTRUCTION PHASE

- 1. The mining activities will only take place during daylight hours. The following activities during the construction phase will be executed:
 - Refurbishing and Maintenance of existing access roads.
 Temporally fencing the site and fence signage.
 - Installing temporal site offices, security office, and ablution facilities.
 - Construction of stores yard, workshop, and maintenance area

- Construction and installation of bulk fuel storage
- Demarcating mine fleet hard park, staff, and visitors parking
- Construction of runoff settling dam
- Stripping and removal of existing topsoil and stockpiling
- Assembling and preparation of the screening plant

During the construction assessment phase, it is expected that, the main sources of impact will result due to the refurbishing of access road, construction of storage andmaintenance area, assemblage and striping of topsoil. The construction phase is commonly of a temporary nature with a definite beginning and end. Construction usually consists of a series of different operations, each with its own duration and potential for impacts.

1.2 OPERATIONAL PHASE

The operation phase will only take place during daylight hours. The proposed mining activity will involve/include the following activities:

- Assemblage and proper storage previously discarded topsoil
- Establishing the mining starting point
- Removing and stockpiling of topsoil;
- Construction of the runoff settling dam (water will also be used for dust suppression)
- Trenching around the mining footprint to ensure that stormwater is diverted into the runoff-settling dam.
- Excavation of the initial strip of the open cast mining (Contour strip mining)
- Excavation of coal commodity;
- Crushing, screening and stockpiling coal;
- Backfill rehabilitation concurrently as mine progress forward.

1.3 DECOMMISSIONING, REHABILITATION AND CLOSURE PHASE

The decommissioning and closure activities will only take place during daylight hours. The decommissioning phase is associated with activities related to the demolition of infrastructure and the rehabilitation of disturbed areas. The following activities are associated with the

decommissioning phase:

- Demolishing of stores yard, workshop, and maintenance area (rubble removedand safe disposal)
- Demolishing of bulk fuel storage (rubble removed and safe disposal)
- Remaining exposed excavated areas filled and levelled using overburden recovered from stockpiles;
- Levelling the area with waste coal and toping with topsoil.
- Top soiling replaced using topsoil recovered from stockpiles; and
- Removal of temporal site offices, security office and ablution facilities buildingsand structures demolished, rubble removed and the area levelled;
- Disturbed land fertilized and prepared for re-vegetation.
- Seeding of land with indigenous species.
- Truck and shovel methods would be used during roll-over backfilling of cut/strips. Compaction and final top soiling will be conducted to bring the final desired topography. Finally seeding will be conducted in accordance with the seasonal precipitation to facilitate quick root establishment and therefore minimise erosion potential.

e.) Policy and Legislative Context

Table 5: policy and legislative context

APPLICABLE LEGISLATION AND GUIDELINES USED TO COMPILE THE REPORT	REFERENCE WHERE APPLIED	HOW DOES THIS DEVELOPMENT COMPLY WITH AND RESPOND TO THE LEGISLATION AND POLICY CONTEXT.
Constitution of South Africa (Act 108 of 1996)	Everyone has the right to a safe environment	Social and environmental impact assessment were conducted, and potential measures are being outlined in the EMP.
Mineral and Petroleum Resources Development Act, 2002 (Act No. 28 of 2002) (MPRDA)	The department of Mineral Resources is a custodian of minerals in South Africa. An Application for Prospecting has been logged and accepted.	A mining permit application was submitted to the DMRE, and due processes are followed.
National Heritage Resources Act, 1999 (Act No. 25 of 1999) (NHRA)	There are no aspects of heritage importance in the area.	This study has assessed the site, no evidence of heritage resources was observed.
National Environmental Management Act, 1998 (Act No. 107 of 1998) (NEMA)	EIA regulations and guidelines are being followed throughout the application process.	This BA is being undertaken in terms of NEMA to determine any possible impacts on the environment and to undertake mitigation measures that reduce any potential harm to the environment. An application for an Environmental Authorisation is submitted to the DMRE with supporting documents. The EDTEA MP is consulted for comments.
National Environmental Management: Waste Act (Act No. 59 of 2008) (NEM:WA)	Waste generated from mining activities	Mitigation measure has been outlined to prevent, reduce, reuse orsafe disposal of waste. The EDTEA MP is consulted for comments.
National Environmental Management Air Quality Act (act no. 39 of 2004)	Dust generated by mining activities.	Mitigation measure has been outlined to prevent, manage and mitigate dust from mining activities. The EDTEA MP is consulted for comments.

National Environmental Management Biodiversity Act (act no. 10 of 2004) (NEMBA)	Biodiversity rich area	The area is located within the CBA, measures has been put in place in accordance with the act not to affect the agricultural resources. DAFF is consulted in this regard.
National Water Act (act no. 36 of 1998) (NWA)	There will be no abstraction of water from the watercourse or working within the water course.	This study has assessed the site, there is no evidence of water resources were observed. No need to apply for water use licence
The National Environmental Management: Protected Areas Act (act no. 57 of 2003)	Biodiversity rich area	The area was scanned through the SANBI database of protected area. The area is not protected. DAFF & EDTEA is consulted inthis regard.
National Forest Act (act no. 84 of 1998)	Biodiversity rich area	There area has been assessed, there are no protected trees. DAFF is consulted in this regard.
Municipal Integrated Development Plans (IDPs)	Mining development within the area demarcated for fore	One of the key issues identified by the IDPs is to facilitate the landclaims. Municipal plans were used to identify relevant socio- economic information and spatial development information within which the area falls under. The District and Local municipality have been consulted.
Occupational Health and Safety Act: No 85 of 1993	Safety of workers and the community	Health and Safety are key components of any mining activity. Health and Safe measured are provided in this report. Measures included are in accordance with this Act. The DMRE is consulted inrelation to health and safety.
Conservation of Agricultural Resources Act: Act No 43 of 1983.	Biodiversity rich area	The area it is located within the CBA and Agricultural area, measures has been put in place in accordance with the act not to affect the biodiversity and agricultural resources. DAFF is consulted in this regard.
National Environmental Management: biodiversity Act 10 of 2004.	Biodiversity rich area	The area is located within the CBA, measures has been put in place in accordance with the act not to affect the agricultural resources. DAFF is consulted in this regard.
Environmental Conservation Act: No 73 of 1989.	Biodiversity rich area	Elements of this Act were used as a guideline for best practice.DAFF is consulted in this regard.

1.1 Environmental Authorization Process

1.1.1 Mineral and Petroleum Development Act

In terms of the Mineral and Petroleum Resources Development Act (Act 28 of 2002), a Mining Permit must be issued prior to the commencement of any mining activities. As per Section 79(4)(a) and (b) of the MPRDA, the Applicant is required to conduct a Basic Assessment and submit an EMPR for approval as well as to notify in writing and consult with Interested and Affected Parties (I&APs) within 90 days of acceptance of the application. The MPRDA also requires adherence with related legislation, chief amongst them is the National Environmental Management Act (Act 107 of 1998, NEMA) and the National Water Act (Act 36 of 1998, NWA).

Several amendments have been made to the MPRDA. These include, but are not limited to, the amendment of Section 102, concerning amendment of rights, permits, programmes and plans, to requiring the written permission of the Minister for any amendment or alteration; and the Section 5A(c) requirement that landowners or land occupiers receive twenty-one (21) days' written notice prior to any activities taking place on their properties. One of the most recent amendments requires all mining related activities to follow the full NEMA process as per the 2014 basic assessment Regulations (as amended), which came into effect on 8th of December 2014.

Section 27 of the MPRDA Amendment Act, Act 49 of 2008 indicates that a Mining Permit is exclusive, transferable, valid for two (2) years and may be renewed for three periods of which may not exceed one year. Any person who wishes to apply to the Minister for a mining permit must simultaneously apply for an environmental authorisation and must, subject to section 9, lodge the application.

1.1.2 National Environmental Management Act

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The main aim of the National Environmental Management Act, 1998 (Act 107 of 1998) (NEMA) is to provide for co-operative governance by establishing decision-making principles on matters affecting the environment. In terms of the NEMA Environmental Impact Assessment (EIA) regulations, the proponent is required to appoint an environmental assessment practitioner (EAP) to undertake the EIA 9 as well as the public participation process. In South Africa, EIA became a legal requirement in 1997 with the promulgation of regulations under the Environmental Conservation Act (ECA). Subsequently, NEMA was passed in 1998. Section 24(2) of NEMA empowers the Minister and any MEC, with the concurrence of the Minister, to identify activities which must be considered, investigated, assessed, and reported on to the competent authority responsible for granting the relevant environmental authorization. On 21

April 2006 the Minister of Environmental Affairs and Tourism promulgated regulations in terms of Chapter 5 of the NEMA.

The objective of the Regulations is to establish the procedures that must be followed in the consideration, investigation, assessment, and reporting of the activities that have been identified. The purpose of these procedures is to provide the competent authority with adequate information to make decisions which ensure that activities which may impact negatively on the environment to an unacceptable degree are not authorized, and that activities which are authorized are undertaken in such a manner that the environmental impacts are managed to acceptable levels.

The aim of the EIA process is to identify and assess the potential impacts associated with the proposed project and to develop measures through which potential negative biophysical and socio-economic impacts can be mitigated and positive benefits can be enhanced. The EIA will ensure that all issues are integrated into the lifecycle of the mining operation and its infrastructure. This will occur during the planning, construction, operation and decommissioning and site closure phases.

The EIA Report and the associated EMPR will indicate how the identified impacts will be avoided, mitigated and/or managed by setting environmental objectives and goals. The EMPR will further outline the implementation programme for the environmental objectives and goals. The EMPR is a legal requirement of the MPRDA and all mines, existing or new, are required to possess an approved EMPR prior to initiating any mining operations. The EMPR is legally binding, and the proponent is required to meet the requirements specified in the document.

The written decision called an Environmental Authorization, is a legal document setting out the conditions of the Authorization and the actions required to protect human health and the environment. Any affected party may appeal against the decision contained in an Environmental Authorization. Appeals must be lodged with the Minister who considers appeals in terms of the relevant provisions of NEMA and the Environmental Regulations.

An important amendment to the NEMA (December 2014) Regulations is that the Department of Mineral Resources has been the responsible authority for approving and issuing of Environmental Authorizations under the NEMA for mining related activities. The Department of Environmental Affairs is the appeal authority for mining related Environmental Authorizations.

1.1.3 National Environmental Management: Waste Amendment Act

The Regulations pertaining to the NEMWA activities were published on 3rd of July 2009 in Government Gazette 32368 under GN 718. These were amended in August 2013 in Government Notice Regulation 921. Regulations regarding the planning and management of

residue stockpiles and residue deposits were published and commenced on 24 July 2015 in Government Notice Regulation 632 and the List of waste management activities that have or are likely to have a detrimental effect on the environment were amended on the same date by Government Notice Regulation 921. As per this list the following is of important to note:

Category A: (15) The establishment or reclamation of a residue stockpile or residue deposit resulting from activities which require a mining permit or mining permit, in terms of the Mineral and Petroleum Resources Development Act, 2002 (Act No. 28 of 2002). Category B: (11) The establishment or reclamation of a residue stockpile or residue deposit resulting from activities which require a mining right, exploration right or production right in terms of the Mineral and Petroleum Resources Development Act, 2002 (Act No. 28 of 2002).

On the 2nd of June 2014 the National Environmental Management: Waste Amendment Act came into force. Of importance for mining activities is that according to this amendment, waste resulting from exploration, mining, quarrying, and physical and chemical treatment of minerals is classified as Hazardous Waste. Waste is accordingly no longer governed by the MPRDA but is subject to all the provisions of the National Environmental Management: Waste Act, 2008 (NEMWA). Section 16 of the NEMWA must also be considered which states as follows:

"A holder of waste must, within the holder's power, take all reasonable measures to:

- Avoid the generation of waste and where such generation cannot be avoided, to minimize the toxicity and amounts of waste that are generated.
- Reduce, re-use, recycle and recover waste.
- Where waste must be disposed of, ensure that the waste is treated and disposed of in an environmentally sound manner.
- ❖ Manage the waste in such a manner that it does not endanger health or the environment or cause a nuisance through noise, odours, or visual impacts.
- Prevent any employee or any person under his or her supervision from contravening the Act.
- Prevent the waste from being used for unauthorized purposes.

These general principles of responsible waste management are incorporated into the requirements in the EMPR to be implemented for this project.

Schedule 3: Defined Wastes have been broken down into two categories: Category A being hazardous wastes and category B being general wastes. Under Category A (hazardous wastes) the act makes allowance for "wastes resulting from exploration, mining, quarrying, and physical and chemical treatment of minerals".

To understand the implications of this it is important to ensure that the definitions of all the relevant terminologies are defined:

- ❖ Hazardous waste: means "any waste that contains organic or inorganic elements or compounds that may, owning to the inherent physical, chemical, or toxicological characteristic of that waste, have a detrimental impact on health and the environment and includes hazardous substances, materials or objects within business waste, residue deposits and residue stockpiles.
- Residue deposits: means "any residue stockpile remaining at the termination, cancellation or expiry of a prospecting right, mining right, mining permit, exploration right or production right.
- Residue stockpile: means "any debris, discard, tailings, slimes, screening, slurry, waste rock, foundry sand, mineral processing plant waste, ash or any other product derived from or incidental to a mining operation and which is stockpiled, stored or accumulated within the mining area for potential re-use, or which is disposed of, by the holder of a mining right, mining permit or, production right or an old order right, including historic mines and dumps created before the implementation of this Act.

Various regulations have been drafted in support of the NEMWA, as discussed below:

- Proposed Regulations regarding the planning and management of waste from a prospecting, mining, exploration, or production operations (2014):
- Chapter 2, Section 3 states the identification and assessment of any environmental impacts, including those on groundwater, arising from waste must be done as part of the Environmental Impact Assessment (EIA) conducted in terms of the National Environmental Management Act, 1998 (Act No.107 of 1998) (hereafter referred to as the NEMA). The pollution control barrier system shall be defined by the (a) Waste Classification and Management Regulations (2013); (b) National Norms and Standards for the Assessment of Wastes for Landfill Disposal (2013); and (c) National Norms and Standards for Disposal of Waste to Landfill (2013).
- ❖ Waste Characterization must be done in terms of physical and chemical composition as well as content. The classification must be done in terms of the health and safety classification and the environmental classification.

Proposed Regulations to exclude a waste stream or a portion of a waste stream from the definition of a waste (2014):

This regulation will give the holder of the right the opportunity to exclude a waste stream, or a portion of a waste stream from the definition of a waste. Chapter 2, Section 4 of this Regulation, Sub-section (1) states that any portion of a waste generated from a source listed in Category A of Schedule 2 of the NEMWA, may be excluded from being defined as hazardous on demonstration that such portion of waste in non-hazardous in accordance with the Waste Management and Classification Regulations of 2013. The application process will be in the form of a prescribed process and application must be made to the Minister. This Regulation is however not yet in force. National Norms and Standards for the assessment of waste for landfill disposal (23 August 2013): These norms and standards prescribe the requirements for the assessment of waste prior to disposal to landfill. The aim of the waste classification tests is to characterize the material to be deposited or stored in terms of the above-mentioned waste classification guidelines set by the Department of Environmental Affairs (DEA).

The outcomes of the tests provide the necessary information in terms of:

- Identification of chemical substances present in the waste.
- Determination of the total concentrations (TC) and leachable concentrations (LC) of the elements and chemical substances that have been identified in the waste and that are specified in Section 6 of the above-mentioned Regulations. The obtained TC and LC values of the waste material will be compared to the threshold limits for total concentrations (TCT limits) and leachable concentrations (LCT limits) specified in Section 6 of the above-mentioned Regulations. Based on the TC and LC values of the elements and chemical substances in the waste exceeding the corresponding TCT and LCT limits respectively, the specific type of waste for disposal to landfill will be determined in terms of Section 7 of the Regulations.

1.1.4 The National Environmental Management: Biodiversity Act 86

The National Environmental Management: Biodiversity Act, 2004 (Act 10 of 2004, NEMBA), "provides for: the management and conservation of South Africa's biodiversity within the framework of the NEMA; the protection of species and ecosystems that warrant national protection; the sustainable use of indigenous biological resources; the fair and equitable sharing of benefits arising from bio-prospecting involving indigenous biological resources; the establishment and functions of a South African National Biodiversity Institute (SANBI); and for matters conducted therewith".

In terms of the Biodiversity Act, the applicant has a responsibility for: The conservation of endangered ecosystems and restriction of activities according to categorization of the area (not just by listed activity as specified in the EIA regulations):Promote the application of appropriate environmental management tools in order to ensure integrated environmental management of

activities thereby ensuring that all developments within the area are in line with ecological sustainable development and protection of biodiversity.

Limit further loss of biodiversity and conserve endangered ecosystems

Regulations published under the NEMBA also provide a list of protected species, according to the Act (GNR 151 dated 23 February 2007, as amended in GNR 1187 dated 14 December 2007). Section 57 of NEMBA identifies restricted activities involving threatened or protected species. Restricted activities include the gathering, collecting, cutting, uprooting, damaging or destroy a listed species.

1.1.5 The National Environmental Management: Protected Areas Act

The National Environmental Management: Protected Areas Act, 2003 (Act 57 of 2003) (NEMPAA) serves to: "provide for the protection and conservation of ecologically viable areas representative of South Africa's biological biodiversity and its natural landscapes and seascape; for the establishment of a national register of all national, provincial and local protected areas; for the management of those areas in accordance with national norms and standards; for intergovernmental co-operation and public consultation in matters concerning protected areas; for the continued existence, governance and functions of South African National Parks; and for matters in connection therewith.

The objectives of this Act are -

- ❖ To provide, within the framework of the national legislation, including the National Environmental Management Act, for the declaration and management of protected areas.
- ❖ To provide for co-operation governance in the declaration and management of protected areas.
- To affect a national system of protected areas in South Africa as part of a strategy to manage and conserve its biodiversity.
- ❖ To provide for a diverse and representative network of protected areas on state land, private land, communal land, and marine water.
- To promote sustainable utilization of protected areas for the benefit of people, in a manner that would preserve the ecological character of such areas.
- ❖ To promote participation of local communities in the management of protected areas, when appropriate
- ❖ To provide for the continued existence of South African National Parks.

1.1.6 National Water Act

The National Water Act, 1998 (Act 36 of 1998) (NWA) makes provision for two types of application for water use licenses, namely individual applications, and compulsory applications. The NWA also provides that the responsible authority may require an assessment by the Applicant of the likely effect of the proposed license on the resource quality, and that such assessment be subject to the EIA regulations. A person may use water if the use is-

- Permissible as a continuation of an existing lawful water use (ELWU).
- ❖ Permissible in terms of a general Authorization (GA).
- Permissible under Schedule 1.
- Authorized by a licensed.

The NWA defines 11 water uses. A water use may only be undertaken if authorized. Water users are required to register certain water uses that took place on the date of registration, irrespective of whether the use was lawful or not.

Section 21 of the National Water Act 1998 lists the following 11 water uses which can only be legally undertaken through the water use Authorization issued by the Department of Water and Sanitation (DWS):

- (a) Taking water from a water resource.
- (b) Storing water.
- (c) Impeding or diverting the flow of water in a watercourse.
- (d) Engaging in a stream flow reduction activity contemplated in Section 36.
- (e) Engaging in a controlled activity identified as such in Section 37(1) or declared under Section 38(1).
- (f) Discharging waste or water containing waste into a water resource through a pipe, canal, sewer, sea outfall or other conduits.
- (g) Disposing of waste in a manner which may detrimentally impact on a water resource.
- (h) Disposing in any manner of water which contains waste from, or which has been heated in, any industrial or power generation process.
- (i) Altering the bed, banks, course or characteristics of a watercourse.
- (j) Removing, discharging or disposing of water found underground if it is necessary for the efficient continuation of an activity or for the safety of people.
- (k) Using water for recreational purposes.

In terms of the National Water Act, no Water Use License has been applied for this project. DWS was engaged about this project so they can direct us whether it is viable or not to apply for water use license.

1.1.7 Mine, Health and Safety Act

The Mine Health and Safety Act 29 of 1996 intends:

- to provide for protection of the health and safety of employees and other persons at mines and, for that purpose -
- to promote a culture of health and safety;
- to provide for the enforcement of health and safety measures;
- to provide for appropriate systems of employee, employer and State participation in health and safety matters;
- to establish representative tripartite institutions to review legislation, promote health and enhance properly targeted research;
- to provide for effective monitoring systems and inspections, investigations and inquiries to improve health and safety;
- to promote training and human resources development;
- to regulate employers' and employees' duties to identify hazards and eliminate, control and minimize the risk to health and safety;
- to entrench the right to refuse to work in dangerous conditions; and
- to give effect to the public international law obligations of the Republic relating to mining health and safety; and
- to provide for matters connected therewith.

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1.1.8 National Heritage Resources Act

The National Heritage Resources Act, 1999 (NHRA) stipulates that cultural heritage resources may not be disturbed without authorization from the relevant heritage authority. Section 34(1) of the NHRA states that, "no person may alter or demolish any structure or part of a structure which is older than 60 years without a permit issued by the relevant provincial heritage resources authority" The NHRA is utilized as the basis for the identification, evaluation, and management of heritage resources and in the case of CRM those resources specifically impacted on by development as stipulated in Section 38 of NHRA, and those developments administered through NEMA, MPRDA and the DFA legislation. In the latter cases the feedback from the relevant heritage resources authority is required by the State and Provincial Departments managing these Acts before any authorizations are granted for development.

The last few years have seen a significant change towards the inclusion of heritage assessments as a major component of Environmental Impacts processes required by NEMA and MPRDA. This change requires us to evaluate the Section of these Acts relevant to heritage (Fourie, 2008b).

The NEMA 23(2)(b) states that an integrated environmental management plan should, "...identify, predict, and evaluate the actual and potential impact on the environment, socio-economic conditions, and cultural heritage". A study of subsections (23)(2)(d), (29)(1)(d), (32)(2)(d) and (34)(b) and their requirements reveals the compulsory inclusion of the identification of cultural resources, the evaluation of the impacts of the proposed activity on these resources, the identification of alternatives and the management procedures for such cultural resources for each of the documents noted in the Environmental Regulations. A further important aspect to be taken account of in the Regulations under NEMA is the Specialist Report requirements laid down in Section 33 (Fourie, 2008b).

MPRDA defines 'environment' as it is in the NEMA and therefore acknowledges cultural resources as part of the environment. Section 39(3)(b) of this Act specifically refers to the evaluation, assessment, and identification of impacts on all heritage resources as identified in Section 3(2) of the National Heritage Resources Act that are to be impacted on by activities governed by the MPRDA. Section 40 of the same Act requires the consultation with any State Department administering any law that has relevance on such an application through Section 39 of the MPRDA. This implies the evaluation of Heritage Assessment Reports in Environmental Management Plans or Programmes by the relevant heritage authorities (Fourie, 2008b).

The NHRA identifies 5 activities that require a Heritage Impact Assessment (HIA). A HIA is the process to be followed to determine whether any heritage resources are located within the area to be developed as well as the possible impact of the proposed development thereon. An Archaeological Impact Assessment (AIA) only looks at archaeological resources.

An HIA must be done under the following circumstances:

- 1. The construction of a linear development (road, wall, power line, canal etc.) exceeding 300 m in length.
- 2. The construction of a bridge or similar structure exceeding 50 m in length.
- 3. Any development or other activity that will change the character of a site and exceed 5 000 m² or involve three or more existing erven or subdivisions thereof.
- 4. Re-zoning of a site exceeding 10 000 m².
- 5. Any other category provided for in the regulations of SAHRA or a provincial heritage authority.

South African Heritage Resource Agency has been consulted for this project so they can have an input to the proposed application.

f.) Need and desirability of the proposed activities.

Sustainable development

South Africa is a signatory to the sustainable development (SD) resolutions. It is described by the Brundland report as the "development that meets the current needs of the present generations, without compromising the needs of the future generations. Furthermore, the concept of SD strives for the balance between society, economy, and environment. The diagram below illustrates how SD show be perceived. The "three overlapping cycles" model of sustainable development (see diagram below) where the economy, environment and society are equally considered for any development.

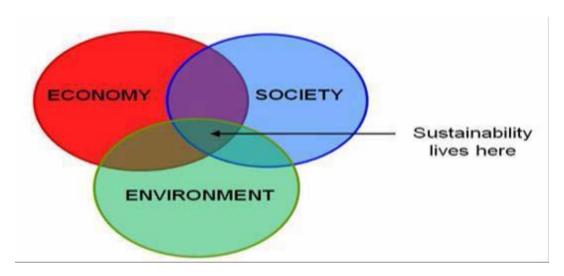


Diagram 1: The sustainability model that drives application

Moreover, SD goals are aimed at eradicating poverty, decent work, and economic growth as well as industrial and infrastructure development.

i.) Mining and Biodiversity Guidelines

The Mining and Biodiversity Guidelines (2013) 2 state that: "Sustainable development is enshrined in South Africa's Constitution and laws. The need to sustain biodiversity is directly or indirectly referred to in several Acts, not least the National Environmental Management: Biodiversity Act (No. 10 of 2004) (here as the Biodiversity Act) and is fundamental to the notion

of sustainable development. International guidelines and commitments as well as national policies and strategies are important in creating a shared vision for sustainable development in South Africa".

DMRE, as custodian of South Africa's mineral resources, is tasked with enabling the sustainable development of these resources. This includes giving effect to the constitutional requirement to "prevent pollution and ecological degradation; promote conservation; and secure ecologically sustainable development and use of natural resources while promoting justifiable economic and social development".

ii.) Environmental desirability

iii.) The proposed area is located within the proposed site is characterised by summer rainfall with very dry winters. Temperature fluctuations generally correspond with those of the rainfall patterns of the proposed area, which makes it convenient to effectively mine throughout the year. Overall desirability

Coal mining is an important mineral resource used to strengthen the community development. The mining operation will help to boost the economy of the Local Municipality. Many local people will be hired during the lifetime of the project. The services required can also be sourced locally depending on their availability thus growing the economy of the area.

The broader socio-economic benefits of the project include employment, skills development, local economic development, and increased business development for the area generally. While the project is small in operation, the production of high-quality coal will assist the construction sector in the area in terms of service delivery and local economic development.

iv.) Advantages

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- SA has abundant coal reserves
- Coal-fired power stations are reliable
- SA coal resources are at shallow depth, hence the low mining cost
- South Africa's infrastructure to generate electricity from coal is wellestablished
- Burning coal is the most cost-effective and energy-efficient way of generating electricity

v.) Disadvantages

- Coal has the most waste problems of all energy sources. Waste includes sulphur and nitrogen oxides, organic compounds, greenhouse gases and a lot of ash
- South Africa's coal fields are concentrated in Mpumalanga, which limits the location options for power stations
- vi.) Various project alternatives were considered during the planning phase of the project.

 These included the following:

a.) Open cast mining (preferred alternative) vs. underground mining

- The open cast mining method is used when deposits of commercially useful minerals or rock are found near the surface, where the overburden is relatively thin, or the material is structurally unsuitable for tunnelling.
- Underground mining is used where the mineral occurs deep below the surface and the overburden is thick.
- Open cast mining of the coal has been identified as the most cost-effective method to produce the desired coal as it is found near the surface, with only a narrow layer of overburden that needs to be removed.
- The geology of the area and depth of coal to be mined is structurally unsuitable for tunnelling.
- The open cast mining method will not produce any residual waste to be disposed of. Due to the location of the proposed coal proposed mines, the potential impact on the surrounding environment is expected to be insignificant. It is proposed that all miningrelated infrastructure be contained in the boundary of the mining area.

b.) Temporary infrastructure (preferred alternative) vs. permanent infrastructure

- Temporary infrastructure use will entail the use of track-based or easily removable
 infrastructure. This includes a mobile in-proposed mine crusher plant, temporary weigh
 bridge and chemical toilet, with off-site vehicle and equipment servicing (at the applicant's
 existing workshop). The off-site office will be used for project administration purposes.
- Positive aspects: The infrastructure can be moved around in the mining area boundaries
 as mining progresses, decreasing the distance material must be transported from the
 crusher plant to the stockpile area. In addition, the crusher plant and other equipment can

move out of the mining area (and onto the existing road) during a blast to prevent potential fly rock damage. During the decommissioning phase, infrastructure will be removed from the mining area, making site rehabilitation easy and effective.

- Permanent infrastructure will entail the construction of an office building with ablution facilities, installation of a septic tank to be connected to the ablution facilities, installation of a permanent weigh bridge and permanent crusher plant.
- The use of permanent infrastructure will increase the impact of the proposed project on the environment as it will entail the establishment of more structures, necessitate the use of concrete products on site to establish this infrastructure, lengthen the period required for rehabilitation as well as increase the rehabilitation cost as the permanent infrastructure will either be decommissioned or be maintained after the closure of the site.
- Due to the small size of the mining area the infrastructure may be exposed to fly rock damage during blasting events.
- The construction of permanent infrastructure on site will increase the visual impact of the proposed project on the surrounding environment and additional mitigation measures will have to be implemented to address the impact.
- In the light of the above, the use of temporary infrastructure is deemed to be the most viable preferred alternative.

c.) Access onto provincial road (preferred alternative) vs. national road

- Provincial roads (R544): The existing access road of the farm connects to the provincial
 road passing the property to the eastern side (R544) It is proposed that this road be used
 by trucks transporting material from the proposed mine to the clients as it will prevent
 trucks having to turn from a farm entrance onto the local road, thereby minimising the
 potential impact on traffic.
- National road (N4): The turning of trucks transporting material from the mining area to
 clients onto the N4 is not considered here, since the N4 is approximately 3.3 km south
 away from the project area. To minimise the impact the activity may have on traffic, it is
 proposed that this option is not implemented, and the alternative provincial road (as
 mentioned above) be used as access road to and from the proposed mining permit.

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

Mining is important for economic development, to construct durable, modernstructures,

employment creation and revenue collection.

The preferred site was chosen, as it will result in minimal adverse socio-economic impacts and a level of environmental impacts that can be managed and rehabilitated through effective EMPr and rehabilitation plan implementation. The technology to be used, involve mechanical removal of gravel using an excavator, on site screening and loading of materials with a front-end loader, was deemed the most feasible technology for the purpose of mining operation. Minimal infrastructure will result in cheaper and more effective rehabilitation upon mine closure.

The methods to be used have been determined in the design phase and have considered potential environmental impacts when identifying the preferred methods.

The proposed site earmarked for the mining of the coal will include the opencast. The proposed site was identified as the preferred alternative due to the following reasons:

- The site offers the sought-after resource.
- The mining impacts can be contained to one area.
- The mining area can be reached by an existing access road gravel road which extends from the unnamed tar road which joins the regional road R 544. No new road infrastructure needs to be constructed.
- The open cast mining of the coal has been identified as the most effective method to produce the desired coal. The potential impacts on the surrounding environment, associated with open cast mining, is deemed to be of low significance.
- The general waste produced on-site will be contained in sealed refuse bins to be transported to the local municipal landfill site.
- As equipment maintenance and servicing will be done at an off-site workshop, the amount of hazardous waste to be produced at the site will be minimal and mainly because of accidental oil or diesel spillages.
- Contaminated soil will be removed to the depth of the spillage and contained in sealed bins until removed from site by a hazardous waste-handling contractor to be disposed of at a registered hazardous waste handling site.

h.) Full description of the process followed to reach the proposed preferred alternatives within the site

(NB!! – This section is about the determination of the specific site layout and the location of infrastructure and activities on site, having taken into consideration the issues raised by interested and affected parties, and the consideration of alternatives to the initially proposed site layout.)

(i) Details of the development footprint 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.

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

The proposed coal mine will take place on portion of portion 32 of the farm Blesboklaagte 296 JS. All infrastructures and activities will take place on the aforementioned site.

Quality coal is evenly distributed over the entire area. Hence, there is no alternative location of the proposed mining permit. This is also proven by the existing mines such as Inyathi Engineering and illegal mines.

b.) The type of activity to be undertaken

Other activity alternatives have therefore not been considered as the sole purpose of the proposed project is to mine from the section of the site. The only other activity required to be assessed in terms of NEMA is the "do-nothing" alternative.

The application is for mining permit and alternatives were considered. The proposed site is the only land that is within reasonable reach to the applicant.

c) The design or layout of the activity

The location of the infrastructure will be determined based on the location of the miningactivities. All infrastructure will be temporary and/or mobile. The site layout will be determined by considering both spatial and practical mining operation aspects. The proposed layout and temporary nature of the mining activity and associated infrastructure will be implemented with the aim to reduce substantial impacts on the area.

d.) The technology to be used in the activity

The technology used in a mining project is determined by the shape, position, and orientation of the mineral resource, with the technology alternative for gravel mining being restricted to the use of excavator, bulldozer and tipper truck, water cart and hauling vehicles (trucks/ 4x4 bakkies

The topsoil will be removed and stockpiled for rehabilitation and the gravel material mined will be stockpiled and sold as building sand. No sand washing will be required thus no infrastructure (wash plant and associated infrastructure) will be required onsite.

The mining methods will include blasting with Nonex Cartridge to loosen the hard rock (overburden) when necessary. Nonex[™] is not high explosives. It is a pyrotechnic composition (low explosives) that breaks rock by generating tensile force through rapid gas expansion in a sealed (steamed) drill hole

Nonex™ RBC's Compared to Conventional Explosives

Particulars	Conventional Explosives	Nonex Cartridge
Environmental effect	Adverse Effects – Landslides, crevasses in earth strata, tunnel collapse etc.	No adverse effect.
Fly Rock	High velocity, uncontrolled, fly rocks up to 500metres	Controllable low velocity fly rocks up to 50m
Shockwave	Supersonic shock wave with significant damage	No shock wave
Dust levels	High level of dust produced by crushing effect.	Minimal dust due to better fragmentation.
Vibrations	High level vibrations – unfit for use in built up areas	Low vibrations – ideal for built up areas/sensitive projects
UN Hazard Division	1.1	1.3C
Functions on	Detonation	Deflagrating
Reaction speed	3,000 -10,000 m/sec.	300 – 1000 m/sec.
Pressure	1200 GPa	450 MPa
Working principle	Produces SHOCK WAVE, resulting in Blast and Shattering effect	NO SHOCK WAVE- Produces gases only which split the rock.
Safety Distance	Minimum 500m	Average 100m
Noxious fumes	Underground mines – 3 hour re-entry time	30 minutes re-entry time

Figure 9: Different Blasting methods compared

e.) the operational aspects of the activity;

The timing of implementing mining programme will commence as soon as the permit is granted by the DMRE, the landowner, interested and affected parties will be notified about the mining programme to ensure a satisfactory working and adhering relationship.

f.) The option of not implementing the activity

The 'no-go' alternative is the option of not undertaking mining permit activities on the project site. The no-go option assumes the site remains in its current state. The no-go alternative would result in no impacts on the social and biophysical environment.

The Project Manager and Safety Officers shall ensure that all "no go" areas are demarcated and that no unauthorised entry, litter, stockpiling, dumping or storage of equipment or materials shall be allowed within the demarcated "no go" areas. Once mining activities within an area has been completed and the area has been rehabilitated and re-vegetated, it shall be considered a "no go" area.

The option of not implementing the activity has been considered. It also assumes that the high possibility of this activity to lead to socio-economic gains will not be realised and, therefore the option of not implementing the activity will not be pursued at this stage.

The proposed area is characterised by subsidence, which is defined as the sinking of the ground because of underground material movement. Subsidence can be natural which is when cohesive soils such as clay and silt shrink and swell depending on their moisture content, and it is also caused by the removal of water, oil, natural gas, or mineral resources out of the ground by pumping, fracking, or mining activities (underground mining mainly).



Figure 10: Mine layout plan for the proposed project area

(ii) Details of Details of the Public Participation Process Followed

The Public Participation Process (PPP) has been structured to provide I&APs with an opportunity to gain more knowledge about the proposed project, to provide input through the review of documents/reports, and to voice any issues or concern at variousstages throughout the EIA process. This process includes all I&AP's (e.g. directly affected landowners, national, provincial- and local authorities, and local communitiesetc.).

The Public Participation Process (PPP) was conducted in terms of Chapter 6 of the National Environmental Management Act, 1998 (Act 107 of 1998).

The Public Participation Process conducted to date is summarised below, please refer to Appendix C for a detailed Public Consultation Report

Table 6: Summary of the PPP undertaken to date

Task	Details	Date
	I&AP notification	
I&AP identification	An I&AP database was developed for the	Continuous
	project by establishing the jurisdiction of	process
	organisations, individuals, and businesses in	
	proximity to the project site or within an interest	
	in the proposed development.	
	The database of I&APs includes the	
	landowner, the adjacent landowners, relevant	
	district and local municipal officials, relevant	
	national and provincial government officials,	
	and organisations. This database is being	
	augmented via chain referral during the BA	
	process and will be continually updated as	
	new I&APsare identified throughout the project	
	lifecycle. The current list of potential I&APs	
	is attached.	
Site notices	A3 Site notices were placed at strategic points	28 July 2022
	to inform the general public, I&APs of the	
	proposed project and the PPP. Photos of the	
	site notices have been	
	included in Photo 6	
B4 1: A 1 4	N. Marie I. M.	00.1.1.0000
Media Adverts	Newspaper advert on Witbank News	22 July 2022
Comments received	The comments received from the	Continuous
	landowners, government officials and others	
Comment on	All the relevant stakeholders will be notified of	23 August 2022 to
DBAR	the availability of the DBAR.	21 September 2022
Public meeting	Meeting of all interested parties	To be confirmed

a. Notification of I&APs

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 basic assessment process.

I&AP 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 during the basic assessment Process is to afford the I&APs with an opportunity to comment and provide valuable inputs during the planning phase of the project.

The project timelines have been developed on the section below.

❖ Announcement of the project: 22 July 2022

Review of Draft BAR & EMPr: 31st of August 2022 to the 30th of September 2022

Stakeholders will be given 30 days to review the DBAR & BAR, from the first day they received it. Engagement of I&APs was done through publishing of newspaper, site notice, emails, one-on-one consultation, and phone calls. On-site notices were placed at the turn off from the roads onto the property, as well as on the fence of the property facing the residents of the adjacent community, to advertise the project. The notices were extended to the local public libraries namely, Lynville Public Library (Vector Road, Lynville, eMalahleni, 1034, South Africa), Klarinet Public Library (Blesboklaagte 296-Js, eMalahleni, South Africa) as well as eMalahleni Local Municipality (Mandela Street eMalahleni 1034).

A consultation meeting was held on the 15th of July 2022 with the Speaker of eMalahleni Local Municipality and his co-worker as well as the ward councilor of ward 15 via Microsoft teams (See Appendix 12). A consultation meeting was held on the 28th of July 2022 at the Klarinet Ext 6 in the eMalahleni Local Municipality with eMalahleni Local Municipality representatives to notify them about the new proposed mining project.

The proofs of the meetings attended are attached o

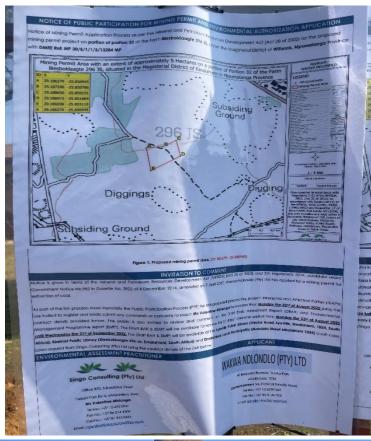
The landowner was identified through windeed search.

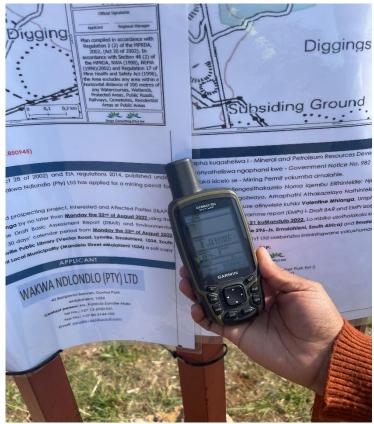
- The benefits of the online stakeholder engagement platform include:
- Ability to create a dedicated project-specific online platform to enable easy access to project-related information.
- ❖ Ability to reach a wider audience, allowing more widespread consultation for major infrastructure projects.

- Allowing stakeholders and I&APs the opportunity to engage on a project without leaving their office or home.
- Enabling stakeholders and I&APs to register their interest in a project (for inclusion on the project database), and automatically gaining access to comprehensive project documentation.
- Enabling the EAP to maintain a complete database of I&APs through maintaining a record of persons accessing the online stakeholder consultation platform.
- Enabling the EAP and stakeholders/I&APs to meet virtually.



Figure 11: Published newspaper advert, Witbank News, in red polygon (22 July 2022







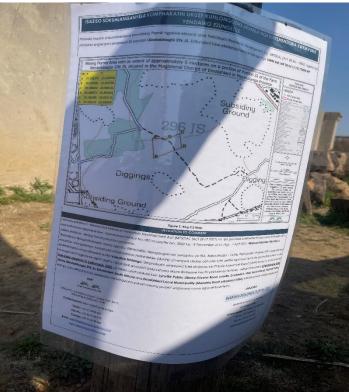


Photo 1: Placement of site notices

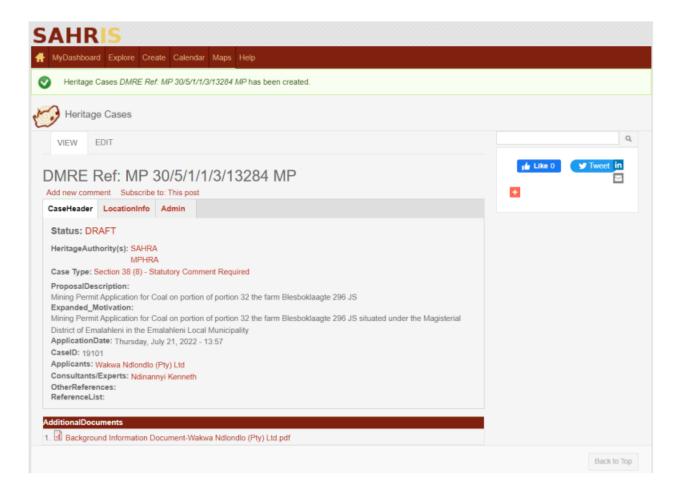


Figure 12: Online consultation (SAHRA)

b. List Authorities Identified and Notified

The following authorities have been identified and notified of the proposed Mining Permit project:

- eMalahleni Local Municipality
- Department of Water Affairs
- Department of Agriculture, Forestry and Fisheries
- Department of Environmental Affairs
- Department of Fisheries, Forestry, and the Environment.
- Mpumalanga Tourism and Parks Agency
- Department of Land Restitution Commission
- Department of Rural Development and Land Reform
- South African National Roads Agency Ltd (SANRAL).
- South African Heritage Resources Agency.

- Eskom SOC Limited.
- Transnet SOC Ltd.

i. List of Surface Rights/Landowners Identified and Notified

The land belongs to Anglo Operations (Pty) Ltd as per the tittle deed illustrated in Figure 39. It was discovered that the landowner according to WinDeed search results was no longer the surface owner and there are transferring of land processes underway and that we had to consult the new landowner who is now Eyethu Coal.







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

SEARCH CRITERIA					
Search Date	2022/07/19 20:13	Farm Number	296		
Reference	-	Registration Division	JS		
Report Print Date	2022/07/19 20:15	Portion Number	32		
Farm Name		Remaining Extent	NO		
Deeds Office	Mpumalanga	Search Source	WinDeed Database		

PROPERTY INFORMATION					
Property Type	FARM	Diagram Deed Number	T1393/1919		
Farm Name	BLESBOKLAAGTE	Local Authority	EMALAHLENI LOCAL MUNICIPALITY		
Farm Number	296	Province	MPUMALANGA		
Registration Division	JS	Remaining Extent	NO		
Portion Number	32	Extent	245.4342H		
Previous Description	-	LPI Code	T0JS00000000029600032		

OWNER INFORMATION (1)							
ANGLO OPERATIONS PTY L	.TD		Owner 1 of 1				
Company Type	COMPANY	Document	T120750/1999				
Registration Number	192100673007	Microfilm / Scanned Date	2005 0139 0714				
Name	ANGLO OPERATIONS PTY LTD	Purchase Price (R)	-				
Multiple Owners	NO	Purchase Date	-				
Multiple Properties	NO	Registration Date	1999/10/13				
Share (%)	-						

ı	ENDO	DRSEMENTS (32)			
	#	Document	Institution	Amount (R)	Microfilm / Scanned Date
	1	K1074/1965S	-	-	20200217 18:22:29

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ENDO	ENDORSEMENTS (32)				
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3	K1191/19665	-		1991 046 5 :26:70	
4	K128/1965S				
5	K1588/1967S				
6	K1590/1967S	-		-	
7	K1592/1967S	-		-	
8	K1594/1967S	-			
9	K1640/1965S	-			
10	K204/1962S	-			
11	K205/1962S	-			
12	K2066/1989S	-		1989 1589 0446	
13	K2067/1989S	-		1989 1589 0524	
14	K2068/1989S			1989 1589 0553	
15	K207/1962S				
16	K425/1967S	-	-	-	
17	K426/1967S				
18	K620/1969S				
19	K623/1969S			20020101 07:51:25	
20	K625/1969S			2002 0521 3461	
21	K663/1966S	-		-	
22	K685/1969S			•	
23	K715/1961S			•	
24	K724/1962S			•	
25	K827/1962S			-	
26	K93/1966S			-	
27	K725/1962S				
28	K294/1962S			-	
29	LG17/969-JS296/6-7-3	/1/969		-	
30	CL-WITBANK CC			-	
31	JS,296,32				
32	INFO FROM PRETORIA DEEDS REGIS	/1/969	-	-	

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HIST	ORIC DOCUMENTS (2)			
#	Document	Institution	Amount (R)	Microfilm / Scanned Date
1	T112673/1992	GOLD FIELDS COAL LTD	200 000	19990101 13:52:18
2	T29938/1944	APEX MINES LTD	Unknown	1993 0039 3808



Figure 13: Windeed results

ii. Summary of Issues Raised by I&APs

The stakeholders were informed about the project through publication of a newspaper, plugging of site notices and consulted through emails attached with BID, MP co-ordinates and Reg 2.2 map. The landowner was consulted via email attached with landowner notification letter, BID and Reg 2.2 map. It was discovered that the landowner according to windeed search results was no longer the surface owner and that we had to consult the new landowner.

Table 7: Summary of issues raised

Interested and Affected Parties List the names of persons consulted in this column, and Mark with an X where those who must be consulted were in facconsulted	Neceived	Issued Raised	EAPs response to issues as mandated by the applicant	Section and paragraph reference in this report where the issues and or response were incorporated
AFFECTED PARTIES				
Landowners/s				
Anglo Operations (Pty) Ltd Portion of portion 32 thygela	X 25/07/2022 (Email) 28/07/2022 (Email)	 Raised that Anglo Operations (Pty) Ltd was no longer the owner of the portion and that he would forward the email to the relevant person/s provided contact details of the relevant representatives of 	 Landowner notification letter and BID was sent to via email on the 22nd of July 2022. On the 25th of July 2022, was informed that Singo Consulting (Pty) Ltd would have to 	See Appendix 4.

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
		landowners to engage with.	continue consulting him about the proposed project as they are the registered landowners as per the Windeed Search unless provided with the relevant rightful landowner's contact details.	
Adjacent Landowners				
		No issues raised	BID together with a consultation email was sent on the 25 th of July 2022.	See Appendix 5

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
Lawful occupiers of the land				
Not Applicable				
Local Municipality				
Department of Environment and Waste Management		No issues were raised	BID together with a consultation email was sent on the 22 nd of July 2022.	See Appendix 5

Interested and Affected Parties List the names of person consulted in this column, and Mark with an X where those wh must be consulted were in factorsulted	10	Date Comments Received	Issu	ed 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 Library						
Klarinet Public Library	Х	28/07/2022 (Face to face)	•	The Librarian Signed for the BID.	EAP submitted the BID to the local Library on the 28th of July 2022.	See Appendix 6
Community						
ELM Ward 14		28/07/2022 (Face to face meeting)	•	raised concerns around the mining permit application and how it would benefit the community, requested for the community development plan and also another meeting.	BID and reg 2.2 map were shared at the meeting held in Ext 6 in ELM on the 28 th of July 2022. Find the attached minutes of the meeting in Appendix 10.	See Appendix 10
Organs of state (Responsible for infrastructure that may be affected Roads Department, Eskom, Telkom, DWA						

List the names of person consulted in this column, and Mark with an X where those wh must be consulted were in facconsulted	0	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
SANRAL SOUTH AFRICAN NATIONAL ROADS AGENCY SOC LTD PRODUCTION OF THE PRODUCT OF	x 22/07/2022 (Email)	No issue raised.	BID, Reg 2.2 Map PR co-ordinates together with a consultation email was sent on the 22 nd of July 2022.	See Appendix 5
Eskom	20/08/2022 (Email)	We refer to your application dated 22 July 2022. Eskom Distribution services are not affected by this application.	BID, Reg 2.2 Map and PR co-ordinates together with a consultation email was sent on the 22 nd of July 2022.	See Appendix 5

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		No issues raised	BID together with a consultation email was sent on the 22 nd of July 2022.	See Appendix 5.
agriculture, land reform & rural development Department: Agriculture, and Reform and Rural Development REPUBLIC OF SOUTH AFRICA				See Appendix 5
		No issues raised	 BID together with a consultation email was sent on the 22nd of July 2022. 	
		No issues raised	BID together with a consultation email was sent on the 15 th of July 2022.	

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
		No issues raised	 BID together with a consultation email was sent on the 22nd of July 2022. 	
Water & sanitation Department: Water and Sanitation REPUBLIC OF SOUTH AFRICA		No issue raised	BID together with a consultation email was sent on the 22 nd of July 2022.	See Appendix 5
		No issue raised	BID together with a consultation email was sent on the 18 th of August 2022.	
environmental affairs Department: Environmental Affairs REPUBLIC OF SOUTH AFRICA	22/07/2022 (Email)	No issue raised	BID together with a consultation email was sent on the 22 nd of July 2022.	See Appendix 5

Interested and Affected Parties List the names of persor consulted in this column, and Mark with an X where those wh must be consulted were in facconsulted	10	Date Comments Received	Issued Raised EAPs response to issue mandated by the applica		Section and paragraph reference in this report where the issues and or response were incorporated
Mpumalanga Tourism and Parks Agency	x	05/08/2022 (Email)	 Sensitivity maps were shared with the EAP and raised concerns requesting that an extensive Terrestrial Ecological Assessment specialist study is conducted. Different mining methods should be investigated due to the sensitivity of the area Email requesting sensitivity of the area was sent on the 22 July 2022 with attack Reg 2.2 Map. Response letter was shared to MTPA regarding their comments on the 2 of August 2022. 	d of shed	See Appendix 5
		25/07/2022 (Postnet)	No issues were raised.		

Interested and Affected Parties List the names of persons consulted in this column, and Mark with an X where those who must be consulted were in fact consulted	Date Comments Received	Issued Raised	EAPs response to issues as mandated by the applicant	Section and paragraph reference in this report where the issues and or response were incorporated
agriculture, forestry & fisheries Department: Agriculture, Forestry and Fisheries REPUBLIC OF SOUTH AFRICA	22/07/2022 (Email)	No issues were raised	 The BID was couriered via Postnet on the 25th of July 2022. BID together with a consultation email was sent on the 22nd of July 2022. 	See Appendix 5
OTHER INTERESTED AND AFFECTED PARTIES				
	28/07/2022 (Face to Face)	Requested to have the BID shared with him to share	BID was sent via WhatsApp on the 28 th of	See Appendix 5

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
		with other members of the Klarinet Industrial Offices.	July 2022. Refer to appendix 11 The EAP further explained the project to him.	
	17/08/2022 (Phone Call) 18/08/2022 (Email)	 Requested to be sent more information regarding the project as he had seen a site notice placed and would like to be registered as an I&AP. Raised a concern that the proposed mine should only employ people who reside in eMalahleni and also shared the contact details of another I&AP. 	 BID together with a consultation email was sent on the 17th of August 2022. A response letter to the comments was sent by the EAP. BID and consultation letter was shared to the I&AP. 	See Appendix 5
		No issues raised	BID together with a consultation email was	See Appendix 5

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
			sent on the 8 th of August 2022.	
		No issues raised	BID together with a consultation email was sent on the 8 th of August 2022.	See Appendix 5
Eco Elementum	22/07/2022		Requested contact details for the rightful landowners of portion of portion 32 of the farm Blesboklaagte 296 JS on the 21st of July 2022.	See Appendix 5.
		Could not share he contact details at this stage due to POPIA, however requested acceptance	BID together with a consultation email was sent on the 22 nd of July 2022.	

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
		letter for the proposed mining project and any draft documents available.	The requested documents (newspaper tearsheet, BID, reg 2.2 map) were shared on the 22 nd of July 2022.	
		• requested all the documents of the projects Singo Consulting was working on for portion of portion 32 of the farm Blesboklaagte 296 JS on the 1st of August 2022.	contact details were shared with all the EAPs working on the projects on portion of portion 32 of the farm Blesboklaagte 296 JS on the 3 rd of August 2022.	
Inyathi Engeneering		No issues raised	BID was shared with the Mine Manager on the 28th of July 2022.	See Appendix 5
Africoal SA		•	Attempted to consult Africoal SA mine on the 28 th of July 2022,	See Appendix 5

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
			however there was nobody available on site.	
Eyethu Coal			 Attempted to consult Eyethu Coal mine on the 28th of July 2022, however there was nobody available on site. Called Eyethu Coal offices on the 22nd of August 2022 to request contact details of the relevant person to consult regarding the proposed mining permit application. The representative couldn't share the requested contact details and 	See Appendix 5

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
			requested a meeting at their office. • On the 23 rd of August 2022, the offices were closed and there was nobody available to consult. The EAP asked for assistance from the security at the Traffic Department opposite the offices. The security confirmed that it was indeed the correct place and signed the register.	

iv.) The Environmental attributes associated with the alternatives. (The environmental attributed described must include socio-economic, social, heritage, cultural, geographical, physical and biological aspects)

(1) Baseline Environment

Type of environment affected by the proposed activity.

The proposed site is located approximately 1.65 km Northeast of Klarinet settlement area and about approximately 4.32 km Southwest of eMalahleni town. It is also approximately 1.3 km East of Truck Stripper, approximately 2 km Northwest of SAB eMalahleni and approximately 1.7 km Southwest of Samancor Ferrochrome industry. The site can be accessed via the gravel road joining in from the R554 National Road leading straight towards the proposed mining area.

Photo 2: Pictures of access roads









Figure 14: Access Roads Map tot the site

1.1) Biodiversity

The vegetation in this proposed site can be classified as heavily modified, CBA irreplaceable and CBA optimal and there are no ESAs close to the site. According to the SANBI (2013) biodiversity guide, CBA optimal areas are located as part of the most efficient solution to meet biodiversity targets. CBA irreplaceable refers to areas which are 80-100& irreplaceable for meeting biodiversity conservation targets, or critical linkages or critically endangered species. However, the ground truthing revealed that the vegetation is heavily modified. The biodiversity is of very high sensitivity. The site is located within the Eastern Highveld Grassland Bioregion of the Mesic Highveld Grassland Bioregion of the Grassland Biome. This area is dominated by a Highveld grassland vegetation. It is a critical biodiversity area with a vulnerable ecosystem, and it is listed under the Protected Areas Expansion Strategy.



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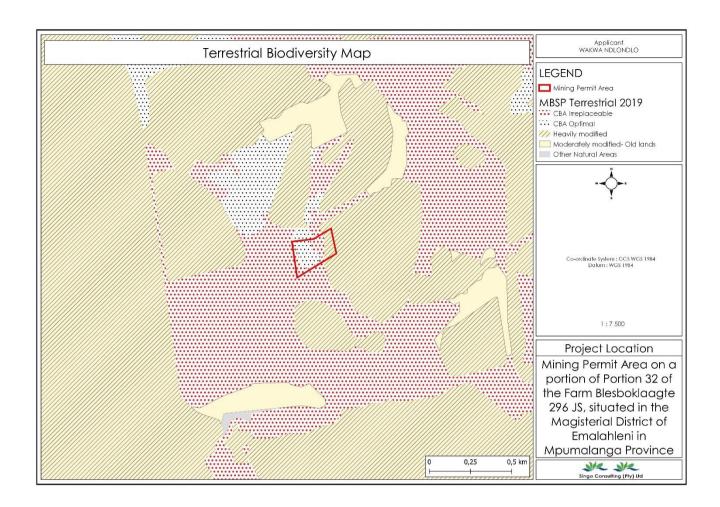
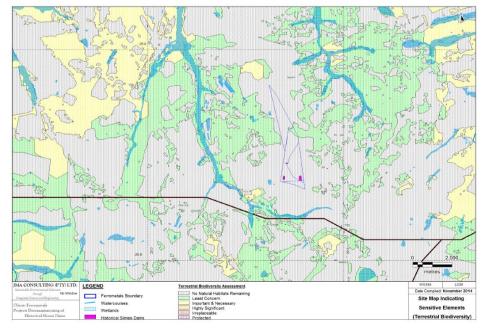
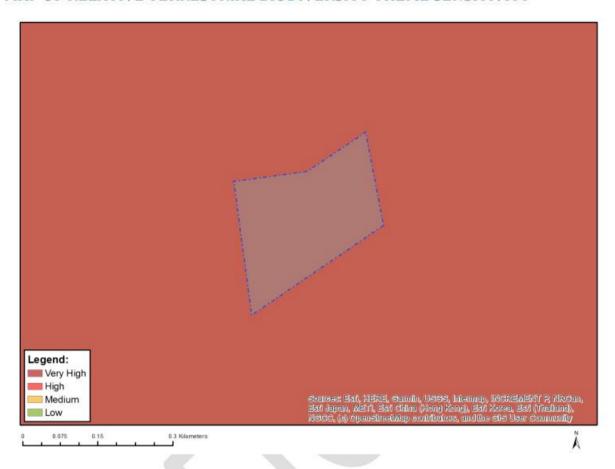


Figure 15: Biodiversity Map

Referencing from the BAR prepared for Samancor Chrome Ferrometals conducted by JMA Consulting (Pty) Ltd, the attached map from Mpumalanga Biodiversity Conservation Plan (MBCP) Terrestrial Biodiversity Assessment shows that the proposed area is within the "least concerned area" See map below.



MAP OF RELATIVE TERRESTRIAL BIODIVERSITY THEME SENSITIVITY



Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
X			

Figure 16: Terrestrial Biodiversity Theme Sensitivity

1.2) Geology

The Geology of the proposed site is underlain by Vryheid formation which is characterized by fine-to coarse- grained sandstone, shale, and coal seams. The PermianVryheid formation hosts most of Southern Africa's economic coal reserves. The Witbank coalfield has produced a large proportion of coal mined for export as well as for the local market. As such, it is one of the most important geographic as well as geological regions with respect to coal distribution and coal production (Cadie, 1987).

Karoo Supergroup

The proposed project area follows under the main Karoo supergroup, under Ecca group. The sedimentary part of the Karoo Supergroup is subdivided into four main lithostratigraphic units, which from the base up are the Dwyka, Ecca, Beaufort and Stormberg (Molteno, Elliot and Clarens formations) groups (Johnson et al., 1996; SACS, 1980;). These are capped by some 1.4 8 km of basaltic lavas of the Drakensberg Group (Johnson et al., 1996; Veevers et al., 1994), the extrusion of which is related to the break-up of Gondwana (Cox, 1992). The basement to the Karoo Supergroup fills in both the MKB and in the northern basins is heterogeneous (Bordy et al., 2004; Hancox, 1998; Rutherford, 2009) and this heterogeneity plays a significant control on the nature of the fill, particularly during the early phases of the deposition of the Karoo Supergroup.

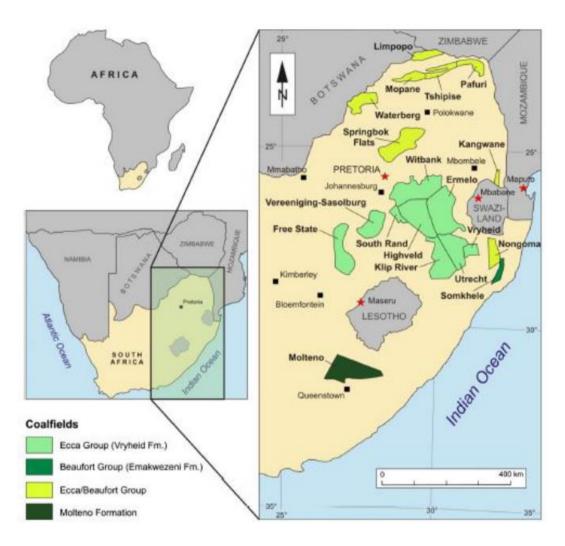


Figure 17: Coal field of South Africa (adopted from Hancox and Gotz, 2014).

Dwyka Group

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

Ecca Group

In the 1970s several 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.

Witbank Coalfield

The Witbank Coalfield is elongated over 180 km in a west to east direction, it is not surprising that the basement to the Karoo Supergroup succession is varied. From west to east the basement rocks include metasedimentary, metavolcanic, and dolomitic rocks of the Neoarchean Transvaal Supergroup, metasedimentary and metavolcanic rocks of the Paleoproterozoic Waterberg Group and BIC age intrusive (felsites and granites). The changing nature of the basement plays a major role in the nature of the paleontography created. For example, in the far east of the Witbank Coalfield, where dolomites of the Transvaal Supergroup form the basement, abnormally thick coals filling karst topography are known. A similar but more extreme case is documented at the Syferfontein Colliery in the West Rand outlier (Stuart-Williams, 1986). In some areas close to the north-western basin margin, the stratigraphic column is reduced to only 80 m. It was also the focus of much of the academic research, including the works of Cairncross (1979) in the Van Dykes Drift area, Le Blanc Smith and Eriksson (1979) to the west of Witbank, and Holland et al. (1989) to the east of Witbank. Cadle and Cairncross (1993) described a sandy bedload dominated system with lateral accretion surfaces from the southern part of the central sector. More recently it has been covered in the regional geological model of Grodner (2002) and Grodner and Cairncross (2006) and various Competent Persons' Reports available on various companies' websites (Goldschmidt et al., 2010a).

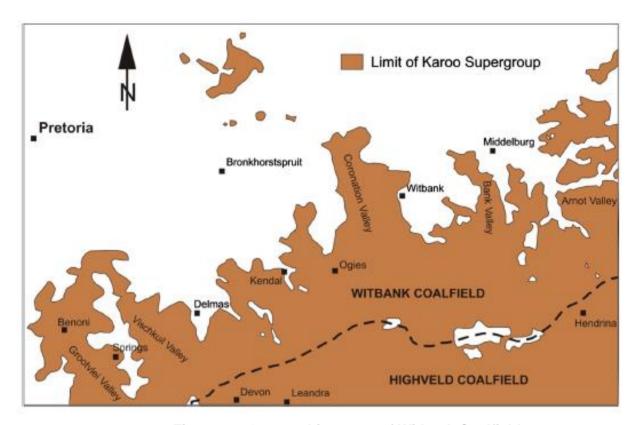


Figure 18: Geographic extent of Witbank Coalfield

Five coal seams occur in the Vryheid Formation, and these are associated predominantly with the coarser-grained fluvial facies at the top of each sequence. These coal seams can be traced laterally across the entire area of occurrence of the Vryheid Formation in the MKB; however, some disagreement exists as to the exact correlation in the various coalfields. Regional differences allow for the considerable diversity of coal types (organic content), mineral matter composition, and rank (maturity) that is found within the coalfields of South Africa (Falcon, 1986b). The majority of the economically extracted coal in South Africa occurs in rocks of the Vryheid Formation, which ranges in thickness in the MKB from less than 70.0 m to over 500.0 m. It is thickest to the south of the towns of Newcastle and Vryheid, where maximum subsidence took place (Du Toit, 1918; Cadle, 1975; Whateley, 1980a; Stavrakis, 1989; Cadle et al., 1982) and where the basin was the deepest.

The No. 2 Seam Sequence (Figure 4) includes the succession from the top of the basement to the top of the No. 2 Seam, which may be up to a maximum development of 60 m in places (Le Blanc Smith, 1980a). It incorporates the rocks of the Dwyka Group, as well as the overlying No. 1 and No. 2 coal seams. It should be noted that we accept that the Dwyka has separate Group status, but that it is described as the basal part of the No. 2 Seam Sequence. The thickness of the Dwyka Group in the Witbank Coalfield also varies considerably dependant on the nature of the underlying topography. It ranges from being thin or absent over the most prominent pre-Karoo topographic highs, to over 25 m thick in the central part of the Witbank Coalfield (Le Blanc Smith and Eriksson, 1979) to 30 m thick

(Glasspool, 2003) in the deeper palaeo valleys. Le Blanc Smith and Eriksson (1979) note that the fill consists of poorly sorted matrix rich diamictites, laminated sandstones and siltstones, stratified pebbly mudstones and cross-stratified conglomerates.

In the western Witbank Coalfield, the No. 2 Seam Sequence tends to be much more variable in nature than it is in the central part. This is mainly due to the irregular nature of the Transvaal Supergroup (Malmani Group) dolomite floor. The Dwyka Group outcrops in the area around Delmas and is also well known from borehole core, which show the succession to be between 0 and 10 m in thickness. The base of the No. 2 Seam Sequence is usually formed by poorly sorted matrix rich diamictites, with angular to rounded basement clasts, set in a matrix of fine- to medium-grained sandstone, which may be highly carbonaceous in places. Maximum clasts sizes documented by the authors are in the region of 30 cm. According to Le Blanc Smith (1980a) the Dwyka Group diamictites may in turn be overlain by a succession up to 36 m thick of mudstone and siltstone, which grades upwards to sandstone and conglomerate that form the floor of the No. 1 Seam or its carbonaceous mudstone equivalent.

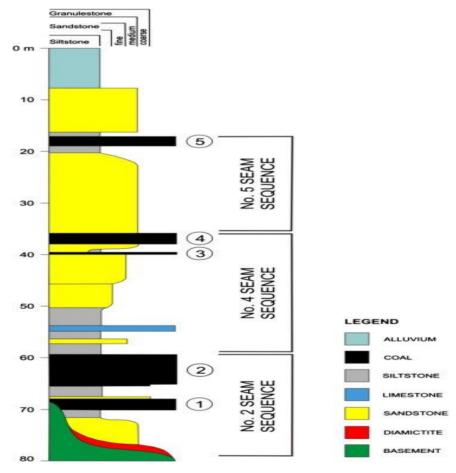


Figure 19:Typical Coal seam of the area (Singo Consulting, PWP, 2022).

1.2.2. Subsidence in the proposed project area

The proposed area is characterised by subsidence, which is defined as the sinking of the ground because of underground material movement. Subsidence can be natural which is when cohesive soils such as clay and silt shrink and swell depending on their moisture content, and it is also caused by the removal of water, oil, natural gas, or mineral resources out of the ground by pumping, fracking, or mining activities (underground mining mainly). The Karoo Supergroup of Late Carboniferous to Middle Jurassic age (320-180 Ma) hosts all the South African coal deposits and was formed in the great Gondwana basin. During the latter part of the Palaeozoic the geomagnetic pole position suggest that the climate in South Africa changed from glacial to periglacial. South African coal, in common with other Gondwana coal fields, was formed in a cold to cool climate (Snyman, 1998). The late Carboniferous to Early Permian glaciogene Dwyka Group occupies the base of the Karoo Supergroup. Coal seams in the Witbank Coalfield were formed in an epicontinental environment and occur within the Vryheid Formation. The Vryheid formation forms the midpart of the Ecca Group, which, in turn, is part of the Karoo Supergroup, This formation consists of sediments deposited in shallow marine and fluvio-deltaic environments in which coal developed from peat accumulated in swamps and marshes. The formation primarily consists of sandstones, siltstones, mudstones, and shales. As the northern margin of the coalfield is approached, the sediments thin out and the Vryheid Formation rests unconformably on the basement rocks, i.e., the Transvaal Supergroup, the Waterberg Group, and volcanic rocks associated with the Bushveld Igneous Complex (Snyman, 1998). Where bord and pillar mining method is used, pillars of coal are left in place to support the roof. The pillars thus have to sustain the redistributed load attributable to the overburden, which means that the strata immediately above and below the workings are subjected to added compressions (Bell, 1988). Stress concentrations tend to be located at the edges of pillars and intervening roof beds tend to sag (Wardell and Wood, 1965). Surface subsidence may be an expression of either multiple pillar failure or bord collapse with accompanying void migration towards the ground surface. Slow deterioration and failure of pillars may take place after mining operation has ended. This is common if pillars are robbed on retreat and consequently the stress on a pillar increase as the extraction ratio increases. The roof rock in the voids may collapse with time. This leads to void migration but the rocks that collapse bulk, so that void migration ultimately comes to an end. However, if seams are at shallow depth (e.g., less than about times the height of the workings), then void migration can give rise to the appearance of crown-holes at the surface (Bell et al., 2001).

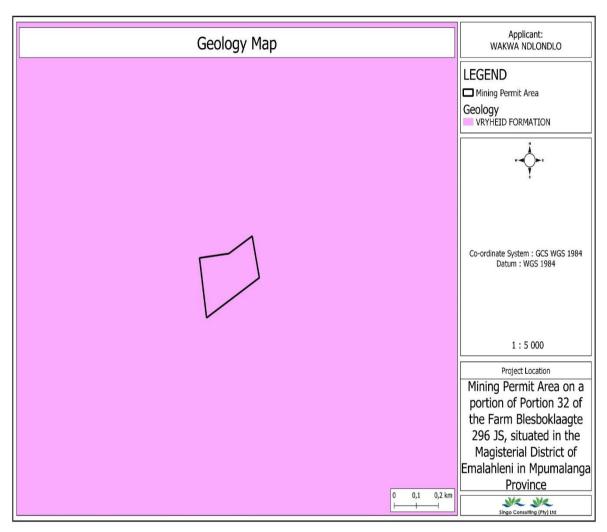
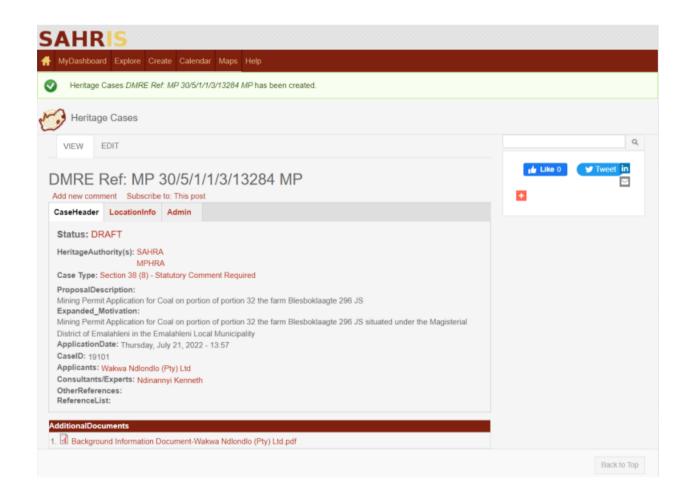


Figure 20: Geology of the proposed site (Singo Consulting (Pty) Ltd, 2022).

1.3.) Heritage

No heritage sites occur on the footprint. The study area was surveyed by foot yet no archaeological sites or artefacts were observed. Furthermore, the area is also not part of any known Cultural landscape. The study area does not form part of any known cultural landscape. Therefore, the proposed development may proceed as no heritage site would be affected. Heritage is of low sensitivity in the proposed area. SAHRA was consulted on the 21st of July 2022.



MAP OF RELATIVE ARCHAEOLOGICAL AND CULTURAL HERITAGE THEME SENSITIVITY



Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
			X

1.4.) Visual exposure

The proposed mining area will include the coal opencast on the farm. The mining area will not be visible from the N4 but will be noticeable from surrounding community and regional road R544.

The applicant should ensure that housekeeping is managed to standard, as this will mitigate the visual impact during the operational phase of the mine. Upon closure of the mine and decommissioning of the site, the area should be fully rehabilitated, and all exposed areas should be seeded to enhance vegetation recovery should natural vegetation not establish within six months of rehabilitation completion.

1.5 Railway line

There is no railway line that runs from or next to the proposed mining area. The railway is situated approximately 2.13 km southeast,



Photo 3: Railway line

1.6 Airblast

Airblast overpressure is the pressure produced by blasting over and above that of atmospheric pressure produced by explosives. The three main concerns associated with airblast overpressure are human discomfort, structural damage and window damage.

The NonexTM method of breaking ensures that expansion gases are contained in the drill hole by effective stemming, which results in very low overpressure levels. Overpressure levels produced by Nonex™M are extremely low when compared to conventional explosives and are of a shorter duration and less damaging frequency. This gives Nonex™ a major advantage over explosives in environmentally sensitive areas.

1.7 Noise

The traffic on the public roads surrounding the property contributes to the ambient noise of the area. The noise to be generated at the proposed mine operation is expected to temporarily increase the noise levels of the area. Blasting noise will be instantaneous and of short duration. Crushing and transportation of the material will generate noise daily. The closest residence is approximately 1.65 km Northeast away, which makes the significance of noise on the surrounding settlement quite low

to medium. Mitigation measures should be implemented to ensure employees conduct them in an acceptable manner while on site to lessen the noise impact of the proposed activity on the surrounding environment.

1.8 Climate

Emalahleni is 1572m above sea level. Emalahleni's climate is classified as warm and temperate. In winter, there is much less rainfall in Emalahleni than in summer. According to Köppen and Geiger, this climate is classified as Cab. In Emalahleni, the average annual temperature is 16.3 °C | 61.4 °F, the average annual minimum temperatures range between 0.1 to 2°C and the mean annual precipitation range between 601 to 800 mm or 29.9 inch of precipitation falls annually. t

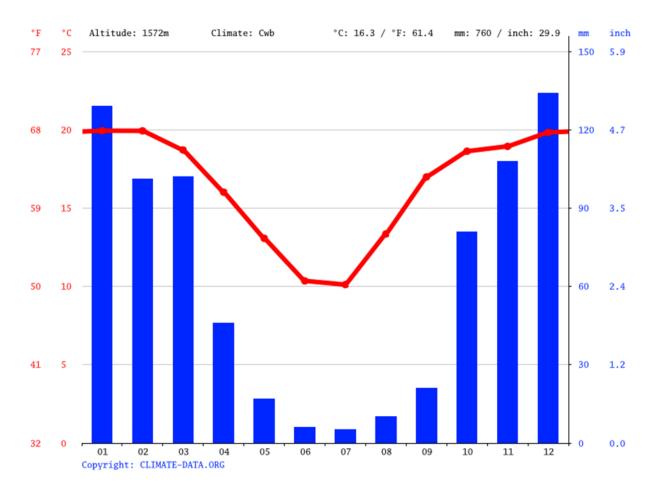


Figure 21: Climate graph

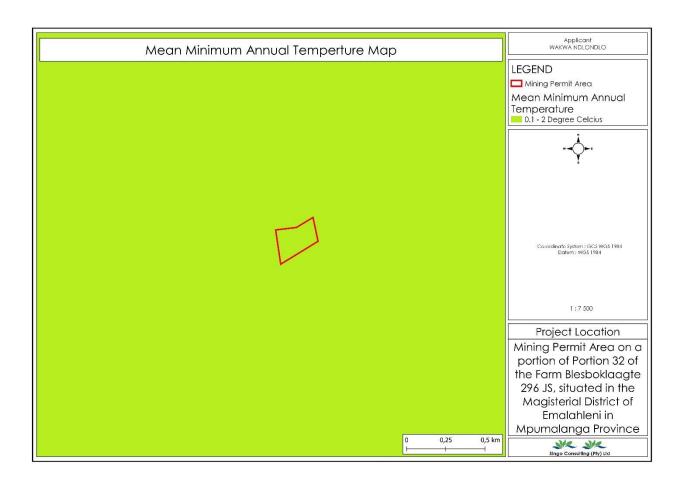


Figure 22: Annual minimum temperatures (Singo Consulting (Pty) Ltd, 2022)

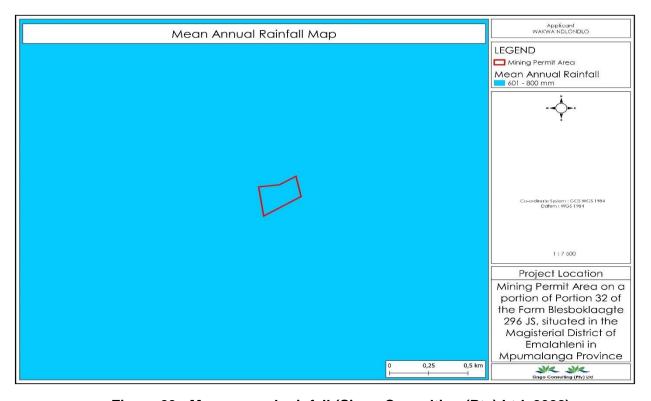


Figure 23: Mean annual rainfall (Singo Consulting (Pty) Ltd, 2022)

1.9 Surface wind field

The average hourly wind speed in Witbank experiences mild seasonal variation over the course of the year. The windier part of the year lasts for 3.9 months, from July 29 to November 26, with average wind speeds of more than 34 m/s. The windiest month of the year in Witbank is September, with an average hourly wind speed of 4 m/s. The calmer time of year lasts for 8.1 months, from November 26 to July 29. The calmest month of the year in Witbank is March, with an average hourly wind speed of 28 m/s.

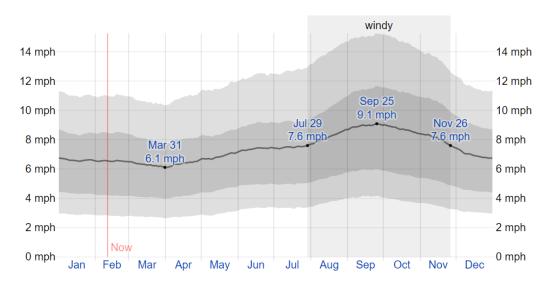


Figure 24: Average wind speed in Witbank.

1.10 Topography

The topology of the area is illustrated below by Figure 12. A topographical map shows the physical features of the land. Besides just showing landforms such as mountains and rivers, the map also shows the elevation changes of the land. The topographical map illustrates that the proposed project area is situated in a region generally characterized by a flat-lying topography as depicted on the topography map below.

Topography is used in this environmental project to determine how soil can be conserved and how water will flow over the land. Topographic data can aid in environmental conservation. Scientists can determine how water and wind cause erosion by understanding the contour of the land. They can aid in the establishment of conservation areas such as watersheds.

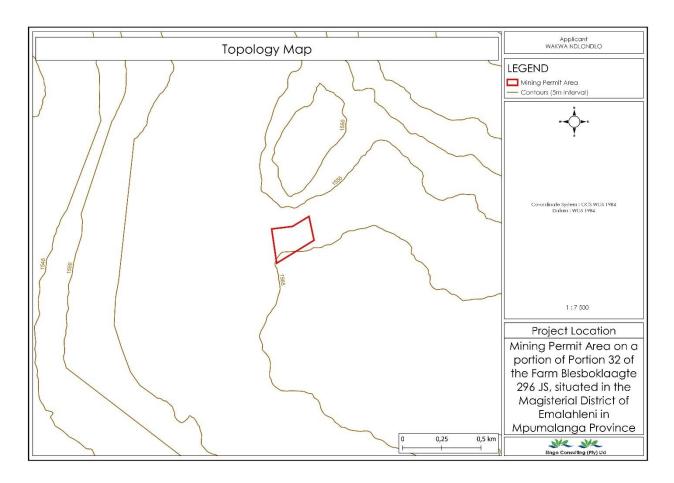


Figure 25: Topology Map of the study area (Singo Consulting (Pty) Ltd, 2022)

1.11 Vegetation

The proposed area is located in the Eastern Highveld Grassland of the Mesic Highveld Grassland Bioregion of the Grassland Biome, which is a threatened species with a vulnerable status. This group of ecosystem climate is characterized by warm, wet summerand cool, dry winters; this, combined with the effects of altitude, results in; a long growing season (centered over summer) lasting about six to seven months, alternating with unproductive winter and early spring seasons; high primary productivity leading to rapid buildup of biomass, resulting in a high fuel load and potentially intense fires. Mesic Highveld grasslands are located in high rainfall regions and are vitally important for water production. The characteristically dense vegetation cover traps surface water, slowing run-off and allowing more time for water to drain vertically through the porous soil profile. The diverse geology underlying Mesic Highveld Grassland correlates closely with high levels of plant species richness and endemism. The soil derived from the diverse types of parent rock varyin texture from sandy to clayey and the sandier solid tend to support lower basal cover buthigher plant species diversity than less sandy ones. The main concerns in this grassland arise from the expansion of activities such as coal mining, commercial agriculture and unplanned urban development (SANBI, 2018).

1.12 Natural vegetation

The vegetation cover in the proposed area is classified as moist sandy highveld grassland as indicated in the figure below, Grasslands are dominated by a single layer of grasses (Rutherford & Westfall, 1986). The amount of cover depends on rainfall and the degree of grazing. The vegetation type is endangered nationally with none conserved and 55% altered, primarily by cultivation. The conservation status of this vegetation type is very poor, with large parts that are either currently cultivated or have been previously ploughed, and the remaining untransformed vegetation that occurs as patchy remnants that are often heavily grazed.

The Moist Sandy Highveld Grassland is also found in the sandy plains west of the Belfast-Carolina-Ermelo area, and north of Volksrust in Mpumalanga, at an altitude of 1,600 to 1,800 m. Moist Sandy Highveld Grassland is dominated by the grasses Eragrostis plana, Eragrostis curvula, Heteropogon contortus, Trachypogon spicatus and Themeda triandra.

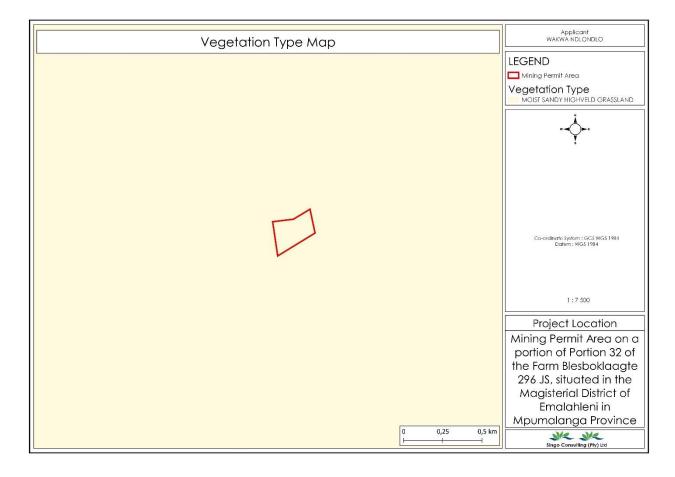


Figure 26: Vegetation map of the project area (Singo Consulting (Pty) Ltd, 2022)

According to the screening report the area is characterised by medium sensitivity of plant species namely Pachycarpus suaveolens and Brachycorythis conica subsp. Transvaalensis.

MAP OF RELATIVE PLANT SPECIES THEME SENSITIVITY

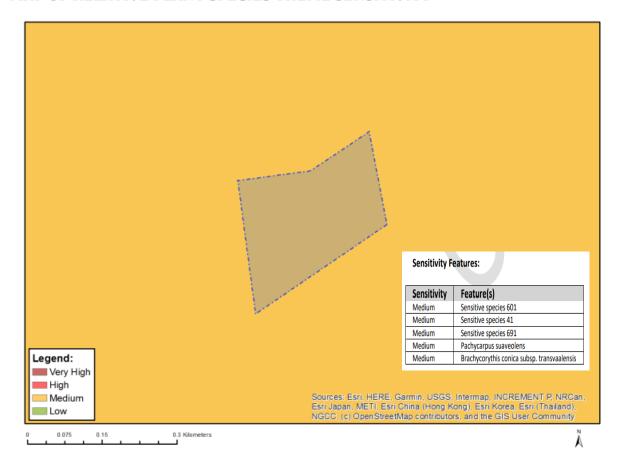


Figure 27: Relative plant species theme sensitivity (adopted from screening report).

Pachycarpus suaveolens is a showy plant with large, hanging, bell-shaped flowers of up to 5 per umbel and exuding milky latex, like most plants in the family Apocynaceae. In summer the flowers of cluster bells are found decorating the grasslands of southern Africa. Threatened by agriculture, mining, and aliens. Seventy-five percent of the known localities occur in heavily transformed areas, with about 45% of the habitat within its known range already transformed (M. Lötter, pers. comm.). Around the Witbank-Carolina-Ermelo area there is substantial coal mining already, as well as renewed interest in coal mining. Several mining applications are currently under consideration for that area (see Khadia carolinensis). Urban expansion may have led to the local extinction of this species in Gauteng (A. Nicholas pers. comm.).

According to Red List of South African plants, ishongwe is listed as Least Concern (LC). Desproposed minee the wide distribution of this species in the wild, plants are relatively rare and with low numbers within a population. Except for Pachycarpus campanulatus var. sutherlandii, the other closely related species to P. campanulatus var. campanulatus, species in the section Trichocodon and are all of conservation importance: P. linearis, P. rostratus (Critically Rare, possibly Extinct) and P. suaveolens (Vulnerable).



Figure 28: Typical example of Pachycarpus suaveolens (adopted from PlantZAfrica.com)

Brachycorythis conica subsp. Transvaalensis is an orchid which was previously classified as Vulnerable in the Red List of South African Plants (Raimondo et al. 2009) due to a large number of historical records. However, since 2007 extensive field surveys have taken place to establish the current situation of this species. Surveys of all historical localities within Gauteng have failed to locate any surviving subpopulations except for one subpopulation of 117 plants near Krugersdorp. Surveys indicate that many of the historical recorded subpopulations in Mpumalanga have also gone extinct, and only three small subpopulations remain in Mpumalanga, all numbering fewer than 10 plants and not considered viable in the long term. Eighty percent of the Krugersdorp population is under housing development application, and all three subpopulations in the Mpumalanga area occur either on the edges of urban settlements or within mining sites, and they are all likely to be lost to development over the next 50 years. As a terrestrial geophytic orchid with a generation length of 20 years, a population reduction of more than 80% is projected to occur within the next 60 years.

This species is severely threatened by ongoing habitat loss to urban expansion in Gauteng and Mpumalanga. In Gauteng, all known historical localities have been affected by extensive urban expansion in recent years, and it appears that this species is now locally extinct within Gauteng except for one remaining subpopulation near Krugersdorp. As Gauteng province is where this species has been recorded in most abundance, habitat loss within this province has caused a significant population reduction. The only known remaining subpopulation within Gauteng is currently threatened by development. Other confirmed subpopulations in Mpumalanga are in an area zoned for development (Middelburg subpopulation), on the outskirts of an informal settlement (Witbank subpopulation), and at a mining site near Ogies, all are in danger of extirpation within the near future.



Figure 29: Typical example of Brachycorythis conica subsp. Transvaalensis (adopted from PlantZAfrica.com).

During site assessment several plant species were observed as indicated in Figure 20 below. The area is dominated by different types of grasses and blue gum tree. The species status report by MTPA has indicated that the farm Blesboklaagte 296 JS has plant species namely Callilepis leptophylla (see Figure 21). Callilepis leptophylla is an aromatic perennial herb with needle-like leaves and large flowers early in the season, and it mixes well with grasses. Its stem arises from a large woody rootstock, glabrous in the lower parts. Leaves and younger branches are often softly villose and closely arranged together at the apices. Its leaves are alternate, linear, and needle-like, up to 45 mm long, single-nerved. It has large flowerheads, with cream-white rays and a purplish black disc. It flowers in spring and early summer (September to January), starting early in the season when not many other perennials are in flower.









Figure 30: The observed vegetation.



Figure 31: Typical example of Callilepis leptophylla (adopted from PlantZAfrica.com)

1.13 Fauna

According to the screening report the proposed mining area has medium animal sensitivity. The identified animal species include *Crocidura maquassiensis* and *Dasymys robertsii*.

MAP OF RELATIVE ANIMAL SPECIES THEME SENSITIVITY

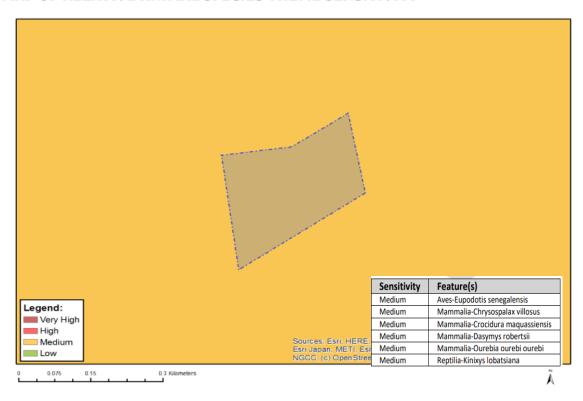


Figure 32: Relative animal species theme sensitivity (adopted from screening report).

The Makwassie musk shrew (Mammalia-Crocidura maquassiensis) is a species of mammal in the family Soricidae. This is a rare species endemic to South Africa, Swaziland, and Zimbabwe, existing in moist grassland habitats in the Savannah and Grassland biomes.

The main threats to shrews are the loss or degradation of moist, productive areas such as wetlands and rank grasslands within suitable habitat. The two main drivers behind this are abstraction of surface water and draining of wetlands through industrial and residential expansion, and overgrazing of moist grasslands, which leads to the loss of ground cover and decreases small mammal diversity and abundance (Bowland & Perrin 1989, 1993). Suppression of natural ecosystem processes, such as fire, can also lead to habitat degradation through bush encroachment or loss of plant diversity through alien invasive infestation, and is suspected to be increasing with human settlement expansion. There are also clear overlaps and synergistic effects between these threats. We infer a continuing population decline based on loss of natural habitat.



Figure 33: Typical example of Mammalia-Crocidura maquassiensis (adopted from mindat.org)

1.14 Soil

According to the in-house soil study conducted and the soil map (see Figure 25), the mining permit area is largely covered with Association of soil Classes 1 to 4: Undifferentiated structureless soils.

Association of Classes 1 to 4: Undifferentiated structureless soils.

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

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

Soil Drainage

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

Erodibility

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



Figure 34: Soil map of the farm (Singo Consulting (Pty) Ltd, 2022).

1.15. Surface Water

According to the in-house baseline hydrology study, there are no water resources within 500m from the proposed area, this is further confirmed by the hydrology map, see Figure 22 below.

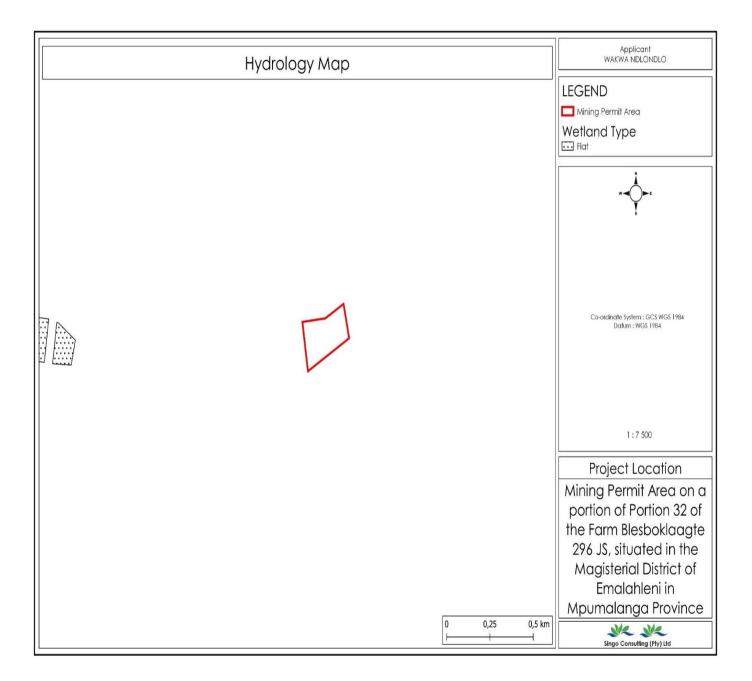
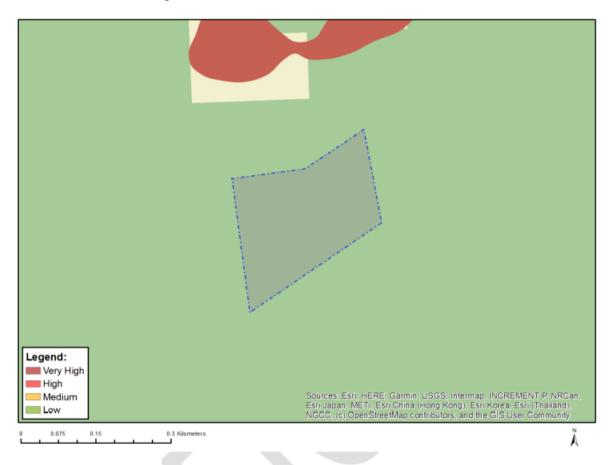


Figure 35: Hydrology of the proposed site (Singo Consulting (Pty) Ltd, 2022)

MAP OF RELATIVE AQUATIC BIODIVERSITY THEME SENSITIVITY



Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
			X

Figure 36: Aquatic Biodiversity Theme Sensitivity

Furthermore, the baseline hydrological study revealed that the project area falls within the Olifants Water Management Area (WMA). The main quaternary catchment is B11K. The WR2012 study, presents hydrological parameters for each quaternary catchment including area, mean annual precipitation (MAP) and mean annual runoff (MAR). Based on the WRC2012 study, the project area falls within the quaternary catchment B11K. The total catchment area of B11K is 378 Km², with a net MAR of 23.19 million cubic meters (mcm) and a (MAP) of 684millimetre (mm).

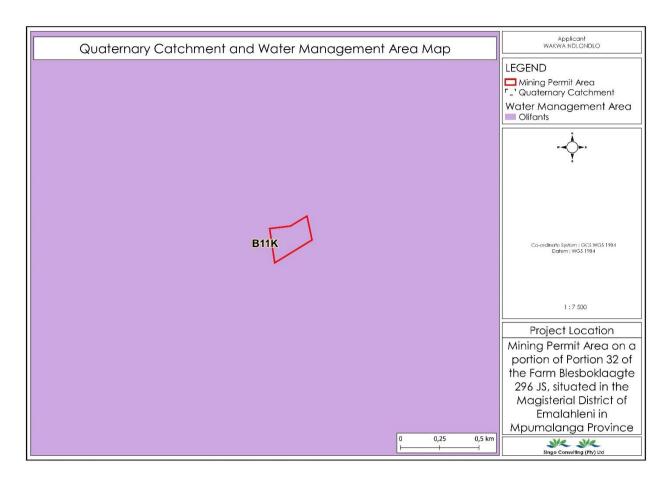


Figure 37: Quaternary catchment and water management (Singo Consulting (Pty) Ltd, 2022)

1.16. Public Road

There is a gravel road which extends from the unnamed tar road which joins the R544 provincial road which will be used to access the proposed site. Coal transportation trucks will use this road to enter and exit the mine premises. These roads will also be used by mine personnel to access the mine areas for their daily duties and the dump trucks will use the road for haulage of material.





Figure 12: Existing access roads to the site

2 Socio-economic settings

The area is composed of eMalahleni Local Municipality therefore it is both an urban and rural area which includes large farms, dispersed urban settlements, coal mines, and power stations. The nearest farmhouses about 180m from the proposed site. The larger proportion is characterized by open bushveld covered by shrubs and grasslands. As a typical rural settlement, a large number of the population is not employed in the vicinity. According to the Gross Value Added (GVA), the largest economic sector is community services with 48.6% study area while mining

activities are the least contributors to the economy of eMalahleni with a contribution of 0.12% of the total GVA. Residents of the area rely on the larger surrounding urban centers for employment opportunities and higher-order goods and services.

The rapid population growth in the municipality put a strain on the provision of basic services (e.g., water, sanitation, public road, and electricity). The rapid expansion of informal settlements presents huge challenges. According to an informal settlement survey conducted, the municipality has 71 Informal settlements with approximately 30000 households.

2.1 Population demographics

According to the 2011 Census by Stats SA, the population of eMalahleni is 395 466. The population grew by 43.1% between 2001 and 2011. The average annual population growth rate was measured at 3.6%. In terms of racial diversity, eMalahleni's population is predominantly black (81.3%) with the remaining portion consisting of 15.7% whites, 1.7% coloured, 0.9% Asians and other 0.3% (IDP, 2014/2015). The population consists of more males than females due to the nature of the local industries, which dictate the type of work available in the area. The sex ratio is 53% male to 47% female (IDP, 2014/2015). CHECK UPDATED IDP FROM NDIMU (2022-2027)

2.2 Education

The number of people over the age of 20 with no schooling totals 14 993, which is 5.8 % of the Municipality's population. The percentage of the population over the age of 20 with matric or higher was 45.3%. This was the third best in comparison with the other 18 municipal areas. The matric pass rate in 2012 was 72.0%, which places the Municipality 7th in the province. The University/degree admission rate was found to be low at only 19.0% in 2012 (IDP, 2014/2015).

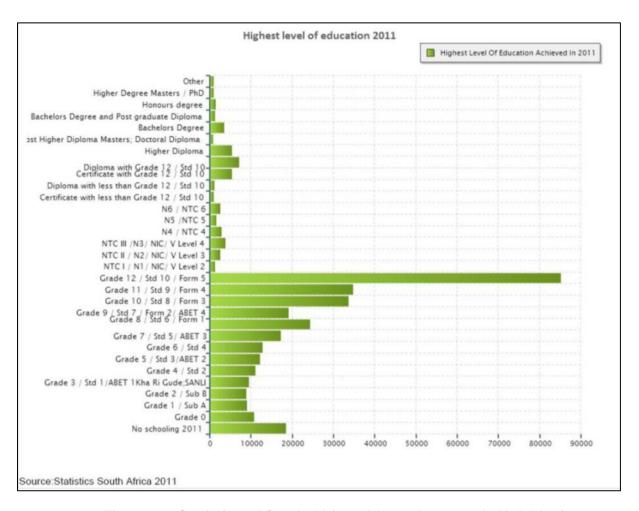


Figure 38: Statistics of South Africa with a reference of eMalahleni

2.3 Employment and income

The leading industry in terms of employment is trade at 21.1%, followed by mining 20.6% and manufacturing 14.2%. Since 2001, there has been an increase in employment in the mining, construction, community services and financial sectors and a decrease in the trade, manufacturing, transport, agriculture, private households, and utility sectors.

2.4 HIV, health, and wellbeing

HIV, AIDS, and Tuberculosis contribute significantly to the burden of disease faced by the South African Government. Huge amounts of resources are expended on serving the health needs of citizens. If the situation continues unabated, it creates a situation where other services are sacrificed to meet the high costs of providing health services to a disproportionately large section of the population. It is for this reason that the South African Government has placed HIV/AIDS at the top of its health priorities.

This goal is in line with the Millennium Development Goals of eradicating HIV/AIDS by 2015. The eMalahleni Metro is equally challenged by its vulnerability to HIV/AIDS. It can never be overemphasised that the situation needs serious and urgent attention. For South Africa to achieve its

goal of eradicating HIV/AIDS by 2015, the responsibility lies with local municipalities, especially metropolitan municipalities, given their expanded functions which include the provision of health services and proximity to local residents. The applicant acknowledges that HIV/AIDS is a national problem and will encourage employees to get tested and know their status by participating in local HIV/AIDS awareness campaigns. Educating employees on the subject matter is important and therefore the project will support the local municipality in its programmes.

b.) Description of the current land uses.

The land within which the proposed site is nestled is a mixture of industrial), agricultural, and residential area. eMalahleni, as its name (place of coal) indicates, is known for its large coal mining industry and associated power stations (Kusile, Duvha, Kendal and Komati). There are also adjacent operating mines that were observed during site assessment namely Africoal SA, now known as Eyethu Coal (Leeuwpoort East Colliery), Rodium (Pty) Ltd and Inyathi Engineering Mine. Samancor Ferrochrome



industry is located approximately 1.7 km southwest of the proposed project area.

Figure 39: Current land uses



Figure 40: Inyathi Coal Mine



Figure 41: Leeuwpoort East Colliery



Figure 42: Current Land Uses Map

c.) Description of specific environmental features and infrastructure on the site.

The following table provides a description of the land uses and/or prominent features that currently occur within a 500 m radius of the site.

Table 8: Land use character of the project area

Land use character	Yes	No	Description
Natural area	Yes		The area is heavily modified. There is plantation
			and natural vegetation.
Low-density residential		No	
			57
Medium-density residential		No	
High-density residential		No	
Informal residential		No	
Retail commercial and		No	
warehousing			
Light industrial		No	
Medium industrial		No	
Heavy industrial		No	
Power station		No	
Office/consulting room		No	

Land use character	Yes	No	Description
Military or police base/		No	
station/compound			
Soil heap or slimes dam		No	
Quarry, sand, mine or borrow		No	
proposed mine			
Dam or reservoir		No	
Hospital/medical centre		No	
School or crèche		No	
School		No	
Tertiary education facility		No	
Church		No	
Old age home		No	
Sewage treatment plant		No	
Train station or shunting yard		No	
Railway line		No	
Major (road 4 lines or more)		No	
River, stream, or wetland		No	
Agriculture		No	
Nature conservation area		No	
Mountain, hill, or ridge		No	
Museum		No	
Historical building		No	58
Plantation		No	
Landfill/waste treatment site		No	
Archaeological sites		No	
Other land uses		No	

d.) Environmental and current land use map.

Land Use and Capability

Land cover

The proposed area is characterised by plantation and natural vegetation according to the desktop study (refer to figure 37), however during ground truthing no

plantations were observed. There is a residential settlement called Klarinet located 1.65 km Northeast from the proposed mining site. Apart from the settlement, the land is also used plantation as well as natural vegetation with a patch of bare land.

Broad Land Uses

The current land use pattern in the proposed site and surrounding areas is also largely covered by Highveld grassland vegetation.

Land use character of surrounding area

The following land uses and/or prominent features are currently occurring within a 1km radius of the site, therefore, a description of how these features may be influenced impacted upon by the project is summarized:

Table 9: Land Uses

Land use character	Description						
Natural area	Some of the surrounding land can be classified						
	as natural as it is undeveloped. No impact is						
	envisaged for such areas.						
Medium density residential	The residential area is around the site, impacts to						
	these residential areas will be both positive and						
	negative in nature.						
Retail commercial & warehousing	The site is not surrounded by retail commercial & warehousing.						
Industrial developments	There is industrial development near the proposed 59						
	mining area.						
Railway line	No Railway line closer to the site.						
-	The railway is situated approximately 2.13 km						
	southeast						
Plantation	There is no plantation that is visible on site.						

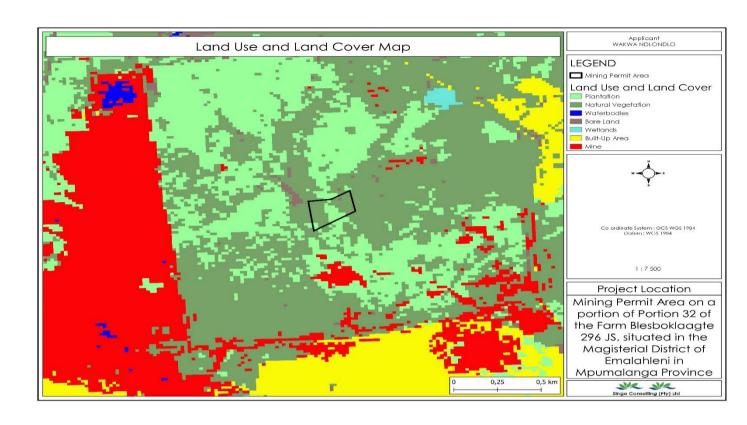


Figure 43: Land Use and Land Cover Map of the proposed area (Singo Consulting (Pty) Ltd, 2022).

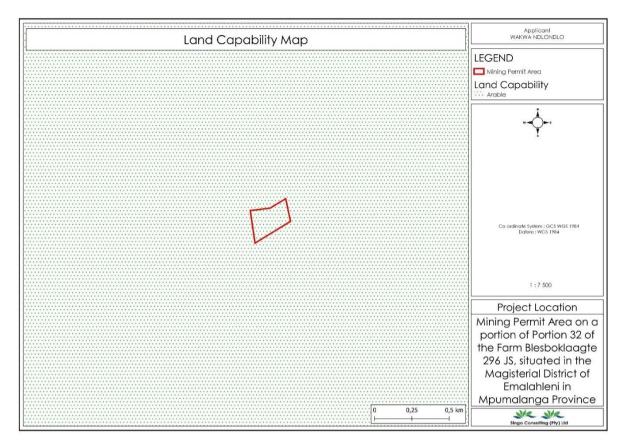


Figure 44: Land Capability Map

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

The proposed coal mine will be established on a previously underground mined area with minimal natural vegetation cover. The adjacent land hosts the Samancor Ferrochrome industry, and some parts are being utilised for agricultural purposes. Upon closure of the mining area, the land will, once again, be used for agricultural purposes.

Due to the remote location of the mine, little to no significantly negative impacts on the community could be identified. The dust and noise impacts that may emanate from the mining area during the operational phase could have a negative impact on the surrounding community if the mitigation measures proposed in this document are not implemented and managed on-site. The operation of the mine will, however, also have several positive impacts, such as permanent job creation for skilled, semi-skilled and un-skilled workers. The proposed mine will, therefore, contribute to upgrading/ maintaining infrastructure in and around Witbank area, which will indirectly contribute to the economy of the area.

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 potential impacts were identified of each main activity in each phase. The significance rating was determined using the methodology described in. The impact rating listed below was determined for each impact prior to bringing the proposed mitigation measures into consideration. The degree of mitigation indicates the possibility of partial, full or no mitigation of the identified impact.

2.1 Stripping and stockpiling of topsoil

Significant impacts:

Visual intrusion associated with the establishment of the mining area

Dust nuisance caused by soil disturbance.

Noise nuisance caused by machinery stripping and stockpiling the topsoil.

Infestation of the topsoil heaps by weeds or invader plants.

Loss of topsoil due to incorrect storm water management.

Contamination of area with hydrocarbons or hazardous waste materials.

2.2 Blasting

Significant impacts:

Health and safety risk posed by blasting activities.

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Dust nuisance caused by blasting activities.

Noise nuisance caused by blasting activities.

2.3 Excavation

Significant impacts:

Visual intrusion associated with the excavation activities.

Dust nuisance due to excavation activities.

Noise nuisance generated by excavation equipment.

Unsafe working conditions for employees.

Negative impact of the fauna and flora of the area.

Contamination of area with hydrocarbons or hazardous waste materials.

Weed and invader plant infestation of the area.

2.4 In-proposed mine crushing

Significant impacts:

Dust nuisance due to the crushing activities.

Noise nuisance generated by the crushing activities.

Contamination of area with hydrocarbons or hazardous waste materials.

2.5 Stockpiling and transporting

Significant impacts:

Visual intrusion associated with the stockpiled material and vehicles transporting material.

Loss of material due to ineffective storm water handling Weed and invader plant infestation of the area due to the disturbance of the soil.

Dust nuisance from stockpiled material and vehicles transporting the material.

Degradation of access roads

Noise nuisance caused by vehicles

Contamination of area with hydrocarbons or hazardous waste materials

2.6 Sloping and landscaping during rehabilitation

Significant impacts:

63

Soil erosion

Health and safety risk posed by un-sloped areas

Dust nuisance caused during sloping and landscaping activities

Noise nuisance caused by machinery

Contamination of area with hydrocarbons or hazardous waste materials

2.7 Replacing of topsoil and rehabilitation of disturbed area

Significant impacts:

Loss of reinstated topsoil due to the absence of vegetation

Infestation of the area by weed and invader plants

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

The risk assessment was conducted using methodology outlined in DWS 2015 publication This methodology has been utilised for the assessment of environmental impacts where the consequence (severity of impact, spatial scope of impact and duration of impact) and likelihood (frequency of activity and frequency of impact) have been considered in parallel to provide an impact rating and hence an interpretation interms of the level of environmental management required for each impact. The risk ratings and significance are indicated in the table 13-21 below.

Table 10: Severity

How severe does the aspects impact on resource quality (flow regime, water quality, geomorphology, biota, habitat)?

Insignificant / non harmful	1						
Small / potentially harmful	2						
Significant / slightly harmful	3						
Great/ harmful	4						
Disastrous / extremely harmful and /or	5						
wetland(s) involved							
Where "or wetland(s) are involved" it means that the activity is located within the							
delineated boundary of any wetland. The score of 5 is only compulsory for the							

Where "or wetland(s) are involved" it means that the activity is located within the delineated boundary of any wetland. The score of 5 is only compulsory for the significance rating.

Table 11: Spatial Scale

How big is the area that the aspect is impacting on?

Area specific (at impact site)	1
Whole site (entire surface right)	2
Regional / neighbouring areas	3
National	4
Global (impacting beyond SA boundary)	5

Table 12: Duration

How long does the aspect impact on the environment and resource quality?

One day to one month, PES, EIS and /or REC not impacted	1
One month to one year, PES, EIS and /or REC impacted but no change in status	2
One year to 10 years, PES, EIS and /or REC impacted to a lower status but can be improved over this period through mitigation	3
Life of the activity, PES, EIS and /or REC permanently lowered	4
More than life of the organisation /facility, PES and EIS scores, a E or F PES and EIS (sensitivity) must be considered.	5

Table 13: Frequency of the activity

How often do you do the specific activity?

Annually or less	1
6 monthly	2
Monthly	3
Weekly	4
Daily	5

Table 14: Frequency of the incident/ impact

How often does the activity impact on the environment?

Almost never / almost impossible / >20%	1
Very seldom / highly unlikely / >40%	2
Infrequent / unlikely / seldom / >60%	3
Often / regularly/ likely / possible / >80%	4
Daily / highly likely / definitely / >100%	5

Table 15: Legal issues

How is the activity governed by legislation

Trouble and dearthy governed by regionalie	••
No legislation	1
Fully covered by legislation	5
Located within the regulated areas	

Table 16: Detection

How quickly can the impacts/risks of the activity be observed on the resource quality,people, or property?

Immediately	1
Without much effort	2
Need some effort	3
Remote and difficult to observe	4
Covered	5

Table 17: Rating classes

Rating	Risk Class	Management Description
1-55	Low (L)	Acceptable as is or consider requirement for mitigation impact
56-169	Moderate (M)	Risk and impact on notably are required and mitigation measureson a higher level
170-300	High (H)	Impact on the environment has a long-term impact.

A low-risk class must be obtained for all activities to be considered for a GA The positive and negative impacts that the proposed activity (in terms of the initial site layout) and alternatives will have on the environment and the community that may be affected.

Table 18: Calculation

Consequence = Severity + Spatial Scale + Duration

Likelihood = Frequency of Activity + Frequency of Incident + Legal Issues + Detection

Significance \Risk = Consequence X Likelihood

b) Full description of the process undertaken to identify, assess and rank the impacts and risks

(In respect of the final site layout plan) through the life of the activity).

To identify the potential impacts associated with the proposed excavation activities, the following steps were undertaken:

- i.) The stakeholder consultant process is currently being undertaken in a manner to be interactive, providing the landowners and identified stakeholders with an opportunity to provide input into the project. This is considered a key focus as the local residents have capabilities of providing site-specific information, which may not be available in desktop research material. Stakeholders were requested, as part of the notification letter, to provide their views on the project, and to state anypotential concerns they may have. All comments and responses provide will be collated into the Comments and Responses Register, which will be attached to thefinal BAR, and will also be incorporated into the final impact assessment.
- ii.) A detailed desktop study was undertaken to determine the environmental setting in which the project is located. Based on the desktop investigations, various resources were used to determine the significance and sensitivity of the various environmental considerations. The desktop investigation involved the use of:
- ➤ The South African National Biodiversity Institute (SANBI) Biodiversity Geographic Database LUDS System;
- ➤ The Department of Environmental Affairs 2015 Landcover and Land use Mapping Database:
- Department of Water and Sanitation information documents such as the Internal Strategic Perspective (ISP) for the local rivers and Groundwater Vulnerability Reports
- Municipal Integrated Development Plans of the Municipality
- The Provincial Spatial Development Framework for the Mpumalanga Province. The rating of the identified impacts was undertaken in a quantitative manner asprovided in Section V (impact rating). The ratings were undertaken in a manner tocalculate the significance of each of the impacts. The identification of managementand mitigation measures was done based on the significance of the impacts andmeasures included are considered sufficient,

appropriate, and practical to protect theenvironment.

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

(This is in terms of the initial site layout), and alternatives will have on the environment and the community that may be affected).

The impacts of the proposed site layout will be the same as those of the alternative sites that may be identified during the excavation exercise.

The positive impacts of the activities are the creation of employment, which is required in the region. This will result in job creation and support to local businesses will be continued.

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

The proposed coal mine will be established on a previously underground mined area with minimal natural vegetation cover. The adjacent land hosts the Samancor Ferrochrome industry, and some parts are being utilised for agricultural purposes. Upon closure of the mining area, the land will, once again, be used for agricultural purposes.

Due to the remote location of the mine, little to no significantly negative impacts on the community could be identified. The dust and noise impacts that may emanate from the mining area during the operational phase could have a negative impact on the surrounding community if the mitigation measures proposed in this document are not implemented and managed on-site. The operation of the mine will, however, also have several positive impacts, such as permanent job creation for skilled, semi-skilled and un-skilled workers. The proposed mine will, therefore, contribute to upgrading/ maintaining infrastructure in and around Witbank area, which will indirectly contribute to the economy of the area.

18.) The possible mitigation measures that could be applied and the level of risk.

Regarding the issues and concerns raised by affected parties provide a list of the issues raised and an assessment/discussion of the mitigation or site layout alternatives available to accommodate or address their concerns, together with an assessment of the impacts or risks associated with the mitigation or alternatives considered.

2.1 Visual mitigation

The risk of the proposed mining activities having a negative impact on the aesthetic quality of the surrounding environment can be reduced to medium risk through the implementation of the following mitigation measures:

- The site must be always kept neat and in good condition.
- Upon closure, the site must be rehabilitated and sloped to ensure that the visual impact on the aesthetic value of the area is minimal.

2.2 Dust handling

The risk of dust generated from the proposed mining activities having a negative impact on the surrounding environment can be reduced to low medium through the implementation of the following mitigation measures:

- Dust liberation into the surrounding environment must be effectively controlled using, inter
 alia, water spraying and/or other dust-allaying agents.
- The site manager must ensure continuous assessment of all dust suppression equipment to confirm its effectiveness in addressing dust suppression.
- Access road speeds must be limited to 40km/h to prevent excessive dust generation.
- Roads must be sprayed with water or an environmentally friendly dust allaying agent, that contains no PCBs (e.g., DAS products), if dust is generated above acceptable limits.
- The in-proposed mine crusher plant must have operational water sprayers to alleviate dust generation from the conveyor belts.

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2.3 Noise handling

The risk of noise, generated from the proposed mining activities, having a negative impact on the surrounding environment can be reduced to low medium through the implementation of the following mitigation measures:

- The applicant must ensure that employees and staff conduct themselves in an acceptable manner while on site, both during work hours and after hours.
- No loud music may be permitted at the mining area.
- All mining vehicles must be equipped with silencers and kept roadworthy in terms of the Road Transport Act.
- The type, duration and timing of the blasting procedures must be planned with due

cognisance of other land users and structures in the vicinity.

Surrounding landowners must be notified, in writing, prior to blasting occasions.

2.4 Management of weed or invader plants

The risk of weeds or invader plants invading the disturbed area can be reduced to low through the implementation of the following mitigation measures:

- A weed and invader plant control management plan must be implemented at the site to ensure eradication of all listed invader plants in terms of Conservation of Agricultural Act (Act No 43 of 1983).
- Management must take responsibility to control declared invader or exotic species on the rehabilitated areas. The following control methods can be used:
 - o The plants can be uprooted, felled, or cut off and destroyed completely.
 - The plants can be treated with an herbicide that is registered for use in connection therewith and in accordance with the directions for the use of such an herbicide.
- The temporary topsoil stockpiles must be kept free of weeds.

2.5 Storm water handling

The risk of contamination through dirty storm water escaping from work areas, or erosion or loss of material caused by uncontrolled storm water flowing through the mining area, can be reduced to low by implementing the following mitigation measures:

- Storm water must be diverted around the topsoil heaps, stockpile areas and access roads to prevent erosion and loss of material.
- Runoff water must also be diverted around the stockpile areas with trenches and contour structures to prevent erosion of the work areas.
- Mining must be conducted in accordance with the Best Practice Guideline for small scale mining that relates to storm water management, erosion and sediment control and waste management, developed by the Department of Water and Sanitation (DWS), and any other conditions the DWS may impose:
 - Clean water (e.g., rainwater) must be kept clean and routed to a natural watercourse by a system separate from the dirty water system. Clean water must be prevented from running or spilling into dirty water systems.
 - Dirty water must be collected and contained in a system separate from the clean water system.

- Dirty water must be prevented from spilling/seeping into clean water systems.
- The storm water management plan must apply for the entire life cycle of the mine and over different hydrological cycles (rainfall patterns).
- The statutory requirements of various regulatory agencies and the interests of stakeholders must be considered and incorporated into the storm water management plan.

2.6 Management of health and safety risks

The health and safety risk posed by the proposed mining activities can be reduced to low through the implementation of the following mitigation measures:

- The type, duration and timing of the blasting procedures must be planned with due cognisance of other land users and structures in the vicinity,
- The surrounding landowners and communities must be informed, in writing, ahead of any blasting event.
- Measures to limit fly rock must be taken.
- Audible warning of a pending blast must be given at least 3 minutes before the blast.
- All fly rock (with diameters of 150 mm and larger) which falls beyond the working area, together with the rock spill, must be collected and removed,
- Workers must have access to the correct PPE, as required by law.
- All operations must comply with the Occupational Health and Safety Act (OHSA).

2.7 Waste management

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The risk of waste generation having a negative impact on the surrounding environment can be reduced to low through by implementing the following mitigation measures:

- Regular vehicle maintenance may only take place within the service bay area of the offsite workshop. If emergency repairs are needed on equipment unable to move to the workshop, drip trays must be present. All waste products must be disposed of in a 200L closed container/bin to be removed from the emergency service area to the workshop to ensure proper disposal.
- Any effluents containing oil, grease or other industrial substances must be collected in a suitable receptacle and removed from the site, either for resale or for appropriate disposal at a recognised facility.
- Spills must be cleaned up immediately to the satisfaction of the Regional Manager by

removing the spillage and the polluted soil and disposing of it at a recognised facility. Proof hereof should be filed.

- Suitable covered receptacles should be always available and conveniently placed for waste disposal.
- Non-biodegradable refuse, such as glass bottles, plastic bags, metal scrap, etc., should
 be stored in a container with a closable lid at a collecting point, collected on a regular
 basis and disposed of at a recognised landfill site. Specific precautions should be taken
 to prevent refuse from being dumped on or in the vicinity of the mine area.
- Biodegradable refuse generated should be handled as indicated above.

2.8 Management of access roads

The risk on the condition of the roads, because of the proposed mining activities, can be reduced to low medium by implementing the following mitigation measures:

- Storm water must be diverted around the access roads to prevent erosion.
- Erosion of access road: Vehicular movement must be restricted to existing access routes
 to prevent criss-crossing of tracks through undisturbed areas. Rutting and erosion of the
 access road because of the mining activities should be repaired by the applicant.

2.9 Topsoil handling

The risk of topsoil loss can be reduced to low by implementing the following mitigation measures:

- Where applicable, the first 300 mm of topsoil should be removed in strips and stored along the boundary of the mining area. Stockpiling of topsoil must be done to protect it from erosion, which includes mixing it with overburden or other material. The topsoil must be used to cover the rehabilitated area and improve the establishment of natural vegetation.
- The temporary topsoil stockpiles of each removed strip must be kept weed free.
- Topsoil stockpiles must be placed on a levelled area and measures should be implemented to safeguard the piles from being washed away in the event of heavy rain/storm water.
- Topsoil heaps should not exceed 1.5 m, to preserve micro-organisms in the topsoil, which can be lost due to compaction and lack of oxygen.
- Should natural vegetation not establish on the heaps within 6 months of stockpiling, it
 must be planted with an indigenous grass species.
- Storm and runoff water should be diverted around the stockpile area and access roads to

prevent erosion.

2.10 Protection of fauna and flora

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

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

19.) Motivation where no alternatives sites were considered

The mining sector accounts for a quarter of all economic activity in the Mpumalanga province and is also the largest single sector, providing employment to 25 percent of the province's workforce. Mpumalanga contributes 83 percent of all coal produced in South Africa, making it the world's third largest coal- exporting region. Towns such as eMalahleni and Middleburg in the Nkangala District Municipality are the centre of the coal mining industry. Mpumalanga coal mining industry is developing as a significant attractor of both foreign and local direct investment in the province. This is particularly important for the development and economic growth of the communities in eMalahleni.

Wakwa Ndlondlo (Pty) Ltd identified the growing need for coal resources due to an increase in power demand. In this light, the applicant identified the proposed area as the preferred and only viable site alternative because of its immediate availability backed by data reviewed in the PWP, which has proven that coal resources are available in the area. The establishment of a coal proposed mine in this un-utilised area was found to be most viable.

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

- The open cast mining of the coal has been identified as the most effective method to produce the desired coal product.
- The use of temporary infrastructure will reduce the impact on the environment and decrease closure objectives regarding infrastructure decommissioning.

• It is recommended that the existing farm road connected to the provincial road to the north-west of the property be used as an access road instead of trucks turning from the farm entrance onto the N4.

As discussed previously, the proposed site was selected because it contains good quality coal and it is located in a convenient position close to the R544 and N4. The site is therefore regarded as the preferred site and alternatives site, are not considered. There are no alternatives to be considered as the application has already been accepted. Only changes in the layout plan and access roads will be discussed and agreed on with the affected landowners.

The site layout was determined by considering both spatial and practical mining operation aspects. The location and extent of the mining activities will be based on the information derived from the desktop surveys as well as the specialist studies. Wherepracticable, the mining sites and location of infrastructure was selected on the basis to avoid sensitive environments such as wetlands, watercourses, biodiversity of conservation importance and heritage features.

The proposed site was selected because it is rich in coal and the coal is of goodquality. The proposed site is located within a section of portion of portion 32 of the farm Blesboklaagte 296 JS which is located at a flat gradient providing a large surface area suitablefor excavation, with no permanent surface water. There are no wetlands on site. The aesthetic characteristics of the surrounding areas will be minimalto none.

The proposed activities have medium to low significance impacts, which will be short term activities in nature. The probability of occurrence of an impact was determined and most of the activities can be controlled and impacts can be reduced or avoided. The probability was also determined based on other excavation activities of similar nature. It was found that generally excavation activities have low impact on the environment.

20.) Statement motivating the alternative development location within the overall site.

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

The open cast mining of the coal has been identified as the most cost-effective method to produce the desired coal product. The proposed method will produce any residual (overburden) waste to be disposed of. Due to the remote location of the coal proposed mine, the potential impacts on the surrounding environment, associated with open cast mining, is considered of low significance. It is proposed that all mining-related infrastructure will be contained within the boundaries of the mining area. As no permanent infrastructure will be

established on site, the layout/position of the temporary infrastructure will be determined by the mining progress and available space in the mining area.

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

Table 19: Impact assessment table for the construction phase

).			Impact	Impact Significance Rating Before Mitigation Measures					Mitigation Measures				
Unite Number	Activity	Aspect		ı	F	D	E	Р	s	С	IS	SIGNIFICANC	
1,0	Employment of workers and procurement of materials	-	Creation of employment	3	3	5	1	1,0	3,7	2,3	2,3	Moderate	Emphasis to employ local individuals must be maximised, reducing the need for migrant labour; the mine should prioritise employment of the local community members and contracts must include employment targets as part of their contractual agreements; Employment requirements should be broadly publicised to ensure that job-seekers do not have unrealistic job expectations; Liaison structures with the local police and community policing forums must be established and development of informal settlements within the proposed mining areas to be communicated to the forums for
		Social											potential monitoring and addressing

2,0	Site		Dust										The area of disturbance must be
	clearance		generation										restricted to the required footprint size;
	and topsoil		emanating										
	removal		from the										Ensure that only vegetation within the
	because of		activities										designated areas is removed;
	the		associated with										
	proposed		the Mining										The drop heights used during the
	Project.		Project areas	4	4	4	2	1,0	4,0	3,0	3,0	Moderate	loading of the cleared soils into trucks
													should be minimised as far as possible;
													and
													Dirt roads to be wetted by a water
		ity											browser and/or any applicable dust
		Quality											suppressant so as to reduce dust
		Air G											plumes.

ē		Impact	S	ignifi	cance	Rati	ng Be	fore N	litigation	on Me	asures	Mitigation Measures	
Unite Number	Activity	Aspect		ı	F	D	E	Р	S	С	IS	SIGNIFICAN	
		Topography and Visual Environment	Topography changes and the disruption of surface water flow. Soil erosion and topsoil loss. Visual impact caused by vegetation and topsoil removal.	3	3	4	1	0,8	3,3	2,2	1,7	Low	 Ensure vegetation and topsoil is only be cleared when necessary and within the demarcated areas; Ensure topsoil stockpiles are vegetated as soon as possible; and Ensure topsoil stockpiles are contoured and have a steepness of less than 18° to prevent slope failure and erosion and aid in vegetation establishment. Topsoil stockpiles that will be kept for more than a year are to be vegetated to sustain ecological components and further prevent dust emissions and growth of alien vegetation.
		Soil	Soil contamination and degradation during soil stripping and management	3	4	4	1	0,8	3,7	2,3	1,9	Low	 Excavation and long-term stockpiling of soil should be limited within the demarcated areas as far as practically possible; Ensure all stockpiles (especially topsoil) are clearly and permanently

Soil erosion		demarcated and located in defined no-go areas; • Restrict the amount of mechanical
and generation		handling, as each handling event
of dust.		increases that compaction level and
		the changes to the soil structure;
		Soil stripping should be done in line
		with a topsoil stripping plan;
		Where possible, separate stockpiling of
		different soil to obtain the highest post-
		mining land capability;
		Stockpiles should be revegetated to
		establish a vegetation cover as an
		erosion control measure. These
		stockpiles should also be always kept
		alien vegetation free to prevent loss of
		soil quality;
		and Temporary berms can be
		constructed, around stockpile areas
		whilst vegetation cover has not
		established to avoid soil loss through
	81	erosion.

	Soil										If possible, vegetation clearance and
	compaction.										commencement of mining related
											activities (construction of haul road),
											can be scheduled to coincide with low
											rainfall conditions when soil moisture is
											anticipated to be relatively low such
		4	5	4	1	1,0	4,3	2,7	2,7	Moderate	that the soils are less prone to
											compaction;
											The movement of heavy vehicle should
											be limited to existing roads and be
											limited to areas where construction of
											haul road is to take place.

er			Impact	S	Significance Rating Before Mitigation Measures								Mitigation Measures
Unite Number	Activity	Aspect		ı	F	D	E	Р	S	С	IS	SIGNIFICAN	
			Loss of land capability and land use potential	2	1	4	1	0,8	2,3	1,7	1,3	Low	Any compacted soils must be ripped to alleviate compaction; Stored topsoil should be replaced (if any) and the footprint graded to a smooth surface; The landscape should be backfilled and reprofiled to mimic the natural topography for potential agricultural activities and grazing opportunities post mining. If possible, ensure a continuation of the pre mining surface drainage pattern; Slopes of the backfilled surface should change gradually since abrupt changes in slope gradient increase the susceptibility for erosion initiation; The soil fertility status to be determined by soil chemical analysis after levelling (before seeding/revegetation). Soil amelioration should be completed, if necessary, according to

											recommendations by a soil specialist, to correct the pH and nutrition status before revegetation; and • The footprint should be re-vegetated with a grass seed mixture as soon as possible, preferably in spring and early summer to stabilise the soil and prevent soil loss during the rainy season.
	Loss of vegetation communities.	4	1	5	1	0,8	3,3	2,2	1,7	Low	 Ensure site clearing is restricted to the footprint of the designated areas to limit the degradation and destruction of natural habitats; Vegetate open and exposed areas to prevent soil erosion and the establishment of alien invasive vegetation; Restrict access and avoid areas of identified faunal and floral SSC, that are adjacent to the mining activities; Rescue and relocate important plant species Restrict access and avoid sensitive landscapes, such as wetlands and ridges, that are adjacent to the mining operations; and Topsoil that will be used for

												rehabilitation must be stockpiled according to the Rehabilitation Plan. Compaction of stockpiled topsoil must be avoided to ensure the seed bank is viable.
		Influx and establishment of alien invasive vegetation.	3	3	4	2	0,8	3,3	2,7	2,1	Moderate	Alien invasive vegetation to be identified and removed throughout the LoM.
	Wetlands and Aquatic Ecology	Sedimentation of wetland areas downstream of the stockpiles.	3	3	4	1	0,8	3,3	2,2	1,7	Low	 Ensure soil management programme is implemented and maintained to minimise erosion and sedimentation; Active rehabilitation, re-sloping, and re-vegetation of disturbed areas immediately after construction; Implement and maintain alien vegetation management programme; Appropriate sanitary facilities must be provided for the duration of the construction activities and all waste must be removed to an appropriate waste facility.
		Contamination of soils as a result of the	3	5	4	1	1,0	4,0	2,5 85	2,5	Moderate	Ensure soil management programme is implemented and maintained to minimise erosion and sedimentation;

ingress of		Active rehabilitation, re-sloping, and
hydrocarbons		re-vegetation of disturbed areas
Try drobat botto		immediately after construction;
		Implement and maintain alien
		vegetation management programme;
		Limit the footprint area of the
		construction activities to what is
		absolutely essential in order to
		minimise impacts as a result of
		vegetation clearing and compaction of
		soils;
		All erosion noted within the
		construction footprint should be
		remedied immediately and included as
		part of an ongoing rehabilitation plan;
		All delineated watercourses and their
		associated 100 m zones of regulation
		in terms of GN704 should be
		designated as "No-Go" areas and be
		off limits to all unauthorised vehicles
		and personnel, with the exception of
		approved construction and operational
		areas unless authorised as part of the
		IWUL;
		No unnecessary crossing of the
		watercourses should take place and
	86	wherever possible, existing
		wholevel possible, existing

						infrastructure should be utilised
						Suitably designed culverts should be
						installed under road crossings where
						any watercourses are anticipated to be
						crossed;
						The number of culverts installed
						should be suitable for the gradient
						width and flow profiles of the
						watercourses being crossed so as to
						avoid upstream inundation, erosior
						and incision, and alterations to the
						natural channel
						Crossings should make use of
						existing roads wherever possible and
						should either utilise or be constructed
						downgradient of barriers associated
						with impoundments on the affected
						systems;
						No material may be dumped or
						stockpiled within delineated
						watercourses;
						 No vehicles or heavy machinery may
						be allowed to drive indiscriminately
						within any delineated watercourses. Al
						vehicles must remain on demarcated
					07	roads and within the construction
					87	footprint;

											All vehicles must be regularly
											inspected for leaks;
											• Re-fuelling must take place on a
											sealed surface area away from
											wetlands to prevent ingress of
											hydrocarbons into topsoil;
											All spills should be immediately
											cleaned up and treated accordingly;
											and.
	Loss of										Ensure that as far as possible all
	catchment										infrastructures are placed outside of
	yields and										delineated watercourse areas and their
	surface water										associated zones of regulation;•
	recharge,										Ensure that sound environmental
	potential loss										management is in place during the
	of biodiversity,										planning phase;• Design of
	impaired water										infrastructure should be
	quality,	3	5	4	3	0,6	4,0	3,5	2,1	Moderate	environmentally and structurally sound
	potential loss										and all possible precautions taken to
	of instream										prevent spillage and/or seepage to the
	integrity,										surface and groundwater resources
	potential										present;• It must be ensured that the
	impacts to										design and construction of all
	freshwater										infrastructures prevents failure.
	resources										
	further										
	. 5.1 11 10 1							88			

downstream of						
this point.						

			Impact	Sigr	nificar	nce Ra	ating	Befor	e Miti	gation	Meas	ures	Mitigation Measures
Unite Number	Activity	Aspect		ı	F	D	E	Р	s	С	IS	SIGNIFICAN	
			Destruction of										Environmental awareness training
			natural habitat										must include the prohibition of any
			and animal life										harm or hindrance to any indigenous
			within the										fauna species and the consequences
			development										of such actions
			area and to										Allow unhindered movement of fauna
			maintain										to allow them the opportunity to freely
			ecological										leave activity areas.
			connectivity to										Ensure safe speed limits in the
			neighbouring										development area and no open fires.
			sites and,	4	5	4	1	1,0	4,3	2,7	2,7	Moderate	Do not feed wild life and ensure that
			where										all food and food waste, including
			possible, to										domestic waste, is placed in sealed
			regional										containers and not exposed on site.
			ecological										Ensure that the outside areas are kept
			corridors.										clean and tidy and provide adequate
													waste removal services to prevent the
													attraction of rats and other alien
													scavenging species to the site.
													Regularly (daily) inspect the haul road
													and clear coal spills and clear coal fines

											to reduce coal dust contamination to the neighbouring wetland areas.
Flora	Loss of vegetation and/or declining species, alteration, and loss of microhabitats, altered vegetation cover, increased erosion and contamination of soil and groundwater due to localised destruction / removal of vegetation and vegetated topsoil.	4	5	4	1	1,0	4,3	2,7	2,7	Moderate	 Keep the clearing of vegetation / impacts to vegetation for any activity to a minimum and locate such activities in already modified areas or secondary grassland. No building of temporary infrastructure should be allowed in moist grasslands without a WUL. Prevent spillage of hazardous material and other pollutants, contain, and treat any spillages immediately, strictly prohibit any pollution/littering according to the relevant EMPr After any above ground activities within the site, the land must be cleared of rubbish, surplus materials, and equipment, and all parts of the land must be left in a condition as close as possible to that prior to the activity. No off-road driving beyond designated areas may be permitted, especially not in natural vegetation.

											 Strict speed control measures must be implemented for any vehicles driving within the mining rights area to reduce dust. Refer to existing mine control measures. There is zero tolerance of the destruction or collecting of any indigenous biodiversity or part thereof by anybody working for or on behalf of the mine. Monitor the establishment of invasive species and remove as soon as detected, whenever possible before regenerative material can be formed Monitor all sites disturbed by localised activities for colonisation by exotics or invasive plants and control these as they emerge. Monitoring should
											·
											continue for at least two years after such activities cease.
	The										Ensure the flow of water through the
	destruction or										moist grassland areas remain
	degradation of										unchanged.
	watercourse	1	1	4	2	0,6	2,0	2,0	1,2	Low	Monitor the presence of hydrophytes
	vegetation.										and species with an affinity for moist
								92			soils within the moist grasslands.
											Should such species decrease of be

						93		replaced by terrestrial species, then it is likely that the hydrological regime on the site has changed. • If moist grasslands are found to become drier, the Crinum species must be relocated to suitable habitat. • Input of sediment due to any related mining activities should be prevented at all cost. • Pollution of the surface and groundwater. Mitigation for this potential impact includes: o In the case of pollution of any surface or groundwater, the Regional Representative of the Department of Water Affairs must be informed immediately; o Store all litter carefully so it cannot be washed or blown into the water course; o Storage of potentially hazardous materials should be above any 100-year flood line or the functional wetland boundary (and its associated buffer zone). These materials include fuel, oil, cement, bitumen etc.; o Surface water draining off contaminated areas containing oil and
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						petrol would need to be channelled
						towards a sump which will separate
						these chemicals and oils;
						o No uncontrolled discharges of water
						from the mine to any surface water
						resources shall be permitted. Any
						discharge points need to be approved
						by the relevant authority.

			Impact	Sigr	nificar	nce Ra	ating	Befor	e Miti	gation	Meas	ures	Mitigation Measures
Unite Number	Activity	Aspect		I	F	D	E	Р	s	С	IS	SIGNIFICAN	
			Destruction of										An independent Environmental Control
			vegetation.										Officer (ECO) should be appointed to
													oversee construction activities and
													ensure the following:
													Keep the development footprint in
													Medium categories as small as
													possible.A temporary fence or demarcation
													must be erected around the
													construction area (include the actual
													footprint, as well as areas where
				4	5	4	1	1,0	4,3	2,7	2,7	Moderate	material is stored).
													Maintain site demarcations in position
													until the cessation of construction work.
													Only remove vegetation where
													necessary and retain vegetation in
													place for as long as possible prior to
													removal.
													Prohibit vehicular or pedestrian
													access into natural areas beyond the
													demarcated boundary of the
										95			construction area.

											Formalise access roads and make
											use of existing roads and tracks where
											feasible, rather than creating new
											routes through naturally vegetated
											areas.
											Implement a vegetation rehabilitation
											plan to ensure areas that can be
											rehabilitated post construction are
											adequately vegetated with indigenous
											grass species.
											After construction, the land must be
											cleared of rubbish, surplus materials,
											and equipment, and all parts of the land
											must be left in a condition as close as
											possible to that prior to construction.
	Erosion and										Make use of existing roads and tracks
	subsequent										where feasible, rather than creating
	sedimentation										new routes through grassland areas.
	or pollution of										Retain vegetation and soil in position
	proximate										for as long as possible, removing it
	moist										immediately ahead of construction /
	grassland	4	5	4	1	0,8	4,3	2,7	2,1	Moderate	earthworks in that area (DWAF, 2005).
	(watercourse).										Runoff from access roads must be
	•										managed to avoid erosion and pollution
											problems.
											Ensure that runoff from compacted or
								96			sealed surfaces is slowed down and

	 	<u> </u>	1	 	Т	 1		
								dispersed sufficiently to prevent
								accelerated erosion from being
								initiated (erosion management plan
								required)
								Remove only the vegetation where
								essential for construction and do not
								allow any disturbance to the adjoining
								natural vegetation cover. The
								grassland can be removed as sods and
								re-established after construction is
								completed.
								Colonisation of the disturbed areas by
								plants species from the surrounding
								natural vegetation must be monitored
								to ensure that vegetation cover is
								sufficient within one growing season. If
								not, then the areas need to be
								rehabilitated with a grass seed mix
								containing species that naturally occur
								within the study area.
								Protect all areas susceptible to
								erosion and ensure that there is no
								undue soil erosion resultant from
								activities within and adjacent to the
								construction camp and work areas.
								Prevent spillage of construction
						97		material, oils or other chemicals, strictly

											prohibit other pollution. Ensure there is a method statement in place to remedy any accidental spillages immediately. • After construction clear any temporarily impacted areas of all foreign materials, re-apply and/or loosen topsoil and landscape to surrounding level.
	Alien invasive plant species.	3	5	5	1	1,0	4,3	2,7	2,7	Moderate	 Areas cleared of invasive to be monitored in the growing season (summer). If re-sprouting or reseeding is noted, follow-up control to be initialised. Cleared and denuded areas to be rehabilitated as soon as possible with indigenous grass species. Monitor the establishment of invasive species and remove as soon as detected, whenever possible before regenerative material can be formed. Monitor all sites disturbed by localised activities for colonisation by exotics or invasive plants and control these as they emerge. Monitoring should continue for at least two years after such activities cease.

_			Impact	Sigr	nificar	nce Ra	ating	Befor	e Miti	gation	Meası	ures	Mitigation Measures
Unite Number	Activity	Aspect		I	F	D	E	Р	s	С	IS	SIGNIFICAN	
		Ş.	Siltation of surface water resources.	4	4	5	2	0,8	4,3	3,2	2,5	Moderate	 Ensure site clearing is limited to the designated areas, and Implement Stormwater Management designs to prevent erosion and divert dirty water to the appropriate storage dams (PCDs).
		water courses	Contamination of groundwater resources	4	5	5	3	1,0	4,7	3,8	3,8	High	 Ensure that a stormwater management plan is in place to separate clean and dirty water; and Groundwater monitoring of the water quality and levels must take place quarterly, especially for the water supply boreholes to ensure a sustainable resource and identify impacts on local users.
		Noise	Noise emanating from the construction machinery and vehicles impacting on surrounding	4	5	4	2	1,0	4,3	3,2 99	3,2	High	 Ensure site clearing activities are only undertaken during daylight hours; Mining related machines and vehicles should be serviced on a regular basis to ensure noise suppression mechanisms are effective (e.g. installed exhaust mufflers); and

			sensitive receptors.										Ensure equipment and machinery is switched off when not in use.
3,0	Stripping and stockpiling of topsoil	Air Quality	Dust generation emanating from the disturbance of soil.	4	1	1	1	1,0	2,0	1,5	1,5	Low	Ensure that dust suppressants are applied regularly Ensure that dust suppressants are applied to gravel or unpaved roads that are in use; Vehicles should obey speed limits
		Topography and Visual	Topographical changeNegative visual impact caused by vehicular activity.	4	4	4	1	0,8	4,0	2,5	2,0	Low	Ensure liaison with the local authorities for the maintenance and upkeep of roads; Ensure that dust suppressants are applied to gravel or unpaved roads that are in use; and Vehicles will obey speed limits.
		Noise pollution	Noise nuisance caused by machinery	3	5	4	1	1,0	4,0	2,5	2,5	Moderate	Avoid through preventative measures (e.g. communication with landowners and timing of activities). Control through implementation of EMPR mitigation measures (e.g. noise abatement measures).

		Traffic	The degradation of the road structures	5	5	4	1	1,0	4,7	2,8	2,8	Moderate	Adhere to the Mine's Traffic Management Plan; and Gravel roads used must be graded and compacted regularly, should the roads
4,0	development and		Soil contamination										remain unpaved. In case whereby contractors bring on site mobile bowsers and lubricants,
	operation of the mine		and degradation.										these are to be stored in a bunded area when parked at the construction areas; All potential hydrocarbon spillages and leaks must be cleaned up immediately
		Soil		4	5	5	2	0,8	4,7	3,3	2,7	Moderate	and the soils remediated; Spillage control kits will be readily available on site to contain the
													mobilisation of contaminants and clean up spills; All vehicles and machinery to be serviced in a hard park area or at an off-site location;
										101			Storage of hydrocarbons must be managed according to the Hazardous Substances Act, 1973 (Act No. 15 of

											1973); and
											Vehicles with leaks must have drip trays in place.
Surface Water	Impacts on surface water resources because of hydrocarbon spills.	3	3	4	2	0,8	3,3	2,7	2,1	Moderate	In case whereby contractors bring on site mobile bowsers and lubricants, these are to be stored in a bunded area when parked at the construction areas; All potential hydrocarbon spillages and leaks must be cleaned up immediately and the soils remediated; Spillage control kits will be readily available on site to contain the mobilisation of contaminants and clean up spills; All vehicles and machinery to be serviced in a hard park area or at an off-site location; Storage of hydrocarbons must be managed according to the Hazardous Substances Act, 1973 (Act No. 15 of 1973); and

												Vehicles with leaks must have drip trays in place.
	Groundwater	Groundwater contamination	4	4	4	3	1,0	4,0	3,5	3,5	High	In case whereby contractors bring on site mobile bowsers and lubricants, these are to be stored in a bunded area when parked at the construction areas; All potential hydrocarbon spillages and leaks must be cleaned up immediately and the soils remediated; Spillage control kits will be readily available on site to contain the mobilisation of contaminants and clean up spills; All vehicles and machinery to be serviced in a hard park area or at an off-site location; Storage of hydrocarbons must be managed according to the Hazardous Substances Act, 1973 (Act No. 15 of 1973); and

						Vehicles with leaks must have drip
						trays in place.

			Impact	Sigi	nificar	nce Ra	ating	Befor	e Miti	gation	Meas	ures	Mitigation Measures
Onite Number	Activity	Aspect		I	F	D	E	Р	s	С	IS	SIGNIFICAN	
5,0	Mining		safety and										The area of disturbance must be
	operations		security risks to										restricted to the required footprint size;
			landowners and lawful occupiers										Ensure that only vegetation within the designated areas is removed;
													The drop heights used during the
				3	5	4	1	0,8	4,0	2,5	2,0	Low	loading of the cleared soils into trucks
													should be minimised as far as possible;
													and
		Social											Dirt roads to be wetted by a water browser and/or any applicable dust suppressant so as to reduce dust plumes.
			interference										Ensure vegetation and topsoil is only
			with existing landusesCrime										be cleared when necessary and within
			and violence	3	4	4	1	0,6	3,7	2,3	1,4	Low	the demarcated areas; Ensure topsoil stockpiles are vegetated as soon as
			and violence	3	7	4	'	0,0	3,1	2,3	1,4	LOW	possible; andEnsure topsoil stockpiles
													are contoured and have a steepness of
										105			less than 18° to prevent slope failure

		opography and Visual Environment Ai	Topography change and disruption of surface water flow.	4	2	5	3	0,8	3,7	3,3	2,7	Moderate	 Limit the footprint areas of the of the surface infrastructure, where possible, especially the width of the link road to be within the servitude; Ensure that access and haul roads are contoured to limit erosion from surface runoff, preventing further alteration to the topography; Establish vegetation, where possible, to aid in screening infrastructure; Surface infrastructure should be painted natural hues so as to blend into the surrounding landscape; and Limit construction activities at night
6,0	Drilling and Blasting	Air Quality	Fugitive dust generation emanating.	4	2	1	1	0,8	2,3	1,7	1,3	Low	and erosion and aid in vegetation establishment. Topsoil stockpiles that will be kept for more than a year are to be vegetated to sustain ecological components and further prevent dust emissions and growth of alien vegetation. • Ensure that the areas of disturbance are minimised and restricted to the required footprint areas; and • Ensure that dust suppressants are

												and down lighting must be used to minimise light pollution.
	Soils	Soil contamination and degradation.	2	5	4	1	0,8	3,7	2,3	1,9	Low	 Ensure soils are stripped and stockpiled prior to the excavation of infrastructure areas; and Implement Stormwater Management designs to prevent erosion.
		Loss of vegetation communities.	2	5	5	2	0,8	4,0	3,0	2,4	Moderate	 Vegetate open and exposed areas to prevent soil erosion and the establishment of alien invasive vegetation;
	Fauna and Flora	Influx and establishment of alien invasive vegetation.	2	5	5	2	0,6	4,0	3,0	1,8	Low	• Ensure a Storm Water Management Plan is implemented; and Alien invasive vegetation to be identified and removed throughout the LoM.
	Fauna	Destruction of natural habitat and animal life within the development area and to maintain ecological connectivity to	4	4	5	2	0,8	4,3	3,2	2,5	Moderate	• Environmental awareness training must include the prohibition of any harm or hindrance to any indigenous fauna species and the consequences of such actions. • Allow unhindered movement of fauna to allow them the opportunity to freely leave activity areas. • Ensure safe speed limits in the development area and no open fires. •

		neighbouring sites and, where possible, to regional ecological corridors.										Do not feed wild life and ensure that all food and food waste, including domestic waste, is placed in sealed containers and not exposed on site. • Ensure that the outside areas are kept clean and tidy and provide adequate waste removal services to prevent the attraction of rats and other alien scavenging species to the site.• Regularly (daily) inspect the haul road and clear coal spills and clear coal fines
												to reduce coal dust contamination to the neighbouring wetland areas.
	Flora	Alien invasive plant species.	4	4	5	2	0,8	4,3	3,2	2,5	Moderate	 Areas cleared of invasive to be monitored in the growing season (summer). If re-sprouting or reseeding is noted, follow-up control to be initialised. Cleared and denuded areas to be rehabilitated as soon as possible with indigenous grass species. Monitor the establishment of invasive species and remove as soon as detected, whenever possible before regenerative material can be formed. Monitor all sites disturbed by localised activities for colonisation by exotics or

	Wetlands and Aquatic Ecology	Contamination and sedimentation of the wetland systems and aquatic ecosystems.	2	5	4	1	0,8	3,7	2,3	1,9	Low	invasive plants and control these as they emerge. • Monitoring should continue for at least two years after such activities cease. • Ensure soil management programme is implemented and maintained to minimise erosion and sedimentation; • Active rehabilitation, re-sloping, and re-vegetation of disturbed areas immediately after construction; • Implement and maintain alien vegetation management programme; • Appropriate sanitary facilities must be provided for the duration of the construction activities and all waste must be removed to an appropriate waste facility.
	Surface Water	Siltation of surface water resources.	4	4	5	2	0,8	4,3	3,2	2,5	Moderate	 Ensure soil management programme is implemented and maintained to minimise erosion and sedimentation; Active rehabilitation, re-sloping, and re-vegetation of disturbed areas immediately after construction; Implement and maintain alien vegetation management programme; Limit the footprint area of the construction activities to what is

<u> </u>		ı	l				<u> </u>	abandadah anggadad 2
								absolutely essential in order to
								minimise impacts as a result of
							,	vegetation clearing and compaction of
							:	soils;
								All erosion noted within the
								construction footprint to be remedied
								immediately and included as part of an
								ongoing rehabilitation plan;
								All delineated watercourses and their
								associated 100 m zones of regulation
								in terms of GN704 must be designated
								as "No-Go" areas and be off limits to all
								unauthorised vehicles and personnel,
							,	with the exception of approved
								construction and operational areas;
								No unnecessary crossing of the
							,	watercourses to take place and
							,	wherever possible, existing
								infrastructure should be utilised;
								Suitably designed culverts to be
								installed under road crossings where
								any watercourses are anticipated to be
								crossed;
								The number of culverts installed must
								be suitable for the gradient, width and
								flow profiles of the watercourses being
						110		crossed so as to avoid upstream
								biossed so as to avoid upstream

													inundation, erosion and incision, and alterations to the natural channel; • Crossings to make use of existing roads wherever possible and should either utilise or be constructed downgradient of barriers associated with impoundments on the affected systems; • No material may be dumped or stockpiled within delineated watercourses;
			Impact	Sigr	nificar	nce Ra	ating	Befor	e Miti	gation	Meas	ures	Mitigation Measures
Unite Number	Activity	Aspect		ı	F	D	E	Р	S	С	IS	SIGNIFICAN	
		Noise	Increased noise levels.	4	2	3	1	0,8	3,0	2,0	1,6	Low	 Ensuring that all construction equipment operators receive proper training in the use of the equipment and that the equipment is serviced regularly. All blasting and piling driving, if required, should only occur during the day. An environmental noise monitoring survey should be conducted during the construction phase to assess the

T	<u> </u>			impact and recommend further actions
				if required.
				A public complaints and actions
				registry should be established to
				capture public perceptions and
				complaints regarding noise impacts,
				track investigation actions, and
				introduce corrective measures for
				continuous improvement.
				Noise complaints should be reported
				through the community liaison officer
				and include an effective follow-up
				process.
				Noise reduction techniques should be
				considered as additional mitigation
				measures to the project design
				Selecting equipment with lower sound
				power levels.
				Installing silencers on fans.
				Ensure construction activities are only
				undertaken during daylight hours;
				All the diesel-powered equipment
				should be of high quality and well
				maintained.
				Equipment should be switched off
				when not in use.
			112	It is recommended that noise
				it is resommended that holde

													measurement monitoring continues during construction and operation phases. This will assist in formulating mitigation measures should noise complaints be received from surrounding residents or communities. Additional monitoring points should be included in the vicinity if required/requested. Regular maintenance schedules should include a check for noise emissions, e.g., the functional state of all intake and exhaust noise attenuators and effectiveness of enclosures in accordance with standard operating procedures; and Construction related machines and vehicles should be serviced on a regular basis to ensure noise
7,0	Construction		Fugitive dust										Ensure that the areas of disturbance
,,,	of RoM		generation										are minimised and restricted to the
	Stockpile and	ality	emanating the										required footprint areas; Public
	associated	Air Quality	RoM Stockpile	4	4	5	2	0,8	4,3	3,2	2,5	Moderate	complaints and actions registry should
	Water	Air	construction										be established to capture public
			activities.							113			perceptions and complaints regarding

Management												increased air quality impacts; Dust
Infrastructure.												fallout monitoring must be conducted
												throughout the life of operation of the
												mine to confirm model predictions.
												Reduce, control and manage the
												height of material drops (e.g., Transfer
												chute to RoM Stockpile); and Increase
												moisture content of material by using
												water sprays prior to or during
												conveying, crushing, and screening
												material.
		Topography										Ensure that the stockpile is
		change and										constructed with the planned disturbed
	Ħ	disruption of										areas;
	nme	surface water										Operate, manage and maintain the
	viro	flow.										stockpile in line with the design plans,
	I En											as-built plans and operating and
	isua	Soil erosion	2	5	5	2	0,6	4,0	3,0	1,8	Low	maintenance manual.
	> p	and topsoil	_				0,0	4,0	3,0	1,0	LOW	
	y an	loss.										
	aph											
	Topography and Visual Environment	visual impact										
	To	caused by										
		stockpiling of										
		coal.										

		Soil										Minimise topsoil stockpile heights as
		degradation.										far as possible;
		acgradation.										Ensure soils are stripped and
												stockpiled prior to the excavation of
												infrastructure foundations;
												Ensure stockpiles are maintained in a
												fertile and erosion free state by
	σ.											sampling and analysing for macro
	Soils		4	4	5	2	0,8	4,3	3,2	2,5	Moderate	•
	• •											Traffic and access to the stockpiles
												will be restricted;
												Ensure that the topsoil stockpiles are
												vegetated to prevent soil erosion and to
												reinstitute the ecological processes
												within the soil; and
												Implement Stormwater Management
												designs to prevent erosion.
		Loss of										Vegetate open and exposed areas to
		vegetation										prevent soil erosion and the
		communities										establishment of alien invasive
	ora											vegetation;
	and Flora			_	_		0.0	4.0	0.0	4.0		
	a an		2	5	5	2	0,6	4,0	3,0	1,8	Low	Ensure a Storm Water Management
	Fauna											Plan is implemented; and
	ц											Alien invasive vegetation to be
												identified and removed throughout the
									115			LoM.

	Wetlands and Aquatic Ecology	Contamination and sedimentation of the wetland systems and aquatic ecosystems.	2	5	4	1	0,8	3,7	2,3	1,9	Low	Ensure the statutory buffers are implemented from the wetlands systems and watercourses, unless otherwise stated in the IWUL; Ensure a Storm Water Management Plan is implemented; and Implement a biannual Aquatic Monitoring Programme to monitor potential impacts and implement corrective actions, should it be required.
	Surface Water	Siltation of surface water resources.	4	4	5	2	0,8	4,3	3,2	2,5	Moderate	Ensure that the topsoil stockpiles are vegetated to prevent soil erosion; Implement Stormwater Management designs to prevent erosion and divert dirty water to the appropriate storage dams (PCDs); andThe design, construction, operation and maintenance of water management facilities must be in accordance with GN R 704 capacity requirements. Noise levels in the area are already well
	Noise	Levels	2	2	2	2	0,8	2,0	2,0 116	1,6	Low	within 70dBA for the industrial areas during the day and 60 dBA at night as may be associated with mining.

												Therefore, it is expected that additional noise levels contributed by Wakwa Ndlondlo Mine will be insignificant. Trucks, machinery, and equipment will be regularly serviced to ensure acceptable noise levels are not exceeded. Silencers will be utilised where possible.
	Groundwater	Contamination of groundwater resources Seepage through and runoff from the coal stockpile.	4	4	5	2	1,0	4,3	3,2	3,2	High	 A groundwater monitoring system must be implemented and test the water on a quarterly basis for changes in water quality and water levels. Should impacts be identified, management measures must be implemented based on the contaminant or water level change; Implement a Surface Water Management Plan to minimise the volume of dirty water produced, as well as the effectiveness of the containment of dirty water, thereby reducing the probability of contamination of groundwater from infiltration of dirty surface water; Refine and update the conceptual and numerical models annually for the first

10.0	Storage		Poil										four years and thereafter every five years based on groundwater monitoring results. This will help to better quantify impacts to water quantity and quality; and • All contaminant, waste and hazardous waste storage facilities and other contaminated water storage areas (PCD) must be lined to proactively prevent infiltration of contaminated seepage water.
10,0	Storage, use and control of fuel and lubricants to be used for the mining activities.	Soil	Soil contamination and degradation	4	4	5	2	0,8	4,3	3,2	2,5	Moderate	 All potential hydrocarbon spillages and leaks must be cleaned up immediately and the soils remediated; Spillage control kits will be readily available on site to contain the mobilisation of contaminants and clean up spills; All vehicles and machinery to be serviced in a hard park area or at an off-site location; Storage of hydrocarbons and explosives must be managed according to the Hazardous Substances Act, 1973 (Act No. 15 of 1973); Hydrocarbons and explosives storage

		Groundwater contamination										facilities must be in a hard park bunded facility; and • Vehicles with leaks must have drip trays in place. • All potential hydrocarbon leaks must be repaired immediately and spillages be cleaned up immediately and the
	Groundwater		5	5	5	3	1,0	5,0	4,0	4,0	High	soils remediated; • Spillage control kits will be readily available on site to contain the mobilisation of contaminants and clean up spills; • All vehicles and machinery to be serviced in a hard park area or at an off-site location; • Storage of hydrocarbons and explosives must be managed according to the Hazardous Substances Act, 1973 (Act No. 15 of 1973); • Hydrocarbons and explosives storage facilities must be in a hard park bunded facility; and • Vehicles with leaks must have drip trays in place; and • Groundwater monitoring of the water quality and levels must take place

													quarterly especially for the water supply boreholes to ensure a sustainable resource and identify impacts on local users.
11,0	Operation of the RoM Stockpile and associated Water Management Infrastructure.	Air Quality	Fugitive dust generation emanating the RoM Stockpile operational activities.	2	3	4	1	0,8	3,0	2,0	1,6	Low	 Ensure that the areas of disturbance are minimised and restricted to the required footprint areas; Public complaints and actions registry should be established to capture public perceptions and complaints regarding increased air quality impacts; Dust fallout monitoring must be conducted throughout the life of operation of the mine to confirm model predictions; control and manage the height of material drops (e.g., Transfer chute to RoM Stockpile); and Increase moisture content of material by using water sprays prior to or during conveying, crushing, and screening material.
		Topography and	Topography change and disruption of surface water flow;To	4	4	5	2	0,8	4,3	3,2 120	2,5	Moderate	• Ensure that the stockpile is constructed within the proposed planned disturbed areas;• Operate, manage and maintain the stockpile in line with the design plans, as-built

minimise soil				plans and operating and maintenance
erosion and				manual.
topsoil loss;				

_			Impact	Sigr	nificar	nce Ra	ating	Befor	e Miti	gation	Meas	ures	Mitigation Measures
Unite Number	Activity	Aspect		ı	F	D	E	Р	s	С	IS	SIGNIFICAN	
			Soil										Minimise topsoil stockpile heights as
			degradation.										far as possible;
													Ensure soils are stripped and
													stockpiled prior to the excavation of
													infrastructure foundations;
													Ensure stockpiles are maintained in a
													fertile and erosion free state by
													sampling and analysing for macro
				3	3	3	1	1,0	3,0	2,0	2,0	Moderate	nutrients and pH on an annual basis;
													Traffic and access to the stockpiles
													will be restricted;
													Ensure that the topsoil stockpiles are
													vegetated to prevent soil erosion and to
													reinstitute the ecological processes
													within the soil; and
													Implement Stormwater Management
													designs to prevent erosion.
		æ	Loss of										Vegetate open and exposed areas to
		Fauna and Flora	vegetation										prevent soil erosion and the
		l pui	communities.	2	3	3	2	0,6	2,7	2,3	1,4	Low	establishment of alien invasive
		na a											vegetation;
		Faul	Influx and							122			Ensure a Storm Water Management

		establishment										Plan is implemented; and
		of alien										Alien invasive vegetation to be
												· ·
		invasive										identified and removed throughout the
		vegetation.										LoM.
		Contamination										Ensure the statutory buffers are
		and										implemented from the wetlands
		sedimentation										systems and watercourses, unless
	<u>8</u>	of the										otherwise stated in the IWUL;
	900	downstream										Ensure a Storm Water Management
	ы С	wetland	3	3	4	1	1,0	3,3	2,2	2,2	Moderate	Plan is implemented; and
	Wetlands and Aquatic Ecology	systems and										Implement a biannual Aquatic
	l Aq	aquatic										Monitoring Programme to monitor
	anc	ecosystems.										potential impacts and implement
	spu											corrective actions, should it be
	ətlar											required.
	Š	O'll a ti a a										
		Siltation of										Ensure that the topsoil stockpiles are
		downstream										vegetated to prevent soil erosion;
		surface water										Implement Stormwater Management
		resources.										designs to prevent erosion and divert
												dirty water to the appropriate storage
			4	4	5	2	0,8	4,3	3,2	2,5	Moderate	dams (PCDs); and
												The design, construction, operation
	ō											and maintenance of water
	Nati											management facilities must be in
	Ge /											accordance with GN R 704 capacity
	Surface Water											requirements.
	Ō								123			1

		Contamination										A groundwater monitoring system
		of groundwater										must be implemented and test the
		resources										water on a quarterly basis for changes
												in water quality and water levels.
												Should impacts be identified,
												management measures must be
												implemented based on the
												contaminant or water level change;•
												Implement a Surface Water
												Management Plan to minimise the
												volume of dirty water produced, as well
												as the effectiveness of the containment
			_							0.4		of dirty water, thereby reducing the
			3	3	3	3	0,8	3,0	3,0	2,4	Moderate	probability of contamination of
												groundwater from infiltration of dirty
												surface water;• Refine and update the
												conceptual and numerical models
												annually for the first four years and
												thereafter every five years based on
												groundwater monitoring results. This
												will help to better quantify impacts to
												water quantity and quality; and All
	ter											contaminant, waste and hazardous
	Groundwater											waste storage facilities and other
	onuc											contaminated water storage areas
	Grc								124			(PCD) must be lined to pro-actively

12,0	Transportation of coal via R42 road	aquaticSoil	Soil contamination and degradation due to potential hydrocarbon spillages.	3	5	4	1	0,8	4,0	2,5	2,0	Moderate	 All potential hydrocarbon spillages and leaks must be cleaned up immediately and the soils remediated; Spillage control kits will be readily available on site to contain the mobilisation of contaminants and clean up spills; All vehicles and machinery to be serviced in a hard park area or at an off-site location; Storage of hydrocarbons must be managed according to the Hazardous Substances Act, 1973 (Act No. 15 of 1973); and Vehicles with leaks must have drip trays in place. Clean and dirty water separation
		Wetland and aqua	movement of heavy vehicles	2	5	4	1	0,8	3,7	2,3	1,9	Low	systems to be implemented prior to the commencement of activities and to be maintained throughout the life of the proposed project; • Ensure that as far as possible all operational infrastructures are placed

Г	Г	Т	<u> </u>			
						outside of wetland/riparian areas and
						their associated 32 or 100m zones of
						regulation respectively;
						Limit the footprint area of the
						operational activities to what is
						absolutely essential in order to
						minimise impacts as a result of
						subsidence;
						Ensure that no incision and
						canalisation of the wetland features
						present takes place as a result of the
						proposed operational activities;
						All erosion noted within the
						operational footprint as a result of
						either subsidence or any potential
						surface activities should be remedied
						immediately and included as part of the
						ongoing rehabilitation plan;
						Erosion berms should be installed on
						roadways and downstream of
						stockpiles to prevent gully formation
						and siltation of the freshwater
						resources.
						A suitable AIP control programme
						must be put in place so as to prevent
						further encroachment as a result of
					126	disturbance to the surrounding
						uisturbance to the surrounding

					terrestrial zones;
					All delineated watercourses should be
					designated as "No-Go" areas and be
					off limits to all unauthorised vehicles
					and personnel, with the exception of
					approved operational areas;
					No material may be dumped or
					stockpiled within any watercourses in
					the vicinity of the proposed operational
					footprint;
					No vehicles or heavy machinery may
					be allowed to drive indiscriminately
					within any delineated watercourses. All
					vehicles must remain on demarcated
					roads and within the operational area
					footprint;
					All vehicles must be regularly
					inspected for leaks;
					Re-fueling must take place on a
					sealed surface area away from
					wetlands to prevent ingress of
					hydrocarbons into topsoil;
					All spills should be immediately
					cleaned up and treated accordingly;
					Appropriate sanitary facilities must be
					provided for the duration of the
				127	operational activities and all waste
					oporational activition and all wante

												must be removed to an appropriate waste facility; • Monitor all systems for erosion and incision;
												 Areas across watercourses where cross-sectional subsidence is observed should be rehabilitated in such a way as to maintain stream connectivity in a downstream direction.
	Surface water and groundwater	Contamination of surface water due to potential hydrocarbon spillages.	4	4	5	2	0,8	4,3	3,2	2,5	Moderate	 All potential hydrocarbon spillages and leaks must be cleaned up immediately and the soils remediated; Spillage control kits will be readily available on site to contain the mobilisation of contaminants and clean up spills; All vehicles and machinery to be serviced in a hard park area or at an off-site location; Storage of hydrocarbons must be managed according to the Hazardous Substances Act, 1973 (Act No. 15 of 1973); and Vehicles with leaks must have drip trays in place.

Fugitive dust generation emanating. 4 5 4 3 1,0 4,3 3,7 3,7 High Ensure that area of disturbance during the mining activities is restricted to the to the identified mining strips; • Ensure that dust suppressants are applied to gravel or unpaved roads that are in use; • Cover the road going trucks from the tip to KPS with a tarpaulin to prevent coal dust generation; and vehicles will obey speed limits. Maintenance equipment and heavy vehicle speeds should be reduced, where possible, to prevent dust emissions. 1 Topography change and disruption of surface water flow 1 Add a disruption of Surface water flow 2 5 5 5 2 0,6 4,0 3,0 1,8 Low 2 5 5 5 2 0,8 4,3 3,2 2,5 Moderate 3 Soil contamination and 4 4 4 5 2 0,8 4,3 3,2 2,5 Moderate 4 Spillage control kits will be readily immediately and the soils remediated; • Spillage control kits will be readily				<u> </u>	ı		1			I				
emanating. 4 5 4 3 1,0 4,3 3,7 3,7 High Topography change and disruption of surface water flow Add Elbodo Local Carbon Local Contamination and 4 4 5 2 0,8 4,3 3,2 2,5 Moderate Estimate to the identified mining strips; Ensure that dust suppressants are applied to gravel or unpaved roads that are in use; Cover the road going trucks from the tip to KPS with a tarpaulin to prevent coal dust generation; and Vehicles will obey speed limits. Maintenance equipment and heavy vehicle speeds should be reduced, where possible, to prevent dust emissions. Ensure that dust suppressants are applied to gravel or unpaved roads that are in use; and explicitly contamination and 4 4 5 2 0,8 4,3 3,2 2,5 Moderate Topography change and disruption of surface water flow Vehicles will obey speed limits. Low 1,0 1,0 4,3 3,7 3,7 4,10 4,3 3,7 4,10 4,3 5,7 4,5 4,5 4,5 4,5 4,5 4,5 4,5 4,5 4,5 4,5	13,0	Vehicular		Fugitive dust										Ensure the area of disturbance during
* Ensure that dust suppressants are applied to gravel or unpaved roads that are in use; * Cover the road going trucks from the tip to KPS with a tarpaulin to prevent coal dust generation; and * Vehicles will obey speed limits. Maintenance equipment and heavy vehicle speeds should be reduced, where possible, to prevent dust emissions. Topography change and disruption of surface water flow **Soil** Soil** Soil** Contamination and 4 4 4 5 2 0,8 4,3 3,2 2,5 Moderate **Ensure that dust suppressants are applied to gravel or unpaved roads that are in use; and * Vehicles will obey speed limits. **Ensure that dust suppressants are applied to gravel or unpaved roads that are in use; and * Vehicles will obey speed limits. **All potential hydrocarbon spillages and leaks must be cleaned up immediately and the soils remediated; * Spillage control kits will be readily.		activity.		generation										the mining activities is restricted to the
applied to gravel or unpaved roads that are in use; Cover the road going trucks from the tip to KPS with a tarpaulin to prevent coal dust generation; and Vehicles will obey speed limits. Maintenance equipment and heavy vehicle speeds should be reduced, where possible, to prevent dust emissions. Topography change and disruption of surface water flow Addisplayed Soil Contamination and 4 4 4 5 2 0,8 4,3 3,2 2,5 Moderate Soil and leaks must be cleaned up immediately and the soils remediated; Soil applied to gravel or unpaved roads that are in use; and leaks must be cleaned up immediately and the soils remediated; Soil applied to gravel or unpaved roads that are in use; All potential hydrocarbon spillages and leaks must be cleaned up immediately and the soils remediated; Soil accontrol kits will be readily				emanating.										to the identified mining strips;
Align Topography change and disruption of surface water flow Align Topography Change and disruption of surface water flow Align Topography Change and disruption of surface water flow Align Topography Change and disruption of surface water flow Align Topography Change and disruption of surface water flow Align Topography Change and disruption of surface water flow Align Topography Change and disruption of surface water flow Align Topography Change and disruption of surface water flow Align Topography Change and disruption of surface water flow Align Topography Change and disruption of surface water flow Align Topography Change and disruption of surface runoff, preventing further alteration to the topography; Ensure that dust suppressants are applied to gravel or unpaved roads that are in use; and Vehicles will obey speed limits. All potential hydrocarbon spillages and leaks must be cleaned up immediately and the soils remediated; Spillage control kits will be readily														Ensure that dust suppressants are
**Cover the road going trucks from the tip to KPS with a tarpaulin to prevent coal dust generation; and **Vehicles will obey speed limits. Maintenance equipment and heavy vehicle speeds should be reduced, where possible, to prevent dust emissions. **Topography change and disruption of surface water flow **Aid degree water flow **Soil contamination and 4 4 5 2 0,8 4,3 3,2 2,5 Moderate degree and leaks must be cleaned up immediately and the soils remediated; **Soillage control kits will be readily **Soillage control kit														applied to gravel or unpaved roads that
tip to KPS with a tarpaulin to prevent coal dust generation; and • Vehicles will obey speed limits. Maintenance equipment and heavy vehicle speeds should be reduced, where possible, to prevent dust emissions. Topography change and disruption of surface water flow Action and and are contoured to limit erosion from surface runoff, preventing further alteration to the topography; • Ensure that dust suppressants are applied to gravel or unpaved roads that are in use; and • Vehicles will obey speed limits. Soil contamination and 4 4 5 2 0,8 4,3 3,2 2,5 Moderate immediately and the soils remediated; • Spillage control kits will be readily														are in use;
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• Vehicles will obey speed limits. Maintenance equipment and heavy vehicle speeds should be reduced, where possible, to prevent dust emissions. Topography change and disruption of surface water flow Add by the flow Soil Contamination and 4 4 5 2 0,8 4,3 3,2 2,5 Moderate • Vehicles will obey speed limits. Maintenance equipment and heavy vehicle speeds should be reduced, where possible, to prevent dust emissions. • Ensure that access and haul roads are contoured to limit erosion from surface runoff, preventing further alteration to the topography; • Ensure that dust suppressants are applied to gravel or unpaved roads that are in use; and • Vehicles will obey speed limits. • All potential hydrocarbon spillages and leaks must be cleaned up immediately and the soils remediated; • Spillage control kits will be readily					4	5	4	3	1,0	4,3	3,7	3,7	Hign	tip to KPS with a tarpaulin to prevent
Maintenance equipment and heavy vehicle speeds should be reduced, where possible, to prevent dust emissions. Topography change and disruption of surface water flow Soil contamination and 4 4 5 2 0,8 4,3 3,2 2,5 Moderate Maintenance equipment and heavy vehicle speeds should be reduced, where possible, to prevent dust emissions. Ensure that access and haul roads are contoured to limit erosion from surface runoff, preventing further alteration to the topography; Ensure that dust suppressants are applied to gravel or unpaved roads that are in use; and Vehicles will obey speed limits. All potential hydrocarbon spillages and leaks must be cleaned up immediately and the soils remediated; Spillage control kits will be readily														coal dust generation; and
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where possible, to prevent dust emissions. Topography change and disruption of surface water flow Adden by the possible and disruption of surface water surface runoff, preventing further alteration to the topography; Ensure that access and haul roads are contoured to limit erosion from surface runoff, preventing further alteration to the topography; Ensure that dust suppressants are applied to gravel or unpaved roads that are in use; and Vehicles will obey speed limits. Soil contamination and 4 4 5 2 0,8 4,3 3,2 2,5 Moderate immediately and the soils remediated; Spillage control kits will be readily														Maintenance equipment and heavy
disruption of surface water flow A discription of surface water alteration to the topography; Ensure that dust suppressants are applied to gravel or unpaved roads that are in use; and eventually vehicles will obey speed limits. Soil Contamination and A discription of surface runoff, preventing further alteration to the topography; All potential hydrocarbon spillages and leaks must be cleaned up immediately and the soils remediated; Spillage control kits will be readily			ty											vehicle speeds should be reduced,
disruption of surface water flow A discription of surface water alteration to the topography; Ensure that dust suppressants are applied to gravel or unpaved roads that are in use; and Vehicles will obey speed limits. Soil contamination and 4 4 5 2 0,8 4,3 3,2 2,5 Moderate degradation. Moderate Spillage control kits will be readily			uali											where possible, to prevent dust
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surface water flow surface water flow surface water flow 1,8 Low alteration to the topography; Ensure that dust suppressants are applied to gravel or unpaved roads that are in use; and Vehicles will obey speed limits. Soil contamination and 4 4 5 2 0,8 4,3 3,2 2,5 Moderate degradation. surface water flow 1,8 Low alteration to the topography; Ensure that dust suppressants are applied to gravel or unpaved roads that are in use; and Vehicles will obey speed limits. All potential hydrocarbon spillages and leaks must be cleaned up immediately and the soils remediated; Spillage control kits will be readily			Vis	change and										are contoured to limit erosion from
flow				disruption of										surface runoff, preventing further
Flow • Ensure that dust suppressants are applied to gravel or unpaved roads that are in use; and • Vehicles will obey speed limits. Soil contamination and 4 4 5 2 0,8 4,3 3,2 2,5 Moderate • Ensure that dust suppressants are applied to gravel or unpaved roads that are in use; and • Vehicles will obey speed limits. • All potential hydrocarbon spillages and leaks must be cleaned up immediately and the soils remediated; • Spillage control kits will be readily			and	surface water		_	_			4.0	0.0	4.0	1	alteration to the topography;
Soil contamination and 4 4 5 2 0,8 4,3 3,2 2,5 Moderate • All potential hydrocarbon spillages and leaks must be cleaned up immediately and the soils remediated; • Spillage control kits will be readily						5	5	2	0,6	4,0	3,0	1,8	LOW	Ensure that dust suppressants are
Soil contamination and 4 4 5 2 0,8 4,3 3,2 2,5 Moderate • All potential hydrocarbon spillages and leaks must be cleaned up immediately and the soils remediated; • Spillage control kits will be readily			phy											applied to gravel or unpaved roads that
Soil contamination and 4 4 5 2 0,8 4,3 3,2 2,5 Moderate • All potential hydrocarbon spillages and leaks must be cleaned up immediately and the soils remediated; • Spillage control kits will be readily			gra											are in use; and
Soil contamination and 4 4 5 2 0,8 4,3 3,2 2,5 Moderate • All potential hydrocarbon spillages and leaks must be cleaned up immediately and the soils remediated; • Spillage control kits will be readily			opc -											Vehicles will obey speed limits.
and 4 4 5 2 0,8 4,3 3,2 2,5 Moderate immediately and the soils remediated; especially degradation.														All potential hydrocarbon spillages
degradation. • Spillage control kits will be readily				contamination										and leaks must be cleaned up
degradation. • Spillage control kits will be readily				and	4	4	5	2	0,8	4,3	3,2	2,5	Moderate	immediately and the soils remediated;
				degradation.							120			Spillage control kits will be readily
available on site to contain the			Soil								123			available on site to contain the

											mobilisation of contaminants and clean
											up spills;
											All vehicles and machinery to be
											serviced in a hard park area or at an
											off-site location;
											Storage of hydrocarbons and
											explosives must be managed
											according to the Hazardous
											Substances Act, 1973 (Act No. 15 of
											1973);
											Hydrocarbons and explosives storage
											facilities must be in a hard park bunded
											facility; and
											Vehicles with leaks must have drip
											trays in place.
	Loss of										Ensure that dust suppressants are
	biodiversity										applied to gravel or unpaved roads that
Ø	and minimise										are in use; • Cover the road going
Flora	impacts on	4	4	5	2	0,8	4,3	3,2	2,5	Moderate	trucks from the tip to KPS with a
and	floral species										tarpaulin to prevent coal dust
ına a											generation; and• Vehicles will obey
andFauna											speed limits.
and	Contamination										Ensure a Storm Water Management
	and										Plan is implemented;
ds 1	1	2	2	4	3	1,0	2,7	2,8	2,8	Moderate	Ensure that dust suppressants are
Wetlands	of the wetland							130			applied to gravel or unpaved roads that
We	systems and										are in use and exposed surfaces;

	aquatic ecosystems										 Cover the road going trucks from the tip to KPS with a tarpaulin to prevent coal dust generation; Vehicles will obey speed limits; and Implement a biannual Aquatic Monitoring Programme to monitor potential impacts and implement corrective actions, should it be
											required.
Surface Water	Contamination and sedimentation of clean water resources.	4	4	5	2	0,8	4,3	3,2	2,5	Moderate	 Ensure that dust suppressants are applied to gravel or unpaved roads that are in use and exposed surfaces; Cover the road going trucks from the tip to KPS with a tarpaulin to prevent coal dust generation; Vehicles will obey speed limits; and Monitor surface water resources up and downstream of the Project area to

_			Impact	Sign	nificar	nce Ra	ating	Befor	e Miti	gation	Meas	ures	Mitigation Measures
Unite Number	Activity	Aspect		I	F	D	E	Р	s	С	IS	SIGNIFICAN	
		Noise	noise emanating from mining and vehicular activities impacting on surrounding sensitive receptors.	4	4	5	2	0,8	4,3	3,2	2,5	Moderate	 Mining related machines and vehicles should be serviced on a regular basis to ensure noise suppression mechanisms are effective (e.g., installed exhaust mufflers); and Ensure equipment and machinery is switched off when not in use. The gravel roads must be graded and compacted on a regular basis and as when required, should the roads remain unpaved; and Adhere to the set speed limit in accordance to the Traffic Management Plan.
		Traffic	Degradation of the road structures resulting in potential health and safety risks and soil erosion.	3	4	5	2	0,8	4,0	3,0	2,4	Moderate	 The gravel roads must be graded and compacted on a regular basis and as when required, should the roads remain unpaved; and Adhere to the set speed limit in accordance to the Traffic Management Plan.

14,0	Dirty water												Ensure a Stormwater Management
1,0	management.												Plan is implemented; • Ensure that no
	management.												incision and canalisation of the
													watercourses;• Dirty water from the
													infrastructure areas must be diverted
													by channels and berms and separated
													from clean water. The dirty water must
													be stored in the existing PCDs;• No
													waste and/or contaminated material
													may be dumped or stockpiled within
				4	4	5	2	0,8	4,3	3,2	2,5	Moderate	any watercourses;• The operation and
													maintenance of the PCD must be in
													accordance with the NWA Regulations
		ogy											set out in GN R704 and must have a
		colc											minimum freeboard of 0.8 m and be
		iic E											able to contain a 1:50 year, 24-hour
		quai	Contamination										storm event; and• Implement a
		d A	of the wetland										biannual Aquatic Monitoring
		s an	systems and										Programme to monitor potential
		and	aquatic										impacts and implement corrective
		Wetlands and Aquatic Ecology	ecosystems										actions, should it be required.
		_>	Contamination										Continue with water quality monitoring
			of clean water										at the existing sample at the current
			resources.			_		0.0	4.0	0.0	0.5		monitoring locations and frequency.
				4	4	5	2	0,8	4,3	3,2	2,5	Moderate	Increase monitoring frequency for
													those monitoring points that show
										133			constant non-compliances;
													•

urface Main round dams itoring and f additional
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additional
treatment
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ased on the
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nance of the
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be able to
hour storm
anagement
s to identify
implement
to rectify
and
sources up
ject area to
tion.

	Groundwater		1								• Ensure that pipelines and diversion
	contamination.										channels and berms are monitored for
											potential leaks and structure failures;
											 Potential leaks and spills must be
											contained and cleaned up immediately,
											as well as the leakage location
											repaired;
											The mine should supply the users with
											an alternative source of water in case
											the boreholes are dewatered;
											Specifically, the Prinsloo Farmstead
											(Located on Portion 6 of the farm
											Zondagsvlei 9 IS);
		4	4	5	2	0,8	4,3	3,2	2,5	Moderate	Monitor and control the potential
											decant of dirty water from the workings;
											Ongoing monitoring to measure the
											water level in the proposed 5 Seam
											Mining area. The water level should be
											managed to stay well below the decant
											level of 1594 mamsl;
											Monitor the borehole water quality
											and if the quality deteriorates, it is
											recommended to start pumping to
											contain the plume;
	ater										Ensure that a stormwater
	мр. 										management plan is in place to
	Groundwater							135			separate clean and dirty water; and
(<u> </u>										and and areas and and

													• Groundwater monitoring of the water quality and levels must take place quarterly especially for the water supply boreholes to ensure a sustainable resource and identify impacts on local users.
15,0		Fopography and	Topography change										Waste must be stored away from surface water and drainage lines; and
		phy	ŭ	2	3	3	2	0,8	2,7	2,3	1,9	Low	General and hazardous waste must
		Topography Visual Epyir											be removed and disposed of frequently
		Top											at a registered disposal site.
			Degradation										Burying of any waste including rubble,
			and contamination										domestic waste, empty containers on the site must be strictly prohibited;
			of soil										Proper waste storage facilities should
	Waste and		0.00	4	4	5	2	0,8	4,3	3,2	2,5	Moderate	be available and used for the correct
	sewage												separation and storage of waste prior
	generation and disposal.												to collection and disposal; and
	ana disposai.												Generated waste must be removed to
		Soil											an approved disposal facility.
			Contamination										The sewer waster collected from the
			of clean water										workings must be disposed of at a
		_	resources.	4	4	5	2	0,8	4,3	3,2	2,5	Moderate	licensed sewage treatment facility; • Monitor surface water resources up
		Vate			·		_	,,,	.,0	-, <u>-</u>	_,0		and downstream of the Project area to
		Surface Water								136			identify potential contamination; • Ensure that a stormwater

						management plan is in place to
						separate clean and dirty water; and
						Waste must be separated at source
						and stored in appropriately designated
						areas for disposal at a licensed facility
						or by a reputable contractor.

i.) Assessment of each identified potentially significant impact and risk

a. Assessment of each identified potentially significant impact and risk

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

Table 20: Assessment of each identified potentially significant impact and risk

Name Of	Potential	Aspects	Phase	Significance	Mitigation Type	Significance
Activity	Impact	Affected				When mitigated
						are
						implemented
Site establis	hment					
General	Disturbance of surrounding areas	All	Site establishment	Low	Fence the site indicated on the mine plan, prior to undertaking	Very Low
			phase		any activity on the site.	
					Treat all areas outside the fence as no-go areas.	
					Should any heritage features	
					(e.g., artefacts, structures or	
					human remains) be identified on site, all work should be ceased,	
					and a heritage specialist should	
					be contacted to investigate the	
					findings.	

					 The heritage specialist will provide further management measures and recommendations in terms of notifying relevant heritage authorities, etc. Failing implementation of the requirements listed in this table, afine may be issued at the discretion of the ECO
Vegetation clearance	Loss of ecological processes	Indigenous vegetation	Site establishment phase	Very Low	 Removal and disposal of alien vegetation Stripping, mulching, and stockpilling indigenous vegetation Re-vegetation during rehabilitation
Topsoil stripping	Dust Soil erosion Loss of topsoil	Natural vegetation and soil	Site establishment phase	Medium	 Control dust by wetting during dry, dusty conditions. Prevent erosion by placing of berms Follow correct topsoil stripping and stockpiling methods

Subsoil and	• Dust	Natural	Site	Low	Control dust by wetting duringdry, Low
topsoil	Loss of topsoil	vegetation	establishme		dusty conditions.
stockpiles	 Loss of topsoil and subsoilthrough inadequate management orerosion Contaminatio nof topsoil Alien vegetation proliferation 	TopsoilSub soil	ntphase		 Prevent erosion by placing of berms Implement adequate subsoil and topsoil stockpiling methods And management Prevent access of contaminants near topsoil stockpiles Alien vegetation monitoring and management on topsoil stockpiles
Site camp including ablution facilities, waste management facilities, material	Soil erosion Visual impactsfor the landowners, surrounding land and road users	VegetationSoilVisual	Site establishme ntphase	Low	 Effective solid waste management Sufficient housekeeping Appropriate materials management Locate site camp in disturbedarea as far as possible

And												
equipment												
storage												
Construction	Construction and Operational phase											
Vegetation clearance	Loss of ecological processes	Indigenous vegetation	Constructional phase	Low	 Removal and disposal of alien vegetation Stripping, mulching, and stockpiling indigenous vegetation Re-vegetation during rehabilitation 							
Soil	 Dust Loss of topsoil and subsoil through inadequate management or erosion Contamination of topsoil Alien vegetation proliferation 	 Natural vegetation Topsoil Sub soil 	Constructional and operational phase	Low	 Implement adequate subsoil and topsoil stockpiling methods and management Prevent access of contaminants near topsoil stockpiles Alien vegetation monitoring and management on topsoil stockpiles 							

Site camp including. ablution facilities, waste management facilities, material, and equipment storage, etc	•	Soil erosion Visual impactsfor the landowners, surrounding land and road users	•	Vegetation Soil Visual	Constructional phase	Low	•	Effective solid waste management Sufficient housekeeping Appropriate materials management Locate site camp in disturbedarea as far as possible	Very Low
Material stockpiles	•	Dust generation Visual impacts on surrounding land and road users Erosion	•	Visual Topsoil	Constructional and operational phase	Very Low	•	Dust suppression measures Erosion control measures Screening of stockpiles behind existing vegetation Stripping of topsoil before stockpiling materials	Very low

Blasting,	Topsoil sterilisation if topsoil is not stripped from affected area Noise	Adjacent	Operational	Very low	Advise adiacent land users of Very low
Excavation, stockpiling of gravel, loading & haulage	NoiseDustTraffic	area to mining footprint	phase	VELY IOW	 Advise adjacent land users of expected blast at least 5 daysprior. Blasting should be according to the approved blasting plan to control vibration and fly-rock. Control impact on roads by properly servicing the operating trucks Speed limit should be 40 km per hr on gravel roads. Control dust by wetting the ground during dry, dusty conditions. Loads must be covered with tarpaulin.

Re-fuelling of plant	Contamination of the environment	Soil environment	Operational phase	Low	 Flag personnel to be on dutywhen trucks are running. Prevent by not storing fuel on siteand re-fuelling to be done from a mobile bowser with Dpc laid down to contain dripping 	Low
Storm water control	Erosion	Soil environment	Operational phase	Low	Prevent erosion by placing of berms and temporary drains to reduce velocity of run-off water	Low
Site camp including ablution facilities, waste management facilities, material and equipment	Soil erosion Visual impactsfor the landowners, surrounding land and road users	Vegetat ionSoilVisual	Construction and Operational phase	Low	 Effective solid waste management Sufficient housekeeping Appropriate materials management Locate site camp in disturbed area as far as possible 	Very Low

storage,							
etc.							
Job creation	Job creation leading to improved socioeconomic conditions for community	Community members	Construction and Operational phase	Medium positive	•	Ensure that local community members and contractors are employed as part of the contract	Medium positive
	members and contractors						
Decommissioning F	hase 						
Decommissioning and rehabilitation	Reinstateme nt of land	Land Use	Decommissioning phase	Low positive	•	Restoration of the landform andremovalof infrastructure	Low positive
	use potential					to reinstate land use potential	
	Incorrect replacement oftopsoil and subsoil leadingto poor reinstatement of the area	Sub-soil and Top-soil	Decommissioning phase	Low	•	Ensure rehabilitation plan isfollowed Implement erosion controlmeasures Monitor erosion and remediate where necessary	Very low

• [Erosion				
	Re- establishment of	Vegetation	Decommissioning phase	Low to very low	 Ensure adequate reseeding Monitor reestablishment for two
r	naturalvegetation			positive	(2) years and remediate where necessary
	Alien vegetation proliferation	Alien Vegetation	Decommissioning phase	Low	Monitoring and removal of alien vegetation for at least three (3) years after rehabilitation
r (Reinstatement of natural area (removing visual Impacts)	Visual	Decommissioning phase	Low positive	None Low positive

j.) 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	RECOMMENDATIONS THAT HAVE BEEN INCLUDED IN THE	REFERENCE TO APPLICABLE SECTION OF REPORT WHERE SPECIALIST
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		(Mark with an X where applicable)	RECOMMENDATIONS HAVE BEEN INCLUDED.
Hydrogeological study	 The study area falls on a fractured aquifer system, the mine planning should take into consideration the fracture zones in the Vryheid formation, drilling activities should not contact the fractures as that is where most groundwater in the area is found and to prevent possible groundwater pollution from residual explosive material used. It is recommended that there should be regular testing or monitoring of surrounding soil, water resources to detect any change in chemistry so that remedial measures are implemented in time. The monitoring process throughout the existence of the project, the chemical and physical parameters of the water samples should be tested and compared with the SANS 241: 2015. There should be soil, water resources and land pollution mitigation measures on site. Wastewater source should be identified, and mitigation measures put in place to prevent groundwater contamination. The stockpile, there should be regular monitoring of any heavy metal which could be exposed, as such could result in leaching during rainfall. 		Section 6.1.6 of this report

Hydrological study	 The area falls on weathered aquifer, wastewater should be properly diverted from seepage, as the aquifer is weathered, and contamination is highly likely. Proper stormwater management is recommended to prevent the risk of water resources contamination. The study area falls on a fractured aquifer system, the mine planning should take into consideration the fracture zones in the 	X	Section 6.1.6 of this report
	 Proper and competent structure of the tailings dam should be built, to contain liquid, or solid waste and to prevent such waste from entering the outside environment. According to section 21(S21) of the National Water Act 36 of 1998, if a proposed project triggers any of the listed S21 activities, a water use license must be applied for. For this project, there will be no activities which includes abstraction of water from groundwater, mining activities from the water courses dust suppression, dewatering, and ROM stockpiles. Hence a water use license will not be applied. It is recommended that compliance of relevant legislations be ensured, NEMA Act 107 of 1998, NWA Act 36 of 1998, NEM: waste Management Act 59 of 2008. it is recommended that during the existence of the project there should also be regular maintenance of the mobile ablutions, to avoid leakage of waste into the ground. There should be boreholes in and around the mining permit area, to monitor the groundwater quality and quantity. 		

Vryheid formation, drilling activities should not contact the fractures as that is where most groundwater in the area is found and to prevent possible groundwater pollution from residual explosive material used.

- The numerical model should be recalibrated as soon as more hydrogeological data such as monitoring holes are made available. This would enhance model predictions and certainty.
- It is recommended that there should be regular testing or monitoring of surrounding soil, water resources to detect any change in chemistry so that remedial measures are implemented in time.
- The monitoring process throughout the existence of the project, the chemical and physical parameters of the water samples should be tested and compared with the SANS241: 2015
- There should be soil, water resources and land pollution mitigation measures on site.
- Wastewater source should be identified, and mitigation measures put in place to prevent groundwater contamination.
- The stockpile, there should be regular monitoring of any heavy metal which could be exposed, as such could result in leaching during rainfall.
- Proper and competent structure of the tailings dam should be built, to contain liquid, or solid waste and to prevent such waste from entering the outside environment.
- According to section 21(S21) of the National Water Act 36 of 1998, if a proposed project triggers any of the listed S21

	activities, a water use license must be applied for. For this project, there will be no activities which includes abstraction of water from groundwater, mining activities within 100 m from the water courses dust suppression, dewatering, and ROM stockpiles. Hence a water use license will not be applied for. Stormwater control should be undertaken to prevent soil from entering nearby streams. Drainage channels should be maintained to ensure that erosion does not occur.
Soil study	 The proposed mining land should be returned to its origin as before mining activities and the rehabilitation performance assessment in the proposed land must be done progressively (annually) during the operational phase by a soil specialist. Final surface rehabilitation of all disturbed areas during mining activities. Rehabilitation of unnecessary water management facilities once appropriate to do so. Specialists should be used to evaluate the erosion and other possible impacts during the entire mining process. Limit impacts to the footprints to keep physical impacts as small as possible. Areas for road, site lay-out should be minimized, dust generation. Stockpiles can be used as a barrier to screen operational activities. If stockpiles are used as screens, the same preventative measures described above should be implemented to prevent loss or contamination of soil.

 The stockpiles should not exceed a maximum height of 6m and 	
it is recommended that the side slopes and surface areas be	
vegetated in order to prevent water and wind erosion and to keep	
the soils biologically active.	
 If used to screen operations, the surface of the stockpile should 	
not be used as roadway as this will result in excessive soil	
compaction.	

k.) Environmental impact statement

(i) Summary of the key findings of the environmental impact assessment.

During the proposed excavation operation impacts may occur on soils, natural vegetation, surface water, groundwater, sensitive landscapes, air quality, noise, visual spects, and sites of archaeological and cultural importance should the EMPr not be adhered to.

Wakwa Ndlondlo (Pty) Ltd will undertake measures to ensure that the identified impacts are minimised. Assessment of the impacts with the proposed mitigation measures has shown the significance of the impacts on all affected environmental aspects to be reduced from medium and low to low and negligible significance.

Land use will not change. Several landowners and land occupiers within the proposed project area may be affected although on a temporary basis due to the need to access the sites and the establishment and use of the campsite. Measures such as safety along the roads and dust suppression will be undertaken to ensure that the impacts on the landowners and land occupiers are minimised.

Storm water runoff from the dirty water areas of the excavation sites, its associated surface infrastructure (campsite) may have a detrimental impact on the surrounding water environment should this water be released to the environment. To prevent the occurrence of the above-mentioned impacts, dirty water collection sump will be used to collect all dirty water from the excavation site. The water collected fromthe sump will be re-used, evaporated and the sump will be rehabilitated once the excavation is finished. Sediments will be created from the site during the construction, operational and decommissioning phase, which may impact negatively on the surrounding water environment. The sediments will be treated should they contain hydrocarbon waste.

The employees will undergo training and will be given strict instruction not to undertakeactivities that will affect the environment and that may have an impact on the landowners. Waste generated from the site will be collected in proper receptacles and disposed of in registered waste disposal sites.

Impacts during the Construction phase

The construction phase of the project will entail the site establishment for the access roads as well as surveying and pegging sites. Environmental impacts on the biophysical and socioeconomic environment which are anticipated to occur throughout the construction phase were identified as follows:

Socio-Economic

The main positive impacts of the excavation activities will be the temporary creation of jobs during the construction phase of the project. The project may also result in a temporary boost in small local businesses in the area.

It is expected that the final site layout will consider all the sensitive environment in the area and will avoid graves and other heritage and cultural resources in the area (if any). Movement of construction vehicles on the roads and other farm roads may increase the risks accidents on the roads. Other health and safety risks may be as a result on construction workers lighting fires on site and littering.

The risk will be low to medium

Groundwater

The use of earth moving machinery and construction vehicles on site poses the risk ofchemical spillages including fuel and oils, which may leach into the groundwater. The removal of vegetation could furthermore lower the evapo-transpiration rates, thereby allowing a greater volume of potentially contaminated water to percolate to the underlying aquifer in the event of an accidental spill from the machinery. It must however be noted that the removal of vegetation will be limited to the required footprints for the access roads, the boreholes, and sumps as well as the camp sites. The impact on evapotranspiration is therefore expected to be negligible. Site clearingand grubbing is unlikely to materially affect the groundwater within the project area. However, care should be taken during the utilisation and storage of hydrocarbons and chemicals, which may have an impact on groundwater quality because of spillages and uncontrolled release.

Risk will be low to medium

Surface water

Various substances may result in the pollution of groundwater sources. Pollution from litter and general wastes may occur due to improper site management. Washing downof vehicles and equipment may result in the pollution of surface and groundwater, and pollution may occur from poor vehicle maintenance and improper storage of hazardous materials such as fuel, sludge etc.

The potential impacts on surface water during the construction phase of the proposed project are as follows:

- Accidental spillages of hazardous substances from construction vehicles used
- Contamination of runoff by poor materials/waste handling practices;
- Debris from poor handling of materials and/or waste blocking watercourses;
- Contaminated dirty water runoff to surrounding areas resulting in the impact onlocal surface water quality;
- Increase in turbidity of the local water streams because of runoff of cleared areas; and
- Increase of surface runoff and potentially contaminated water that needs to be controlled in the areas where site clearing occurred.

Some level of sedimentation is expected to occur in the watercourses that traverse theproject area as runoff is naturally anticipated to pick up environmental debris as it crosses natural areas. Increased turbidity is reversible and surface water should return to pre-impact turbidity levels once sediment levels entering the watercourse are reduced. Settled sediments should naturally move downstream during periods of highflow flowing storm events.

Wetlands and Aquatic Ecosystems

There is no watercourse around the proposed project.

Heritage and Archaeological Resources

There has been no heritage or archaeological resources which have been identified on site and it is also highly unlikely that sites will consist of such phenomenon, since approximately 90% of the site has been transformed from its natural state that artifacts of heritage value will be found on site. If any heritage artifacts including graves and human remains are uncovered during excavation, this will immediately be reported to SAHRA as per National Legislation.

<u>Flora</u>

The project may result in the following impacts on the floral environment during the construction phase:

- Destruction of potential floral habitats for species because of site clearing, alien species, improper waste management and soil compaction;
- Vegetation clearance may lead to floral habitat loss of potential species of conservational
 concern; removal of vegetation involves cutting down of trees, removing stumps and roots
 of the trees but only after authorization/permit has been provided. However, there is no trees
 in the proposed area.

Fauna

The project may result in the following impacts on the faunal environment during the construction phase:

- Loss of faunal habitat and ecological structure because of site clearing, alien invasive species, erosion, and general construction activities;
- Loss of faunal species due to collisions with construction vehicles and machinery;
- Loss of faunal diversity and ecological integrity because of construction activities, erosion, poaching and faunal specie trapping;
- Impact on faunal species of conservational concern due to habitat loss and collisionwith construction vehicles, Failure to initiate a rehabilitation plan and alien control plan during the construction phase may lead to further impacts on faunal habitat during the operation phase.

Minimal vegetation disturbance is expected due to the transformed nature of the sitesand the small size of the borehole diameter. The loss of biodiversity is expected be insignificant as it will be limited to the footprints of the required infrastructure. However, mitigation and management of species of conservational concern, if any, needs to be adhered to. The infrastructure that will have the significant impact on biodiversity is expected to the access roads.

As the vegetation within the excavation region has been identified as least concern in terms of their conservation status, the relatively small loss of vegetation within already degraded agricultural areas is regarded as negligible.

Environmental Impacts

Impacts of excavation activities: Increased dust and noise generation, noise impact onfauna in the immediate surrounds, increase in veld fire risk and loss of vegetation andstock/wildlife, decrease visual quality and impact on land uses are potential impacts.

Noise

Noise is unlikely to be an impact during excavation, due to most of the activitiesoccurring during the day, and far away from public roads or community nodes.

Soil

Impacts of topsoil removal for pitting: Topsoil removal could lead to short term dust creation (air pollution). These exposed surfaces will increase the chances of soil erosion and potential soil loss.

Impacts on soil are likely to be low negative impact, as excavation and coring may be required in the later phases of the excavation. Soil erosion and disturbance impacts should be incorporated into the landowner agreements prior to excavation.

Air Quality

The movement of construction vehicles and earth moving machinery as well as the stripping of vegetation will likely result in an increase in nuisance dust, PM10 and PM2.5. There is also potential for increase in carbon emissions and ambient air pollution due to the movement of vehicles and construction machinery. It is expected that the implementation of dust suppressing mitigation measures will result in the reduction in nuisance dust.

<u>Visual</u>

The following impacts on the visual character because of the proposed project areenvisaged during the construction phase:

Scaring of the landscape because of the clearance of vegetation;

• Visual intrusion because of the movement of machinery and the erection of contractor camps; and Indirect visual impact due to dust generation because of the movement of vehicles and materials, to and from the site

Key findings of the environmental impact assessment include:

- All the identified impacts will be localized, short term and will have a medium and low significance.
 The significance of potential environmental impacts can be reduced to low and very low significance with implementation of mitigation measures and monitoring.
- Cumulative noise, visual and air quality (dust) impacts are deemed to not be significant when proper mitigation measures are implemented.

Vegetation loss is unavoidable during the construction phase of the project. This will however be limited to the footprint of the infrastructure. Care must be taken tomanage any species of special concern as well as the proliferation of alien invasive plant species.

ii.) Final Site Map

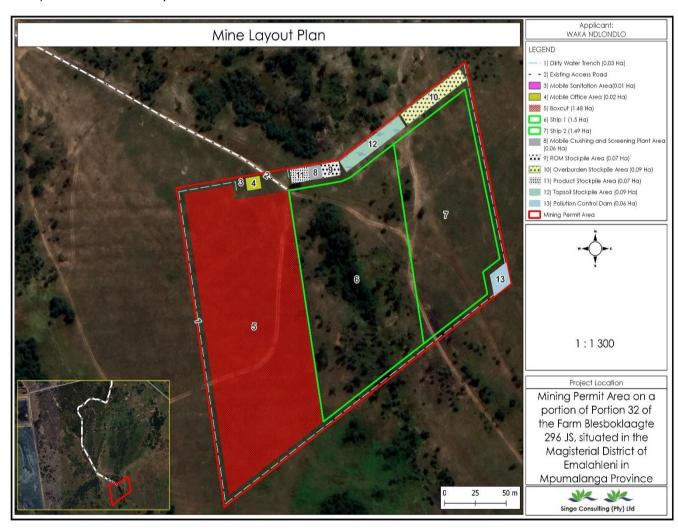


Figure 45: Mine layout map

- iii.) Summary of the positive and negative impacts and risks of theproposed activity and identified alternatives
 - Job creation, although a fixed number of jobs to be created cannot be stated at this stage, will include multiple job opportunities for skilled, semi-skilled and unskilled personnel will be created by this project. This will contribute to the socio-economic status of the Witbank area.
 - The coal to be mined will be supplied to Eskom, hence it will enhance Eskom's coal resources security to generate electricity without re-occurrence of load shedding.

The negative impacts associated with the project and that was of Low-Medium or Medium significance includes:

Visual intrusion associated with the establishment of the mining area	Medium
Visual intrusion associated with the excavation activities	Medium
Visual intrusion associated with the stockpiled material and vehicles	Low-medium
transporting the material	
Dust nuisance caused by blasting activities	Low-medium
Dust nuisance due to the crushing activities	Low-medium
Noise nuisance generated by excavation equipment	Low-medium
Noise nuisance generated by the crushing activities	Low-medium
Degradation of access roads	Low-medium

I.) Proposed impact management objectives and the impact management outcomesfor inclusion in the EMPr

Management	Role	Management outcomes
objectives		
Dust	Site Manager to	Control dust liberation into the surrounding
handling	ensure compliance	environment by using water spraying and/or other
	with EMP guidelines.	dust allaying agents.
	Compliance to be	• Limit speed on the access roads to 40km/h to
	monitored by the	prevent the generation of excess dust.
	Environmental	Spray roads with water or an environmentally friendly
	Control Officer.	dust-allaying agent that contains no PCB's (e.g.,
		DAS products) if dust is generated above acceptable
		limits.
		Assess effectiveness of dust suppression equipment.
		Ensure the crusher plant has operational water

Management	Role	Management outcomes			
objectives					
		sprayer to alleviate dust generation from the			
		conveyor belts.			
Noise	Site Manager to	Ensure that employees and staff conduct themselves			
handling	ensure compliance	in an acceptable manner while on site.			
	with EMP guidelines.	No loud music may be permitted at the mining area.			
	Compliance to be	Ensure that all mining vehicles are equipped with			
	monitored by the	silencers and maintained in a road worthy condition			
	Environmental Control	in terms of the Road Transport Act.			
	Officer.	 Plan the type, duration, and timing of the blasting 			
		procedures with due cognizance of other land users			
		and structures in the vicinity.			
		Notify surrounding landowners in writing prior to			
		blasting.			
Management	Site Manager to	Implement a weed and invader plant control			
of weed/	ensure compliance	management plan.			
invader	with EMP guidelines.	Control declared invader or exotic species on the			
plants	Compliance to be	rehabilitated areas.			
	monitored by the	• Keep the temporary topsoil stockpiles free of weeds.			
	Environmental				
	Control Officer.				
Surface and	Site Manager to	Divert storm water around topsoil heaps, stockpile			
storm water	ensure compliance	areas and access roads to prevent erosion and			
handling	with EMP guidelines.	material loss.			
	Compliance to be	Divert runoff water around stockpile areas with			
	monitored by the	trenches and contour structures to prevent erosion of			
	Environmental Control				
	Officer.	Conduct mining in accordance with the Best Practice			
		Guideline for small scale mining that relates to storm			
		water management, erosion and sediment control			
		and waste management, developed by the			
		Department of Water and Sanitation (DWS), and any			
Mongrana	Cito Monagan (other conditions which that Department may impose.			
Management	Site Manager to	Plan the type, duration and timing of the blasting			
of health and	ensure compliance	procedures with due cognizance of other land users			
safety risks	with EMP guidelines.	and structures in the vicinity.			

Management	Role	Management outcomes
objectives		
objectives	Compliance to be monitored by the Environmental Control Officer. Blasting contractor to comply with national blasting requirements.	 Inform the surrounding landowners and communities of any blasting event. Use noise mufflers and/or soft explosives during blasting, limit fly rock. Give audible warning of a pending blast at least 3 minutes in advance of the blast. Remove all fly rock (of diameter 150 mm and larger) which falls beyond the working area, with the rock spill.
		 Ensure that workers have access to the correct PPE as required by law. Ensure all operations comply with the Occupational Health and Safety Act.
Waste	Site Manager to	Ensure no waste pile is established within 100 m of
management	ensure compliance with EMP guidelines. Compliance to be monitored by the Environmental Control Officer.	 the edge of any river channel or other water bodies. Ensure regular vehicle maintenance take place within the service bay area of the off-site workshop. If emergency repairs are needed on site, ensure drip trays is present. Ensure all waste products are disposed of in a 200L closed container/bin inside the emergency service area. Collect effluents containing oil, grease or other industrial substances in a suitable receptacle and remove from site, for resale or appropriate disposal at a recognised facility. Clean spills immediately to the satisfaction of the Regional Manager by removing the spillage and polluted soil and disposing thereof at a recognised facility. File proof. Ensure availability of suitable covered, conveniently placed receptacles always for waste disposal. Store non-biodegradable refuse such as glass bottles, plastic bags, metal scrap, etc., in a container with a closable lid at a collecting point. Collection should take place on a regular basis and disposed of

Management objectives	Role	Management outcomes
		 at the recognised landfill site at Witbank. Prevent refuse from being dumped on or in the vicinity of the mine area. Biodegradable refuse to be handled as indicated above.
Management of access roads	Site Manager to ensure compliance with EMP guidelines. Compliance to be monitored by the Environmental Control Officer.	 Divert storm water around access roads to prevent erosion. Erosion of access road: Restrict vehicular movement to existing access routes to prevent crisscrossing of tracks through undisturbed areas.
Topsoil handling	Site Manager to ensure compliance with EMP guidelines. Compliance to be monitored by the Environmental Control Officer.	 Remove the first 300mm of topsoil in strips and store at stockpile area. Keep the temporary topsoil stockpiles free of weeds. Place topsoil stockpiles on a levelled area and implement measures to safeguard the piles from being washed away in the event of heavy rains/storm water. Topsoil heaps should not exceed 1.5 m to preserve micro-organisms within the topsoil, which can be lost due to compaction and lack of oxygen. Seed the stockpiled topsoil heaps if vegetation does not re-establish within 6 months of stockpiling. Divert storm- and runoff water around the stockpile area and access roads to prevent erosion.
Fauna and flora	Site Manager to ensure compliance with EMP guidelines. Compliance to be monitored by the Environmental Control Officer.	 Ensure no fauna is caught, killed, harmed, sold, or played with. Instruct workers to report any animals that may be trapped in the working area. Ensure no snares are set or nests raided for eggs or young. Do not remove plants/trees without ECO approval.

m.)Aspects for inclusion as conditions of Authorisation

The following conditions should be included in the Environmental Authorisation:

- (a) The holder shall be responsible for ensuring compliance with the conditions contained in the EA. This includes any person acting on the holders'behalf, including but not limited to an agent, servant, contractor, subcontractor, employee, consultant or any person rendering a service to theholder of the EA.
- (b) Any changes to, or deviation from the project description set out in the BAR must be approved in writing by this Department before such changes or deviation may be effected. In assessing whether to grant such approval or not, the Department may request such information as is deems necessary to evaluate the significance and impacts of such changes or deviations. It may be necessary for the holder of the EA to apply for further authorisations in terms of the EIA Regulations applicable at the time of the amendment.
- (c) The activities, which are authorised, may only be carried out at the property indicated in the Reg 2.2 map.
- (d) The holder of the EA must note that in terms of the National Forest Act (Act no.84 of 1998) protected plant species must not cut, disturbed, damaged, destroyed and their products must not be possessed, collected, removed, transported, exported, donated, purchased or sold unless permission in grated by the Department of Environment, Forestry and Fisheries.
- (e) A minimum distance of 100m from any dwellings or infrastructure must be kept;
- (f) No activities may be undertaken within 100m of watercourses.
- (g) No activity should be taken within 100m from the important biodiversity area (threatened vegetation and animal species e.g. game farm).
- (h) Landowners as well as land occupiers must be re-consulted at least 30 days prior to any prospecting activities undertaken on their properties; A map detailing the Mining locations should be submitted to the relevant landowners, prior to the commencement of the prospecting activities;
- (i) Wakwa Ndlondlo must ensure concurrent rehabilitation.

- (j) The EA is only applicable to Mining permit application and associated activities only.
- (k) Where any contacts details of the holder of the EA Changes, including the name of the responsible person, physical address/or telephonic details, the holder of the EA must notify the Department within 14 calendar days.
- (I) The EA does not negate the responsibility of the holder to comply with any other statutory requirements that may be applicable to the undertaking of such activities.
- (m) The holder of the EA must ensure that any water uses listed in terms of the National Water Act be authorised by the Department of Human Settlement, Waterand Sanitation prior to the commencement of such activities.
- (n) The EA does not purport to absolve the holder of the EA from its common law obligations towards the owner of the surface land affected.
- (o) The EA may be amended or withdrawn at any stage for non-compliance and provides no relief from the provisions of any other relevant statutory or contractual obligation.
- (p) The holder of the EA must not that in terms of Section 30 of the National Environmental Management: Waste Act, 2008 (Act no 59 of 2008), no person may commence, undertake of conduct waste management activity, except inaccordance, with the requirements of the norms and standards determined in terms of Section 19(3).
- (q) The Department serves the right to Audit and/or inspect the activities withoutprior notification at any reasonable time and any frequency.
- (r) The EA will only be effected in the event that a corresponding prospecting rightis issues in terms of the MPRDA (as amended) and none of the activities listedin this EA may commence without the corresponding Mining permit.
- (s) Should there be any conflicting conditions between this EA and approved grantedby others authorities, the responsibility rests with the holder of EA to bring it to the attention of the Department for resolution.
- (t) Non-compliance with any condition of this EA and approved EMP may result in the issuing of a directive in terms of section 28 and or a compliance notice in terms of section 31L of NEMA.

- (u) The holder is reminded in terms of section 49(A)(1)(c) of NEMA, 1998, as amended, a person is guilty of an offence if that person fails to comply with or contravenes a condition of an EA.
- (v) A person convicted of an offence is liable to a fine not exceeding 10 million orto imprisonment for a period not exceeding 10 (ten) years, or to either such finesor such imprisonment.

n.) Description of any assumptions, uncertainties and gaps in knowledge.

(Which relate to the assessment and mitigation measures proposed)

o.) Reasoned opinion as to whether the proposed activity should or should not beauthorised

i.) Reasons why the activity should be authorized or not.

Mining is important for economic development, to construct durable, modern structures, employment creation and revenue collection.

According to the impact assessment undertaken for the proposed project, the impactsof the project are of medium and low significance. The significance of the impacts can be reduced to low and very low when the mitigation measures are implemented.

The project will also have positive impacts due to the employment to be created although for a short term, as well as a short boost to local businesses.

The stakeholders were also requested for their comments. All definents received during Public Participation Process will be included in the draft and final BAR and EMPr. These comments are addressed as far as possible to the satisfaction of the interested and affected parties.

The management of the impacts identified in the impact assessment for all phases of the proposed project will be undertaken through a range of programmes and plans contained in the EMPr. In consideration of the layout plan and the management and mitigation measures contained within the EMPr compiled for the project, which are expected to be effectively implemented, there will be significant reduction in the significance of potential impacts.

The proposed site was selected because it is rich in coal and the coal is of goodquality. The proposed site is located within a section of portion of portion 32 of the farm Blesboklaagte 296 JS which is located at a flat gradient providing a large surface area suitablefor excavation, with no permanent surface water. There are no wetlands on site. The aesthetic characteristics of the surrounding areas will be minimalto none.

The proposed activities have medium to low significance impacts, which will be short term activities in nature. The probability of occurrence of an impact was determined and most of the activities can be controlled and impacts can be reduced or avoided. The probability was also determined based on other excavation activities of similar nature. It was found that generally excavation activities have low impact on the environment.

ii.) Conditions that must be included in the authorisation

- The procedure that has been followed is in compliance with the provisions of the NEMA and the associated EIA Regulations as amended in 2017.
- The environmental Impacts associated with the proposed activity will be addressed by the proposed mitigation measures outlined in the EnvironmentalImpact Assessment and Environmental Management programme.
- The baseline information contained in the BAR provided an adequate description of the site and impacts of the prospecting operation on the environment.
- An adequate Public Participation Process (PPP) was undertaken and the applicant satisfied the minimum requirements as prescribed in the NEMA:EIARegulation 326 as amended in 2017 for public involvement.
- Comments, issues and objections raised have been adequately responded to.
- The national wide need to create economic and employment opportunities for previously disadvantages individuals.

p.) Period for which the Environmental Authorisation is required.

The mining permit has been applied for a period of five (5) years. Thereafter an extension will be applied when deemed necessary.

q.) Undertaking

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

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.

r.) Financial Provision

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

Applicant: Evaluator:	WAKWA NDLONDLO (PTY) LTD Valentine Mhlanga	CALCULATION OF THE QUANTUM DMRE Ref No.: MP 30/5/1/1/3/13284 MP Date: August-2022						
			A	В	С	D	E=A*B*C*D	
No.	Description	Unit	Quantity	Master Rate	Multiplication factor	Weighting factor 1	Amount (Rands)	
1	Dismantling of processing plant and related structures (including overland conveyors and powerlines)	m3	0	19	1	1	0	
2 (A)	Demolition of steel buildings and structures	m2	0	271	1	1	0	
2(B)	Demolition of reinforced concrete buildings and structures	m2	0	400	1	1	0	
3	Rehabilitation of access roads	m2	0	49	1	1	0	
4 (A)	Demolition and rehabilitation of electrified railway lines	m	0	471	1	1	0	
4 (A)	Demolition and rehabilitation of non-electrified railway lines	m	0	257	1	1	0	
5	Demolition of housing and/or administration facilities	m2	0	542	1	1	0	
6	Opencast rehabilitation including final voids and ramps	ha	4.47	28429 <u>2</u>	0.01	1	12707.8524	
7	Sealing of shafts adits and inclines	m3	0	146	1	1	0	
8 (A)	Rehabilitation of overburden and spoils	ha	0.32	189528	1	1	60648.96	
8 (B)	Rehabilitation of processing waste deposits and evaporation ponds (non-polluting potential)	ha	0	236054	1	1	0	
8(C)	Rehabilitation of processing waste deposits and evaporation ponds (polluting potential)	ha	0	685612	1	1	0	
9	Rehabilitation of subsided areas	ha		158701	1	1	0	
10	General surface rehabilitation	ha	5	150138	0.75	1	563017.5	
11	River diversions	ha	0	150138	1	1	0	
12	Fencing	m	0	171	1	1	0	
13	Water management	ha	0.01	57087	1	1	570.87	
14	2 to 3 years of maintenance and aftercare	ha	5	19980	1	1	99900	
15 (A)	Specialist study	Sum	0			1	0	
15 (B)	Specialist study	Sum				1	0	
				l	Sub Tota	11	736845.1824	
1	Preliminary and General	88421.	42189	weighting factor 2		88421.42189		
2	Contingencies			736	84.51824		73684.51824	
	Valentine Mhlanga				Subtotal	12	898951.12	
1 0	11/8/2022			[VAT (15	%)	134842.67	
					Grand To	tal	1033794	

i) Explain how the aforesaid amount was derived.

The financial provision for the environmental rehabilitation and closure of any mine/excavation and its associated operations forms an integral part of the MPRDA. Sections 41 (1) and, 41 (2), 41 (3) and 45 of the MPRDA deal with the financial provision for rehabilitation and closure. During 2012, the DMRE made updated rate available for the calculation of the closure costs, where contractor's costs are not available, these apply.

The "Guideline Document for the Evaluation of Financial Provision made by the Mining Industry" was developed by the DMRE in January 2005 in order to empower the personnel at Regional DMRE offices to review the quantum determination for the rehabilitation and closure of mining sites. With the determination of the quantum for closure, it must be assumed that the infrastructure had no salvage value (clean closure). The closure cost estimate (clean closure) was determined in accordance withthe DMRE guidelines.

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

The rehabilitation and closure financial provision is estimated to be R 1 033 794.00 at this stage. Wakwa Ndlondlo (Pty) Ltd will fund the operation and rehabilitation costs. The applicant hereby confirms that the amount is anticipated to be an operating cost and is provided for as such in the Mining Work Programme.

s.) Specific Information required by the competent Authority

i) Compliance with the provisions of sections 24(4)(a) and (b) read with section24 (3) (a) and (7) of the National Environmental Management Act (Act 107 of 1998). the EIA report must include the:-

No specific information was required.

(1) Impact on the socio-economic conditions of any directly affected person.

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

The proposed coal proposed mine will be established on a natural vegetation cover. Upon closure, the land will be rehabilitated to its original state.

The dust and noise impacts that may emanate from the mining area during the operational phase could have a negative impact on the surrounding community if the mitigation measures proposed in this document are not implemented and managed on-site. However, due to the distance of the community from the mining area (approximately1.65 km Northeast) these impacts are considered to be of low-medium significance.

The operation of the mine will have several positive impacts, such as job creation for skilled, semiskilled and unskilled permanent workers. The proposed coal mine will therefore contribute locally by aiding in the development of the area and boosting the local economy through increased municipal revenue. On a national scale, this will aid by boosting the slowly growing SA economy.

(2.) 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,)

Due to the already disturbed nature of the proposed project areas, no area of archaeological or cultural importance could be identified.

t.) 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 site and project alternatives investigated during the impact assessment process were done at the hand of information obtained during the site investigation, public participation process and desktop studies conducted of the study area. As discussed earlier, the following alternatives were considered:

- Establishment of a coal mine 1.65 km away from the residential area or any form of development vs. establishment of a coal mine in an un-utilised area (preferred alternative)
- Open cast mining (preferred alternative) vs. underground mining
- Temporary Infrastructure (preferred alternative) vs. permanent Infrastructure
- Access onto provincial road (preferred alternative) vs. access onto national road

d.) Mining timeframe

Timeframes or scheduling on construction phase, operational phase, decommissioning, and rehabilitation phase will be as follows. The open-cast mine will be allowed to operate within the permitted area for a period of 2 years and may be renewed for three periods of which each may not exceed one year. This would add up to a maximum of 5 years. The mining area

including all stockpile areas, offices, parking area etc. will ultimately measure 5 ha in total, although mining will be carried out in three box cuts, the boundary of mining within 5 ha will still be maintained.

2. Legal appointment

Details of the list of all the job categories that will be employed on the mine, from the mine manager to the unskilled labours, including those of subcontractors and serviceproviders will be provided in the technical ability report document that which will also be submitted to the competent authority. In this section, we highlight that the following are some of the essential and legally required skills will be employed on all phases of the mine.

- i) Mine manager: A mine manager with at least 5 years of experience must be responsible to ensure that mining and rehabilitation program is implemented as outlined. The mine manager must also enforce the following:
 - confirming that workers are trained and competent for the task undertaken
 - providing clear work instructions
 - inspecting and monitoring workplace conditions
 - continuously evaluating worker performance and correcting unsafe acts
 - reporting and rectifying hazards
 - assuring implementation of the company's safety systems
 - demanding compliance with safety rules and procedures

- conducting meaningful observations, consultation, and interventions
- **ii)** Environmental, Health and safety personnel: with at least 5 years' experiencein relevant fields of environmental assessment, monitoring, and rehabilitation.
 - Monitor and report the potential environmental, health and safety risk
 - Identify priorities for replacing or modifying the rehabilitation plan.
 - Develop an action plan with due dates and responsibilities for the rehabilitation process
 - Conduct an audit of rehabilitation to ensure that all practical measures havebeen taken to control risk associated
 - Produce and environmental, health and safety report monthly and quarterly
- iii) Geologist with at least 5 years' experience on exploration of coal or relevantwork.
 - Will be responsible for identifying and assessing the location, quantity, and quality of mineral deposits.
 - Planning programmes for Mining and taking samples
 - Collecting and recording samples and data from test sites
 - Analysing geological data using specialist computer applications
 - Produce a report on quantity, quality, and depth of coal reserves
- iv) Ecologist with at least 5 years minimum experience.
 - Responsible for assessing the site specific ecological risk by inspect the areato be mined and ensure that plants and animals are not harmed or affected bythe activities.
 - Ensure enough time is given for animal species to move away from the areato be mined.
 - Keep a register of identified species.
 - Recommend alternatives and mitigation measures

PART B

ENVIRONMENTAL MANAGEMENT PROGRAMME REPORT

1.) Draft Environmental management programme

a.) Details of the EAP

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

Refer to section 1 of Part A and Appendix 2.

b.) Description of the aspects of the activity

Confirm that the requirements to describe the aspects of the activity that are covered by the draft environmental management programme is already included in Part A, **Error! Reference source not found.**, herein, as required.

The aspects of the activity that are covered by the environmental management programme has been described and included in Part A, **Error! R eference source not found.**

a. 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, such as buffers.

As mentioned in Part A, section 2.2 (Error! Reference source not found.) this map has been compiled and is attached as Error! Reference source not found.

b. Description of impact management objectives, including management statements

i. Determination of closure objectives

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

In terms of Section 38(1)(d) of the MPRDA, Integrated Environmental Management and Responsibility to Remedy: "The holder of a mining permit must as far as it is reasonably practicable, rehabilitate the environment affected by the mining operations to its natural or predetermined state or to a land use which conforms to the generally accepted principle of sustainable development".

In line with the above, it was agreed with the landowners that the land use would be restored to the pre-mining conditions.

The rehabilitation plan compiled by Singo Consulting (Pty) Ltd was developed on the basis that the rehabilitated area will be made safe, stable as well as non- polluting and will be able to support self-sustaining ecosystems, similar to the surrounding natural ecosystems. To ensure that the rehabilitation plan is aligned withthe closure objective, high-level risk assessment of the mining components was undertaken to establish the potential risks associated with the disturbed areas.

Closure of the mining site will entail rehabilitation of the disturbed areas to as close tothe pre-mining condition or enhanced end-land use.

The closure objectives are to:

- To ensure that all areas that were impacted by the mining activities are physically stable and non-eroding after closure;
- Remove and/or rehabilitate all pollution and pollution sources such as waste materials and spills;
- To leave behind a rehabilitated site that is neat and tidy, giving an acceptable overall aesthetic appearance.
- To limit the possible adverse environmental consequences arising from the miningafter closure and ensure that environmental functionality, where relevant, is reinstated;
- Restore disturbed areas and re-vegetate these areas with plant species naturally occurring in the area to restore the ecological function of the affected areas as faras practicable; and
- Eliminate all alien invasive plant species

Rehabilitation can be divided into two different streams, namely concurrent rehabilitation and final rehabilitation. Concurrent rehabilitation must be carried out along with the operations and will decrease the final liability that the operation will carry at the time of closure. This concurrent rehabilitation will be carried out within thecontext of the EMPr. Final rehabilitation will be carried out once the operation goes into its closure phase. This final rehabilitation will be carried out within the context of the closure plan. The closure and rehabilitation plan should be modified and adapted as the project continues and more knowledge is generated about the environment andthe impacts project.

i) Volumes and rate of water use required for the operation.

It is estimated that the mining activities will require approximately 18000L of water per day for dust suppression purposes.

ii) Has a water use licence has been applied for?

No, water to be used in the mine will be trucked in, there are no activities triggering section 21 of the National Water use Act.

iii) Impacts to be mitigated in their respective phases

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

Table 21: Mitigation measures

Activities	Phase	Size and	Mitigation measures	Compliance with	Time period for
		scale of		standards	implementation
		disturbance			
Mining Permit	Of operation in	Volumes,	Describe how recommendations	Description of how	Describe the time
excavations, blasting,	which activity will	tonnages and	herein will remedy the cause of	each	period when the
stockpiles, discard	take place. State:	hectares or	pollution or degradation	recommendation	measures in the
dumps/dams, loading,	Planning and	m²		herein will comply	environmental

Activities	Phase	Size and	Mitigation measures	Compliance with	Time period for
		scale of		standards	implementation
		disturbance			
hauling and transport.	design, pre-			with any	management
Water supply dams	construction,			prescribed	programme must be
and boreholes,	construction			environmental	implemented.
accommodation,	operational,			management	Measures must be
offices, ablution,	rehabilitation,			standards or	implemented when
stores, workshops,	closure, post-closure			practices that have	required. With regard
processing plant, storm				been identified by	to rehabilitation
water control, berms,				Competent	specifically this must
roads, pipelines, power				Authorities	take place at the
lines, conveyors, etc.					earliest opportunity.
					Regarding
					rehabilitation,
					therefore state either:
					Upon cessation of the
					individual activity or,
					upon cessation of
					mining, bulk sampling,
					or alluvial diamond
					prospecting.
Stripping and	Site establishment/	4.84ha	Visual mitigation	Dust and Noise:	Throughout the site
stockpiling of topsoil	construction phase		• The site must be neat and kept in	NEMAQA, 2004	establishment phase.

Activities	Phase	Size and	Mitigation measures	Compliance with	Time period for
		scale of		standards	implementation
		disturbance			
			good condition at all times.	• Regulation 6(1)	
			Upon closure, the site must be	• Weeds: CARA,	
			rehabilitated and sloped to ensure	1983	
			that visual impact on the aesthetic	• Storm Water:	
			value of the area is minimal.	NWA, 1998	
			Dust handling	• Waste:	
			Dust liberation into the surrounding	NEM:WA, 2008	
			environment must be effectively		
			controlled by the use of, inter alia,		
			water spraying and/or other dust-		
			allaying agents.		
			The site manager must ensure		
			continuous assessment of all dust		
			suppression equipment to confirm		
			its effectiveness.		
			Speed on the access roads must		
			be limited to 40km/h to prevent		
			excess dust generation.		
			Roads must be sprayed with water		
			or an environmentally-friendly		
			dust-allaying agent that contains		

Activities	Phase	Size and	Mitigation measures	Compliance with	Time period for
		scale of		standards	implementation
		disturbance			
			no PCBs (e.g. DAS products) if		
			dust is generated above		
			acceptable limits.		
			Noise handling		
			The applicant must ensure that		
			staff conduct themselves in an		
			acceptable manner while on site,		
			both during work hours and after		
			hours.		
			No loud music permitted at the		
			mining area.		
			All mining vehicles must be		
			equipped with silencers and kept		
			roadworthy in terms of the Road		
			Transport Act.		
			Weed and invader plant		
			management		
			A weed and invader plant control		
			management plan must be		
			implemented at the site to ensure		
			eradication of all listed invader		

Activities	Phase	Size and	Mitigation measures	Compliance with	Time period for
		scale of		standards	implementation
		disturbance			
			plants in terms of CORA (Act No		
			43 1983).		
			Management must take		
			responsibility to control declared		
			invader or exotic species on the		
			rehabilitated areas. The following		
			control methods can be used:		
			 The plants can be uprooted, 		
			felled or cut off and can be		
			destroyed completely.		
			 The plants can be treated with 		
			an herbicide that is registered		
			for use in connection		
			therewith and in accordance		
			with the directions for the use		
			of such an herbicide.		
			 The temporary topsoil 		
			stockpiles must be kept free of		
			weeds.		
			Storm water handling		
			Storm water must be diverted		

Activities	Phase	Size and	Mitigation measures	Compliance with	Time period for
		scale of		standards	implementation
		disturbance			
			around the topsoil heaps, stockpile		
			areas and access roads to prevent		
			erosion and material loss.		
			Runoff water must be diverted		
			around the stockpile areas with		
			trenches and contour structures to		
			prevent erosion of the work areas.		
			Waste management		
			No processing area or waste pile		
			may be established within 100 m		
			of the edge of any river channel or		
			other water bodies.		
			Regular vehicle maintenance may		
			only take place in the service bay		
			area of the off-site workshop. If		
			emergency repairs are needed on		
			equipment not able to move to the		
			workshop, drip trays must be		
			present. All waste products must be		
			disposed of in a 200L closed		
			container/bin to be removed from		

Activities	Phase	Size and	Mitigation measures	Compliance with	Time period for
		scale of		standards	implementation
		disturbance			
			the emergency service area to the		
			workshop to ensure proper		
			disposal.		
			Any effluents containing oil, grease		
			or other industrial substances must		
			be collected in a suitable		
			receptacle and removed from the		
			site, for resale or appropriate		
			disposal at a recognised facility.		
			Spills must be cleaned		
			immediately to the satisfaction of		
			the Regional Manager by		
			removing the spillage and the		
			polluted soil and disposing it at a		
			recognised facility. Proof must be		
			filed.		
			Suitable covered receptacles must		
			be always available and		
			conveniently placed for waste		
			disposal.		
			Non-biodegradable refuse, such		

Activities	Phase	Size and	Mitigation measures	Compliance with	Time period for
		scale of		standards	implementation
		disturbance			
			as glass bottles, plastic bags,		
			metal scrap, etc., must be stored		
			in a container with a closable lid at		
			a collecting point and collected on		
			a regular basis and disposed of at		
			a recognised landfill site. Specific		
			precautions must be taken to		
			prevent refuse from being dumped		
			on or in the vicinity of the mine		
			area.		
			Biodegradable refuse generated		
			must be handled as indicated		
			above.		
Blasting	Operational phase	3.9ha	Management of Health and Safety	Health and	Applicable with each
			Risks	safety	blasting event.
			The type, duration and timing of	• MHSA, 1996	
			the blasting procedures must be	• OHSA, 1993	
			planned with due cognizance of	• OHSAS 18001	
			other land users and structures in	Dust and noise	
			the vicinity,	NEMAQA, 2004	
			The surrounding landowners and	Regulation 6(1)	

Activities	Phase	Size and	Mitigation measures	Compliance with	Time period for
		scale of		standards	implementation
		disturbance			
			communities must be informed in		
			writing ahead of any blasting event		
			Measures to limit fly rock must be		
			taken		
			Audible warning of a pending blast		
			must be given at least 3 minutes		
			before the blast		
			All fly rock (of diameter 150mm		
			and larger) which falls beyond the		
			working area, together with the		
			rock spill must be collected and		
			removed,		
			Workers must have access to the		
			correct PPE as required by law.		
			All operations must comply with		
			the OHSA.		
			Dust handling		
			Dust liberation into the surrounding		
			environment must be effectively		
			controlled using, inter alia, water		
			spraying and/or other dust-allaying		

Activities	Phase	Size and	Mitigation measures	Compliance with	Time period for
		scale of		standards	implementation
		disturbance			
			agents.		
			• Speed on the access roads must be		
			limited to 40km/h to prevent the		
			generation of excess dust.		
			Noise handling		
			The applicant must ensure that		
			staff conduct themselves in an		
			acceptable manner while on site,		
			both during work hours and after		
			hours.		
			No loud music permitted at the		
			mining area.		
			All mining vehicles must be		
			equipped with silencers and		
			maintained in a road worthy		
			condition in terms of the Road		
			Transport Act.		
			• The type, duration and timing of		
			the blasting procedures must be		
			planned with due cognizance of		
			other land users and structures in		

Activities	Phase	Size and	Mitigation measures	Compliance with	Time period for
		scale of		standards	implementation
		disturbance			
			the vicinity. Surrounding land		
			owners must be notified in writing		
			prior to blasting.		
Excavation	Operational phase	4.47 ha	Visual mitigation	Dust and noise	Throughout the
			The site needs to have a neat	NEM:AQA, 2004	operational phase
			appearance and be always kept in	Regulation 6(1)	
			good condition.	Health and	
			• Upon closure the site needs to be	safety	
			rehabilitated and sloped to ensure	MHSA, 1996	
			that the visual impact on the	OHSA, 1993	
			aesthetic value of the area is kept	OHSAS 18001	
			to a minimum.	Fauna and flora	
			Dust handling	NEM:BA, 2004	
			Dust liberation into the surrounding	Waste	
			environment must be effectively	NEM:WA, 2008	
			controlled using, inter alia, water	Weeds	
			spraying and/or other dust-allaying	CARA, 1983	
			agents.	,	
			The site manager must ensure		
			continuous assessment of all dust		
			suppression equipment to confirm		

Activities	Phase	Size and	Mitigation measures	Compliance with	Time period for
		scale of		standards	implementation
		disturbance			
			its effectiveness.		
			Speed on the access roads must		
			be limited to 40km/h to prevent the		
			generation of excess dust.		
			Roads must be sprayed with water		
			or an environmentally friendly		
			dust-allaying agent that contains		
			no PCBs (e.g., DAS products) if		
			dust is generated above		
			acceptable limits.		
			Noise handling		
			The applicant must ensure that		
			staff conduct themselves in an		
			acceptable manner while on site,		
			both during work hours and after		
			hours.		
			No loud music permitted at the		
			mining area.		
			All mining vehicles must be		
			equipped with silencers and		
			maintained in a road worthy		

Activities	Phase	Size and	Mitigation measures	Compliance with	Time period for
		scale of		standards	implementation
		disturbance			
			condition in terms of the Road		
			Transport Act.		
			Management of health and safety		
			risks		
			Workers must have access to the		
			correct PPE as required by law.		
			All operations must comply with		
			the OHSA.		
			Protection of fauna and flora		
			The site manager should ensure		
			that no fauna is caught, killed,		
			harmed, sold or played with.		
			Workers should be instructed to		
			report any animals that may be		
			trapped in the working area.		
			No snares may be set, or nests		
			raided for eggs or young.		
			No plants or trees may be		
			removed without the approval of		
			the ECO.		
			Waste management		

Activities	Phase	Size and	Mitigation measures	Compliance with	Time period for
		scale of		standards	implementation
		disturbance			
			No processing area or waste pile		
			may be established within 100 m		
			of the edge of any river channel or		
			other water bodies.		
			Regular vehicle maintenance may		
			only take place within the service		
			bay area of the off-site workshop.		
			If emergency repairs are needed		
			on equipment not able to move to		
			the workshop, drip trays must be		
			present. All waste products must		
			be disposed of in a 200 L closed		
			container/bin to be removed from		
			the emergency service area to the		
			workshop to ensure proper		
			disposal.		
			Any effluents containing oil, grease		
			or other industrial substances must		
			be collected in a suitable		
			receptacle and removed from site,		
			for resale/ appropriate disposal at		

Activities	Phase	Size and	Mitigation measures	Compliance with	Time period for
		scale of		standards	implementation
		disturbance			
			a recognised facility.		
			Spills must be cleaned up		
			immediately to the satisfaction of		
			the Regional Manager by		
			removing the spillage and polluted		
			soil and disposing it at a		
			recognised facility. Proof must be		
			filed.		
			Suitable covered receptacles must		
			be always available and		
			conveniently placed for waste		
			disposal.		
			Non-biodegradable refuse such as		
			glass bottles, plastic bags, metal		
			scrap, etc., should be stored in a		
			container with a closable lid at a		
			collecting point and collected on a		
			regular basis and disposed of at a		
			recognised landfill site. Specific		
			precautions should be taken to		
			prevent refuse from being dumped		

Activities	Phase	Size and	Mitigation measures	Compliance with	Time period for
		scale of		standards	implementation
		disturbance			
			on or in the vicinity of the mine		
			area.		
			Biodegradable refuse generated		
			must be handled as indicated		
			above.		
			Management of weed/invader		
			plants		
			A weed and invader plant control		
			management plan must be		
			implemented at the site to ensure		
			eradication of all listed invader		
			plants in terms of CORA (Act No		
			43 1983).		
			Management must take		
			responsibility to control declared		
			invader or exotic species on the		
			rehabilitated areas. The following		
			control methods can be used:		
			 The plants can be uprooted, 		
			felled or cut off and can be		
			destroyed completely.		

Activities	Phase	Size and	Mitigation measures	Compliance with	Time period for
		scale of		standards	implementation
		disturbance			
Crushing	Operational phase	0.05 ha	 The plants can be treated with an herbicide that is registered for use in connection therewith and in accordance with the directions for the use of such an herbicide. The temporary topsoil stockpiles need to be kept free of weeds. Dust handling Dust liberation into the surrounding environment must be effectively controlled by using, inter alia, water spraying and/or other dustallaying agents. The site manager must ensure continuous assessment of all dust suppression equipment to confirm its effectiveness. Speed on the access roads must be limited to 40km/h to prevent 	Dust and noise NEM:AQA 2004 Waste NEM:WA 2008	Throughout the operational phase

Activities	Phase	Size and	Mitigation measures	Compliance with	Time period for
		scale of		standards	implementation
		disturbance			
			excess dust generation.		
			The crusher plant must have		
			operational water sprayers to		
			alleviate dust generation from		
			conveyor belts.		
			Noise handling		
			The applicant must ensure that		
			staff conduct themselves in an		
			acceptable manner while on site,		
			during work hours and after hours.		
			No loud music permitted at the		
			mining area.		
			All mining vehicles must be		
			equipped with silencers and kept		
			roadworthy in terms of the Road		
			Transport Act.		
			Waste management		
			No processing area or waste pile		
			may be established within 100 m		
			of the edge of any river channel or		
			other water bodies.		

Activities	Phase	Size and	Mitigation measures	Compliance with	Time period for
		scale of		standards	implementation
		disturbance			
			Regular vehicle maintenance may		
			only take place in the service bay		
			of the off-site workshop. If		
			emergency repairs are needed on		
			equipment not able to move to the		
			workshop, drip trays must be		
			present. All waste products must		
			be disposed of in a 200L closed		
			container/bin to be removed from		
			the emergency service area to the		
			workshop for proper disposal.		
			Any effluents containing oil, grease		
			or other industrial substances must		
			be collected in a suitable		
			receptacle and removed from site,		
			either for resale or appropriate		
			disposal at a recognised facility.		
			Spills must be cleaned up		
			immediately to the satisfaction of		
			the Regional Manager by		
			removing spillage and polluted soil		

Activities	Phase	Size and	Mitigation measures	Compliance with	Time period for
		scale of		standards	implementation
		disturbance			
			and by disposing it at a recognised		
			facility. Proof must be filed.		
			Suitable covered receptacles must		
			be always available and		
			conveniently placed for the		
			disposal of waste.		
			Non-biodegradable refuse such as		
			glass bottles, plastic bags, metal		
			scrap, etc., should be stored in a		
			container with a closable lid at a		
			collecting point and collected on a		
			regular basis and disposed of at a		
			recognised landfill site. Specific		
			precautions must be taken to		
			prevent refuse from being dumped		
			on or in the vicinity of the mine		
			area.		
			Biodegradable refuse generated		
			must be handled as indicated		
			above.		
Stockpiling and	Operational phase	0.36 ha	Visual mitigation	Storm water	Throughout

Activities	Phase	Size and	Mitigation measures	Compliance with	Time period for
		scale of		standards	implementation
		disturbance			
transporting			The site must be neat and be	NWA, 1998	operational phase
			always kept in good condition.	Weeds	
			Upon closure, the site must be	CARA, 1983	
			rehabilitated and sloped to ensure	Dust and noise	
			that the visual impact on the	NEM:AQA, 2004	
			aesthetic value of the area is	Regulation 6(1)	
			minimal.	Waste	
			Storm water handling	NEM:WA, 2008	
			Storm water must be diverted		
			around the stockpile areas and		
			access roads to prevent erosion		
			and material loss.		
			Runoff water must be diverted		
			around the stockpile areas with		
			trenches and contour structures to		
			prevent erosion of work areas.		
			Mining must be conducted in		
			accordance with the Best Practice		
			Guideline for small scale mining		
			that relates to storm water		
			management, erosion and		

Activities	Phase	Size and	Mitigation measures	Compliance with	Time period for
		scale of		standards	implementation
		disturbance			
			sediment control and waste		
			management, developed by the		
			DWS, and any other conditions		
			that the DWS may impose:		
			Clean water (e.g., rainwater) must		
			be kept clean and be routed to a		
			natural watercourse by a system		
			separate from the dirty water		
			system. Prevent clean water from		
			running or spilling into dirty water		
			systems.		
			Dirty water must be collected and		
			contained in a system separate		
			from the clean water system.		
			Dirty water must be prevented		
			from spilling/seeping into clean		
			water systems.		
			The storm water management plan		
			must apply for the entire life cycle		
			of the mine and over different		
			hydrological cycles (rainfall		

Activities	Phase	Size and	Mitigation measures	Compliance with	Time period for
		scale of		standards	implementation
		disturbance			
			patterns).		
			The statutory requirements of		
			various regulatory agencies and		
			the interests of stakeholders must		
			be considered and incorporated		
			into the storm water management		
			plan.		
			Management of weed/invader		
			plants		
			A weed and invader plant control		
			management plan must be		
			implemented at the site to ensure		
			eradication of all listed invader		
			plants in terms of CORA (Act No		
			43 1983).		
			Management must take		
			responsibility to control declared		
			invader or exotic species on the		
			rehabilitated areas. The following		
			control methods can be used:		
			 The plants can be uprooted, 		

Activities	Phase	Size and	Mitigation measures	Compliance with	Time period for
		scale of		standards	implementation
		disturbance			
			felled, or cut off and can be		
			destroyed completely.		
			 The plants can be treated with 		
			an herbicide that is registered		
			for use in connection		
			therewith and in accordance		
			with the directions for the use		
			of such an herbicide.		
			• The temporary stockpile area must		
			be kept free of weeds.		
			Dust handling		
			Dust liberation into the surrounding		
			environment must be effectively		
			controlled using, inter alia, water		
			spraying and/or other dust-allaying		
			agents.		
			The site manager must ensure		
			continuous assessment of all dust		
			suppression equipment to confirm		
			its effectiveness.		
			• Speed on the access roads must		

Activities	Phase	Size and	Mitigation measures	Compliance with	Time period for
		scale of		standards	implementation
		disturbance			
			be limited to 40km/h to prevent		
			excess dust generation.		
			Roads must be sprayed with water		
			or an environmentally friendly		
			dust-allaying agent that contains		
			no PCBs (e.g., DAS products) if		
			dust is generated above		
			acceptable limits.		
			Management of access roads		
			Storm water should be diverted		
			around the access roads to		
			prevent erosion.		
			Vehicular movement must be		
			restricted to existing access routes		
			to prevent crisscrossing of tracks		
			through undisturbed areas.		
			Rutting and erosion of the access		
			road caused because of the		
			mining activities must be repaired		
			by the applicant.		
			Noise handling		

Activities	Phase	Size and	Mitigation measures	Compliance with	Time period for
		scale of		standards	implementation
		disturbance			
			The applicant must ensure that		
			staff conduct themselves in an		
			acceptable manner while on site,		
			both during work hours and after		
			hours.		
			No loud music permitted at the		
			mining area.		
			All mining vehicles must be		
			equipped with silencers and kept		
			roadworthy in terms of the Road		
			Transport Act.		
			Waste management		
			No processing area or waste pile		
			may be established within 100 m		
			of the edge of any river channel or		
			other water bodies.		
			Regular vehicle maintenance may		
			only take place in the service bay		
			area of the off-site workshop. If		
			emergency repairs are needed on		
			equipment not able to move to the		

Activities	Phase	Size and	Mitigation measures	Compliance with	Time period for
		scale of		standards	implementation
		disturbance			
			workshop, drip trays must be		
			present. All waste products must		
			be disposed of in a 200L closed		
			container/bin to be removed from		
			the emergency service area to the		
			workshop for proper disposal.		
			Any effluents containing oil, grease		
			or other industrial substances must		
			be collected in a suitable		
			receptacle and removed from site,		
			for resale or appropriate disposal		
			at a recognised facility.		
			Spills must be cleaned up		
			immediately to the satisfaction of		
			the Regional Manager by		
			removing the spillage and polluted		
			soil and disposing of it at a		
			recognised facility. Proof must be		
			filed.		
			Suitable covered receptacles must		
			be always available and		

Activities	Phase	Size and	Mitigation measures	Compliance with	Time period for
		scale of		standards	implementation
		disturbance			
			conveniently placed for waste		
			disposal.		
			Non-biodegradable refuse such as		
			glass bottles, plastic bags, metal		
			scrap, etc., should be stored in a		
			container with a closable lid at a		
			collecting point and collected on a		
			regular basis and disposed of at a		
			recognised landfill site. Specific		
			precautions should be taken to		
			prevent refuse from being dumped		
			on or in the vicinity of the mine		
			area.		
			Biodegradable refuse generated		
			must be handled as indicated		
			above.		
Sloping and	Decommissioning	5 ha	Storm water handling	Storm water	Upon cessation of
landscaping during	phase		Storm water must be diverted	NWA, 1998	mining
rehabilitation			around the rehabilitated area to	Health and	
			prevent erosion and loss of	safety	
			reinstated material.	MHSA, 1996	

Activities	Phase	Size and	Mitigation measures	Compliance with	Time period for
		scale of		standards	implementation
		disturbance			
			Management of health and safety	OHSA, 1993	
			risks	OHSAS 18001	
			• Excavations must be rehabilitated	Dust and noise	
			as stipulated in the closure plan to	NEM:AQA 2004,	
			ensure the site is safe upon	Regulation 6(1)	
			closure.	Waste	
			Workers must have access to the	NEM:WA 2008	
			correct PPE as required by law.		
			All operations must comply with the		
			OHSA.		
			Dust handling		
			Dust liberation into the surrounding		
			environment must be effectively		
			controlled using, inter alia, water		
			spraying and/or other dust-allaying		
			agents.		
			The site manager must ensure		
			continuous assessment of all dust		
			suppression equipment to confirm		
			its effectiveness.		
			Speed on the access roads must		

Activities	Phase	Size and	Mitigation measures	Compliance with	Time period for
		scale of		standards	implementation
		disturbance			
			be limited to 40km/h to prevent		
			excess dust generation.		
			Roads must be sprayed with water		
			or an environmentally friendly		
			dust-allaying agent that contains		
			no PCBs (e.g., DAS products) if		
			dust is generated above		
			acceptable limits.		
			Noise handling		
			The applicant must ensure that		
			staff conduct themselves in an		
			acceptable manner while on site,		
			both during work hours and after		
			hours.		
			No loud music permitted at the		
			mining area.		
			All mining vehicles must be		
			equipped with silencers and kept		
			roadworthy in terms of the Road		
			Transport Act.		
			Waste management		

Activities	Phase	Size and	Mitigation measures	Compliance with	Time period for
		scale of		standards	implementation
		disturbance			
			Waste material of any description,		
			including receptacles, scrap,		
			rubble, and tyres, will be removed		
			entirely from the mining area, and		
			disposed of at a recognised landfill		
			facility. It will not be permitted to		
			be buried/burned on site		
			Any effluents containing oil, grease		
			or other industrial substances must		
			be collected in a suitable		
			receptacle and removed from site,		
			for resale/ appropriate disposal at		
			a recognised facility.		
			Spills must be cleaned up		
			immediately to the satisfaction of		
			the Regional Manager by		
			removing the spillage together with		
			the polluted soil and disposing of it		
			at a recognised facility. Proof		
			should be filed.		
			Suitable covered receptacles must		

Activities	Phase	Size and	Mitigation measures	Compliance with	Time period for
		scale of		standards	implementation
		disturbance			
			be always available and		
			conveniently placed for waste		
			disposal.		
			Non-biodegradable refuse, like		
			glass bottles, plastic bags, metal		
			scrap, etc., should be stored in a		
			container with a closable lid at a		
			collecting point and collected on a		
			regular basis and disposed of at a		
			recognised landfill site. Specific		
			precautions should be taken to		
			prevent refuse from being dumped		
			on or in the vicinity of the mine		
			area.		
			Biodegradable refuse generated		
			must be handled as indicated		
			above.		
Replacing of topsoil	Decommissioning	5 ha	Rehabilitation of excavated area	Rehabilitation	Upon cessation of
and rehabilitation of	phase		Rocks and coarse material	MPRDA, 2008	mining
disturbed area			removed from the excavation must	Health and	
			be dumped into the excavation.	safety	

Activities	Phase	Size and	Mitigation measures	Compliance with	Time period for
		scale of		standards	implementation
		disturbance			
			No waste will be permitted to be	MHSA, 1996	
			deposited in the excavations.	OHSA, 1993	
			Once overburden, rocks and	OHSAS 18001	
			coarse natural materials have	Dust and noise	
			been added to the excavation and	NEMAQA, 2004	
			were profiled with acceptable	Regulation 6(1)	
			contours and erosion control	Weeds	
			measures, the topsoil previously	CARA, 1983	
			stored will be returned to its	Waste	
			original depth over the area.	NEMWA, 2008	
			The area will be fertilized if		
			necessary to allow vegetation to		
			establish rapidly. The site will be		
			seeded with a local or adapted		
			indigenous seed mix to propagate		
			the locally or regionally occurring		
			flora, should natural vegetation not		
			re-establish within 6 months from		
			site closure.		
			If a reasonable assessment		
			indicates that the re-establishment		

Activities	Phase	Size and	Mitigation measures	Compliance with	Time period for
		scale of		standards	implementation
		disturbance			
			of vegetation is unacceptably slow,		
			the Regional Manager may require		
			that the soil be analysed and any		
			deleterious effects on the soil		
			arising from the mining operation		
			be corrected and the area seeded		
			with a vegetation seed mix to his		
			or her specification.		
			Rehabilitation of plant area		
			The compacted areas will be		
			ripped, and the topsoil returned		
			over the area.		
			Coarse natural material used for		
			the construction of ramps will be		
			removed and dumped into the		
			excavations.		
			Stockpiles will be removed during		
			the decommissioning phase, the		
			area ripped, and topsoil returned		
			to original depth to provide a		
			growth medium.		

Activities	Phase	Size and	Mitigation measures	Compliance with	Time period for
		scale of		standards	implementation
		disturbance			
			On completion of operations, all		
			structures or objects will be dealt		
			with in accordance with Section 44		
			of the MPRDA 2002 (Act 28 of		
			2002):		
			 Where sites have been 		
			rendered devoid of		
			vegetation/grass or soils have		
			been compacted by traffic, the		
			surface will be scarified or		
			ripped.		
			 The site will be seeded with a 		
			vegetation seed mix adapted		
			to reflect the local indigenous		
			flora if natural vegetation does		
			not re-establish within 6		
			months of site closure.		
			 Photographs of the mining 		
			area and office sites, before		
			and during the mining		
			operation and after		

Activities	Phase	Size and	Mitigation measures	Compliance with	Time period for
		scale of		standards	implementation
		disturbance			
			rehabilitation, will be taken at		
			selected fixed points and kept		
			on record for the information		
			of the Regional Manager.		
			 On completion of mining 		
			operations, the surface of		
			these areas, if compacted due		
			to hauling and dumping		
			operations, will be scarified to		
			a depth of at least 300 mm		
			and graded to an even		
			surface condition. The		
			previously stored topsoil will		
			be returned to its original		
			depth over the area.		
			 Prior to replacing the topsoil, 		
			the overburden material that		
			was removed from these		
			areas will be replaced in the		
			same order as it originally		
			occurred.		

Activities	Phase	Size and	Mitigation measures	Compliance with	Time period for
		scale of		standards	implementation
		disturbance			
			 The area will then be fertilised 		
			if necessary to allow		
			vegetation to establish rapidly.		
			The site will be seeded with a		
			local, adapted indigenous		
			seed mix if natural vegetation		
			does not re-establish within 6		
			months after site closure.		
			 If a reasonable assessment 		
			indicates that the re-		
			establishment of vegetation is		
			unacceptably slow, the		
			Regional Manager may		
			require that the soil be		
			analysed and any deleterious		
			effects on the soil arising from		
			the mining operation be		
			corrected and the area be		
			seeded with a seed mix to		
			their specification.		
			Final rehabilitation		

Activities	Phase	Size and	Mitigation measures	Compliance with	Time period for
		scale of		standards	implementation
		disturbance			
			Rehabilitation of the surface area		
			will entail landscaping, levelling,		
			top dressing, land preparation,		
			seeding (if required) and		
			maintenance, and weed/alien		
			clearing.		
			All infrastructure, equipment, plant,		
			temporary housing, and other		
			items used during the mining		
			period will be removed from the		
			site (section 44 of the MPRDA).		
			Waste material of any description,		
			including receptacles, scrap,		
			rubble, and tyres, will be removed		
			entirely from the mining area, and		
			disposed of at a recognised landfill		
			facility. It will not be permitted to		
			be buried/burned on site.		
			Weed/alien clearing will be done in		
			a sporadic manner during the life		
			of the mining activities. Species		

Activities	Phase	Size and	Mitigation measures	Compliance with	Time period for
		scale of		standards	implementation
		disturbance			
			regarded as Category 1 weeds		
			according to CORA, 1983 – Act		
			43; Regulations 15 & 16 (as		
			amended in March 2001) must be		
			eradicated from the site.		
			• Final rehabilitation will be		
			completed within a period		
			specified by the Regional		
			Manager.		

e.) Impact Management Outcomes

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

Activity	Potential impact	Aspects affected	Phase	Mitigation type	Standard to be achieved
Whether listed or	E.g., dust, noise,		In which impact is	Modify, remedy,	Impact avoided, noise levels, dust
not. E.g.,	drainage, surface		anticipated. E.g.,	control or stop	levels, rehabilitation standards, end-
excavations,	disturbance, fly		construction,	through, e.g.,	use objectives, etc.
blasting, stockpiles,	rock, surface water		commissioning,	noise control	
discard dumps/	contamination,		operational	measures, storm	
dams, loading,	groundwater		decommissioning,	water control, dust	
hauling, transport,	contamination, air		closure and post-	control,	

Activity	Potential impact	Aspects affected	Phase	Mitigation type	Standard to be achieved
water supply dams	pollution, etc.		closure.	rehabilitation,	
and boreholes,				design measures,	
accommodation,				blasting controls,	
offices, ablution,				avoidance,	
stores, workshops,				relocation,	
processing plant,				alternative activity,	
storm water control,				etc.	
berms, roads,					
pipelines, power					
lines, conveyors,					
etc.					
Topsoil stripping	Visual intrusion	The visual impact	Site	Control:	Impact on the surrounding
and stockpiling	associated with the	may affect the	establishment/	Implementation of	environment mitigated until
	establishment of the	residents of the	construction	proper	rehabilitation standards can be
	mining area.	immediate area.	phase	housekeeping	implemented.
	Dust nuisance	Dust will be	-		Fallout dust levels must comply
	caused by soil	contained within			with the acceptable dust fall rate
	disturbance.	property			published for non-residential areas
		boundaries and		Control: Dust	in the National Dust Control
		therefore affect		suppression	Regulations 2013 – 600 < Dust Fall
		only the			< 1 200 mg/m²/day.
		landowner.			Gravimetric dust levels must
					comply with the standard published

Activity	Potential impact	Aspects affected	Phase	Mitigation type	Standard to be achieved
					in the NIOSH guidelines –
					particulates >1/10 th of the
					occupational exposure limit.
					NEMAQA 2004, Regulation 6(1)
	Noise nuisance	The noise impact	-	Control: Noise	Noise levels on the site must be
	caused by	should be		control measures	managed and needs to comply with
	machinery stripping	contained within			the standards stipulated in
	and stockpiling the	property			NEMAQA, 2004 Regulation 6(1) as
	topsoil.	boundaries but			well as the noise standards of
		might have a			SANS 10103:2008
		periodic impact on			• Employees working in areas with
		the closest			noise levels of more than 82dBA
		residents of the			need to be issue with hearing
		Witbank			protection.
		community.			
	Infestation of the	Biodiversity	-	Control and	The impact must be avoided
	topsoil heaps by			remedy:	through the eradication of Category
	weeds and invader			Implementation	1 weeds/ invader plants in terms of
	plants			of weed control	CARA, 1993 as well as the
					implementation of the mitigation
					measures in this document.
	Loss of topsoil due	Loss of topsoil	-	Control: Storm	The impact must be avoided
	to incorrect storm	will affect the		water	through the implementation of

Activity	Potential impact	Aspects affected	Phase	Mitigation type	Standard to be achieved
	water management.	rehabilitation of the mining area.		management	storm water management.
	Contamination of area with hydrocarbons or hazardous waste materials.	Contamination may cause surface or ground water contamination if not addressed		Control and remedy: Implementation of waste management	 The impact must be avoided through the implementation of the mitigation measures stipulated in this document. Should spillage occur, the area needs to be cleaned in accordance with the standards of the NEMWA, 2008.
Blasting	Health and safety risk posed by blasting Activities	Impact might affect the employees working on site.	Operational phase	Control: Health and safety monitoring management	 Impact must be avoided through compliance with the MHSA, 1996, OHSA, 1993 and OHSAS 18001 Fallout dust levels must comply with the acceptable dust fall rate published for non-residential areas in the National Dust Control Regulations 2013 – 600 < Dust Fall < 1 200 mg/m²/day.
	Dust nuisance caused by blasting activities	Dependent on the blast, the impact might affect the surrounding		Control: Dust suppression	Gravimetric dust levels has to comply with the standard published in the NIOSH guidelines particulates >1/10 th of the occupational exposure limit.

Activity	Potential impact	Aspects affected	Phase	Mitigation type	Standard to be achieved
		community. Blasting will only occur twice a year.			NEMAQA, 2004 Regulation 6(1)
	Noise nuisance caused by blasting activities	Dependent on the blast, the impact might affect the surrounding community. Blasting will only occur twice a year.		Control: Noise control measure	 Noise levels on the site has to be managed and need to comply with the standards stipulated in NEMAQA, 2004 Regulation 6(1) as well as the noise standards of SANS 10103:2008 Employees working in areas with noise levels of more than 82dBA need to be issue with hearing protection.
Excavation	Visual intrusion associated with the excavation activities Dust nuisance due to excavation activities.	The visual impact may affect the residents of the immediate area. Dust will be contained within the property boundaries and will therefore	Operational phase	Control: Implementation of proper housekeeping Control: Dust suppression	 Impact on the surrounding environment mitigated until rehabilitation standards can be implemented. Fallout dust levels must comply with the acceptable dust fall rate published for non-residential areas, as per National Dust Control Regulations 2013 – 600 < Dust Fall < 1 200 mg/m²/day.

Activity	Potential impact	Aspects affected	Phase	Mitigation type	Standard to be achieved
		affect only the			Gravimetric dust levels must
		landowner.			comply with the standard published
					in the NIOSH guidelines –
					Particulates >1/10 th of the
					occupational exposure limit.
					• NEM:AQA, 2004 Regulation 6(1).
	Noise nuisance	The noise impact	-	Control: Noise	Noise levels on the site must be
	generated by	must be contained		control measures	managed and need to comply with
	excavation	within the			the standards stipulated in
	equipment	boundaries of the			NEM:AQA, 2004 Regulation 6(1)
		property but might			as well as the noise standards of
		have a periodic			SANS 10103:2008.
		impact on the			• Employees working in areas with
		closest residents			noise levels of more than 82dBA
		of the Witbank			need to be issue with hearing
		community.			protection.
	Unsafe working	Impact might	_	Control: Health	Impact must be avoided through
	conditions for	affect employees		and safety	compliance with the MHSA, 1996,
	employees.			monitoring and	OHSA, 1993 and OHSAS 18001
				management	
Excavation	Negative impact on	Biodiversity	Operational	Control:	The impact must be avoided
	the fauna and flora		phase	Protection of	through implementation of the
	of the area.			fauna and flora	mitigation measures stipulated in

Activity	Potential impact	Aspects affected	Phase	Mitigation type	Standard to be achieved
				through	this document.
				operational	• NEM:BA, 2004.
				phase	
	Contamination of	Contamination		Control:	The impact should be avoided
	area with	may cause surface		Implementation	through the implementation the
	hydrocarbons or	or ground water		of waste	mitigation measures stipulated in
	hazardous waste	contamination if		management	this document.
	materials.	not addressed.			Should spillage however occur the
					area needs to be cleaned in
					accordance with the standards of
					the NEMWA, 2008.
	Weed and invader	Biodiversity		Control:	The impact should be avoided
	plant infestation of			Implementation	through the eradication of Category
	the area.			of weed control	1 weeds/invader plants in terms of
					CARA, 1993 as well as the
					implementation of the mitigation
					measures in this document.
Crushing	Dust nuisance due	Dust will be	Operational	Control: Dust	Fallout dust levels must comply
	to the crushing	contained within	phase	suppression	with the acceptable dust fall rate
	activities	the property			published for non-residential areas
		boundaries and			in the National Dust Control
		will therefore affect			Regulations 2013 – 600 < Dust Fall
		only the			< 1 200 mg/m²/day.

Activity	Potential impact	Aspects affected	Phase	Mitigation type	Standard to be achieved
		landowner.			Gravimetric dust levels must
					comply with the standard published
					in the NIOSH guidelines –
					Particulates >1/10 th of the
					occupational exposure limit.
					• NEMAQA, 2004 Regulation 6(1).
	Noise nuisance	The noise impact	-	Control: Noise	Noise levels on the site must be
	generated by the	should be		control measures	managed and need to comply with
	crushing activities	contained within			the standards stipulated in
		the boundaries of			NEMAQA, 2004 Regulation 6(1) as
		the property but			well as the noise standards of
		might have a			SANS 10103:2008.
		periodic impact on			• Employees working in areas with
		the closest			noise levels of more than 82dBA
		residents of the			need to be issue with hearing
		Witbank			protection.
		community.			
	Contamination of	Contamination	-	Control:	The impact should be avoided
	area with	may cause surface		Implementation	through the implementation the
	hydrocarbons or	or ground water		of waste	mitigation measures stipulated in
	hazardous waste	contamination if		management	this document.
	materials.	not addressed.			Should spillage however occur the
					area needs to be cleaned in

Activity	Potential impact	Aspects affected	Phase	Mitigation type	Standard to be achieved
					accordance with the standards of
					the NEMWA, 2008.
	Loss of material	Impact will affect		Control: Storm	The impact should be avoided
	due to ineffective	income of		water control	through the implementation of
	storm water	applicant.		measures	storm water management.
	handling.				
	Weed and invader	Biodiversity	•	Control and	The impact should be avoided
	plant infestation of			remedy:	through the eradication of Category
	the area due to the			Implementation	1 weeds/invader plants in terms of
	disturbance of the			of weed control	CARA, 1993 as well as the
	soil				implementation of the mitigation
					measures in this document.
Stockpiling and	Dust nuisance from	Dust will be	Operational	Control: Dust	Fallout dust levels has to comply
transporting	stockpiled material	contained within	phase	suppression	with the acceptable dust fall rate
	and vehicles	the property			published for non-residential areas
	transporting the	boundaries and			in the National Dust Control
	material.	will therefore affect			Regulations 2013 – 600 < Dust Fall
		only the			< 1 200 mg/m²/day.
		landowner.			Gravimetric dust levels must
					comply with the standard published
					in the NIOSH guidelines –
					Particulates >1/10 th of the
					occupational exposure limit.

Activity	Potential impact	Aspects affected	Phase	Mitigation type	Standard to be achieved
					NEMAQA, 2004 Regulation 6(1).
	Degradation of	All road users will		Control and	The impact should be avoided
	access roads.	be affected.		remedy: Road	through the implementation of the
				management	mitigation measures proposed in
					this document.
	Noise nuisance	The noise impact		Control: Noise	Noise levels on the site must be
	caused by vehicles.	should be		management	managed and need to comply with
		contained within		monitoring and	the standards stipulated in
		the boundaries of		management	NEMAQA, 2004 Regulation 6(1) as
		the property but			well as the noise standards of
		might have a			SANS 10103:2008.
		periodic impact on			• Employees working in areas with
		the closest			noise levels of more than 82dBA
		residents of the			need to be issue with hearing
		Witbank			protection.
		community.			
Sloping and	Contamination of	Contamination	Decommissioning	Control:	•The impact should be avoided
landscaping	area with	may cause surface	phase	Implementation	through the implementation the
during	hydrocarbons or	or ground water		of waste	mitigation measures stipulated in
rehabilitation	hazardous waste	contamination if		management	this document.
	materials	not addressed.			Should spillage however occur the
					area needs to be cleaned in
					accordance with the standards of

Activity	Potential impact	Aspects affected	Phase	Mitigation type	Standard to be achieved
					the NEM: WA, 2008.
	Soil erosion	Biodiversity	-	Control: Soil	The impact should be avoided
				management	through the implementation the
					mitigation measures stipulated in
					this document.
					• CARA, 1993
	Health and safety	Impact will affect	-	Control: Health	The impact should be avoided
	risk posed by un-	employees and		and safety	through compliance with the
	sloped areas	residents of the		monitoring and	standards of the MHSA, 1996,
		property		management.	OHSA, 1993 and OHSAS 18001
	Dust nuisance	Dust will be	-	Control: Dust	Fallout dust levels must comply
	caused during	contained within		suppression	with the acceptable dust fall rate
	sloping and	the property			published for non-residential areas
	landscaping	boundaries and			in the National Dust Control
	activities.	will therefore affect			Regulations 2013 – 600 < Dust Fall
		only the			< 1 200 mg/m²/day.
		landowner.			Gravimetric dust levels must
					comply with the standard published
					in the NIOSH guidelines –
					Particulates >1/10 of the
					occupational exposure limit. NEM:
					AQA, 2004 Regulation 6(1).
	Noise nuisance	The noise impact	-	Control: Noise	Noise levels on the site has to be

Activity	Potential impact	Aspects affected	Phase	Mitigation type	Standard to be achieved
	caused by	should be		monitoring	managed and need to comply with
	machinery.	contained within			the standards stipulated in NEM:
		the boundaries of			AQA, 2004 Regulation 6(1) as well
		the property but			as the noise standards of SANS
		might have a			10103:2008.
		periodic impact on			 Employees working in areas with
		the closest			noise levels of more than 82dBA
		residents of the			need to be issue with hearing
		Witbank			protection.
		community.			
	Contamination of	Contamination		Control: Waste	The impact should be avoided
	area with	may cause surface		management	through the implementation the
	hydrocarbons or	or ground water			mitigation measures stipulated in
	hazardous waste	contamination if			this document.
	materials.	not addressed.			Should spillage however occur the
					area needs to be cleaned in
					accordance with the standards of
					the NEM:WA, 2008.
Replacing of	Loss of reinstated	Biodiversity and	Decommissioning	Control: Soil	The impact should be avoided
topsoil and	topsoil due to the	soil management	phase	management	through the implementation the
rehabilitation of	absence of				mitigation measures stipulated in
disturbed area	vegetation				this document.
					• CARA, 1993

Activity	Potential impact	Aspects affected	Phase	Mitigation type	Standard to be achieved
	Infestation of the	Biodiversity and		Control and	The impact should be avoided
	area by weed and	soil management		remedy:	through the eradication of Category
	invader plants.			Implementation	1 weeds/invader plants in terms of
				of weed control	CARA, 1993 as well as the
					implementation of the mitigation
					measures in this document.

f.) Impact management actions

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

Activity	Potential impact	Mitigation type	Time period for	Compliance with standards
			implementation	
Whether listed or	E.g. dust, noise,	Modify, remedy, control or	Describe the time period when	A description of how each of the
not, e.g.,	drainage, surface	stop through, e.g., noise	the measures in the	recommendations in 2.11.6 read
excavations,	disturbance, fly rock,	control measures, storm	environmental management	with 2.12 and 2.15.2 herein will
blasting, stockpiles,	surface water	water control, dust control,	programme must be	comply with any prescribed
discard	contamination,	rehabilitation, design	implemented. Measures must	environmental management
dumps/dams,	groundwater	measures, blasting controls,	be implemented when	standards or practices that have
loading, hauling,	contamination, air	avoidance, relocation,	required. Regarding	been identified by Competent
transport, water	pollution, etc.	alternative activity, etc. E.g.,	rehabilitation specifically this	Authorities
supply dams,		Modify through alternative	must take place at the earliest	
boreholes,		method, control through	opportunity. Regarding	
accommodation,		noise control, control	Rehabilitation therefore state	
offices, ablution,		through management and	either – Upon cessation of the	
stores, workshops,		monitoring, and remedy	individual activity or upon the	
processing plant,		through rehabilitation.	cessation of mining, bulk	
storm water control,			sampling, or alluvial diamond	
berms, roads,			prospecting as the case may	
pipelines, power			be.	
lines, conveyors,				
etc.				

Activity	Potential impact	Mitigation type	Time period for	Compliance with standards
			implementation	
Topsoil stripping	Visual intrusion	Control: Implementation of	To be implemented daily	Impact on the surrounding
and stockpiling	associated with the	proper housekeeping	throughout the site	environment must be mitigated
	establishment of the		establishment / construction	until rehabilitation standards can
	mining area.		phase:	be implemented in terms of the
			Daily compliance monitoring	MRDA.
			by site management.	
			Quarterly compliance	
			monitoring of site by an	
			Environmental Control	
			Officer.	
	Dust nuisance caused	Control: Dust suppression	To be implemented daily	Fallout dust levels must comply
	by the disturbance of		throughout the site	with the acceptable dust fall rate
	soil.		establishment / construction	published for non-residential
			phase:	areas in the National Dust
			Daily compliance monitoring	Control Regulations 2013 – 600
			by site management.	< Dust Fall < 1 200 mg/m²/day.
			Quarterly compliance	Gravimetric dust levels must
			monitoring of site by an	comply with the standard
			Environmental Control	published in the NIOSH
			Officer.	guidelines – Particulates >1/10 th
				of the occupational exposure
				limit NEMAQA, 2004 Regulation

Activity	Potential impact	Mitigation type	Time period for	Compliance with standards
			implementation	
				6(1)
	Noise nuisance	Control: Noise control	To be implemented daily	Noise levels on the site has to
	caused by machinery	measures	throughout the site	be managed and need to
	stripping and		establishment / construction	comply with the standards
	stockpiling the topsoil.		phase:	stipulated in NEM:AQA, 2004
			Daily compliance monitoring	Regulation 6(1) as well as the
			by site management.	noise standards of SANS
			Quarterly compliance	10103:2008.
			monitoring of site by an	• Employees working in areas
			Environmental Control	with noise levels of more than
			Officer.	82dBA need to be issue with
				hearing protection.
	Infestation of the	Control and remedy:	To be implemented, when	The impact should be avoided
	topsoil heaps by	Implementation of weed	necessary, throughout the	through the eradication of
	weeds and invader	control	site establishment /	Category 1 weeds/invader
	plants		construction phase:	plants in terms of CARA, 1993
			Daily compliance monitoring	as well as the implementation of
			by site management.	the mitigation measures in this
			Quarterly compliance	document.
			monitoring of site by an	
			Environmental Control	
			Officer.	

Activity	Potential impact	Mitigation type	Time period for	Compliance with standards
			implementation	
	Loss of topsoil due to	Control: Storm water	To be implemented daily	The impact should be avoided
	incorrect storm water	management	throughout the site	through the implementation of
	management.		establishment / construction	storm water management.
			phase:	
			Daily compliance monitoring	
			by site management.	
			Quarterly compliance	
			monitoring of site by an	
			Environmental Control officer	
	Contamination of area	Control and remedy:	To be implemented daily	The impact should be avoided
	with hydrocarbons or	Implementation of waste	throughout the site	through the implementation of
	hazardous waste	management	establishment / construction	the mitigation measures
	materials		phase:	stipulated in this document.
			Daily compliance monitoring	Should spillage however occur
			by site management.	the area needs to be cleaned in
			Quarterly compliance	accordance with the standards
			monitoring of site by an	of the NEM:WA, 2008.
			Environmental Control	
			Officer.	
Blasting	Health and safety risk	Control: Health and safety	To be implemented, when	The impact should be avoided
	posed by blasting	monitoring and	necessary, throughout the	through compliance with the
	activities	management	operational phase:	standards of the MHSA, 1996,

Activity	Potential impact	Mitigation type	Time period for implementation	Compliance with standards
	Dust nuisance	Control: Dust suppression	 Daily compliance monitoring by site management. Quarterly compliance monitoring of site by an Environmental Control Officer. To be implemented daily 	OHSA, 1993 and OHSAS 18001 • Fallout dust levels has to
	caused by blasting activities		throughout the operational phase: • Daily compliance monitoring by site management. • Quarterly compliance monitoring of site by an • Environmental Control	comply with the acceptable dust fall rate published for non-residential areas in the National Dust Control Regulations 2013 – 600 < Dust Fall < 1 200 mg/m²/day. • Gravimetric dust levels have to
			Officer.	comply with the standard published in the NIOSH guidelines – Particulates >1/10 th of the occupational exposure limit. • NEMAQA, 2004 Regulation 6(1)

Activity	Potential impact	Mitigation type	Time period for	Compliance with standards
			implementation	
	Noise nuisance	Control: Noise control	To be implemented daily	Noise levels on the site has to
	caused by blasting	measures	throughout the operational	be managed and need to
	activities		phase:	comply with the standards
			Daily compliance monitoring	stipulated in NEM:AQA, 2004
			by site management.	Regulation 6(1) as well as the
			Quarterly compliance	noise standards of SANS
			monitoring of site by an	10103:2008.
			Environmental Control	• Employees working in areas
			Officer.	with noise levels of more than
				82dBA need to be issue with
				hearing protection.
Excavation	Visual intrusion	Control: Implementation of	To be implemented daily	Impact on the surrounding
	associated with the	proper housekeeping	throughout the operational	environment mitigated until
	excavation activities		phase:	rehabilitation standards can be
			Daily compliance monitoring	implemented.
			by site management.	
			Quarterly compliance	
			monitoring of site by an	
			Environmental Control	
			Officer.	

Activity	Potential impact	Mitigation type	Time period for	Compliance with standards
			implementation	
	Dust nuisance due to	Control: Dust suppression	To be implemented daily	Fallout dust levels has to
	excavation activities.		throughout the operational	comply with the acceptable dust
			phase:	fall rate published for non-
			Daily compliance monitoring	residential areas in the National
			by site management.	Dust Control Regulations 2013
			Quarterly compliance	- 600 < Dust Fall < 1 200
			monitoring of site by an	mg/m²/day
			Environmental Control	Gravimetric dust levels must
			Officer.	comply with the standard
				published in the NIOSH
				guidelines – Particulates >1/10 th
				of the occupational exposure
				limit.
				NEM:AQA, 2004 Regulation
				6(1).
	Noise nuisance	Control: Noise control	To be implemented daily	Noise levels on the site has to
	generated by	measures	throughout the operational	be managed and need to
	excavation		phase:	comply with the standards
	equipment.		Daily compliance monitoring	stipulated in NEM:AQA, 2004
			by site management.	Regulation 6(1) as well as the
			Quarterly compliance	noise standards of SANS
			monitoring of site by an	10103:2008.

Activity	Potential impact	Mitigation type	Time period for implementation	Compliance with standards
	Unsafe working conditions for employees.	Control: Health and safety monitoring and management	 Environmental Control Officer. To be daily throughout the operational phase: Daily compliance monitoring by site management. Quarterly compliance monitoring of site by an Environmental Control Officer. 	 Employees working in areas with noise levels of more than 82dBA need to be issue with hearing protection. The impact should be avoided through compliance with the standards of the MHSA, 1996, OHSA, 1993 and OHSAS 18001
	Negative impact on the fauna and flora of the area.	Control: Protection of fauna and flora through operational phase	To be daily throughout the operational phase: • Daily compliance monitoring by site management. • Quarterly compliance monitoring of site by an • Environmental Control Officer.	 The impact should be avoided through the implementation of the mitigation measures stipulated in this document. NEM:BA, 2004.

Activity	Potential impact	Mitigation type	Time period for	Compliance with standards
			implementation	
	Contamination of	Control: Implementation of	To be implemented daily	The impact should be avoided
	area with	waste management	throughout the operational	through the implementation the
	hydrocarbons or		phase:	mitigation measures stipulated
	hazardous waste		Daily compliance monitoring	in this document.
	materials.		by site management.	Should spillage however occur
			Quarterly compliance	the area needs to be cleaned in
			monitoring of site by an	accordance with the standards
			Environmental Control	of the NEM:WA, 2008.
			Officer.	
	Weed and invader	Control: implementation of	To be implemented when	The impact should be avoided
	plant infestation of	weed control	necessary throughout the	through the eradication of
	the area.		operational phase:	Category 1 weeds/invader
			Daily compliance monitoring	plants in terms of CARA, 1993
			by site management.	as well as the implementation of
			Quarterly compliance	the mitigation measures in this
			monitoring of site by an	document.
			Environmental Control	
			Officer.	
Crushing	Dust nuisance due to	Control: Dust suppression	To be implemented daily	• Fallout dust levels has to
	the crushing		throughout the operational	comply with the acceptable dust
	activities		phase:	fall rate published for non-
			Daily compliance monitoring	residential areas in the National

Activity	Potential impact	Mitigation type	Time period for	Compliance with standards
			implementation	
			by site management. • Quarterly compliance monitoring of site by an • Environmental Control Officer.	Dust Control Regulations 2013 - 600 < Dust Fall < 1 200 mg/m²/day. • Gravimetric dust levels have to comply with the standard published in the NIOSH guidelines – Particulates >1/10 th of the occupational exposure limit. • NEM:AQA, 2004 Regulation 6(1).
	Noise nuisance generated by the crushing activities.	Control: Noise control measures	To be implemented daily throughout the operational phase: • Daily compliance monitoring by site management. • Quarterly compliance monitoring of site by an • Environmental Control Officer.	 Noise levels on the site has to be managed and need to comply with the standards stipulated in NEM:AQA, 2004 Regulation 6(1) as well as the noise standards of SANS 10103:2008. Employees working in areas with noise levels of more than 82dBA need to be issue with hearing protection.

Activity	Potential impact	Mitigation type	Time period for	Compliance with standards
			implementation	
	Contamination of	Control: Implementation of	To be implemented daily	The impact should be avoided
	area with	waste management	throughout the operational	through the implementation the
	hydrocarbons or		phase:	mitigation measures stipulated
	hazardous waste		Daily compliance monitoring	in this document.
	materials.		by site management.	Should spillage however occur
			Quarterly compliance	the area needs to be cleaned in
			monitoring of site by an	accordance with the standards
			Environmental Control	of the NEM:WA, 2008.
			Officer.	
Stockpiling and	Visual intrusion	Control: Implementation of	To be implemented daily	Impact on the surrounding
transporting	associated with the	proper housekeeping	throughout the operational	environment mitigated until
	stockpiled material		phase:	rehabilitation standards can be
	and vehicles		Daily compliance monitoring	implemented.
	transporting the		by site management.	
	material.		Quarterly compliance	
			monitoring of site by an	
			Environmental Control	
			Officer.	
	Loss of material due	Control: Storm water control	To be implemented daily	The impact should be avoided
	to ineffective storm	measures	throughout the operational	through the implementation of
	water handling.		phase:	storm water management
			Daily compliance monitoring	

Activity	Potential impact	Mitigation type	Time period for	Compliance with standards
			implementation	
			by site management.	
			Quarterly compliance	
			monitoring of site by an	
			Environmental Control	
			Officer.	
	Weed and invader	Control and remedy:	To be implemented when	The impact should be avoided
	plant infestation of	Implementation of weed	necessary throughout the	through the eradication of
	the area due to the	control	operational phase:	Category 1 weeds/invader
	disturbance of the		Daily compliance monitoring	plants in terms of CARA, 1993
	soil		by site management.	as well as the implementation of
			Quarterly compliance	the mitigation measures in this
			monitoring of site by an	document.
			• Environmental Control	
			Officer.	
	Dust nuisance from	Control: Dust suppression	To be implemented daily	• Fallout dust levels has to
	stockpiled material		throughout the operational	comply with the acceptable dust
	and vehicles		phase:	fall rate published for non-
	transporting the		Daily compliance monitoring	residential areas in the National
	material.		by site management.	Dust Control Regulations 2013
			Quarterly compliance	- 600 < Dust Fall < 1 200
			monitoring of site by an	mg/m²/day.
			• Environmental Control	Gravimetric dust levels have to

Activity	Potential impact	Mitigation type	Time period for	Compliance with standards
			implementation	
			Officer.	comply with the standard
				published in the NIOSH
				guidelines – Particulates >1/10 th
				of the occupational exposure
				limit.
				• NEM:AQA, 2004 Regulation
				6(1).
	Degradation of	Control and remedy: Road	To be implemented when	The impact should be avoided
	access roads	management	necessary throughout the	through the implementation of
			operational phase:	the mitigation measures
			Daily compliance monitoring	proposed in this document.
			by site management.	
			Quarterly compliance	
			monitoring of site by an	
			Environmental Control	
			Officer.	
	Noise nuisance	Control: Noise management	To be implemented daily	Noise levels on the site has to
	caused by vehicles.	monitoring and	throughout the operational	be managed and need to
		management	phase:	comply with the standards
			Daily compliance monitoring	stipulated in NEM:AQA, 2004
			by site management.	Regulation 6(1) as well as the
			Quarterly compliance	noise standards of SANS

Activity	Potential impact	Mitigation type	Time period for	Compliance with standards
			implementation	
			monitoring of site by an	10103:2008.
			• Environmental Control	 Employees working in areas
			Officer.	with noise levels of more than
				82dBA need to be issue with
				hearing protection.
	Contamination of	Control: Implementation of	To be implemented daily	The impact should be avoided
	area with	waste management	throughout the operational	through the implementation the
	hydrocarbons or		phase:	mitigation measures stipulated
	hazardous waste		Daily compliance monitoring	in this document.
	materials.		by site management.	Should spillage however occur
			Quarterly compliance	the area needs to be cleaned in
			monitoring of site by an	accordance with the standards
			• Environmental Control	of the NEMWA, 2008.
			Officer.	
Sloping and	Soil erosion	Control: Soil management	To be implemented	The impact should be avoided
landscaping			throughout the rehabilitation /	through the implementation the
during			closure phase:	mitigation measures stipulated
rehabilitation			Daily compliance monitoring	in this document.
			by site management.	• CARA, 1993
			Compliance monitoring of	
			site by an Environmental	
			Control Officer.	

Activity	Potential impact	Mitigation type	Time period for	Compliance with standards
			implementation	
	Health and safety	Control: Health and safety	To be implemented	The impact should be avoided
	risk posed by un-	monitoring and	throughout the rehabilitation /	through compliance with the
	sloped areas	management.	closure phase:	standards of the MHSA, 1996,
			Daily compliance monitoring	OHSA, 1993 and OHSAS 18001
			by site management.	
			Compliance monitoring of	
			site by an Environmental	
			Control Officer.	
	Dust nuisance	Control: Dust suppression	To be implemented	• Fallout dust levels has to
	caused during		throughout the rehabilitation /	comply with the acceptable dust
	sloping and		closure phase:	fall rate published for non-
	landscaping		Daily compliance monitoring	residential areas in the National
	activities.		by site management.	Dust Control Regulations 2013
			Compliance monitoring of	- 600 < Dust Fall < 1 200
			site by an Environmental	mg/m²/day.
			Control Officer.	Gravimetric dust levels have to
				comply with the standard
				published in the NIOSH
				guidelines – Particulates >1/10 th
				of the occupational exposure
				limit.
				NEM:AQA, 2004 Regulation

Activity	Potential impact	Mitigation type	Time period for	Compliance with standards
			implementation	
				6(1).
	Noise nuisance	Control: Noise monitoring	To be implemented	Noise levels on the site has to
	caused by		throughout the rehabilitation /	be managed and need to
	machinery.		closure phase:	comply with the standards
			Daily compliance monitoring	stipulated in NEM:AQA, 2004
			by site management.	Regulation 6(1) as well as the
			Compliance monitoring of	noise standards of SANS
			site by an Environmental	10103:2008.
			Control Officer.	 Employees working in areas
				with noise levels of more than
				82dBA need to be issue with
				hearing protection.
	Contamination of	Controls: Waste	To be implemented	The impact must be avoided
	area with	management	throughout the rehabilitation /	through implementation of
	hydrocarbons or		closure phase:	mitigation measures stipulated
	hazardous waste		Daily compliance monitoring	in this document.
	materials.		by site management.	Should spillage however occur
			Compliance monitoring of	the area needs to be cleaned in
			site by an Environmental	accordance with the standards
			Control Officer.	of the NEMWA, 2008.

Activity	Potential impact	Mitigation type	Time period for implementation	Compliance with standards
Replacing of topsoil and rehabilitation of disturbed area	Loss of reinstated topsoil due to the absence of vegetation	Control: Soil management	To be implemented throughout the rehabilitation / closure phase: • Daily compliance monitoring by site management. • Compliance monitoring of site by an Environmental Control Officer.	 The impact should be avoided through the implementation the mitigation measures stipulated in this document. CARA, 1993
	Infestation of the area by weed and invader plants.	Control and remedy: Implementation of weed control	To be implemented throughout the rehabilitation / closure phase: • Daily compliance monitoring by site management. • Compliance monitoring of site by an Environmental Control Officer.	The impact should be avoided through the eradication of Category 1 weeds/invader plants in terms of CARA, 1993 as well as the implementation of the mitigation measures in this document.

i) Financial Provision

- (1) Determination of the amount of Financial Provision.
- a.) Describe the closure objectives and the extent to which they have been aligned to the baseline environment described under the Regulation.

In terms of Section 38(1)(d) of the MPRDA, Integrated Environmental Management and Responsibility to Remedy: "The holder of a mining permit must as far as it is reasonably practicable, rehabilitate the environment affected by the mining operations to its natural or predetermined state or to a land use which conforms to the generally accepted principle of sustainable development".

In line with the above, it was agreed with the landowners that the land use would be restored to the pre-mining conditions.

The rehabilitation plan compiled by Singo Consulting (Pty) Ltd was developed on the basis that the rehabilitated area will be made safe, stable as well as non-polluting and will be able to support self-sustaining ecosystems, similar to the surrounding natural ecosystems. To ensure that the rehabilitation plan is aligned withthe closure objective, high-level risk assessment of the mining components was undertaken to establish the potential risks associated with the disturbed areas.

Closure of the mining site will entail rehabilitation of the disturbed areas to as close to the pre-mining condition or enhanced end-land use.

The closure objectives are to:

- To ensure that all areas that were impacted by the mining activities are physicallystable and non-eroding after closure;
- Remove and/or rehabilitate all pollution and pollution sources such as waste materials and spills;
- To leave behind a rehabilitated site that is neat and tidy, giving an acceptable overall aesthetic appearance.
- To limit the possible adverse environmental consequences arising from the miningafter closure and ensure that environmental functionality, where relevant, is reinstated;
- Restore disturbed areas and re-vegetate these areas with plant species naturally occurring in the area to restore the ecological function of the affected areas as faras practicable; and

Eliminate all alien invasive plant species

Rehabilitation can be divided into two different streams, namely concurrent rehabilitation, and final rehabilitation. Concurrent rehabilitation must be carried out along with the operations and will decrease the final liability that the operation will carry at the time of closure. This concurrent rehabilitation will be carried out within thecontext of the EMPr. Final rehabilitation will be carried out once the operation goes into its closure phase. This final rehabilitation will be carried out within the context of the closure plan. The closure and rehabilitation plan should be modified and adapted as the project continues and more knowledge is generated about the environment andthe impacts project.

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

The following have been highlighted as closure objectives:

- Minimising the area to be disturbed and to ensure that the areas disturbed during the mining activities are rehabilitated and stable, as per
 the commitments made in the EMP.
- Sustaining the pre-mining land use and return the site to its near natural state asfar as possible.
- This EMP will be made available to and discussed with each landowner beforeany mining activity commences on his/her property.
- Access to each property and placement of infrastructure will be done inconsultation with the relevant landowner.

Proof of consultation is attached. Comments on the closure and rehabilitation will be expected from landowners and I&Aps after the review of the DBAR. All the issues raised by the I&APs will be incorporated in the final BAR

b.) 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 mining has been completed in one area, the site must be restored to its original state by implementing the measures listed in the table

below.

Aspects/ Impact	Rehabilitation Measure	Monitoring Frequency and
		Responsibility
Removal of Structures	 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 utilised during construction (which arenot earmarked for closure and rehabilitation) are returned (as far aspossible) to their state prior to construction. 	Once-off; Wakwa Ndlondlo (Pty) Ltd (Applicant)
Vegetation clearing/ Replanting	 Remove any emerging alien and invasive vegetation to prevent further establishment; All work is to be undertaken by suitably qualified personnel makinguse of the appropriate equipment; Transplant will be done during the winter period (between April and September); and Plant indigenous plants to minimise the spread of alien and invasive vegetation. 	When revegetation is done and in blooming season

Aspects/ Impact	Rehabilitation Measure	Monitoring Frequency and
		Responsibility
Topsoil replacement	 Replace and redistribute stockpiled topsoil together with herbaceous vegetation, overlying grass and other fine organic matter in all disturbed areas of the mining site, including temporary access routesand roads. Replace topsoil to the original depth (i.e. as much as wasremoved prior to construction). Prohibiting the use of topsoil suspected to be contaminated with theseed of alien vegetation. Alternatively, the soil is to be sprayed withspecified herbicides. Backfill planting holes with excavated material / approved topsoil, thoroughly mixed with weed free manure or compost (per volume about 	Responsibility Once-Off, Wakwa Ndlondlo (Pty) Ltd (applicant)
	 one quarter of the plant hole), one cup of 2:3:2 fertiliser and anapproved 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	Clear the site of all inert waste and rubble, including surplus rock,	Once-Off; Wakwa Ndlondlo
Removal	foundations and batching plant aggregates.	(Pty) Ltd

Aspects/ Impact	Rehabilitation Measure	Monitoring Frequency and
		Responsibility
	Remove from site all domestic waste and dispose of in the approved manner at a registered waste disposal site	
Solid & Hazardous Waste	 Store hazardous waste as indicated on the approved Environmental Management Programme (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. Disposeof hazardous waste in the approved manner. Do not hose oil or fuel spills into a storm water drain or sewer, 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 wetcement and liquid slurry, as well as cement powder must be treatedas hazardous 	Once-Off, Wakwa Ndlondlo (Pty) Ltd (applicant)
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. 	After rainfall events

Aspects/ Impact	Rehabilitation Measure	Monitoring Frequency and
		Responsibility
	Perform regular monitoring and maintenance of erosion control measures.	

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

Closure of the mining site will entail rehabilitation of the disturbed areas to as close to the pre-mining condition after removal of infrastructure and supporting vehicles.

The closure-related objectives are as follows:

- To ensure that all areas that were impacted by mining activities are physically stable and noneroding after closure;
- Ripping, shaping, and vegetating of the remaining disturbed areas and integratingthese into the surrounding surface topography.
- To limit the possible adverse environmental consequences arising from mining after closure and ensure that environmental functionality, is reinstated where relevant;
- Ensuring that the rehabilitated site is free-draining and run-off is routed to local/natural catchments, to sustain catchment yield;
- To eliminate potential latent safety threats to humans and animals through properclosure;
- To remove and properly dispose of all mining-related waste; and
- To re-instate pre-existing land uses/capabilities over the affected portions of the mining site. If the Applicant fails to rehabilitate or manage any negative impact on the environment, the DMRE may, upon written notice to the Applicant use all or part of the financial provision to rehabilitate or manage the negative environmental impact in question. The financial provision provides for the final checking of all sites before site clearance.

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

The financial provision for the environmental rehabilitation and closure of any mine/prospecting and its associated operations forms an integral part of the MPRDA. Section 41 (1) and 41(3) and 45 of the MPRDA deals with the financial provision for rehabilitation and closure. During 2012, the DMRE made updated rate available for thecalculation of the closure costs, where contractor's costs are not available these apply

e.) Confirm that the financial provision will be provided as determined.

Please refer to Appendix 7 for more details on the financial provision for the proposed activity.

Mechanisms for monitoring compliance with and performance assessment against the environmental management programmeand reporting thereon, including

- b) Monitoring of Impact Management Actions
 c) Monitoring and reporting frequency
 d) Responsible persons
 e) Time period for implementing impact management actions
 f) Mechanism for monitoring compliance

Source activity	Impacts required monitoring programme	Functional requirements for monitoring	Roles and responsibilities for the execution of monitoring programmes	Monitoring and reporting frequency and time periods for implementing impact management actions
• Topsoil	Dust monitoring	Dust handling and	Role	Throughout construction,
stripping and	• The dust	monitoring	Site Manager to ensure compliance with EMPr	operational and
stockpiling	generated by the	• Dust suppression	guidelines.	decommissioning phase
Blasting	mining activities	equipment, like a	Compliance to be monitored by the Environmental	 Daily compliance
Excavation	should be	water car and	Control Officer.	monitoring by site
Crushing	continuously	water dispenser.	Responsibility	management.
 Stockpiling 	monitored and	The applicant	Control dust liberation into surrounding environment	 Quarterly compliance
and	addressed by the	already has this	by using, e.g., water spraying and/or other dust-	monitoring of site by an
transporting	implementation of	equipment	allaying agents.	Environmental Control
Sloping and	dust suppression	available.	• Limit speed on access roads to 40km/h to prevent	Officer.
landscaping	methods.		excess dust generation.	
during			Spray roads with water/environmentally-friendly dust	
			allaying agent that contains no PCBs (e.g. DAS	

Source activity	Impacts required monitoring programme	Functional requirements for monitoring	Roles and responsibilities for the execution of monitoring programmes	Monitoring and reporting frequency and time periods for implementing impact management actions
rehabilitation			products) if dust is generated above acceptable limits. • Assess effectiveness of dust suppression equipment. • Re-vegetate all disturbed/exposed areas as soon as possible to prevent any dust source from being created. • Ensure the crusher is equipped with water sprayers.	
• Topsoil	Noise monitoring	Noise handling and	· ·	Throughout construction,
stripping and stockpiling Blasting Excavation Crushing Sloping and landscaping during rehabilitation	• The noise generated by the mining activities should be continuously monitored, and any excessive noise should be addressed.	 Site manager to ensure that the vehicles are equipped with silencers and kept roadworthy. Compliance with the appropriate legislation with respect to noise will be mandatory. 	 Site Manager to ensure compliance with EMPr guidelines. Compliance to be monitored by the Environmental Control Officer. Responsibility Ensure that staff conduct themselves in an acceptable manner while on site. No loud music permitted at mining area. Ensure that all mining vehicles are equipped with silencers and kept roadworthy in terms of the Road Transport Act. Plan the type, duration and timing of the blasting 	operational and decommissioning phase • Daily compliance monitoring by site management. • Quarterly compliance monitoring of site by an Environmental Control Officer.

Source activity	Impacts required monitoring programme	Functional requirements for monitoring	Roles and responsibilities for the execution of monitoring programmes	Monitoring and reporting frequency and time periods for implementing impact management actions
			procedures with due cognizance of other land	
			users and structures in the vicinity.	
			 Notify surrounding land owners in writing prior 	
			blasting occasions.	
			• Use noise mufflers and/or soft explosives during	
			blasting.	
• Topsoil	Management of	Management of	Role	Throughout operational
stripping and	weed or invader	weed or invader	Site Manager to ensure compliance with EMPr	and
stockpiling	plants	plants	guidelines.	decommissioning phase
Excavation	• The presence of	• Removal of weeds	Compliance to be monitored by the Environmental	Daily compliance
Stockpiling	weed and/or	should be	Control Officer.	monitoring by site
and	invader plants	manually or by the	Responsibility	management.
transporting	should be	use of an	• Implement a weed and invader plant control	Quarterly compliance
	continuously	approved	management plan.	monitoring of site by an
	monitored, and any	herbicide	• Control declared invader or exotic species on the	Environmental Control
	unwanted plants		rehabilitated areas.	Officer.
	should be		 Keep the temporary topsoil stockpiles free of 	
	removed.		weeds.	
Stockpiling	Surface and storm	Surface and storm	Role	
and	water monitoring	water handling	Site Manager to ensure compliance with EMPr	
transporting	• The effectiveness	• Trenches and	guidelines.	
Sloping and	of the storm water	contours to be	Compliance to be monitored by the Environmental	

Source activity	Impacts required monitoring programme	Functional requirements for monitoring	Roles and responsibilities for the execution of monitoring programmes	Monitoring and reporting frequency and time periods for implementing impact management actions
Landscaping	infrastructure	made to direct	Control Officer.	
during	needs to be	storm- and runoff	Responsibility	
rehabilitation	continuously	water around the	Divert storm water around topsoil heaps, stockpile	
	monitored.	stockpile areas.	areas and access roads to prevent erosion and	
			material loss.	
			Divert runoff water around the stockpile areas with	
			trenches and contour structures to prevent erosion	
			of the work areas.	
			Conduct mining in accordance with the Best	
			Practice Guideline for small scale mining that	
			relates to storm water management, erosion and	
			sediment control and waste management,	
			developed by the DWS, and any other conditions	
			the DWS may impose.	
Blasting	Management of	Management of	Role	Throughout construction,
 Excavation 	health and safety	health and safety	Site Manager to ensure compliance with EMPr	operational and
 Sloping and 	All health and	risks	guidelines.	decommissioning phase
Landscaping	safety aspects	Site manager to	Compliance to be monitored by the Environmental	Daily compliance
during	need to be	ensure that	Control Officer.	monitoring by site
rehabilitation	monitored on a	workers are	Responsibility	management.
	daily basis.	equipped with	Submit an application for approval of access onto	Quarterly compliance
		required PPE	the R392 to the Department of Roads and Public	monitoring of site by an

Source activity	Impacts required monitoring programme	Functional requirements for monitoring	Roles and responsibilities for the execution of monitoring programmes	Monitoring and reporting frequency and time periods for implementing impact management actions
		while operating on	Works prior to the commencement of work.	Environmental Control
		site.	Inform the Traffic Department of each blast. If	Officer
		• The necessary	necessary, arrange for temporary road closure	
		warning signs	during a blast.	
		must be present at	Plan the type, duration and timing of the blasting	
		the site to inform	procedures with due cognizance of other land	
		the public and	users and structures in the vicinity.	
		workers of mining	 Inform the surrounding landowners and 	
		activities.	communities of any blasting event.	
			 Use noise mufflers and/or soft explosives during 	
			blasting.	
			• Limit fly rock.	
			Give audible warning of a pending blast at least 3	
			minutes before the blast.	
			Remove all fly rock (diameter 150mm and larger)	
			which falls beyond working area, together with the	
			rock spill.	
			Ensure that workers have access to the correct	
			PPE as required by law.	

Source activity	Impacts required monitoring programme	Functional requirements for monitoring	Roles and responsibilities for the execution of monitoring programmes	Monitoring and reporting frequency and time periods for implementing impact management actions
Excavation	Waste	Waste	Role	Throughout construction,
Crushing	management	management	Site Manager to ensure compliance with EMPr	operational and
stockpiling and	 Management of 	Closed containers	guidelines.	decommissioning phase
transporting	waste should be a	for the storage of	Compliance to be monitored by the Environmental	 Daily compliance
 Sloping and 	daily monitoring	general/hazardous	Control Officer.	monitoring by site
landscaping	activity.	waste until waste	Responsibility	management.
during	Hydrocarbon spills	is removed to the	• Ensure that vehicle repairs only take place in the	 Quarterly compliance
rehabilitation	need to be cleaned	appropriate landfill	service bay area and all waste products are	monitoring of site by an
	immediately and	site.	disposed of in a 200 I closed container/bin inside the	 Environmental Control
	the site manager	Hydrocarbon spill	emergency service area.	Officer.
	should check	kits to enable	Collect any effluents containing oil, grease or other	
	compliance daily.	sufficient clean-up	industrial substances in a suitable receptacle and	
		of contaminated	remove from site, for resale or appropriate disposal	
		areas.	at a recognised facility.	
		Drip trays should	Clean spills immediately to the satisfaction of the	
		be available to	Regional Manager by removing the spillage and	
		place underneath	polluted soil and by disposing of them at a	
		haul vehicles	recognised facility.	
		while the vehicles	Ensure availability of suitable covered,	
		are parked at	conveniently placed receptacles at all times for	
		night.	waste disposal.	
		Should a vehicle	Place all used oils, grease or hydraulic fluids	

Source activity	Impacts required monitoring programme	Functional requirements for monitoring	Roles and responsibilities for the execution of monitoring programmes	Monitoring and reporting frequency and time periods for implementing impact management actions
		have a break	therein and remove receptacles from site regularly	
		down, it should be	for disposal at a registered/licensed hazardous	
		serviced	disposal facility.	
		immediately.	Store non-biodegradable refuse such as glass	
			bottles, plastic bags, metal scrap, etc., in a	
			container with a closable lid at a collecting point.	
			Collection should take place regularly and	
			disposed of at the recognised landfill site at	
			Witbank. Prevent refuse from being dumped on or	
			in the vicinity of the mine area.	
			Biodegradable refuse to be handled as indicated	
			above.	

Source activity	Impacts required monitoring programme	Functional requirements for monitoring	Roles and responsibilities for the execution of monitoring programmes	Monitoring and reporting frequency and time periods for implementing impact management actions
Stockpiling and	Management of	Management of	Role	Throughout construction,
transporting	access roads	access roads	Site Manager to ensure compliance with EMPr	operational and
	 Access road 	Dust suppression	guidelines.	decommissioning phase
	conditions must be	equipment such	Compliance to be monitored by the Environmental	Daily compliance
	continuously	as a water car and	Control Officer.	monitoring by site
	monitored.	dispenser.	Responsibility	management.
	 Vehicles carrying 	Trenches and	Maintain newly constructed access roads (if	Quarterly compliance
	materials has to be	contours to be	applicable) to minimise dust, erosion or undue	monitoring of site by an
	equipped with	made to direct	surface damage.	Environmental Control
	adequate tarpaulin	storm- and runoff	Divert storm water around access roads to prevent	Officer.
	type covers to	water around the	erosion.	
	ensure that	access roads.	• Erosion of access road: Restrict vehicular	
	material being		movement to existing access routes to prevent	
	transported will not		crisscrossing of tracks through undisturbed areas.	
	leave the vehicle		Cover vehicles carrying materials with adequate	
	during		tarpaulin type covers to ensure that material being	
	transportation.		transported does leave the vehicle during	
			transportation.	
			• Ensure vehicles entering and using the public road	
			system from the site does not exceed the	
			permissible legal limits on gross vehicle mass and	
			individual axle loads as prescribed in terms of the	

Source activity	Impacts required monitoring programme	Functional requirements for monitoring	Roles and responsibilities for the execution of monitoring programmes	Monitoring and reporting frequency and time periods for implementing impact management actions
			National Road Traffic Act (Act No 93 of 1996).	
Topsoil stripping	Topsoil handling	Topsoil handling	Role	Throughout construction,
and stockpiling	 When topsoil has 	Excavating	Site Manager to ensure compliance with EMPr	operational and
	been removed	equipment to	guidelines.	decommissioning phase
	from any area the	remove the first	Compliance to be monitored by the Environmental	Daily compliance
	topsoil heaps need	300mm of topsoil	Control Officer.	monitoring by site
	to be continuously	from the proposed	Responsibility	management.
	protected against	work areas. The	Remove the first 300mm of topsoil in strips and	Quarterly compliance
	loss of soil due to	applicant already	store at the stockpile area.	monitoring of site by an
	wind and water	has this	Keep the temporary topsoil stockpiles free of	• Environmental Control

Source activity	Impacts required monitoring programme	Functional requirements for monitoring	Roles and responsibilities for the execution of monitoring programmes	Monitoring and reporting frequency and time periods for implementing impact management actions
	erosion.	equipment	weeds.	Officer.
		available.	Place topsoil stockpiles on a levelled area and	
		• Trenches and	implement measures to safeguard the piles from	
		contours to be	being washed away in the event of heavy	
		made to direct	rains/storm water.	
		storm and runoff	Topsoil heaps should not exceed 2 m in order to	
		water around	preserve micro-organisms within the topsoil, which	
		stockpiled topsoil	can be lost due to compaction and lack of oxygen.	
		area.	Divert storm- and runoff water around the stockpile	
			area and access roads to prevent erosion.	

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

Environmental Performance Assessment (EPA) audits or reviews are a requirement all MP holders, as stipulated in the MPRDA Regulations 54 and 55 (MPRDA Regulations, Government Notice (GN) 527, 2004, as amended. In compliance with these Regulations, the audit process is to be conducted on a biennial basis (i.e., every two years).

Environmental audits to ensure compliance with the EMPr and EA. The environmental audit reports must also include the provision. The reports must be submitted to the DMRE.

m.) Environmental Awareness Plan

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

It is a standard practice for Wakwa Ndlondlo (Pty) Ltd to ensure that employees and the employees of contractors that will be working on a new project or at a new site attend an induction course where the nature and characteristics of the project and the site is explained. The course includes key information abstracted from the EMPr pertaining to the potential environmental impacts, the mitigation measures that will be applied, the monitoring activities that will be undertaken and the roles and responsibilities of contractors' and Wakwa Ndlondlo (Pty) Ltd personnel. The full EMPr document is also made available to attendees.

The environmental training courses will include, amongst others, aspects such as:

- a.) Awareness training for contractors and employees
- b.) Job specific training training for personnel performing tasks which couldcause potentially significant environmental impacts;
 - c.) Comprehensive training on emergency response, spill management, etc;
 - d.) Specialised skills; and
 - e.) Training verification and record keeping.
 - f.) Environmental issues on site;
 - g.) Roles and responsibilities;
 - h.) The construction environmental management measures;
 - i.) Cultural awareness; and
 - j.) Heritage discovery procedures.

All attendees shall remain for the duration of the course and, on completion, sign an attendance register that clearly indicates participants' names. A copy of the register shall be kept on record by Wakwa Ndlondlo (Pty) Ltd.

(2) Manner in which risks will be dealt with in order to avoid pollution or thedegradation of the environment.

The following documents will be used as reference for identifying and managing impacts:

- Approved Empr;
- Approved EA; And

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

Wakwa Ndlondlo (Pty) Ltd and contractors will be always responsible for the implementation of section 28 of NEMA "duty of care" to mitigate any impacts to avoid pollution or degradation of the environment. Appropriate implementation of the recommended mitigation measures specified in the EMPr will be monitored through monthly site audits by an EAP and annual EMP audits undertaken by a third party.

n.) Specific information required by the Competent Authority

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

Singo Consulting (Pty) Ltd will update and review the quantum of the financial provision on an annual basis (as per Regulation 54(2) of the MPRDA). In addition, formal monitoring and performance assessment reviews of compliance will be undertaken annually.

2.) 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 I&APs and any response of the EAP to comments or inputs made by I&APs are correctly reflected herein

Signature of the Environmental Assessment Practitioner					
Singo Consulting (Pty) Ltd					
Name of company					
23/08/2022					
Date					
-END-					

Appendix 1: DMRE Letter



Private Bag X7279, Emalahleri, 1035, Tel: 013 653 0500, Fax 013 690 3288, Saveways Centre, First Floor, Mandela Drive, Emalahleri, 1035, Directorate: Mineral Regulation: Mpurnalanga Region, Enquiriles: P. Maluleka Email Address: Mineral Laws, Ref: MP 30/5/11/3/13284 MP.

BY: Email/Fax

The Director/s **Wakwa Ndlondlo (Pty) Ltd** P/Bag X7297 Highveld Mall 1035

Fax: 086 514 4103

Email: kenneth@signoconsulting.co.za.

ACCEPTANCE OF AN APPLICATION FOR MINING PERMIT IN TERMS OF SECTION 27 OF THE MINERAL AND PETROLEUM DEVELOPMENT ACT, 2002 (ACT 28 OF 2002) [HEREIN AFTER REFERRED TO AS THE ACT] AS AMENDED BY SECTION 23 OF THE MINERALS AND PETROLEUM RESOURCES DEVELOPMENT AMENDMENT ACT, 2008 (ACT 49 OF 2008) [HEREINAFTER REFERRED TO AS THE AMENDMENT ACT].

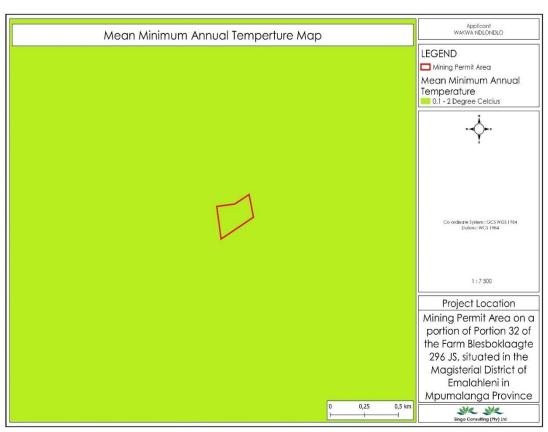
- Please be informed that your application for a mining permit to mine Coal on Portion of Portion 32 of the farm Blesboklaagte 296 JS, Magisterial District of Nkangala, is hereby accepted in terms of Section 27 and 9(1) (b) of the Act.
- 2. Further be informed that there is a prior accepted application by Lehlabile 2017 Trading and Projects (Pty) limited under file reference number 17007PR and received applications by Popup Investment 15 (Pty) limited under file reference numbers 17130PR, Eyethu Coal (Pty) limited under file reference number 17140PR which remains a decision to either grant or refuse and should it become successful yours will automatically falls away.
- Furthermore, note that acceptance of your application does not grant you the right to commence with mining operations. Your application will be evaluated/ processed and a recommendation will be made on either to issue

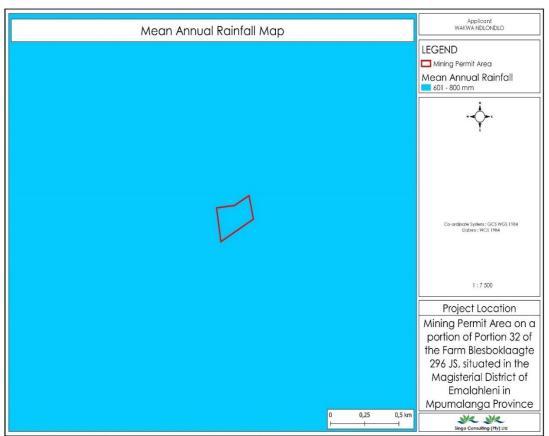
13284 MP- Acceptance

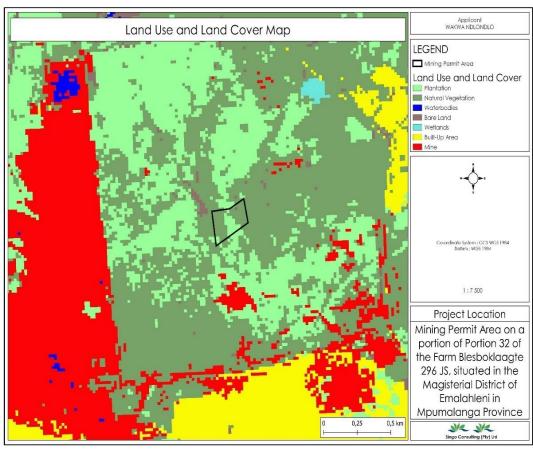
Curriculum Vitae of the EAP

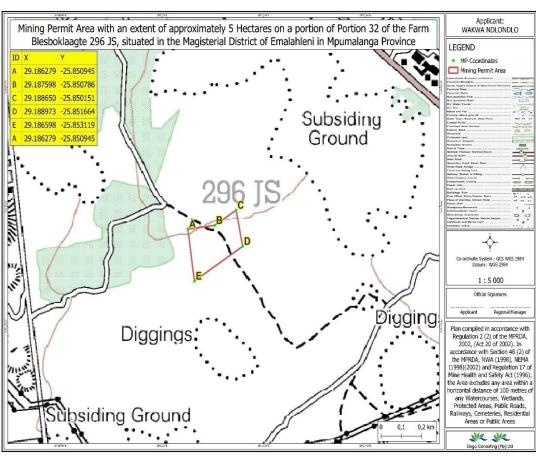
Due to the POPIA ACT the Curriculum Vitae will be made available to DMREE only.

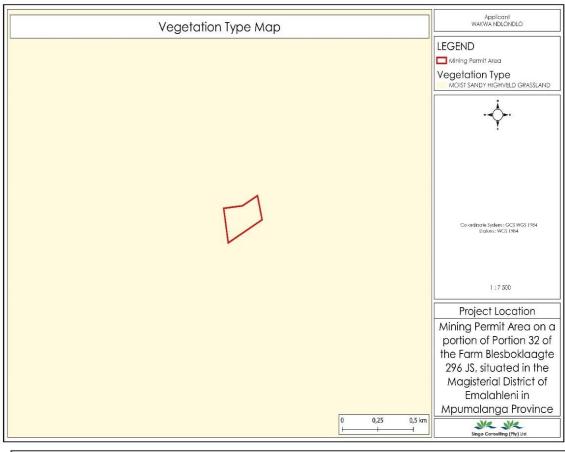
Appendix 2: Project Maps

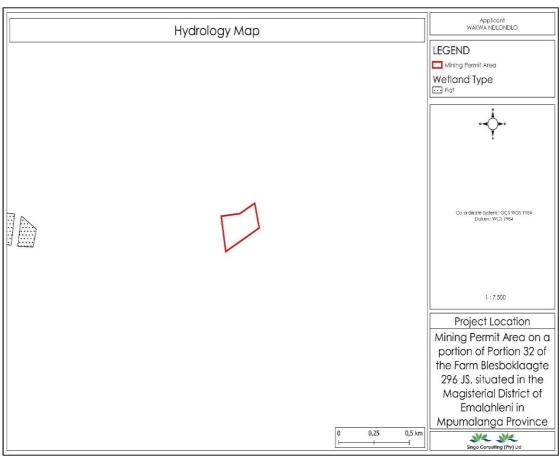


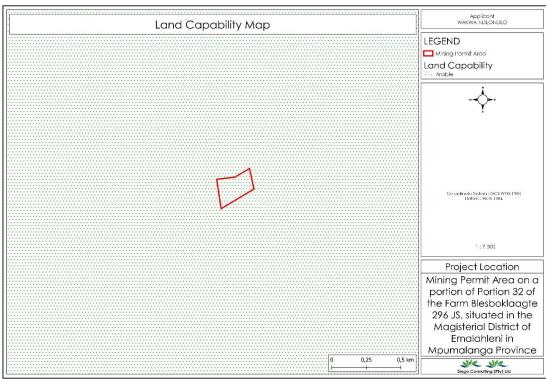


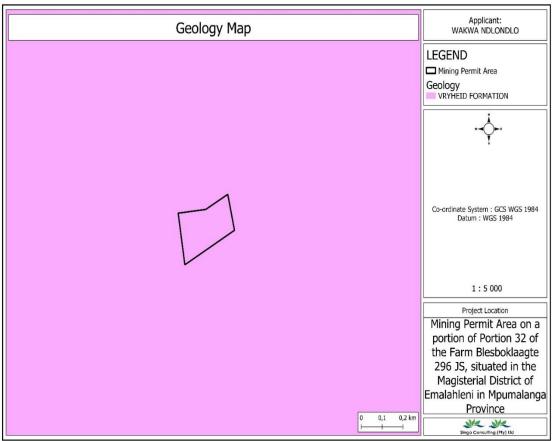


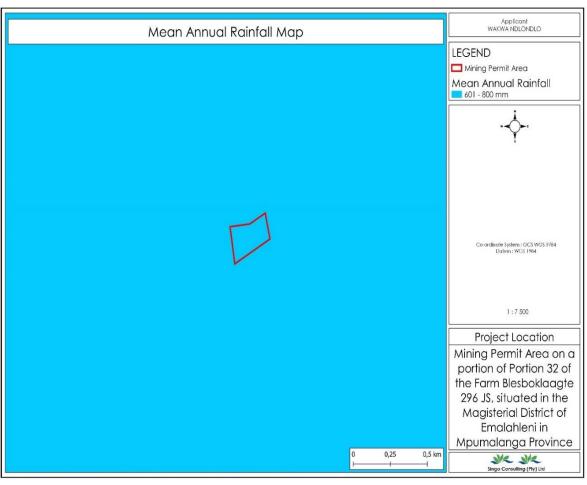


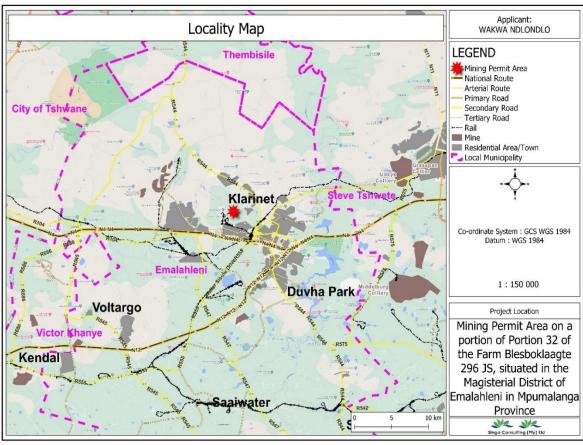


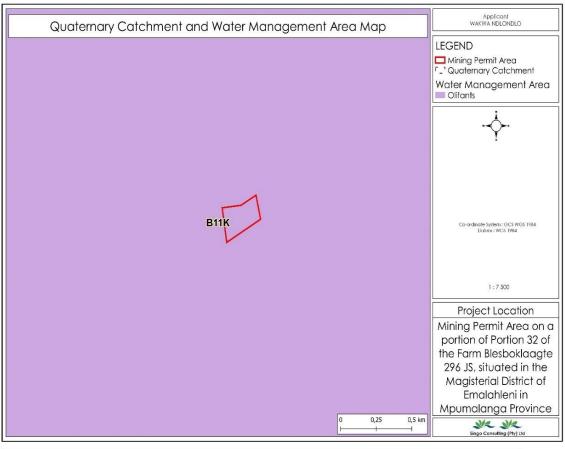




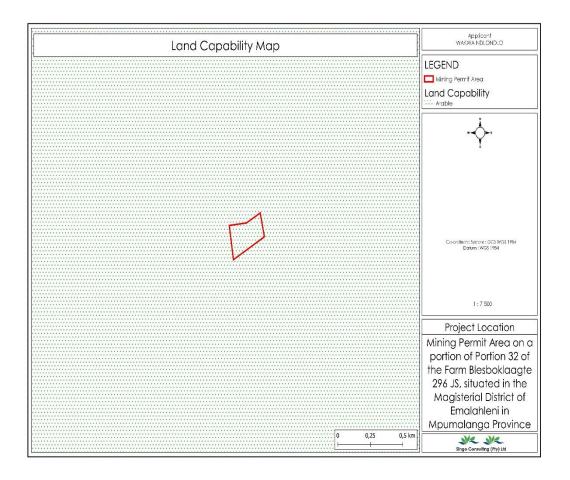












Appendix 3: Public Participation Process

BACKGROUND INFORMATION DOCUMENT

Prepared by:

Prepared for:

Mining Permit on Portion of portion 32 of the farm Blesboklaagte 296 JS.



WAKWA NDLONDLO (PTY) LTD

District:

INTRODUCTION AND THE PURPOSE OF THIS DOCUMENT

Singo Consulting (Pty) Ltd has been appointed as an independent Environmental Consultant by Wakwa Ndlondlo (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 Mining Permit Application on Portion of portion 32 of the farm Blesboklaagte 296 JS in the Magisterial District of Witbank in Moumalanga Province with DMRE Ref: MP 30/5/1/1/3/13284 MP.

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 ns to be raised.

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

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

PROJECT DESCRIPTION

Mining Permit Application has been submitted for the extraction of **Coal** resource on the property mentioned above. This Mining Permit Area is situated approximately 1.65 km Northeast of Klarinet and approximately 4.32 km Southwest of eMalahleni Town. Figure 1 shows the locality map of the proposed project area.

Mining activities will be undertaken over a period of two (2) years. This project will entail an open cast method of excavation. The mine design will be developed according to the dimension of the applied mineral deposit within the project area, but overall mining activities will be limited to an area of 5 Ha as per mining permit requirements. The topsoil will be stockpiled elsewhere on site preferably next to the farm boundary and will be used during rehabilitation period. Once a box cut has been made, the overburden and mineral resources where necessary will be loosened by blasting. The loosened material will then be loaded onto trucks by excavators. A haul road will be situated at the side of the pit, forming a ramp up which trucks can drive, carrying ore and waste rock. Waste rock will be piled up at the surface, near the edge of the open pit (waste dump). The waste dump will be tiered and stepped, to minimize degradation. All the activities will be guided by the project's EMPr such that the project does not impact the environment negatively

REGULATORY FRAMEWORK

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 extract the existence and occurrence of the applied mineral; therefore, this will be conducted in accordance with Mineral and Petroleum Resources Development Act, (Act 28 of 2002). Other regulatory guidelines to be followed includes National Water Act, 1998 (Act 36 of 1998), National Air Quality Standards (GN 1210: 2009) and National Dust Control Regulations (GN 827 of GG NO. 36974).

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 me.

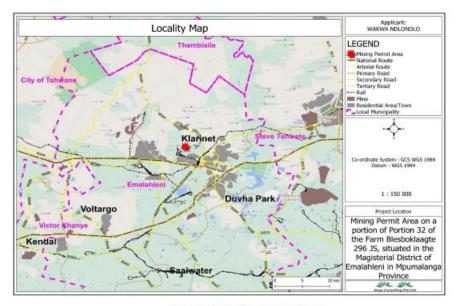


Figure 1: Locality Map of the proposed project area

2

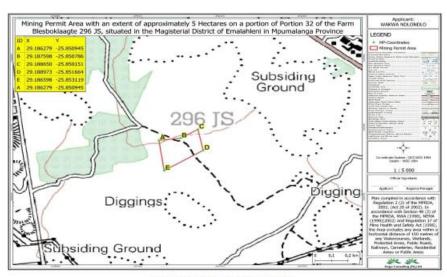


Figure 2: Reg2(2) of the proposed project area

BASIC AND ENVIRONMENTAL IMPACT ASSESSMENT PROCESSES

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

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

These tools are regarded crucial because they are utilized to demonstrate to the relevant stakeholders about the potential impacts, which in turn leads to the Mining Permit 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.

They key objectives of the Public Participation Process (PPP) during the EIA Process is to afford I&APs an opportunity to understand the proposed project and provide valuable contributions during the planning phase.

I&AP 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.

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

Kindly keep the following dates:

- Stakeholder engagement and consultation:
 - Ongoing throughout the process of compiling the BAR & EMPr
- * Review of draft BAR & EMPr:

23rd of August 2022 – 21st of September 2022.

The report will be made available at the Lynville Public Library (Vector Road, Lynville, Emalahleni, 1034, South Africa). Klarinet Public Library (Blesboklaagte 296-Js, Emalahleni, South Africa) and Emalahleni Local Municipality (Mandela Street EMalahleni, 1034). Furthermore, the report will be available upon request, via email from the respective EAP.

For comments or concerns about the proposed project, please contact Singo Consulting (Pty) Ltd, using the contact details of the EAP below.

Comments on the draft BAR and EMPr must be submitted before or on the 21st of September 2022.



Office 870, 5 Balalaika Street Tasbet Park Ext 2, Witbank, 1040

Cell: +27 81 813 0654 Tel: +27 13 692 0041 Fax: +27 86 5144 103

Email: valentine@singoconsulting.co.za admin@singoconsulting.co.za

REGISTRATION & COMMENT SHEET

Mining Permit Application on portion of Portion 32 of the farm Blesboklaagte 296 JS, situated under the Magisterial Districts of Witbank, Mpumalanga Province,

DMRE Ref: MP 30/5/1/1/3/13284 MP

Attention: Valentine Mhlanga Email: valentine@singoconsulting.co.za

Title	Name		Surname	. 1	
Company	Nume		Somanie	•	
Designation					
Address					
Tel No.			Fax No.		
E-mail			Cell No.		
		atifications by Japan with HVIII.	Post	E-mail:	1
I would like to	b receive my n	otifications be (mark with "X"):	POST	E-mail:	
				Fax:	1
Please indica	ate why you w	ould have an interest in the abov	e-mentioned p	oroject.	
Please provid	de vour comm	ents and questions here:			
riedse provi	de your commi	erns and questions here.			
Please feel fr	ee to attach c	separate document			
Please add o	any person you	think may be interested and aff	ected parties:		
Full name			Company		
Address					
Address					
E-mail			Contact No.		

Appendix 4: Landowner Consultation

Landowner Notification Letter



Dear Landowner (Anglo Operations (Pty) Ltd)

SUBJECT: PROPOSED MINING PERMIT APPLICATION FOR COAL ON PORTION OF PORTION 32 OF THE FARM BLESBOKLAAGTE 296 JS, SITUATED UNDER THE MAGISTERIAL DISTRICT OF EMALAHLENI, MPUMALANGA PROVINCE WITH DMR REF: MP 30/5/1/1/3/13284 MP

Singo Consulting (Pty) Ltd on behalf of Wakwa Ndlondlo (Pty) Ltd wishes to inform you as a Landowner(s) about the Mining Permit Application for the above-mentioned resource on portion of Portion 32 of the farm Blesboklaagte 296 JS. Wakwa Ndlondlo (Pty) Ltd has applied for Mining Permit together with the Environmental Authorization (EA) in terms of Section 16 of the Mineral and Petroleum Resources Development Act, 2002 (Act No. 28 of 2002) (MPRDA), on portion of Portion 32 of the farm Blesboklaagte 296 JS, situated under the eMalahleni Magisterial District, Mpumalanga Province.

Singo Consulting (Pty) Ltd has been appointed as an independent Environmental Assessment Practitioner (EAP). We are conducting a Basic Assessment process, if you have any comment(s) concerning the proposed project or terms and conditions you want to lay down, kindly fill the comment form below and register your comments.

As a landowner(s) of portion of Portion 32 of the farm **Blesboklaagte 296 JS**, kindly note that your comments are key to decision making at the DMRE regarding the proposed project. Should you have any queries regarding the proposed project, please do not hesitate to contact me (appointed EAP) on the details provided below.

Kind Regards,

EAP's contact details

IN IN

Singo Consulting (Pty) Ltd

Office 870, 5 Balalaika Street, Tasbet park, Ext 2, eMalahleni (Witbank), 1040

Contact person: Valentine Mhlanga

Tel No.: +27 13 6920 041 Fax No.: +27 86 5144 103 Cell No.: +27 81 8130 654

Email: valentine@singoconsulting.co.za

Client's contact details

WAKWA NDLONDLO (PTY) LTD

40 Benjamin Bennet, Duvha Park

eMalahleni, 1034

Contact person: Ms. Patricia Zandile Msibi

Tel No.: +27 13 6920 041 Fax No.: +27 86 5144 103 Email: zandile1446@gmail.com herewith acknowledge receipt of:

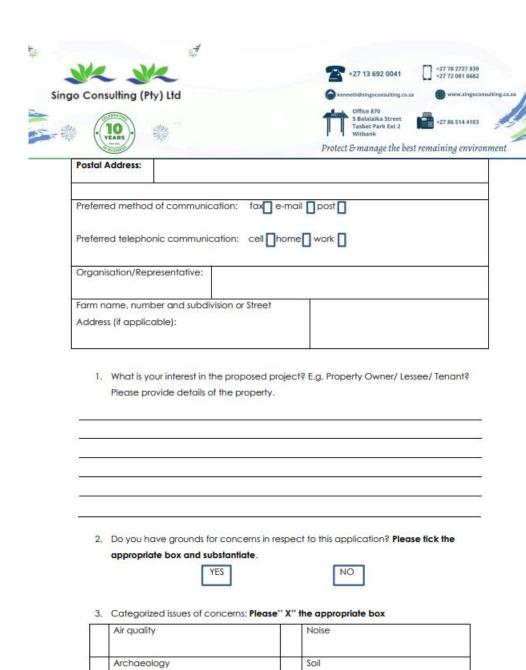
One (1) copy of the letter entitled: Mining Permit Application on Portion of Portion 32 of the Farm Blesboklaagte 296 JS, situated under the eMalahleni Magisterial District, Mpumalanga Province with DMRE REF: MP 30/5/1/1/3/13284 MP

Please comment and return to:

Physical address:	Office 870		
	5 Balalaika Street		
	Tasbet Park Ext 2		
	Witbank		
	1040		
Postal address	P/Bag X7297		
	Postnet Suite 87		
	Highveld Mall		
	Witbank		
	1035		
Tell No:	+27 13 6920 041		
Cell No:	+27 81 8130 654		
Fax No:	+27 86 5144 103		
Email:	admin@singoconsulfing.co.za		
	kenneth@singoconsulting.co.za		
	valentine@singoconsulting.co.za		

Personal Details:

Full Names and	F-1"		
Surname:			
Contact Details:			
Tel(w):	Tel(h):	Fax No:	Cell No:
Email:		5	13
Physical			
Address:			





Surface water	Employment
Groundwater	Security
Ecology	Visual
Land use and Planning	Quality of life
Waste management	Property value
Economy	Nuisance

4.	If yes, please list elaborate further.	

5. Are there, in your opinion, any other interested/ or affected parties that should be contacted in relation to this application? Please "X" appropriate box.

YES

NO

6. If yes, please provide their contact details:

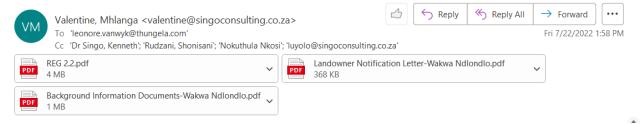
Name:		Organization:	
Contact details		•	
Address:			
Tel No:	Fax No:		Cell No:
Email address:			

SIGNATURE:__ DATE: __



THANK YOU

LANDOWNER CONSULTATION AND INVITATION TO COMMENT ON THE MINING PERMIT APPLICATION F...



Good day, Mr Leonare Van Wyk

I Hope this email finds you well

Singo Consulting (Pty) Ltd on behalf of Wakdlo Ndlondlo (Pty) Ltd, hereby wish to inform you that it has submitted an application for a Mining Permit together with an Environmental Authorization (EA) to the Mpumalanga Department of Mineral Resources and Energy (DMREE) for the purpose of Prospecting for Coal on portion of portion 32 of the farm Blesboklaagte 296 JS, which is situated under Magisterial District of eMalahleni, Mpumalanga Province with DMREE REF.: MP 30/5/1/1/3/13284 MP

According to the law we must consult everyone (including the Landowners and Lawful occupiers) who is within and around the project area to notify about the proposed project. As per our telephone conversation you requested document that give a description of the project, then we can be able to discuss a way forward on the proposed projects and regard the access to farm.

Kindly see the attached landowner Notification Letter, Background Information Document (BID) and Reg2(2) for the proposed Mining Permit Application.



RE: LANDOWNER CONSULTATION AND INVITATION TO COMMENT ON THE MINING PERMIT APPLICATION FOR COAL ON PORTION OF...



FW: LANDOWNER CONSULTATION AND INVITATION TO COMMENT ON THE MINING PERMIT APPLICATION FOR COAL ON PORTION O...



Good morning, Van Wyk Leonore

Your Email is hereby acknowledged. Singo Consulting (Pty) Ltd on behalf of the applicants is forced to continue consulting Ango Operations (Pty) Ltd as they are the registered landowners of portion of portion 32 of the farm Blesboklaagte 296 JS as per the tittle deed from WinDeed search until provided with the relevant details of the relevant landowner and proof that Anglo Operations (Pty) Ltd are no longer the surface owners of the said property.

I hope that the above reaches you in order.



RE: LANDOWNER CONSULTATION AND INVITATION TO COMMENT ON THE MINING PERMIT APPLICATION FOR COAL ON PORTION OF...



Good day,

Please take note the property is in the process of being transferred and therefore we are not able to grant you access to the properties. We have forwarded this notification to the relevant representatives for their action.

You can contact:

1) Mpho@berylholdings.com

2) Fortunate@berylholdings.com

And cc Rea on reak@berylholdings.com

Regards

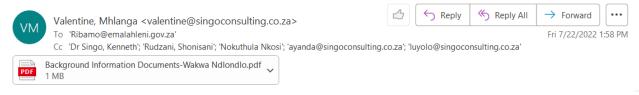
Leonore van Wyk



C +27 (0)76 822 0399 leonore.vanwyk@thungela.com



Appendix 5: Stakeholder Consultation



Good day,

Receive warm greetings from Singo Consulting (Pty) Ltd.

Singo Consulting (Pty) Ltd on behalf of Wakwa Ndlondlo (Pty) Ltd hereby wishes to inform you about coal mining permit and environmental authorization applications that were lodged on portion of portion 32 of the farm Blesboklaagte 296 JS, under Emalahleni Magisterial District, Mpumalanga Province (DMREE REF: MP 30/5/1/1/3/13284 MP).

This invitation is extended to you as the department you serve may somehow enforce any of the laws of the Republic of South Africa that ensure; pollution prevention & environmental degradation, encourage sustainable development & socio-economic development, or might be affected by activities to be taking place instead. Hence you are being offered an opportunity to:

- ✓ Register as an Interested and Affected Party (I&AP) and to respond to the environmental compliance process;
- ✓ Raise issues of concern and provide suggestions for enhanced benefits;
- ✓ Contribute to local knowledge;
- ✓ Comment on Scoping Phase Report & Environmental Management Programme report (EMPr)

A scoping phase process has commenced, for your participation kindly fill the registration and comment form at the end of the Background Information Document attached and register your comments, issues, and/or questions that you may have about the proposed project. Should you

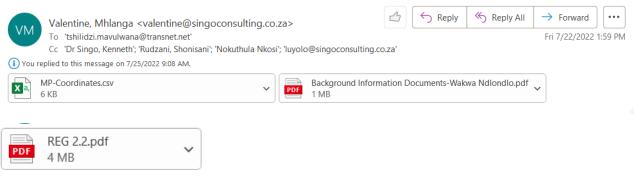
need any clarity on the attached document or have any queries with regards to the project, please do not hesitate to contact me on the details below.

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

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



STAKEHOLDER INVITATION TO COMMENT ON THE MINING PERMIT APPLICATION ON PORTION OF PORTI...



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Please find the attached Background Information Document (BID) for brief description of the proposed project and timelines as well as MP co-ordinates.

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



STAKEHOLDER INVITATION TO COMMENT ON THE MINING PERMIT APPLICATION ON PORTION OF PORTI...



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



REQUEST FOR SENSITIVITY MAP ON THE MINING PERMIT APPLICATION ON PORTION OF PORTION 32 OF ...



Good day Mervyn,

Receive warm greeting from Singo Consulting (Pty) Ltd.

I'm hereby to request sensitivity maps of portion of portion 32 of the farm Blesboklaagte 296 JS, under eMalahleni Magisterial district, Mpumalanga Province.

Kindly find the attached regulation map above.

Your assistance will be highly appreciated.



LAND CLAIM ENQUIRY ON THE MINING PERMIT APPLICATION ON PORTION OF PORTION 32 OF FARM BL...



Good day,

I hope this email finds you well.

You are kindly receiving this email as an enquiry for any possible land claim on **portion of portion**32 of the farm Blesboklaagte 235 IR where Mining Permit and Environmental Authorization
Applications have been lodged in the above-mentioned property under Emalahleni Magisterial
District, Mpumalanga Province (DMREE REF: MP 30/5/1/1/3/13284 MP).

Kindly review attached BID and Regulation map 2.2 for detailed description of proposed project. This is to ensure that all claimants are properly consulted and are given opportunity to:

- Register as an I&APs and to respond to the environmental compliance process;
- Raise issues of concern and provide suggestions for enhanced benefits;
- Contribute to local knowledge;
- Comment on the Basic Assessment Report & Environmental Management Programme report (EMPr); and
- Inform any other person / organization that they may feel should be informed about the project.

Your comments will be highly appreciated as they will assist us in developing a well-informed Basic Assessment Report (BAR) and Environmental Management Programme (EMPr).





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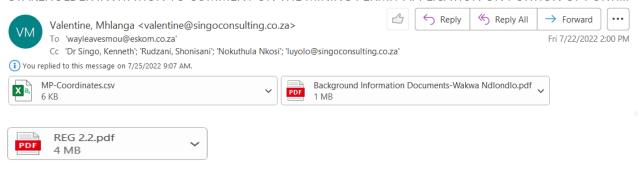
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STAKEHOLDER INVITATION TO COMMENT ON THE MINING PERMIT APPLICATION ON PORTION OF PORTI...



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RE: [CAUTION:EXTERNAL EMAIL] - STAKEHOLDER INVITATION TO COMMENT ON THE MINING PERMIT A...



Good day

We refer to your application dated 22 July 2022. Eskom Distribution services are not affected by this application.



Valentine Mhlanga EAP Intern Singo Consulting (Pty) Ltd Office 870, 5 Balalaika Street Tasbet Park Ext.2 Witbank, 1040 Tel: 013 692 0041 Email: valentine@singoconsulting.co.za

Date:
20 August 2022
Our ref: LD-INV/F/NM/142/2022

Our ref: LD-INV/E/NM/142/2022 Your ref: MP 30/5/1/1/3/13284 MP

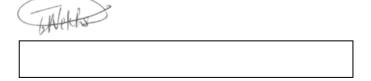
MINING PERMIT AREA WITH AN EXTENT OF APPROXIMATELY 5 HECTORS ON PORTION 32 OF THE FARM BLESBOKLAAGTE 296 JS, SITUATED IN THE MAGISTERIAL DISTRICT OF EMALAHLENI IN MPUMALANGA PROVINCE.

We refer to your application dated 22 July 2022.

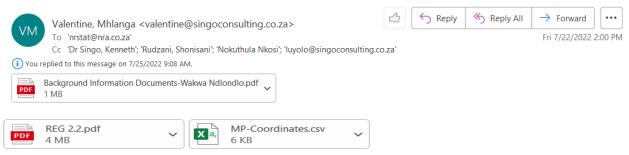
Eskom Distribution services are not affected by this application.

We thank you and hope that you find the above in order, and please don't hesitate to contact us should you've any queries or seek clarity.

Yours sincerely



STAKEHOLDER INVITATION TO COMMENT ON THE MINING PERMIT APPLICATION ON PORTION OF PORTI...



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REQUEST FOR PORTION OF PORTION 32 OF THE FARM BLESBOKLAAGTE 296 JS LANDOWNER (EYETHU COAL PTY LTD) DETAILS



Good day Maru,

Singo Consulting (Pty) Ltd on behalf on the clients, lodged mining permit applications on portion of portion 32 of the farm Blesboklaagte 296 JS. The tittle deed found in windeed search indicates that portion of portion 32 of the farm Blesboklaagte 296 JS is owned by Anglo Operations (Pty) Ltd, but when we consulted them, they said that they sold the farm portion to Eyethu Coal (Pty) Ltd. We requested contact details of the relevant person from Eyethu Coal (Pty) Ltd that we can communicate with regarding the proposed mining permit applications on the said property, but such information was never shared with us until today.

→ Forward

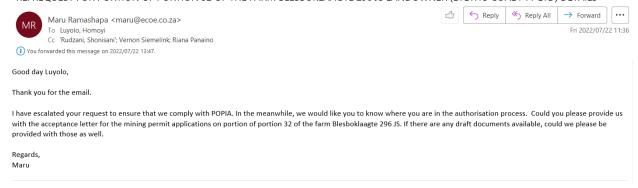
Thu 2022/07/21 14:03

Can you please kindly assist with the name(s) and contact details of the relevant people/ person, so that we consult the rightful landowners of the proposed application area.

Your swift response on the above matter will be highly appreciated.



RE: REQUEST FOR PORTION OF PORTION 32 OF THE FARM BLESBOKLAAGTE 296 JS LANDOWNER (EYETHU COAL PTY LTD) DETAILS



RE: REQUEST FOR PORTION OF PORTION 32 OF THE FARM BLESBOKLAAGTE 296 JS LANDOWNER (EYETHU COAL PTY LTD) DETAILS



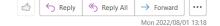
Good day Maru

As per your request below. The proposed mining permit applications on portion of portion 32 of the Blesboklaagte 296 JS were published on 22 July 2022 (today) at Witbank News. The 30-day review period commences today, and landowner notification letter will be shared with the identified landowner. BID's, regulation 2.2 maps and site notices will also be shared with stakeholders, identified I&APs as part of public participation process (PPP).



Project Information Request: Farm Blesboklaagte Portion 32





Good day,

Hope your day is going well.

Eco Elementum (Pty) Ltd, on behalf of their clients, would like to request details of all the MP applications which Singo Consulting is currently working on related to Portion 32 of Farm Blesboklaagte. Our client has Mining Rights in the area and would like to assess the implications of your projects on their interests.

Could you please provide us with all details of projects, Reg 2(2) maps associated with each project and project status relating to how far along Singo Consulting is in the application process.

Thank you.

Kind Regards,

MARUNGWANE RAMASHAPA

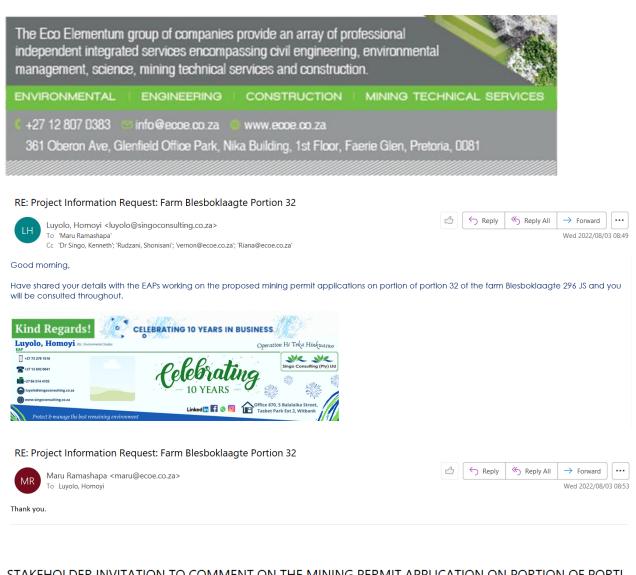
Environmental Consultant
MSc Geography
Office number: 012 807 0383

Maru@ecoe.co.za

www.ecoe.co.za | Follow us: **f G** in









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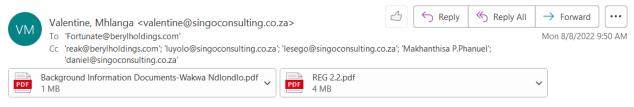
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STAKEHOLDER INVITATION TO COMMENT ON THE MINING PERMIT APPLICATION ON PORTION OF PORTI...



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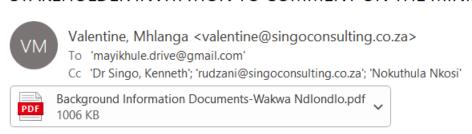
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STAKEHOLDER INVITATION TO COMMENT ON THE MINING PERMIT APPLICATION ON

← Reply



Good day,

Receive warm greetings from Singo Consulting (Pty) Ltd.

Singo Consulting (Pty) Ltd on behalf of Wakwa Ndlondlo (Pty) Ltd hereby wishes to inform you about coal mining permit and environmental authorization applications that were lodged on portion of portion 32 of the farm Blesboklaagte 296 JS, under Emalahleni Magisterial District, Mpumalanga Province (DMREE REF: MP 30/5/1/1/3/13284 MP).

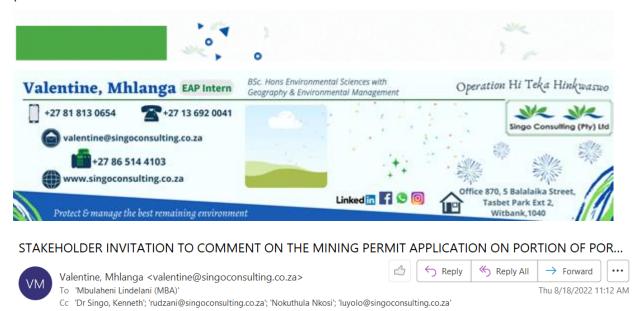
This invitation is extended to you as the department you serve may somehow enforce any of the laws of the Republic of South Africa that ensure; pollution prevention & environmental degradation, encourage sustainable development & socio-economic development, or might be affected by activities to be taking place instead. Hence you are being offered an opportunity to:

- ✓ Register as an Interested and Affected Party (I&AP) and to respond to the environmental compliance process;
- ✓ Raise issues of concern and provide suggestions for enhanced benefits;
- ✓ Contribute to local knowledge;
- ✓ Comment on Scoping Phase Report & Environmental Management Programme report (EMPr)

A scoping phase process has commenced, for your participation kindly fill the registration and comment form at the end of the Background Information Document attached and register your comments, issues, and/or questions that you may have about the proposed project. Should you need any clarity on the attached document or have any queries with regards to the project, please do not hesitate to contact me on the details below.

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

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



Good day,

1006 KB

Receive warm greetings from Singo Consulting (Pty) Ltd.

Background Information Documents-Wakwa Ndlondlo.pdf

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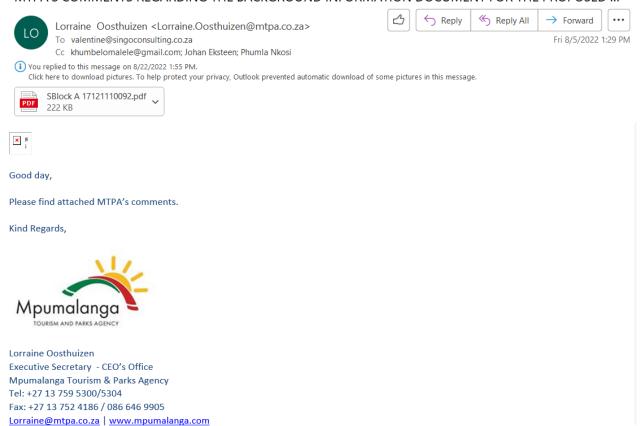
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RE: MTPA'S COMMENTS REGARDING THE BACKGROUND INFORMATION DOCUMENT FOR THE PROPOSE...



(1) Click here to download pictures. To help protect your privacy, Outlook prevented automatic download of some pictures in this message.

Good day

Kindly note that your comments have been received and acknowledge. Your comments/ suggestions will be incorporated into the final Basic Assessment Report.



Appendix 6: Consultation process







Appendix 7: Financial Provision

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. ,		m3	0	146	1	1	0
	Rehabilitation of overburden and spoils	ha	0.32	189528	1	1	60648.96
	Rehabilitation of processing waste deposits and evaporation ponds (non-polluting potential)	ha	0	236054	1	1	0
	Rehabilitation of processing waste deposits and evaporation ponds (polluting potential)	ha	0	685612	1	1	0
	Rehabilitation of subsided areas	ha		158701	1	1	0
10 0	General surface rehabilitation	ha	5	150138	0.75	1	563017.5
11 F	River diversions	ha	0	150138	1	1	0
	Fencing	m	0	171	1	1	0
	Water management	ha	0.01	57087	1	1	570.87
	2 to 3 years of maintenance and aftercare	ha	5	19980	1	1	99900
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	Valentine Mhlanga						
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Appendix 8: Site Conditions





















Appendix 9: Screening Report

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

EIA Reference number: DMRE REF: MP 30/5/1/1/3/13284 MP

Project name: Mining Permit Application on portion of portion 32 on the farm Blesboklaagte 296

JS

Project title: Mining Permit Application on portion of portion 32 on the farm Blesboklaagte 296 JS

Date screening report generated: 19/07/2022 20:42:11

Applicant: Wakwa Ndlondlo (Pty) Ltd **Compiler:** Singo Consulting (Pty) Ltd

Compiler signature:

Application Category: Mining | Mining Permit



	Singo	Cor	nsulting	(Pty) Ltd
MEETING WITH THE	COUNCILLOR	&	FIRM	(SINGO
CONSULTING)				
Date: 28 July 2022				
Time: 11:30 am				
Venue: Ext 6 ELM				
Attendee: (Refer to Attendance Reg	ister)			
NB: The councillor could not attend to Secretary) and (Se	he meeting cretary of the councillor)	(Econ were p	omic Devel oresent on h	lopment nis behalf.
Agenda:				
about the mining permit mentioned companies on portion of the local municipality of eMalahleni, Meeting Objective	Portion 32 of the farm Bles	sboklad		
Daniel introduced Singo Consulting o	n behalf of Emet Mining c	and Eng	gineering (P	ty) Ltd, Wakwa
Ndlondlo (Pty) Ltd, Lupfhumo Colliery	(Pty) Ltd and Italo Cloth	ning (Pt	y) Ltd and e	explained that
these companies have applied for	Mining permits for the e	extracti	on of coal	on portion of
Portion 32 of the farm Blesboklaag	ite 296 JS. He also emp	ohasize	d that this	meeting also
contributes to the public participation	on process. To top up the	e PPP, I		were
asked to assist in arranging the mee	eting with the community	y so the	at they are	aware of this
proposed mining permits. BIDs were	provided to both.			
Questions and Answers				
Issue raised by				

- What's in it for the community?
- What will they benefit?
 Where is the Community Development Plan/ Programme?

Response by Singo Consulting

It was explained to them that they are being notified as this is the initial stage of the project for the purpose of public participation process. With regards to the CDP and what will the community benefit, upon commencement of the mining activities a specific number of



people will be employed, and the CDP will be developed which will be in favour of the community.

Furthermore, all other discussions will be addressed upon the second meeting where all relevant Singo personnel will be there.

Issue raised by

With regards to the arrangement of the meeting, transport will have to be arranged so that community members can attend because Klarinet has a lot of extensions

Response by Singo Consulting

The applicants will be made aware of this matter, and we shall come back with a response once all the applicants have reached a common ground regarding the matter.

Issue raised by

We are aware that Singo Consulting is representing a lot of companies who have lodged mining permits on the Blesboklaagte farm, we suggest that instead of Singo Consulting on behalf of all the applicants always coming and consult individually, how about everyone who's involved in any project that's situated in Blesboklaagte 296 JS farm come all at once in one sitting instead of doing the same thing all over again when we can always do it

Response by Singo Consulting

We are open to the suggestion, we will let everyone know who's involved and we will take it from there.

Issue raised by Singo Consulting

Should you have any other comments regarding the proposed mining permit projects, please don't hesitate to contact us. Your comments will be incorporated in our Draft BAR,

response by

We will write down our concerns and when the DBAR is available, please share with us.

Issue raised by

The one sitting meeting with all the Singo personnel will actually work to your advantage as we will prepare you for the community meeting because we would have drafted our needs analysis and all our assessments as we know exactly what our people want.

Response raised by Singo Consulting

Yes, that would be appreciated and thank you

Issue raised by

Please note that I'm not the one who came up with the transportation idea, I was given clear instructions by the speaker to deliver the idea to you.

Response raised by Singo Consulting

We are aware that you are doing your job, everything is noted down. Further communication will be done.

Way forward

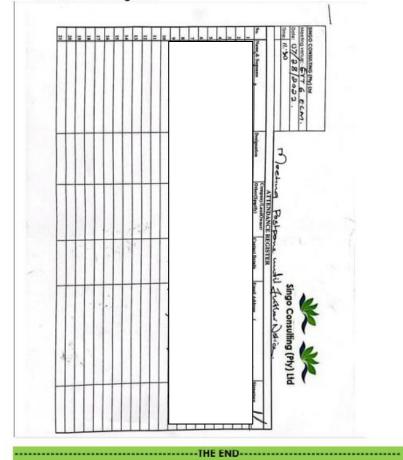
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Comments received. The councillor's representatives will be notified on when the meeting with Singo personnel shall be held in order to prepare for the meeting with the community.

End-of-Minutes

1. Attendance Register:



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enue: te	eams.live.co	m				
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genda:	Singo Consu	lting addressing	proposed mini	ing permit appli	cation at Klarine	et
ommun	ity on behal	f of, Wakwa Ndl	ondlo (Pty) Ltd	i		
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- On behalf of the community, no proper public participation was conducted with regards to the councillors of the affected wards and the affected communities and that there are also mining operations that did not conduct proper public participation process in the area of interest that were stopped by the community since there was no proper communication between the mines and the affected community.
- Where was the community meeting held? Were the ward councillors invited? Who attended the meeting?
- Can I have the names of the two people who attended a meeting and also the attendance register to be directed to _________ and a meeting with two community members attending a meeting is no public participation.
- The proposed meeting was in ward 12 whereas the proposed permit fall under ward 14.
- As the community we are looking at being employed and the SMME's benefiting from the project when in operation and that a community meeting must include Social Labour Plan and DMRE officials are expected in such meetings.
- Arrange another community meeting so that the comments and issues raised by the community members are adequately addressed. Liaise with the ward councillors of the affected wards for them to have a common understanding of the proposed projects and I do not want to see you being chased away by the affected community upon commencement of mining activities.

RESPONSE BY

Singo Consulting (Pty) Ltd lodged mining permit application to the DMRE on portion of portion 32, of the farm Blesboklaagte 296 JS and BID was shared with landowners, interested and affected parties, site notices were placed around the proposed application areas, newspaper publication was done and the Draft BAR and EMPr was also shared with stakeholders.

	RESI
>	On commencement of mining activities, various job opportunities will available for skilled and unskilled labours and the local SMME's will benefit from proposed project.
>	Arrangements of another community meeting will further proceed through so Bhengu as advised by the Municipality Speaker.
	You must further communicate with me and I am the one who will engage we other ward councillors for preparing a community meeting.
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	> You must further communicate with me and I am the one who will engage v
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Attendance Register:



-----THE END-----

Appendix 13: Specialist Studies