

**ENVIRONMENTAL IMPACT ASSESSMENT REPORT AND ENVIRONMENTAL MANAGEMENT PROGRAMME
FOR COAL MINING RIGHT APPLICATION, INTEGRATED WATER USE LICENSE APPLICATION, INTEGRATED
WASTE MANAGEMENT LICENSE APPLICATION, INTEGRATED ENVIRONMENTAL IMPACT ASSESSMENT
AND ENVIRONMENTAL AUTHORISATION**

Portions 02, 3 (Now known as Portion 48) 05, 19, 22, 35(Now known as Portion 49) of the Farm Witbank 80 IS, in
Witbank Magisterial District, Mpumalanga Province: DMRE REF NUMBER: MP30/5/1/1/2/478MR

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COMPETENT AUTHORITY



mineral resources
Department:
Mineral Resources
REPUBLIC OF SOUTH AFRICA

MP 30/5/1/1/2/478MR

MP-00180-MR/102

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DISCLAIMER

The opinion expressed in this, and associated reports are based on the information provided by Dotess (Pty) Ltd to Singo Consulting (Pty) Ltd (“Singo Consulting”) and is specific to the scope of work agreed with Dotess (Pty) Ltd. Since the client is the owner or lessor of the property, many of the advice and acts contained in this legally binding contract remain his or her duty.

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

Except where expressly stated, Singo Consulting has not verified the validity, accuracy or comprehensiveness of any information supplied for its reports. Singo Consulting shall not be held liable for any errors or omissions in the information given or any consequential loss resulting from commercial decisions or acts arising from them.

Where site inspections, testing or fieldwork have taken place, the report is based on the information made available by Singo Consulting during the visit, visual observations, and any subsequent discussions with regulatory authorities. The data and information used in this report were provided to Singo Consulting by the Dotess (Pty) Ltd and referred to other outside sources (includes historical site investigation information and third-party expert research).

These views do not generally refer to circumstances and features that may occur after the date of this study, which were not previously known to Singo Consulting (Pty) Ltd or had the opportunity to assess. It should be noted that some of the information were sourced from an EMP undertaken by T. G. Tefu (B.Sc.) (Geovicon Environmental (Pty) Limited) over the same farm for the same applicant in the year 2012.



mineral resources

Department:
Mineral Resources
REPUBLIC OF SOUTH AFRICA

ENVIRONMENTAL IMPACT ASSESSMENT REPORT AND ENVIRONMENTAL MANAGEMENT PROGRAMME REPORT

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

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FILE REFERENCE NUMBER SAMRAD:	MP30/5/1/1/2/478MR

2023

1. IMPORTANT NOTICE

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

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

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

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

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

2. OBJECTIVE OF THE ENVIRONMENTAL IMPACT PROCESS

- (a) determine the policy and legislative context within which the activity is located and document how the proposed activity complies with and responds to the policy and legislative context;
- (b) describe the need and desirability of the proposed activity, including the need and desirability of the activity in the context of the preferred location;
- (c) identify the location of the development footprint within the preferred site based on an impact and risk assessment process inclusive of cumulative impacts and a ranking process of all the identified development footprint alternatives focusing on the geographical, physical, biological, social, economic, heritage and cultural aspects of the environment;
- (d) determine the—
 - (i) nature, significance, consequence, extent, duration and probability of the impacts occurring to inform identified preferred alternatives; and
 - (ii) degree to which these
 - impacts—(aa) can be reversed;
 - (bb) may cause irreplaceable loss of resources,
 - and (cc) can be avoided, managed or mitigated;
- (e) identify the most ideal location for the activity within the preferred site based on the lowest level of environmental sensitivity identified during the assessment;
- (f) identify, assess, and rank the impacts the activity will impose on the preferred location through the life of the activity;
- (g) identify suitable measures to manage, avoid or mitigate identified impacts; and
- (h) identify residual risks that need to be managed and monitored.

Executive summary

1. INTRODUCTION

This Executive Summary provides a summary of the Scoping Report compiled and distributed for review and comment as part of the Scoping and Environmental Impact Assessment (EIA) process that is being undertaken for a proposed Mine in Kriel. The Scoping and EIA process is a planning tool that is used to assess the potential impacts of a development on the physical, biological and socio-economic environment in which the land use and infrastructure development is proposed.

The process strives to identify and, where possible, quantify the harmful impacts of a development before it takes place so that these harmful impacts can ideally be avoided or at least reduced through engineering design modifications, operational controls or other mitigation measures. The process also seeks to identify opportunities for enhancing the positive impacts of a development. In addition, the process seeks to inform and consult those who may be affected by the proposed development and to provide an opportunity for people to be involved in the decision-making process regarding the proposed development.

The Scoping and EIA process consists of two phases, a Scoping Phase and an EIA Phase. The Scoping Report presents the information applicable to the Scoping Phase. Legislation requires that the Scoping and EIA process must be conducted by an independent Environmental Assessment Practitioner (EAP). Singo Consulting (Pty) Ltd has been appointed as the EAP.

2. PROJECT OVERVIEW

Dotess (Pty) Ltd (hereafter the applicant) has appointed Singo Consulting (Pty) Ltd (Consultant) to apply for Section 102 Amendment on a mining right and undertake environmental authorization associated with the proposed Witbank Coal Mine. Dotess (Pty) Ltd currently holds a coal mining right with reference: MP30/5/1/1/2/478MR for underground. The mineral rights for the properties; Remaining Extent of Portions 2 and 19 and Portions 5, 22 and 35 of the farm Witbank 80 IS, measuring 1013,536 hectares in extent in the Magisterial District of Kriel Mpumalanga, Mpumalanga Province were granted to Dotess (Pty) Limited (company registration number 1983/010984/07) who are now the holder of the mining right MP 478 MR.

The Minister grants to the Holder the sole and exclusive right to mine, and recover the mineral/s in, on and under the mining area for the Holder's own benefit and account, and to deal with, remove and sell or otherwise dispose of the minerals, subject to the terms and conditions of this mining right. The term of the mining right did commence on 31 August 2012 and, unless cancelled or suspended in terms clause 13 of the mining right and section 47 of the Mineral and Petroleum Resources Development Act No. 28 of 2002, will continue to be in force for a period of 15 years ending 30 August 2027.

The mining right (File ref. No. MP 478 MR) was registered in the Minerals and Petroleum Titles Office, Pretoria 10th May, 2019, on the remaining extent of portions 2, and 19 and portions 5, 22, 35 of the farm Witbank 80 IS, covering an extent of 1013.536 Ha. Dotess (Pty) Ltd is hereby applying for an

amendment in terms of section 102 of the MPRDA. This amendment includes the application of a Water Use License as per the National Water Act (Act No. 36 of 1998) as well as a Waste Management License for waste management activities in terms of section 45 of the National Environmental Management Waste Act 2008 on portions 02, 05, 19, 22,35, with two additional farm portions 48 and 49 of the farm Witbank 80 IS, covering an extent of 1529.120 Ha.

The property lies within the Southern Witbank coalfield and is properly separated from the field by this Smithfield Ridge belonging to the Bushveld Igneous Complex. The coal seams occur within the Vryheid Formation of the Ecca Group and can be correlated with the coal seams of the Witbank coal field. There are usually five coal-bearing zones, numbered from Seam No. 1 to Seam No. 5 of which Seam No. 5 is the uppermost coal zone.

In the Witbank area, the lowermost seam (Seam No. 1) is not developed as the deep boreholes intersected the Dwyka Formation. No. 2 Seam is present in most of the area but is not thick enough the warrant exploitation. No. 3 Seam is poorly developed in most areas. Where it does occur, it is 10 to 20 cm thick and lies about 21 to 34m above No. 2 Seam. The sedimentary rocks between these two seams consist mainly of sandstones, interbedded with minor shales and sandy shales.

Seam No. 4 is well-developed in the entire area under consideration. It occurs about 1.8m above Seam No. 3 and reaches thicknesses of over 6m in places. Quality-wise it may be divided into a rather low-grade upper zone and a significantly higher-grade lower zone. The upper zone cannot be upgraded by washing, while the lower zone shows a very good potential for yielding a high-grade product by washing in a suitable medium. The lower zone is often separated from the upper inferior zone by thin black shale which may be up to 60cm thick. The lower zone is interbedded with thin layers of shale and/or sandstone near the top.

Seam No. 5 is multi-seamed consisting of from two to four layers of coal interbed with black shales or sandy shales. It is separated from Seam No. 4 by between 30 and 37 metres of sandstone. The uppermost seam ranges in thickness from 20 to 40cms and is usually good quality. It is separated from the main seam by 50 to 90cm of black shale. The main seam ranges in thickness from 40 to 80cm.

Seam No. 5 outcrops in the southern part of the area on Witbank 80 IS and is weathered to a vertical depth of about 10m. It is overlain mainly by sandstone with thin intercalated bands of black shale.

Dolerite is absent on surface over most of the area, but a sheet of between 12 and 15m in thickness is present in depth. In places it lies below No. 2 seam. In other localities it is above Seam No. 2 and in places above Seam No. 4. This dolerite has caused devolatilization of the coal in some areas and Seam No. 4 has been badly affected in places (Zietsman, 1982).

For the proposed mine to operate, the applicant is required to apply for a mining right with the DMRE. In support of the application to obtain the mining right, the applicant is required to conduct a Scoping and Environmental Impact Assessment (S&EIA) for submission to the DMRE for adjudication. This assessment must include activities triggered under the Environmental Impact Assessment Regulations of 2014 (as amended) promulgated under the National Environmental Management Act, 1998 (Act 107 of 1998) and activities triggered under the National Environmental Management: Waste Act, 2008 (NEMWA) (Act 59 of 2008) and National Water Act, 1998 (NWA) (Act 36 of 1998).

Once a box cut has been made, the overburden and mineral resources where necessary will be loosened by blasting with non-conventional explosives such as Non-Ex Rock Breaking Cartridges also used by Samancor Chrome in Gauteng and Waterkloof mine in Rustenburg. Non-Ex Rock Breaking Cartridges are a pyrotechnic composition (low explosives) that break rocks by generating tensile force through rapid gas expansion in a sealed (stemmed) drill hole and have no adverse environmental effects. The loosened material will then be loaded onto trucks by excavators. A haul road will be situated at the side of the open cast, forming a ramp up which trucks can drive, carrying coal and waste rock. Waste rock will be piled up at the surface, near the edge of the open cast (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.

To fulfil the demand for electricity, coal is needed on a nationwide level. By supplying coal to the local markets, this proposed project will help to address the supply shortage. In summary, the National Development Framework mentions the requirement for affordable energy production to assist the industry. Additionally, the proposed project will boost the local economy by generating jobs and supporting local businesses. Increased employment will result in higher spending, a larger tax base, and higher royalties.

The required infrastructure proposed for the extension includes:

- Potable Water storage tank;
- PCD;
- Underground Pillars
- A new 22 kV overhead powerline from the existing substation (Eskom Powerlines)
- Run of Mine (ROM) Stockpile conveyor at portal;
- Portal ventilation fan;

- Dumps
- Change house;
- Lamp room;
- Office;
- Workshop area;

Purpose of this report

The purpose of this Scoping Report includes the following:

- To provide a description of the proposed Project and its activities;
- To provide a high-level baseline environment;
- To predict potential impacts as a result of the Project and its activities;
- To provide a detailed plan of study for the Environmental Impact Assessment (EIA) Phase; and
- To share Project information with Interested and Affected Parties (I&APs) and to record comments and issues.

Environmental consultants:

Singo consulting Pty Ltd has been appointed by Dotess as an independent Environmental Assessment Practitioner (EAP) to conduct the following environmental-regulatory processes in relation to this Project:

- An Environmental Authorisation Application process, in terms of the National Environmental Management Act, 1998 (Act No. 107 of 1998) (NEMA);
- A Water Use Licence Application (WULA) in terms of the National Water Act, 1998 (Act No. 36 of 1998) (NWA);
- Waste Management licence process, in terms of the National Environmental Management Waste Act, 2008.
- All relevant specialist studies in support of the applications; and the required Public Participation Process (PPP)

Scoping and Environmental Impact Assessment process

A S&EIA is conducted in two phases: Scoping and EIA compilation. The scoping phase will commence with the following activities once the application has been submitted with the competent authority:

- Identify interested and affected parties (I&APs) and stakeholders
- Identify relevant policies and legislation
- Consider the need and desirability of the project
- Consider alternative technologies and sites
- Identify the potential environmental issues
- Determine the level of assessment and public participation process required for the EIA phase
- Identify preliminary measures to avoid, mitigate or manage potential impacts

The objectives of the EIA phase will be to assess the potential impacts associated with the preferred project alternatives as per the terms of reference for the assessment set out in the scoping report. The EIA/EMPr report will document the assessment findings and detail the measures required to avoid, mitigate and/or manage the potential impacts.

The S&EIA process requirements are contained in Chapter 4, Part 3 of the NEMA Reg No 326 (amended on 7 April 2017). The EIA process can take up to 300 days to complete (87 days for the scoping phase, 106 days for the EIA phase, 107 days for competent authority to review).

Approach and methodology for the PPP:

A PPP as per the Environmental Impact Assessment (EIA) Regulations, 2014 (as amended) has been initiated, which is central to the investigation of environmental and social impacts, as it is important that stakeholders who are affected by the Project are given an opportunity to identify concerns to ensure that local knowledge, needs and values are understood and taken into consideration as part of the EIA process.

The Draft Scoping Report was available for public comment for a period of 30 days from 27th of March 2023 to the 28th of April 2023 and all comments or concerns raised by Interested and Affected Parties (I&APs) were recorded and responded to in the Comments and Responses Report (CRR) contained in the Final Scoping Report which was submitted to the DMRE on the 30th of August 2023.

The following activities were also undertaken during the Project's and Scoping Phase:

- Background Information Documents (BID) were distributed to identified I&APs throughout the Scoping Phase;
- A newspaper advertisement was placed in the Witbank News on 10th of March 2023;

- An announcement letter including a registration form were distributed to identified I&APs via email on 10th of March 2023;
- Site notices were placed around the site on 8th of March 2023; and
- The Draft Scoping Report and future Project communications were made available to I&APs through soft copies on email, hardcopies at library (Kriel), Municipality (Witbank).

Project Alternatives:

The alternatives considered in this report and during the pre-feasibility studies undertaken include the mining method, resource access, mining equipment requirements, production and scheduling, employment and the “No-Go” alternative (the option of not proceeding with the Project).

Environmental Baseline:

The following baseline specialist studies have been undertaken and included in the EIA report:

- Ecology (fauna and flora);
- Public Participation Process.

PURPOSE OF THIS EIA/EMP REPORT

This report addresses the requirements of the Scoping and Impact Assessment Phases as outlined in the EIA regulations. This report documents the issues and concerns raised during the Scoping phase, and includes the findings of the specialist assessments for issues that have been raised.

The aim of this EIA Report is to:

- Provide information on the proposed project and present the findings of the EIA to the authorities;
- Provide information regarding alternatives that have been considered;
- Show how authorities and interested and affected parties were afforded the opportunity to contribute to the project, and to indicate the issues raised and the responses to those issues;
- Describe the baseline information regarding the receiving environment;
- Describe the extent of environmental consequences for the construction, operation and decommission phases of the proposed project;
- Propose mitigation measures for impacts that are considered significant regarding the proposed mining project;
- Present findings of the EIA in a manner that facilitates decision-making by the relevant authorities

The baseline environmental investigations found that most of the Project Area consists of disturbed/transformed vegetation as a result of existing structures/developments, agricultural practices and associated infrastructure. Small patches of the study site do consist of recovered natural vegetation. The aquatic environments are also modified and negatively impacted by agricultural and mining activities. Socioeconomically speaking, the employment and training opportunities are a need in the local area.

The preliminary impacts of the mining project ancillary infrastructure can be summarised as follows:

- Water quality deterioration;
- Increased surface water runoff;
- Terrestrial and aquatic habitat disturbance, loss and/or fragmentation;
- Soil erosion and compaction;
- Spread of alien and invasive species;
- Disturbance and destruction of heritage resources; and
- Employment opportunities and skills development.

The Project has the opportunity to have a significantly beneficial impact through providing employment opportunities, SMME development, education support (ABET, portable skills training, bursary programmes), as well as community development initiatives. Closure, rehabilitation, water, Geotech, heritage, palaeontology and climate change studies amongst others shall be undertaken and included in the EIA Phase as they do not provide baseline information.

Conclusion:

All specialist studies are finalised in this EIA Phase for the completion of the impact assessment and further mitigation measures are recommended for the Project. Comments received from I&APs will be used to inform further aspects of the specialist studies. The EIA Phase allows for an in-depth assessment of the impacts, potential mitigations and further recommendations with regards to the proposed Project proceeding.

List of abbreviations

BID	Background Information Document
DEA	Department of Environmental Affairs
DMR	Department of Mineral Resources
DWS	Department of Water and Sanitation
EA	Environmental Authorisation
EIA	Environmental Impact Assessment
EIAr	Environmental Impact Assessment Report
EMPr	Environmental Management Programme Report
GDARD	Gauteng Department of Agriculture and Rural Development
GIS	Geographic Information System
GN	Government Notice
HIA	Heritage Impact Assessment
I&AP	Interested & Affected Party
IBA	Important Bird Area
IWULA	Integrated Water Use Licence Application
ASAPA	Association of Southern African Professional Archaeologists
LoM	Life of Mine
MPRDA	Minerals and Petroleum Resources Development Act, 2002
Mtpa	Million tonnes per annum
NEMWA	National Environmental Management: Waste Amendment Act, 2008
NEMA	National Environmental Management Act, 1998 (Act No. 107 of 1998)
NHRA	National Heritage Resources Act, 1999 (Act No. 25 of 1999)
NWA	National Water Act, 1998 (Act No. 36 of 1998)
PPP	Public Participation Process
RoM	Run of Mine
SAHRA	South African Heritage Resources Agency
SANS	South African National Standard
SCC	Species of Conservation Concern
S&EIA	Scoping and Environmental Impact Assessment
WMA	Water Management Area

PART A

1. INTRODUCTION AND BACKGROUND

Dotess Holdings (Pty) Ltd (hereafter the applicant) has appointed Singo Consulting (Pty) Ltd (Consultant) to apply for mining right and to undertake environmental authorization associated with the proposed Witbank Coal Mine. Dotess (Pty) Ltd currently holds a coal mining right with reference: MP30/5/1/1/2/478MR for underground mining method, on the remaining extent of portions 2, and 19 and portions 5, 22, 35 of the farm Witbank 80 IS, covering an extent of 1013.536 Ha. Dotess (Pty) Ltd is hereby applying for an amendment in terms of section 102 of the MPRDA. This amendment includes the application of a Water Use License as per the National Water Act (Act No. 36 of 1998) as well as a Waste Management License for waste management activities in terms of section 45 of the National Environmental Management Waste Act 2008 on portions 02, 05, 19, 22, 35, 48 and 49 of the farm Witbank 80 IS covering an extent of 1529.120 Ha.

The property lies within the Southern Witbank coalfield and is properly separated from the field by this Smithfield Ridge belonging to the Bushveld Igneous Complex. The coal seams occur within the Vryheid Formation of the Ecca Group and can be correlated with the coal seams of the Witbank coal field. There are usually five coal-bearing zones, numbered from Seam No. 1 to Seam No. 5 of which Seam No. 5 is the uppermost coal zone.

In the Witbank area, the lowermost seam (Seam No. 1) is not developed as the deep boreholes intersected the Dwyka Formation. No. 2 Seam is present in most of the area but is not thick enough the warrant exploitation. No. 3 Seam is poorly developed in most areas. Where it does occur, it is 10 to 20 cm thick and lies about 21 to 34m above No. 2 Seam. The sedimentary rocks between these two seams consist mainly of sandstones, interbedded with minor shales and sandy shales.

Seam No. 4 is well-developed in the entire area under consideration. It occurs about 1.8m above Seam No. 3 and reaches thicknesses of over 6m in places. Quality-wise it may be divided into a rather low-grade upper zone and a significantly higher-grade lower zone. The upper zone cannot be upgraded by washing, while the lower zone shows a very good potential for yielding a high-grade product by washing in a suitable medium. The lower zone is often separated from the upper inferior zone by thin black shale which may be up to 60cm thick. The lower zone is interbedded with thin layers of shale and/or sandstone near the top.

Seam No. 5 is multi-seamed consisting of from two to four layers of coal interbed with black shales or sandy shales. It is separated from Seam No. 4 by between 30 and 37 metres of sandstone. The uppermost seam ranges in thickness from 20 to 40cms and is usually good quality. It is separated from the main seam by 50 to 90cm of black shale. The main seam ranges in thickness from 40 to 80cm.

Seam No. 5 outcrops in the southern part of the area on Witbank 80 IS and is weathered to a vertical depth of about 10m. It is overlain mainly by sandstone with thin intercalated bands of black shale.

Dolerite is absent on surface over most of the area, but a sheet of between 12 and 15m in thickness is present in depth. In places it lies below No. 2 seam. In other localities it is above Seam No. 2 and in places above Seam No. 4. This dolerite has caused devolatilization of the coal in some areas and Seam No. 4 has been badly affected in places (Zietsman, 1982).

For the proposed mine to operate, the applicant is required to apply for a mining right with the DMRE. In support of the application to obtain the mining right, the applicant is required to conduct a Scoping and Environmental Impact Assessment (S&EIA) for submission to the DMRE for adjudication. This assessment must include activities triggered under the Environmental Impact Assessment Regulations of 2014 (as amended) promulgated under the National Environmental Management Act, 1998 (Act 107 of 1998) and activities triggered under the National Environmental Management: Waste Act, 2008 (NEMWA) (Act 59 of 2008) as well as the National Water Act 1998 (Act 36 of 1998).

The proposed underground and open cast/ surface coal mining operations constitute various listed activities, as contained in the scheduled activities in Government Notice Regulation No 324, 325 and 327 (amended 7 April 2017). As such, a full Scoping and EIA process must be followed. Prior to any listed activity being approved by the DMRE, an environmental process must be undertaken, and a report submitted to the relevant environmental authority for consideration.

The purpose of the S&EIA process is to ensure that potential environmental, economic, and social impacts associated with operation and closure/rehabilitation of a project are identified, assessed, and appropriately managed. This is done in two primary phases: the scoping phase and the impact assessment phase, both of which are discussed in more detail in the following:

Scoping phase

The scoping phase is conducted as a precursor to the EIA process, during which:

- Project and baseline environmental information is collated. Baseline information for the scoping report is gathered through visual inspections during field visits to the proposed project area and surroundings, desktop studies (including GIS mapping), and review of existing reports, guidelines, and legislation.

- Landowners, adjacent landowners, local authorities, environmental authorities, and other stakeholders who may be affected by/or have an interest in the environmental impacts of the project, are identified.
- Interested and affected parties (I&APs) are informed about the proposed project.
- Environmental authorities are consulted to confirm legal and administrative requirements.
- Environmental issues and impacts are identified and described.
- Development alternatives are identified and evaluated, and non-feasible development alternatives are eliminated.
- The nature and extent of further investigations and specialist input required in the EIA phase is identified.
- The draft and final scoping reports are submitted for review by authorities, relevant organs of state and I&APs.
- Key I&AP issues and concerns are collated into an issues and response section for consideration in the EIA phase.

Environmental Impact Assessment process

After the initial scoping phase, the following EIA activities are completed:

- Specialist investigations are undertaken in accordance with the terms of reference established in the scoping assessment (plan of study for EIA appended to the scoping report). The scope for specialist work is determined by the nature and scale of the project impacts.
- Evaluation of development alternatives and identification of a proposed option.
- Assessment of existing impacts (no-go development option), environmental impacts that may be associated with the proposed project option, and cumulative impacts using the impact assessment methodology.
- Identification of mitigation measures to address the environmental impacts and development of actions required to achieve the mitigation required.
- Consultation with I&APs.
- Incorporation of public comments received during scoping into the Environmental Impact Assessment (EIA) and Environmental Management Programme report (EMPr), and finalisation of the EIA report.
- Issuing of the final EIA report for review.
- The requirements for the S&EIA process are contained in Chapter 4, Part 3 of the NEMA Reg No 326 (amended on 7 April 2017). The EIA process can take up to 300 days to complete (87

days for the scoping phase, 106 days for the EIA phase, and 107 days for the competent authority review).

Singo Consulting Pty Ltd (SC) is appointed as the independent Environmental Assessment Practitioner (EAP) to manage and facilitate the environmental authorisation process, Waste license and IWUL application.

SCOPE OF ASSESSMENT AND ENVIRONMENTAL IMPACT ASSESSMENT REPORT

2. Contact Person and correspondence address

The applicant has appointed Singo Consulting as an independent EAP to conduct an S&EIA that is required to support the application for a mining right. Singo Consulting (Pty) Ltd has no vested interest in the proposed project and hereby declares its independence, as required by the EIA Regulations. Any queries regarding this S&EIA may be directed to the following PPP and EAPs at Singo Consulting:

Table 1: Details of the 1st EAP manager

Name of the Practitioner	Miss Rudzani Shonisani
Designation	EAP manager
Tel No.	+27 13 692 0041
Cell No.	+27 78 548 1244
Fax No.	+27 86 515 4103
Email	rudzani@singoconsulting.co.za

Table 2: Details of the EAP Principal

Name of the Practitioner	Dr NK Singo
Designation	Principal EAP
Tel No.	+27 13 692 0041
Cell No.	+27 78 2727 839

Fax No.	+27 86 515 4103
Email	kenneth@singoconsulting.co.za

Expertise of the EAP

Please refer to **Appendix 1** for the EAP's qualifications and Curriculum Vitae. (Appendices section).

EAP - Mrs Rudzani Radebe

Qualifications

N.Dip Geology (Tshwane University of Technology)

BTech Geology (Tshwane University of Technology)

COMSOC 1 & 2 (TR Safety Consultants)

LLB (UNISA)

Affiliations

South African Council for Natural Scientific Professions (SACNASP)

Geological Society of South Africa (GSSA)

Land Rehabilitation Society of Southern Africa (LaRSSA)

South African Affiliates of the International Association for Impact Assessment (IAIASa)

Environmental Assessment Practitioners Association of South Africa (EAPASA)

Rudzani is an EAP Consultant. She joined Singo Consulting Pty (Ltd) in August 2017, and she has been actively involved in assistance with environmental authorization processes (including Basic Assessment and Scoping & Environmental Impact Assessment processes), report writing, public and authority consultation, environmental site assessment, assisting in the management of large and small EA and

environmental permitting projects, as well as applying and enforcing Singo Consulting Pty (Ltd) project standards.

She was a core masker intern at Terracore (Pty) Ltd, and she was involved in several projects including making, product check, core log interpretation and box masking and also worked at Vhembe Municipality as junior technician, involved in drilling projects, office-based report check and admin work.

Rudzani completed BTech in Geology at Tshwane University of Technology in 2019 and she did her research project with Singo Consulting Pty (Ltd) under the supervision of Dr NK Singo and now enrolled with Unisa for LAW.

Principal EAP – Dr Kenneth Singo

Qualifications

Ph.D. Geology, Applied Environmental Mineralogy and Geochemistry (University of Johannesburg)

MSc Environmental Management (University of South Africa (UNISA))

BSc (Hons) in Mining and Environmental Geology (UNIVEN).

Affiliations

South African Council for Natural Scientific Professions (SACNASP: Earth Science)

Geological Society of South Africa (GSSA) [Geologist and Hydrogeologist]

Land Rehabilitation Society of Southern Africa (LaRSSA)

South African Affiliates of the International Association for Impact Assessment (IAIASa)

WESSA (People Caring for the Earth)

Environmental Assessment Practitioners Association of South Africa (EAPASA)

Dr. Singo is a Principal Consultant (Earth Science), and REAP (EAPASA) in the Mining, Agricultural and Construction sector and currently works for Singo Consulting, an advisory firm based in eMalahleni. He has over 11 years' experience in diverse areas of natural resources including Geology, Geochemistry

and Environmental Geochemistry. He is a coal expert with extensive experience of the Waterberg, Soutpansberg, Witbank, Highveld, and Springbok flats, as well as the Tete (Moatize) coalfield in Mozambique.

Kenneth holds an MSc in Environmental Geochemistry (University of South Africa (UNISA)), BSc (Hons) in Mining and Environmental Geology (the University of Venda), and Ph.D. (Geology, Applied Environmental Mineralogy and Geochemistry) at the University of Johannesburg. S24G Environmental Impact Report

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

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

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.

Expertise of Environmental Assessment Practitioner

See appendices for EAP CVs. (Appendices section).

Specialist studies

Specialist studies have been conducted to address the impacts associated with the mining activities; some are still in the process of being done. The specialist studies involve the gathering of data relevant to identifying and assessing impacts that may occur as a result of the proposed project. The specialists have recommended appropriate mitigation/control or optimisation measures to minimise potential negative impacts or enhance potential benefits. The mitigation measures and recommendations made by the specialists are included in the EMPr, which will guide the project's construction, operational and decommissioning phases (including rehabilitation). See **Section 7** for the environmental attributes associated with the development footprint for a list of specialist studies.

Property description

The property description of the proposed Witbank Coal mine is provided in Table 3. The farm name applicable to the S&EIA is listed in this table. Several S&EIA processes would have to be followed for the proposed mining operations.

Table 3: Property descriptions of the proposed Witbank Coal Mine

Farm name	Witbank 80 IS
Proposed name of the mine	Witbank Mine
Application area (ha)	Approximately 1 529,120 Ha
Magisterial district:	Witbank
Local government municipalities	Local Municipality: eMalahleni Local Municipality District Municipality: Nkangala District Municipality
Distance and direction from nearest town	The project area is situated approximately 8,9 km southwest of Kriel, approximately 8.9 km southwest of Kriel Mall, approximately 15.4 west of Kriel Power Station approximately 21 km southwest of Reedstream Park, approximately 6.6 km northeast of Boskrans, approximately 6 km east of Dios Hostel, approximately 2.6 km northwest of Enkundleni Primary School, approximately 8.7 km northwest Adiels Carriers Bethal Depot, approximately 13.1 km west of Diepfontein, approximately 19.2 northwest of Bethal, approximately 19.8 km northeast of Trichardt, and approximately 19.1 km west of Matla Power Station.
21-digit Surveyor General code for farm portion	TOIS00000000008000002 TOIS00000000008000005 TOIS00000000008000019 TOIS00000000008000022 TOIS00000000008000048 TOIS00000000008000049
Locality map	Locality map at a scale of 1:150000 (see Figure 1 and Figure 2).
Description of the overall activity. (Indicate Mining Right, Mining Permit, Prospecting right, Bulk Sampling, Production Right, Exploration Right, Reconnaissance permit, Technical co-operation permit, Additional listed activity)	The activity relates to an application for a mining right for coal. Mining will be a combination of opencast and underground extraction with a planned life of approximately 30 years. 4 opencast pits will be developed occupying 71.853 hectares and 1 563. 038 hectares respectively with underground mining being accessed through adits in the high wall of the opencast pits. The majority of mining will take place underground. Activities in the mining right area include: <ol style="list-style-type: none"> 1. Four opencast (OC) pits 2. Adit (within OC pit) accessing underground workings 3. Overburden and topsoil dumps 4. Haul roads, access roads, maintenance roads and security roads (including a firebreak)

	<ul style="list-style-type: none">5. A processing plant, workshop, warehousing, washbay and offices6. Plant processing discard dump7. Product stockpiles8. Stormwater management system including pollution control dams, evaporation ponds, trenches and berms, diversion of drainage courses9. A surface water storage dam and dewatering of underground workings10. An explosives magazine11. A conveyor12. Services including powerlines, pipelines, security, refueling and sewerage <p>In addition to the abovementioned activities, the following is also included in the application.</p> <p>Activities include:</p> <ul style="list-style-type: none">13. Access roads14. Coal stockpiling and loading <p>Stormwater Management System, including a Pollution Control Dam</p>
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3. Project Location

The mining right area is located on portions 02, 05, 19, 22, 35, 48 and 49 of the farm Witbank 80 IS and is owned by H J Pieterse Vlakfontein Tweehonderd CC, H J Pieterse, and Henry & Marlene Dunn Witbank Trust. The farm (located in Witbank) falls in the jurisdiction of eMalahleni Local Municipality in the Nkangala district in Mpumalanga, South Africa.

The project area is situated approximately 8,9 km southwest of Kriel, approximately 8.9 km southwest of Kriel Mall, approximately 15.4 west of Kriel Power Station approximately 21 km southwest of Reedstream Park, approximately 6.6 km northeast of Boskrans, approximately 6 km east of Dios Hostel, approximately 2.6 km northwest of Enkundleni Primary School, approximately 8.7 km northwest Adiels Carriers Bethal Depot, approximately 13.1 km west of Diepfontein, approximately 19.2 northwest of Bethal, approximately 19.8 km northeast of Trichardt, and approximately 19.1 km west of Matla Power Station. The application is covering approximately 1529.120 hectares (ha) in extent, and it is well situated with respect to the Richards Bay railway line and can be accessed through the R545.

The area surrounding the Dotess coal deposit, is underlain by the Vryheid Formation of the Ecca Group which is the major coal-bearing formation of the Karoo Supergroup (Fig. 2B). There is coal outcropping in the Steenkool Spruit about 3km south of Dotess which was mined in the past by artisanal miners. On the farm Aangewys 6 km to the west is the Wakefield Colliery, which has been drilled and evaluated but not yet mined. Seams No. 4 and 5 are present and there is an estimated resource of 1.7Mt in 5 Seam and 5.6Mt in 4 Seam (Barker and Associates, 1990). The mining area is located adjacent to the Sibonelo Coal mine: (owned by Anglo American) which is situated within the proximity of Eskom's Kriel, Matla and Kendal Power Stations, and on the south-western boundary of the Steenkoolspruit. There are also collieries on the farms Driefontein 69 and Haasfontein 85 which are 14 and 20km, respectively to the west and Isibonelo Colliery just southwest of the mining right.

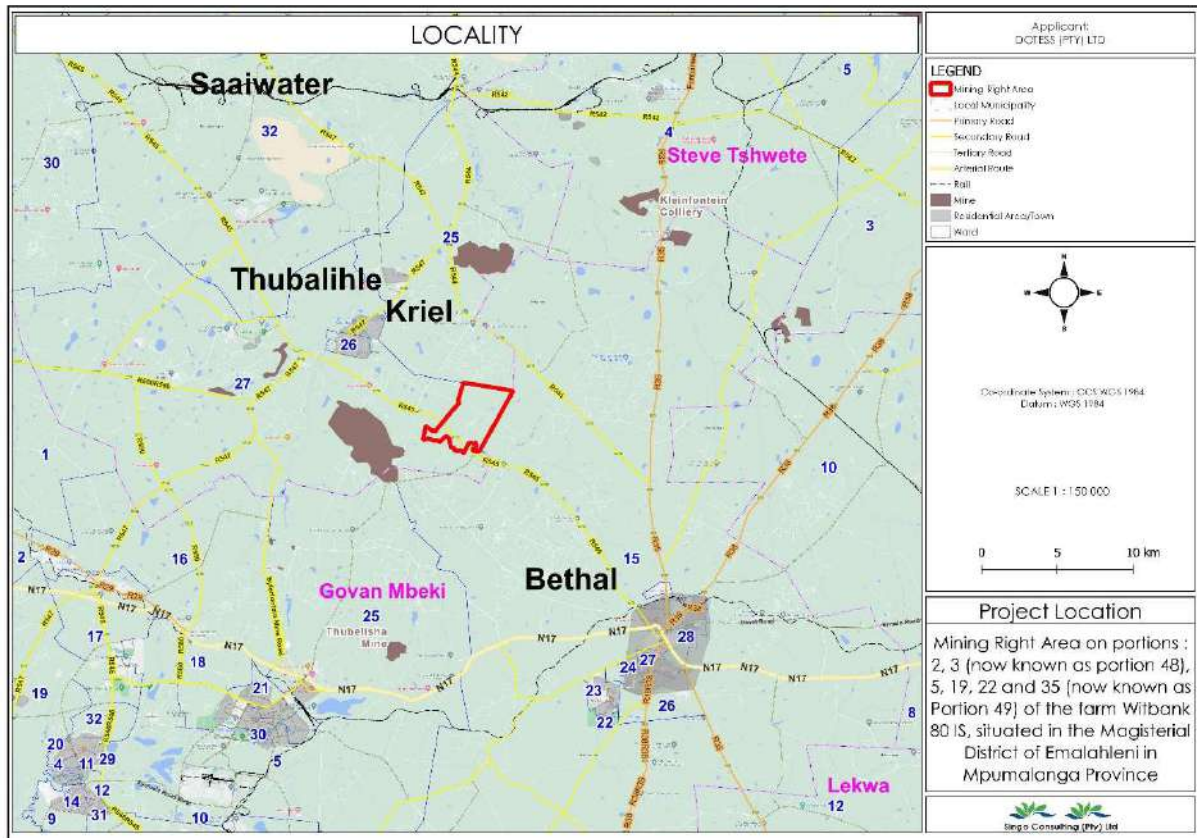


Figure 1: Project area locality (Singo Consulting, 2023)



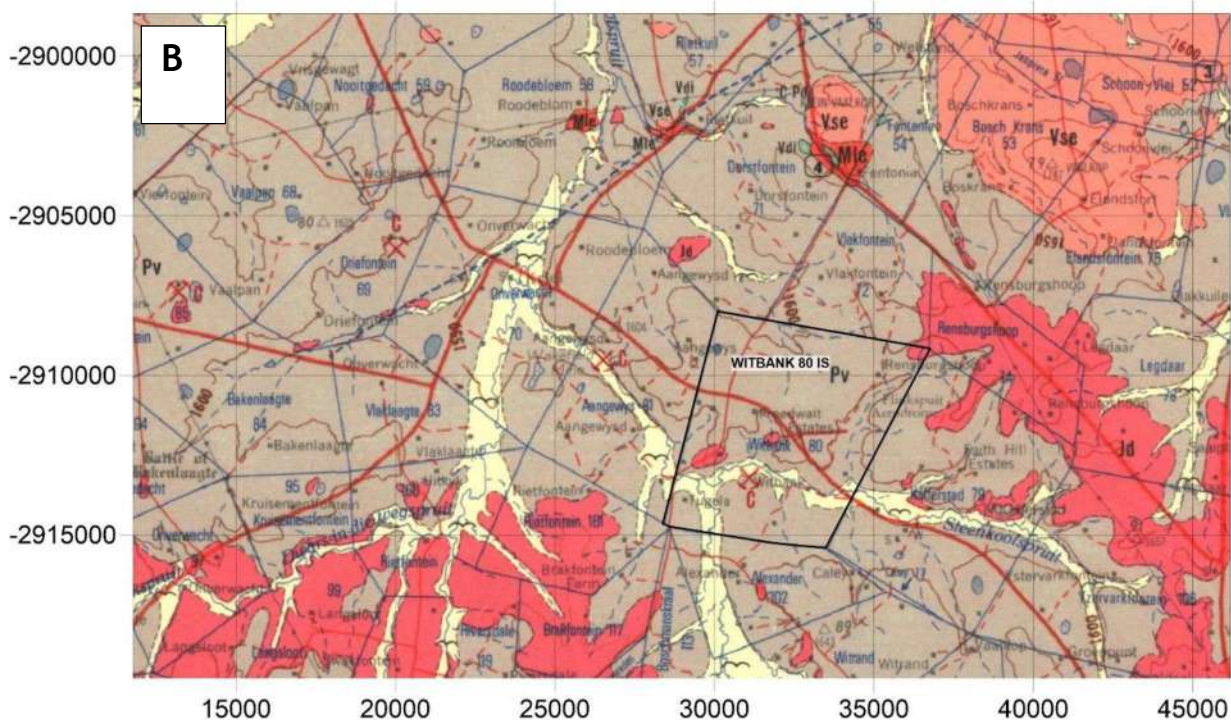


Figure 2: A-Google Earth view of the project area (Google Earth, 2023) & B-Regional Geological 1:1000 000 Map (Andersen Geological Consulting, 2023)

3.1 Landowner

The mining right is applicable for the entire Portions 02, 05, 19, 22, 35, 48 and 49 of the Farm Witbank 80 IS. The environmental authorisation process for the Witbank Coal Mine project study area includes the property indicated above.

It must be noted that portion 35 has now been consolidated to Parts of portion 49 with portion 3 as portion 48. Portion 35 was granted on the mining right which was applied in the year 2016 under ref: 478MR. Land tenure and use is indicated in Table 4. The surface of land within and adjacent to the proposed Witbank Colliery mining area is extensively used for agricultural purposes e.g., mono crop production (maize) and livestock grazing. Table 5 also denoted adjacent landowners with contact details.

Table 4: Landowner of the affected properties

Landowner	Property description	Title deed number
H J Pieterse Vlakfontein Tweehonderd CC	Witbank 80 IS, Portions 02, 05, 19, 22 and 48 (Previously known as Portion 3)	T131928/1997 & T1357/2021

Henry & Marlene Dunn Witbank Trust	Witbank 80 IS, Portion 49 (Used to be 35)	T1356/2021
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Deeds Office Property - List
IS, 80, MPUMALANGA

Lexis® WinDeed

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

SEARCH CRITERIA

Search Date	2022/06/13 09:23	Farm Number	80
Reference	-	Registration Division	IS
Report Print Date	2022/06/13 09:25	Portion Number	-
Farm Name	-	Remaining Extent	NO
Deeds Office	Mpumalanga	Search Source	Deeds Office

PORTION LIST

Portion	Owner	Title Deed	Registration Date	Purchase Price (R)
0	*** NO LONGER EXISTS - SEE ENDORSEMENTS ***	-	-	-
1	ROOIBLOM LANDGOED HOEVELD PTY LTD	T10040/2019	-	-
2	H J PIETERSE VLAKFONTEIN TWEEHONDERD CC	T131928/1997	-	-
5	H J PIETERSE VLAKFONTEIN TWEEHONDERD CC	T131928/1997	-	-
6	*** NO LONGER EXISTS - SEE ENDORSEMENTS ***	-	-	-
7	HENRY & MARLENE DUNN WITBANK TRUST	T131927/1997	-	-
8	VENTER SANDRIENA JOHANNA	T336029/2007	-	-
9	*** NO LONGER EXISTS - SEE ENDORSEMENTS ***	-	-	-

PORTION LIST				
Portion	Owner	Title Deed	Registration Date	Purchase Price (R)
17	HENRY & MARLENE DUNN WITBANK TRUST	T389/2019	-	-
18	*** NO LONGER EXISTS - SEE ENDORSEMENTS ***	-	-	-
19	H J PIETERSE VLAKFONTEIN TWEEHONDERD CC	T131928/1997	-	-
20	WITBANK PLAAS TRUST	T56292/1995	-	-
21	WITBANK PLAAS TRUST	T56292/1995	-	-
22	H J PIETERSE VLAKFONTEIN TWEEHONDERD CC	T131928/1997	-	-
23	HENRY & MARLENE DUNN WITBANK TRUST	T1351/2021	-	-
24	HENRY & MARLENE DUNN WITBANK TRUST	T1351/2021	-	-
25	HENRY & MARLENE DUNN WITBANK TRUST	T1351/2021	-	-
26	HENRY & MARLENE DUNN WITBANK TRUST	T1351/2021	-	-
27	HENRY & MARLENE DUNN WITBANK TRUST	T1351/2021	-	-
28	H B DUNN BOERDERY PTY LTD	T1450/2017	-	-
29	H B DUNN BOERDERY PTY LTD	T1450/2017	-	-
30	H B DUNN BOERDERY PTY LTD	T1450/2017	-	-
31	DUNN HENRY BROWN	T96084/1997	-	-
32	VENTER SANDRIENA JOHANNA	T336029/2007	-	-
33	VENTER SANDRIENA JOHANNA	T336029/2007	-	-
34	WITBANK PLAAS TRUST	T56292/1995	-	-
35	*** NO LONGER EXISTS - SEE ENDORSEMENTS ***	-	-	-

41	H J PIETERSE (VLAKFONTEIN TWEEHONDERD) CC	T1349/2021	-	-
48	H J PIETERSE	T1357/2021	-	-

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PORTION LIST				
Portion	Owner	Title Deed	Registration Date	Purchase Price (R)
	(VLAKFONTEIN TWEEHONDERD) CC			
49	HENRY & MARLENE DUNN WITBANK TRUST	T1356/2021	-	-

Table 5: Adjacent Landowners.

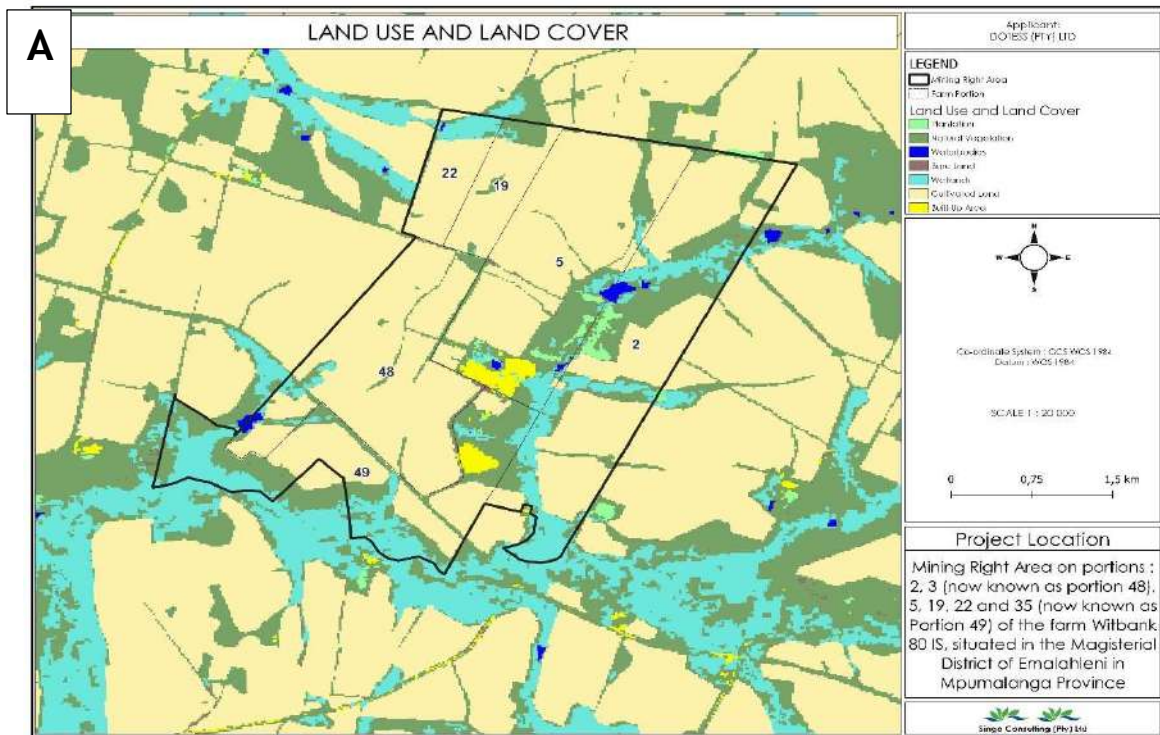
Farm Name	Subdivision	Contact Person	Contact Details
Kafferstad 79 IS	Portion 11	F R Grobler Familie Trust (Mr Grobler)	082 388 0060
	Portion 17	Josua G Holtshauzen	082 388 2002
	Portion 19	L V D M Eiendomme (Pty) Ltd (A. J. Van der Merwe)	082 556 2291
Rensburgshoop 74 IS	Portion 5	Henry & Marlene Dunn Witbank Trust (Mr. Dunn)	082 571 3763
Vlakfontein 72 IS	Portion 3	Witbank Trust (Edmund Muller)	082 388 2139
	Portion 4	H. J. Pieterse Vlakfontein Tweehonderd (Pty) Ltd (H. J. Pieterse)	082 555 0666

	Portion 7	H. J. Pieterse Vlakfontein Tweehonderd (Pty) Ltd	082 555 0666
	Portion 9	H. J. Pieterse Vlakfontein Tweehonderd (Pty) Ltd	082 555 0666
Witbank 80 IS	Portion 3	Henry & Marlene Dunn Witbank Trust	082 571 3763
	Portion 21	Witbank Trust	082 388 2139
	Portion 20	Witbank Trust	082 388 2139
	Portion 0 (Re Ext)	H. J. Pieterse Vlakfontein Tweehonderd (Pty) Ltd	082 555 0666
	Portion 39	Henry & Marlene Dunn Witbank Trust	082 571 3763
	Portion 3	Henry & Marlene Dunn Witbank Trust	082 571 3763
	Portion 10	H. J. Pieterse Vlakfontein Tweehonderd (Pty) Ltd	082 555 0666
	Portion 14	H. J. Pieterse Vlakfontein Tweehonderd (Pty) Ltd	082 555 0666
	Portion 12	Henry & Marlene Dunn Witbank Trust	082 571 3763
	Portion 07	Henry & Marlene Dunn Witbank Trust	082 571 3763
	Portion 15	Henry & Marlene Dunn Witbank Trust	082 571 3763
	Portion 08,32 and 33	Johanna S. Venter	082 573 2320
	Portion 28	Norman Himie Hirschowitz	082 608 0108
	Portion 26	H. J. Pieterse Vlakfontein Tweehonderd (Pty) Ltd	082 555 0666

3.2 Description of current land cover

Land cover information is a crucial reference dataset that informs a variety of activities, including environmental planning and protection, development planning, economic development, compliance monitoring, enforcement and strategic decision making.

Landsat 8 satellite imagery offers the opportunity to create a national land cover dataset for South Africa, circa 2013-14, which has replaced the previous (1994 and 2000) South African national land cover datasets (Geoterraimage, 2015). The 2013-14 national land cover dataset is based on 30x30 m raster cells and is ideally suited for ± 1:75,000 - 1:250,000 scale GIS-based mapping and modelling applications. As per the 2013-14 national land cover dataset, the current land cover for the study area includes multiple classes, the majority being cultivated, followed by uncategorised and few waterbodies. Refer to Figure 3 (A, B). During a field assessment it was, however, observed that most of the farm is being used for grazing and commercial cultivation and neighbouring farms are used for the same purpose.



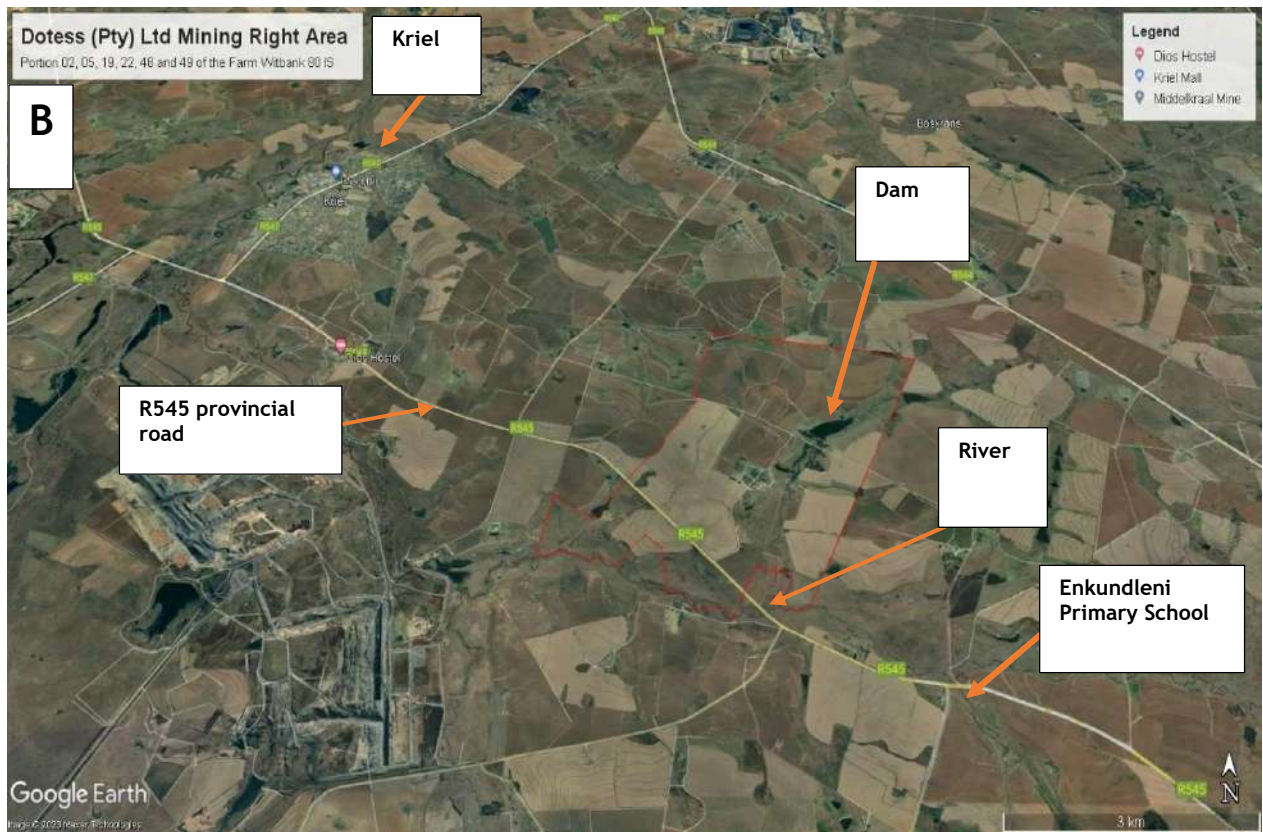
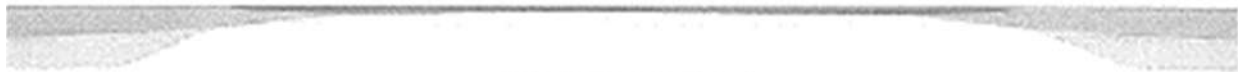


Figure 3 (A & B): Study area in relation to current land cover (Singo Consulting, 2023) & (Google Earth, 2023)

3.3 Land claims

No land claims as per the results outcomes from the land restitution department. See Figure 4 below.



OFFICE OF THE REGIONAL LAND CLAIMS COMMISSIONER: MPUMALANGA
 10 B&B Street, B&B Tower building, Restitution House, Nelsoni | Private Bag X11300, Nelsoni, 1200
 Tel: (013) 752 4054 | Fax: (013) 752 5410

ENQUIRY: VK KHOZA
 EL: 013 752 4054
 DATE: 31/03/2023

SINGO CONSULTING(PTY)LTD
 ATTENTION: VALENTINE MHLANGA

RE: YOUR ENQUIRY: LAND RESTITUTION CLAIM AGAINST THE FOLLOWING PROPERTY IN
 TERMS OF THE RESTITUTION OF LAND RIGHTS ACT NO.22 OF 1994

DETAILS OF PROPERTY DESCRIPTION

Property Description	Comments
Province of Mpumalanga Magisterial District: Property: Portion 2,5, 19, 48 & 49 of the farm Witbank 80 IS	According to our Database, there is currently no registered Land Claim which was lodged against the mentioned property.

1. We refer to your letter received on 23 March 2023 regarding an enquiry to a Restitution claim against the above property.
2. We advise that there is no claim lodged against the property.
3. **TAKE NOTICE** that land claims are lodged with the office of the Commission in accordance with the historical and or present property descriptions of the dispossessed properties and therefore may not match the current property description as described in your correspondence in respect of the above-mentioned properties. However, if the historical description of any of the above property has changed since 1913, or you are aware of any other local or official name by which it was then described or currently known, kindly supply us with such information to enable us to search further.
4. **TAKE NOTICE FURTHER THAT** while the Regional Land Claims Commission: Mpumalanga has taken reasonable care to ensure the accuracy of the above-mentioned information, the Commission cannot be held accountable if, through the process of further on- going investigation, additional information may be found that contradicts paragraph 2 above.

Yours Faithfully


E.S. NKOSI
 CHIEF DIRECTOR
 OFFICE OF THE REGIONAL LAND CLAIMS COMMISSION: MPUMALANGA
 DATE: 31 March 2023

Figure 4: Outcomes of Land Claim Commission (Land restitution. , 2023)

3.4 AGREEMENT OF SALE

Three parties (Landowners, Cheyenne and Dotess) entered into a sales agreement as attached.

ORIGINAL

AGREEMENT OF SALE

Entered into between:

RAMASELA FLORENCE MABOBO

Identity number:

And

CYNTHIA HIRSCHOWITZ

Passport number: 444474907

And

LUDIK SCHLEBUSCH

Identity number: 460223 5004 08 1

(Hereinafter collectively referred to as the "Sellers")

And

CHEYENNE HOLDINGS (PTY) LTD.

REGISTRATION NUMBER: 2021/476466/07

And herein represented by Jacobus Francois Rossouw in his capacity as director and who warrants that he is duly authorized to sign this agreement on behalf of Cheyenne Holdings (Pty.) Ltd.

(Hereinafter referred to as the "Purchaser")

And

DOTESS (PTY) LTD.

REGISTRATION NUMBER: 1983/010984/07

And herein represented by Cynthia Hirschowitz and/or Ludik Schiebusch and/or in their capacity as directors and who warrants that they are duly authorized to sign this agreement on behalf of Dotess (Pty.) Ltd.

(Hereinafter referred to as the "Company")

R.F.
Initial here


Signed at Los Angeles on this 17th day of May 2023.

AS WITNESSES:

1. [Signature] [Signature]
C HIRSCHOWITZ

2. [Signature]

Signed at Bronkhorstspuit on this 22nd day of May 2023.

AS WITNESSES:

1. [Signature] [Signature]
L SCHLEBUSCH

2. [Signature]

Signed at _____ on this _____ day of May 2023.

AS WITNESSES:

1. [Signature] [Signature]
L.F. MABOBO

2. [Signature] R.F.

Signed at PRETORIA on this 19th day of May 2023.

AS WITNESSES:

1. [Signature] [Signature]
CHEYENNE MINING (PTY) LTD.
[Signature] (Holdings)
CHEYENNE HOLDINGS (PTY) LTD.
J.F. ROSSOUW

2. [Signature]

Signed at Middelburg on this 6th day of May 2023.

AS WITNESSES:

1. [Signature] [Signature]
C HIRCHOWITZ obo DOTESS (PTY) LTD.

2. [Signature]
L SCHLEBUSCH obo DOTESS (PTY) LTD.

Cheyenne Doteess 15 May 2023

Initial here [Signature]
[Signature]

3.5 Present Surface Infrastructure

The mining right area of the proposed mining project cover a vast area (approximately 1 007 hectares). This area has a number of landowners with each landowners developing for their agricultural practices. In view of this, infrastructure such as roads (farm, secondary and provincial roads), power lines, telecommunication lines, farmhouses and wind mills are present on the proposed mining area. It must

however be noted that the proposed mining project will use majority of the area for underground mining method hence only a small portion of the mining area (infrastructure area) will be affected inclusive of opencast mining as an adit to the underground mine. No surface infrastructures are currently present at the proposed infrastructure area.

3.6 Presence of Servitudes

The R 545 provincial road, Eskom Power-lines and several Telkom lines are servitudes that were identified over the mining right area.

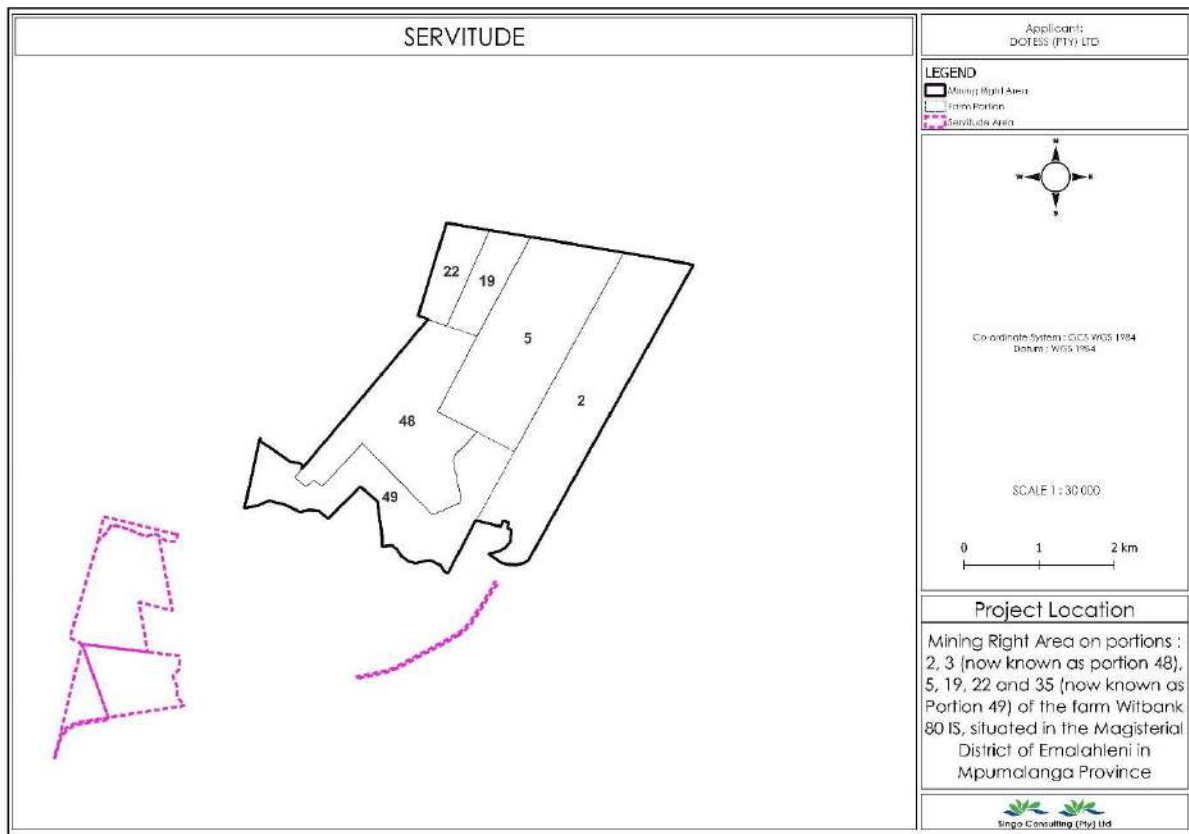


Figure 5: Servitudes identified around the project area. (Singo Consulting, 2023)

4. Description of the scope of the proposed overall activity.

Provide a plan drawn to a scale acceptable to the competent authority but not less than 1: 10 000 that shows the location, and area (hectares) of all the aforesaid main and listed activities, and infrastructure to be placed on site and attach as **Appendix 4**.

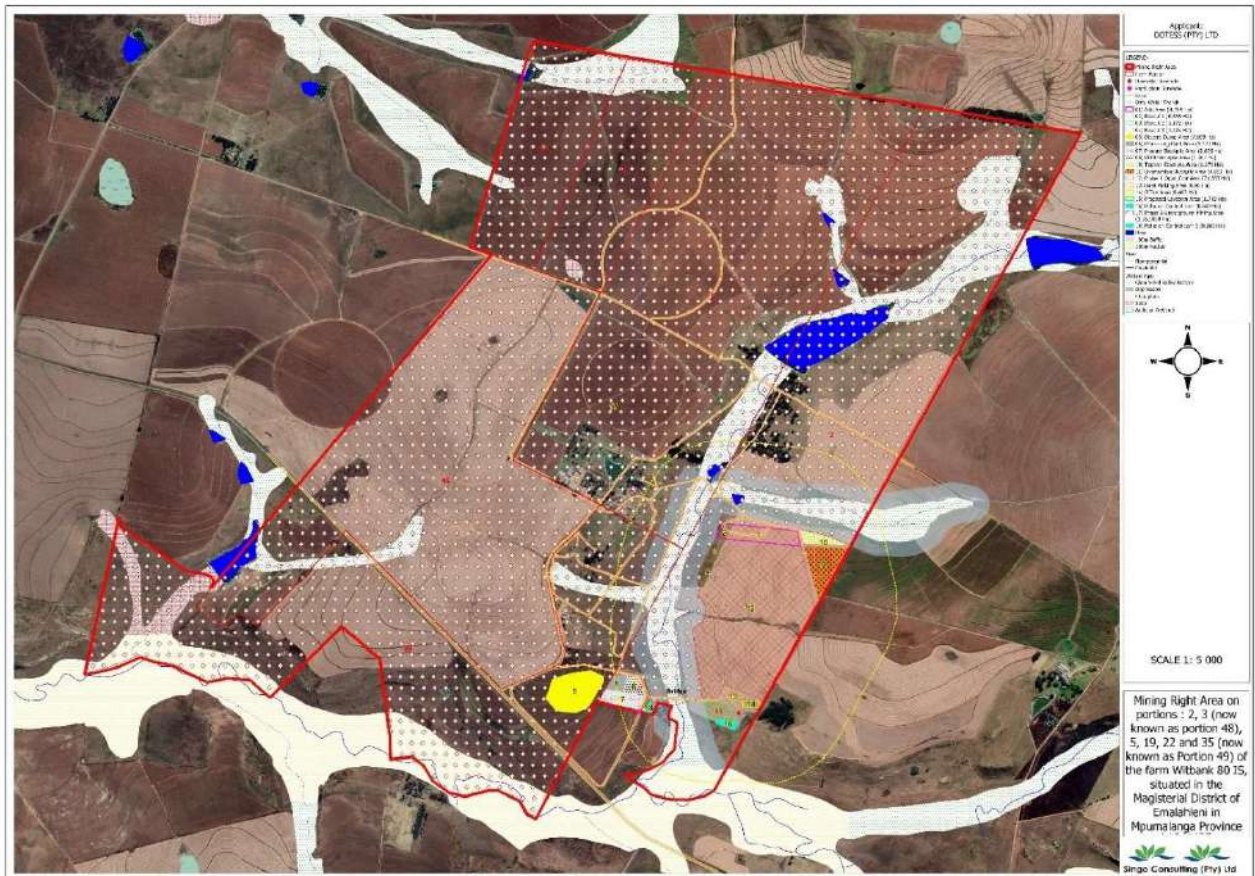


Figure 6: Mine layout plan (Singo Consulting, 2023)

4.1 Listed and specified activities

Table 6:NEMA listing notices.

NAME OF ACTIVITY	Aerial extent of the Activity Ha or m ²	LISTED ACTIVITY Mark with an X where applicable or affected.	APPLICABLE LISTING NOTICE	WASTE MANAGEMENT AUTHORIZATION	APPLICABLE NOTICE (GNR 921)
Opencast pits	Combined Approximately 71.853ha	X	GNR 983, as amended by GNR 327 12 (watercourse) GNR 984, as amended by GNR 325 17 (mining)		
Underground workings	Approximately 1 563.038ha	X	GNR 983, as amended by GNR 327 12 (watercourse) GNR 984, as amended by GNR 325 17 (mining)		
Pits overburden dump, topsoil dump	Approximately 6.532ha	X	GNR 983, as amended by GNR 327 12 (watercourse)	X	Category B (7) disposal of hazardous waste to land
Plant discard dump	Approximately 7.869 ha		GNR 984, as amended by GNR 325 6 (water use licence) 17 (mining and primary processing)		(10) construction of waste management facilities (11) establishment of residue deposits and stockpiles

Processing plant, workshops, warehousing, washbays and offices	Approximately 1.53ha	X	GNR 983, as amended by GNR 327 12 (watercourse) GNR 984, as amended by GNR 325		
Product stockpiles	Approximately 2.695 ha		6 (water use licence) 17 (mining associated and primary processing)		
Explosives magazine	Approximately 0.5 ha	X	GNR 983, as amended by GNR 327 14 (storage of dangerous goods) GNR 984, as amended by GNR 325 17 (mining associated)	X	Category C (2) The storage of hazardous waste at a facility
Haul roads from pit/ underground to processing plant	Approximately 10 ha (~4km)	X	GNR 983, as amended by GNR 327 20 (mining) 12 (watercourse) 19 (bridge upgrade) 24 (new roads) 48 (expansion of bridge) 56 (widening of existing roads)		
Access roads to plant from main gravel road, incl. bridge upgrade	Approximately 2ha (~1.5km)				
Maintenance roads	Approximately 2 ha (~1.5km)		GNR 984, as amended by GNR 325 17 (mining associated) 27 (roads)		
Security roads	Approximately 3.5 ha (~5km)		GNR 985, as amended by GNR 324 14 (ii) (bridges, NFEPA river)		
Transport road from main mining area to railway siding (existing) if required	Approximately (~18km)				

<p>Stormwater management system including pollution control dams, evaporation ponds, trenches and berms, diversion of drainage courses</p>	<p>Covering approximately 1ha as part of the disturbed footprints for the OC pits, processing plant, roads, and dumps</p>	<p>X</p>	<p>GNR 983, as amended byGNR 327 12 (watercourse) 13 (storage of water) GNR 984, as amended byGNR 325 6 (water use licence) 17 (Primary processing)</p>		
<p>A surface storage dam and dewatering of underground workings</p>	<p>Approximately 0.86 ha</p>	<p>X</p>	<p>GNR 983, as amended byGNR 327 12 (watercourse) 13 (storage of water)</p>		
<p>Services including powerlines, pipelines, security, refuelling and sewerage</p>	<p>Approximately 2 ha</p>	<p>X</p>	<p>GNR 983, as amended byGNR 327 9 (pipelines) 10 (pipelines) 11 (powerlines) GNR 984, as amended byGNR 325 4 (fuel storage) 17 (mining associated)</p>		

<p>All activities requiring clearance of site vegetation and change in land use</p>	<p>Sections over 71.853 ha area</p>	<p>X</p>	<p>GNR 983, as amended by GNR 327 27 (clearance of vegetation) 28 (change in land use) 30 (removal of protected plants or animals in accordance with NEMBA) GNR 984, as amended by GNR 325 15 (clearance of vegetation) 17 (mining associated) GNR985, as amended by GNR 324 12 (clearance of vegetation, possible TBC)</p>		
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Table 7: Waste management listed activities according to NEMWA requiring environmental authorisation

Government notice	Activity	Description
<p>R.921 Category A</p>	<p>12</p>	<p>The construction of a facility for a waste management activity listed in Category A of this Schedule.</p>
<p>R.633: Category B</p>	<p>7</p>	<p>The disposal of any quantity of hazardous waste to land.</p>
	<p>10</p>	<p>The construction of a facility for a waste management activity listed in Category B of this Schedule.</p>
	<p>11</p>	<p>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 MPRDA.</p>

R.921 Category C	2	The storage of hazardous waste at a facility that has the capacity to store in excess of 80 m ³ of hazardous waste at any one time, excluding the storage of hazardous waste in lagoons or temporary storage of such waste
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Table 8: Water uses according to NWA requiring environmental authorisation

Section 21 water use	Description
21 (a)	Abstraction of water
21 (b)	Storage of water
21 (c)	Impeding or diverting the flow of water in a watercourse
21 (g)	Disposing of waste in a manner which may detrimentally impact a water resource.
21 (i)	Altering the bed, banks, course, or characteristics of a watercourse
21 (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

4.2 Description of the activities to be undertaken

(Describe Methodology or technology to be employed, and for linear activity, a description of the route of the activity)

The mine will be located in Witbank 80 IS, Portions 02, 05, 19, 22, 35, 48 and 49, with an area extent of 1 529,120 Ha. Several exploration boreholes were drilled within the prospecting right area. From the results of the drilling results, it was determined that the coal reserve within the prospected area were sufficient to warrant a viable mining operation.

Certain portions of the 5 Seam can be mined by opencast methods, but 4 Seam can only be accessed by underground methods with access via an audit. The No. 2 Seam attains economic grades in isolated areas. The main target is the No. 4 lower seam which contains about 25 million of extractable tonnes of ROM coal.

In 1982 A.L. Zietsman evaluated 22 boreholes that had been drilled by the Anglo-American Corporation of South Africa during 1967 and 1968 using copies of borehole logs obtained from the Fuel Research Institute of South Africa. Zietsman evaluated the drilling done on the farms Witbank 80 IS and Kafferstad 79 IS. Zietsman (1982) concluded that the properties under review contain approximately 184 million tons of coal in situ of which 135 million tons can be classified as bituminous coal, about 40 million as lean coal (pseudo anthracite) and 9 million as inferior burnt coal. Of the 135 million tons of bituminous coal, about 52.26 million tons can be mined by opencast methods and an average stripping ratio of 6:1. About 43.5 million tonnes can be mined by underground mining method.

Seam No. 5 outcrops in the southern part of the area on Witbank 80 IS and is weathered to a vertical depth of about 10m. It is overlain mainly by sandstone with thin intercalated bands of black shale. Dolerite is absent on surface over most of the area, but a sheet of between 12 and 15m in thickness is present in depth. In places it lies below No. 2 seam. In other localities it is above Seam No. 2 and in places above Seam No. 4. This dolerite has caused devolatilization of the coal in some areas and Seam No. 4 has been badly affected in places (Zietsman, 1982).

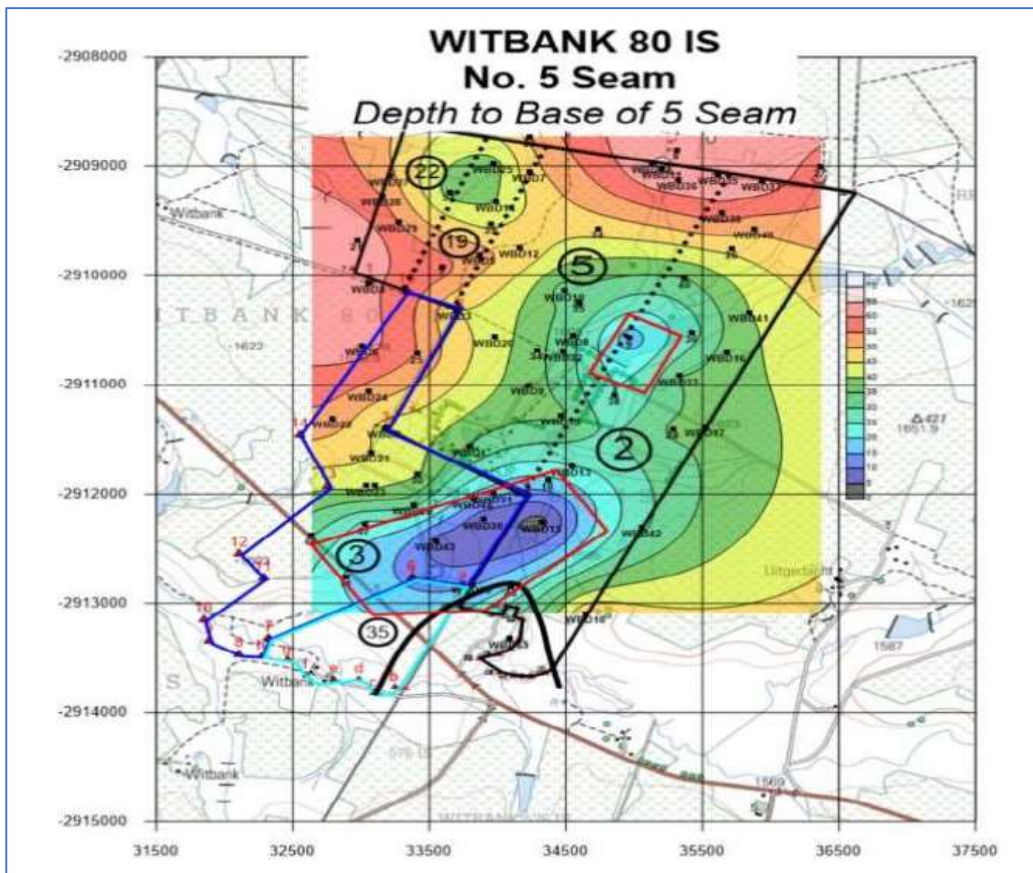
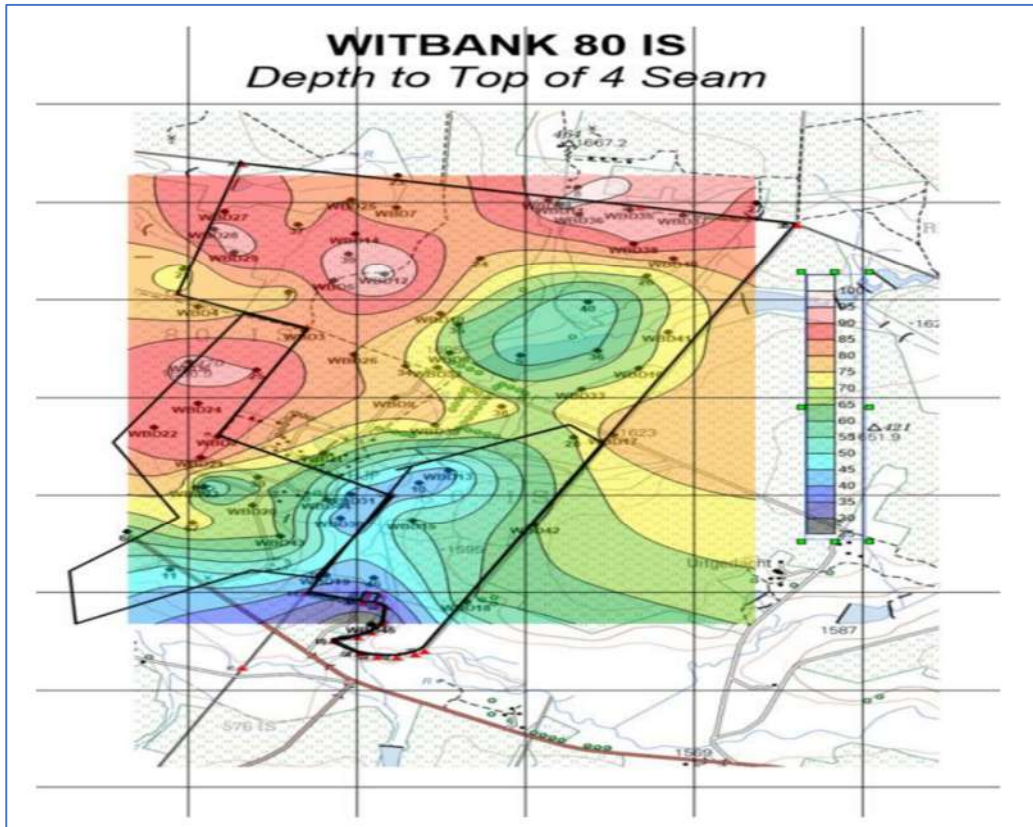


Figure 7: Depth to base of 5 Seam and Depth to top of 4 Seam.

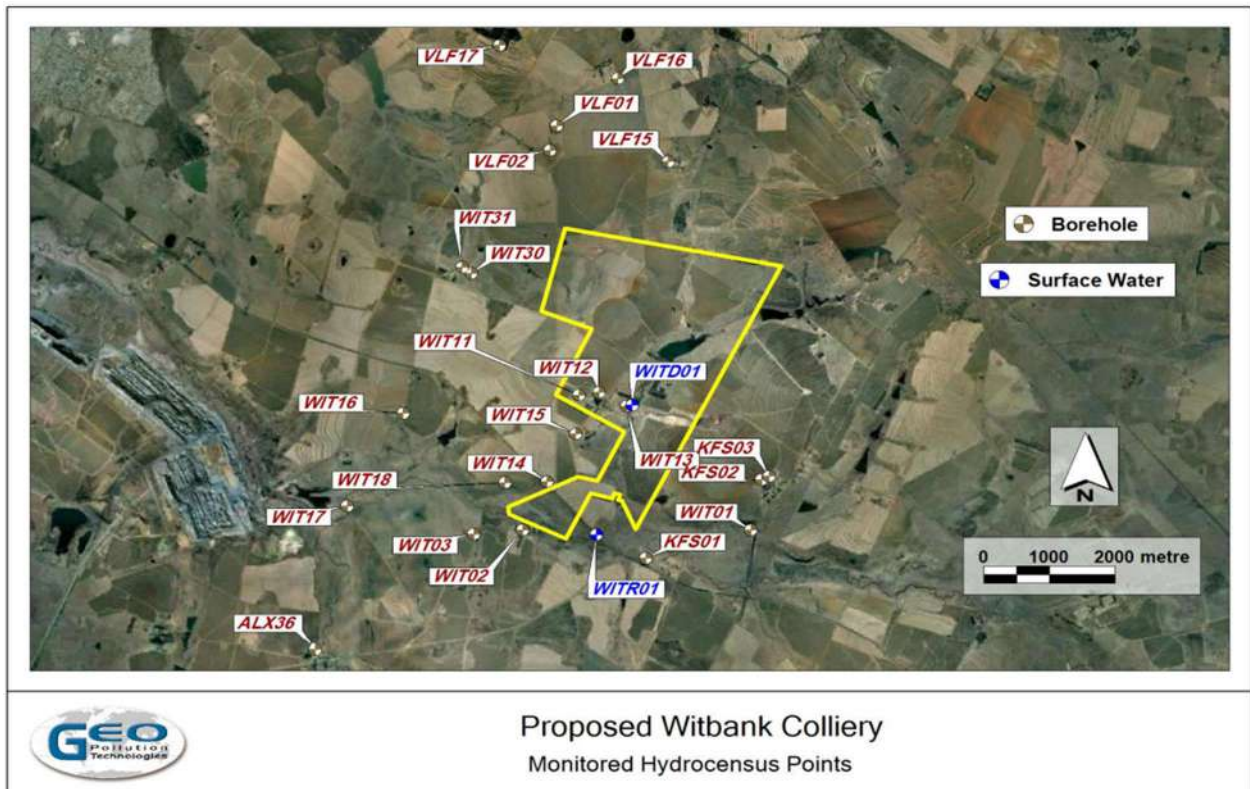


Figure 8: Plan showing existing drilled holes (Geovicon Environmental (Pty) Limited, 2012)

4.2.1 Mining methodology

Construction Phase Activities

The following activities are expected to take place during construction of the mine:

Temporary construction facilities will be established on site to support the construction phase. These facilities could include:

contractor's laydown areas, workshops/ maintenance area for servicing and maintaining equipment and vehicles; and temporary waste collection and storage area;

- Clearing of vegetation in construction areas;
- Stripping and stockpiling of soil;
- Establishment of storm water management facilities such as drains, berms and pollution control dams;
- Establishment of services: including powerlines, pipelines, security, refuelling and sewerage;
- Construction of surface water storage dam;
- Construction of access roads to the plant from the main gravel road (unnamed road),

- Construction of maintenance roads, security roads, haul roads from the pit/ underground to the processing plant;
- Construction of an explosives magazine;
- Construction of a processing plant, workshops, warehousing, washbays and offices
- Construction of an overland conveyor from the opencast pits to the plant
- Store for the storing and handling of fuel, lubricants, solvents, paint etc.;
- Parking areas;
- Weighbridge;
- Change houses;
- Security and access control;
- Development of areas for stockpiles and dumps (overburden and topsoil);

Mining methods vary widely and depend on the location, type, and size of mineral resources. Surface mining methods are most economical in situations where mineral deposits occur close to the surface (e.g., coal, salts and other evaporate deposits or road quarry material) or form part of surface deposits (e.g., alluvial gold and diamonds, and heavy mineral sands). For this specific project, the mining of coal by means of Both surface mining and underground, mining respectively with surface mining methods on opencast portions being viable since the resource is situated close enough to the surface to make it economically mineable and underground in the remaining applied areas.

Operational Phase Activities

The Dortess Mining project is planning to mine 52 262 000 tonnes of coal will be mined with open cast mining and 43 470 000 tonnes will be mined underground making a total of 95 732 000 total tonnages being mined both surface and underground. The Mine will initially involve a conventional truck and shovel operation from four opencast pits (shown in figure 9). The opencast sections will be developed to approximately 30 meters below natural ground level where access from the high wall (adit) can be created to mine the coal that is located underground (shown in figures 10).

A mining plan consisting of a Box-Cut layout was developed by the mine surveyor Waldo La Grange based on the results of the resource modelling done by Kobus Dippenaar (7.2). This layout is shown (Fig. 9) on a contour map of the 5 Seam stripping ratio with a background of the Google Earth Imagery.

Mining will commence in the top north-western box-cut where the stripping ratio is approximately 2. In this area the 5 seam is between 1.2 and 1.5m thick. On the western side of the proposed opencast area, the 5 Seam has been burnt by the dolerite sill. Fig. 46 shows the thickness of the 5 seam overlaid onto the box-cut layout. It is important to note that the 5 seam does not continue to the western edge of the layout, although the 4 seam does. This is not shown in this figure. The numbered box-cut layout is shown in Fig. 9, and the block calculation values of seam numbers, stripping ratio, seam thicknesses and volumes of the two seams as well as the "softs". The land-survey at Dotess was established through the surrounding trigonometric beacons. A full survey of the opencast area was conducted using the latest survey equipment. The mine layout was designed using the survey data obtained and borehole logs.

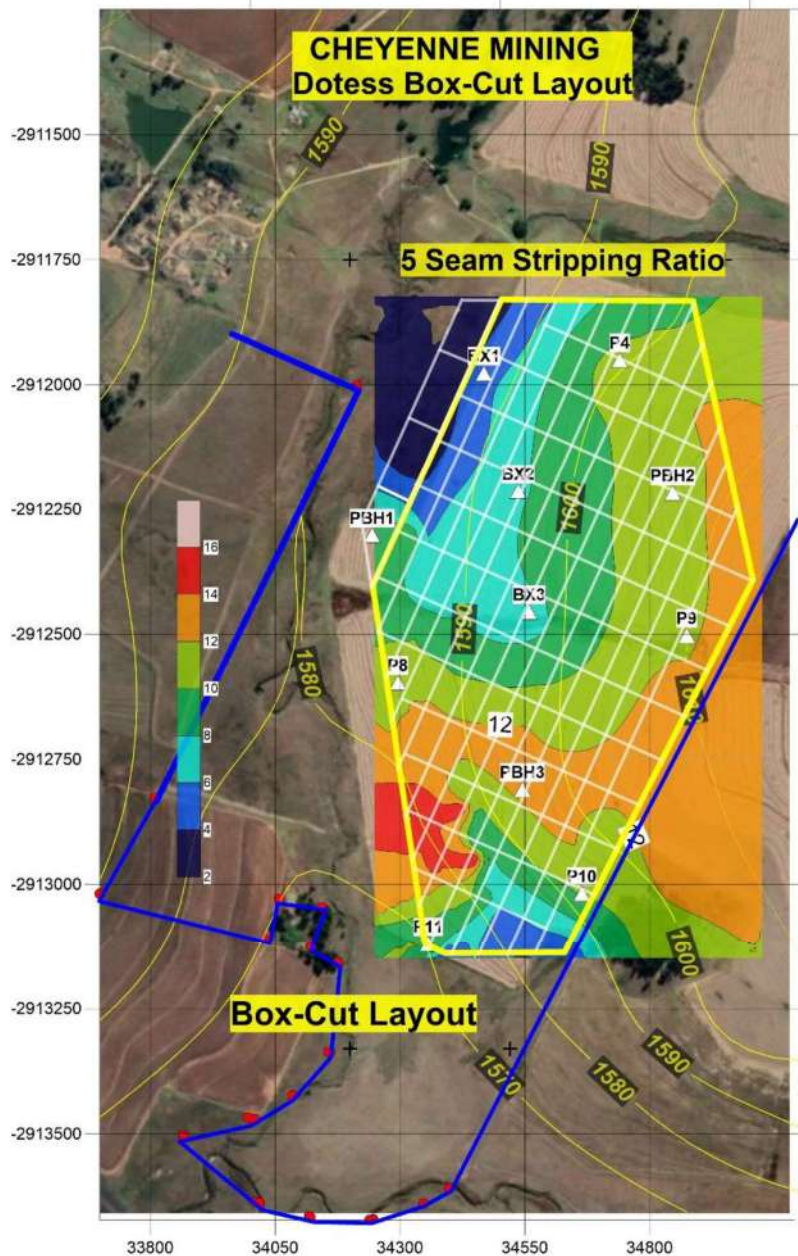


Figure 9: Box-Cut layout shown on a contour map of the 5 Seam stripping ratio with a background of the Google Earth Imagery (Andersen Geological Consulting, 2023)

The underground sections will be mined using board and pillar mining methods. See figures (10-12). Underground mining will commence subsequent to opencast mining and will form the majority of the coal extraction for the mine with approximately 95 million tonnes run-of-mine (ROM) coal to be produced. ROM Coal will be processed at a coal washing plant to be constructed on Farm Witbank 80 IS.

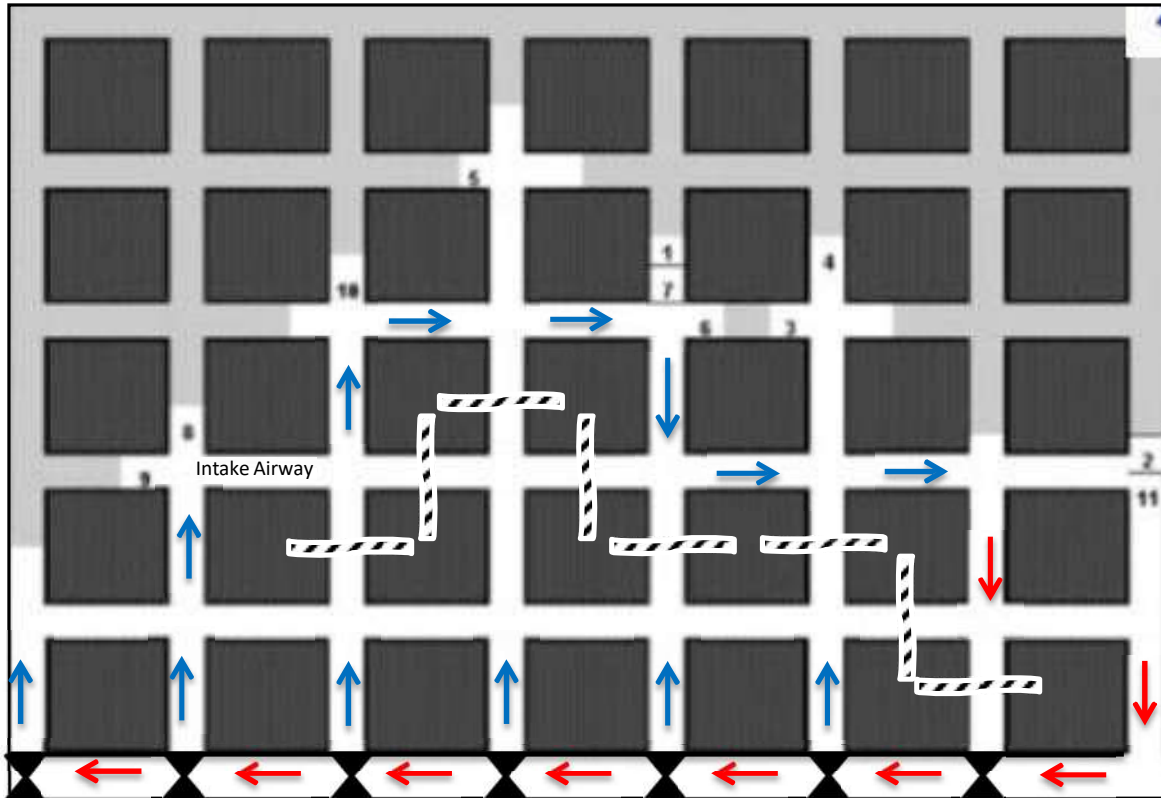


Figure 10: Typical Bord-and-Pillar Layout

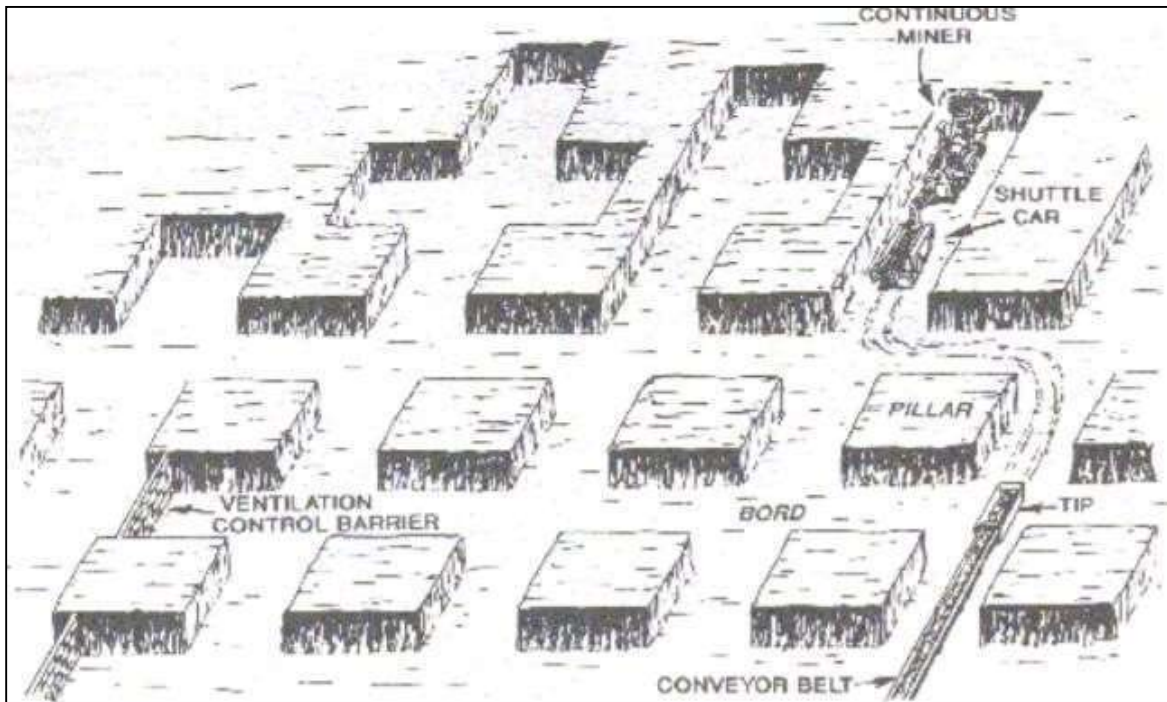


Figure 11: Typical Bord-and-Pillar Layout (Wells et al., 1992)

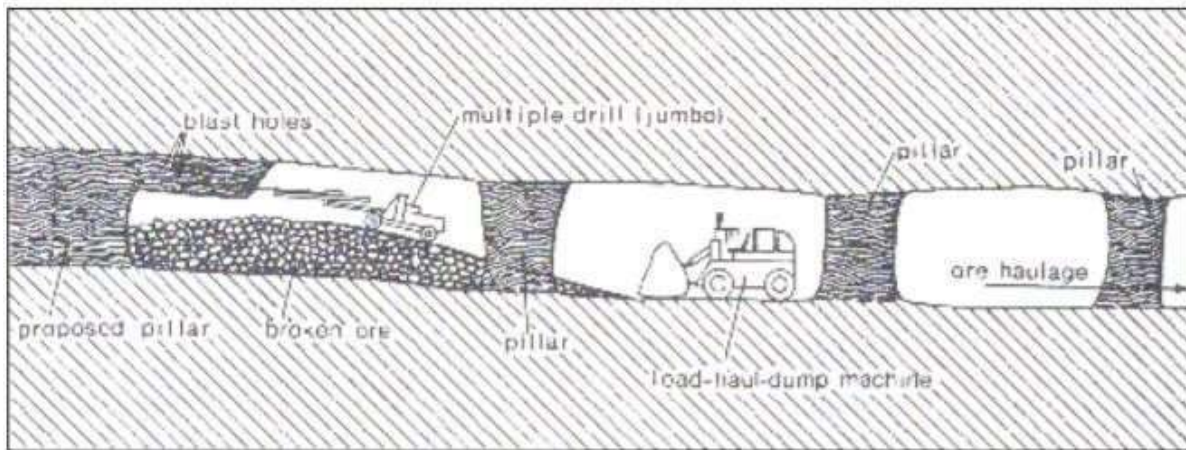


Figure 12: Cross section of typical bord-and-pillar layout (Source: Scoble, 1993)

Other operational phase activities include:

- Overburden [and discard] dumps from excavation of the pits and underground mining;
- Topsoil stockpiles;
- Creation of underground workings (Adit)
- Conveyors
- ROM stockpiles;
- Product stockpiles
- Crushing and Screening;
- Pollution Control Dams (PCDs) to capture dirty stormwater;
- Stormwater Management Systems;
- Dewatering of underground workings

Coal will be transported by truck to relevant markets and options are being weighed to transport also to an existing railway siding near Bethal from where it will be either exported or consumed locally. The operation of the rail siding will involve the off-loading of coal product delivered by side-tipper trucks and stockpiling along the loading tracks. Loading occurs by means of Front-End Loaders onto the rail wagons.

Infrastructure requirements

The project has the following infrastructure requirements:

- Access and haul roads (with necessary security), including upgrading the access point to the gravel road
- Offices with septic/chemical ablution facilities

- Weighbridge and weighbridge control room
- Workshop and stores (with septic/chemical ablation facilities)
- Refuel bays (Diesel facilities and a hardstand)
- Power and water
- Boxcuts
- Stockpiles (topsoil, overburden, subsoil/softs, RoM)
- Surface water management measures (storm water diversion berms and trenches, pollution control dams, discard dump, etc.)
- Adit (to access the underground mine)
- Crushing and screening facilities

4.2.2 Mine schedule

According to Andersen CPR, Schedule of reserves presented by Zietsman (1982). It is not possible to verify the coal reserves quoted by Sudor or Zietsman as no borehole data has been reviewed. Andersen evaluated the existing, poorly copied and distorted information maps (from the Zietsman report) using geostatistical extrapolating procedures, but drilling will be required to verify this data. At this stage of the evaluation, the potential open castable reserves quoted by Zietsman (1982), are more likely to be about 5 million tonnes and not what is shown below.

SCHEDULE OF POTENTIAL COAL RESERVE					
Location	Seam	In Situ	R.O.M.	Steam Coal	Export Coal
Pit No 1	No. 5	4 875 000	4 630 000	1 330 000	3 300 000
	No. 4 U	13 720 000	13 034 000	13 034 000	
	No. 4 L	19 540 000	18 563 000	11 138 000	7 425 000
Pit No 2	No. 5	2 277 000	2 163 000	415 000	1 748 000
	No. 4 U	7 378 000	7 010 000	7 010 000	
	No. 4 L	7 223 000	6 862 000	4 117 000	2 745 000
Underground	No. 5	32 670 000	19 600 000		9 410 000
	No. 4 (U)	28 500 000	14 250 000	14 250 000	
	No. 4 (L)	13 100 000	6 600 000	3 960 000	2 640 000
	No. 2	6 040 000	3 020 000		3 020 000
TOTALS		135 323 000	95 732 000	55 254 000	30 288 000

Figure 13: Schedule of Reserves for Witbank 80 IS (Zietsman, 1982)

4.2.3 Areas proposed to be mined.

The mining of the commodity will be done through underground and opencast mining methods. This mining plan is based on the results of the prospecting that occurred in the area and is based on the availability of coal as per the CPR undertaken. The project will be on 02, 03 (Now known as Portion 48) 05, 19, 22, 35 (Now known as Portion 49) of the farm Witbank 80 IS, measuring 1013,536 hectares in extent in the Magisterial District of Kriel Mpumalanga, Mpumalanga Province. See Layout below.

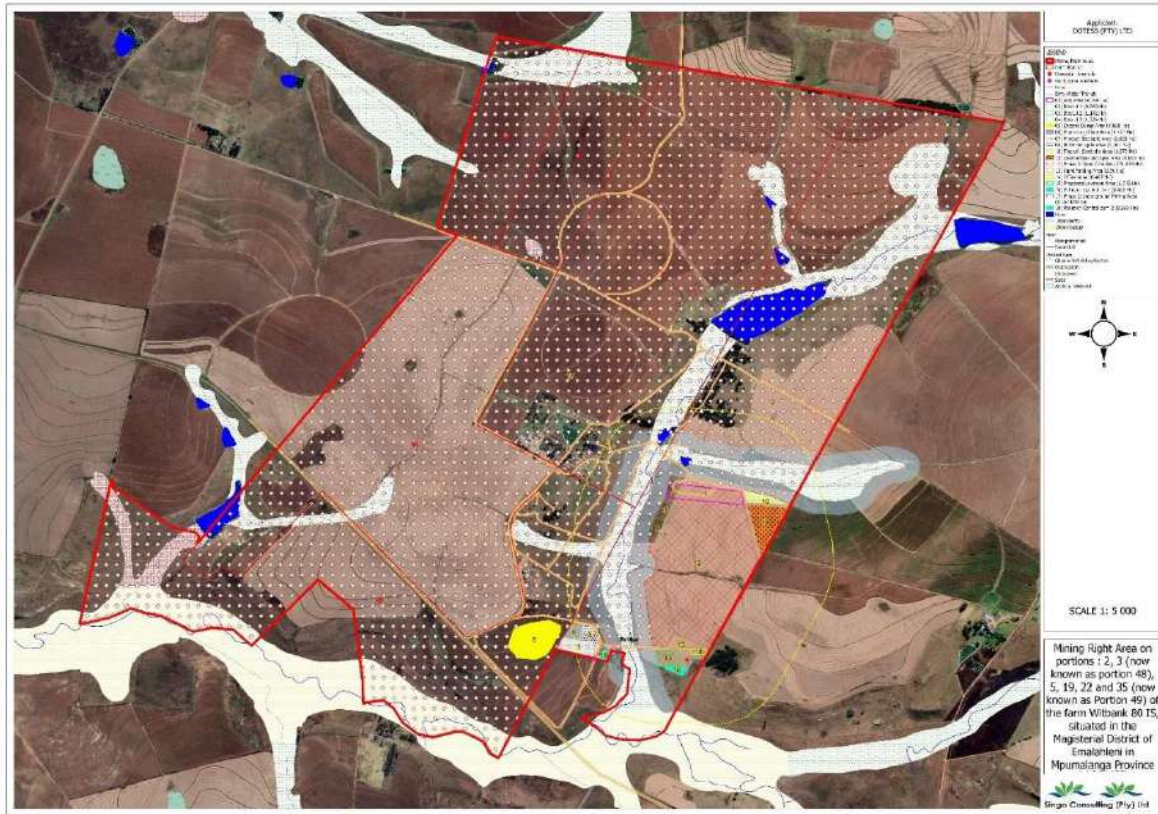


Figure 14: Mine layout plan (Singo Consulting, 2023)

4.2.4 Solid Waste Management

No significant amount of domestic waste will be generated at the proposed mining area, however all waste generated will be collected in drums and transported to the nearest solid waste disposal site (Bethal/Kriel). All necessary arrangements will be made with the municipality for the disposal of the solid waste from the proposed Colliery.

Since no permanent workshops will be constructed at the proposed mining area very little industrial waste will be generated. The little industrial waste generated will be collected and transported by a contractor for recycling, reuse and disposal. All arrangements will be made with the contractor before commencement of the mine and details will be provided to the Department of Mineral Resources and Energy.

4.2.5 Water Pollution Management Facilities

No sewage treatment plant will be constructed at the proposed Witbank Colliery. A 48m³ septic tank will however be constructed at the mine site for the sewage generated from the administration buildings. Chemical toilets will be provided for employees at the workings. These will be sufficient to

cater for the sewage generated from the proposed Witbank Colliery mining area.

Tanks for the storage of used and new oil and fuel will be installed on site. These will be placed on a concrete slab within bundied areas (110% of capacity at least) and outflow be directed to a dirty water drain and oil trap system. Responsible persons on site will be made familiar with spill response basics. Witbank Colliery will be operated on the strategy of maximising the utilisation of “dirty water” in the mining area and on a policy of zero discharge of contaminated water. In order to achieve this, an in pit sump will be constructed on the lowest part of the adit. All surface run off from the pit ramp and adit area and some of the underground seepage water will be collected in the sump. Two pollution control dams will be constructed on the surface close to the adit area for the storage of water pumped from the in pit sump. Water from the pollution control dams will be used for dust suppression and during the operation of the mining equipment’s underground i.e. continuous miners. The R.O.M stockpile and office area will be serviced by a pollution control dam. This dam will be constructed on the down-slope of the R.O.M. stockpile and office area.

4.2.6 Potable Water Plant

No potable water plant will be constructed on site. Potable water will be obtained from a borehole to be sited and drilled on site in accordance to the applied water use license.

4.2.7 Mineral Processing Plant

No washing plant will be constructed on the proposed Colliery. Crushing and screening will be conducted at the proposed Witbank Colliery. All coal products will be transported via road transport to local markets for consumption.

4.2.8 Workshops and Buildings

The proposed mining area will be equipped with its own administrative building in the form of mobile offices and a small workshop in addition to existing infrastructures (Buildings) from the farm.

All major repairs and maintenance will be conducted at the workshop. The proposed Witbank Colliery will be equipped with a small on surface workshop area where minor repairs can be performed to machinery and vehicles. A diesel tank and a wash bay will be located adjacent the workshop. Appropriate oil and contaminated water and waste management systems will be put in place.

4.2.9 Transport

Mine officials and senior skilled employees will use their own vehicles for all transport requirements. A bus service will be made available to transport other employees from their residence to the working place.

4.2.10 Pollution Control Dams

The two pollution control dam and the runoff diversion drains will be designed and constructed to have sufficient capacity to retain precipitation captured in the event of a 1:50 year rainfall event.

4.2.11 Disturbance of Water Courses

Except for the purpose of accessing the reserves across rivers and streams, no mining will be undertaken within one hundred meters of the Steenkoolspruit and its tributaries. The crossing of the streams and rivers by underground mining will be undertaken such that the integrity of the river or streams is not compromised.

4.2.12 Storm Water

Clean water and dirty water will be separated at the Witbank Colliery as shown in the Mining Layout Plan. These will be achieved by diversion drain, which will take the form of trenches around the dirty and clean water areas. Water from the incline adit and underground workings will be pumped into the in pit sump as it accumulates and then to the two pollution control dams. Surface run off from the dirty water area will be diverted to the pollution control dam. All clean water will be diverted around the dirty water areas i.e. R.O.M stockpile area, Incline adit, mine office complex and access roads to the Steenkoolspruit.

Decommissioning phase

Simultaneous rehabilitation of the mine have to be undertaken with mining with final rehabilitation taking place after the operational phase has come to an end. The decommissioning and closure of the mining will occur with the decommissioning of the mine in accordance with an applicable EMPR as part of a closure EIA to be conducted and also in accordance with any other closure plans pertaining to mine infrastructure and facilities. This phase starts at the end of the operational phase of the project. This phase ends when the site obtains a Closure Certificate from the regulatory authorities but may include a period where there is no activity on the site other than monitoring prior to closure being completed.

The Progressive total for rehabilitation to be provided for is calculated in the financial provision section.

Post closure phase

Monitoring of aspects such as surface and ground water quality and the indefinite management of decant levels by pumping water out of the pit and underground voids will be conducted in the post closure phase.

5. POLICY AND LEGISLATIVE CONTEXT

This section provides an overview of the governing legislation relating to the proposed project.

Constitution of the Republic of South Africa

The Constitution of the Republic of South Africa, Act 108 of 1996 (as amended) Section 24 states that:

“Everyone has the right— (a) to an environment that is not harmful to their health or well-being; and (b) to have the environment protected, for the benefit of present and future generations, through reasonable legislative and other measures that—

- a) prevent pollution and ecological degradation;
- b) Promote conservation; and
- c) Secure ecologically sustainable development and use of natural resources while promoting justifiable economic and social development.”

Mineral and Petroleum Resources Development Act

The Mineral and Petroleum Resources Development Act, 2002 (MPRDA), outlines the procedural requirements an applicant must follow to obtain a mining right before proceeding with a mining project. Applicants are required to obtain Environmental Authorisation (EA) in terms of the National Environmental Management Act 107 of 1998, as amended (NEMA).

The MPRDA is administered by the Department of Mineral Resources (DMR) and governs the sustainable utilisation of South Africa’s mineral resources. The MPRDA aims to “make provision for equitable access to, and sustainable development of, the nation’s mineral and petroleum resources”.

In the event that the proposed activities require material (e.g., sand, gravel, aggregate) for construction, the MPRDA provisions may apply. In support of the application to obtain the mining right, the applicant is required to conduct a Scoping Report, EIA/EMPr and I&AP consultation process, all of which must be submitted to the DMR for adjudication.

National Environmental Management Act

The aim of the NEMA is to provide for co-operative governance by establishing decision-making principles on matters affecting the environment. In terms of the NEMA EIA regulations, the applicant is required to appoint an EAP to undertake the EIA, as well as conduct the public participation process (PPP). In South Africa, EIAs became a legal requirement in 1997 with the promulgation of regulations under the

Environment 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 authorisation.

On 21 April 2006, the Minister of Environmental Affairs and Tourism promulgated regulations in terms of Chapter 5 of the NEMA. These regulations, in terms of the NEMA, were amended in June 2010 and December 2014. The December 2014 NEMA regulations apply to this project. Mining activities officially became governable under the NEMA EIA in December 2014. The objective of the Regulations is to establish the procedures that must be followed in the consideration, investigation, assessment, and reporting of the identified activities. The purpose of these procedures is to provide the competent authority with adequate information to refuse authorisation of activities which may impact negatively on the environment to an unacceptable degree. These procedures also aim to ensure that authorised activities are undertaken in a manner that responsibly manages environmental impacts.

In accordance with the provisions of Section 24 (5) and Section 44 of the NEMA, the Minister has published regulations (GN R. 982) pertaining to the required process for conducting EIAs to be considered for the issuing of EA. These regulations provide a detailed description of the EIA process to be followed when applying for EA for any listed activity.

The regulations differentiate between a simple Basic Assessment Process (required for activities listed in GN R. 983 and 985) and a more complete EIA process (activities listed in GN R. 984). In the case of this project, activities under GN R. 984 are triggered, requiring a full EIA process. On 7 April 2017, the NEMA 2014 regulations were amended, making activities triggered under GN R. 324, 325 and 327 applicable to this application.

A scoping and EIA process is reserved for activities with potentially significant impacts that are complex to assess. Scoping and EIA provides a mechanism for the comprehensive assessment of activities that are likely to have significant environmental impacts.

National Water Act

The National Water Act, 1998 (NWA) also has a role to play in regulating mining. Mining almost always uses water and/or has an impact on water resources, like streams, wetlands, or rivers. The NWA is administered by the Department of Water and Sanitation (DWS).

The NWA Section 21 defines eleven water uses that require EA:

21 (a): taking water from a water resource

21 (b): storing water

21 (c): impeding or diverting the flow of water in a watercourse

21 (d): engaging in a stream flow reduction activity contemplated in section 36

21 (e): engaging in a controlled activity identified as such in section 37(1) or declared under section 38(1)

21 (f): discharging waste or water containing waste into a water resource through a pipe, canal, sewer, sea outfall or other conduit

21 (g): disposing of waste in a manner which may detrimentally impact on a water resource

21 (h): disposing in any manner of water which contains waste from, or which has been heated in, any industrial or power generation process

21 (i): altering the bed, banks, course, or characteristics of a watercourse

21 (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

21 (k): using water for recreational purposes. The proposed mine is in the process of applying for an Integrated Water Use Licence (IWUL) as per the water uses indicated.

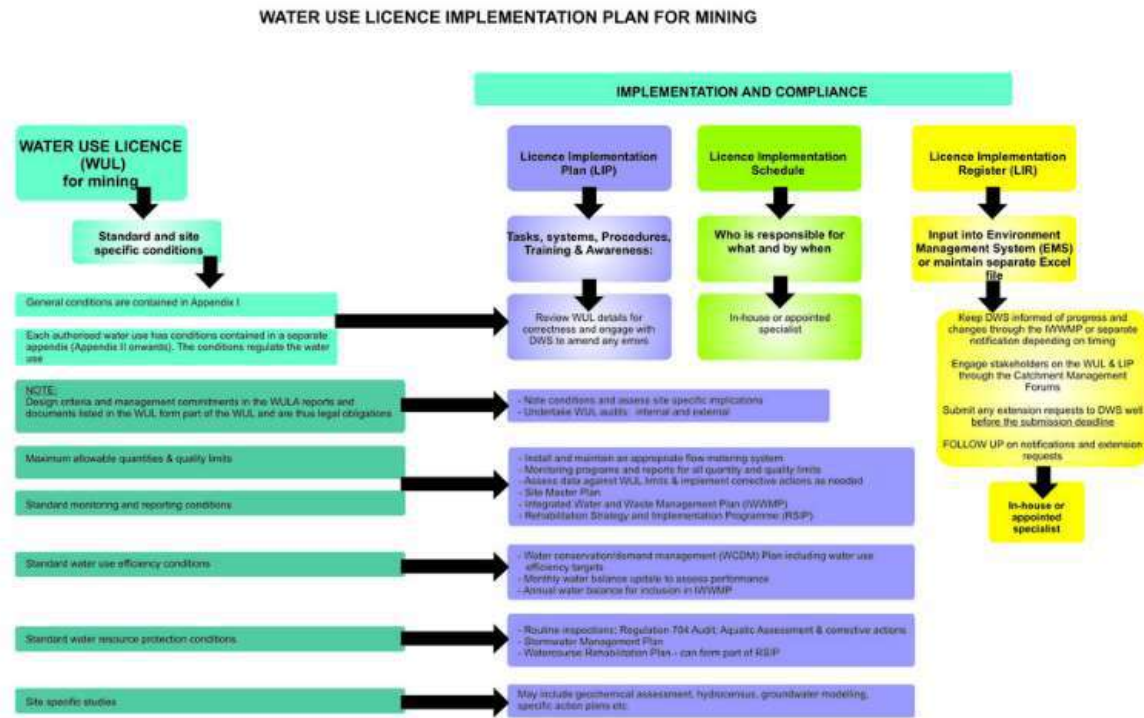


Figure 16: WUL Process

National Environmental Management: Waste Act

The National Environmental Management: Waste Act, 2008 (NEMWA) (Act 59 of 2008) lists mining activities that must be undertaken to manage waste generated by the project and prevent environmental pollution and littering. On 2 June 2014, the NEMWA (amended) came into force. As per the amended Act, waste is longer governed by the MPRDA, but is subject to all the provisions of the NEMWA). As per Section 16 of the NEMWA, “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 minimise 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, odour, or visual impacts;
- Prevent any employee or any person under his or her supervision from contravening the Act; and
- Prevent the waste from being used for unauthorised purposes.”

These general principles of responsible waste management will be incorporated into this project’s EMP requirements. The NEMWA provides for specific waste management measures to be implemented and

provides for the licensing and control of waste management activities. Waste management activities apply to Category A, B and C according to GN R 921 (Nov 2013) and the proposed residue stockpiles in terms of Category B, Activity 11 of GNR 921, and, therefore, form part of the application process (**Error! Reference source not found.**).

NEMWA – Planning and Management of Residue Stockpiles and Residue Deposits Regulations, 2015 (GN R 632)

This regulates the planning and management of residue stockpiles and deposits from a prospecting, mining, exploration, or production operation.

NEMWA – National Norms and Standards for the Assessment of Waste for Landfill Disposal, 2013 (GN R 635)

These norms and standards prescribe the requirements for the assessment of waste prior to disposal to landfill. The aim of the waste assessment tests is to characterise the material to be deposited or stored in terms of the above-mentioned waste assessment guidelines set by the DEA.

NEMWA – Waste Classification and Management Regulations, 2013 (GN R 634)

Chapter 9 of the NEMWA stipulates the requirements for a motivation for and consideration of listed Waste Management Activities that do not require a Waste Management License. The motivation must:

- Demonstrate that the waste management activity can be implemented without unacceptable impacts on, or risk to, the environment or health
- Must provide a description of the waste
- Description of waste minimisation or waste management plans
- Description of potential impacts, etc.
- The transitional provisions under Chapter 6 of this Regulation prescribes timeframes in which all waste must be classified within 18 months from the date of commencement of these regulations (23 August 2013)

Waste streams generated from mine activities will, where applicable, be classified to determine their nature (i.e., general or hazardous), managed and disposed of in accordance with the relevant legislation.

National Environmental Management: Air Quality Act

The National Environmental Management: Air Quality Act (NEMAQA) (Act No. 39 of 2004 as amended) is the main legislative tool for the management of air pollution and related activities.

The objectives of the Act are to protect the environment by providing reasonable measures for:

- The protection and enhancement of the quality of air in the republic
- The prevention of air pollution and ecological degradation
- Securing ecologically sustainable development while promoting justifiable economic and social development
- Generally, to give effect to Section 24(b) of the constitution in order to enhance the quality of ambient air for the sake of securing an environment that is not harmful to the health and wellbeing of people

The NEMAQA mandates the Minister of Environmental Affairs to publish a list of activities that result in atmospheric emissions and consequently cause detrimental effects on the environment, human health, and social welfare. The Listed Activities and Minimum National Emission Standards were published on 22 November 2013 (Government Gazette No. 37054).

According to NEMAQA, air quality management control and enforcement is the responsibility of local government, with district and metropolitan municipalities being the licensing authorities. Provincial government is primarily responsible for ambient monitoring and ensuring municipalities fulfil their legal obligations, with national government primarily as policy maker and coordinator. Each sphere of government must appoint an Air Quality Officer responsible for coordinating matters pertaining to air quality management. Under the old Act, air quality management was the sole responsibility of national government, with local authorities only being responsible for smoke and vehicle emission control. The National Pollution Prevention Plan Regulations, which came into effect on 21 July 2017, tie in with The National Greenhouse Gas Emission Reporting Regulations, which took effect on 3 April 2017.

These regulations aim to prescribe the requirements that Greenhouse Gas (GHG) pollution prevention plans need to comply with (in terms of priority air pollutants), as per NEMAQA. The regulations specify who needs to comply, and by when, and prescribes the content requirements. Mines do have an obligation to report on the GHG emissions under these regulations.

The National Heritage Resources Act

The National Heritage Resources Act (NHRA) (Act 25 of 1999) stipulates that cultural heritage resources may not be disturbed without authorisation 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 informs the identification, evaluation, and management of heritage resources and, in the case of Cultural Resource Management (CRM), affected by development (as stipulated in Section 38 of NHRA) and those developments administered through the NEMA, MPRDA and NEMWA 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 EIAs required by NEMA and MPRDA. This change requires an evaluation of the section of these Acts relevant to heritage. 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".

Subsections (23)(2)(d), (29)(1)(d), (32)(2)(d) and (34)(b) require the (compulsory) inclusion of the identified 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. Regulations under NEMA's regulations on the Specialist Report requirements must be considered when compiling such a report.

The MPRDA and NEMA have similar definitions of "environment". Both acknowledge 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 NHRA. Section 40 of the same Act requires consultation with any state department administering any law relevant to 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).

In accordance with the legislative requirements and EIA rating criteria, the regulations of the South African Heritage Resources Agency (SAHRA) and Association of Southern African Professional Archaeologists (ASAPA) have been incorporated to ensure that a comprehensive and legally compatible Heritage Impact Assessment (HIA) is compiled.

National Environmental Management: Biodiversity Act

The overarching aim of the National Environmental Management: Biodiversity Act (No 10 of 2004) (NEMBA), within the framework of NEMA, is to provide for:

- The management and conservation of biological diversity in South Africa and of the components of such diversity.
- The use of indigenous biological resources in a sustainable manner.
- The fair and equitable sharing, among stakeholders, of benefits arising from bioprospecting involving indigenous biological resources.
- The South African National Biodiversity Institute (SANBI) was established on 1 September 2004 through the signing into force of the NEMBA, its purpose being (*inter alia*) to report on the status

of the country's biodiversity and the conservation status of all listed threatened or protected species and ecosystems.

- Other objectives include the identification, control, and eradication of declared weeds and alien invaders in South Africa. These are categorised according to one of the following categories, and require control or removal:
 - Category 1a Listed Invasive Species: Category 1a Listed Invasive Species are those species listed as such by notice in terms of section 70(1)(a) of the Act as species which must be combated or eradicated.
 - Category 1b Listed Invasive Species: Category 1b Listed Invasive Species are those species listed as such by notice in terms of section 70(1)(a) of the Act as species which must be controlled.
 - Category 2 Listed Invasive Species: Category 2 Listed Invasive Species are those species listed by notice in terms of section 70(1)(a) of the Act as species which require a permit to carry out a restricted activity within an area specified in the Notice or an area specified in the permit.
 - Category 3 Listed Invasive Species: Category 3 Listed Invasive Species are species that are listed by notice in terms of section 70(1)(a) of the Act, as species which are subject to exemptions in terms of section 71(3) and prohibitions in terms of section 71A of Act, as specified in the Notice.
 - The provisions of this Act have been considered and, where relevant, incorporated into the proposed mitigation measures and requirements of the EMPr. It is also appropriate to undertake a Fauna and Flora Impact Assessment for developments in an area that is considered ecologically sensitive which require environmental authorisation in terms of NEMA, with such Assessment taking place during the EIA phase.

The Conservation of Agricultural Resources Act

This Act informs the utilisation of the natural agricultural resources in South Africa to promote soil, water, and vegetation conservation, as well as combat weeds and invader plants.

Spatial Planning and Land Use Management Act 16 of 2013 (SPLUMA)

The Spatial Planning and Land Use Management Act 16 of 2013 (SPLUMA) is a framework law, which means that the law provides broad principles for a set of provincial laws that will regulate planning for the country. The Act introduces provisions to cater for development principles; norms and standards; inter-governmental support; Spatial Development Frameworks (SDFs) across national, provincial, regional, and municipal areas; Land Use Schemes (LUS); and municipal planning tribunals.

SPLUMA also provides clarity on how planning law interacts with other laws and policies. It is a uniform, recognisable and comprehensive system that addresses the past spatial and regulatory imbalances and promotes optimal exploitation of minerals and mineral resources. SPLUMA achieves this by strengthening the position of mining right holders when land needs to be rezoned for mining purposes. SPLUMA's impact on optimal exploitation is particularly evident where conflict exists between mining right holders and landowners. Economic and policy considerations, as well as practical necessities, often motivate the state to grant mining rights to entities other than landowners. SPLUMA is a new national framework Act that provides clear principles and standards for provincial and local governments to formulate their own new spatial planning and land use policies. The new provincial legislation can regulate, among other things, land development, land use management, spatial planning, and municipal planning.

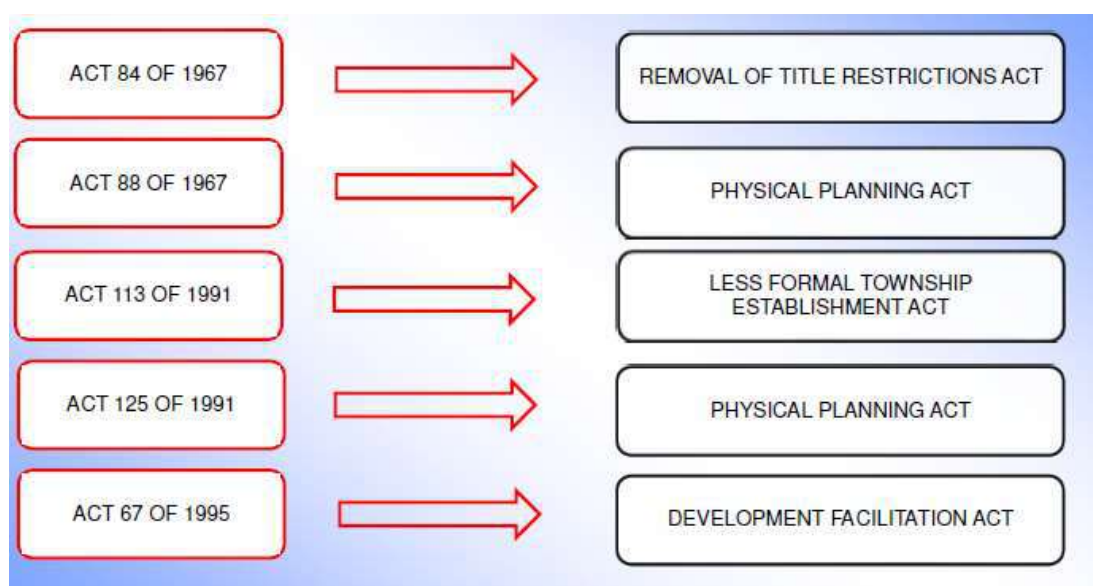


Figure 17: Repealed legislation as a result of SPLUMA

Environment Conservation Act, 1989 (Act 73 of 1989) – Noise control regulations

In terms of section 25 of the ECA, the national Noise Control Regulations (GN R154 in Government Gazette No. 13717 dated 10 January 1992) were promulgated. The NCRs were revised under GN R. 55 of 14 January 1994 to make it obligatory for all authorities to apply the regulations. The Gauteng Province promulgated provincial regulations: Noise Control Regulations of Gauteng 1999, (Provincial Gazette, Extraordinary no 75 of August 1999).

The noise control regulations must be considered in relation to the potential noise that may be generated during the construction and decommissioning phases of the proposed project. The two key aspects of the

noise control regulations relate to disturbing noise and noise nuisance. Section 4 of the regulations prohibits a person from making, producing or causing a disturbing noise, or allowing it to be made produced or caused by any person, machine, device or apparatus or any combination thereof.

A disturbing noise is defined in the regulations as “a noise level which exceeds the zone sound level or if no zone sound level has been designated, a noise level which exceeds the ambient sound level at the same measuring point by 7 dBA or more”. Section 5 of the noise control regulations prohibits the creation of a noise nuisance. A noise nuisance is defined as “any sound which disturbs or impairs or may disturb or impair the convenience or peace of any person”. Noise nuisance is anticipated from the proposed project particularly to those residents that are situated near the project sites. South African National Standard 10103 also applies to the measurement and consideration of environmental noise and should be considered in conjunction with these regulations. A noise specialist study is proposed for the EIA.

Noise standards

The following South African Bureau of Standards (SABS) requirements relate to noise from mines, industry and roads:

- South African National Standard (SANS) 10103:2008. “The measurement and rating of environmental noise with respect to annoyance and to speech communication”.
- SANS 10210:2004. “Calculating and predicting road traffic noise”.
- SANS 10328:2008. “Methods for environmental noise impact assessments”.
- SANS 10357:2004. “The calculation of sound propagation by the Concave method”.
- SANS 10181:2003. “The Measurement of Noise Emitted by Road Vehicles when Stationary”.
- SANS 10205:2003. “The Measurement of Noise Emitted by Motor Vehicles in Motion”.

The relevant standards use the equivalent continuous rating level as a basis to determine what is acceptable. The levels may take single event noise into account, but single event noise by itself does not determine whether noise levels are acceptable for land use purposes. With regards to SANS 10103:2008, the recommendations are likely to inform decisions by authorities, but non-compliance with the standard will not necessarily render an activity unlawful. The noise assessment will take these noise standards and impacts into consideration.

Guidelines and policies

SANBI Wetland Inventory

The South African National Biodiversity Institute (SANBI) Wetland Inventory is an inventory dataset that presents information on the extent, location and distribution of wetlands systems in South Africa. A national database, containing the attributes, functions and values of individual wetlands will be linked to this spatial data. The aim of the inventory is to establish a baseline for measuring future change in wetland area, function and values, and permit status, and if possible, trends analyses to be carried out in order to assess the need for, or effectiveness of, specific wetland conservation strategies. There are floodplain wetlands present within the proposed project area. A wetland study will need to be conducted to ground truth the presence and importance of these wetlands.

Mining and Biodiversity Guideline

The Mining and Biodiversity Guideline was developed as a good practice guideline that focuses on providing practical guidance to the mining sector on how to address biodiversity issues in the South African context. This is done through applying the law, using the best available biodiversity information, engaging relevant stakeholders, using best practice in EIAs to identify, assess and evaluate impacts on biodiversity, to apply the mitigation hierarchy when planning any mining-related activities, develop robust EMPs, and ensure effective implementation of EMPs. The Guideline encourages mining companies, regulatory authorities and other mining stakeholders to use the high quality, readily accessible spatial and non- spatial biodiversity information that is available to guide thinking and decision making in respect of the mine planning process.

National Freshwater Ecosystem Priority Areas

The National Freshwater Ecosystem Priority Areas (NFEPA) project was aimed to identify a national network of freshwater conservation areas and to explore institutional mechanisms for their implementation by:

- Identifying Freshwater Ecosystem Priority Areas to meet national biodiversity goals for freshwater ecosystems; and
- Developing a basis for enabling effective implementation of measures to protect FEPAs, including free flowing rivers.

It provides strategic spatial priorities for conserving South Africa's freshwater ecosystems and supporting sustainable use of water resources. While there is a database of NFEPA's, this needs to be ground truthed with specialist studies.

There are various NFEPA water resources in the vicinity of the project area that can potentially be impacted by the project and thus specialist studies will need to investigate these.

As part of the EA process, the existing approved EMPR's will be consolidated and amended to incorporate the proposed opencast mining area and related infrastructure associated with the Witbank 80 IS Mining Area, in accordance with Section 102 of the MPRDA, National Water Act (Act No. 36 of 1998).

The NWA is the primary regulatory legislation controlling and managing the use of water resources as well as the pollution thereof. The preamble to the NWA recognises that the ultimate aim of water resource management is to achieve sustainable use of water for the benefit of all users and that the protection of the quality of water resources is necessary to ensure sustainability of the nation's water resources in the interests of all water users. As the NWA is founded on the principle the government has overall responsibility for and authority over water resource management, including the equitable allocation and beneficial use of water in the public interest, an industry (including mines) can only be entitled to use water if the use is permissible under the NWA. Further, Regulation 704 of the NWA deals with the control and use of water for mining and related activities aimed at the protection of water resources. It specifically deals with clean and dirty water in a mining environment.

Dotess mine has a valid EA for portion (2,5,19,22 and 35) and now require water use license in terms of Chapter 4 of the NWA with inclusion of portion 48 and 49.

6. Need and desirability of the proposed activities.

6.1 Project selection area

The site was selected due to the presence of an economically mineable coal resource. The Witbank project offers several economic benefits; mine revenue will facilitate fund allocation to local economic development through the implementation of projects identified on the social and labour plan. Local contractors and businesses will benefit from supplying the mine with goods and services. The applicant is fully committed to implementing development plans and projects that will align with the provisions of the broad-based socio-economic empowerment charter of the South African mining industry.

Project development will contribute to the South African economy through exports that will leverage foreign income to the country. The National Government will obtain tax revenue from the project. The project will provide income for the mining company through profits and will provide wages for employees. Indirect income will also be increased through the mine's procurement of goods and services. More information regarding employment generated by this project will be included in the EIA report.

Mining is identified as a strategic objective for economic development and job creation. Mining will enable community members to gain skills in mine construction and operation. Although mining is a large contributor to the local economy, the primary objective should be to prevent mining activities from encroaching onto high-potential agricultural land and areas of high biodiversity, and to ensure that the mining area is properly rehabilitated, and the agricultural value of the land use are restored once the mineral resource is fully depleted. The location of the coal resource to be mined is a phenomena natural resource that cannot be moved, but the mine infrastructure can be located with due consideration to known environmental and social sensitivities, while still considering engineering feasibility and financial factors.

Despite the slow economic recovery from the 2008 economic recession and recently the covid-19, there is still a high demand for coal in South Africa and internationally. South Africa is dependent on coal for electricity production. The potential benefits of the proposed project are:

- Long-term, national benefits of reliable power supply and the resultant socio-economic benefits.
- Ensure the supply of a secure, long-term supply of coal to Eskom.
- Needed job creation and other local, provincial and national socio-economic benefits.

- Local growth in the economy of Kriel and surrounding areas, and for local businesses including those that supply, transport etc.
- Economic benefits for contractors and other suppliers of goods and services.

The activity is needed and in a desirable location in the preferred location due to the proximity of the location to Kriel coal power station.

6.2 Coal as an important resource

Coal is a hard rock which can be burned as a solid fossil fuel. It is mostly carbon but also contains hydrogen, sulphur, oxygen, and nitrogen. It is a sedimentary rock formed from peat, by the pressure of rocks laid down later on top. Coal has many important uses worldwide. The most significant uses of coal are in electricity generation, steel production, cement manufacturing and as a liquid fuel. Steam coal - also known as thermal coal is mainly used in power generation.

Eskom is a South African electricity public utility, established in 1923 by the government of South Africa in terms of the Electricity Act (1922) which uses coal the most. The utility is the largest electricity producer in Africa, among the top seven globally in terms of generation capacity and among the top nine in terms of sales. The company is divided into Generation, Transmission and Distribution divisions and generates approximately 95% of electricity used in South Africa. Currently, Eskom has 24 power stations in commission, of which thirteen are coal-fired stations.

South Africa's energy is predominately coal-fuelled, with limited renewable energy alternatives. South Africa consumes approximately 175 Mtpa of coal daily, with Eskom consuming approximately 110 Mtpa (Eskom, 2017). The importance of coal and coal supply is detailed in the Eskom Transmission Ten Year Development Plan 2018 to 2027 (Eskom, 2017). Eskom's coal-fired power stations are critical to electricity production and meeting South Africa's energy needs. Without a steady, secure coal supply, Eskom is unlikely to meet these needs. Coal mining, beneficiation and supply is critical in ensuring continued electricity generation in the short, medium, and long-term.

coal is a good energy source: Cheapest source of energy. Unlike other forms of energy (nuclear, natural gas, oil, hydroelectric), coal provides many jobs in removing coal from the earth, transporting it to the utility, burning it, and properly disposing of coal ash. Eskom has voiced concern over medium and long-term future supply security to its coal-fired electricity generating power stations. If Eskom's needs are not met, it might have severe economic impacts. As such, coal is one of the five minerals selected by the DMR for local beneficiation as it is considered critical to South Africa's on-going development (DMR, 2011).

The globe recognizes the importance of energy supply security for a nation's economic and social progress. Coal continues to make a substantial contribution to South Africa's economic growth since it is a readily available and inexpensive source of energy for the production of local power. Due to Eskom's domestic needs and exports to other nations, coal is in great demand in South Africa.

With the impact of the Covid-19 pandemic in 2020, coal output decreased globally by 4.8% as a result of lower electrical consumption during lockdown, expansion in renewable generating, and low gas prices, as well as lower electricity demand overall. In 2021, the global coal-fired power generation was forecast to rise by 9%, surpassing 2019 levels, according to the IEA Coal (2021) Report. However, factors like as unfavorable weather, supply chain interruptions, and Covid-19 containment measures prevented output increases in 2021. Large coal-producing nations were anticipated to step up efforts to increase their output because demand was predicted to rise faster than supply, leading to shortages of coal. In 2022, coal production is anticipated to hit a record high before plateauing as demand declines.

Currently, coal meets more than 75% of the nation's electrical needs. Also, due to the severe shortage of anthracite-grade coal, which is required for the production of steel, this commodity is now selling for record prices. Therefore, it is necessary to extract coal in South Africa. According to the 2019 Integrated Resource Plan, it is possible to draw the conclusion that when additional primary energy sources and the associated installed generation capacity are built, the demand for coal for usage in the power sector is anticipated to decline over time. Nevertheless, this change won't take place anytime soon. Coal will be required for the nation's power generation needs for at least the next two decades.

6.3 Witbank proposed open-cast mining operations.

Mining in South Africa contributed to the establishment of the Johannesburg Stock Exchange (JSE) in the late 19th century and today it accounts for a large portion of its market capitalisation. Mining in South Africa has shaped the country politically, culturally, and economically, and has provided critical mass to several industries that are either Supplier to the mining industry, or users of its products. These include, but are not limited to energy, financial services, water and engineering services, and specialist seismic geological and metallurgical services. The proposed Witbank coal mine will contribute directly to the South African economy and the development and growth of industries supporting the mining sector.

The proposed open-cast mining operations of the Witbank coal mine project will have positive economic impacts on a local, regional, and national scale. It will result in additional coal, job creation and skills development opportunities. The mine will act as a job gap closer in the Witbank area. The proposed

mining activities will fit in with these developments and the outcomes will be transported to the neighbour power stations to ensure electricity shortage is minimal. If the applicant does not proceed with the proposed application, another application in terms of the MPRDA, Act 28 of 2002 can be submitted by another company. Unless the government declares these areas “NO-GO” for mining and/or the demand for coal subsidies, mining houses will continue to attempt to mine these coal reserves.

7. Motivation for the preferred development footprint within the approved site including a full description of the process followed to reach the proposed development footprint within the approved site.

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

The proposed alternative was reached after a full evaluation of the sensitivities of the site. This included various studies conducted.

7.1 Process Followed to Reach the Proposed Preferred Site.

All reasonable and feasible alternatives must be identified and assessed during the S&EIA for consideration and assessment during the EIA phase. There are significant constraints that must be considered when identifying alternatives for a project of this scope. Such constraints include social, financial, and environmental constraints, which will be discussed in the evaluation of the alternatives. The preferred option must be highlighted and presented to the authorities. Alternatives can typically be identified according to location, process, technology, and activity (including the no-go option).

For any alternative to be considered feasible (from a technical and environmental perspective), it must meet the need of the development proposal without presenting significantly high associated impacts. Such alternatives must be described, and the advantages and disadvantages must be indicated. Incremental alternatives typically arise during the EIA process and are usually suggested as a means of addressing identified impacts. These alternatives are closely linked to the identification of mitigation measures and are not specifically identified as distinct alternatives.

The following sub-sections details the development footprint, properties, and activity type alternatives to be considered, which are;

7.1.1 Location alternatives

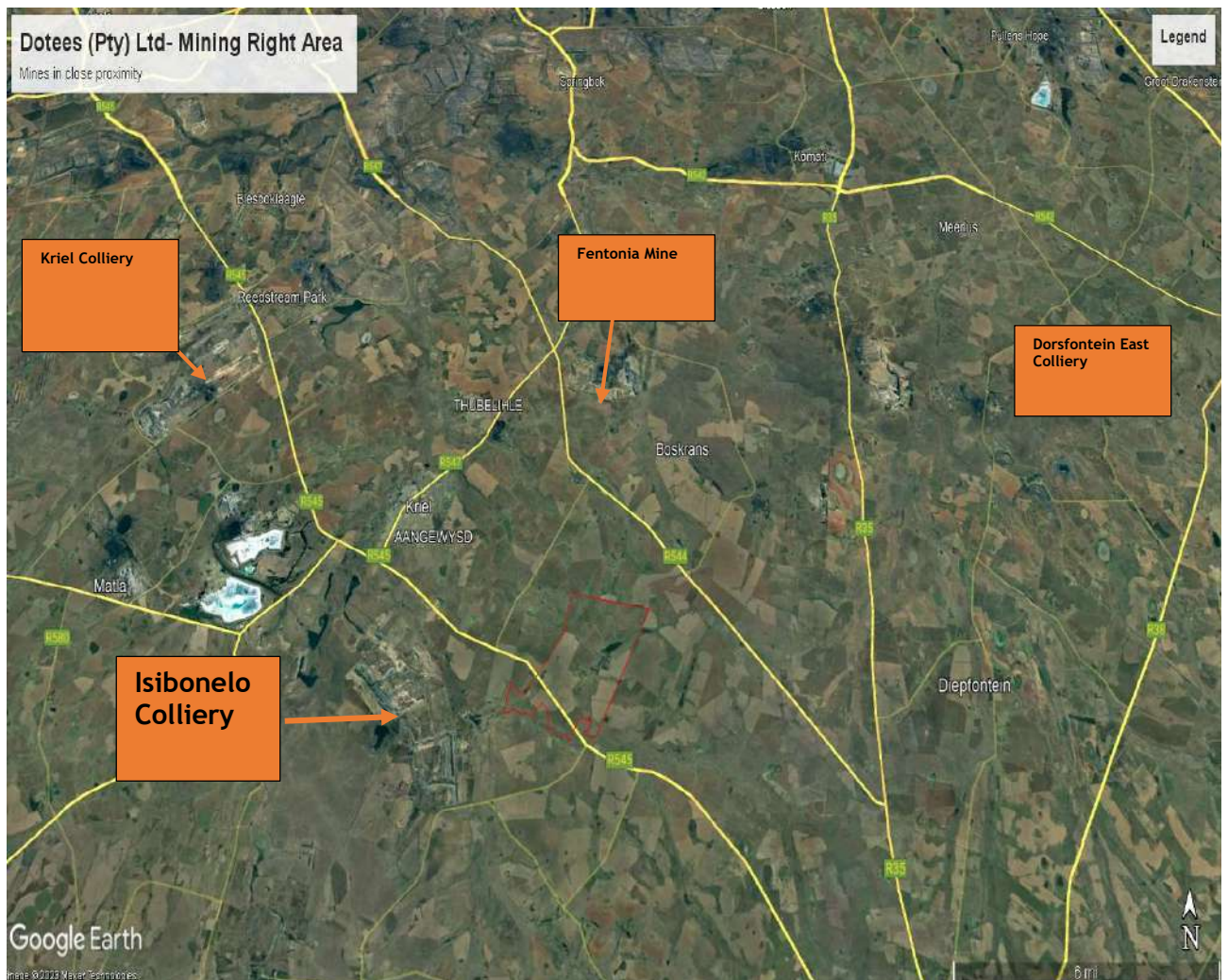
The study area was considered due to the positive results obtained during the prospecting phase and exploration drilling with regards to the underlying coal grade. As the applicant already has prospecting right on the above-mentioned property together with a mining permit for the said property, and with the favourable results from the prospecting phase regarding coal deposits, the proposed study area is optimal for coal mining.

7.1.2 Land use alternatives

The first alternative is coal mining due to the results obtained during the prospecting phase, while the second alternative is using the area for its agricultural potential (as per the current land use).

Alternative 1: Coal mine

According to the land use map, the area is cultivation and uncategorised dominated and in those areas that is where mines have dominated, rezoning the area from agriculture to mining. The coal is of very high grade and the economic injection to the local and regional economy if the mine is to be opened as detailed in section 4.2, compared to the agricultural sector must be investigated in the EIA phase.



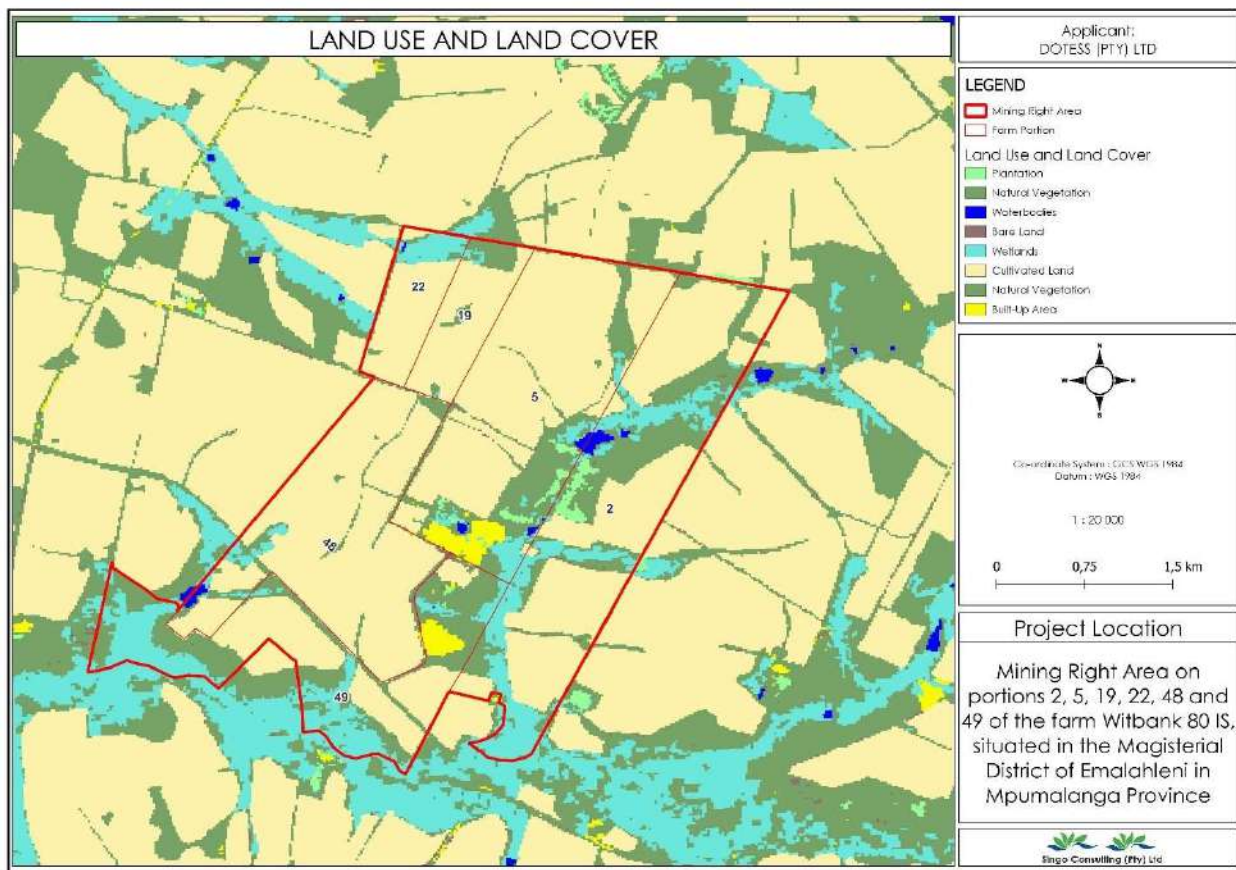


Figure 18: Land use and activity maps around the proposed area

Alternative 2: Agricultural land

The current land use of the study area (See figure 9). The area is mainly comprised of cultivated and uncategorised lands. The area falls under heavily modified, moderately modified- old lands, CBA Optimal and other natural area, see Figure 10. CBA Optimal is less in the boundary of the mining area and it is deemed flexible in land-use options. In the heavily modified area, it is where biodiversity and ecological function has been lost to a point that they are not worth considering for conservation at all. That is where mining activities will take place. Another category is the moderately modified area- old land, which is an area which was modified in the last 80 years but has been abandoned, including old mines, and cultivated lands. The area can be used for mining, however it will be stabilised and managed to restore ecological functionality in particular, the soil carbon and water related functionality. Minor natural area category is observed on the mining right area boundary and that is where basic ecosystem functionality will be ensured. Waterbodies are seen on the uncategorised and quaternary catchment B12A of which activities of WUL that are triggered have been applied, See Table 9. The land use alternatives must be investigated in more detail once specialist investigations have been completed in the EIA phase.

The mining right area includes the landowners house, kraal for cattle, old, abandoned hostel, houses (Erik/Juda community), reservoir, wetlands, borehole with various tanks, plantation. The area is heavily modified and is dominated with cultivation of maize and soya beans and there are chickens and cows on the farm. Servitudes were observed on the farm portion. The farm is owned by H J Pieterse Vlakfontein Tweehonderd CC and Henry & Marlene Dunn Witbank Trust. The wide range of activities around the area is shown in **Table 9**.

Table 9: Site pictures of the current active activities in and around the mining right application area













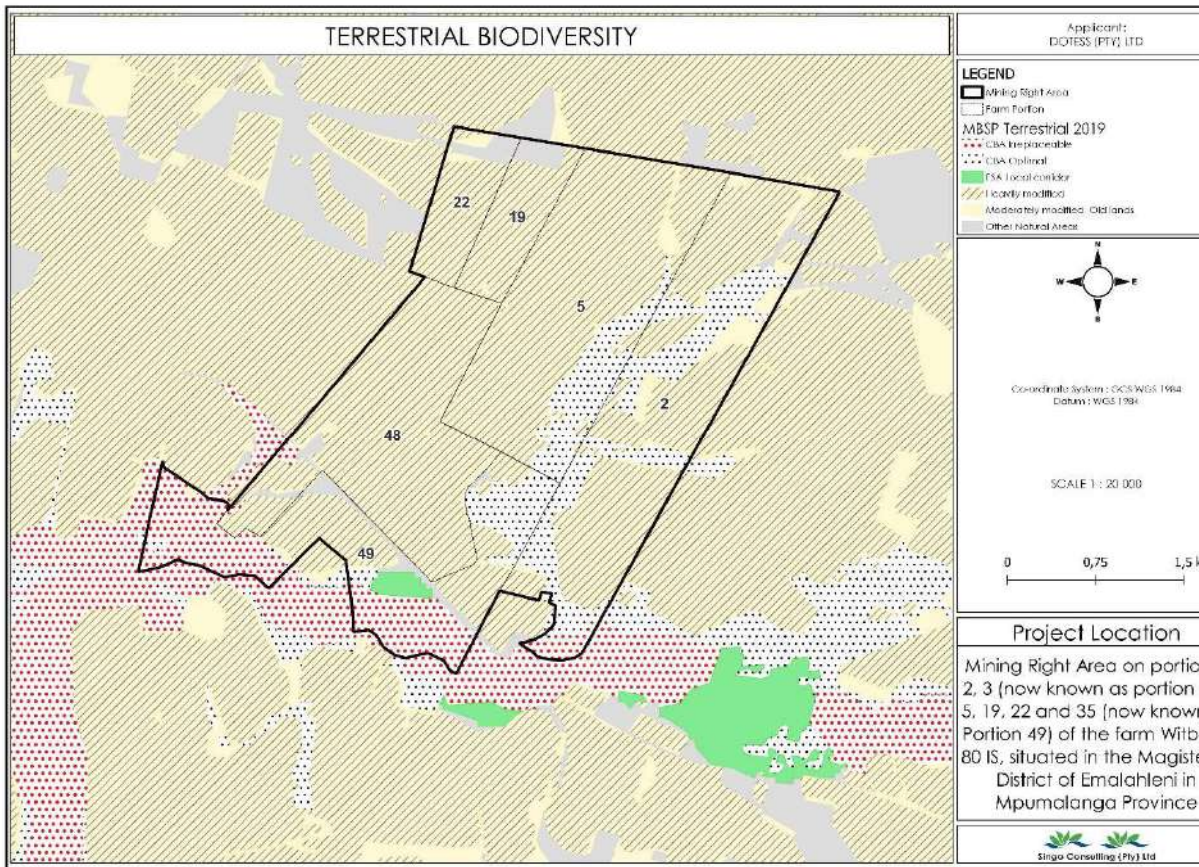


Figure 19: The critical biodiversity map of the area. (Singo Consulting, 2023)

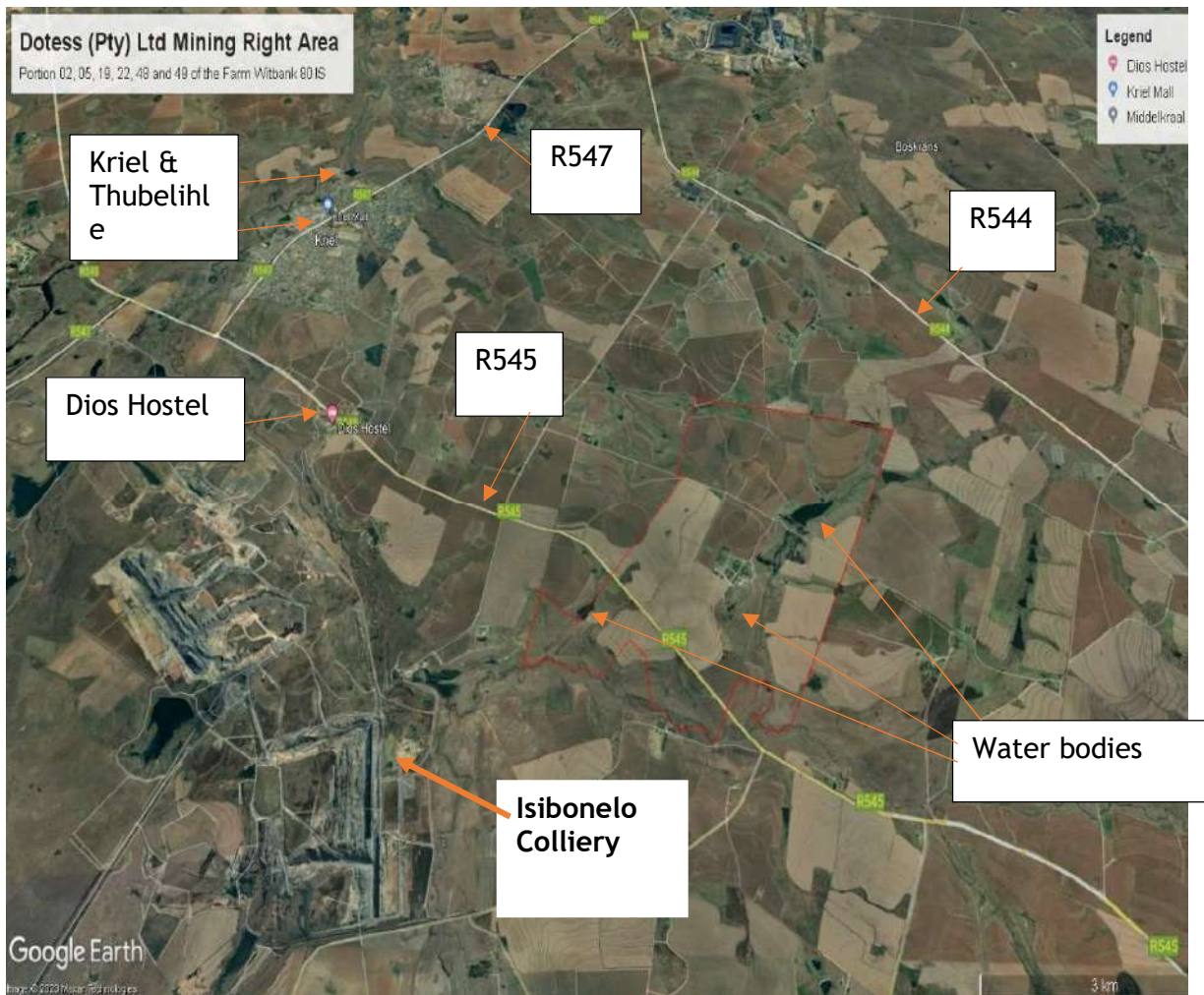


Figure 20: Wide range of activities on and around the proposed area. (Google Earth , 2023)

7.1.3 Process alternatives

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

Mineral resources are by nature very difficult to locate as it requires extensive prospecting and calculated determination of stock. Minerals can only be mined where they exist. The proposed property is in an area dominated by mining activities in the surrounding and the prospecting has indicated the presence of coal on these properties. Minerals can only be mined where identified and verified, therefore it was not practical to select any other sites. No location alternative was considered.

7.1.3.2 The type of activity to be undertaken.

The alternative for mining and extracting the target mineral resource is both open-cast and underground mining.

7.1.3.3 Mine operational

Operations and associated infrastructure, including a crushing and screening plant, bridge, will be available for the duration of the LoM.

7.1.3.4 No-go alternative

If this project is not carried out ("no-go"), the current situation will continue, and the status quo shall remain. The nearby communities would profit from the anticipated employment opportunities and other community projects related with the SLP, notwithstanding the small employee complement. The no-go option also entails that none of the potential negative impacts connected to the proposed mine and the infrastructure surrounding it would materialize.

Coal is a strategic resource in South Africa and coal resources are essential in ensuring economic growth in South Africa. By not implementing this project, more than approximately fifty- two permanent jobs and approximately twenty unskilled jobs will not be created to begin off with. In addition, a resource with high seam quality and a calorific value of between 26 and 29 MJ/kg as raw coal will become sterilised. The environmental, social, and economic impacts will be assessed in detail during the EIA phase to identify and address all negative impacts.

The no-go alternative's viability cannot be addressed at this time and will be discussed in more detail during the EIA phase once specialist inputs have been received. Consequently, the EIA process will ascertain whether the project will have any environmental or socioeconomic fatal flaws that could make the no-go alternative the preferred alternative.

8. PUBLIC PARTICIPATION PROCESS

8.1 Objectives of public participation

Public participation aims to:

- Provide I&APs with an opportunity to voice their support, concerns and questions regarding the project, application, or decision.
- Provide an opportunity for I&APs, EAPs and the Competent Authority (CA) to obtain clear, accurate and understandable information about the environmental, social, and economic impacts of the proposed activity or implications of a decision.
- Provide I&APs with the opportunity to suggest ways to reduce or mitigate an activity's negative impacts and enhance the positive impacts.
- Enable the applicant to incorporate the needs, preferences, and values of the I&APs into the application.

8.2 Legislation

The PPP must comply with several important sets of legislation that require public participation as part of an application for authorisation or approval, namely the MPRDA, NEMA, NEMWA and NWA. Adherence to the requirements of these acts will allow for an integrated PPP, satisfying the requirement for public participation referenced in the Acts. The details of the integrated PPP are provided in the following sections (7.3-7.7) respectively.

8.3 Identification of I&APs

Potential I&APs were identified based on the definition of I&APs in the EIA regulations. The I&APs database includes authorities and landowners. The PPP and consultation have been conducted in adherence to the relevant legislation.

People and/or organisations will be registered as I&APs for the project if they:

- Are landowners or tenants adjacent to the proposed study area.
- Are the local municipality/ward councillors with jurisdiction in the area or represent the ratepayer's association.
- Are an authority or organ of state with jurisdiction in respect of any aspect of the activity.
- Responded to the Background Information Document (BID), advertisements and site posters.
- Attend a public meeting.

The PPP will commence on the 10th of March 2023. The public participation meeting was organised with the community and held on the 2nd of April 2023 on site sportsground. The Draft Scoping Report was available for stakeholders and I&APs to review for a period of 30 days commencing from the 27th of March 2023 to the 28th of April 2023.

- Newspaper advertisement: Published in “Witbank News” on the 10th of March 2023.
- A meeting was with the ward counsellor.
- A meeting was with farm dwellers of the proposed mining right area
- A meeting with the landowners will be held.
- Site notices were placed at prominent points around the mine boundary, close to the farmhouses, along the R547 and R545 provincial roads, around the farms, library, local municipality and at the Juda/Erik community area.
- Consultation emails were sent to the identified authorities, adjacent landowners, and stakeholders.
- Public Participation meeting was held with the community members and affected farm households face to face on the 2nd of April 2023.
- Draft Scoping Reports were shared to registered I&APs of the project and comments received, were incorporated on the report for submission to the DMRE.

Newspaper Advertisements

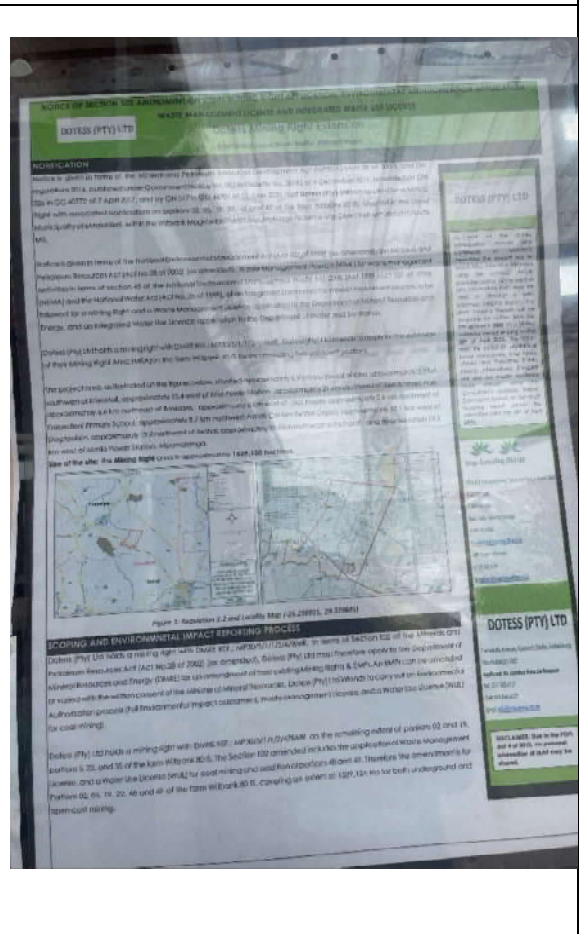
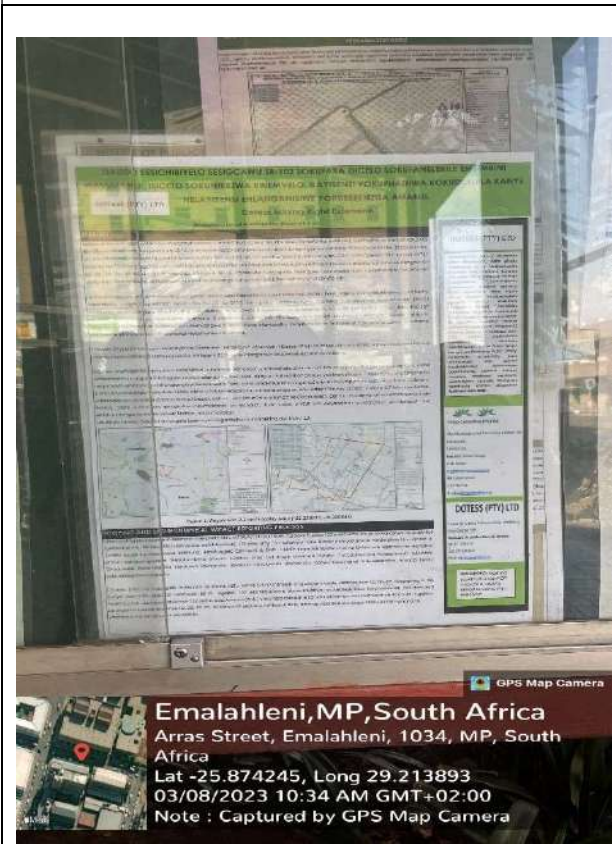
Newspaper advertising is used to target particular demographics that are traditionally much harder to reach through other media such as the internet and other social networks. A newspaper advertisement was published on the 10th of March 2023 in the Witbank news/nuus to notify all the Interested & Affected Parties of the proposed development.

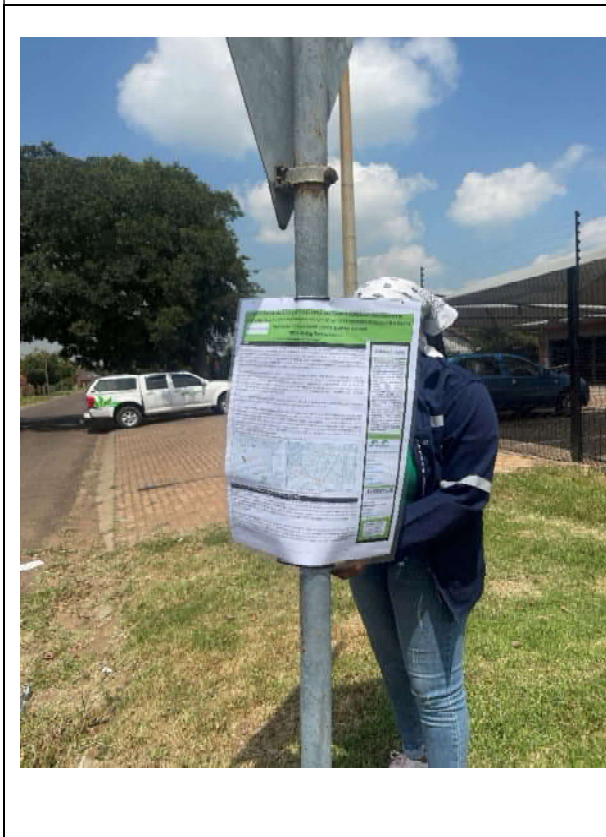
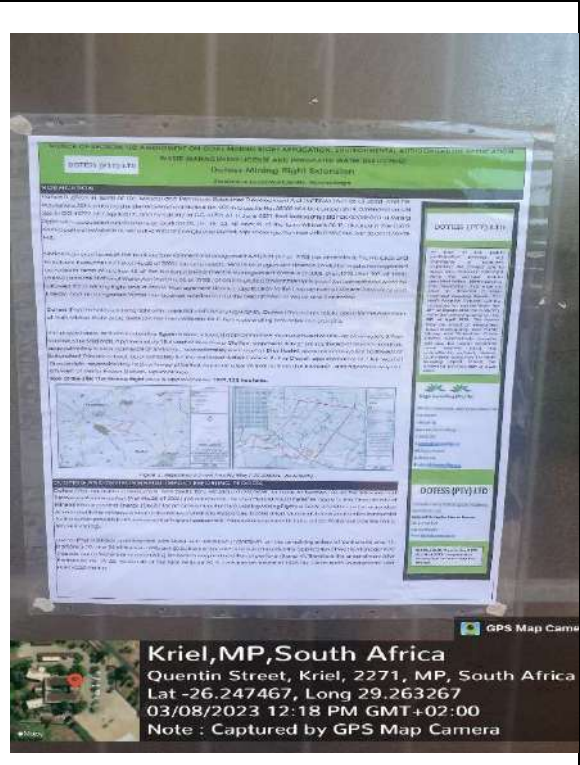


Figure 21: Newspaper Published

Public Space Notices

Site notices were placed around the farm boundaries, Erik/Juda community, the Emalahleni Local Municipality, Kriel Public Library, Thubelihle Public Library, Thubelihle Clinic, Kriel Information Hub as another means of notifying any person/s who would be Interested & Affected by the proposed development.





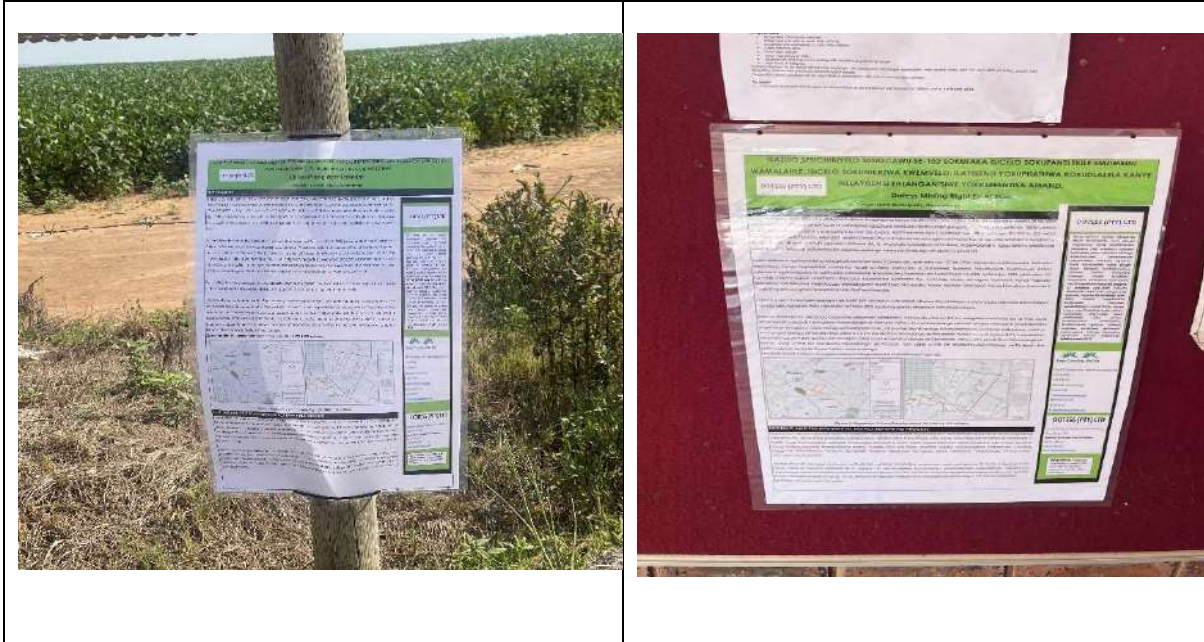


Table 10: Site Notices Plugged

Table 11: Windeed Search

Deeds Office Property - List
IS, 80, MPUMALANGA

Lexis® WinDeed

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

SEARCH CRITERIA

Search Date	2022/06/13 09:23	Farm Number	80
Reference	-	Registration Division	IS
Report Print Date	2022/06/13 09:25	Portion Number	-
Farm Name	-	Remaining Extent	NO
Deeds Office	Mpumalanga	Search Source	Deeds Office

PORTION LIST

Portion	Owner	Title Deed	Registration Date	Purchase Price (R)
0	*** NO LONGER EXISTS - SEE ENDORSEMENTS ***	-	-	-
1	ROOIBLOM LANDGOED HOEVELD PTY LTD	T10040/2019	-	-
2	H J PIETERSE VLAKFONTEIN TWEEHONDERD CC	T131928/1997	-	-
5	H J PIETERSE VLAKFONTEIN TWEEHONDERD CC	T131928/1997	-	-
6	*** NO LONGER EXISTS - SEE ENDORSEMENTS ***	-	-	-
7	HENRY & MARLENE DUNN WITBANK TRUST	T131927/1997	-	-
8	VENTER SANDRIENA JOHANNA	T336029/2007	-	-
9	*** NO LONGER EXISTS - SEE ENDORSEMENTS ***	-	-	-
10	H J PIETERSE (VLAKFONTEIN TWEEHONDERD) CC	T21782/1999	-	-
11	*** NO LONGER EXISTS - SEE ENDORSEMENTS ***	-	-	-
13	H B DUNN BOERDERY PTY LTD	T1450/2017	-	-
15	HENRY & MARLENE DUNN WITBANK TRUST	T29488/2001	-	-
16	REPUBLIEK VAN SUID-AFRIKA	T6674/1908	-	-

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PORTION LIST				
Portion	Owner	Title Deed	Registration Date	Purchase Price (R)
17	HENRY & MARLENE DUNN WITBANK TRUST	T389/2019	-	-
18	*** NO LONGER EXISTS - SEE ENDORSEMENTS ***	-	-	-
19	H J PIETERSE VLAKFONTEIN TWEEHONDERD CC	T131928/1997	-	-
20	WITBANK PLAAS TRUST	T56292/1995	-	-
21	WITBANK PLAAS TRUST	T56292/1995	-	-
22	H J PIETERSE VLAKFONTEIN TWEEHONDERD CC	T131928/1997	-	-
23	HENRY & MARLENE DUNN WITBANK TRUST	T1351/2021	-	-
24	HENRY & MARLENE DUNN WITBANK TRUST	T1351/2021	-	-
25	HENRY & MARLENE DUNN WITBANK TRUST	T1351/2021	-	-
26	HENRY & MARLENE DUNN WITBANK TRUST	T1351/2021	-	-
27	HENRY & MARLENE DUNN WITBANK TRUST	T1351/2021	-	-
28	H B DUNN BOERDERY PTY LTD	T1450/2017	-	-
29	H B DUNN BOERDERY PTY LTD	T1450/2017	-	-
30	H B DUNN BOERDERY PTY LTD	T1450/2017	-	-
31	DUNN HENRY BROWN	T96084/1997	-	-
32	VENTER SANDRIENA JOHANNA	T336029/2007	-	-
33	VENTER SANDRIENA JOHANNA	T336029/2007	-	-
34	WITBANK PLAAS TRUST	T56292/1995	-	-
36	*** NO LONGER EXISTS - SEE ENDORSEMENTS ***	-	-	-
37	ROOIBLOM LANDGOED HOEVELD PTY LTD	T10040/2019	-	-
41	H J PIETERSE (VLAKFONTEIN TWEEHONDERD) CC	T1349/2021	-	-
48	H J PIETERSE	T1357/2021	-	-

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PORTION LIST				
Portion	Owner	Title Deed	Registration Date	Purchase Price (R)
	(VLAKFONTEIN TWEEHONDERD) CC			
49	HENRY & MARLENE DUNN WITBANK TRUST	T1356/2021	-	-

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Table 12: Consultation procedure

A table containing the procedures that was undertaken to engage with all interested and affected parties physically is demonstrated below:

Consultation with eMalahleni Local Municipality
8 March 2023
Meeting with the landowners
Attempted on the 8th of March 2023, however the Applicant meet with them prior.
Meeting with the Ward 26 Councillor
22 March 2023
Meeting with the farm dwellers
8 March 2023
Site notices erected around the farm, neighbouring properties, national routes and town
8 March 2023
Site notices placed regarding the community meeting
24 March 2023
Public Participation Meeting
02 April 2023, at the sportsground of Witbank 80 IS Farm.

Background information document

Included in the I&AP notification letters: facsimiles, and e-mails in a BID, which includes:

- Locality map and description
- Project description and background
- Legal framework
- Explanation of the scoping and EIA process to be followed
- An invitation to get involved and comment on the proposed project
- Time frames of the scoping report

Notification of availability of scoping report

All registered I&APs and stakeholders have been notified via email of the availability of the Draft Scoping Report for review for a planned period of thirty days from the 27th of March 2023 to the 28th of April 2023. The report was available at Kriel Public library (Quintin &, Heinrich St, Kriel, 2271; 017 648 2241, Thubelihle Public library (2275 Kriel Drive, Thubelihle) and eMalahleni Local Municipality: (Civic Centre,

Cnr Mandela & Arras Streets, eMalahleni; 013 690 6911/ 013 690 6207). Respectively and obtainable from Valentine Mhlanga (valentine@singoconsulting.co.za/rudzani@singoconsulting.co.za) at Singo Consulting. All incoming comments received from stakeholders and I&APs were included in the Final Scoping Report. Comments were received from Eskom, SASOL, Agriculture, SANRAL (South African National Roads Agency Limited) and such comments were not objecting to the application and are incorporated in this report. Comments are also being further anticipated to be received from stakeholders including the Department of Department of water and sanitation (DWS). Comments received from community members from the public participation meeting were also included in this final scoping report with them stating the desire to have this project up and running and them in support of the project with concerns only for being removed as they will be affected by the mining proceedings. Such engagements are underway with the community, landowner and the applicant. The DMRE has forty-three days from report submission to review and make decision for the application in order for EIA processes to be underway, consulted and completed for submission to the DMRE for awarding a mining right.

Meetings

The following meetings were held during scoping phase:

- Public participation meeting (2nd April 2023)
- Landowners (By Applicant)

Organisation/Capacity
Landowners and adjacent
Emalahleni Local Municipality
Nkangala District Municipality
Mpumalanga Department of Agriculture, Rural Development, Land and Environmental Affairs
Department of Environmental Affairs
Nkangala District Municipality
Department of Agriculture, Forestry and Fisheries

Department of Water and Sanitation
Department of Environmental Affairs
Department of Labour
Department of Public Works
Commission on Restitution of Land Rights
Mpumalanga Tourism
Biodiversity Planning
Eskom
Sanral
Transnet
Community

CONSULTATION WITH STAKEHOLDERS DURING THE EIA PHASE:






During the EIA Phase the following main PP activities are envisaged to be undertaken:

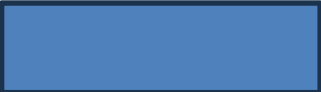

- Provide opportunity for I&APs to comment on specialist findings, impacts assessments, EMPr and MWP, etc;
- Verify that comments raised by I&APs have been accurately recorded;
- Have a public meeting after releasing the draft EIA report if need be;
- Provide all stakeholders with the opportunity to comment on the draft EIA report.
- This draft EIA report will be submitted for public review for a period of 30 days. All comments received will be incorporated into the final EIA report that will be submitted to the DMRE.
- This draft EIA is available for review at the locations listed below and is also available on request through the Eap from Singo Consulting (Pty) Ltd: rudzani@singoconsulting.co.za. Electronic copies (CDs/USB/Emails) will be available from Singo Consulting (Pty) Ltd on request.


8.3 Summary of issues raised by I&APs

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


All comments from I&APs and public consultation meetings are included in the comments and response sheet in Appendix 5. A summary is given in the table below
 Table 13: Summary of issues raised by I&APs

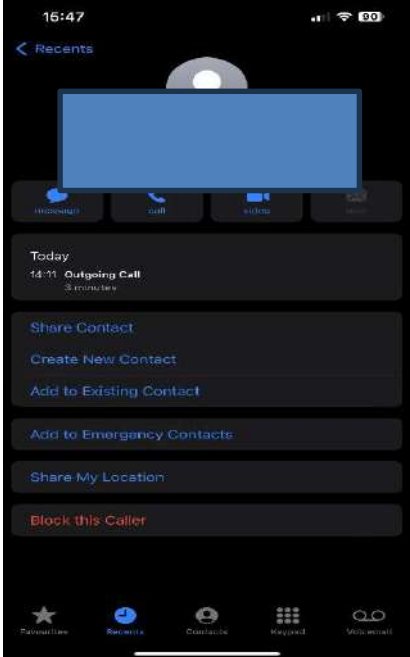
Interested and Affected Parties List the names of persons consulted in this column, and Mark with an X where those who must be consulted were in fact consulted	Date Comments Received	Proof of Consultation	Issues Raised	EAPs response to issues as mandated by the applicant	Section and paragraph reference in this report where the issues and or response were incorporated
AFFECTED PARTIES					
Landowners					
Portion 02, 05, 19, 22 and 48 of the farm Witbank 80 IS H J Pieterse Vlaktefontein Tweehonderd CC 			<ul style="list-style-type: none"> No issues raised. 	<ul style="list-style-type: none"> Went to  house, but unfortunately didn't get the chance to speak with him, however left a BID with the helper on the 8th of March 2023. The applicant informed us that they have an agreement with  us  and they are supporting the project. 	Appendix 2




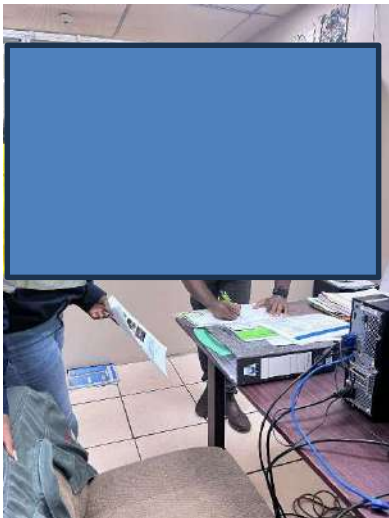
<p>Interested and Affected Parties</p> <p>List the names of persons consulted in this column, and</p> <p>Mark with an X where those who must be consulted were in fact consulted</p>	<p>Date Comments Received</p>	<p>Proof of Consultation</p>	<p>Issued Raised</p>	<p>EAPs response to issues as mandated by the applicant</p>	<p>Section and paragraph reference in this report where the issues and or response were incorporated</p>
				<ul style="list-style-type: none"> The purchase offer has been issued and attached in appendices. Draft Scoping report was shared for 30 days review from 27th of March 2023 to the 28th of April 2023 through email. 	
<p>Portion 49 of the farm Witbank 80 IS</p> <p>Henry & Marlene Dunn Witbank Trust.</p> 	<p>X 15/03/2023 (Email)</p>		<ul style="list-style-type: none"> Received a hardcopy that was delivered for me but it not very clear, please send it through my mail. 	<ul style="list-style-type: none"> Went to their house and unfortunately, they were not around, and a BID was left with one of the workers on the 8th of March 2023. The applicant informed us that they have an agreement with Mr Henry Dunn, and they are supporting the project. Consultation email together with the BID, MR Co-ordinates and KML were sent on the 16th of March 2023. 	<p>Appendix 2</p>

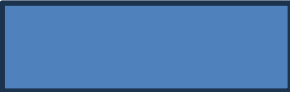


<p>Interested and Affected Parties</p> <p>List the names of persons consulted in this column, and</p> <p>Mark with an X where those who must be consulted were in fact consulted</p>	<p>Date Comments Received</p>	<p>Proof of Consultation</p>	<p>Issued Raised</p>	<p>EAPs response to issues as mandated by the applicant</p>	<p>Section and paragraph reference in this report where the issues and or response were incorporated</p>
		<p>Dotess</p>  <p>I recieved a document delivered by hand - the first page is attached for reference.</p> <p>The copy is not very clear and I can't scan it properly. Please send me a copy to my mail.</p> <p>I am an affected party.</p> <p>HB Dunn Owner portion 49 of the Farm Witbank 80 IS.</p>		<ul style="list-style-type: none"> Draft Scoping report was shared for 30 days review from 27th of March 2023 to the 28th of April 2023 through email. 	
<p>Adjacent Landowners</p>					


<p>Interested and Affected Parties</p> <p>List the names of persons consulted in this column, and</p> <p>Mark with an X where those who must be consulted were in fact consulted</p>	<p>Date Comments Received</p>	<p>Proof of Consultation</p>	<p>Issues Raised</p>	<p>EAPs response to issues as mandated by the applicant</p>	<p>Section and paragraph reference in this report where the issues and or response were incorporated</p>
<div style="border: 1px solid black; width: 60px; height: 30px; background-color: #4a7ebb; margin-bottom: 10px;"></div>	<p>08/03/2023</p> <p>(Face-to face)</p>	<div style="border: 1px solid black; width: 150px; height: 60px; background-color: #4a7ebb; margin-bottom: 5px;"></div> 	<ul style="list-style-type: none"> We don't want a mine; we are farmers not miners. 	<p>Explained the proposed project and he informed us that the applicant already came to them.</p>	<p>Appendix 2</p>
<p>Lawful occupiers of the land</p>					



<p>Interested and Affected Parties</p> <p>List the names of persons consulted in this column, and</p> <p>Mark with an X where those who must be consulted were in fact consulted</p>	<p>Date Comments Received</p>	<p>Proof of Consultation</p>	<p>Issues Raised</p>	<p>EAPs response to issues as mandated by the applicant</p>	<p>Section and paragraph reference in this report where the issues and or response were incorporated</p>
<p>Juda/ Erik Community</p> <p>Representative:</p> <div style="background-color: #4a7ebb; width: 118px; height: 80px; margin-bottom: 10px;"></div> <p>Ward Councillor (Ward 26):</p> <div style="background-color: #4a7ebb; width: 138px; height: 76px;"></div>	<p>X 08/03/2023</p> <p>(Face-to face)</p> <p>20/03/2023</p> <p>(Phone Call)</p>		<ul style="list-style-type: none"> • They are interested in the project and will help spread the word and arrange the community meeting. • Proposed that we have a public participation meeting at the Erik Sports Ground. • Proposed to have a meeting before meeting with the rest of the community either wednesday the 22nd or Thursday the 23rd of March 2023. 	<ul style="list-style-type: none"> • Explained the project and requested for the ward councillors' numbers to arrange a community meeting. • Consulted regarding the public participation meeting which needs to be held with the community. • Draft Scoping report was shared for 30 days review from 27th of March 2023 to the 28th of April 2023 through hard copy. 	<p>Appendix 2</p>


<p>Interested and Affected Parties</p> <p>List the names of persons consulted in this column, and</p> <p>Mark with an X where those who must be consulted were in fact consulted</p>	<p>Date Comments Received</p>	<p>Proof of Consultation</p>	<p>Issued Raised</p>	<p>EAPs response to issues as mandated by the applicant</p>	<p>Section and paragraph reference in this report where the issues and or response were incorporated</p>
					
<p>Local Municipality</p>					


<p>Interested and Affected Parties</p> <p>List the names of persons consulted in this column, and</p> <p>Mark with an X where those who must be consulted were in fact consulted</p>	<p>Date Comments Received</p>	<p>Proof of Consultation</p>	<p>Issues Raised</p>	<p>EAPs response to issues as mandated by the applicant</p>	<p>Section and paragraph reference in this report where the issues and or response were incorporated</p>
  <p>Councillor</p> 	<p>X 08/03/2023</p> <p>(Face-to face)</p> <p>08/03/2023</p> <p>Face to face</p>		<ul style="list-style-type: none"> Please send me a soft copy and the project KML via email. <p>Discussed that the community wants to be removed in that areas as the mining will impact them negatively.</p>	<ul style="list-style-type: none"> Explained the project and left a BID as well as plugged notices outside (08/03/2023). Consultation email together with the BID, MR Co-ordinates and KML were sent on the 13th of March 2023. Draft Scoping report was shared for 30 days review from 27th of March 2023 to the 28th of April 2023 through hard copy. <p>To be resolved upon applicant engaging with the community at large.</p>	<p>Appendix 2</p>

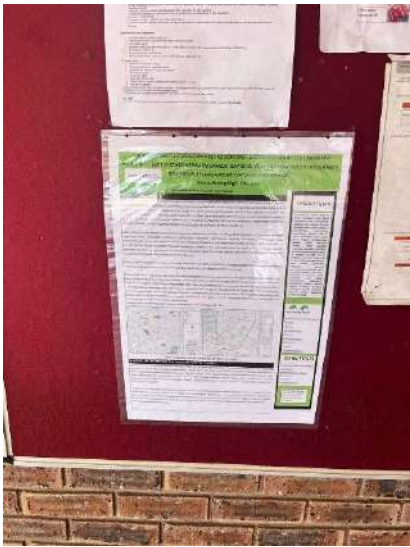
<p>Interested and Affected Parties</p> <p>List the names of persons consulted in this column, and</p> <p>Mark with an X where those who must be consulted were in fact consulted</p>	<p>Date Comments Received</p>	<p>Proof of Consultation</p>	<p>Issued Raised</p>	<p>EAPs response to issues as mandated by the applicant</p>	<p>Section and paragraph reference in this report where the issues and or response were incorporated</p>
<p>Ward 27):</p> 					
<p>District Municipality</p>					
 	<p>X</p>		<ul style="list-style-type: none"> No issued raised. 	<ul style="list-style-type: none"> Consultation email together with the BID, MR Co-ordinates, Reg 2.2 map and KML were sent on the 13th of March 2023. Draft Scoping report was shared for 30 days review from 27th of March 2023 to the 28th of April 2023 through email. 	<p>Appendix 2</p>
<p>Local Library</p>					



<p>Interested and Affected Parties</p> <p>List the names of persons consulted in this column, and</p> <p>Mark with an X where those who must be consulted were in fact consulted</p>	<p>Date Comments Received</p>	<p>Proof of Consultation</p>	<p>Issued Raised</p>	<p>EAPs response to issues as mandated by the applicant</p>	<p>Section and paragraph reference in this report where the issues and or response were incorporated</p>
<p>Kriel Public Library</p>				<ul style="list-style-type: none"> • The offices were closed due to load shedding however site notices were plugged outside (08/03/2023). • Draft Scoping report was shared for 30 days review from 27th of March 2023 to the 28th of April 2023 through hard copy. 	<p>Appendix 2</p>

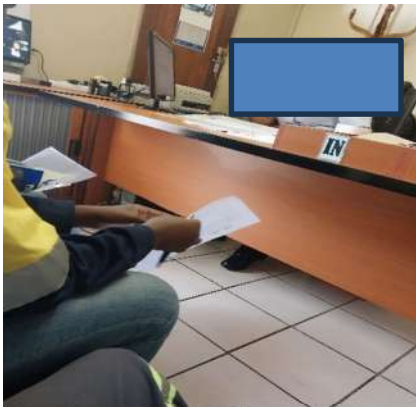

<p>Interested and Affected Parties</p> <p>List the names of persons consulted in this column, and</p> <p>Mark with an X where those who must be consulted were in fact consulted</p>	<p>Date Comments Received</p>	<p>Proof of Consultation</p>	<p>Issued Raised</p>	<p>EAPs response to issues as mandated by the applicant</p>	<p>Section and paragraph reference in this report where the issues and or response were incorporated</p>
<p>Thubelihle Public Library</p> 	<p>X 08/03/2023</p> <p>(Face-to face)</p>		<ul style="list-style-type: none"> The librarian signed for the BID and gave us permission to plug site notices outside. 	<ul style="list-style-type: none"> Explained the project and left a BID as well as plugged notices outside (08/03/2023). Draft Scoping report was shared for 30 days review from 27th of March 2023 to the 28th of April 2023 through hard copy. 	<p>Appendix 2</p>
<p>Community</p>					




<p>Interested and Affected Parties</p> <p>List the names of persons consulted in this column, and</p> <p>Mark with an X where those who must be consulted were in fact consulted</p>	<p>Date Comments Received</p>	<p>Proof of Consultation</p>	<p>Issues Raised</p>	<p>EAPs response to issues as mandated by the applicant</p>	<p>Section and paragraph reference in this report where the issues and or response were incorporated</p>
<p>Thubelihle Community</p> <p>Ward Councillor</p> <p>[Redacted]</p> <p>Thubelihle Community Hall</p> <p>[Redacted]</p>	<p>8/03/2023</p> <p>Face to face</p>		<p>[Redacted] (nurse) gave us her number so she can later share the councillors number Mr [Redacted]</p>	<p>Explained the proposed project to the ward councillor.</p> <p>[Redacted] numbers has since been off, but after consultation with the ward 26 councillor, he said that ward is too far from the project area. Thus meetings were held with the affected ward.</p>	


<p>Interested and Affected Parties</p> <p>List the names of persons consulted in this column, and</p> <p>Mark with an X where those who must be consulted were in fact consulted</p>	<p>Date Comments Received</p>	<p>Proof of Consultation</p>	<p>Issued Raised</p>	<p>EAPs response to issues as mandated by the applicant</p>	<p>Section and paragraph reference in this report where the issues and or response were incorporated</p>
<p>Thubelihle Public Clinic</p>	<p>X 08/03/2023</p> <p>(Face-to face)</p>		<p>I can take the BID and you can plug site notices but as you can see the clinic is closed due to NEHAWU strike.</p>	<p>Explained the proposed project, left a BID, and plugged site notices outside.</p>	



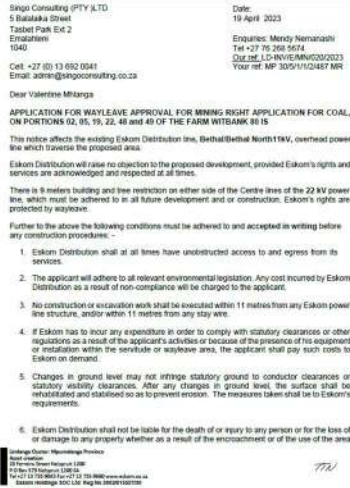


<p>Interested and Affected Parties</p> <p>List the names of persons consulted in this column, and</p> <p>Mark with an X where those who must be consulted were in fact consulted</p>	<p>Date</p> <p>Comments</p> <p>Received</p>	<p>Proof of Consultation</p>	<p>Issues Raised</p>	<p>EAPs response to issues as mandated by the applicant</p>	<p>Section and paragraph reference in this report where the issues and or response were incorporated</p>
					


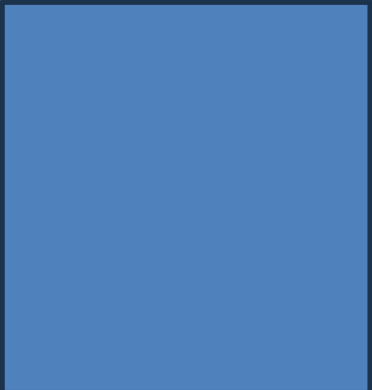

<p>Interested and Affected Parties</p> <p>List the names of persons consulted in this column, and</p> <p>Mark with an X where those who must be consulted were in fact consulted</p>	<p>Date Comments Received</p>	<p>Proof of Consultation</p>	<p>Issued Raised</p>	<p>EAPs response to issues as mandated by the applicant</p>	<p>Section and paragraph reference in this report where the issues and or response were incorporated</p>
<p>Ga Nala Community Hall</p> 	<p>08/03/2023</p> <p>Face to face</p>		<p>The Security shared Ms [REDACTED] numbers who is in charge of booking the community hall.</p>	<ul style="list-style-type: none"> The offices were closed due to load shedding however site notices were plugged outside (08/03/2023) and meeting was said it can only be held at close proximity of affected area. 	


<p>Interested and Affected Parties</p> <p>List the names of persons consulted in this column, and</p> <p>Mark with an X where those who must be consulted were in fact consulted</p>	<p>Date Comments Received</p>	<p>Proof of Consultation</p>	<p>Issues Raised</p>	<p>EAPs response to issues as mandated by the applicant</p>	<p>Section and paragraph reference in this report where the issues and or response were incorporated</p>
<p>Kriel Police Station</p>	<p>X 08/03/2023</p> <p>(Face to face)</p>		<p>You are not allowed to plug site notices outside the police station, you can go and plug at the mall and we are not mandated to accept or collect any paperwork either than that of police station.</p>	<p>EAP explained the procedures, regulations and reason however it did not materialize.</p>	
<p>Kriel Information Hub</p>	<p>X 08/03/2023</p> <p>(Face to face)</p>		<p>Took the BID.</p>	<p>Explained the proposed project, left a BID, and plugged site notices outside.</p>	
<p>Organs of state (Responsible for infrastructure that may be</p>					


<p>Interested and Affected Parties</p> <p>List the names of persons consulted in this column, and</p> <p>Mark with an X where those who must be consulted were in fact consulted</p>	<p>Date Comments Received</p>	<p>Proof of Consultation</p>	<p>Issued Raised</p>	<p>EAPs response to issues as mandated by the applicant</p>	<p>Section and paragraph reference in this report where the issues and or response were incorporated</p>
<p>affected Roads Department, Eskom, Telkom, DWA</p>					
<p>SANRAL</p>  	<p>X</p> <p>17/08/2023</p> <p>Email</p>		<ul style="list-style-type: none"> No issues raised <p>No Objections</p>	<ul style="list-style-type: none"> BID was couriered via Postnet on the 14th of March 2023.. Draft Scoping report was shared for 30 days review from 27th of March 2023 to the 28th of April 2023 through email. <p>Correspondence acknowledged.</p>	<p>Appendix 2</p>



<p>Interested and Affected Parties</p> <p>List the names of persons consulted in this column, and</p> <p>Mark with an X where those who must be consulted were in fact consulted</p>	<p>Date Comments Received</p>	<p>Proof of Consultation</p>	<p>Issues Raised</p>	<p>EAPs response to issues as mandated by the applicant</p>	<p>Section and paragraph reference in this report where the issues and or response were incorporated</p>
		 <p>The image shows an email from Singo Consulting (Pty) Ltd to SANRAL. The email is dated 13 July 2023 and is addressed to Mr. J. Omer. The subject is 'MINING RIGHT APPLICATION ON PORTIONS 02, 05, 19, 22, 48 AND 49 OF THE FARM WITBANK 80 IS'. The email content states that the report prepared by Singo Consulting (Pty) Ltd and submitted to SANRAL for review and comment has reference. It also states that the South African National Roads Agency SOC Limited (SANRAL) has no objection to the application as no national roads or interchanges under the jurisdiction of SANRAL will be affected. The email is signed by the Statutory Control Officer for the Northern Region.</p>			

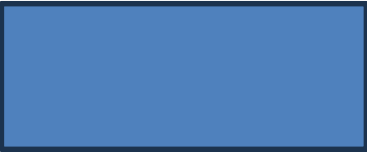


<p>Interested and Affected Parties</p> <p>List the names of persons consulted in this column, and</p> <p>Mark with an X where those who must be consulted were in fact consulted</p>	<p>Date Comments Received</p>	<p>Proof of Consultation</p>	<p>Issued Raised</p>	<p>EAPs response to issues as mandated by the applicant</p>	<p>Section and paragraph reference in this report where the issues and or response were incorporated</p>
<p>Eskom</p>  <p>Wayleavesmou</p> 	<p>X 22/04/2023</p> <p>Email</p>		<ul style="list-style-type: none"> • NO objection. A consent letter must be signed. 	<ul style="list-style-type: none"> • Consent letter signed and shared with Eskom. 	<p>Appendix 2</p>
<p>Transnet</p>  	<p>X</p>		<ul style="list-style-type: none"> • No issues raised. 	<ul style="list-style-type: none"> • Consultation email together with the BID, Reg 2.2 map, MR Co-ordinates and KML were sent on the 13th of March 2023. • Draft Scoping report was shared for 30 days review from 27th of March 2023 to the 28th of April 2023 through email. 	




<p>Interested and Affected Parties</p> <p>List the names of persons consulted in this column, and</p> <p>Mark with an X where those who must be consulted were in fact consulted</p>	<p>Date Comments Received</p>	<p>Proof of Consultation</p>	<p>Issues Raised</p>	<p>EAPs response to issues as mandated by the applicant</p>	<p>Section and paragraph reference in this report where the issues and or response were incorporated</p>
<p>Department of Agriculture, Land Reform & Rural Development</p>  	<p>18/05/2023</p> <p>Email</p>		<ul style="list-style-type: none"> No issues raised The department has no comments at this stage. 	<ul style="list-style-type: none"> Consultation email together with the BID, MR Co-ordinates, Reg 2.2 map and KML were sent on the 13th of March 2023. Draft Scoping report was shared for 30 days review from 27th of March 2023 to the 28th of April 2023 through email. <p>Comment was acknowledged.</p>	<p>Appendix 2</p>



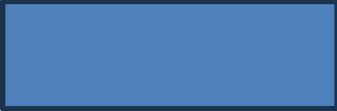

<p>Interested and Affected Parties</p> <p>List the names of persons consulted in this column, and</p> <p>Mark with an X where those who must be consulted were in fact consulted</p>	<p>Date Comments Received</p>	<p>Proof of Consultation</p>	<p>Issued Raised</p>	<p>EAPs response to issues as mandated by the applicant</p>	<p>Section and paragraph reference in this report where the issues and or response were incorporated</p>																				
		 <p>Tel: 011 012 0041/061 812 0054 Fax: 011 5141 103 Email: info@singoconsulting.co.za Email: info@singoconsulting.co.za</p> <p>Appendix A: REGISTRATION AND COMMENT FORM SHEET</p> <p>NOTICE OF SECTION 102 AMENDMENT ON COAL MINING RIGHT AND ENVIRONMENTAL AUTHORIZATION APPLICATION ON PORTIONS 02, 03, 19, 22, 35 AND 48 OF THE FARM WITBANK 80 IS, IN THE MANTLETON DISTRICT OF WESTERN CAPE PROVINCE, SOUTH AFRICAN REPUBLIC (ZC 016 000).</p> <p>Please complete this form and return it to Singo Consulting (Pty) Ltd to ensure that you are registered as an interested and affected party (I&AP).</p> <p>By answering the questions below you will help us to develop a better understanding of your information requirements. The form also gives you the opportunity to make comments regarding the project. Additional pages may be attached.</p> <p>I&AP Details:</p> <table border="1"> <tr> <td colspan="2">Full Names and Surname: <u>Dipon SITHI</u></td> <td colspan="2">Contact Details:</td> </tr> <tr> <td>Cell No:</td> <td><u>015 745 410</u></td> <td>Home No:</td> <td><u>011 514 103</u></td> </tr> <tr> <td>Email:</td> <td><u>Dipon.Sithi@netnet.co.za</u></td> <td>Cell No:</td> <td><u>012 410 8367</u></td> </tr> <tr> <td>Physical Address:</td> <td colspan="3"><u>27 Brown Street, 2nd Floor</u></td> </tr> <tr> <td>Postal Address:</td> <td colspan="3"><u>P.O. Box 8306, Netospruit, 1200</u></td> </tr> </table> <p>Preferred method of communication: <input type="checkbox"/> e-mail <input checked="" type="checkbox"/> post</p> <p>Preferred telephone communication: <input type="checkbox"/> cell <input checked="" type="checkbox"/> home <input type="checkbox"/> work</p> <p>Organization/Representative: <u>Department of Agriculture and Forestry</u> <u>Western Cape Government</u></p> <p>Form name, number and subdivisions at Street Address (if applicable):</p> <p>Questions:</p> <p>1. Where did you get information about the project? <u>Newspaper advertisement if notice heard if not if other (please specify)</u> <u>From Singo Consulting (Pty) Ltd.</u></p>	Full Names and Surname: <u>Dipon SITHI</u>		Contact Details:		Cell No:	<u>015 745 410</u>	Home No:	<u>011 514 103</u>	Email:	<u>Dipon.Sithi@netnet.co.za</u>	Cell No:	<u>012 410 8367</u>	Physical Address:	<u>27 Brown Street, 2nd Floor</u>			Postal Address:	<u>P.O. Box 8306, Netospruit, 1200</u>					
Full Names and Surname: <u>Dipon SITHI</u>		Contact Details:																							
Cell No:	<u>015 745 410</u>	Home No:	<u>011 514 103</u>																						
Email:	<u>Dipon.Sithi@netnet.co.za</u>	Cell No:	<u>012 410 8367</u>																						
Physical Address:	<u>27 Brown Street, 2nd Floor</u>																								
Postal Address:	<u>P.O. Box 8306, Netospruit, 1200</u>																								


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



<p>Interested and Affected Parties</p> <p>List the names of persons consulted in this column, and</p> <p>Mark with an X where those who must be consulted were in fact consulted</p>	<p>Date Comments Received</p>	<p>Proof of Consultation</p>	<p>Issues Raised</p>	<p>EAPs response to issues as mandated by the applicant</p>	<p>Section and paragraph reference in this report where the issues and or response were incorporated</p>
					
<p>Department of Water and Sanitation</p> 			<ul style="list-style-type: none"> No issues raised. 	<ul style="list-style-type: none"> Consultation email together with the BID, MR Co-ordinates, Reg 2.2 map and KML were sent on the 13th of March 2023. Draft Scoping report was shared for 30 days review from 27th of March 2023 	



<p>Interested and Affected Parties</p> <p>List the names of persons consulted in this column, and</p> <p>Mark with an X where those who must be consulted were in fact consulted</p>	<p>Date Comments Received</p>	<p>Proof of Consultation</p>	<p>Issued Raised</p>	<p>EAPs response to issues as mandated by the applicant</p>	<p>Section and paragraph reference in this report where the issues and or response were incorporated</p>
				<p>to the 28th of April 2023 through email.</p> <ul style="list-style-type: none"> A water use license has been lodged. 	
<p>Department of Forestry, fisheries, and the Environment</p>  	<p>18/05/2023</p> <p>Email</p>		<ul style="list-style-type: none"> No issues raised. <p>The department has no objection to the project, however, requires that the final scoping comply with the procedures of the assessment and minimum criteria for reporting on identified environmental themes in terms of sections 24(5)(A) and (H) of NEMA, 1998.</p>	<ul style="list-style-type: none"> Consultation email together with the BID, Reg 2.2 map, MR Co-ordinates and KML were sent on the 13th of March 2023. <p>The comments were acknowledged, and it was also highlighted that the project will adhere, and the applicant has been notified.</p>	<p>Appendix 2</p>





<p>Interested and Affected Parties</p> <p>List the names of persons consulted in this column, and</p> <p>Mark with an X where those who must be consulted were in fact consulted</p>	<p>Date Comments Received</p>	<p>Proof of Consultation</p>	<p>Issues Raised</p>	<p>EAPs response to issues as mandated by the applicant</p>	<p>Section and paragraph reference in this report where the issues and or response were incorporated</p>
					
<p>Department of Labour</p>  <p>Department: Labour REPUBLIC OF SOUTH AFRICA</p> 			<ul style="list-style-type: none"> No issues raised. 	<ul style="list-style-type: none"> Consultation email together with the BID, MR Co-ordinates, Reg 2.2 map and KML were sent on the 13th of March 2023. Draft Scoping report was shared for 30 days review from 27th of March 2023 to the 28th of April 2023 through email. 	

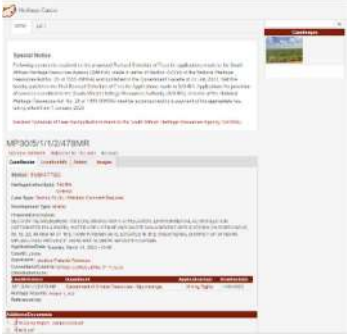
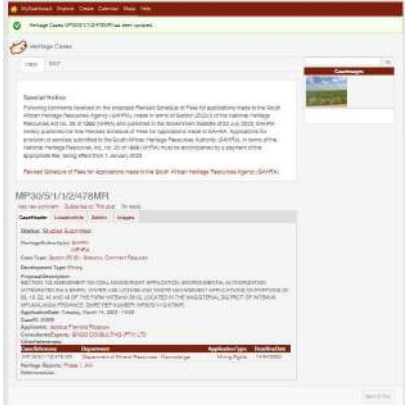
<p>Interested and Affected Parties</p> <p>List the names of persons consulted in this column, and</p> <p>Mark with an X where those who must be consulted were in fact consulted</p>	<p>Date Comments Received</p>	<p>Proof of Consultation</p>	<p>Issues Raised</p>	<p>EAPs response to issues as mandated by the applicant</p>	<p>Section and paragraph reference in this report where the issues and or response were incorporated</p>
<p>Department of Public Works</p> 			<ul style="list-style-type: none"> No issues raised. 	<ul style="list-style-type: none"> Consultation email together with the BID, MR Co-ordinates, Reg 2.2 map and KML were sent on the 13th of March 2023. Draft Scoping report was shared for 30 days review from 27th of March 2023 to the 28th of April 2023 through email. 	
<p>Mpumalanga Tourism</p>  	<p>X</p>		<ul style="list-style-type: none"> No issues raised. 	<ul style="list-style-type: none"> Sensitivity maps were requested via email on the 12th of March 2023. BID was couriered via Postnet on the 14th of March 2023. Draft Scoping report was shared for 30 days review from 27th of March 2023 to the 28th of April 2023 through email. 	<p>Appendix 2</p>

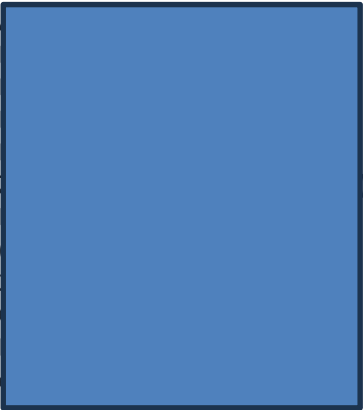
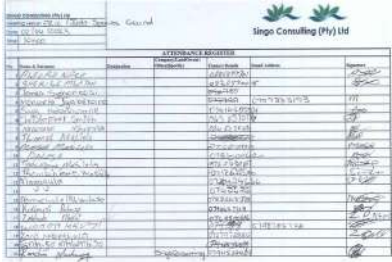
<p>Interested and Affected Parties</p> <p>List the names of persons consulted in this column, and</p> <p>Mark with an X where those who must be consulted were in fact consulted</p>	<p>Date Comments Received</p>	<p>Proof of Consultation</p>	<p>Issued Raised</p>	<p>EAPs response to issues as mandated by the applicant</p>	<p>Section and paragraph reference in this report where the issues and or response were incorporated</p>
	<p>15/05/2023</p> <p>Email</p>		<p>MTPA does not object to the scoping phase and has the following recommendations:</p> <ul style="list-style-type: none"> *A qualified ecologist should do an on-site biophysical study which includes conservation important species which occur on site and what mitigation strategies for coal mine will follow. *An impact risk assessment be done that includes a thorough rehabilitation strategy to ensure that no pollution, erosion and decanting of AMD is released into natural system. * ESA wetlands must be delineated with a 100m and avoided. *A water purification strategy to ensure that clean water is provided for the downstream users must be provided. 	<p>Comments were noted, acknowledged and the comments were shared with specialists who are doing the studies to adhere for EIA phase.</p>	


<p>Interested and Affected Parties</p> <p>List the names of persons consulted in this column, and</p> <p>Mark with an X where those who must be consulted were in fact consulted</p>	<p>Date Comments Received</p>	<p>Proof of Consultation</p>	<p>Issues Raised</p>	<p>EAPs response to issues as mandated by the applicant</p>	<p>Section and paragraph reference in this report where the issues and or response were incorporated</p>
		 <p>The MPA does not object to this Scoping phase, and have the following recommendations:</p> <ul style="list-style-type: none"> A qualified ecologist should do an on-site biophysical study. The biophysical studies should include which Conservation important species occur on site and what mitigation strategies for that area will follow. The MPA further request that an impact risk assessment be done that includes a thorough rehabilitation strategy to ensure that no pollution, erosion and or denuding of land near drainage is allowed into the natural system. The principle of polluter pays must be the main objective to avoid. The ESA wetlands must be delineated with a 100 m, and avoided. A water purification strategy to ensure that clean water is provided for the downstream users must be provided. <p>Please do not hesitate to contact this office if there are any enquiries.</p> <p>Kind Regards</p> 			

<p>Interested and Affected Parties</p> <p>List the names of persons consulted in this column, and</p> <p>Mark with an X where those who must be consulted were in fact consulted</p>	<p>Date Comments Received</p>	<p>Proof of Consultation</p>	<p>Issued Raised</p>	<p>EAPs response to issues as mandated by the applicant</p>	<p>Section and paragraph reference in this report where the issues and or response were incorporated</p>
	<p>X 16/03/2023</p> <p>(Email)</p>	 <p>Our Ref: F IN117 26160 Your ref:</p> <p>Enquiries: Cyeh Buthelesi 031 344 0598 / 079 802 9616 Sasollet Lekaletale 010 345 8570 / 076 305 9116 Zodwa Mamba 010 345 8592 / 071 673 7882 wyleeves@sasol.com</p> <p>27 March 2023</p> <p>SINGO CONSULTING (Pty) Ltd</p> <p>Dear Sir / Madam,</p> <p>SECTION 102 AMENDMENT ON COAL MINING RIGHT AND ENVIRONMENTAL AUTHORIZATION APPLICATIONS THAT WERE LOGGED ON PORTION 02, 05, 19, 22, 48 AND 49 OF THE FARM WITBANK 80 IS</p> <p>In reply to your letter, we would like to advise that we have no objection against the above-mentioned application as Sasol Satellite Operations will NOT BE AFFECTED.</p> <p>This wayleave is valid for 12 months.</p> <p>Thank you for your co-operation in submitting this request.</p> <p>Kind regards,</p> <p>Rachel Mphahle 010 345 8358 Team Lead Gas Pipeline wyleeves@sasol.com Call: 079 805 4588</p>	<ul style="list-style-type: none"> Has no objection against the application as Sasol Satellite Operations will NOT BE AFFECTED. 	<ul style="list-style-type: none"> Email acknowledged. 	<p>Appendix 2</p>

<p>Interested and Affected Parties</p> <p>List the names of persons consulted in this column, and</p> <p>Mark with an X where those who must be consulted were in fact consulted</p>	<p>Date Comments Received</p>	<p>Proof of Consultation</p>	<p>Issues Raised</p>	<p>EAPs response to issues as mandated by the applicant</p>	<p>Section and paragraph reference in this report where the issues and or response were incorporated</p>
<p>Commission on Restitution of Land Rights</p> 	<p>X 03/04/2023</p> <p>Email</p>		<ul style="list-style-type: none"> No existing land claims are available on the properties. 	<ul style="list-style-type: none"> Correspondence noted and appreciated. 	<p>Appendix 2</p>
<p>OTHER INTERESTED AND AFFECTED PARTIES</p>					
<p>South African Heritage Resource Agency</p> 	<p>X</p>		<ul style="list-style-type: none"> No issues raised. 	<p>Consultation was done on the online portal and BID was uploaded on the 14th of March 2023.</p> <ul style="list-style-type: none"> Draft Scoping report was shared for 30 days review from 	<p>Appendix 2</p>

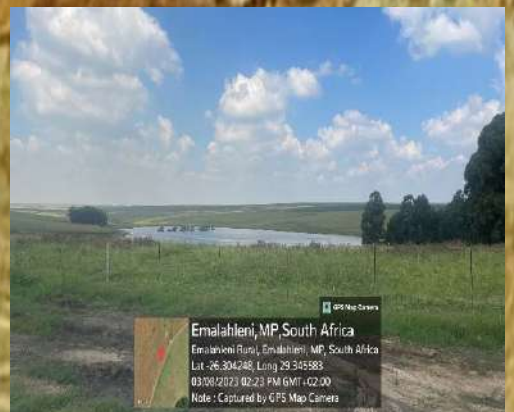
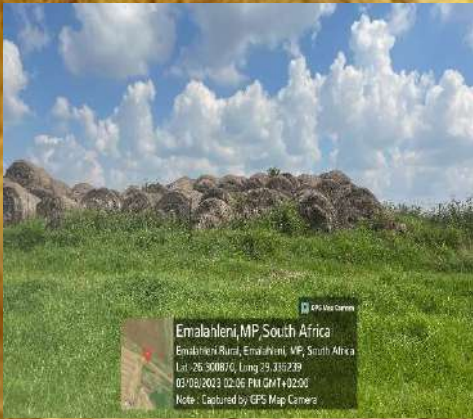
<p>Interested and Affected Parties</p> <p>List the names of persons consulted in this column, and</p> <p>Mark with an X where those who must be consulted were in fact consulted</p>	<p>Date Comments Received</p>	<p>Proof of Consultation</p>	<p>Issues Raised</p>	<p>EAPs response to issues as mandated by the applicant</p>	<p>Section and paragraph reference in this report where the issues and or response were incorporated</p>
		 		<p>27th of March 2023 to the 28th of April 2023 through email.</p> <p>5th of July, a heritage study was loaded on the system for commenting. No comments have been received thus far.</p>	

<p>Interested and Affected Parties</p> <p>List the names of persons consulted in this column, and</p> <p>Mark with an X where those who must be consulted were in fact consulted</p>	<p>Date Comments Received</p>	<p>Proof of Consultation</p>	<p>Issued Raised</p>	<p>EAPs response to issues as mandated by the applicant</p>	<p>Section and paragraph reference in this report where the issues and or response were incorporated</p>
<p>Community Members</p> <p>Time: 10:30 am</p> <p>Venue: Thubelihle sports ground</p> 	<p>02/04/2023</p> <p>Face to face</p>	<p>Community needs</p> <ol style="list-style-type: none"> 1. Training Skills 2. Job Opportunities 3. Bursaries developments 4. tenders Opportunities 5. Business People 6. looked for land 7. No mafisa 8. CK 	<ul style="list-style-type: none"> • No Objection for Community Members, however, require the following to be addressed with the applicant: • Jobs • Bursaries • Relocation due to blasting impacts. • Service provider opportunities as they are not being considered by surrounding mines currently. 	<p>The EAP highlighted that requirements will be shared with the applicant and comments from filled will be presented to aid the applicant to draw a way forward for the identified needs and ensure that the SLP is compliant to the current needs and developments.</p>	<p>Appendix 2</p>

<p>Interested and Affected Parties</p> <p>List the names of persons consulted in this column, and</p> <p>Mark with an X where those who must be consulted were in fact consulted</p>	<p>Date Comments Received</p>	<p>Proof of Consultation</p>	<p>Issues Raised</p>	<p>EAPs response to issues as mandated by the applicant</p>	<p>Section and paragraph reference in this report where the issues and or response were incorporated</p>
					

Due to POPIA, sensitive content are not displayed in this report.

ENVIRONMENTAL ATTRIBUTES



9 The Environmental attributes associated with the sites

Baseline Environment

(a) Type of environment affected by the proposed activity.

9.1 Geology

9.1.1 Local geology

According to the CPR produced by the inhouse geologist, the main Karoo Supergroup basin covers over 50% of South Africa's surface and consists of five age-based groups, which show a change of depositional environment in time. These groups are the Dwyka (glacial), Ecca (shallow marine and coastal plain), Beaufort (non-marine fluvial), Stormberg (aeolian) and the volcanic Lebombo or Drakensberg groups (Johnson et al., 2006). The proposed project area falls within the Witbank Coalfield the which hosts thinner seams that are more sedimentologically and structurally complex. Sediments of Vryheid and Dwyka formations underlay the area which was deposited on a glaciated Pre-Karoo basement consisting of Rooiberg felsites. The deposit is preserved as an outlier underlying the small hill known as Vlooi kop, surrounded by strata of the Dwyka Group (mainly tillites and varved mudstones/shales).

The Vryheid formation is essentially an interbedded succession of sandstone with lesser gritstone, siltstone, and mudstone, which contains five coal seams of the Witbank coalfield. See regional geology Map below.

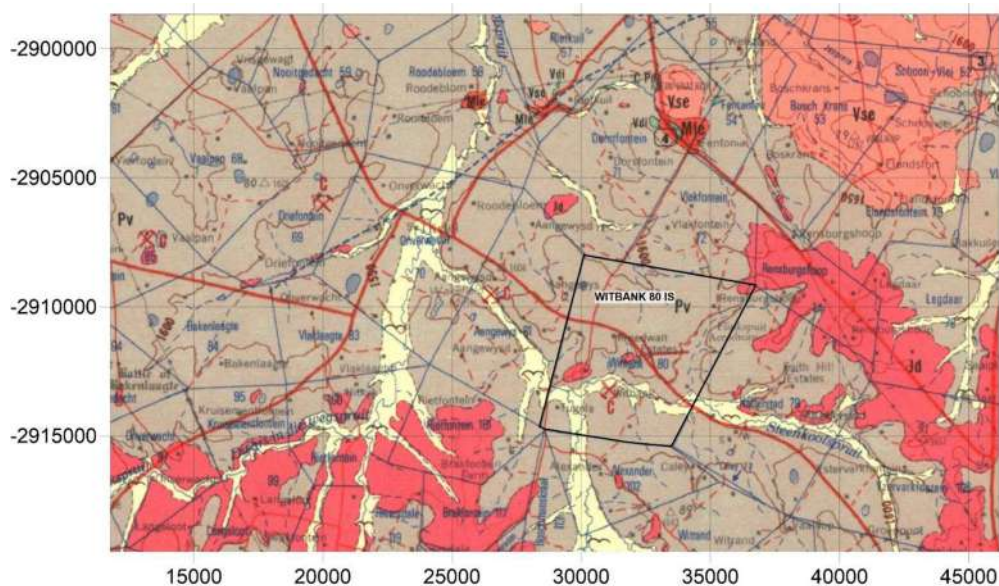


Figure 22: Regional Geological 1:100 000 Map (Andersen Geological Consulting, 2023)

Dwyka Group

The rocks of the Dwyka Group in South Africa are amongst the most important glaciogenic deposits from Gondwana. This Group is named for exposures along the Dwyka River east of Laingsburg and forms the basal succession of the Karoo Supergroup. Dwyka Group strata are mostly contained within bedrock valleys incised into Archean to lower Palaeozoic bedrock (Visser, 1990; Visser and Kingsley, 1982; Von Brunn, 1996). The lithologies in the areas underlying the coalfields of South Africa consist of a heterolithic arrangement of massive and stratified polymictic diamictites, conglomerates, sandstones, and dropstone-bearing varved mudstones. The easily identifiable lithologies form a good marker below the coal bearing 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.

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

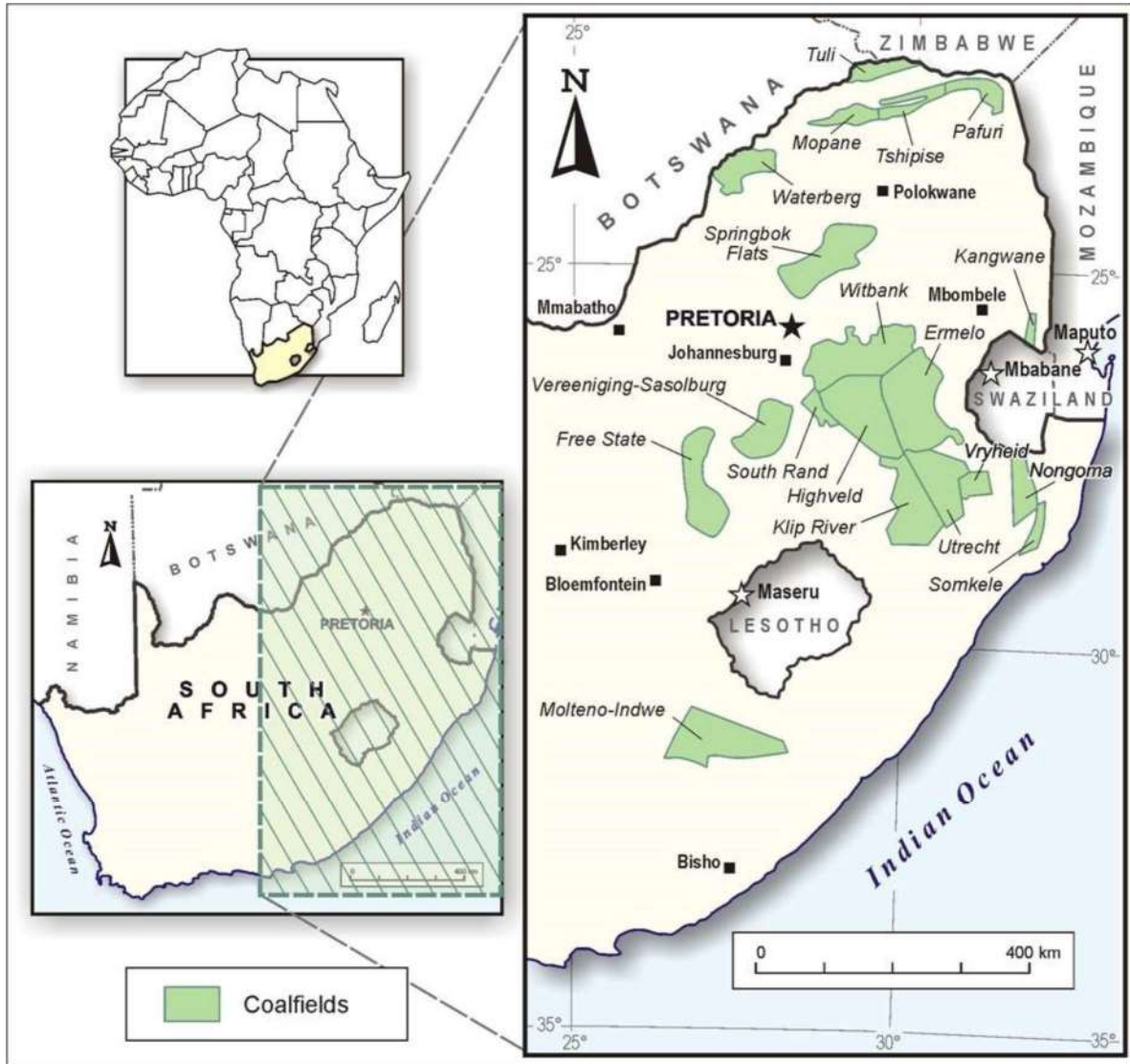


Figure 23: South Africa’s Coalfields, Snyman (1998)

In South Africa, based on the literature; only 19 coalfields are generally accepted which cover an area of approximately 9.7 million hectares (ha). The distinction between coalfields is based on geographic considerations and variations in the mode of sedimentation, origin, formation, distribution, and quality of the coals. (Hancox & Annette, 2014).

9.1.2 Regional geology

The distribution of geological formations in the project area includes rocks from Dwyka and Ecca Group of the Main Karoo Supergroup.

Witbank Coalfield

The Witbank Coalfield is situated in the northern part of the MKB, extending from roughly 25°30'S to 26°30'S by 28°30'E to 30°00'E, and covering an area of over 568,000 ha. It extends some 90 km in a west–east direction, from the towns of Springs in the west to Belfast in the east, and 50 km in a north–south direction, from the town of Middelburg in the north to Rietspruit in the south. The northern boundary of the coalfield is formed by pre-Karoo basement rocks, whilst the southern boundary in the central portion of the basin is widely considered to be the sub-outcrop against a basement palaeohigh known as the Smithfield Ridge. Therefore, the property lies within the Southern Witbank coalfield and is properly separated from the field by this Smithfield Ridge belonging to the Bushveld Igneous Complex. The coal seams occur within the Vryheid Formation of the Eccu Group and can be correlated with the coal seams of the Witbank coal field. There are usually five coal-bearing zones, numbered from Seam No. 1 to Seam No. 5 of which Seam No. 5 is the uppermost coal zone.

In the Witbank area, the lowermost seam (Seam No. 1) is not developed as the deep boreholes intersected the Dwyka Formation. No. 2 Seam is present in most of the area but is not thick enough the warrant exploitation. No. 3 Seam is poorly developed in most areas. Where it does occur, it is 10 to 20 cm thick and lies about 21 to 34m above No. 2 Seam. The sedimentary rocks between these two seams consist mainly of sandstones, interbedded with minor shales and sandy shales.

Seam No. 4 is well-developed in the entire area under consideration. It occurs about 1.8m above Seam No. 3 and reaches thicknesses of over 6m in places. Quality-wise it may be divided into a rather low-grade upper zone and a significantly higher-grade lower zone. The upper zone cannot be up-graded by washing, while the lower zone shows a very good potential for yielding a high-grade product by washing in a suitable medium. The lower zone is often separated from the upper inferior zone by thin black shale which may be up to 60cm thick. The lower zone is interbedded with thin layers of shale and/or sandstone near the top.

Seam No. 5 is multi-seamed consisting of from two to four layers of coal interbed with black shales or sandy shales. It is separated from Seam No. 4 by between 30 and 37 metres of sandstone. The uppermost seam ranges in thickness from 20 to 40cms and is usually good quality. It is separated from the main seam by 50 to 90cm of black shale. The main seam ranges in thickness from 40 to 80cm.

Seam No. 5 outcrops in the southern part of the area on Witbank 80 IS and is weathered to a vertical depth of about 10m. It is overlain mainly by sandstone with thin intercalated bands of black shale.

Dolerite is absent on surface over most of the area, but a sheet of between 12 and 15m in thickness is present in depth. In places it lies below No. 2 seam. In other localities it is above Seam No. 2 and in places above Seam No. 4. This dolerite has caused devolatilization of the coal in some areas and Seam No. 4 has been badly affected in places (Zietsman, 1982).

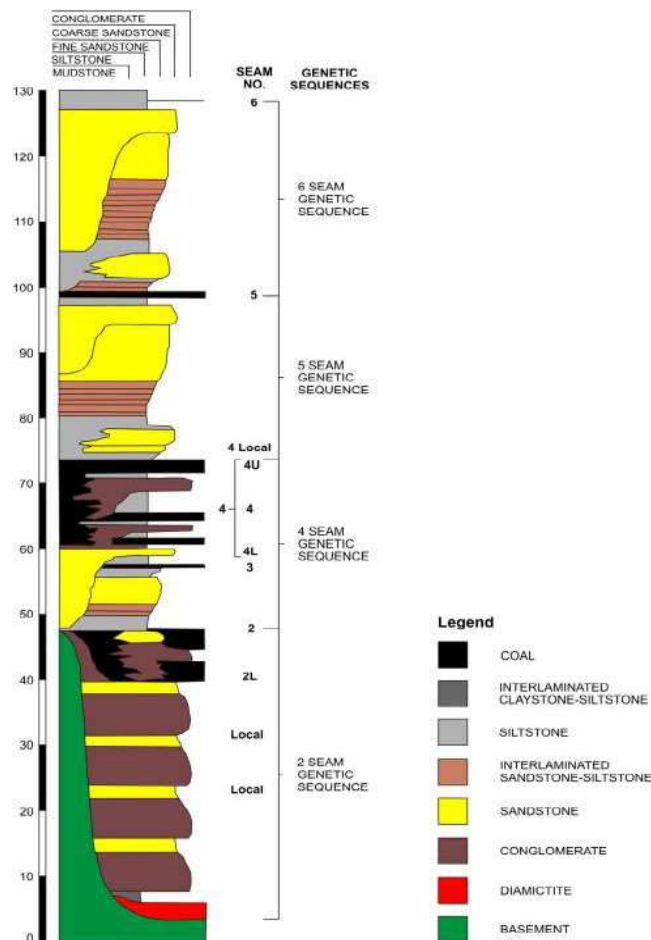


Figure 24: The stratigraphic column of the coalfield (Cairncross and Cadle,1988).

Vryheid formation

According to the CPR produced by the inhouse geologist in association with the CPR produced by Andersen (2022) , the proposed mining right project area comprises of the Vryheid formation. The dominant rocks of the Vryheid formation that can be found are sandstones together with subequal or subordinate mudrock/rhythmite. The base of an idealised coarsening upwards deltaic cycle in the eastern part of the Vryheid formation consists of dark grey, muddy siltstone resulting from shelf suspension deposition in anoxic water of moderate depth. Combinations of these rock types are often found in the form of interbedded siltstone, mudstone, and coarse-grained sandstone.

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; Stavarakis, 1989; Cadle et al., 1982) and where the basin was the deepest. According to SACS (1980) the basic concept, distinguishing features and boundaries of the Vryheid Formation are those of the “Middle Ecca” as described by Du Toit (1954) and others. Prior to

1973 studies of the Vryheid Formation were largely stratigraphic. This situation changed when Hobday (1973) postulated deltaic depositional systems for the Vryheid Formation, and academic studies became more depositional process orientated.

Several 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).

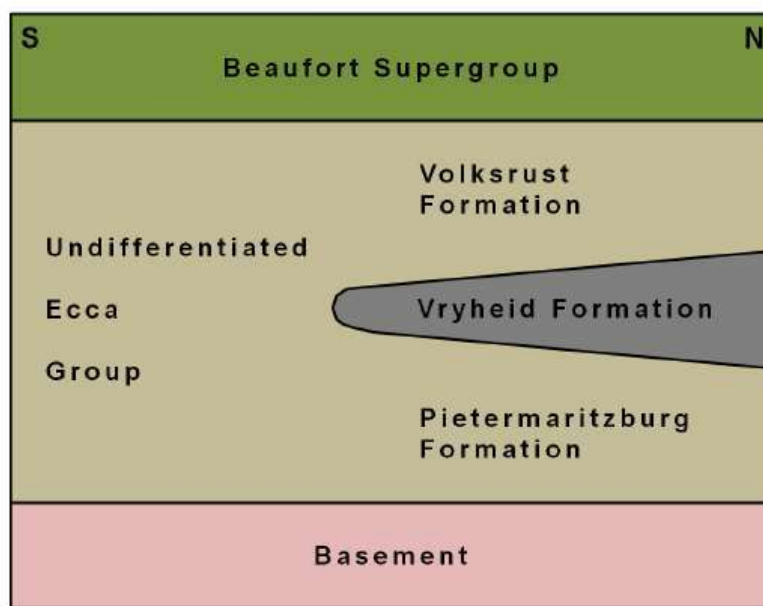


Figure 25: Schematic north-south oriented stratigraphic section of the Ecca Group in the northeast corner of the Karoo Basin.

Local geology and coal seams

Witbank coalfield

The project area is situated in the Witbank Coalfield. The Witbank coalfield is, historically, the most important coal-producing region in South Africa. Bituminous coal is hosted in the Permian Vryheid Formation (Karoo Supergroup) and five coal seams exist in the region, although not all are economically exploitable. About 22 coal mines in the area around Witbank. Some dumps are burning, in part already for decades.

The basin is a multiple-seam deposit with the development of five major seam horizons, which may, in places, be composite seams. The Coalfield is situated in the northern part of the Main Karoo Basin, extending from roughly 25°30'S to 26°30'S by 28°30'E to 30°00'E, and covering an area of over

568,000ha.

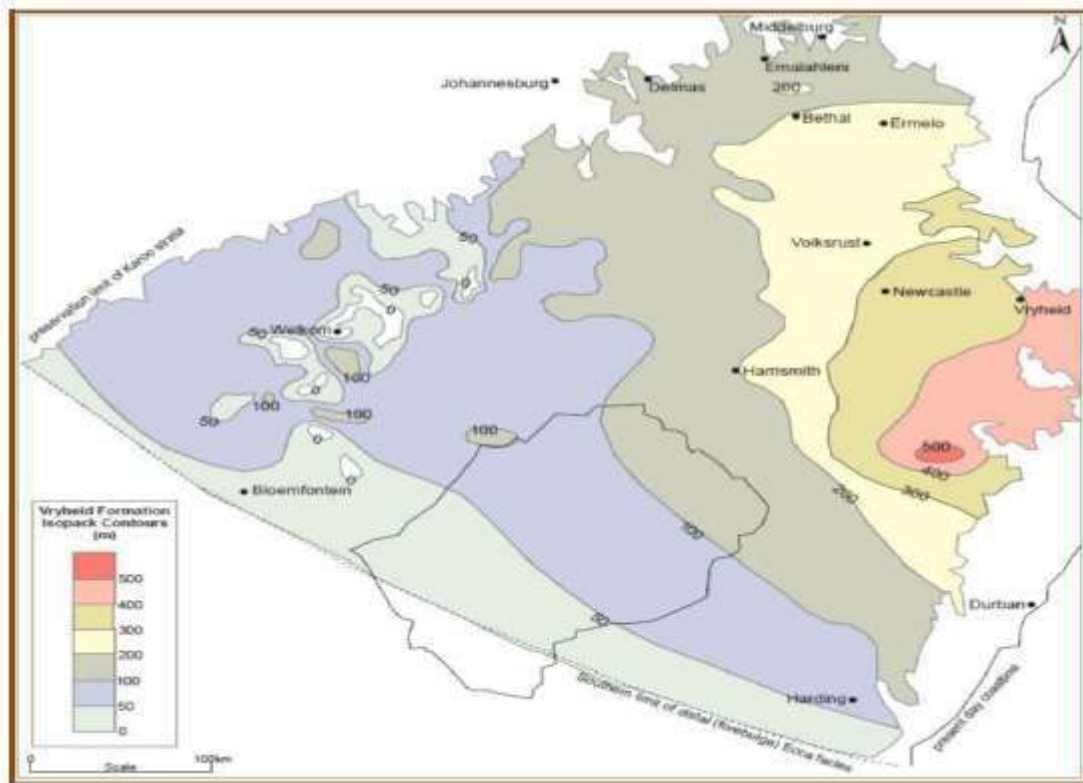


Figure 26: Illustration of the Witbank Coalfield.

The project falls under the Vryheid formation and the rocks of the Permian Vryheid Formation and Jurassic aged dolerites dominate the surface exposures of the coalfield. The Vryheid Formation is underlain by the Dwyka Group and is gradually overlain by mudstones (and shale) and sandstones of the Volksrust Formation. The typical colours for the Vryheid Formation are grey and yellow for the sediments and black for the coal seam. The thickness of the grey shale can vary, and this is interlayered with variable yellow sandstone and coal seams, see Figure 27.

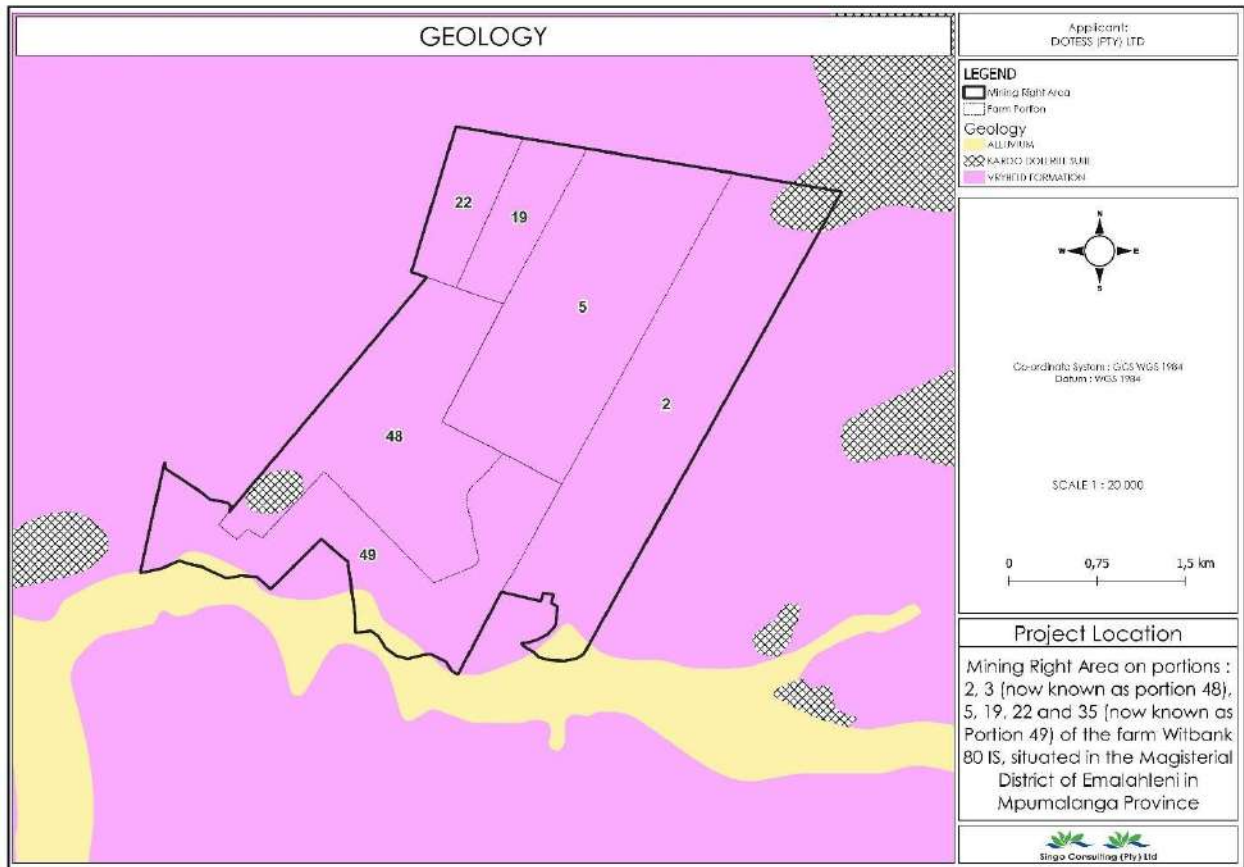


Figure 27: The geology map of the area (Singo Consulting, 2023)

Exploration outcomes

Several exploration boreholes were drilled within the prospecting right area. From the results of the drilling results, it was determined that the coal reserve within the prospected area were sufficient to warrant a viable mining operation.

In 1982 A.L. Zietsman evaluated 22 boreholes that had been drilled by the Anglo-American Corporation of South Africa during 1967 and 1968 using copies of borehole logs obtained from the Fuel Research Institute of South Africa. Zietsman evaluated the drilling done on the farms Witbank 80 IS and Kafferstad 79 IS. Zietsman (1982) concluded that the properties under review contain approximately 184 million tons of coal in situ of which 135 million tons can be classified as bituminous coal, about 40 million as lean coal (pseudo anthracite) and 9 million as inferior burnt coal. Of the 135 million tons of bituminous coal, about 52.26 million tons can be mined by opencast methods and an average stripping ratio of 6:1. About 43.5 million tonnes can be mined by underground mining method.

Seam No. 5 outcrops in the southern part of the area on Witbank 80 IS and is weathered to a vertical depth of about 10m. It is overlain mainly by sandstone with thin intercalated bands of black shale. Dolerite is absent on surface over most of the area, but a sheet of between 12 and 15m in thickness is present in depth. In places it lies below No. 2 seam. In other localities it is above Seam No. 2 and in

places above Seam No. 4. This dolerite has caused devolatilization of the coal in some areas and Seam No. 4 has been badly affected in places (Zietsman, 1982).

Certain portions of the 5 and 4 Seam can be mined by opencast methods, but 4 Seam can also be accessed by underground methods with access via an audit. The No. 2 Seam attains economic grades in isolated areas. The main target is the No. 4 lower seam which contains about 25 million of extractable tonnes of ROM coal.

Resource Estimation

According to Andersen (2022), the total resource in situ of 4 and 5 seam is 82.49 Mil tonnes (see below)

Table 14: Resource Estimation

DOTESS (PTY) LTD			
Resource Estimate (Volume X 1.25kg/cum)			
	Area	Million cum	Million tonnes
5 Seam	Open Cast	2.17	2.71
	Total Area	28.31	35.38
4 Seam	Below Open Cast	3.71	4.71
	Total Area	37.69	47.11
4 and 5 Seam Total Resource In Situ			82.49

Regulation 11(1)(e): The details of the market for, the markets requirements and pricing in respect of the mineral concerned.

A list of products and their proportionate quantities

According to the report by Andersen (2022), the products that will be produced are steam and export coal, and the total for each is estimated to be 55 254 000 and 30 288 000 respectively.

Table 15: Steam and Export Coal

Location	Steam Coal	Export Coal
Pit No 1	1 330 000	3 300 000
	13 034 000	
	11 138 000	7 425 000
Pit No 2	415 000	1 748 000
	7 010 000	
	4 117 000	2 745 000
Underground		9 410 000
	14 250 000	
	3 960 000	2 640 000
		3 020 000
TOTALS	55 254 000	30 288 000

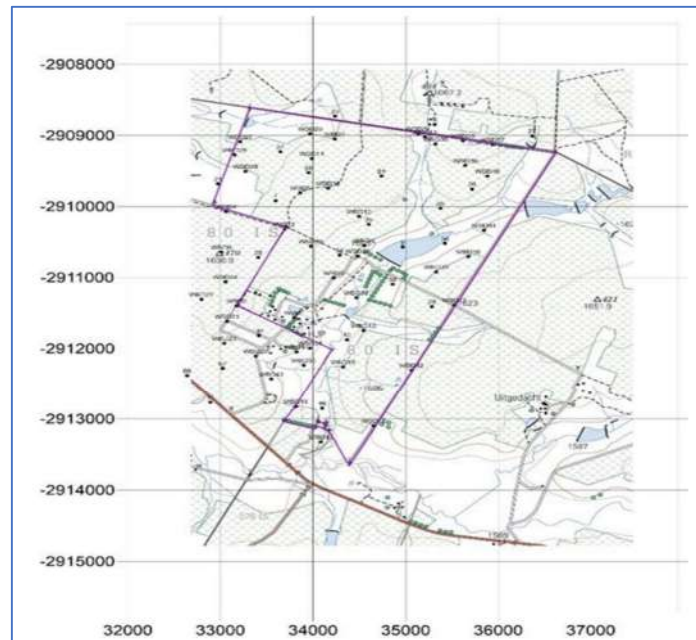


Figure 28: Historic boreholes that were drilled by the Anglo-American Corporation of South Africa during 1967 and 1968 (Andersen, 2022).

Dotess (Pty) Ltd entered into a joint venture agreement with Sudor Coal (Pty) Limited with the intention to mine certain portions of the farm Witbank 80 IS which is within the Kriel Magisterial District. Dotess (Pty) Ltd applied for and obtained a prospecting right and subsequent to the issuing of the right, 45 exploration boreholes were drilled within the prospecting right area (possibly 2008). From the results of the drilling it was determined that the coal reserve within the prospected area was sufficient to warrant a viable mining operation.

Certain portions of the 5 Seam can be mined by opencast methods, but they suggested that 4 Seam can only be accessed by underground methods with access via an adit. The No. 2 Seam attains economic grades in isolated areas. The main target is the No. 4 lower seam which contains about 25 million of extractable tonnes of ROM coal. Dotess (Pty) Ltd lodged an application for a mining right (Ref No. MP30/5/1/2/2/478) which was accepted on the 14th July 2010. (Tefu, March, 2012). Subsequent to the submission of the Scoping Report, environmental baseline data has been obtained through various agencies, and was used for the compilation of the Environmental Impact Assessments Report (Tefu, 2012). More information has been attached in appendices as per the updated CPR undertaken by Andersen Geological Consulting (Pty) Ltd. July 2023.

9.2 SOIL

A soil Study undertaken by a specialist has reference.

The soil classes map in Figure 29 below, shows that the Mining Right area is largely covered with Red or yellow structureless soils with a plinthic horizon.

9.2.1 Red or yellow structureless soils with a plinthic horizon

The Soil class has favourable water- holding properties and has im-perfect drainage and the soil is unfavourable in high rainfall area. Crumbly and granular soils have the best structure for favourable physical attributes. The best infiltration, water-holding capacity, aeration, and drainage are all provided by this kind of structure. The supply of nutrients and the activities of soil microorganisms are both good. The properties of Red or yellow structureless soils with a plinthic horizon has experienced a localized build-up of iron and manganese oxides under varying conditions. clear reddish-brown, yellow-brown, or black strains in the water table that cover more than 10% of the horizon; Has grey colours of gleying in the horizon or immediately underneath it; and is not a characteristic soft carbonate horizon.

9.2.2 Red apedal soils

These soils have a structure that is weaker than moderate blocky or prismatic in the moist state, if structure is borderline, CEC (NH₄OAc, pH7) per kg soil is less than 11cmol (+)/kg soil. These soils are non-calcareous in any part of the horizon which occurs within 1500mm of the soil surface but may contain infrequent, discrete, relict lime nodules in a non-calcareous soil matrix. It does not have alluvial or aeolian stratifications. The B horizons that have uniform colours, falling within the range defined as red and that in the moist state, lack well-formed peds other than porous micro-aggregates, qualify as red apedal. The concept of these macroscopically weakly structured or structureless materials embraces that kind of weathering that takes place in a well-drained oxidizing environment to produce coatings of iron oxides on individual soil particles (hence the diagnostic red colours) and clay minerals dominated by non-swelling 1:1 type.

9.2.3 Yellow apedal soil

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

may be found on all types of parent material.

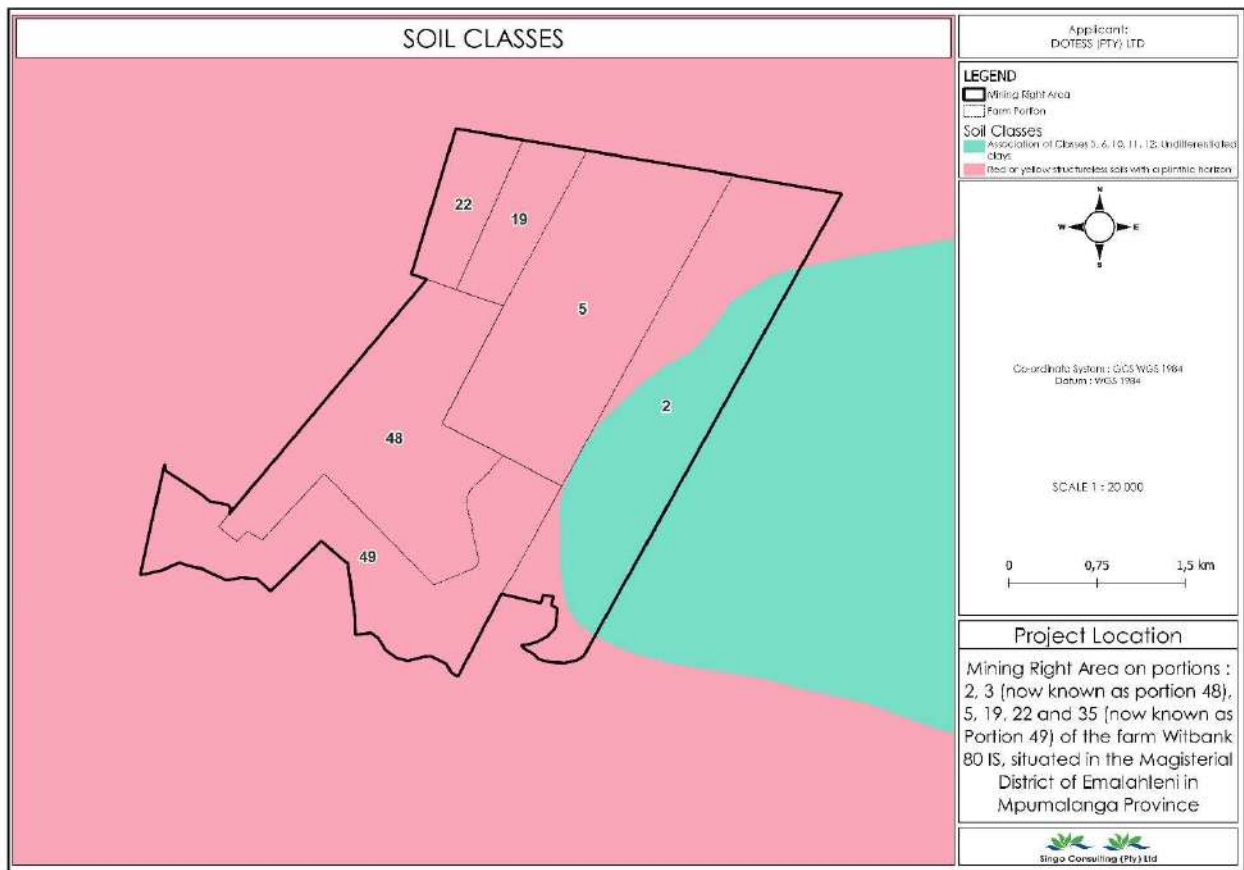


Figure 29: Soil classes map encountered. (Singo Consulting, 2023)



Figure 30: Soil type observed onsite.

10 CLIMATE

10.1 Regional climate

The study area is situated in the Mpumalanga Highveld Region, which is a summer rainfall region. The climate is temperate with warm summers and cold, dry winters. Precipitation usually occurs in summer, as mist, rain, and hail. Convictional thunderstorms are common and the source of most precipitation. Hail can be expected to occur about six days per year. The average annual rainfall is between 601 mm and 800 mm with 85 % of this falling in the high rainfall months (October-March). The usual highveld weather conditions prevail with warm summers and cold winters with the main temperature at 14:00 in winter being about 17°C. The climate of the area under investigation is classified as the Highveld region (Region H), which is defined as a climate with a temperate to warm temperature and summer rains.

The highest mean daily maximum temperature of >25°C occur between December and February. Average maximum temperatures in the winter months (May-August) vary between 16.9°C and 20.1°C. Sharp frosts are common in winter. In summer, average minimum temperatures do not drop below 12.7°C, in contrast to the June/July minimum of 0°C and 0.2°C respectively. An extreme maximum temperature of 34.7°C has occurred in January, whilst an extreme minimum of -12.4°C has been recorded in July. Frost can be expected from the beginning of May until mid-September, with an average of fifty-eight frost days a year.

The prevailing wind direction throughout the year is from the north-west, but storm winds (i.e., high velocity winds) generally blow from the south-east, with the strongest winds occurring in late winter and early spring. Maximum evaporation occurs in summer (October-January), due to high summer temperatures. The annual rain fall of the area in question is between 601-800 mm. See Figure 31.

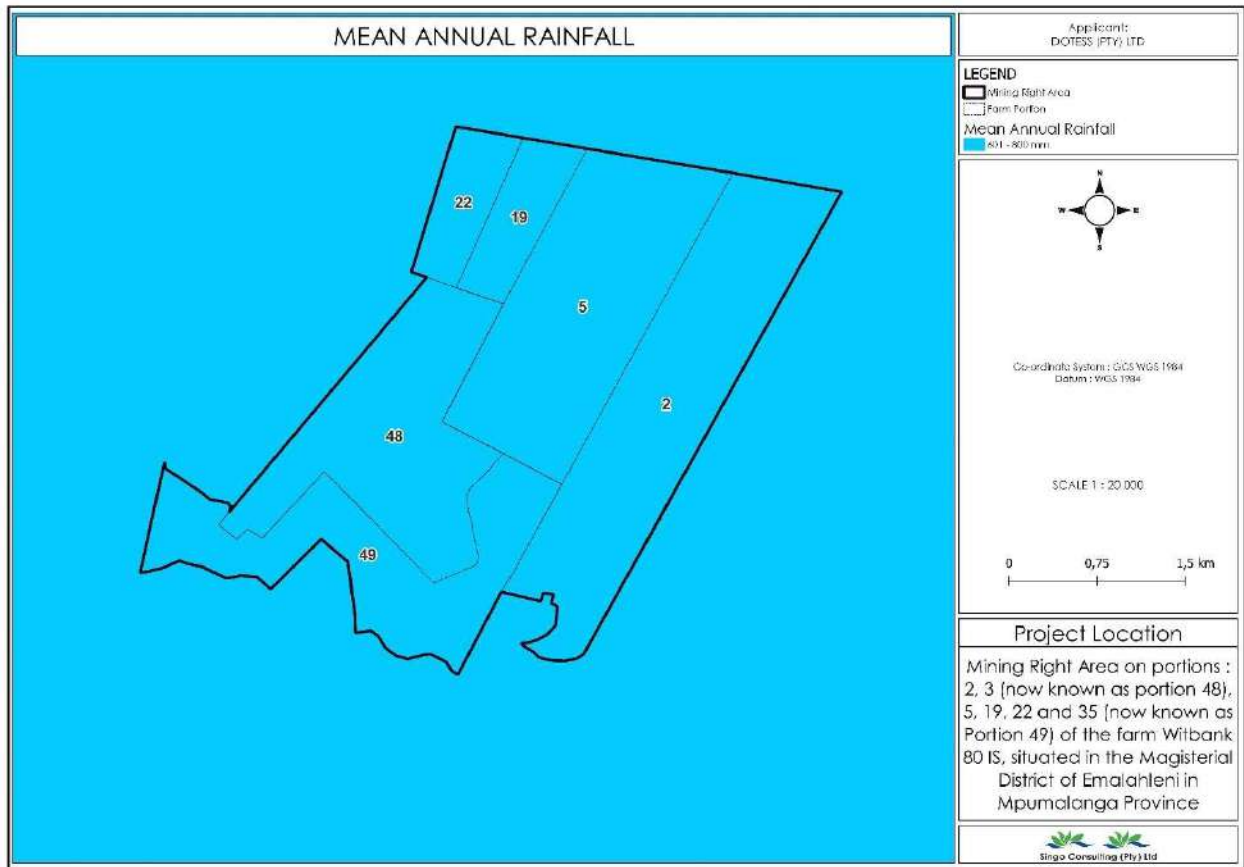


Figure 31: Rainfall in the area (Singo Consulting, 2023)

10.2 Local climate

The climate is a typical Highveld climate and is generally dry with moderate summers and cold winters. The mean monthly and mean annual rainfall is 59 mm and 711 mm respectively. The mean monthly wind direction is north-west, whilst the mean monthly wind speed is approximately 4.4 m/sec. The Middelburg area has the following features:

- Warm to hot summers with average temperatures being 27°C, extremes of up to 35°C are sometimes encountered;
- Cold winters with average temperatures being 15°C, extremes of up to 10°C are sometimes encountered;
- Drought periods during the rainy season are frequent to occasional; 0 - 9 rain days per month may be expected;
- Low lying topographical areas experience heavy mist from April to September;
- Hail occurs on average 2.8 days per annum; and
- Frost occurs from 120 - 150 days per annum from April to September.



Figure 32: Witbank's high and low temperatures.

10.3 Local temperatures, rainfall, and wind

❖ Temperature

In the Bethal area, the summers are long, comfortable, wet, and partly cloudy and the winters are short, cold, dry, and mostly clear. Over the course of the year, the temperatures typically vary from 0.0° C to 24°C and is rarely below -4°C or above 28°. The warm season lasts for 5 months from October 25th to March 23rd, with an average daily high temperature above 23°C. The hottest month of the year in Bethal is January with an average high of 24° and low of 13°C. The cold season lasts 2 months, from June 2nd to July 29th, with average daily high temperatures below 18° C. The coldest month of the year is July, with an average low of 0°C and a high of 17°C. See Figure 33.

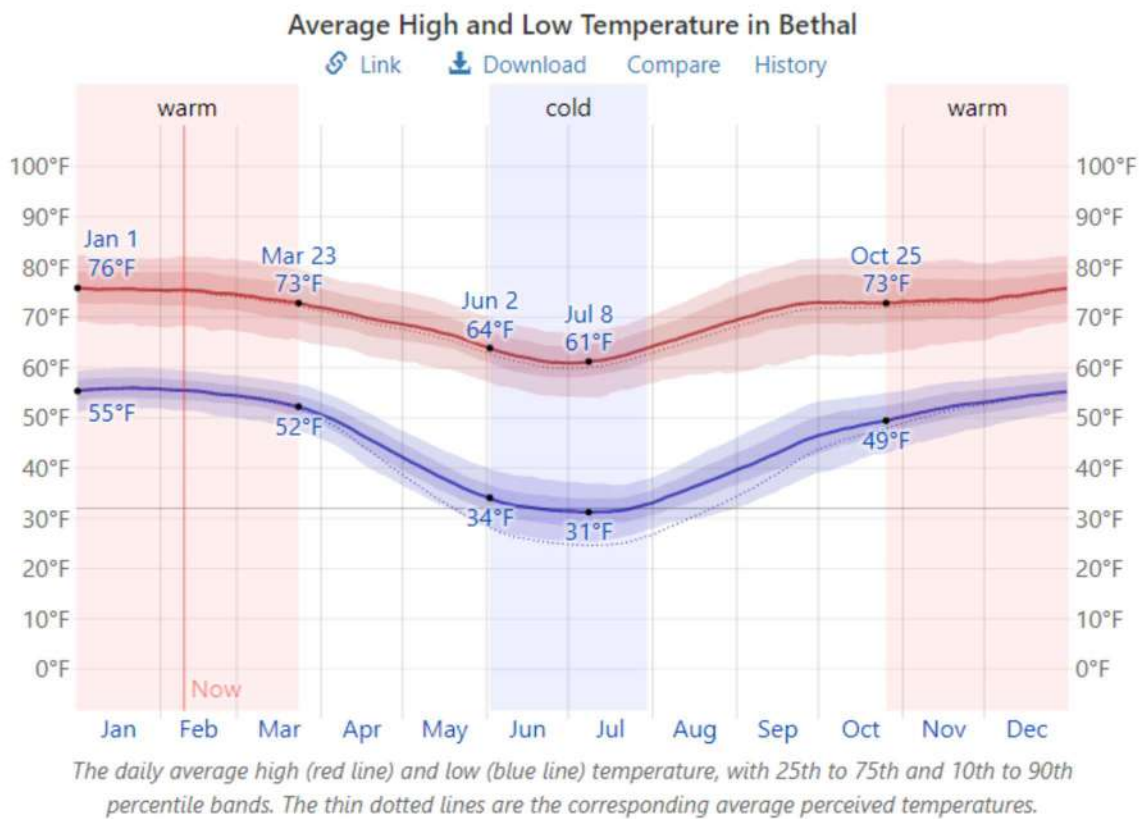
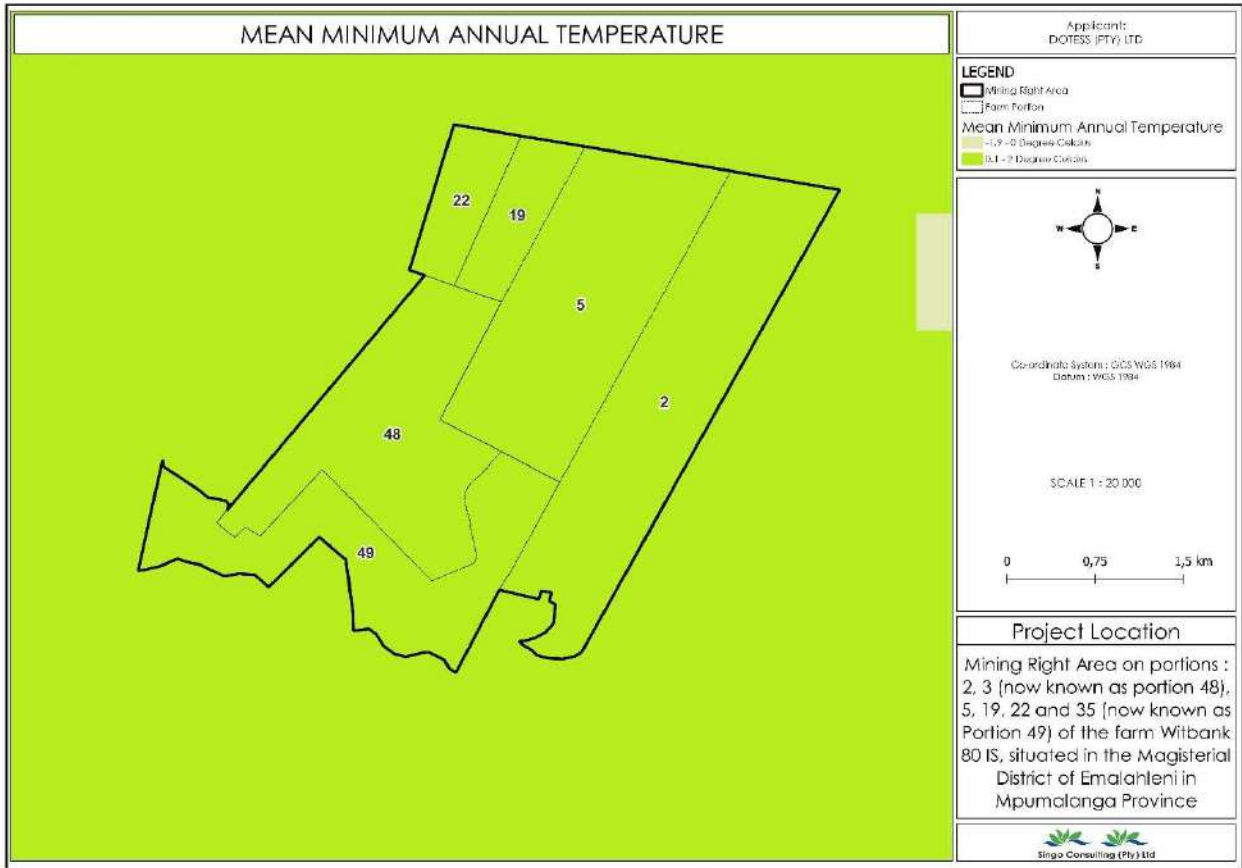


Figure 33: Annual temperature ranges (Singo Consulting, 2023) and (Andersen Geological Consulting, 2023)

The area is a slightly moist area. Less rainfall occurs in the area, as shown in Figure 34.

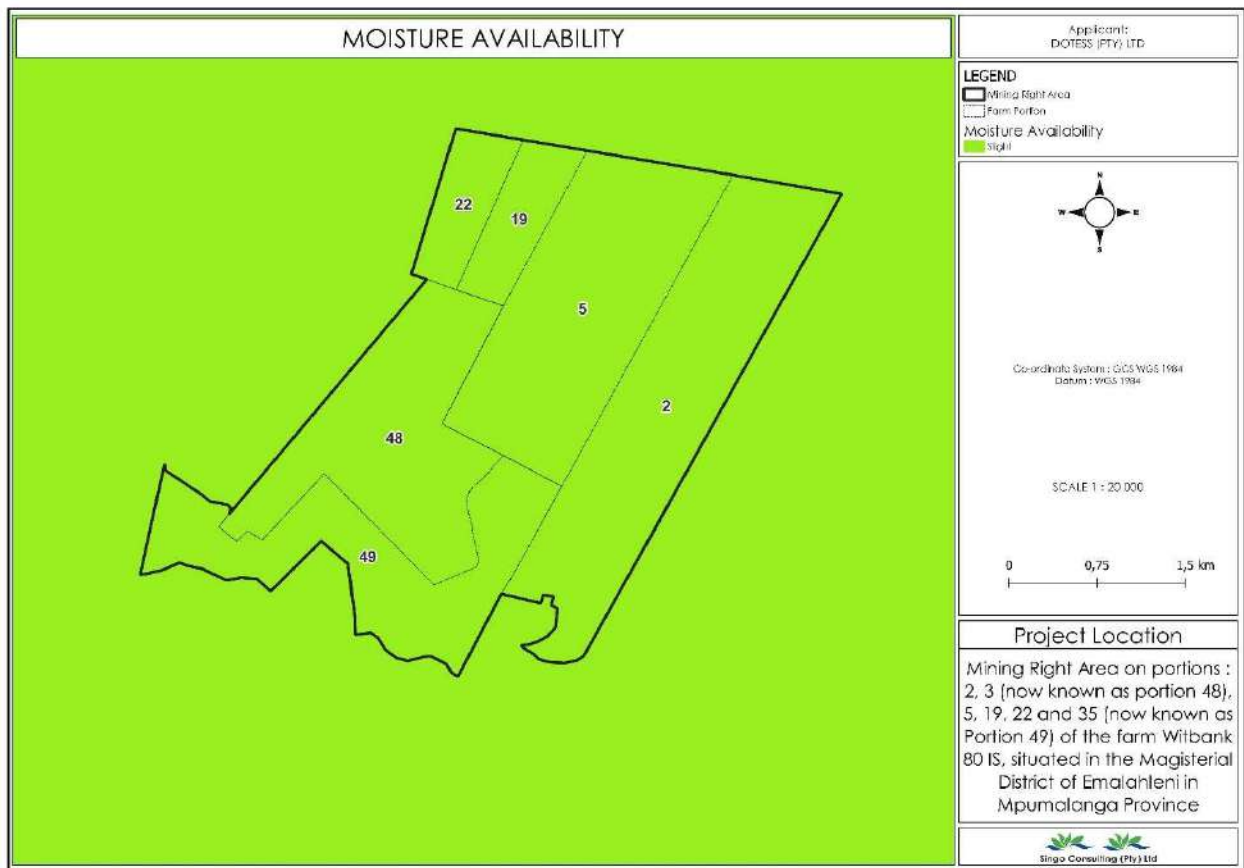


Figure 34: Moisture content (Singo Consulting, 2023)

❖ Wind

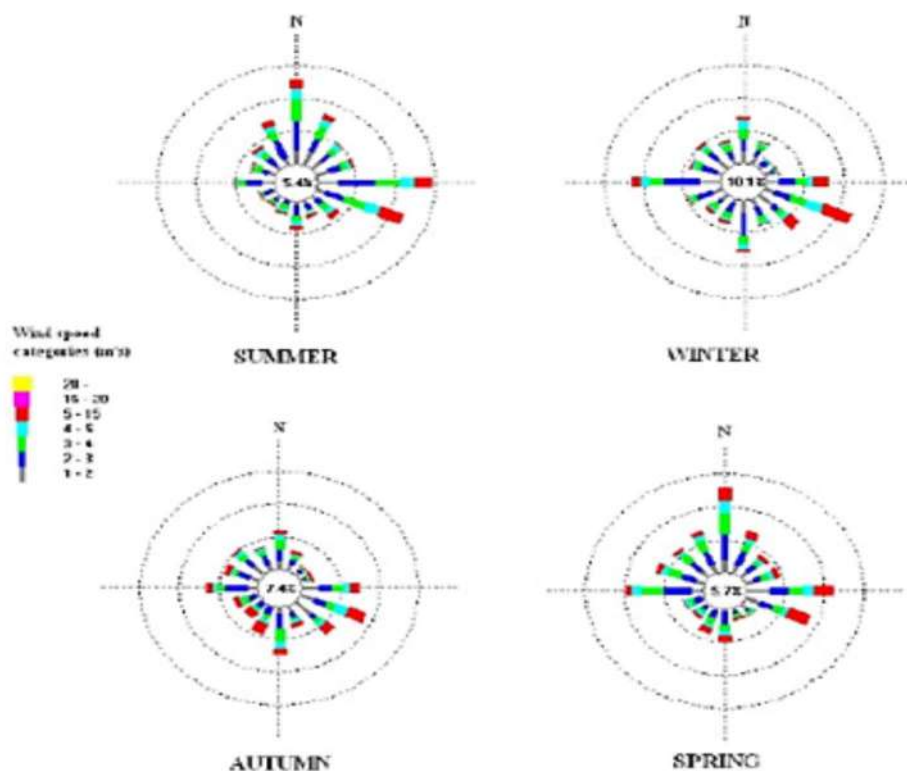
The mean monthly wind direction is northwest, and the mean monthly wind speed is approximately 4.4m/sec. The north-westerly winds continue to be more pronounced in the summer and during the autumn months the high energy north north-easterly and south-easterly winds increase in occurrence. In the winter a similar wind frequency distribution as that of autumn continues and in the spring months the energy of the wind decreases and the winds from the northerly quadrant are more pronounced (Golder, 2008).

Wind roses summarize the occurrence of winds at a specified location via representing their strength, direction, and frequency. Calm conditions are defined as wind speeds of less than 1m/s which are represented as a percentage of the total winds in the centre circle. Each directional branch on a wind rose represents wind originating from that specific cardinal direction (16 cardinal directions). Each cardinal branch is divided into segments of different colours which represent different wind speed classes.

For the current wind roses, wind speed is represented in classes, 1 to 2 m/s in blue, 2 to 4 m/s in dark green, 4 to 6 m/s in light green and > 6 m/s in yellow. Each circle represents a percentage frequency of occurrence. Between 00:00 to 05:59, winds are predominantly from the north (15% of the time) and

north north-east (13% of the time). During the morning (06:00 to 11:59), winds are predominantly from the north (15.5% of the time) and north-north-west (10.5% of the time). During the afternoon (12:00 to 17:59), winds are predominantly from the north-west (14.5% of the time) and north north-west (12% of the time). During the evening (18:00 – 23:59), winds are predominantly from the north (11.0% of the time) and north-north-east (10.75% of the time). During summer (DJF), winds are predominantly from the north (17.5% of the time) and north north-east (10.5% of the time).

During autumn (MAM), winds are predominantly from the east (10.5% of the time) and east-south-east (9.25% of the time). During winter (JJA), winds are predominantly from the south-east (13.75% of the time) and east-south-east (13.5% of the time). During spring (SON), winds are predominantly from the north (22.5% of the time) and north-north-east (13%). The average monthly wind speed is 10.26 m/s for the period 1993 - 2003. The maximum wind speed of 13.6 m/s was measured in October 1995 and the minimum wind speed of 8 m/s was experienced in June and July 2000.

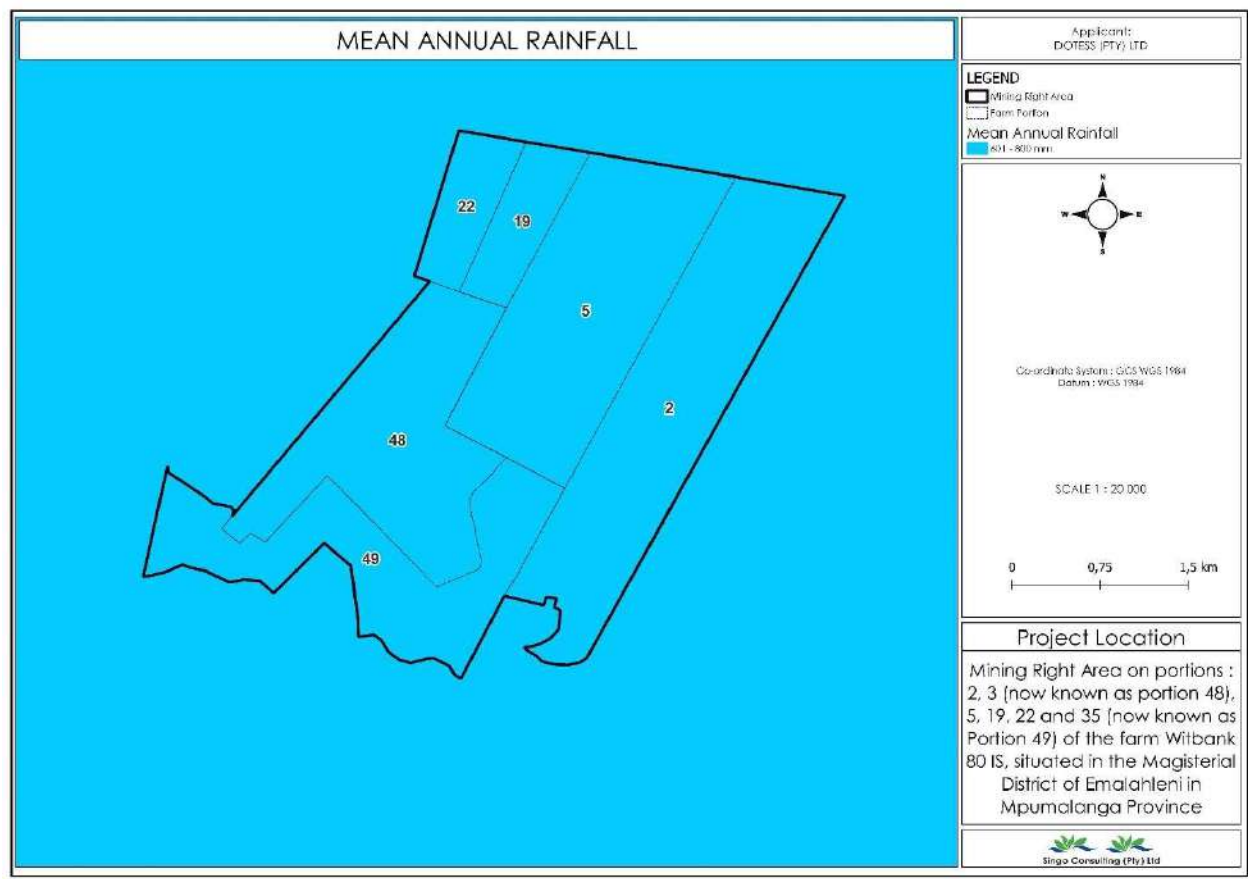


Month	N		NE		E		SE		S		SW		W		NW	
	n	v	n	v	n	v	n	v	n	v	n	v	n	v	n	v
Jan	67	4.3	124	4.0	119	4.5	92	5.1	40	4.6	47	4.3	45	3.8	149	3.8
Feb	48	4.1	108	3.8	139	4.1	135	4.9	61	4.5	48	3.9	41	3.5	91	3.7
Mar	53	3.9	99	3.7	16	3.7	99	4.5	50	4.1	56	4.1	43	3.5	111	3.9
Apr	50	4.0	88	3.5	94	4.0	55	4.2	45	4.3	71	4.4	71	4.5	129	4.0
May	54	4.4	66	3.7	61	3.9	62	4.5	47	4.2	79	4.5	67	4.7	116	4.1
Jun	48	4.1	47	3.7	59	4.1	42	4.8	46	4.7	99	4.5	76	4.3	115	4.3
Jul	43	4.1	66	3.7	64	4.1	62	4.9	54	4.6	84	4.5	57	4.2	121	4.1
Aug	80	4.9	96	4.4	97	4.3	33	5.6	35	4.9	75	4.9	65	4.9	192	4.7
Sept	115	4.8	134	4.8	101	5.0	48	5.7	32	4.1	53	5.1	59	5.0	203	4.8
Oct	115	4.5	139	4.7	116	5.4	58	5.6	41	4.9	54	4.7	47	4.8	223	4.8
Nov	105	4.4	135	4.4	110	5.0	56	5.3	37	4.9	45	4.6	55	4.3	229	4.7
Dec	91	4.2	138	4.1	102	4.8	55	4.9	35	4.5	47	4.9	55	4.2	194	4.2
Avg	72	4.4	103	4.1	98	4.4	66	4.9	44	4.5	64	4.5	57	4.4	156	4.4

Figure 35: Wind characteristics of the areas

❖ Rainfall

Annual rainfall values range from 601 mm 800 mm with an average of approximately 754 mm per annum. Most precipitation occurs over the period November to January with an average of approximately ninety (90) rain days per annum. Rainfall over the period May to September is generally low or absent, with a noticeable increase in the months of October to April. Rainfall events in the region occur mainly in the form of thunderstorms and heavy showers.



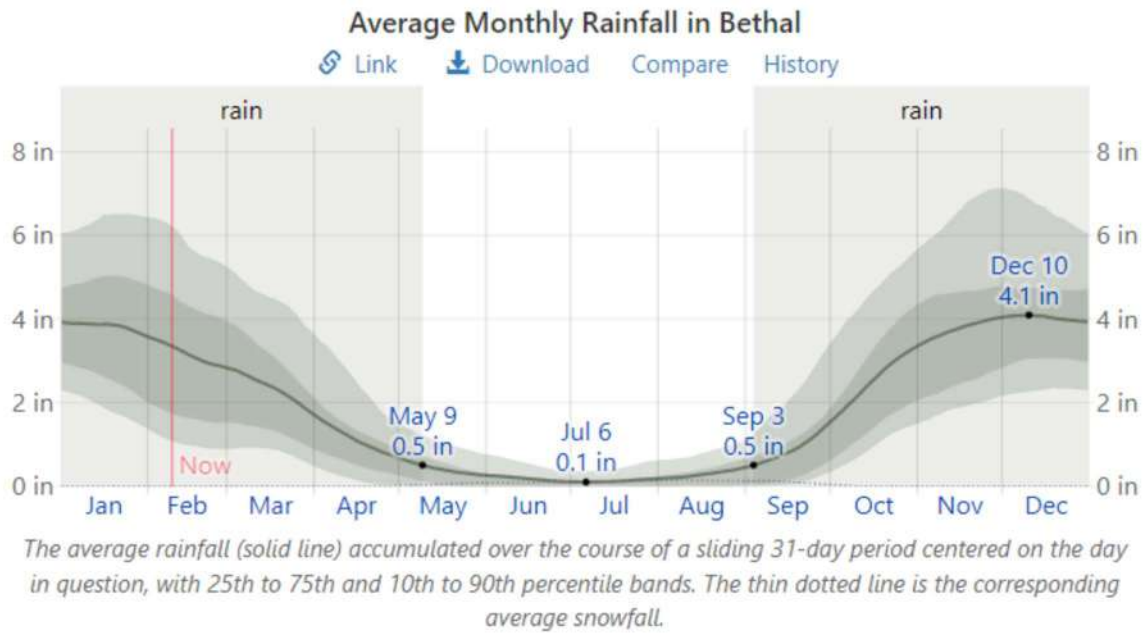


Figure 36: Mean Annual Rainfall (Singo Consulting, 2023) and (Andersen Geological Consulting, 2023)

❖ **Evaporation**

Gross annual average — All pan evaporation at Bethal is 1,702 mm, and at Kriel, 1,733 mm. Maximum evaporation occurs in summer from October to January, due to high summer temperatures. Thunderstorms are frequent during the rainy season and are usually accompanied by lightning, heavy rain, strong winds and sometimes hail. The storms are highly localised.

Table 16: Mean Monthly Evaporation

Month	Mean monthly evaporation (mm)
January	179.8
February	151.1
March	147.8
April	111.1
May	94.8
June	79.2
July	89.0
August	132.0
September	167.0
October	186.6
November	167.6
December	195.9
Annum	1702.0

11 Topography

The map below shows the terrain of the region. A topographic map is a map that accurately and to scale displays both natural and man-made features on the surface of the Earth (Oxford Dictionary; 2020). The topographical map includes contour lines to describe the height above sea level in addition to showing landform features, rivers, and related water resources. Contour lines are fictitious lines that link locations with the same height on the ground. The contour lines' tightness indicates that the topography starts to increase in height toward the southeast of the mining right region. Every point on the map that intersects the line should have the same elevation.

In this environmental project, topography is used to predict how much soil may be preserved and how water will flow across the earth's surface. By analyzing the contours of the ground, topographic information can be used to predict how and in which direction topsoil will be eroded by wind or water. Over the course of the project, this information can help with water management and environmental mitigation in the area. In this project, it is expected that water will move from the region where the contour lines are tightly packed to the region where they are loosely scattered. The land's groundwater vulnerability can also be better understood as a result, as a gentle slope indicates an area where toxins can remain for a longer period of time. Therefore, topography can aid in reducing the chance of contamination.

The Steenkoolspruit River drains the area flowing from southeast to northwest through Faith Hill Estate 79 IS, Witbank 80 IS and Aangewys 81 IS (Fig.37). It is joined by tributaries flowing south southwest through Faith Hills Estate and Witbank as well as the Piekespruit, rising in the farm Holfontein, in the south and flowing north-west to join the Steenkoolspruit. The area is dissected by streams with plateaus both to the north and south of the river. The river is at an elevation of 1 548 to 1 560m and the plateau areas rise to an elevation of 1 670m.

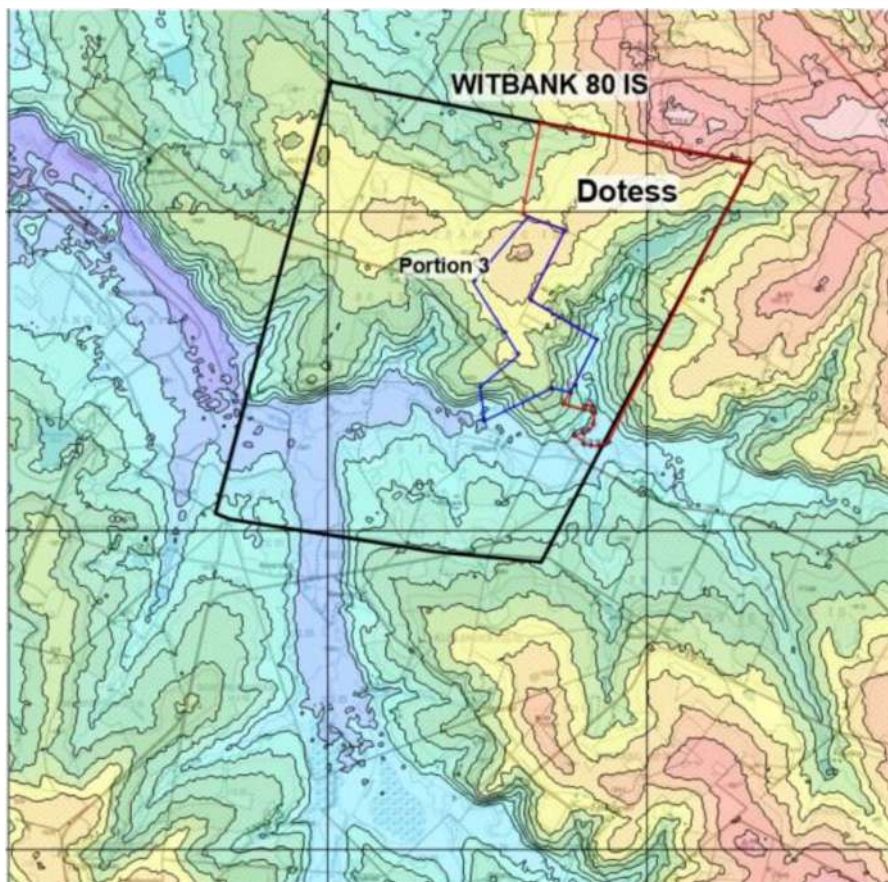
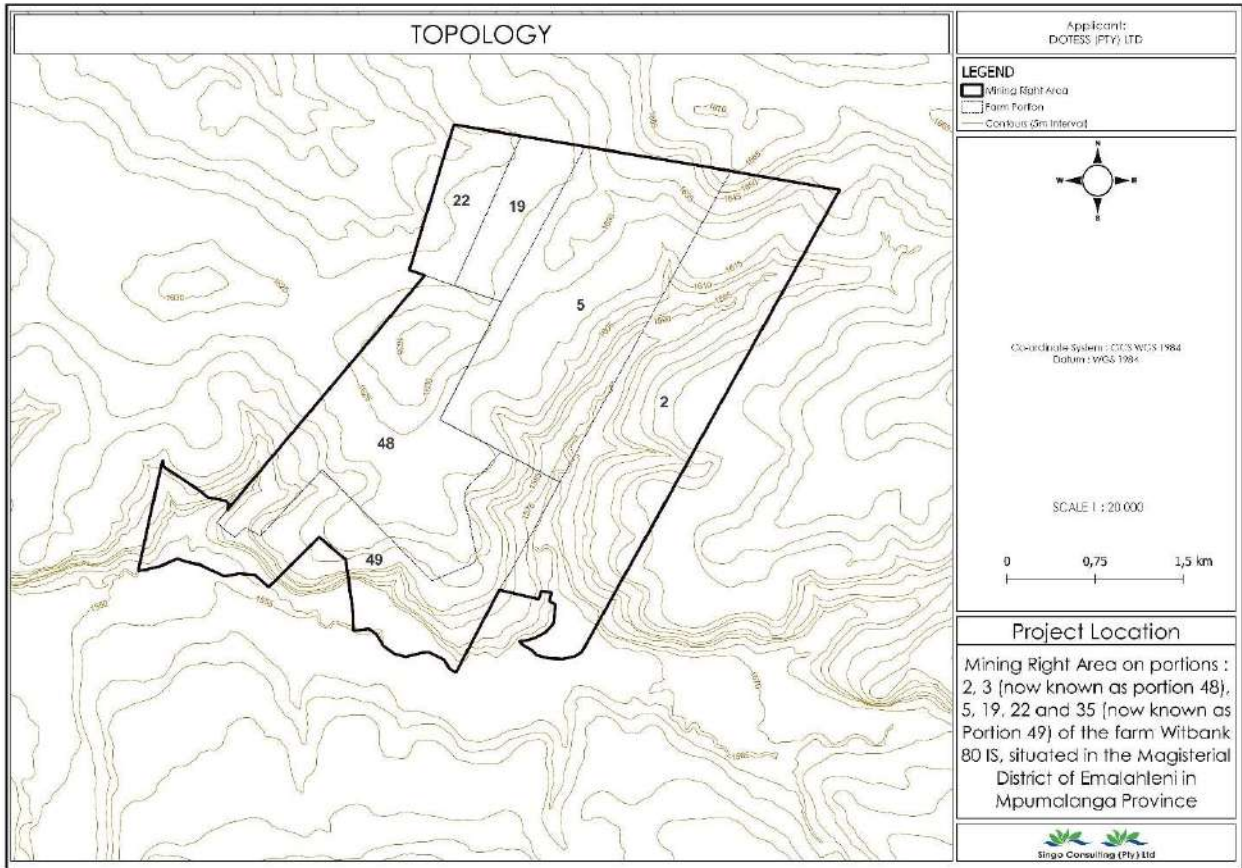


Figure 37: Area topology (Singo Consulting, 2023) and (Andersen Geological Consulting, 2023)

11.1 Types of slope.

➤ **Gentle Slope:** A slope with contour lines widely spread. The slope covers some parts of the area study area, and it continues outside the project area in the north-western directions.



Figure 38: Gentle slope observed onsite. (Singo Consulting (Pty) Ltd , 2023)

➤ **Steep Slope:** Contour lines close together. The slope covers the western part of the proposed project especially around the perennial river and the southern part on the floodplain wetland.



Figure 39: Steep Slope observed onsite. (Singo Consulting, 2023)

11.2 Influence of Slope on Groundwater Contamination

Slope of an area plays a major role in the transport of liquid or solid contaminants. In the context of the study area, two slope types were identified and observed during the site assessment.

Gentle slope: which influences groundwater contamination as it consists of high groundwater level since less time is allowed for stormwater to infiltrate which means there will be an increase in residence time of contaminants such as Total Petroleum Hydrocarbon (TPH) (Gradual slope) and allowing faster movement of contaminants downhill (towards lower elevation).

Steep Slope: Which is the opposite to gentle slope, as it consists of low groundwater level and it will take more time for stormwater to infiltrate which means there will be a decrease in residence time of contaminants.

Landforms identified in the study area.

➤ **Summit:** Point on a surface that is higher in elevation than all points immediately adjacent to it. The summit in the study area is located at an elevation of 1655 mamsl in the northern direction at the boundary of the study area.

➤ **Valleys:** Valleys are depressed areas of land—scoured and washed out by the conspiring forces of water or gravity. Valleys are identified by contours that form a “V” pattern. The V pattern points upstream. A valley is identified on the North-East of the study area from an elevation of 1600 mamsl to 1615 mamsl. The identified valley influence groundwater contamination through channelling of contaminants, which will carry them to the nearby streams and or wetlands identified.

➤ **Saddle:** Flat area between hills/ Summit, ground rises to 2 sides and descends on 2 sides. A saddle is identified in the western direction in-between the summits of approximate elevation of 1625 mamsl.

12 Air quality

The assessment of the ambient air quality is based on available ambient air quality information identified in the literature review and data supplied by the DEA and the South African Weather Service (SAWS).

Mpumalanga experiences a wide range of natural and anthropogenic sources of air pollution ranging from veld fires to industrial processes, agriculture, mining activities, power generation, paper and pulp processing, vehicle use and domestic use of fossil fuels. Different pollutants are associated with each of the above activities, ranging from volatile organic compounds and heavy metals to dust and odours. The project area is located in the Mpumalanga Highveld Priority Area, which has been declared as such by the Minister of Environment and Tourism in terms of Section 18 (1) and 57 (1) of the NEMAQA. The area is situated near two power stations, namely, Kriel (approximately 15.4 km west of Kriel Power Station), and Matla (19.1 km west of Matla Power Station). These stations result in a significant negative impact on air quality in the area and have specific air quality management actions rectifying the situation.

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

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

13 Noise

Measurements of the existing noise climate in accordance with the relevant SANS 10103:2008 Code of practice within the Project area were made at 5 defined positions around the site.

In summary the results of the noise baseline indicated that existing sources of noise in the Project area are:

- Natural sounds of the bush;
- The agricultural activities of the boundary on site; and
- Nearby mines (Kriel Colliery, approximately 19.2 km northwest), Driefontein 69 and Haasfontein 85 which are 14 and 20 km, respectively to the west and Isibonelo Colliery just SW of the proposed Dotess mine.
- Noise from roads (incl. domestic traffic as well as trucks carrying coal to the power stations).

Noise and vibration are not monitored at the proposed site as it is not currently being mined and used for agricultural activities. As with air quality, the surrounding mines, and industries impact on noise levels from vehicular and mechanical equipment. The current ambient noise levels are generally comparable with the levels associated with farming activities. Due to numerous daytime sources including traffic on the adjacent provincial roads, and haul roads, the noise and vibration levels are most prominent during the daytime and the noise emitted during these activities is occasionally intrusive to the wellbeing of the community. In the proposed coal mining area, the noise will be coming from vehicles moving to and from the site, the R545 and R544 provincial road, the farmhouses and blasting that will occur when extracting deeper resource. See Figure 40 below.



Figure 40: Sources of noise near the proposed mining area. (Singo Consulting, 2023)

14 HYDROLOGICAL SETTING AND BASELINE HYDROLOGY

A hydrological study undertaken by a specialist has reference.

14.1 Drainage

The hydrology surrounding the proposed area is of vital importance. In this context hydrology is all the surface waters appearing within and nearby the proposed project area and they have a potential to be impacted by the project existence. The hydrology map Figure 41, illustrates that the following water bodies exists within and nearby the project area:

Dams

Floodplains

Depressions

Perennial rivers

Non- Perennial Rivers

Seeps

Channelled-valley bottom wetlands.

Channeled Valley Bottom wetlands: Channelled valley bottom wetlands are linear fluvial, net depositional valley bottom surfaces which have a straight channel with flow on a permanent, seasonal, or ephemeral/episodic basis (Rountree, Todd, Kleynhans, et al, 2007: iv). Several channelled valley bottom wetlands were identified within the project area and the furthest wetland identified is approximately 2.5 km from the boundary of the study area in the southeastern direction.

Seep wetlands: Seep wetlands are defined as wetlands that occur in area where the groundwater reaches the surface. Two seep wetlands were identified, one wetland is identified along the gentle slope in the centre of the study area at an approximate elevation of 1645 mamsl the other one was identified at the south-west corner of the study area along at an approximate 1550 elevation mamsl.

Non-perennial: Non-Perennial rivers are rivers that flow seasonally, such as summer. The rivers flow from an area of higher elevation to an area of lower elevation. A number of non-perennial streams were identified, which drain into the main river or the perennial river found within the study area. These Non-perennial rivers are associated with valleys, and they are found in all directions of the perennial river. They act as tributaries of the perennial river.

Perennial: Perennial rivers are rivers that flow all year round. One confluence point of the perennial rivers was identified within the study area. The perennial river is flowing from the northern direction towards the southern direction, this perennial river conflues with another perennial river flowing from the eastern direction towards south-eastern direction, the rivers confluence at an elevation of 1565 mamsl.

Dam: the study area has about seven dams which were identified within the project area. Five of the dams are situated next to the perennial river and a channelled-valley wetland that cut through the proposed project along the eastern site.

Floodplains: A floodplain is the land adjacent to water bodies which may be periodically covered by flood water. The floodplains in the hydrology map are shown by yellow dots and they cover the entire southern part of the project area.

Depression: Depression/ Pan wetlands are wetlands which can be identified of their edges or boundaries, these pans are usually small, often temporary, and only contain water for short periods. Depression wetlands are not present within the project area; however, they are five different depression wetlands shown outside the project area.

During the site visit, some of the water bodies were observed within the study area, see figure 41 below for reference.

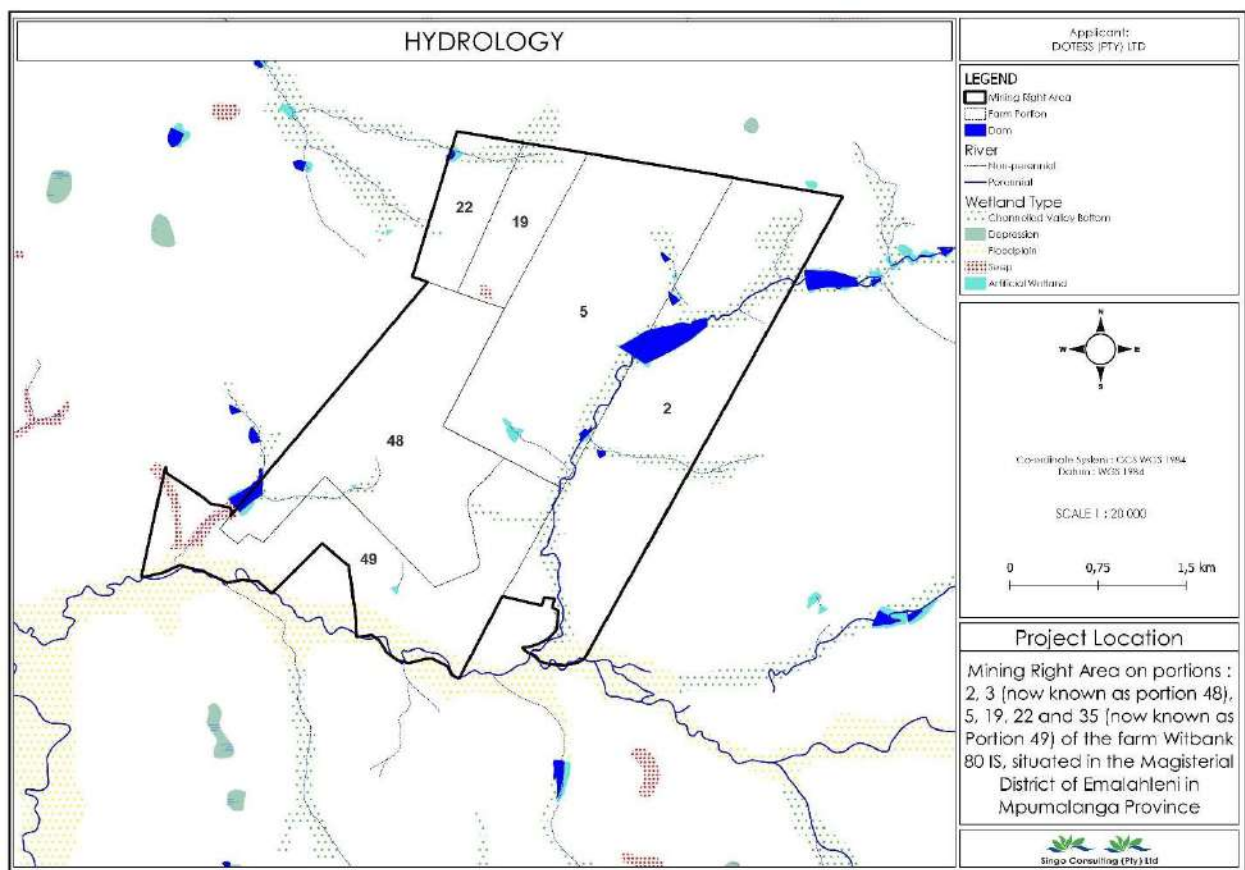


Figure 41: Hydrology of the area (Singo Consulting, 2023)

14.2 Catchment Description

The regional hydrological setting of the project site is indicated in Figure 42. The Coal mining Right is in the Olifants Water Management Area (WMA). The main quaternary catchments are B11C and B11D. The WRC 2012 study, presents hydrological parameters for each quaternary catchment including area,

mean annual precipitation (MAP) and mean annual runoff (MAR) (Refer to Table 17).

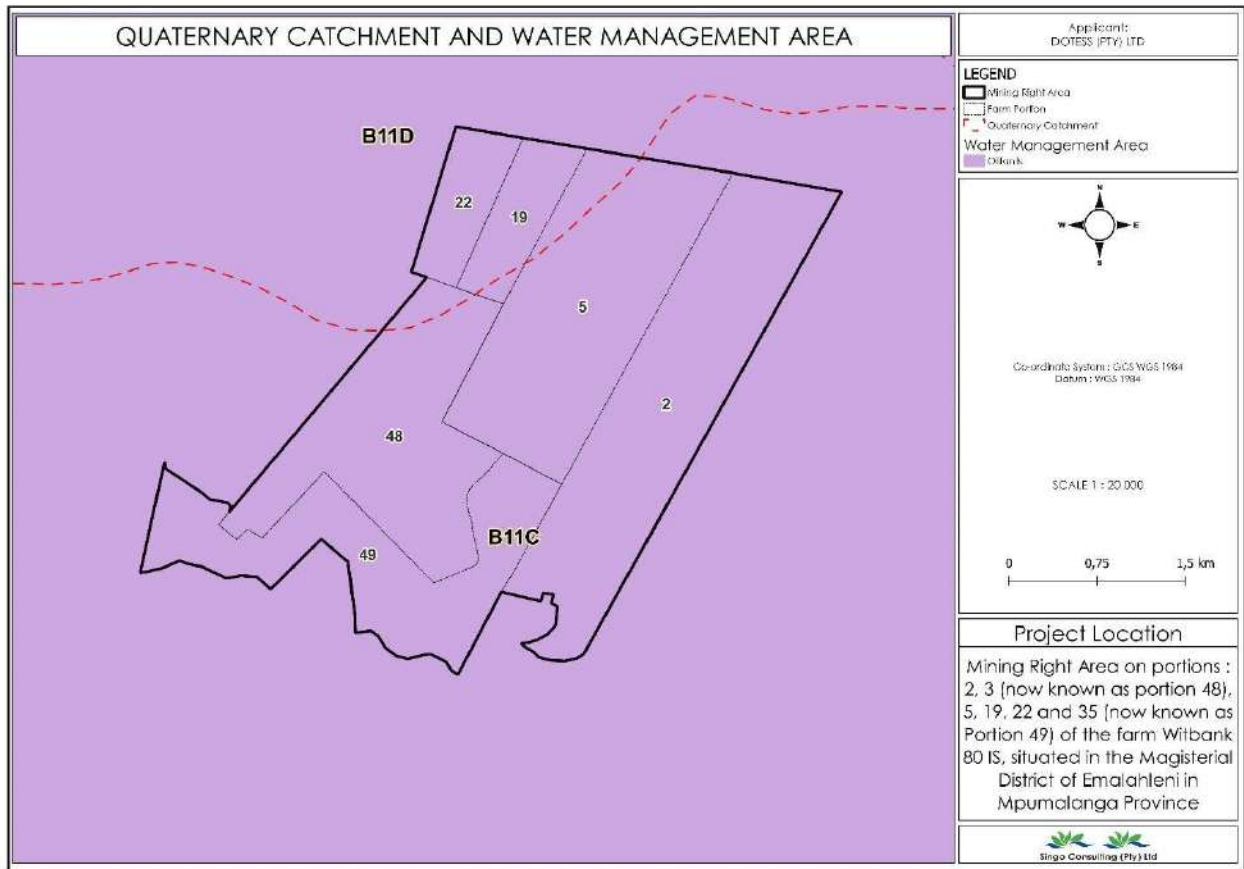


Figure 42: Quaternary Catchment and Water Management for Project area. (Singo Consulting, 2023)

Table 17: Quaternary Catchment Information (WRC. 2012)

Quaternary Catchment	S-Pan Evaporation		Rainfall	
	Evaporation Zone	MAE (mm)	Rainfall Zone	MAP (mm)
B11C	4A	1550	B1A (ZB1AA)	672.7
B11D	4A	1600	B1A (ZB1AA)	671.5

The waterbodies identified as shown in figure 43 will be buffered, 100 m buffer need to be implemented on the observed water bodies and 500 m buffer need to be implemented on all the wetlands present with the study area. Through strict measures which will be implemented, the mining activities will not invade on the identified water body, see Figure 43 below.





Figure 43: Borehole and wetland sampling (Singo Consulting, 2023)

14.3 Buffer Zones

Buffer zones (or “setback areas”) have been used in land-use planning to protect natural resources and limit the impact of one land-use on another. They are typically designed to act as a barrier between human activities and sensitive water resources, thereby protecting them from negative impacts. The Buffer Zones needs to be located on all the affected water bodies, where 500 m should be placed on the wetlands observed onsite and 100m buffer is on all the water bodies seen on site and showed on the hydrology map (See Figure 44 below). The primary roles of buffer zones include:

- Maintaining basic aquatic processes, services, and values.
- Reducing impacts on water resources from upstream activities and adjoining land uses.
- Meeting life need requirements for aquatic and semi-aquatic species.
- Providing habitat for terrestrial species.
- Providing a range of ancillary societal benefits

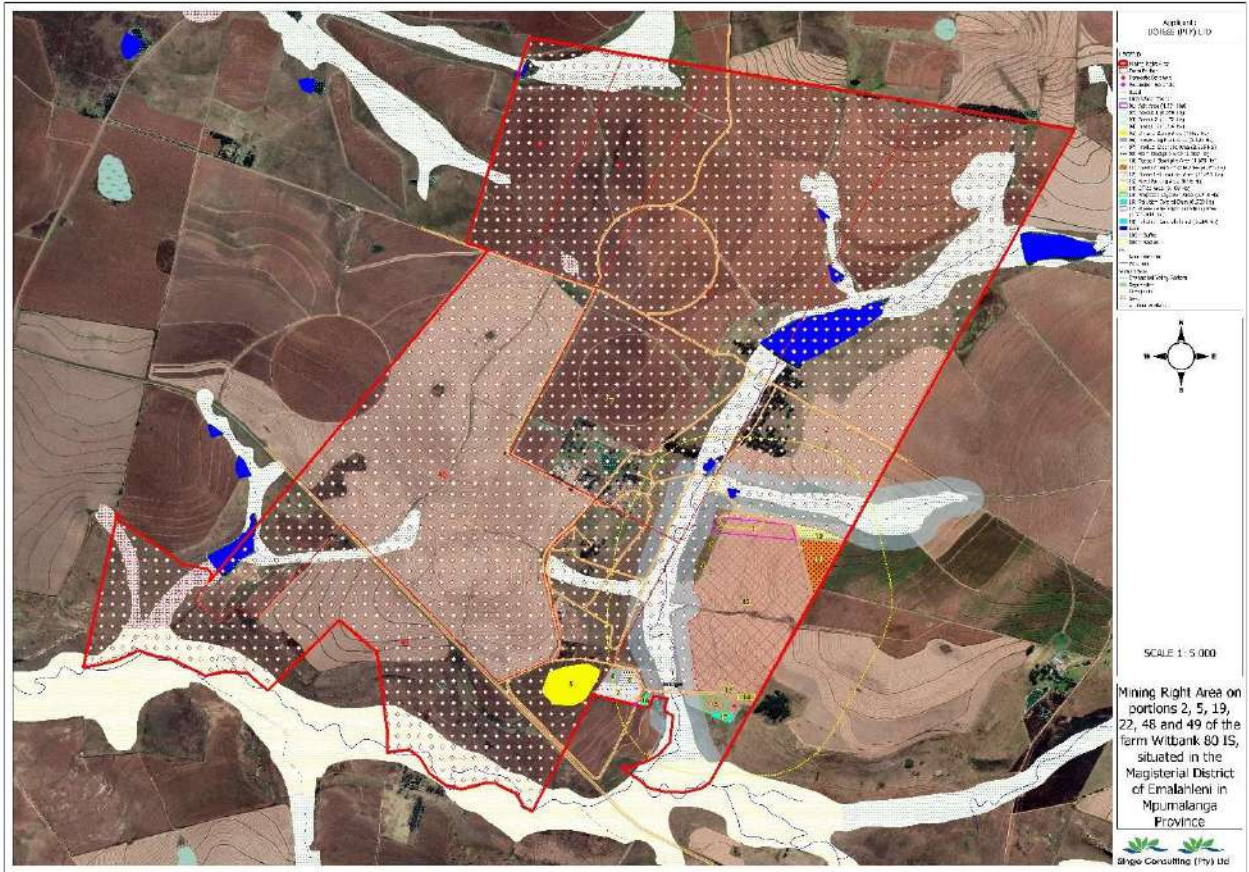


Figure 44: Buffer Map for the proposed project. (Singo Consulting, 2023)

14.4 Drainage pattern in the study area

The drainage pattern observed within the study area is dendritic pattern.

Dendritic Pattern:

The dendritic pattern develops when the river channel follows the slope of the terrain often found in mountainous areas. It is the most common form of drainage pattern and looks like the branching pattern of a tree when joined by tributaries. The pattern is made by non-perennial rivers found within the proposed mining right area, it is most common along the boundary in the north-western direction, as seen on Figure 45.

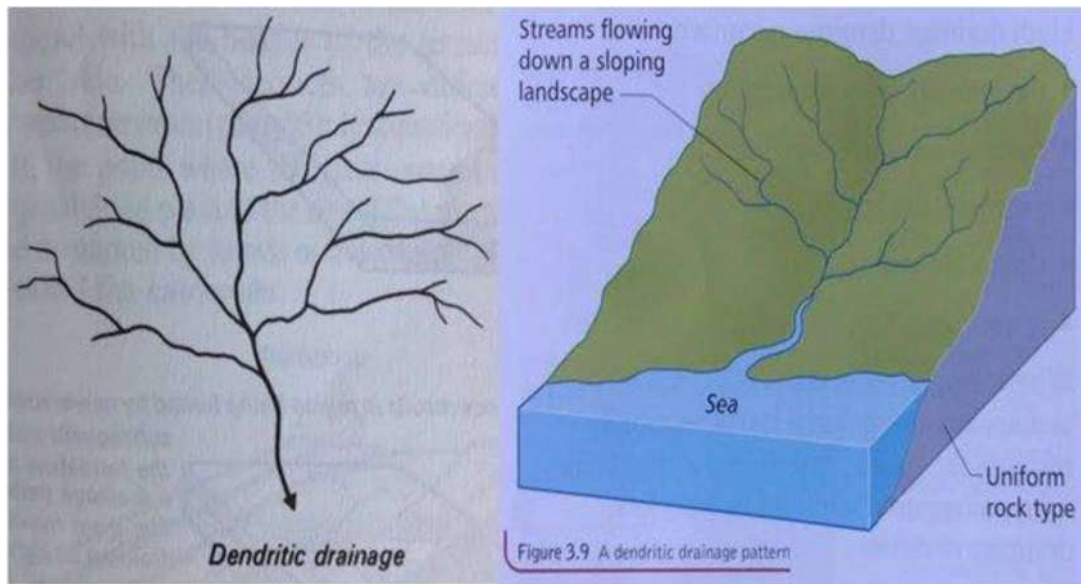


Figure 45: Dendric Drainage Pattern. (Quora Website, n.d.)

14.5 Water Balance

✓ Groundwater Recharge

Highly variable recharge occurs over the project area, but values are generally between 1 and 3 % of MAP (Hodgson & Krantz, 1998) for undisturbed areas. Recharge to the weathered aquifer drains towards regional surface water courses and less than 60% of the recharge discharge in streams. The remainder is withdrawn through evapotranspiration from the weathered aquifer, recharge to the deeper fractured rock aquifers or abstracted through pumping. A low vertical permeability generally exists for the fractured aquifer in the Vryheid Formation and this aquifer is recharged by interflow from the weathered aquifer.



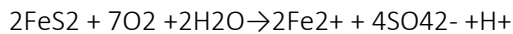
Figure 46: Groundwater is used for cattle feeding

14.6 Acid mine drainage generation capacity

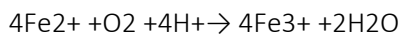
Acid mine drainage (AMD) poses a serious threat at mines, especially coal mines where there is an abundance of sulphide minerals. AMD is expected to occur due to the extraction of sulphide ores like chalcopyrite, pyrite or arsenopyrite ores. As such, AMD studies must be included as one of the impacts

to be mitigated in the mining area. The presence of AMD in a mining area is indicated by a drop in pH. The following equations show the process of AMD in four steps. This process is self-propagating until the ferric iron or pyrite is depleted. Generally, when pyrite combines with oxygen and water, AMD forms. If AMD gets into surface waterways, the acidity and metal content can produce significant environmental problems over large distances. Once AMD reaches surface water, the acidity may cause significant environmental problems over long distances and destroy the aquatic life.

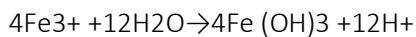
1. Oxidation of Polysulfide to sulphate by O₂



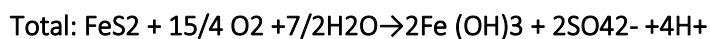
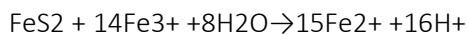
2. Oxidation of Fe²⁺ (ferrousiron) to Fe³⁺ (ferriciron) by O₂



3. Hydrolysis of iron (ferriciron→ferrichydroxide, “yellowboy”)



4. Oxidation of polysulfide to sulphate by Fe³⁺ at low pH



AMD can be treated in various ways, including:

- An increase in pH or raising alkalinity. This can be achieved by adding lime or other alkaline materials to neutralise the acidity (like NaCO₃ or NaCl).
- Removing metals like iron, zinc and aluminium from water.
- Conducting passive (limestone leach beds) and active (treatment plants) AMD treatments.

The study area falls under the Karoo Basement and is fractured and influenced by dykes. For effective borehole yields, the boreholes must target the fracture zones in this area.

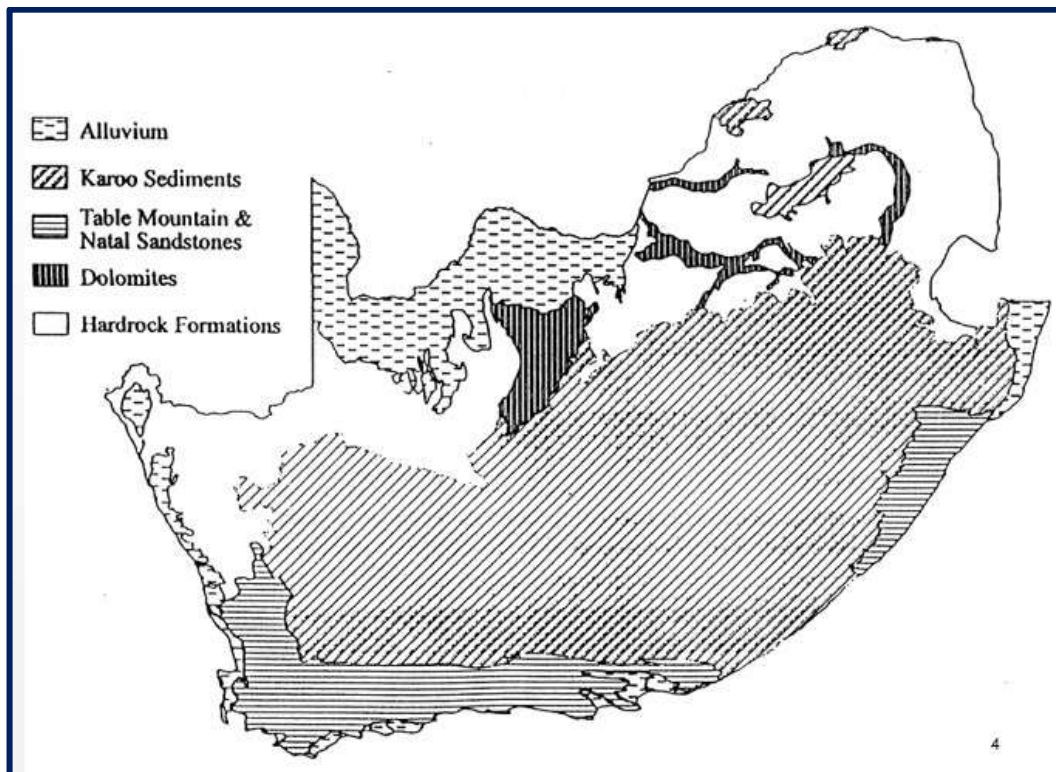


Figure 47: Aquifers of South Africa

The groundwater potential of the formations located in the project area is limited in their pristine state due to low permeability, storage, and transmissivity. Secondary processes, like weathering, fracturing, etc., are required to enhance the groundwater potential.

14.7 Geohydrology

14.7.1 Regional Geohydrology

The natural geohydrological system within the Witbank Coalfield consists of three superimposed aquifers namely an upper weathered aquifer, a fractured Karoo aquifer and a fractured pre-Karoo aquifer (Hodgson & Krantz, 1998). The upper weathered aquifer consists of material weathered in situ and transported as part of the erosion process. The depth to weathering is generally between 1m and 15m from surface and the water level varies between 5m and 10m below ground level (mbgl). The flow mechanism within the weathered aquifer is porous flow (primary aquifer type). The water quality is generally good due to years of dynamic groundwater flow resulting in the leaching of soluble salts.

The fractured Karoo aquifer consists of the various lithologies of siltstone, shale, sandstone, and the coal seams. The pores of the geological units are generally well cemented, and the principle flow mechanism is fractured flow along secondary structures e.g., faults, bedding plane fractures etc. The intrusion of the fractured aquifer by dolerite dykes and sills has led to the formation of preferential flow paths along the contacts of these lithologies due to the development of cooling joints. The intrusions

of dykes crush the lithologies on which they intrude through, forming cracks where water can flow through.

The fractured pre-Karoo aquifer is separated from the overlying fractured Karoo aquifer by Dwyka tillites which act as an aquiclude where present. The flow mechanism is fracture flow as can be expected from the crystalline nature of the granite rocks. The water quality is generally characterized by high fluoride levels which restricts exploitation of this aquifer in combination with the general low yields, deep drilling, and the low recharge (Grobbelaar *et al.*, 2004). Mining of the coal seams has resulted in the establishment of an artificial aquifer system which generally dominates the groundwater flow on a local and regional scale. Below is a summary of the geohydrological system.

Karoo aquifers and aquiclude

- a. Shallow weathered zone aquifers (Overburden/weathered)
- b. Fractured aquifers
 - I. Upper fractured aquifer
 - II. Dolerite sill (aquiclude)
 - III. Deep fractured aquifer
- c. Coal mine artificial aquifer

14.7.2 Shallow weathered Karoo aquifer (unconfined)

Overburden/Weathered Zone Aquifer

- ❖ The weathered zone of the Karoo sediments hosts the unconfined or semi-confined shallow weathered Karoo aquifer. Water levels are often shallow, and the water quality is good due to direct rainfall recharge and dynamic groundwater flow through the unconfined aquifer in weathered sediments, which makes it also easily exposed to contamination. Water intersections in the weathered aquifer is mostly encountered above or at the interface to fresh, where the vertical infiltration of water is typically limited by impermeable layers of weathering products and capillary forces, with subsequent lateral movement following topographical gradients.
- ❖ Localised perched aquifers may occur on clay layers or lenses at shallower depth (soil zone) but are due to their localised and detached nature of no further interest in the context of the present study.
- ❖ Alluvial deposits occur in most valley bottoms associated with surface water courses, but their regional coverage is little. These unconsolidated alluvial sediments consist of clay, sand, gravel, and boulder sized grains.

Upper fractured aquifer unconfined to semi-confined

- ❖ The weathered aquifer is underlain by a deeper semi-confined to confined fractured aquifer in which fracture flow dominates. The fractured Karoo aquifer consists of the various lithologies of siltstone, shale, sandstone, and the coal seams, where groundwater flow is governed by secondary porosities like faults, fractures, joints, bedding planes or other geological contacts, while the rock matrix itself is considered impermeable. Geological structures are generally better developed in competent rocks like sandstone, which subsequently show better water yields than the less competent silt or mudstones. Not all secondary structures are water bearing due to e.g., compressional forces from the neo-tectonic stress field overburden closing the apertures.
- ❖ Although the Karoo aquifer supports domestic and stock water requirements in the area, their physical and hydraulic characteristics preclude large scale groundwater exploitation for e.g., irrigation.
- ❖ The strike frequency analysis for the Karoo rocks indicates a predominant shallow groundwater occurrence, mostly in the first 50 meters below the water table (Woodford and Chevallier, 2002)

14.7.3 Local Geohydrology

The groundwater systems in the Mpumalanga coalfields have been discussed extensively by Hodgson *et al.*, (1998) and Grobbelaar *et al.*, (2004). Three distinct superimposed groundwater systems are present. They are the upper weathered Ecca aquifer, the fractured aquifers within the unweathered Ecca sediments and the aquifer below the Ecca sediments.

The following aquifer description extracted from the previously stated references is relevant to the project area:

Table 18: Aquifer description of the project area

Aspect	Description
The weathered aquifer	<p>The Eccca sediments are weathered to depths between 5 and 12m below surface throughout the area. The upper aquifer is associated with this weathered zone and water is often found within a few meters below surface.</p> <p>This aquifer is recharged by rainfall. The percentage based on work in other parts of the country by Kirchner <i>et al.</i>, (1991) and Bredenkamp (1995). It should, however, be emphasized that in a weathered system, such as the Eccca sediments, highly variable recharge values can be found from one area to the next.</p>
Fractured Eccca Aquifer	<p>The pores within the Eccca sediments are well-cemented and do not allow any significant flow of water. All groundwater movement therefore occurs along secondary structures, such as fractures and joints in the sediments. These structures are better developed in competent rocks, such as sandstone; hence the better water-yielding properties of the latter rock type. It should, however, be emphasized that not all secondary structures are water bearing. Many of these structures are constricted because of compressional forces that act within the earth's crust.</p>
Coal Seam Aquifer	<p>Hodgson <i>et al.</i>, (1998) states that of all the unweathered sediments in the Eccca, the coal seams often have the highest hydraulic conductivity. Since the aquifer permeability and storability of the seam will also be enhanced by mine excavation, it has been simulated as a separate aquifer with an approximate permeability of 0.1m/d. This permeability is in the same order of magnitude estimated for the coal seams by Hodgson <i>et al.</i>, (1998).</p>

14.7.4 WETLAND

Wetlands have been delineated beyond and between the three MRA's boundaries to show the connectivity of these ecosystems in the catchment areas. In the project area of channelled and unchannelled wetlands in the valley bottoms, significant hillslope seep wetlands are identified. Furthermore, pan wetlands were typically found in high lying areas on the catchment divide. See figure below.



Figure 48: Wetlands Identified on around project Area. (*Singo COUNSULTING, 2023*)

15 Terrestrial ecology

An ecological study undertaken by a specialist has reference.

15.1 Regional vegetation

15.1.1 Overview of the biome type

Singo Consulting (Pty) Ltd will appoint a specialist to conduct a thorough going study for ecology, however as per the desktop study conducted in the premises of Singo consulting in reference to Mucina and Rutherford (2006) it was noted that the project area falls in the Grassland biome. The grassland biome is the second largest biome in South Africa, covering 28.4% of the country or more than 360 000 km². The grassland biome is found in summer rainfall areas, from sea level to above 2,000 m. The grassland biome is rich in plants, with nearly 3,800 plant species recorded. Because fires are frequent, there are very few woody plants like trees (they occur mainly in river courses and on rocky slopes). C4 grasses dominate the biome, except at the highest altitudes where C3 grasses are more prominent.

In the past, grasslands housed large herds of animals like the black wildebeest, blesbok and eland. Today, these animals mainly survive in nature reserves and on game farms. Grasslands are rich in birds, many of which eat seeds, e.g., black korhaan, blue crane and helmeted guinea fowl. Nearly half of the original grassland biome has been ploughed to plant maize, sunflowers, sorghum, and wheat. Grassland supports livestock farming, including cattle and sheep. Most of Gauteng and the Mpumalanga Highveld, which have been developed for mining, industry and urban development, forms part of the grassland biome.

The grassland biome has extremely high biodiversity, second only to the fynbos biome. Rare plants are often found in the grasslands, especially in the escarpment area. These rare species are often endangered, and mainly comprise endemic geophytes or dicotyledonous herbaceous plants. Very few grasses are rare or endangered. The scenic splendour of the escarpment region attracts many tourists.



Figure 49: Biome Type Map (Singo Consulting, 2023)

15.1.2 Broad vegetation classification

According to Mucina and Rutherford, 2006, the proposed area is located in the Eastern Highveld Grassland (Gm 12). This vegetation is distributed in Mpumalanga and Gauteng on plains between Belfast (in the east) and the eastern side of Johannesburg (in the west) and extends to Bethal and Ermelo (in the south) and west of Piet Retief. Altitude averages between 1,520 and 1,780 m, but is as low as 1,300 m.

The climatic conditions of the vegetation unit are strongly seasonal summer rainfall, with very dry winters. The MAP (650-900 mm, averaging 726 mm) is relatively uniform across most of the unit, but increases significantly in the extreme south-east. The coefficient of variation in MAP is 25% across most of the unit but drops to 21% in the east and south-east. Frost occurs about thirteen to forty-two days, but longer at higher elevations.

The vegetation is considered vulnerable with a conservation target of 24%. Only very small fraction is conserved in statutory. Some 44% transformed primarily by cultivation, plantations, mines, urbanisation, and dam building. Cultivation may have had a more extensive impact, indicated by land-cover data (Mucina and Rutherford, 2006).

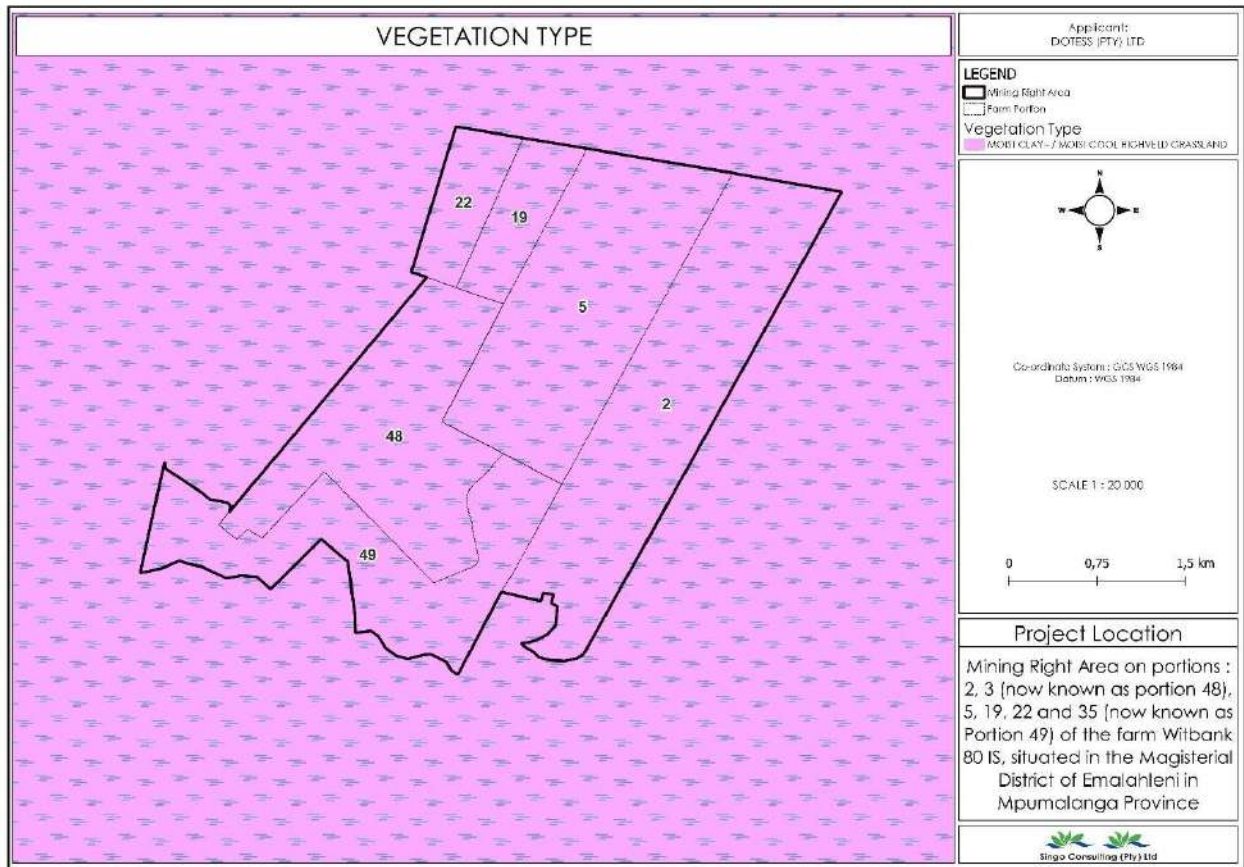


Figure 50: Broad vegetation classification for the site (Singo Consulting, 2023)

15.2 Terrestrial threatened ecosystem

The South African National Biodiversity Institute (SANBI), in conjunction with the DEA, released a draft report in 2009 entitled *Threatened Ecosystems in South Africa: Descriptions and Maps*, to provide background information on the list of threatened ecosystems (SANBI, 2009). The purpose of this report was to present a detailed description of each of South Africa's ecosystems and to determine their status using a credible and practical set of criteria. The following criteria were used to determine the status of threatened ecosystems:

- Irreversible loss of natural habitat
- Ecosystem degradation and loss of integrity
- Limited extent and imminent threat
- Threatened plant species associations
- Threatened animal species associations
- Priority areas for meeting explicit biodiversity targets as defined in a systematic conservation plan

In terms of Section 52 (1) (a) of the NEMBA, a new national list of ecosystems that are threatened and

in need of protection was gazetted on 9 December 2012 (Government Notice 1002 (Driver et. al., 2004)). The list classified all threatened or protected ecosystems in South Africa in four categories: Critically Endangered (CR), Endangered (EN), Vulnerable (VU), or Protected. The purpose of categorising these ecosystems is to prioritise conservation areas in order to reduce the rates of ecosystem and species extinction, and prevent further degradation and loss of structure, function, and composition of these ecosystems. It is estimated that 9.5% of South African ecosystems are threatened, with CR and EN ecosystems accounting for 2.7%, and VU ecosystems 6.8% of the land area. It is vital that Threatened Terrestrial Ecosystems inform proactive and reactive conservation and planning tools, such as Biodiversity Sector Plans, municipal Strategic Environmental Assessments (SEAs), Environmental Management Frameworks (EMFs), EIAs and other environmental applications (Mucina *et al.*, 2006). According to data sourced from SANBI, the proposed project is situated in a VU ecosystem (Eastern Highveld Grassland).

Methodology and reporting

The information provided in this terrestrial biodiversity report is based on observations made during the field survey and a review of the available reports containing known and predicted biodiversity and wetland information on the study area. Various spatial data sets were analysed, and relevant information was extracted for the study area. The various approaches and aspects considered are detailed in the following.

General

A desktop survey utilising aerial images and photography was undertaken to assemble background information on the different features and vegetation types in the proposed project footprint. The site was then assessed on 14th of November 2022 in order to record the true floristic reflection of the study area.

Vegetation

The PRECIS list of plants recorded in the quarter degree grid squares (2629BB) was obtained from SANBI. This list was consulted to verify the record of occurrence of the plant species seen on site. A desktop study of the habitats of the red-listed and orange-listed species known to occur in the area was conducted prior to site assessment. The vegetation types of Mucina & Rutherford (2012) were also used as reference, but where necessary communities are named according to the recommendations for a standardised South African syntaxonomic nomenclature system (Brown, L.R., Du Preez, P.J., Bezuidenhout, H., Bredenkamp, G.J., Mostert, T.H.C., and Collins, N.B. 2013). By combining the available literature, stratification of vegetation communities was possible.

Fauna survey

Most mammals and reptiles are either very secretive, nocturnal, hibernate (reptiles), migrate (birds) or prefer specific habitats, which made sampling and identification difficult.

Mammals

Records of all mammal species recorded in the quarter degree grid squares were obtained from the Virtual Museum (VM) website of the Animal Demographic Unit of University of Cape Town prior to the site visits. The site assessment was conducted for mammal species diversity by direct and indirect methods, like mammal sightings, burrows, holes, and verification by mammal book (Skinner and Chimimba, 2005). No trapping was conducted during the field survey. The only mammals observed were cows.

Sensitivity map

Following the site visit, an ecological sensitivity map of the site was generated by integrating the information collected on-site with the available biodiversity information available in the aforementioned literature and various spatial databases. The ecological sensitivity of the different units identified in the mapping procedure was rated according to the following scale:

- **Low.** Units with a low sensitivity is likely to have a negligible impact on ecological processes and terrestrial biodiversity. This category is reserved for areas where the natural vegetation has already been transformed, usually for intensive agricultural purposes like cropping. Most types of development can proceed in these areas with little ecological impact.
- **Medium.** Includes areas of natural or previously transformed land where the impacts are likely to be largely local and the risk of secondary impact (like erosion) is low. Development in these areas can proceed with relatively little ecological impact if appropriate mitigation measures are taken.
- **High.** Includes areas of natural or transformed land where a high impact is anticipated due to the high biodiversity value, sensitivity, or important ecological role of the area. Development in these areas is highly undesirable and should only proceed with caution as it may not be possible to mitigate all impacts appropriately.
- **Very high.** Includes critical and unique habitats that house rare/endangered species or perform critical ecological roles. These areas are no-go areas from a developmental perspective and should be avoided at all costs.

15.3 Impact assessment methodology

The significance of the impacts will be assessed using the following impact assessment guideline:

Table 19: Impact assessment

Nature of the impact		
Positive	+	Impact will be beneficial to the environment (a benefit).
Negative	-	Impact will not be beneficial to the environment (a cost).
Neutral	0	Where a negative impact is offset by a positive impact, or mitigation measures, to have no overall effect.
Magnitude		
Minor	2	Negligible effects on biophysical or social functions / processes. Includes areas / environmental aspects which have already been altered significantly and have little to no conservation importance (negligible sensitivity*).
Low	4	Minimal effects on biophysical or social functions/processes. Includes areas/ environmental aspects which have been largely modified, and/or have a low conservation importance (low sensitivity*).
Moderate	6	Notable effects on biophysical or social functions/processes. Includes areas/ environmental aspects which have already been moderately modified and have a medium conservation importance (medium sensitivity*).
High	8	Considerable effects on biophysical or social functions/processes. Includes areas / environmental aspects which have been slightly modified and have a high conservation importance (high sensitivity*).
Very high	10	Severe effects on biophysical or social functions/processes. Includes areas/ environmental aspects which have not previously been impacted upon and are pristine, thus of very high conservation importance (very high sensitivity*).
Extent		
Site only	1	Effect limited to the site and its immediate surroundings.
Local	2	Effect limited to within 3-5 km of the site.
Regional	3	Activity will have an impact on a regional scale.
National	4	Activity will have an impact on a national scale.
International	5	Activity will have an impact on an international scale.
Duration		
Immediate	1	Effect occurs periodically throughout the life of the activity.
Short term	2	Effect lasts for a period 0 to 5 years.
Medium term	3	Effect continues for a period between 5 and 15 years.
Long term	4	Effect will cease after the operational life of the activity either because of natural process or by human intervention.
Permanent	5	Where mitigation either by natural process or by human intervention will not occur in such a way or in such a time span that the impact can be considered transient.
Probability of occurrence		
Improbable	1	Less than 30% chance of occurrence.

Low	2	Between 30 and 50% chance of occurrence.
Medium	3	Between 50 and 70% chance of occurrence.
High	4	Greater than 70% chance of occurrence.
Definite	5	Will occur, or where applicable has occurred, regardless or in spite of any mitigation measures.

Once the impact criteria have been ranked for each impact, the significance of the impacts will be calculated using the following formula:

Significance Points (SP) = (Magnitude + Duration + Extent) x Probability

The significance of the ecological impact is calculated by multiplying the severity rating with the probability rating. The maximum value that can be reached through this impact evaluation process is 100 SP (points). The significance for each impact is rated as High (SP≥60), Medium (SP=31-60) and Low (SP<30) significance (see Table 20).

Table 20: Definition of significance rating

Significance of predicted NEGATIVE impacts		
Low	0-30	Where the impact will have a relatively small effect on the environment and will require minimum or no mitigation and as such have a limited influence on the decision.
Medium	31-60	Where the impact can have an influence on the environment and should be mitigated and as such could have an influence on the decision unless it is mitigated.
High	61-100	Where the impact will definitely have an influence on the environment and must be mitigated, where possible. This impact will influence the decision regardless of any possible mitigation.
Significance of predicted POSITIVE impacts		
Low	0-30	Where the impact will have a relatively small positive effect on the environment.
Medium	31-60	Where the positive impact will counteract an existing negative impact and result in an overall neutral effect on the environment.
High	61-100	Where the positive impact will improve the environment relative to baseline conditions.

15.4 Assessment results

Habitant Found on Site

A large percentage of the project area has been transformed through agricultural activities. Almost 80% of the project area is currently used for agricultural purposes, either maize (*Zea mays*) or Soya Beans farming. However, at least 20% of the project area is under natural grassland. These are often associated with the Klein Olifants, its tributaries, and the rocky outcrops. These natural areas are potential habitat for rare and threatened species.

Table 21: Broad habitat types found within the project area.

Habitat Types	Habitat Size	% Total Area	Conservation Importance
Transformed Areas			
Agricultural Fields	1800.96	47.96	Low
Alien Bush Clumps	61.6	1.64	Low
Transformed - Built-up	36.35	0.97	Low
Riverine and Aquatic			
River Systems – specifically the Klein Olifants and associated tributaries	212.02	5.65	High
Large Dams	50.03	1.33	Moderate
Grassland Habitat			
Hydromorphic Grasslands	463.46	12.34	Moderate-High
Rocky Outcrops	105.67	2.81	High
Natural Grassland	1024.72	27.29	Moderate-High

Vegetation on site

Three vegetation communities were identified during the site assessment (See Figures 51-55). They were recognised based on physiognomy, moisture regime and species composition and disturbance characteristics. These vegetation communities are:

- Cultivated/disturbed area
- Vegetation associated with watercourses (riparian and moist grassland)
- Natural (untransformed) grassland

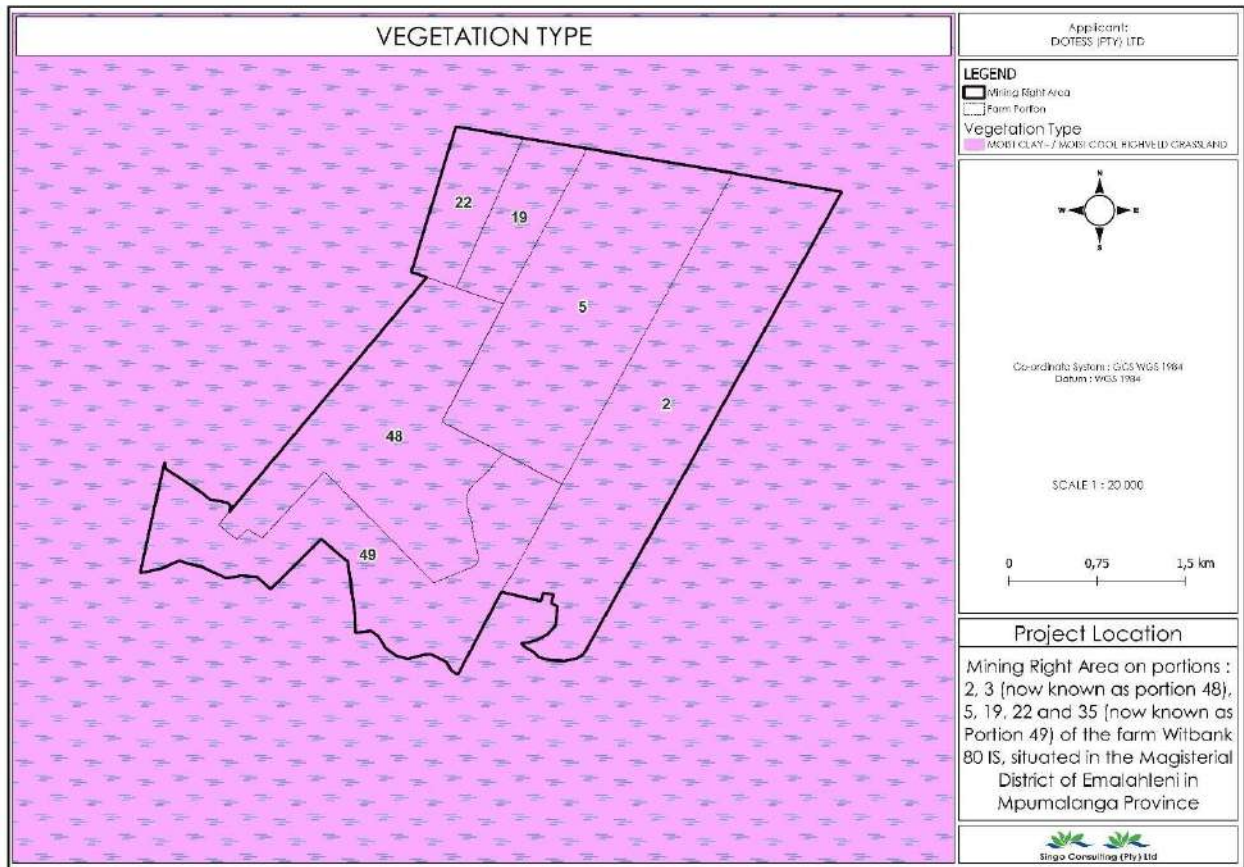


Figure 51: Onsite vegetation (Singo Consulting, 2023)

The characteristics of each vegetation community are discussed in the following sections:

15.4.1 Cultivated/disturbed area

These areas are cultivated and also used for grazing of the landowners' cows. At the boundaries of this vegetation community is a mixture of invasive, exotic plants, as well as pioneer and sub-climax indigenous grass species.



Figure 52: Grazing of the landowner's cows.

MAP OF RELATIVE PLANT SPECIES THEME SENSITIVITY

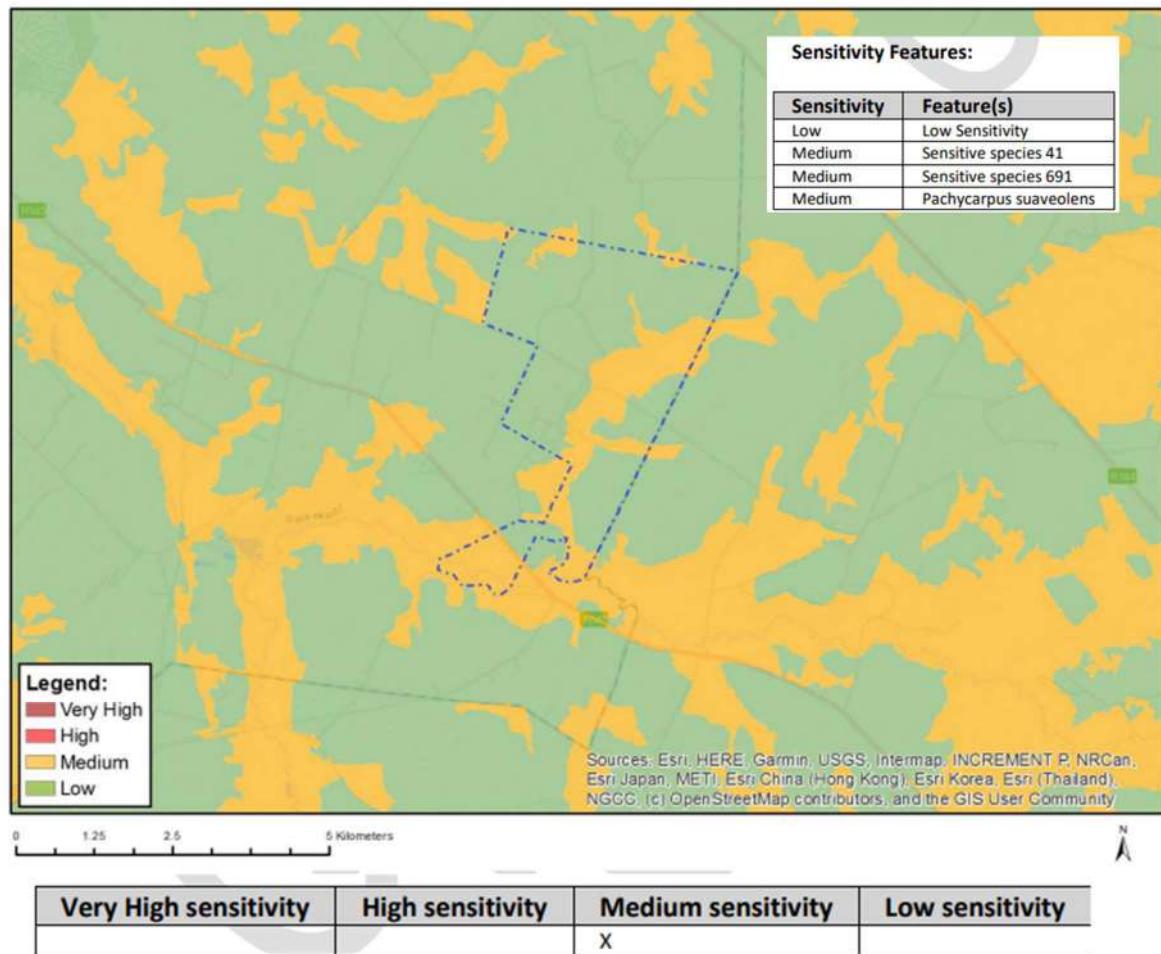


Figure 53: Plant Species Theme Sensitivity

15.4.2 Red data/endemic species

The Threatened Plant Species Programme (TPS) is currently revising all threatened plant species assessments made by Craig Hilton-Taylor (1996), using IUCN Red Listing Criteria modified from Davis *et al.*, (1986). According to the TPS interim Red Data list of South African plant taxa, there are over 201 Red Data listed species within Mpumalanga Province, of which 14 species are Critically Endangered (CE), 19 Endangered (EN) and 59 are Vulnerable (VU). Although the project area is situated in an area that is currently been utilized mainly for crop cultivation and cattle farming, sufficient habitat for species of conservation significance do occur, specifically within the hydromorphic grasslands along the Klein Olifants River system.



Figure 54: Vegetation occurs along the wetland and drainage lines on site



Figure 55: Vegetation associated with watercourses onsite

15.4.3 Natural/untransformed grassland

This vegetation covers approximately 55 to 60% of the site. Much of the natural habitat represented in the project area comprises untransformed grassland and occurs in areas where the grassland has never been disturbed. Dominant floral species in this community include *Eragrostis plana*, *Themenda triandra* and *E. racemose*. Other species include *Eragrostis lehmanniana*, *Aristida congesta*, *Melinis repens*, *Melinis nerviglumis*, *Alloteropsis semialata*, *Aristida junciformis*, *Cymbopogon pospischilii*, *Eragrostis chloromelas*, *E. gummiflua*, *Cynodon dactylon* and *Heteropogon contortus*. Forbs and geophytes are reasonably diverse and include species like *Helichrysum rugulosum*, *Hypochaeris radicata*, *Ipomoea oblongata*, *Acalypha villicaulis*, *Hilliardiella oligocephala*, *Indigofera hiliaris*, *Eucomis autumnalis* subsp.

clavata and *Ledebouria ovatifolia*, all of which were recorded scattered in the grassland.

Invasive alien plants

Declared weeds and invaders have the tendency to dominate or replace the herbaceous layer of natural ecosystems, transforming the structure, composition, and function of natural ecosystems. Therefore, it is important that all these transformers be eradicated and controlled by means of an eradication and monitoring programme. Some invader plants may degrade ecosystems through superior competitive capabilities to exclude native plant species (Henderson, 2001).

According to the published Alien and Invasive Species regulations in terms of Section 97(1) of the NEMBA, there are four categories of problem plants, namely:

- **Category 1a:** These plants are high-priority emerging species requiring compulsory control. All breeding, growing, moving, and selling are banned.
- **Category 1b:** These plants are widespread invasive species controlled by a management programme.
- **Category 2:** These plants are invasive species controlled by area. Can be grown under permit conditions in demarcated areas. All breeding, growing, moving, and selling are banned without a permit.
- **Category 3:** These plants are ornamental and permitted on a property but may not be planted or sold.

Table 22 lists the alien species and the various NEMBA categories for the alien species that have been recorded in the study. Their presence will have to be confirmed by a site walk-through (site survey).

Description of the CBAs

Critical Biodiversity Areas (CBAs) have terrestrial and aquatic landscape features that are critical in retaining biodiversity and supporting continued ecosystem functioning and services (SANBI, 2007). These form the key output of a systematic conservation assessment and are the biodiversity sectors inputs into multi-sectoral planning and decision-making tools.

The primary purpose of CBAs is to inform land-use planning and the land-use guidelines attached to CBAs' aim to promote sustainable development by avoiding loss or degradation of important natural habitat and landscapes in these areas and the landscape. CBAs can be used to inform protected area expansion and development plans. The use of CBAs here follows the definition laid out in the guideline for publishing bioregional plans (Anon, 2008):

- “Critical biodiversity areas (CBAs) are areas of the landscape that need to be maintained in a natural or near-natural state in order to ensure the continued existence and functioning of species and ecosystems and the delivery of ecosystem services. In other words, if these areas are not maintained in a natural or near-natural state then biodiversity conservation targets cannot be met. Maintaining an area in a natural state can include a variety of biodiversity-compatible land uses and resource uses.”
- “Ecological support areas (ESA’s) are areas that are not essential for meeting biodiversity representation targets/thresholds, but which nevertheless play an important role in supporting the ecological functioning of critical biodiversity areas and/or in delivering ecosystem services that support socio-economic development, such as water provision, flood mitigation or carbon sequestration. The degree of restriction on land use and resource use in these areas may be lower than that recommended for critical biodiversity areas.”

The guideline for bioregional plans defines three basic CBA categories based on three high-level land management objectives.

Table 22: Framework for linking spatial planning categories (CBAs) to land-use planning and decision-making guidelines based on high-level land biodiversity management objectives

CBA category	Land management objective
PA & CBA 1	Natural landscapes: <ul style="list-style-type: none"> • Ecosystems and species fully intact and undisturbed. • These are areas with high irreplaceability or low flexibility in terms of meeting biodiversity pattern targets. If the biodiversity features targeted in these areas are lost, targets will not be met. • These are landscapes that are at or past their limits of acceptable change.
CBA 2	Near-natural landscapes: <ul style="list-style-type: none"> • Ecosystems and species largely intact and undisturbed. • Areas with intermediate irreplaceability or some flexibility in terms of area required to meet biodiversity targets. There are options for loss of some components of biodiversity in these landscapes without compromising our ability to achieve targets. • These are landscapes that are approaching but have not passed their limits of acceptable change.
Ecological Support Areas (ESAs)	Functional landscapes: <ul style="list-style-type: none"> • Ecosystems moderately to significantly disturbed but still able to maintain basic functionality. • Individual species or other biodiversity indicators may be severely disturbed or reduced. • These are areas with low irreplaceability with respect to biodiversity pattern targets only.
Other Natural Areas (ONAs)	Production landscapes: manage land to optimise sustainable utilisation of natural resources.

and transformed Grassland	
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According to the Mpumalanga conservation plan, most of the site is located in a disturbed area since cultivation is taking place on-site with the remainder of the site classified as a CBA. All-natural grassland, the rocky outcrop and vegetation associated with watercourses in the project area falls in CBAs according to the Mpumalanga Biodiversity Sector Plan (MBSP). These are the most sensitive habitats in the project area and represent areas where ecological impacts will be most significant. Sensitive areas will be buffered out and, as most of it is situated where coal is not present, these areas will be excluded to prevent negative ecological impacts. Terrestrial biodiversity assessments are expected to be performed by MPTA during consultation process undertaken by Singo Consulting (Pty) Ltd. According to records, no mining activities should be performed on critical biodiversity areas. As mining is a land use that compromise the biodiversity objectives of a priority biodiversity conservation area and not permissible.

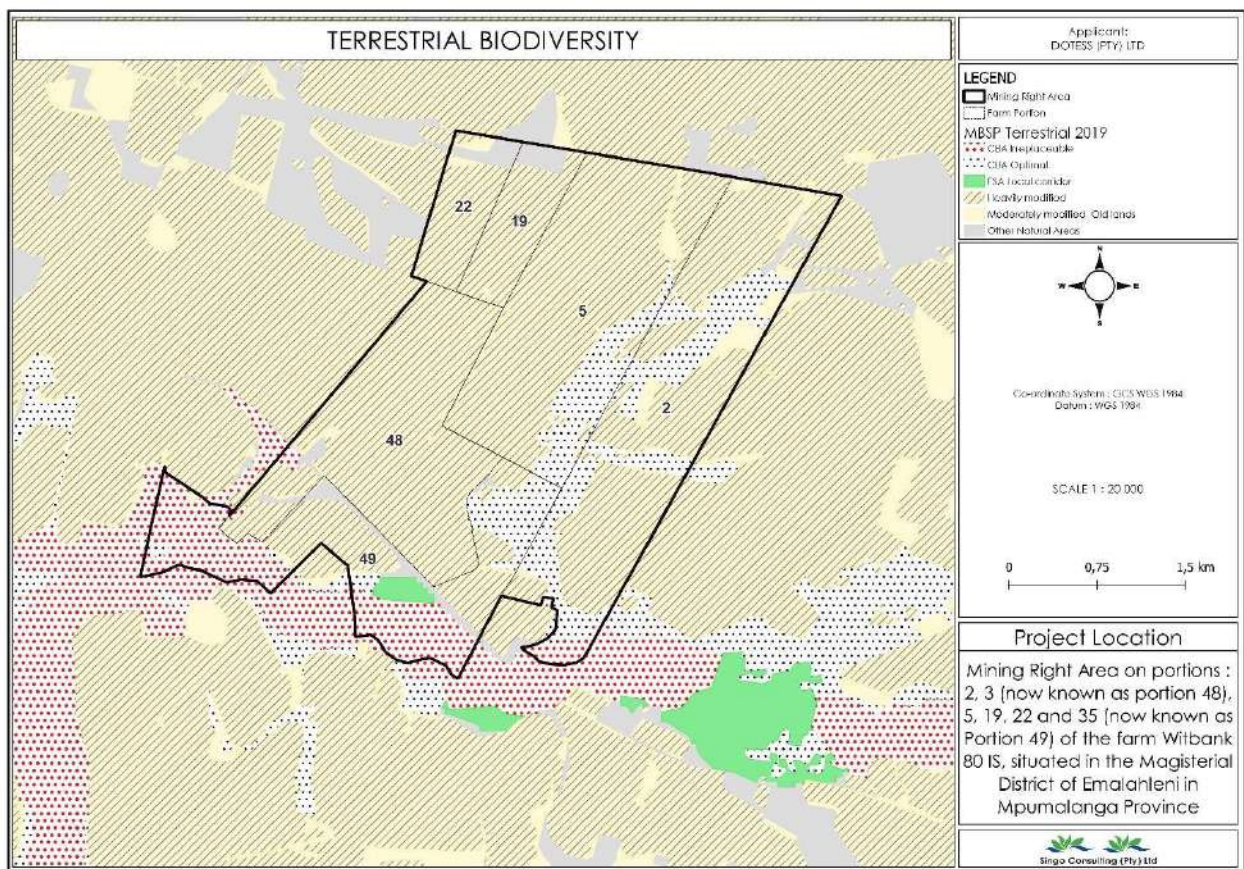


Figure 56: Biodiversity map (Singo Consulting, 2023)

Mammals

This faunal survey focused mainly on the mammals and birds of the study area. The survey focused on the current status of threatened animal species occurring, or likely to occur in the study area, describing the available and sensitive habitats. Faunal data was supplemented by previous surveys conducted in similar habitats, literature investigations and historic data. Different habitats were explored to identify sensitive or endangered species. Mammal names are as used by Stuart and Stuart (1998), and Skinner and Chimimba (2005), and bird names are used as used by Hockey *et al.*, (2005). *Amblysomus hottentotus*, *A. septentrionalis*, *Atilax paludinosus* and *Potamochoerus larvatus* were previously recorded in the vicinity of the project area but were not confirmed during site assessment.



Figure 57: Cows grazing on site

MAP OF RELATIVE ANIMAL SPECIES THEME SENSITIVITY

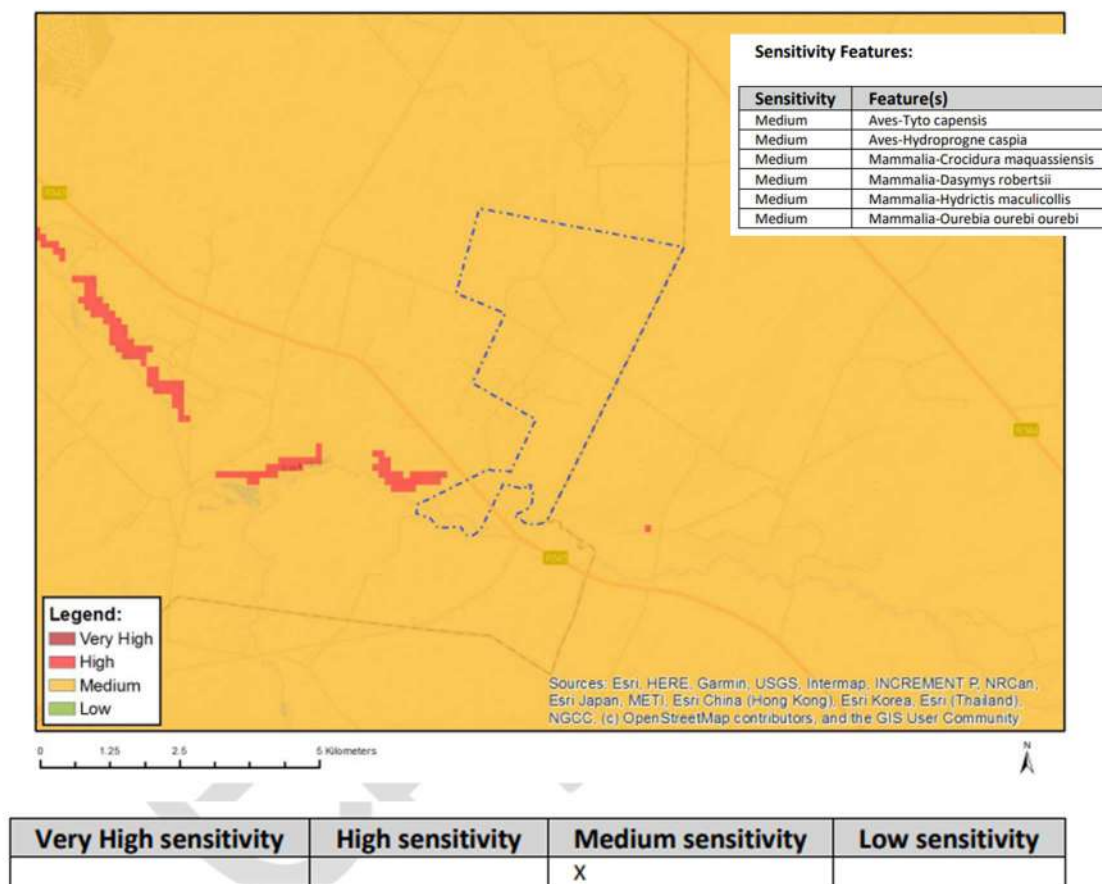


Figure 58: Animal Species Theme Sensitivity

Avifauna (Birds)

Birds are good ecological indicators, since their presence or absence tends to represent conditions pertaining to the proper functioning of the ecosystem. Bird communities and ecological conditions are linked to land cover: as the land cover changes so do the types of birds in the area.

Many avifaunal species are adaptable, as they are habitat generalists and can therefore accommodate a certain degree of habitat degradation and transformation (Harrison *et al.*, 1997). Other species are extremely habitat-specific and rely on certain habitat units for breeding, hunting or foraging and roosting. It is the survival of these species that become threatened as they cannot adapt to changes to the habitat. Habitat-specific species are sensitive to environmental change, with destruction of habitat being the leading cause of species decline worldwide (Barnes, 2000).

It is widely accepted that vegetation structure, rather than the actual plant species, influences bird species' distribution and abundance (Harrison *et al.*, 1997). The vegetation description used in the Bird Atlas does not focus on lists of plant species, but rather on factors relevant to bird distribution.

Full ecology study has been presented during this EIA phase and attached on appendices.

16 Soils, land use and land capability

The project falls under soil type or association mostly with Red or yellow structureless soils with a plinthic horizon. Soils or lands with low to poor potential will be considered on the project and soils with high potential for agricultural activities will be preserved. The dominating land-use on-site is cultivation (maize) and waterbodies. The land is capable for agricultural and mining activities. See Figure 59 and 60.



Figure 59: On-site land uses

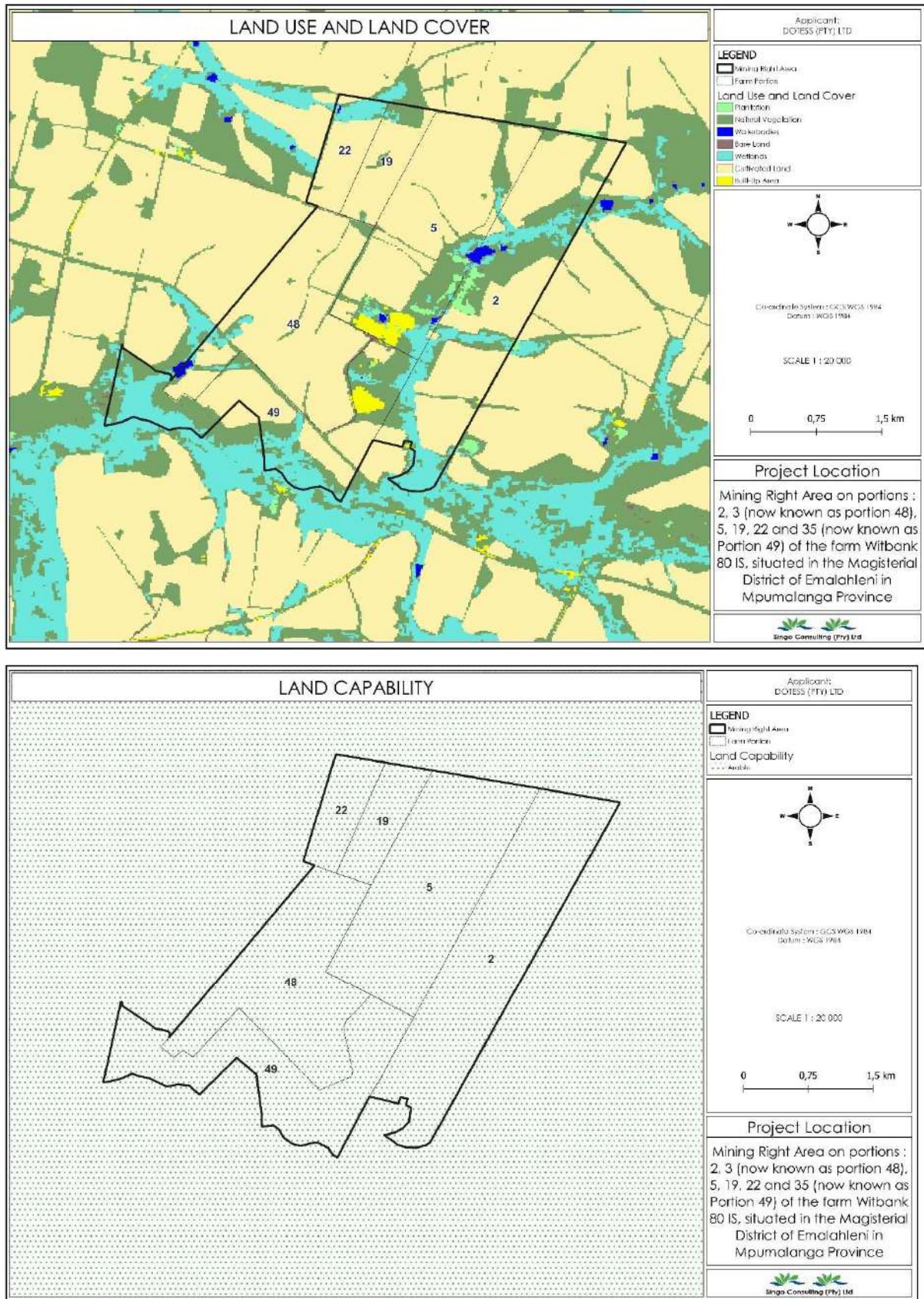


Figure 60: Land use and capability on site (Singo Consulting, 2023)

17 Heritage study

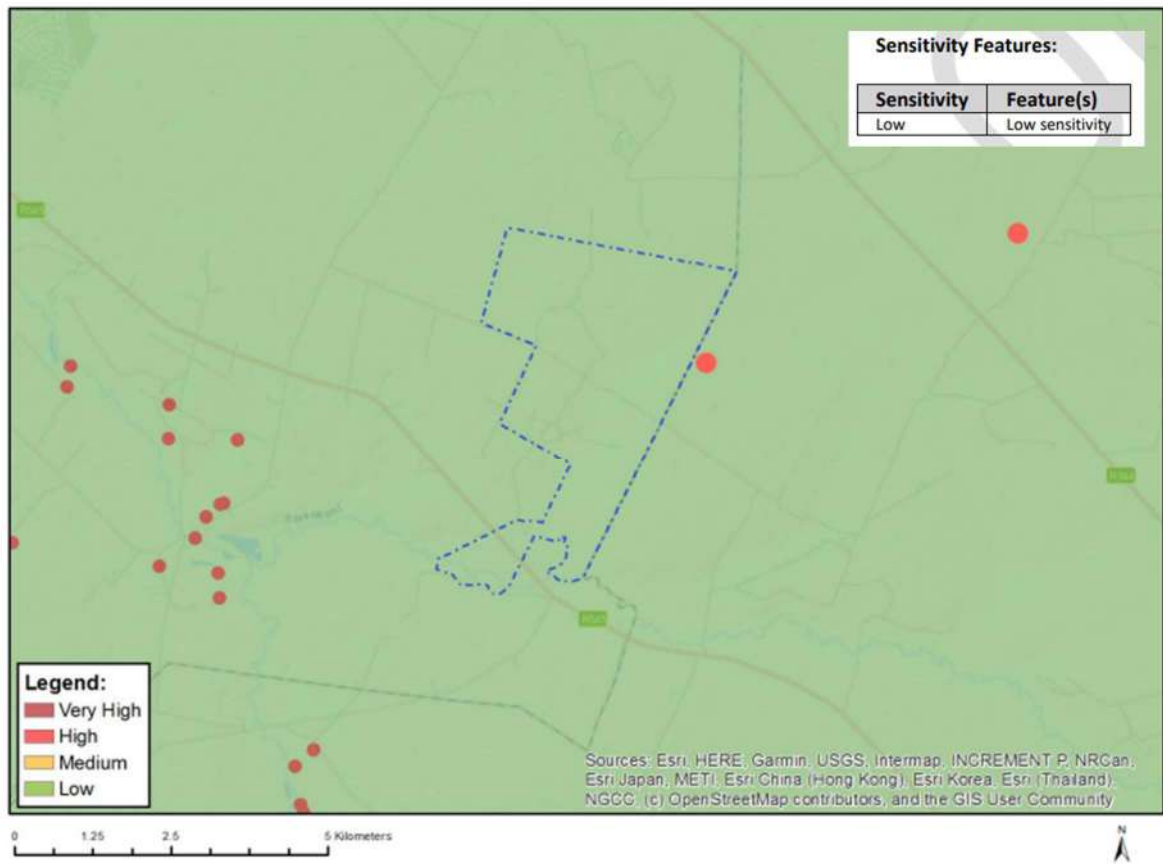
17.1 Historical background

Singo consulting (Pty) Ltd has appointed a specialist to conduct heritage impact assessment for Witbank 80 IS during the EIA phase.

Relevant published and unpublished sources were consulted to generate desktop information. This includes online databases such as the United Nations Educational, Scientific and Cultural Organization (UNESCO) website, Google Earth, Google Scholar, and South African Heritage Resources Information System (SAHRIS). Previous HIA in the project area will also be consulted. Published works on the archaeology, history and palaeontology was also consulted. Thus, the proposed mining right application site will be considered in relation to the broader landscape, which is a key requirement of the International Council on Monuments and Sites (ICOMOS) Guidelines.

As part of the desktop study, published literature and cartographic data, as well as archival data on heritage legislation, the history and archaeology of the area were studied. The desktop study was followed by field surveys. The field assessment was conducted according to generally accepted AIA/HIA practices and aimed at locating all possible objects, sites, and features of cultural significance on the development footprint. Initially a drive-through was undertaken around the proposed mining development site as a way of acquiring the archaeological impression of the general area. This was then followed by a walk down survey in the study area, with a handheld Global Positioning System (GPS) for recording the location/position of each possible site. Detailed photographic recording were taken. The findings were then analysed in view of the proposed mining development in order to suggest further action. The result of this investigation is a report indicating the presence/absence of heritage resources and how to manage them in the context of the Mining Right Application site. According to screening report the archaeological and cultural theme sensitivity of the area is low sensitivity see Figure 61 below and as per evidence of Figure 62, SAHRA was consulted to can share inputs.

MAP OF RELATIVE ARCHAEOLOGICAL AND CULTURAL HERITAGE THEME SENSITIVITY



Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
			X

Figure 61: Archaeological and Cultural Heritage Theme Sensitivity

SAHRIS database and impact assessment reports in the proposed project area

MP30/5/1/1/2/478MR

Add new comment Subscribe to: This post

CaseHeader LocationInfo Admin Images

Status: SUBMITTED

HeritageAuthority(s): SAHRA
MPHRA

Case Type: Section 38 (8) - Statutory Comment Required

Development Type: Mining

ProposalDescription:
SECTION 102 AMENDMENT ON COAL MINING RIGHT APPLICATION, ENVIRONMENTAL AUTHORIZATION (INTEGRATED EIA & EMPR), WATER USE LICENSE AND WASTE MANAGEMENT APPLICATIONS ON PORTIONS 02, 05, 19, 22, 48 AND 49 OF THE FARM WITBANK 80 IS, LOCATED IN THE MAGISTERIAL DISTRICT OF WITBANK, MPUMALANGA PROVINCE: DMRE REF NUMBER: MP30/5/1/1/2/478MR.

ApplicationDate: Tuesday, March 14, 2023 - 10:00

CaseID: 20896

Applicants: Jacobus Francois Rossouw

Consultants/Experts: SINGO CONSULTING (PTY) LTD

OtherReferences:

CaseReference	Department	ApplicationType	DeadlineDate
MP 30/5/1/1/2/478 MR	Department of Mineral Resources - Mpumalanga	Mining Rights	14/04/2023

ReferenceList:

AdditionalDocuments

1. BID.pdf

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✔ Heritage Cases MP30/5/1/1/2/478MR has been updated.

Heritage Cases

VIEW EDIT

Special Notice

Following comments received on the proposed Revised Schedule of Fees for applications made to the South African Heritage Resources Agency (SAHRA), made in terms of Section 25(2)(f) of the National Heritage Resources Act No. 25 of 1989 (NHRA) and published in the Government Gazette of 22 July 2022, SAHRA hereby publishes the final Revised Schedule of Fees for Applications made to SAHRA. Applications for provision of services submitted to the South African Heritage Resources Authority (SAHRA), in terms of the National Heritage Resources Act, No. 25 of 1989 (NHRA) must be accompanied by a payment of the appropriate fee, taking effect from 1 January 2023

Revised Schedule of Fees for Applications made to the South African Heritage Resources Agency (SAHRA)

MP30/5/1/1/2/478MR

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CaseHeader LocationInfo Admin Images

Status: Studies Submitted

HeritageAuthority(s): SAHRA
MPHRA

Case Type: Section 38 (8) - Statutory Comment Required

Development Type: Mining

ProposalDescription:
SECTION 102 AMENDMENT ON COAL MINING RIGHT APPLICATION, ENVIRONMENTAL AUTHORIZATION (INTEGRATED EIA & EMPR), WATER USE LICENSE AND WASTE MANAGEMENT APPLICATIONS ON PORTIONS 02, 05, 19, 22, 48 AND 49 OF THE FARM WITBANK 80 IS, LOCATED IN THE MAGISTERIAL DISTRICT OF WITBANK, MPUMALANGA PROVINCE: DMRE REF NUMBER: MP30/5/1/1/2/478MR.

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MP 30/5/1/1/2/478 MR	Department of Mineral Resources - Mpumalanga	Mining Rights	14/04/2023

Heritage Reports: Phase 1, AIA

ReferenceList:

Back to Top

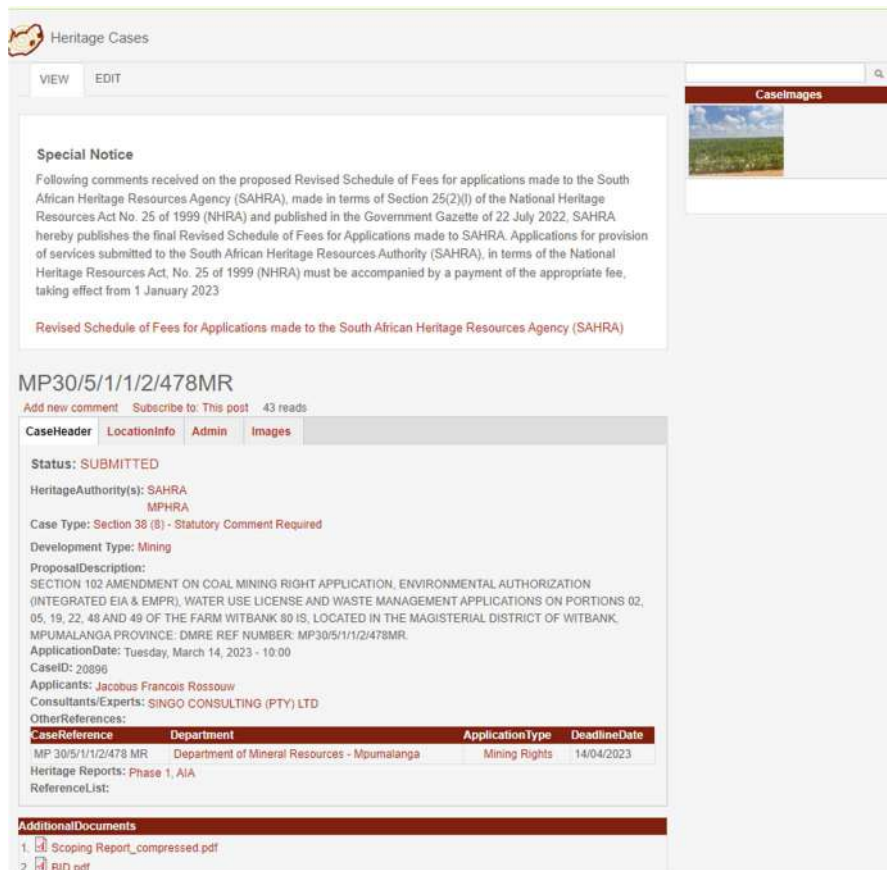


Figure 62: SAHRA Consultation

17.2 Intangible heritage

As defined in terms of the UNESCO Convention for the Safeguarding of the Intangible Cultural Heritage (2003), intangible heritage includes oral traditions, knowledge and practices concerning nature, traditional craftsmanship and rituals and festive events, as well as the instruments, objects, artefacts and cultural spaces associated with group(s) of people. Thus, intangible heritage is better defined and understood by the particular group of people that uphold it. In the present study area, very little intangible heritage is anticipated on the development footprint because most historical knowledge does not suggest a relationship with the study area, even though many places in the general area do have intangible heritage.

17.2.1 Results of the field study

The fieldwork survey was undertaken on the 28th of June 2023. The focus of the survey involved a pedestrian survey which was conducted within the proposed mining area. The pedestrian survey focused on parts of the project area where it seemed as if disturbances may have occurred in the past, for example bald spots in the grass veld; strands of grass which are taller than the surrounding grass veld; the presence of exotic trees; evidence of building rubble, existing buildings and ecological

indicators such as invader weeds.

The literature survey suggests that prior to the 20th century modern agriculture development; the general area would have been a rewarding region to locate heritage resources related to Iron Age and historical sites (Bergh 1999: 4). However, the situation today is completely different. The study area now lies on a clearly modified landscape that is dominated by ongoing commercial farming.

17.2.2 Archaeology

The site was scanned for archaeological remains, but given the previous and current land use activities, no archaeological remains were identified during the survey (see Figure 1 & Plates 1-12). Based on the field study results and field observations, the receiving environment for the proposed mining site is low to medium potential to yield previously unidentified archaeological sites during mining. Literature review also revealed that no Stone Age and LIA sites are not shown on a map contained in a historical atlas of this area. This, however, should rather be seen as a lack of research in the area and not as an indication that such features do not occur.

17.2.3 Burial grounds and Graves

Human remains and burials are commonly found close to archaeological sites and abandoned settlements; they may be found in abandoned and neglected burial sites or occur sporadically anywhere because of prehistoric activity, victims of conflict or crime. It is often difficult to detect the presence of archaeological human burials on the landscape as these burials, in most cases, are not marked at the surface and concealed by dense vegetation cover. Human remains are usually identified when they are exposed through erosion, earth moving activities and construction/mining. In some instances, packed stones or bricks may indicate the presence of informal burials. If any human bones are found during the course of mining work, then they should be reported to an archaeologist and work in the immediate vicinity should cease until the appropriate actions have been carried out by the archaeologist. Where human remains are part of a burial, they would need to be exhumed under a Right from either SAHRA (for pre-colonial burials as well as burials later than about AD 1500) or Department of Health for graves younger than 60 years.

The field survey identified five burial sites (**WBS01, WBS02, WBS03, WBS04, WBS05**) within the proposed Mining Right Application site (see Figure below). The burial site WBS01 is located at GPS coordinates 26°18'34.71"S, 29°20'32.47"E. The site has more than 45 informal graves (see figure 63). Most of the graves are marked oval stone curbs while others are marked by brick lining and tombstones with inscribed headstones. The survey noted that some graves are not clearly marked, newer graves

marked by steel grave markers. There is evidence of ritual activities on the other section of the burial site, but the northern section seems to be neglected. As such some graves are partially visible due to grass cover and erosion. The perimeter fence has fallen off.



Figure 63: Various pictures showing the burial sites.

18 Social aspects

The study area is located in Ward 27 of the Emalahleni Local Municipality within Nkangala District Municipality, Mpumalanga. The demographics, households, economics, education, and service delivery aspects are discussed in the following to provide a background of the area and initial insights for the socio-economic assessment that will be done and be presented in the EIA phase. The information was obtained from Statistics South Africa (Census, 2011) and Municipal Integrated Development Plan (IDP). The socio-economic analysis is based on a desktop study of existing socioeconomic information and development strategies contained in the governmental national, regional, and local databases (Statistics South Africa).

18.1 Introduction

The development of the 2022-27 IDP was to first understand the current Emalahleni population, its relevant demographics as well as the anticipated trends in development for the 2022-2027 financial year. According to Emalahleni Local Municipality (2022) the IDP has been developed for the 2022 to 2027 financial years in compliance with Section 34 of the Local Government: Municipal Systems Act, 2000 (Act 32 of 2000 as amended).

18.2 Population Profile

Statistical Premise The data used in this review of the analysis phase of the IDP was obtained from Statistics South Africa and the Municipal Demarcation Board.

18.3 Population Size

It is imperative to note that population growth statistics was taken into consideration throughout the IDP planning processes of the municipality. Specific reference is made to the latest 2016 Community Survey in comparison to the Census 1996, 2001, 2007 Community Survey and 2011 Census in order to see the trend.

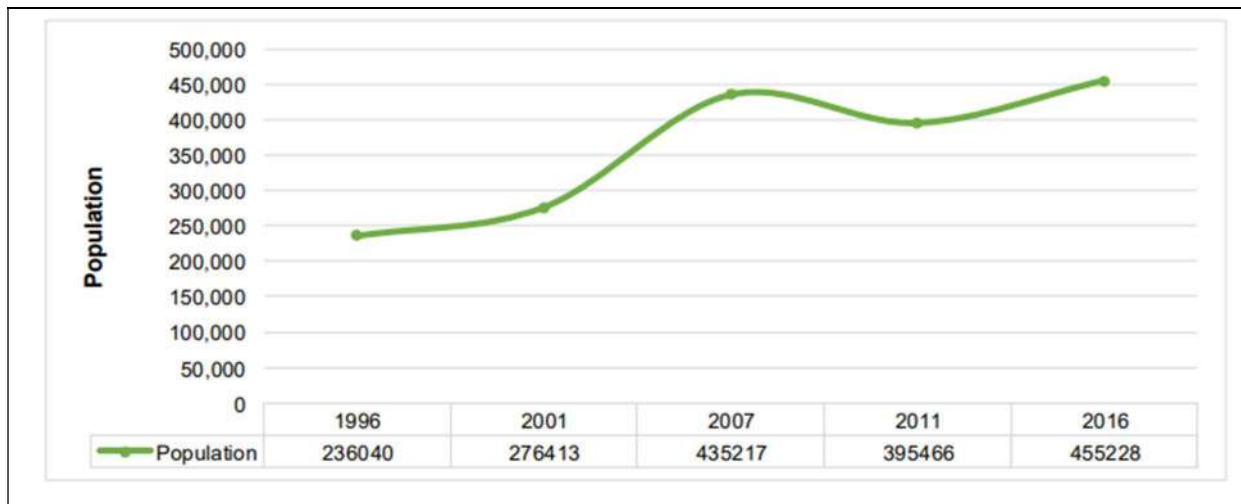


Figure 64: Population size of Emalahleni (Source: Statistics South Africa, Community Survey 2016)

	Census 1996	Census 2001	Census 2011	Community Survey 2016	Av. growth per annum 1996 - 2011
Population	129 027	121 820	119 461	124 532	-0.51%
Household	26 722	27280	31 681	27 008	1.14%
Average HH Size	4.8	4.5	3.8	4.7	

Figure 65: Population Growth Rate (%). (Source: Census 1996, Census 2001, Census 2011 and Community Survey 2016)

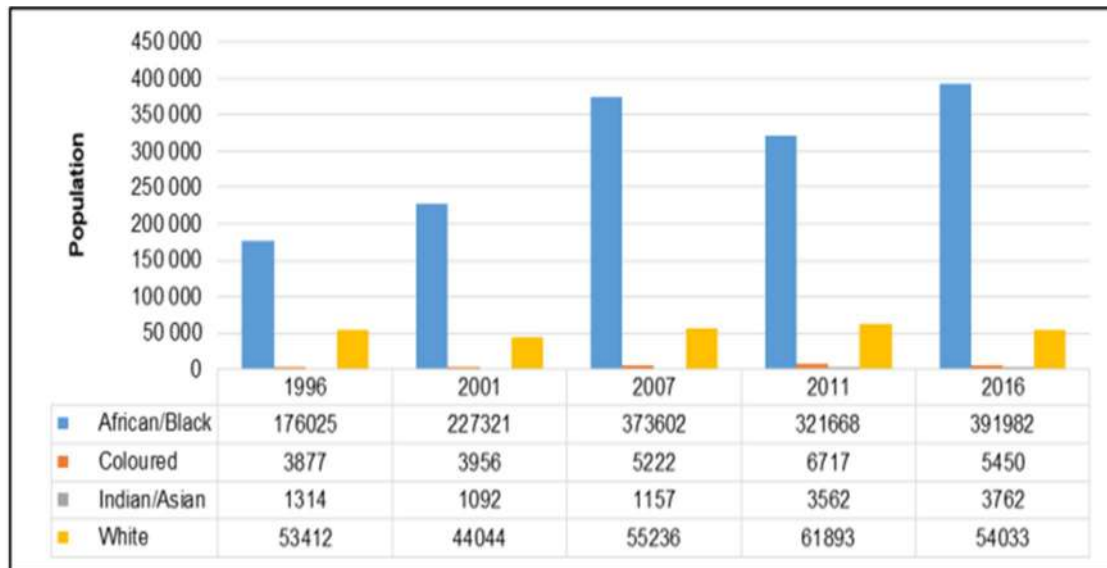
According to the 2016 Census by Stats SA, the population of eMalahleni is 455 228 (eMalahleni IDP, 2022-2027). From 2011 to 2016 the population of Emalahleni increased by 59 762 and from 2016 to 2021 by 98 334. Municipality has shown a population growth of 157414 over the last 10 years which equates to a growth rate of 39.80%. eMalahleni is composed of all racial groups with 391,982 Black African, which shows an increase since 2011; Coloured 5 450; Indian or Asian 3 762 and White 54 033 (eMalahleni IDP, 2022-2027). The tables indicate changes of population groups since 2011 and it shows an increase in both African/Black and Indian/Asian and decrease in both Coloured and White population since 2011 (eMalahleni IDP, 2022-2027).

18.4 Population Distribution

Population distribution is the arrangement or spread of people living in a given area according to variables such as age, race, or sex.

18.4.1 Race

African/ black population continues to constitute the highest group followed by the white population since 1996 to date. Asian and coloured population constitute the minor population group.



Source: Statistics South Africa, Community Survey 2016

Figure 66: Population Group 1996, 2001, 2007, 2011 and 2016 Source: Statistics South Africa, Community Survey 2016

18.4.2 Sex Ratio

There are more males than females in ELM (eMalahleni IDP, 2022-2027). The birth rate has decreased from 2011 to 2021 (eMalahleni IDP, 2022-2027). The proportion of both males and females in the categories between birth and 29 years of age (except for the category 10–14-year-old females which showed a slight increase) are smaller in 2021 than they were in 2011 (eMalahleni IDP, 2022-2027). The bigger proportion of both males and females in the categories 30 and older for 2021 as compared with 2011 are thus to be expected as people move ‘up though’ the population pyramid as they age (eMalahleni IDP, 2022-2027). There is an increase in the percentage of both genders from 2011 to 2021, from the age of 30 upwards. The population of Emalahleni is predominantly youth (15-34 years) at 43.1% of the total population (eMalahleni IDP, 2022-2027).

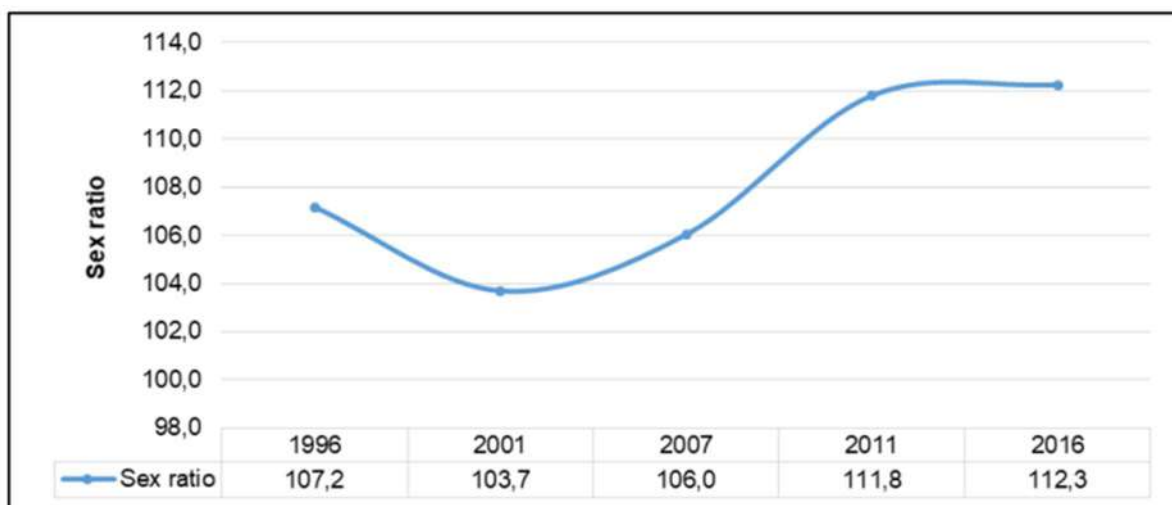
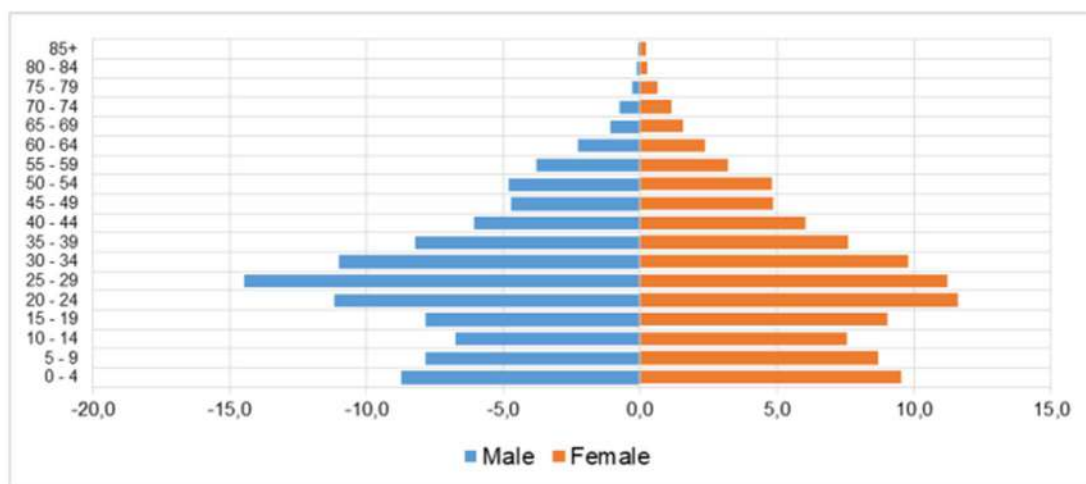
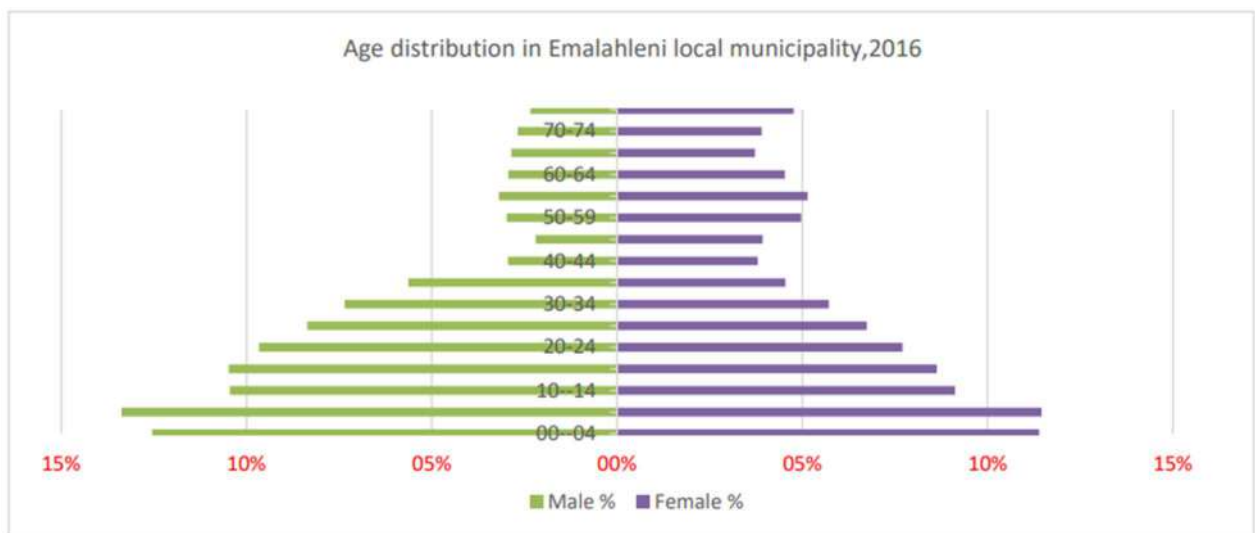


Figure 67: Sex ratio 1996, 2001, 2007, 2011 and 2016 (Source: Statistics South Africa, Community Survey 2016)

18.4.3 Age

The challenges that are posed by the youthful population in the main are socio-economic. It means that the municipality should grow the economy to meet employment needs of the youth, which at present is estimated to grow at less than 0.9% between 2018 and 2023. This implies that the LED (eMalahleni IDP, 2022-2027). The recent SERO Report indicates that there is 47, 1% females and 52, 9% males. This is surprising because in most cases females are more than males. However, this may be as a result of young males coming into the municipality looking for employment or married male who temporarily coming to eMalahleni for employment opportunities. This suggests that the municipality has to consider the rental accommodation.



Source: Statistics South Africa, Community Survey 2016

Figure 68: Distribution of Population by Age and Sex in 2016. (Source: StatsSA; Community Survey, 2016)

19 Educational Attainment

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).

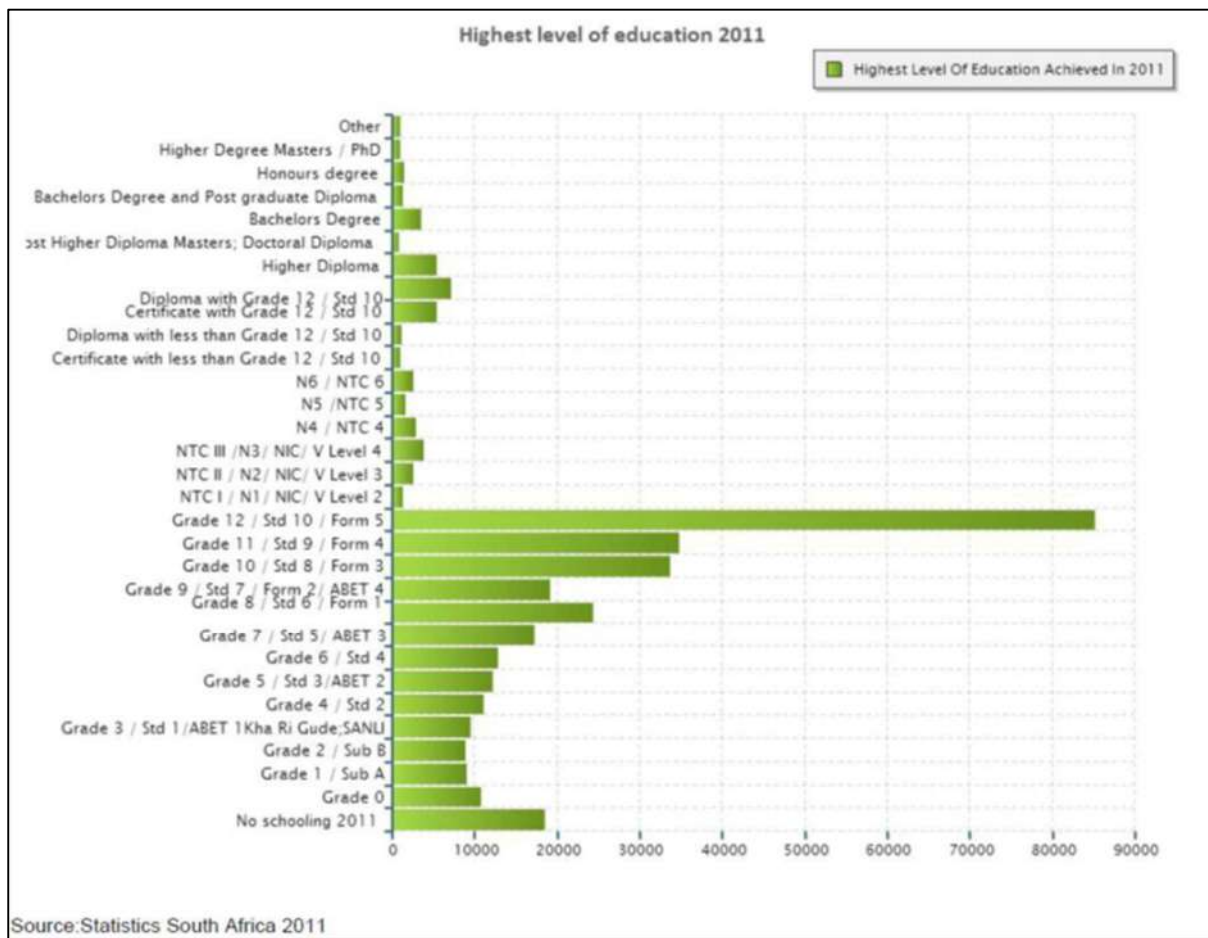


Figure 69: Statistics of South Africa with a reference of eMalaheni

Table 23: Educational Achievement in eMalahleni, 1996-2016 (Source: Statistics South Africa, Community Survey 2016)

Year	1996	2001	2007	2011	2016
No schooling	14%	14%	8%	6%	5%
Primary	20%	20%	20%	13%	10%
Grade 8 – grade 11	35%	33%	40%	33%	34%
Less than matric & certificate/Diploma	3%	1%	5%	1%	1%
Matric only	18%	24%	19%	31%	37%
NTCI/N1/NIC/V Level2-N6/NTC6				5%	6%
Post matric	10%	8%	8%	10%	8%

Socio Economic Analysis

The socio-economic analysis is specifically aimed at spatial related matters, i.e., employment, income and economic profile. This analysis is based on a municipal level to give a broader overview of the Municipality.

Poverty and Inequality

In the last ten years the municipality has made huge investments in infrastructure and housing development as a result of that, poverty and inequality has been decreasing steadily. However, the current rate of unemployment and poverty are key factors contributing to high inequality levels.

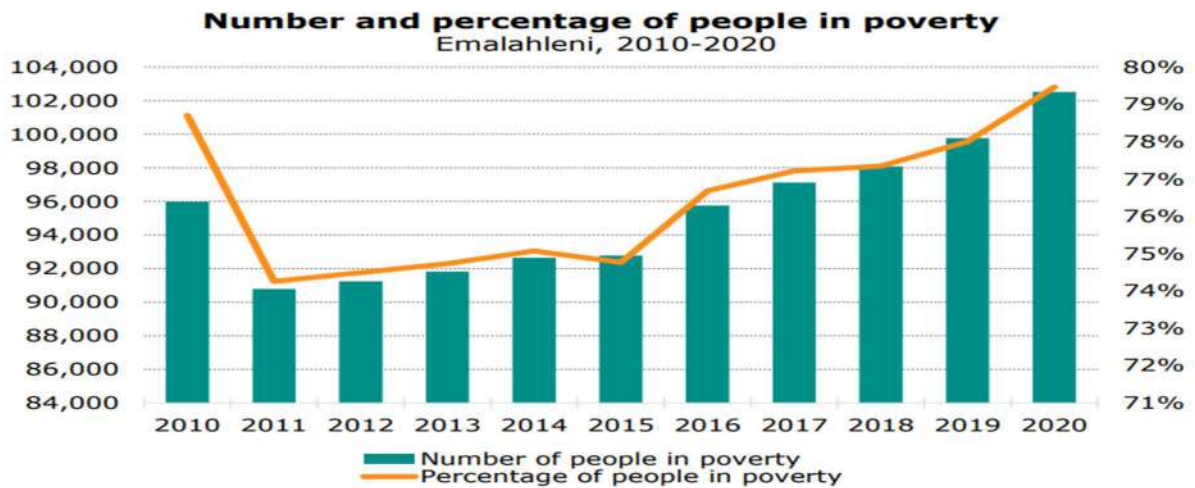


Figure 70: Poverty in eMalahleni 2010-2020

According to the 2016 Community Survey of StatSA, the so-called poverty headcount (multi-dimensionally) of Emalahleni deteriorated from 8.0% in 2011 to 10.9% in 2016 and was the second highest in the province and the poverty intensity also increased from 43.6% to 45.4% in the same period. In 2018, the Emalahleni lower-bound poverty line was the second lowest amongst municipalities in Mpumalanga (Emalahleni Local Municipality IDP, 2022).

Human Development Index

Human Development Index (HDI) is defined as a standard measure of determining whether an area is developed, developing, and developed. According to the SERO 2022 report, the HDI of the municipality was 0.68 in 2020, the same as that one of 2018 (Emalahleni Local Municipality IDP, 2022). The predetermined life expectancy in South Africa is 65 and as a result that confirms the decline of the population group between the ages 65 and 85+ as depicted in the pyramid (figure 1). On the other hand, the high death rate within these population groups could be attributed to the top ten leading causes of death as listed by the STATS SA 2011, namely, influenza and pneumonia, other external causes of accidental injury, Tuberculosis, Intestinal infectious diseases, other forms of heart disease, Cerebrovascular diseases, Ischaemic heart diseases, Chronic lower respiratory diseases, Human immunodeficiency virus [HIV] disease, Diabetes mellitus.

20 Social Grants

The table below shows the number of beneficiaries of social grants for January 2019, January 2020 and January 2021. Youth is generally not targeted by South Africa's social welfare system. Child Grants followed by the old age grants were the highest pay-outs.

Table 24 Social Grants Beneficiaries (January 2019, January 2020 and January 2021)

Grant type	Number receiving grant (January 2019)	Number receiving grant (January 2020)	Number receiving grant (January 2021)
Child Support	68,624	70,839	72182
Old Age	17,035	17,745	18106
Disability	5,882	5,833	5714
Foster Care	2,359	2,186	2503
Care Dependency	968	939	952
Grant-in-Aid	753	843	819
War Veteran	0	0	0
TOTAL	95,621	98,385	100,276

21 Employment

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.

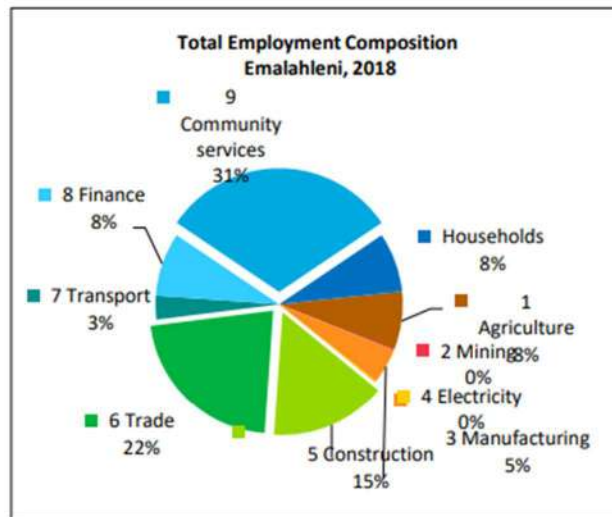


Figure 71: Percentage of Employment (Source: IHS Markit Regional eXplorer version 1870)

During the operational phase the mine will employ approximately 52 permanent employees ranging from skilled to semi-skilled and unskilled workers with varying education levels. It is estimated that 50 illiterate workers will be employed to fill unskilled vacancies. Skilled positions will include top and senior Management, qualified and experienced Specialists, Technical and academically qualified workers, Junior Management, Supervisors, Foremen and Superintendents, and includes:

Mine manager;

Environmental Specialist;

Technical Superintendent;

Mine Planner;

Surveyor;

Production Geologist and Geologist assistant;

Secretary, Accountant and Office staff;

Processing plant Manager;

Boiler makers;

Electricians; and so forth.

Semi-skilled employment includes positions with discretionary decision-making power, such as:

Shuttle car operator and vehicle operator;

Water tanker operator;

Pump station attendants;

General crew; etc

Un-skilled positions are usually positions with defined decision-making and would include the Production miners. According to the Dotess SLP, 50 illiterate employees would be employed, with ABET 1, 2, 3, and 4 needs.

Dotess is responsible for the provision of funds for individual career development and in-service training for employees where the capacity to do so exist. In addition to this the Witbank Colliery will provide learnerships, which are registered with the Department of Labour. Internal and external bursaries and internships will be provided in accordance the Mining Charter guidelines.

Management shall accept the responsibility to:

- ✓ Develop career development and succession plans;
- ✓ Assess the potential of employees and establish a career path for each;
- ✓ Ensure the development of each employee;
- ✓ Provide a platform for communication of all levels;
- ✓ Facilitate communication;
- ✓ Ensure an environment openness, honesty and trust;
- ✓ Show visible support for leadership development;
- ✓ Facilitate career development;

- ✓ Give guidance and counselling regarding career development; and
- ✓ Provide relevant and updated information.

- ✓ **Employees will be responsible to:**
- ✓ Assist in career development plan;
- ✓ Be motivated and willing to participate in career development;
- ✓ Acquire competencies as provided by Dotess Colliery;
- ✓ Take charge of own development; and
- ✓ Adhere to service obligations.

A 'Skills, training and development Policy and Plan' has been drawn up with the purpose to provide guidelines for the implementation and maintenance of comprehensive training and development strategies and procedures.

21.1 Employment equity

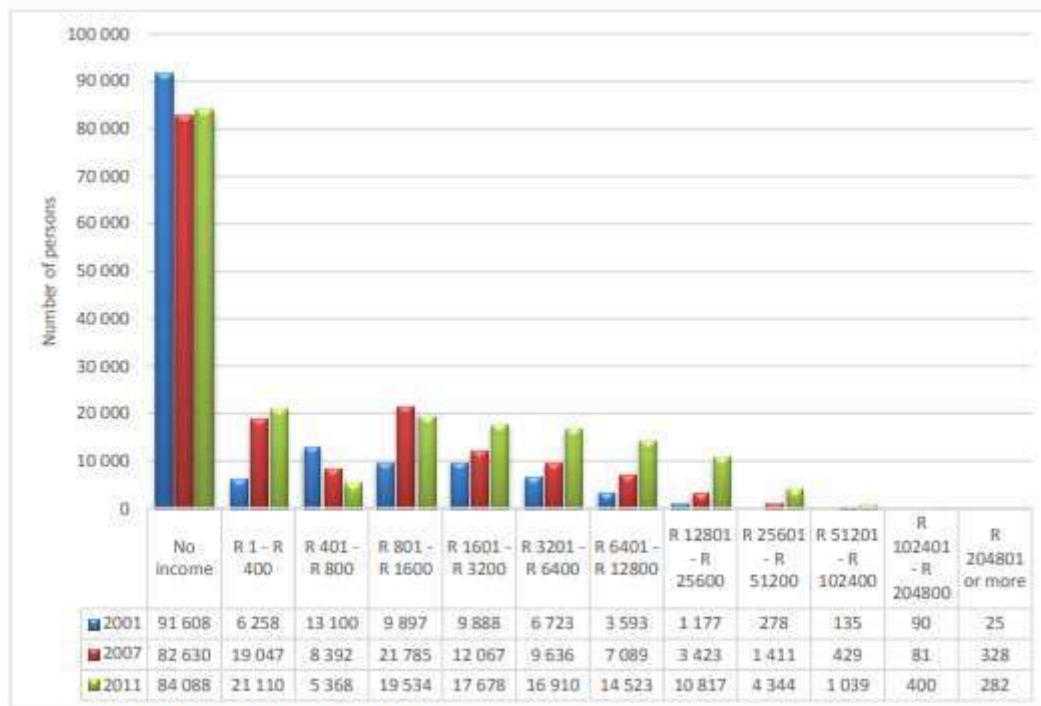
The number of Historically Disadvantaged South Africans (HDSA) to be employed and developed is reflected in the Dotess SLP and will annually be evaluated by the Department of Mineral Resources and Energy (DMRE). The purpose of the Witbank Colliery 'Employment Equity and Policy Plan' is to regulate, control and guide on how to ensure effective realization of employment equity strategies which are in line with the SA government's equity policies. Its vision is the employment of a diverse workforce representative of the people of South Africa and thus eliminating all forms of unfair and indiscriminate practices at Dotess (SLP, Witbank Colliery).

21.2 Social Development

As part of a mine's Social and Economic Development responsibility, the mine must get involved with a relevant Local Economic Development Projects as identified in the IDP of a municipality. The Witbank Colliery is however not in the position to get involved with the day-to-day running of a LED project but will make a financial contribution of R1 000 000 annually towards a project of the municipality's choice, over a period of 5 years

Consultations with the Director of LED at the Local Municipality of eMalahleni are in progress during which a project will be identified by the said municipality and the necessary stipulations and agreements for the transferring of funds will be made.

The transferal of funds can however only be possible once the mine is in full and successful production and production can only commence on receipt of a mining right, however in the event of Dotess the mine will be operational thus far through the existing granted right.



Source: Statistics South Africa Census 2001 and 2011

Emalahleni	
2010	1.8
2011	2.0
2012	2.2
2013	2.4
2014	2.6
2015	2.9
2016	3.1
2017	3.5
2018	3.8
2019	4.0
2020	3.9
Average Annual growth 2010-2020	7.87%

Figure 72: Individual income distribution in Emalahleni from 2010-2020 (Source: IHS Markit Regional eXplorer version 2175)

22 Household income

Monthly household income	2001		2011	
	No	%	No	%
No Income	8911	34.18	4803	15.15
R1-R400	1961	7.52	2037	6.42
R400-RR800	8332	31.96	3471	10.95
R800-R1600	4127	15.82	9414	29.70
R1600-R3200	1486	5.70	7836	24.72
R3200-R6400	751	2.88	2292	7.23
R6400-R12 800	337	1.29	975	3.07
R12 800-R25 600	101	0.38	546	1.72
R25 600-R51 200	12	0.04	234	0.73
R51 200-R 102 400	15	0.05	42	0.13
R102 400-R204 800	27	0.10	18	0.05
R204 800 and more	6	0.02	21	0.06
Total	26 066	100.1	31 689	100.0

Figure 73: Household Income 2001 and 2011 (Source: Census 2001 and 2011)

23 Health

According to Mpumalanga Department of Health, the HIV prevalence rate of eMalahleni was measured at 40.7% in 2013 (latest available figure). It is the 9th highest of all the municipal areas in the province. The HIV prevalence rate remained more or less at the same level between 2012 and 2013 (Emalahleni Local Municipality IDP, 2022).

24 HIV/ AIDS Prevalence

Since 2014/15 people who tested positive (as proportion of 15-49 years' population) and 2017/18 were 13, 4% and 8.0% respectively. This shows a downward trend. This may or may not be true reflection as this figure shows who volunteered to be tested or those who were pregnant. The total number of people who are on ARV support increased from 21 348 to 32 460 in the same period. Maternal mortality rate also increased slightly between 2014/15 to 2017/18 from 275.5 to 282.6 per 100 000 live births. Death in facility for children less than five years decreased from 13.7 to 10.2 in the same period. However, there was an increase in neonatal mortality rate per 1000 live birth births, from 14.5 to 20.8 from 2014/15 and 2017/18. There are programmes that deal with HIV/AIDS in the municipality. The municipality hold HIV/AIDS days and condoms distribution programmes for example as part of Mayor's programmes. 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 (Emalahleni Local Municipality IDP, 2022).

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 over-emphasised 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.

Emalahleni	
2010	13,000
2011	13,300
2012	13,500
2013	13,800
2014	14,100
2015	14,400
2016	14,600
2017	15,000
2018	15,300
2019	15,700
2020	16,100
Average Annual growth	
2010-2020	2.18%

Figure 74: HIV Prevalence by Sub-district: 2010-2020 (Source: IHS Markit Regional eXplorer version 2175)

25 Household (HH) Profile and Services

25.1 Number of households

According to the figure below, there were more than 30 000 more households in 2016 than there were in 2011, yet the average household size decreased from 3.0 to 3.0 within the same time period (Emalahleni Local Municipality IDP, 2022).

According to the CSIR Green Book, there will be 194 507 households in eMalahleni in 2021, an increase of 44 87 households from 2016. In 2030, there will likely be 233 142 households overall. The Provincial

Department of Human Settlements' recent construction of new homes may be to blame for the increase (Emalahleni Local Municipality IDP, 2022).

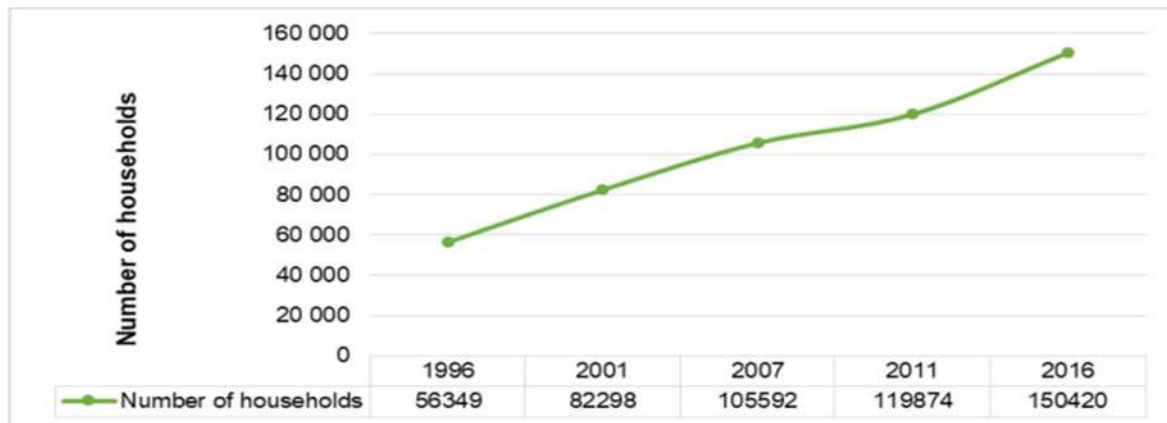
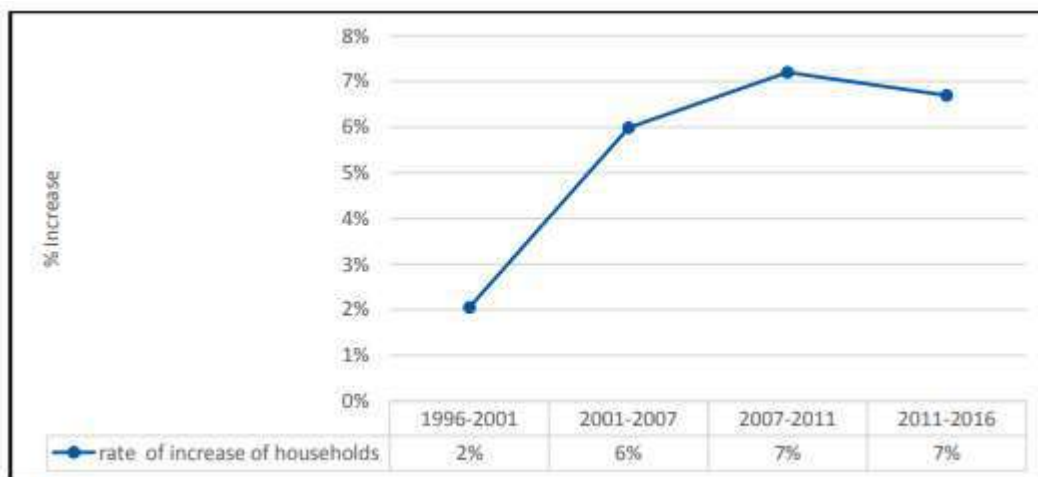


Figure 75: Number of Households in Emalahleni 1996, 2001, 2007, 2011 and 2016. (Source: Statistics South Africa, Community Survey 2016)



Source: Stats SA Community Profiles (1996, 2001, 2007, 2011 & 2016)

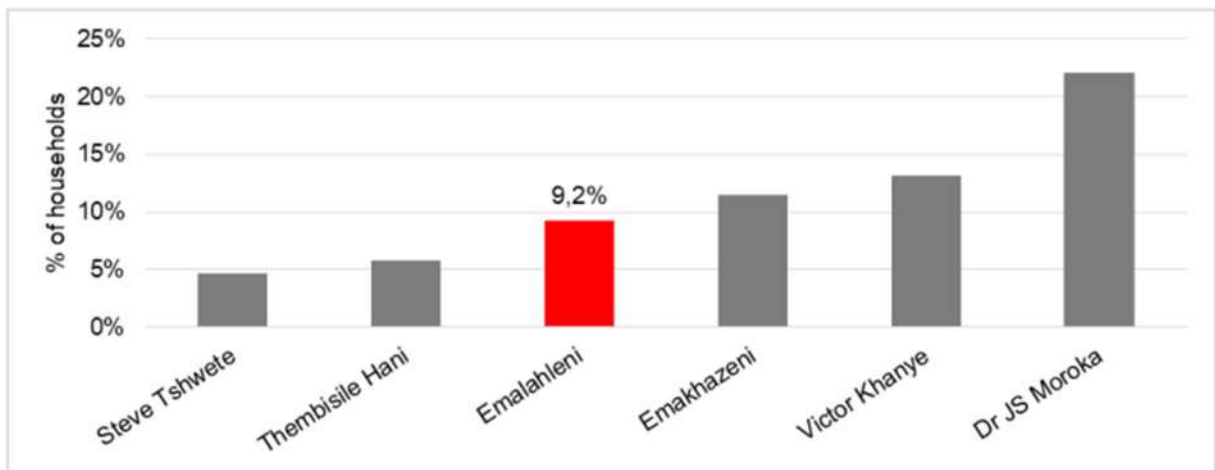
Figure 76: Rate of Increase of Households

Refuse disposal	2001		2011		2016	
	No	%	No	%	No	%
Removed by local authority at least once a week	2 825	10.8	2637	8.3	2 780	10.3
Removed by local authority less often	221	0.8	165	0.5	232	0.9
Communal refuse dump	467	1.8	528	1.7	727	2.7
Own refuse dump	12 183	46.7	20163	63.6	20 679	76.6
No rubbish disposal	10370	39.8	6885	21.7	2 590	9.6
Unspecified /other	-		1302	4.1	-	-
Total	26 066	100.0	31 680	100.0	27 008	100.0

Energy source	2001		2011		2016	
	No	%	No	%	No	%
Electricity	12 245	47.0	24837	79	21 438	79.4
Gas	102	0.4	81	0.3	476	1.8
Paraffin	9770	37.5	3363	11	2 531	9.4
Candles	3775	14	3252	10	2 500	9.3
Solar	42	0	48	0.2	32	0.1
Other	131	1	60	0.2	31	0.1
Total	26 066	100	31 680	100%	27 008	100.0

25.2 Water and sanitation

In 2019, 92,5% of all families, had access to piped water, totaling 142 967 households. According to the graph below, 9,2% of houses in eMalahleni lacked access to piped water in 2016 (Emalahleni Local Municipality IDP, 2022).



Source: Statistics South Africa, Community Survey 2016

Figure 77: Access to piped water (Census 2001 & 2011 and Community Survey, 2016)

However, according to The SERO Report, 2022, eMalahleni has 91,3% of its toilets connected to public sewerage, 2.6% to septic tanks, 0.0% to bucket systems, 6.1% to ventilated improved pits, and 0.0% to other types of septic systems (Emalahleni Local Municipality IDP, 2022).

Local Municipal area	Number of households without flush/chemical toilets		Share of total households	
	2011	2016	2011	2016
Victor Khanye	3 742	3 373	18.2%	13.9%
Emalahleni	34 160	41 552	28.5%	27.6%
Steve Tshwete	9 780	15 713	15.1%	18.1%
Emakhazeni	2 941	2 573	21.4%	17.6%
Thembisile Hani	68 022	73 411	89.9%	88.7%
Dr JS Moroka	52 450	50 738	84.4%	81.4%

Statistics South Africa: Community Services, 2016

Table 25: Access to flush/chemical toilets (Statistic South Africa: Community Survey, 2016)

25.3 Electricity

More than 40 721 households, or more than 25% of all the households, have no electricity at all. The rise may be attributed to informal settlements, which implies that a plan must be developed to electrify these areas. The growth may also be a result of in-fills that need to be planned for as well as RDP homes that are constructed but not wired into the grid (Emalahleni Local Municipality IDP, 2022).

Local Municipal area	Number of households not connected*		Share of total households	
	2011	2016	2011	2016
Victor Khanye	3 062	1 585	14.9%	6.5%
Emalahleni	31 527	40 721	26.3%	27.1%
Steve Tshwete	5 782	7 458	8.9%	8.6%
Emakhazeni	2 209	2 074	16.1%	14.2%
Thembisile Hani	5 673	1 636	7.5%	2.0%
Dr JS Moroka	1 927	912	3.1%	1.5%

Statistics South Africa: Community Services, 2016

Table 26: Connection to electricity (Statistic South Africa: Community Survey, 2016)

25.4 Refuse Removal

A total of 68 houses, or 7% of the dwelling population, receive curbside garbage removal services from the municipality. The remaining 31.3% of households, mostly in informal settlements, receive a minimal level of service in the form of mass container removal and common dumping areas (Emalahleni Local Municipality IDP, 2022).

25.5 Roads and stormwater

A road network that supports an effective and efficient public, private, and freight transport system is necessary for economic growth and development. A well-managed, functioning mobility road network increases capacity and traffic flow, which cuts down on travel time and costs for road users. In both urban and rural settings, a safe and effective road network is a crucial enabler for sustainable development. The department is in charge of managing and maintaining the 1400.08 km of roads, as well as the distribution of the network by area.

The municipality is dealing with ongoing economic and population growth, which is leading to more traffic congestion. Most municipal roads have congested traffic and outdated, crumbling road infrastructure that need updating, repair, and upkeep. 90% of the streets need to be repaired and rebuilt due to their destruction. Heavy vehicles (such as mining trucks) and inadequate storm water drainage are the main causes of most street damage.

Area	Surfaced Roads (km)	Gravel Roads (km)	Block Paved Roads (km)	Concrete Paved Roads (km)	Total (km)
eMalahleni	483.08	80.32	4.61	0.6	568.60
Clewer	8.24	29.01	2.48	0	39.73
Kriel	82.72	5.45	0.1	0	88.27
KwaQuga	62.81	243.06	5.13	0	311
Lynnville	68.51	67.19	19.68	0	155.38
Ogies	4.23	0	0	0	4.32
Paxton	12.07	5.64	0	0	17.72
Pine Ridge	9.54	29.19	4.08	0	42.81
Rietspruit	25.01	2.71	0	0	27.72
Thubelihle	22.39	3.77	0	0	26.16
Wilge	8.03	0.25	0	0	8.28
Wolwekrans	13	90.25	6.83	0	110.09
TOTAL	799.72 KM	556.84 km	42.91 km	0.6 km	1400.08 km

Table 27: Network distribution per area (Statistic South Africa: Community Survey, 2016)

26 Geotechnical Assessment

A Geotechnical Study undertaken by a specialist has reference.

26.1 METHOD OF INVESTIGATION

Subsequently a site walkover survey was undertaken prior to mobilization of the geotechnical subcontractors to confirm the findings of the information gathered during the desktop study phase and assess access for site equipment to be used.

This chapter presents the detailed description of the methods adopted in this investigation to achieve its objectives and is divided into various sections including test pits and laboratory testing.

Based on the “Site Investigation Code of Practice” (SAICE Geotechnical Division, 2010), which provides standards for “acceptable engineering practice”, a total of Nine (9) test pits were planned and dug for assessing the suitability of the site for planning and designing additional stands.

The method of investigation was based on near surface, to a maximum depth of 3.0m below existing ground level for the proposed development.

The site investigation, which was carried out on the 13th of March 2023, comprised the excavation of test pits and penetration testing using hand-held Dynamic Cone Penetration (DCP) equipment. The layout of the test positions and DCP Field tests are shown in the geotechnical study.

26.2 Desktop Study

The desktop study included a review of the regional topographical and geological maps and seismic hazard maps of South Africa.

26.3 Test Pits

Six (6) test pits designated TP01 through to TP06 were excavated across the site on the 5th July 2023 using a Tractor Loader Backhoe (TLB).

Each test pit, which was deemed safe to enter, was profiled by an engineering geologist in accordance with the “Guidelines for Soil and Rock Logging in South Africa”, 2nd Impression 2002, sampled as necessary and loosely backfilled.

The test pits were positioned such that broad coverage of the underlying geological and subsoil conditions could be determined. The test pit coordinates and depth of excavation are provided in Table 28.

The test pit positions are indicated on the layout drawing attached as Figure 78. Detailed test pit profiles and site pictures are attached in Appendix B respectively.

Table 28: Summary of test pit information

TP ID.	Handheld GPS Coordinates		Final	Comment
	Latitude (S)	Longitude (E)	Depth (m)	
TP01	26°19'35.59"S	29°20'25.90"E	1.9	Refusal of TLB on Reworked sanstone
TP02	26°19'30.57"S	29°20'25.34"E	0.94	Ferruginized reworked sandstone
TP03	26°19'37.84"S	29°20'30.98"E	1.20	Refusal of TLB on Reworked sanstone
TP04	26°19'45.46"S	29°20'8.41"E	0.90	Refusal of TLB on Honeycomb Ferricrete
TP05	26°19'39.25"S	29°20'2.47"E	1.70	Refusal of TLB on Residual sanstone
TP06	26°19'33.19"S	29°19'56.39"E	0.85	Refusal of TLB on Reworked sanstone

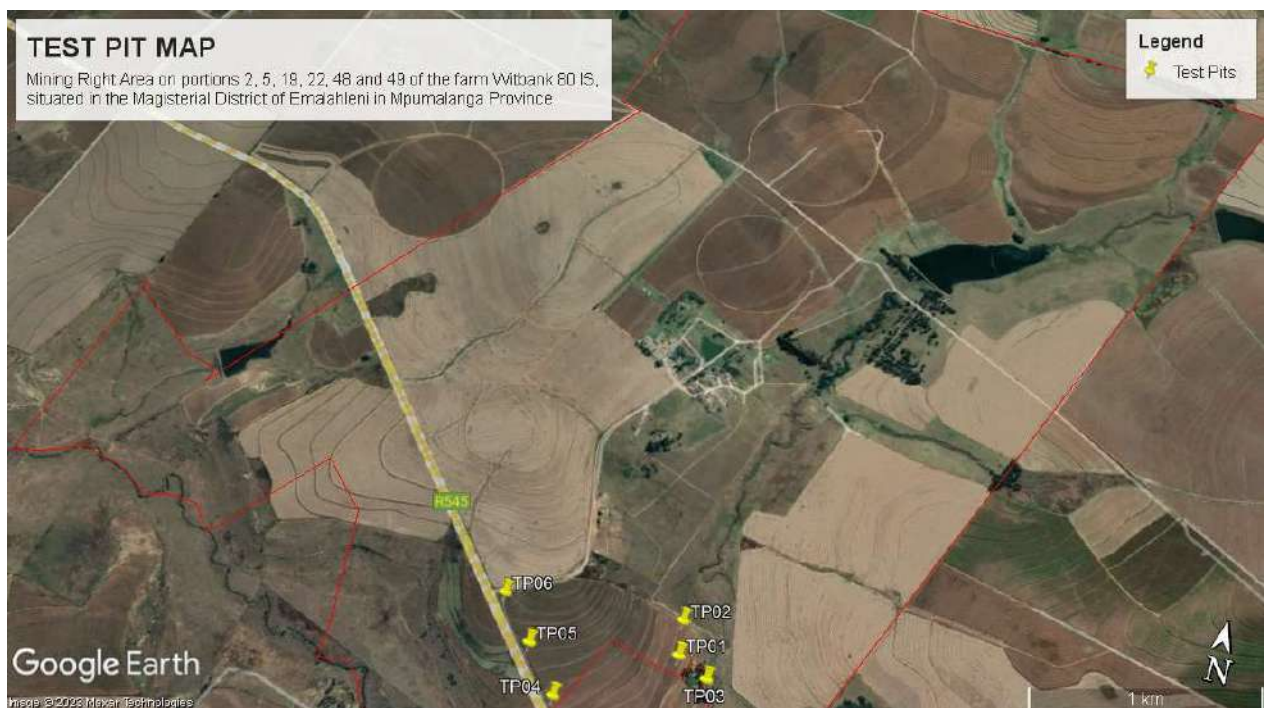


Figure 78: Test pits map of the Project area

26.4 Dynamic Cone Penetrometer (DCP)

As part of the near surface geotechnical investigation, Six (6) Dynamic Cone Penetrometer (DCP) tests were carried out adjacent to selected test pits on the site.

The DCP test provides an empirical indication of the consistency of the subsoils with depth. It is carried out by driving a 20mm diameter, 60-degree cone into the soil with an 8kg hammer falling through 575mm. The penetration resistance is expressed as no. of blows per 100mm penetration. A summary of location and depths of the DCP tests are shown in Table 29. Full DCP results are presented in the geotechnical study.

Table 29: Summary of DCP location and refusal depths

TP ID.	Handheld GPS Coordinates		Final Depth (m)	Comment
	Latitude	Longitude		
DCP1	26°19'35.59"S	29°20'25.90"E	1	Maximum Depth
DCP2	26°19'30.57"S	29°20'25.34"E	1	Maximum Depth
DCP3	26°19'37.84"S	29°20'30.98"E	0.79	Refusal
DCP4	26°19'45.46"S	29°20'8.41"E	1	Maximum Depth
DCP5	26°19'39.25"S	29°20'2.47"E	1	Maximum Depth
DCP6	26°19'33.19"S	29°19'56.39"E	1	Maximum Depth

26.5 Laboratory Testing

To confirm the visual assessments of the engineering properties of the soil, a number of representative disturbed samples were taken and submitted for laboratory testing. The laboratory testing comprised of the following:

- Four (4) foundation indicator tests were taken to determine the basic engineering properties of the in-situ materials;
- Two (2) bulk samples were taken for moisture / density relationship and CBR testing to determine the compaction characteristics of the in-situ material;
- Two (2) samples were taken for chemical tests to determine the pH and conductivity characteristics of the in-situ material.

The following guidelines proposed by Evans (Ref 4) were applied in the interpretation of pH and corrosivity of a soil towards buried, exposed metallic surfaces. In general, pH and corrosivity depend on the following properties of the soil:

- Electrical conductivity
- Chemical properties of the soil,
- Ability of the soil to support sulphate reducing bacteria,
- Heterogeneity of the soil

The pH of a soil gives an indication of potential acid related problems. If the soil pH is less than 6, the corrosion may take place and if the pH should be less than 4.50, the problem of corrosion may be serious. If the conductivity of the soil is less than 0.001s/m, corrosivity is generally not a problem. However, the corrosion potential of the soil increases with an increase in conductivity. Should the conductivity of a soil exceed 0.005S/m, the soil be regarded as very corrosive.

26.6 GEOLOGY AND ANTICIPATED SOIL CONDITIONS

From a review of the 1:250 000 geological series map, 2629AD East Rand, indicates that the investigated area is located on sandstone, shale and coal beds of the Vryheid Formation of the Ecca Group, Karoo Sequence. These lithologies are overlain by their weathered soil derivatives, which are in turn mantled by variable thicknesses of Hillwash, alluvial and colluvial materials. The various lithological units encountered on the sites as shown in Table 30.

Table 30: Lithological units Table of project area

LITHOLOGY	LITHOSTRATIGRAPHIC UNIT
Silts, sands, gravels, clayey deposits, pedocretes, aeolian	Recent deposits of mixed origin (hillwash, aeolian, pedocretes and colluvium)
Sandstone, shale and coal beds.	Vryheid Formation, Ecca Group, Karoo Sequence

26.7 Anticipated Soil Conditions

Residual soils derived from sandstone, typically form silty sands that may exhibit a collapsible grain structure. These soils may competently bear imposed loads when dry, however, when inundation occurs and the soil is under load the colloidal 'bridges' in these voided soils fail and the soil typically collapses into a denser state, leading to differential settlement. The differential settlement may result in structural damage. 'Corners down' cracking of buildings is often observed in areas of collapsing soils.

27 Blasting Assessment

A blasting Study undertaken by a specialist has reference.

27.1 BLASTING OPERATION

Drilling and blasting are the controlled use of explosives and other methods such as gas pressure blasting pyrotechnics, to break rock for excavation. It is practiced most often in mining, quarrying and civil engineering such as dam, tunnel, or road construction. The result of rock blasting is often known as a rock cut.

Drilling and blasting currently utilizes many different varieties of explosives with different compositions and performance properties. Higher velocity explosives are used for relatively hard rock in order to shatter and break the rock, while low velocity explosives are used in soft rocks to generate more gas pressure and a greater heaving effect. For instance, an early 20th-century blasting manual compared the effects of black powder to that of a wedge, and dynamite to that of a hammer. The most commonly used explosives in mining today are ANFO based blends due to lower cost than dynamite.



Figure 79: Typical example of blasting operation.

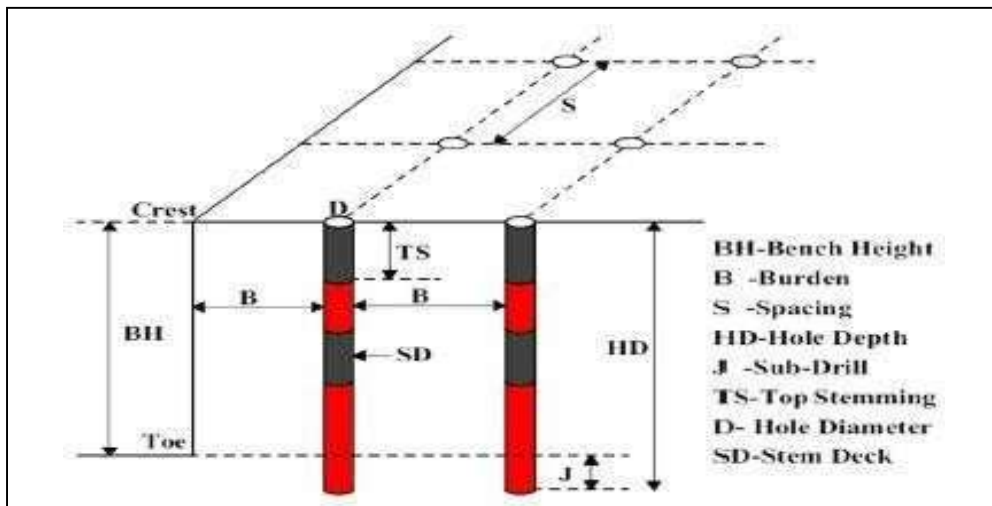


Figure 80: Blasting design and planning.

27.2 SENSITIVITY OF THE PROPOSED PROJECT

A review of the project and the surrounding areas was done before any specific analysis is undertaken and sensitivity mapping was also conducted, based on typical areas and distance from the proposed mining area. This sensitivity map uses distances normally associated where possible influences may occur and where influence is expected to be very low or none. Two different areas were identified in this regard:

Range	Criteria	Description
≤500m	High sensitivity	The area within 500m is considered an area that should be cleared of all people and animals prior to blasting. Levels of ground vibration and air blast are also expected to be higher closer to the blasting site.
500 – 1500m	Medium sensitivity	In this area, the possibility of impact is still expected, but it is moderate. The expected level of influence may be moderate, but there may still be reason for concern, as levels could be moderate enough not to cause structural damage but still upset people; and
≥1500m	Low sensitivity	In this area, it is relatively certain that influences will be low with low possibility of damages and limited possibility to upset people.

Desktop studies was done to preliminary check the orientation and the feel of the environment where the proposed project is located. As part of desktop studies screening tool was used to assess the applied area and its surroundings. The following information was gathered from the screening report and collaborated with site assessment.

An essential aspect of conducting an EIA is to determine the level of impact of the proposed project, development, or initiative. When we look at major development projects especially those involving natural resources, such as mining, we can say for certain that they will require an environmental and social impact assessment. On the other hand, while the development of a tourism project may seem low-risk at first, a second look could reveal that the project requires large amounts of drinking water, energy, the removal of endangered flora or fauna, and will result in extensive sewage production. It may also lead to increased road and air traffic to deliver supplies, visitors and workers.

Finally, the impacts of project could change over time. Thus, during the screening step as well as the whole EIA process, impacts are considered over the lifetime of the project, from the construction phase through to operations and after closing.

Most proposals can be screened very quickly because they will have few impacts and will be screened out of the EIA process. Only a limited number of proposals, usually large-scale projects, require a full EIA because they will likely have major irreversible impacts on environmental resources or on people's health, livelihoods or cultural heritage. However, many projects with medium impacts will require an Environmental Management Plan (EMP) which is a component of a full EIA.

From the screening results about 44% of the sensitivity themes portrays that the area is highly sensitivity to the proposed development. The screening report helps the EAP to come up with the mitigation measures that can enhance sustainable development.

28 Traffic Impact Assessment

A traffic impact assessment undertaken by a specialist has reference.

28.1 EXISTING ROAD NETWORK AND TRAFFIC CONDITIONS

The traffic count and assessment were done manually from a T-way stop through which vehicles will travel towards the project area. The purpose of the traffic count was to monitor the peak morning hours traffic of heavy and light vehicles and the afternoon peak hours of the light and heavy vehicles near the project area.

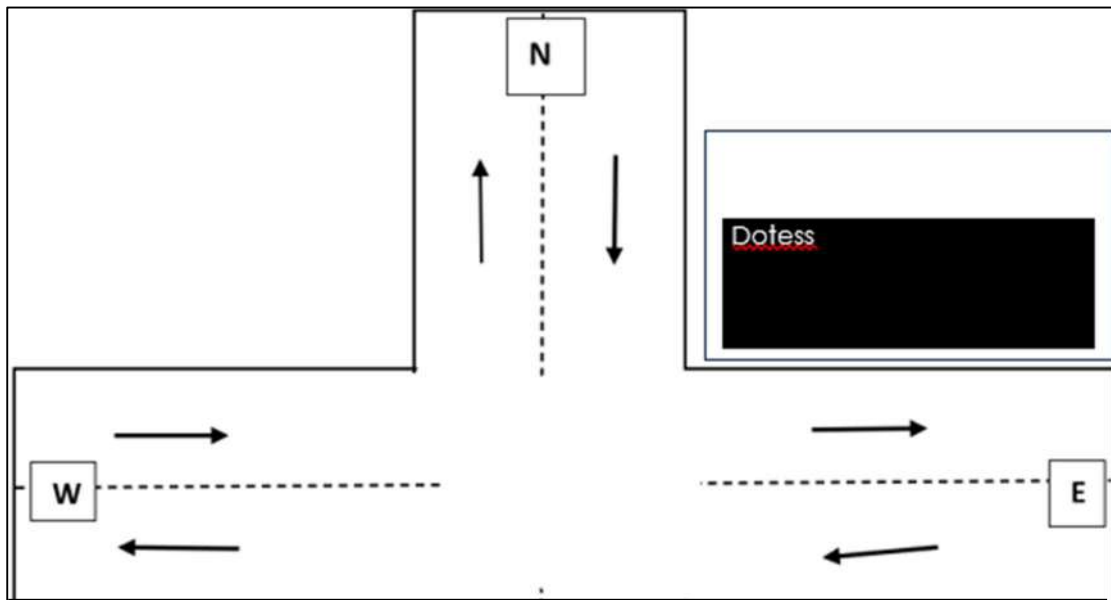


Figure 81: Illustration of the road along which the traffic count was conducted.

Symbol	Meaning
Light vehicles	Private cars, taxis and bakkies
Heavy vehicles	Trucks and buses
Morning peak	06:00am - 09:00am
Afternoon peak	15:00pm -18:00pm

Morning peak

Observations indicate that at least more than 3000 light vehicles pass through the road in the morning between 06:00 and 09:00. Furthermore, most light vehicles were approaching from the east. Heavy vehicles were counted to be over 150 between 06:00am and 09:00am

Table 31: Morning peak count

Type of vehicle	East	West	South	North
Light Vehicle	812	1429	487	625
Heavy Vehicle	50	76	3	52

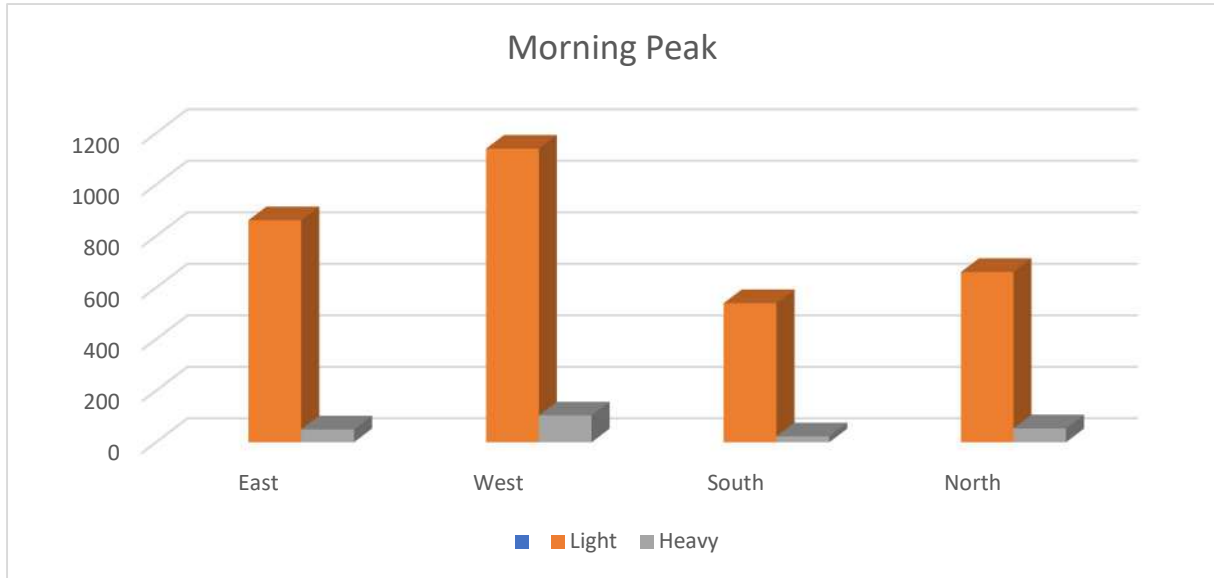


Figure 82: Graph illustrating Light and Heavy Vehicles

Afternoon Peak

Second count was conducted from 15:00pm to 18:00pm and the cars approaching from the west was the busiest as more than 1100 light vehicles and 104 Heavy vehicles were recorded on that direction.

Table 32: Afternoon peak count

Type of vehicle	East	West	South	North
Light Vehicle	862	1140	540	661
Heavy Vehicle	50	104	23	54

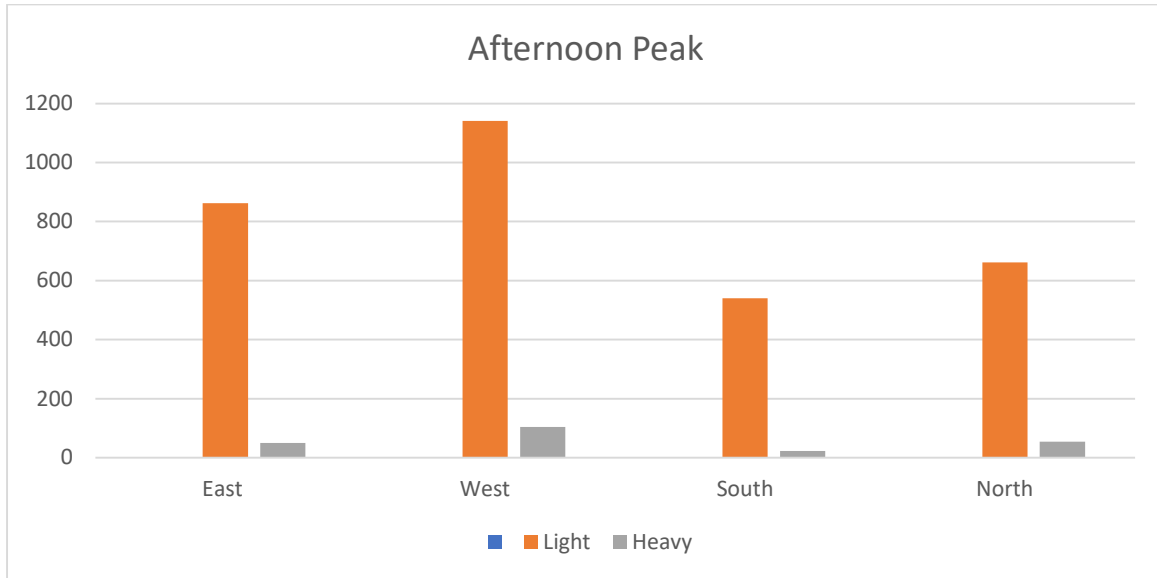


Figure 83: Graph illustrating Light and Heavy Vehicles

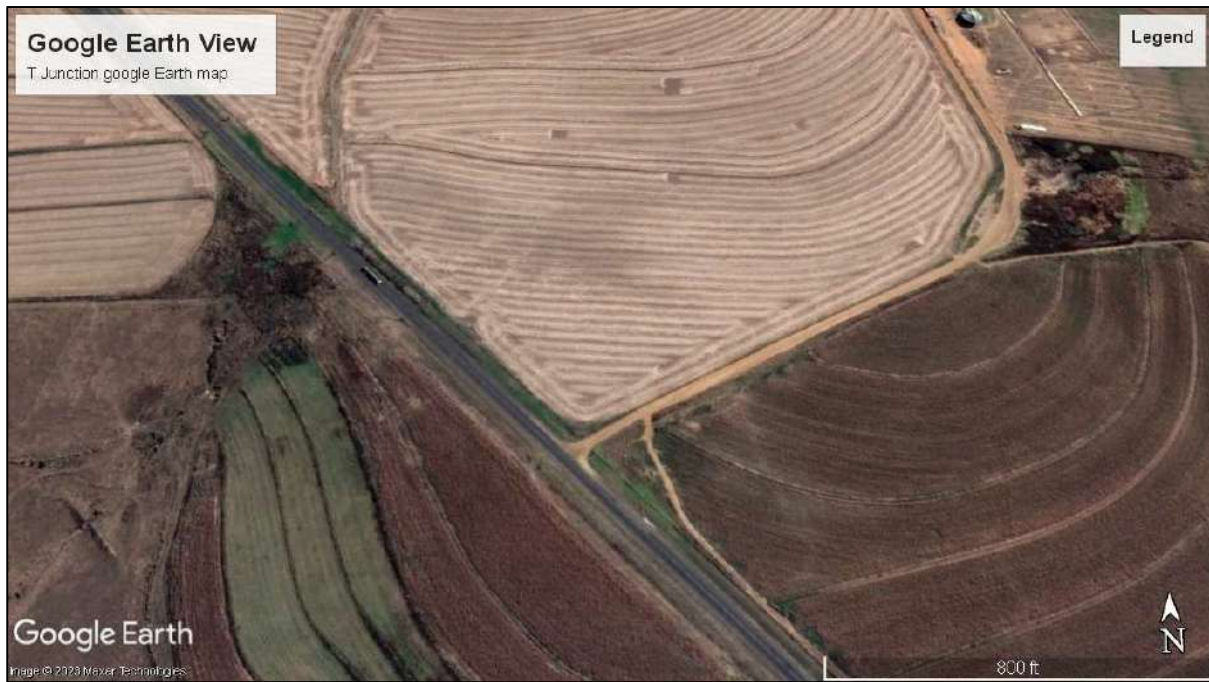
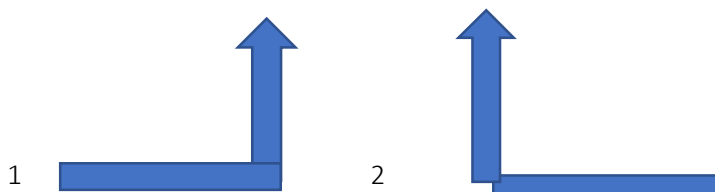


Figure 84: Google earth View

Symbol	Meaning
A	Vehicles towards the North
B	Vehicles towards the South
C	Vehicles towards the East
D	Vehicles towards the West
1	Vehicles turning from West towards North

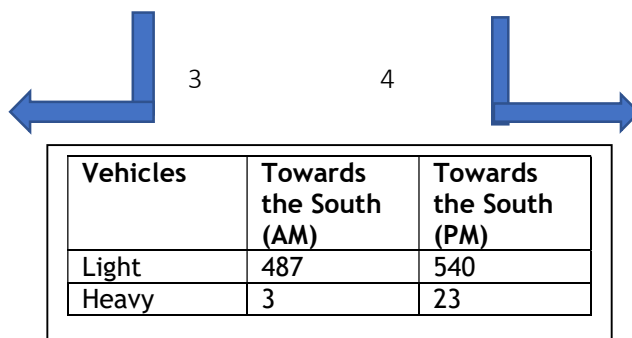
2	Vehicles Moving from South towards North
3	Vehicles turning from East towards North
4	Vehicles Moving from North towards South
5	Vehicles turning from East towards South
6	Vehicles turning from West towards South
7	Vehicles Moving from West towards East
8	Vehicles turning from South towards East
9	Vehicles turning from North towards East
10	Vehicles Moving from East towards West
11	Vehicles turning from South to West
12	Vehicles turning from North to West
Light vehicles	Private cars, taxis and bakkies
Heavy vehicles	Trucks and buses
Morning peak	06:00am -09:00am
Afternoon peak	15:00pm -18:00pm
N1	National Road 11

North approach during the morning and Afternoon peak





Vehicles	Towards the North (AM)	Towards the North (PM)
Light	624	661
Heavy	52	54

South approach during the Morning and Afternoon peak



East approach during the morning and Afternoon Peak peak

5  6 

Vehicles	Towards East (AM)	Towards East (PM)
Light	812	862
Heavy	50	50

West approach during the Morning and Afternoon Peak

Table 33: Rural functional road classification

Table B: Rural Functional Road Classification

Function			Description		Mobility				
Basic Function	Alternate functional descriptions	Determining function	Class No (R_)	Class name	Origin / destination	Through traffic component	Reach of connectivity	% of built km	AADT (average annual daily traffic)
Mobility	Vehicle priority, vehicle only, long distance, through, high order, high speed, numbered, commercial, economic, strategic; route, arterial road or highway.	Movement is dominant, through traffic is dominant, the majority of traffic does not originate or terminate in the immediate vicinity, the function of the road is to carry high volumes of traffic between urban areas	1	Principal arterial*	Metro areas, large cities, large border posts, join national routes	Exclusively	> 50 km	2 - 4% Classes 1 and 2	1000 – 100 000+
			2	Major arterial*	Cities and large towns, transport nodes (harbours and international airports), smaller border posts, join major routes	Exclusively	>25 km		500 – 25 000+
			3	Minor arterial*	Towns, villages and rural settlements, tourist destinations, transport nodes (railway sidings, seaports, landing strips), small border posts, other routes	Predominant	> 10 km	6 - 12% Classes 1, 2 and 3	100 – 2 000+
Access / Activity	Access, mixed pedestrian and vehicle traffic, short distance, low order, lower speed, community / farm, road or street.	Access, turning and crossing movements are allowed, the majority of traffic has an origin or destination in the district, the function of the road is to provide a safe environment for vehicles and pedestrians using access points	4	Collector road	Connect farming districts, rural settlements, tourist areas, national and private parks and mines to mobility routes	Minimal	< 10 km	20 - 25%	< 1 000
			5	Local road	Farm or property access, connection to other routes	Nil Discontinuous	< 5 km	65 - 75%	< 500
			6	Walkway (path or track)	Settlements, farms, transport nodes, water points	n/a			

** In rural areas, the term distributor may be preferred to arterial*

28.2 TRAFFIC GENERATION

The proposed sand mining right project by Dotess (Pty) Ltd will generate additional traffic on the surrounding road network during the operational phase. The estimated employment figures for the construction and operational phases of Dotess (Pty) Ltd were projected from the scale of the operation.

28.2.1 Construction Phase (Land Clearance, Topsoil removal and Construction of working facilities)

➤ Construction Workforce Traffic

The volume of traffic entering and exiting the Dotess (Pty) Ltd project will increase during the construction phase as a result of the construction workforce. Some of the workforce will be sourced from the local communities.

Given the estimated volume of construction traffic daily and during the peak periods, it is expected that this additional traffic will have low impact on the level of service (LOS) on the surrounding road network.

➤ Transport Vehicles during construction

The construction or site establishment activities at the proposed Dotess (Pty) Ltd project will generate additional heavy vehicle traffic on the surrounding road network as a result of the vehicles travelling to and from the site transporting materials. It is predicted that the delivery vehicles will be deployed from their origins in the morning. The expected arrival times of these vehicles will fall outside of the traditional AM peak hour in. Similarly, these vehicles will leave for their origins before the PM peak hour in order to be back in time. Therefore, the impact of the heavy construction vehicles on the external road network is also expected to be negligible during the peak hours. In addition, heavy vehicles will be used to transport raw materials and equipment within the construction site, in which case, these construction vehicles will remain within the site overnight for lengthy periods of time and will also have no impact on the surrounding road network.

The construction phase will thus generate a total of +/-20 vehicles per hour two-way during the AM and PM peak hours, which is considered to be exceptionally low in traffic analysis.

28.2.2 Operational Phase

➤ New Employees

Permanent employees will be employed to operate the new activities at the proposed Dotess (Pty) Ltd project. The operational phase will have an increase in the number of workers and hence trips as the

construction phase described above. As with most industries in South Africa, it is safe to assume that all management, skilled and semi-skilled labour will travel to work in private cars while the unskilled employees will use public transport or be transported by site transport.

Based on vehicle occupancy rates of 15 for passenger cars and 15 for minibus taxis (maximum impact scenario), the additional workforce that will be employed at the site will generate 40 passenger cars, 20 minibuses to sustain the new operations per day.

➤ **Analysis Requirements for the Additional Site Generated Traffic Volumes**

In accordance with the Department of Transport's Manual on Traffic Impact Studies (RR93/365), developments that generate over 150 vehicles per hour, in peak hours, require a full Traffic Impact Assessment (TIA), while those generating less than 150 vehicles per hour only require a Traffic Impact Statement (TIS). The difference between these two assessments is that the TIA must contain recent traffic counts and the analysis of both existing and future traffic flows, whereas in a TIS, little or no analysis is required, instead the Traffic Engineer's professional opinion is given more emphasis based on his or her observations and experience.

Since the operational phase of the proposed new activities at the proposed Dotess (Pty) Ltd project will generate less than 150 vehicles per hour in the peak hour, a detailed analysis of these traffic volumes on the surrounding road network is not required for this study.

29 Mine Closure and Rehabilitation Assessment

A mine closure and rehabilitation plan undertaken by a specialist has reference.

29.1 ENVIRONMENTAL RISK SELECTION

Risk assessment is the overall process of risk identification, risk analysis and risk evaluation. The level of detail as depicted in the EIA regulations were fine-tuned by assigning specific values to each risk.

29.2 Objective of environmental risk assessment.

The Financial Provisioning Regulations, 2015 outlines the purpose of the Environmental Risk Report (ERR). The goal is to:

- Ensure time-limited risk mitigation by effective interventions.
- Approach information for risk management strategy
- Identify and measure possible latent environmental risks associated with post-rehabilitation
- Quantify the potential liabilities associated with the management of the risks
- Surveillance, auditing and monitoring criteria outline.

The risk assessment has been done on the full EIA and other specialist studies for the proposed project, therefore financial provision for this report drafted from risk assessment report done for this proposed project from EIA report and other specialist studies. Refer to full EIA and other specialist reports for more information regarding the risk assessment report.

29.3 Discussion.

Mine closure is a continuous program designed to recover the physical, chemical, and biological quality or capacity of mining-disturbed air, soil, and water regimes to a condition appropriate to regulators and post-mining land users. Mine closure programs are designed to prevent or mitigate detrimental long-term environmental impacts and create a self-sustaining natural ecosystem or alternative land use based on an accepted set of goals.

The purpose of mine closure is to obtain legal agreement that states the condition of the closed operation satisfies the requirements of government and affected community, whereupon legal responsibility for the undertakings is extinguished. Rehabilitation can be divided into two distinct

streams: simultaneous or concurrent rehabilitation and final rehabilitation. Concurrent rehabilitation must be carried out in conjunction with the coal mine operations, and the final responsibility that the mine must bear at the time of closure will be that.

A mine will only receive a certificate of closure once it can show that recovery is sufficient, and that if there are any residual contamination effects, they can be handled accordingly. It is recommended that a monitoring program be introduced after closure before the mine granted certificate for closure. The implementation of this monitoring program would allow the mine to detect and rectify any impacts of the residual environmental dam

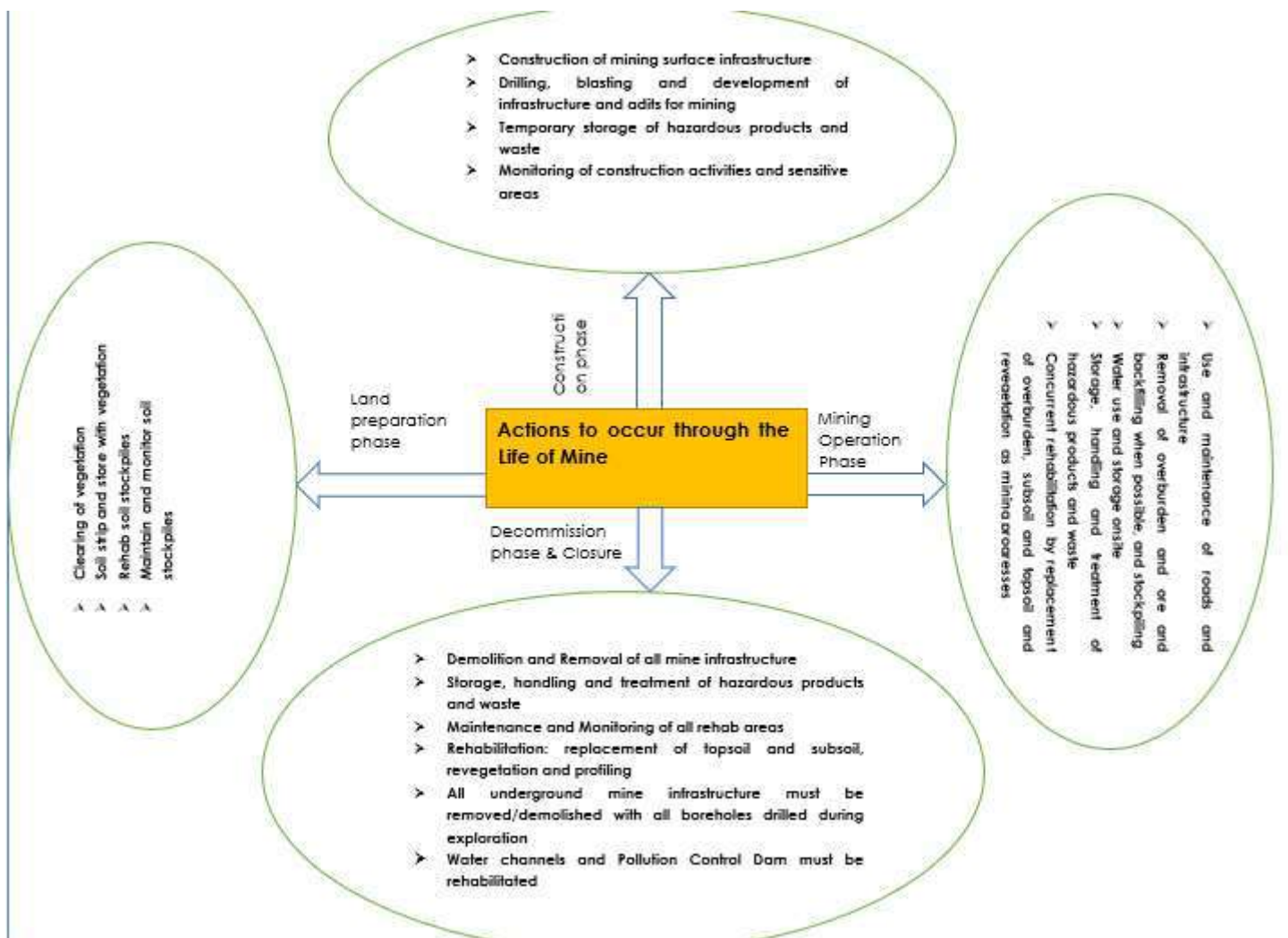
29.4 CONCEPTUAL CLOSURE STRATEGIES

29.4.1 Closure Visions, Objectives And Targets

The rehabilitation of the project area is simultaneously a continuous and timeframe operation. In order to gain the best possible rehabilitation outcomes from the mining processes in the relatively sensitive area, different actions are required to occur at different times within the life of the project from prospecting to closure. Similarly, there are management and monitoring actions that will be required throughout the life of the mine project and for years after the project has been closed.

Traditional mining phases include Construction, Operational and Closure phases. Prior to construction and preparation of the land for mining, best practices need to be implemented and compliance to legislation needs to be adhered to.

The project is no exception and outlined below are the actions to occur through the four phases that are needed to ensure successful rehabilitation.



29.5 Closure Actions

Based on the type of mining (underground mining) and the associated risk that could occur post closure, the suggested recommendations have been made:

- Capture decanting mine water before it joins the streams or wetlands; treat it and thereafter, if the quality is acceptable, reintroduce it into the streams.
- Compact coal discard to ensure a reduction in the possibility of spontaneous combustion
- Berms should be created around facilities to reduce pollution leaving the site and reduce sedimentation of rivers
- Clean and dirty water trenches should be constructed appropriately
- Monitoring of groundwater water levels in the weathered and coal seam aquifer; and
- Update the numerical model and decant rates annually for the first five years with the monitoring data.

The aim of the closure actions would be to minimize and remove, wherever possible, the threats, impacts and residual impacts arising from the implementation of the proposed project and what would occur at the final stage of restoration, decommissioning and closure. The backfilling and closure of the final void would take the longest time, and would be enforced over a one-year cycle, despite the assessment undertaken.

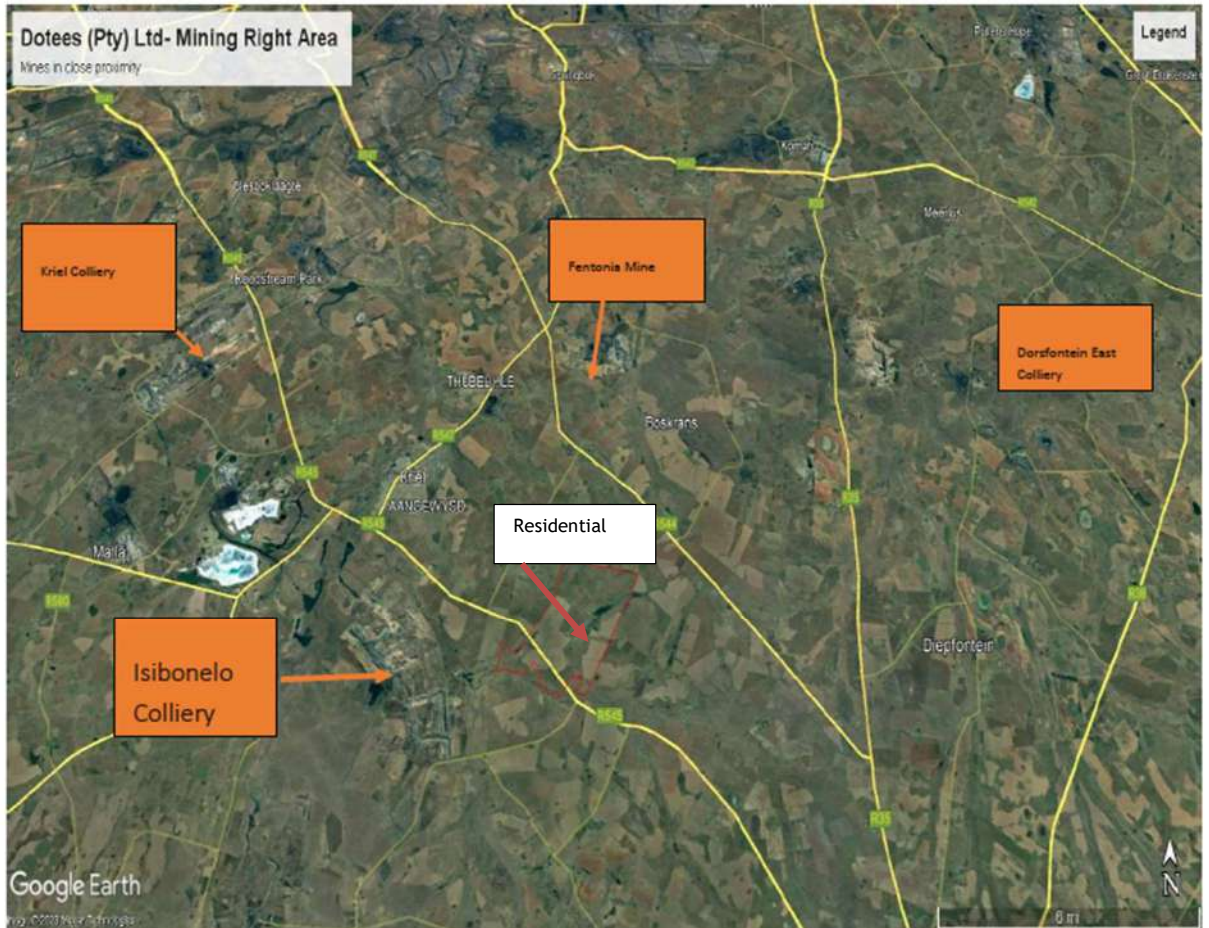
Once all reconstruction, decommissioning, and closure activities have been completed, a further five-year period for post-closure aftercare and maintenance period would be required.

Usually activities associated with this process would be:

- Monitoring and auditing of the different environmental attributes and indicators
- Continuous erosion control until a stable land type has been established
- Soil enhancement and field management to promote continuous improvement of regeneration and revegetation practices Alien invasive species eradication and control
- Ensure the vegetation cover and reinstate biological processes Outline tracking, auditing and reporting criteria
- Assess radical reforms in assemblies of flora and fauna
- Ensure the ecological integrity/function of the rehabilitated landscape.

30 Description of the current land uses

The mining right area includes the landowners house, kraal for cattle, old, abandoned hostel, houses (Erik/Juda community), reservoir, wetlands, borehole with various tanks, plantation. The area is heavily modified and is dominated with cultivation of maize and soya beans and there are chickens and cows on the farm. Servitudes were observed on the farm portion. The farm is owned by H J Pieterse Vlakfontein Tweehonderd CC and Henry & Marlene Dunn Witbank Trust. The wide range of activities around the area is shown in the Figure and the Table below.



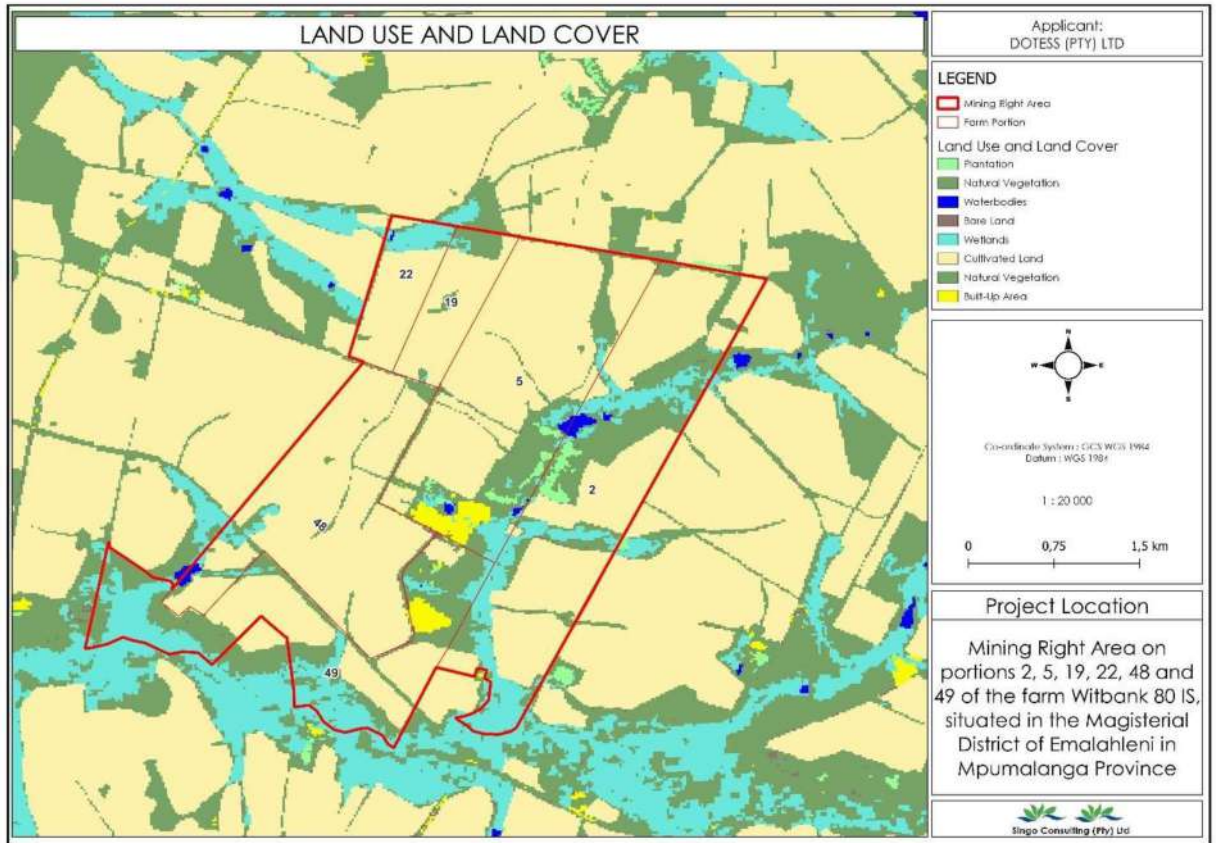


Figure 85: Pre-mining land use for the infrastructure area.

Table 34: Site pictures of the current active activities in and around the mining right application area















31 Description of specific environmental features and Infrastructure on the site

The area is mainly comprised of cultivated and uncategorised lands. The area falls under heavily modified, moderately modified- old lands, CBA Optimal and other natural area, see Figure 86 (A & B). CBA Optimal is less in the boundary of the mining area and it is deemed flexible in land-use options. In the heavily modified area, it is where biodiversity and ecological function has been lost to a point that they are not worth considering for conservation at all. That is where mining activities will take place. Another category is the moderately modified area- old land, which is an area which was modified in the last 80 years but has been abandoned, including old mines, and cultivated lands. The area can be used for mining, however it will be stabilised and managed to restore ecological functionality in particular, the soil carbon and water related functionality. Minor natural area category is observed on the mining right area boundary and that is where basic ecosystem functionality will be ensured. Waterbodies are seen on the uncategorised and quaternary catchment B12A of which activities of WUL that are triggered have been applied.

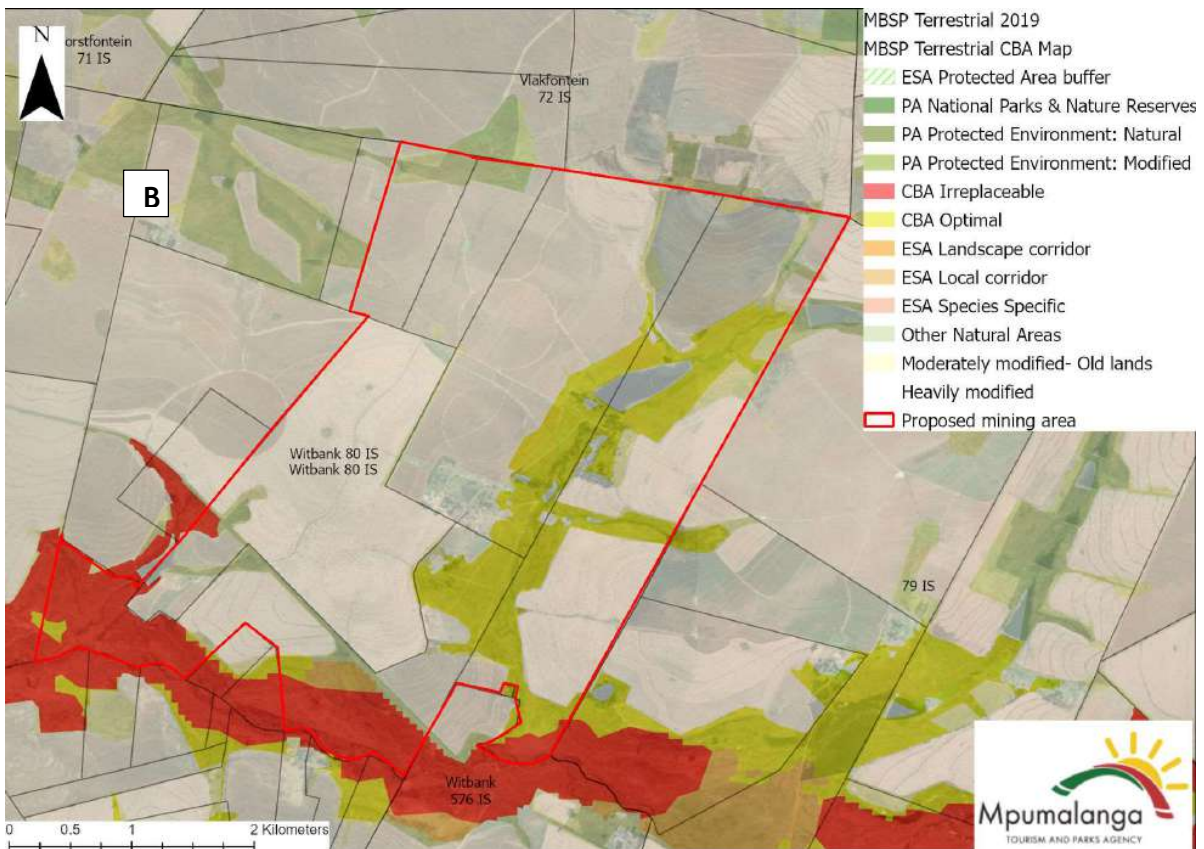
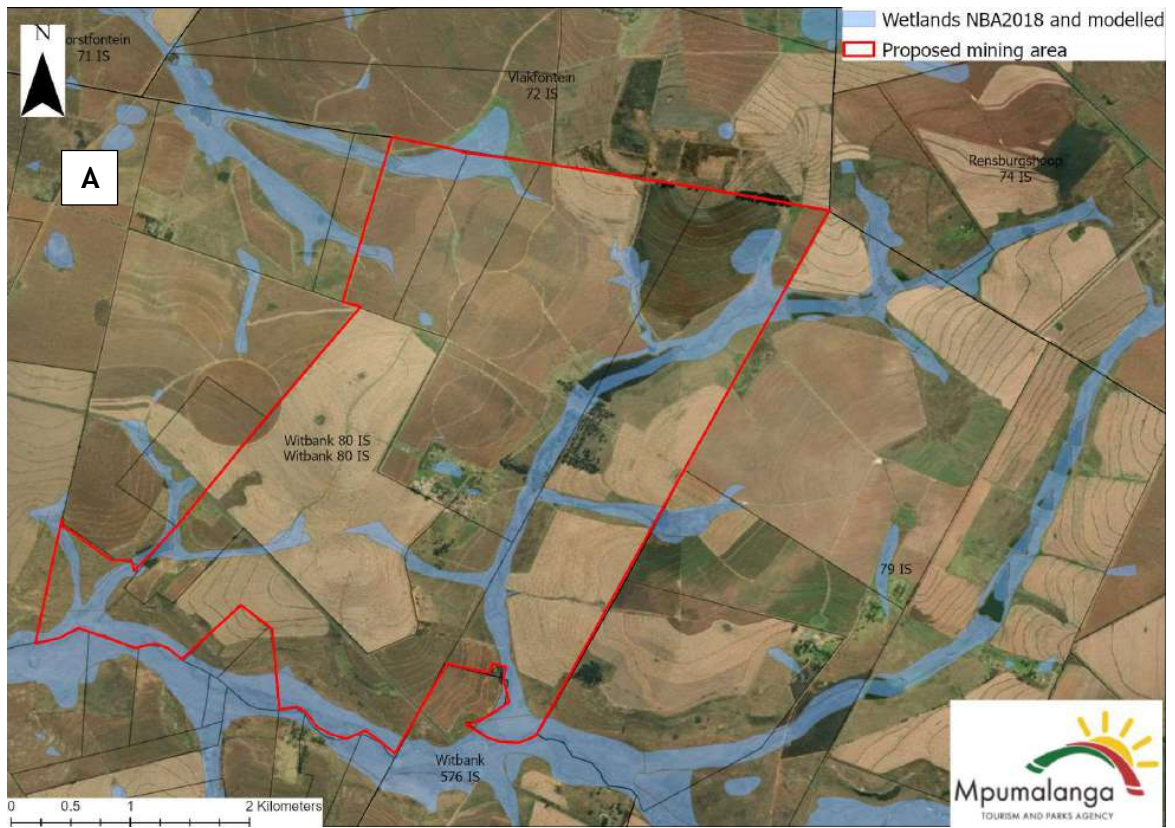


Figure 86: Sensitive environmental features maps (A & B).

32 Environmental and current land use map

(Show all environmental and current land use features)

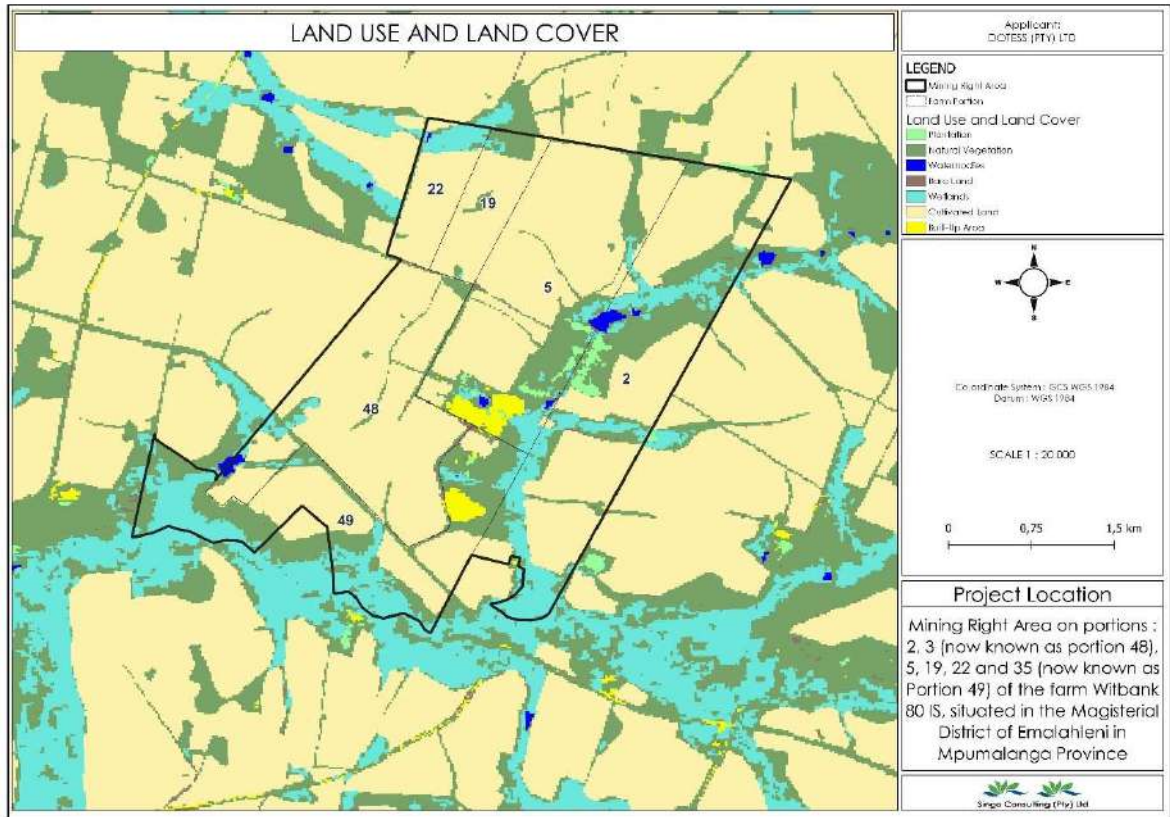


Figure 87: Environmental and Current land use map

33 IMPACT ASSESSMENT

33.1 ASSESSMENT METHODOLOGY

Witbank Colliery using the underground mining methods bases the following prediction and evaluation of impacts on the proposed mining area. It should be noted that although no surface subsidence is expected to occur over the area due to the depth of coal from surface, however the possible impacts that may result from surface subsidence have been determined in this chapter.

The evaluation distinguishes between significantly adverse and beneficial impacts and allocates significance against national regulations, standards and quality objectives governing:

- Health & Safety
- Protection of Environmentally Sensitive Areas
- Land use
- Pollution levels

Irreversible impacts are also identified.

The significance of the impacts is determined through the consideration of the following criteria:

- Probability - Likelihood of the impact occurring
- Area - the extent over which the impact will be experienced.
- Duration - the period over which the impact will be experienced.
- Intensity - the degree to which the impact affects the health and welfare of humans and the environment (includes the consideration of unknown risks, reversibility of the impact, violation of laws, precedents for future actions and cumulative effects).

The above criteria are expressed for each impact in tabular form according to the following definitions:

Proba	Definition
Low	There is a slight possibility (0 – 30%) that the impact will occur.
Medium	There is a 30 – 70% possibility that the impact will occur.
High	The impact is definitely expected to occur (70% +) or is already occurring.

Area	Definition
Small	0 – 50 ha

Medium	51 – 200 ha
Large	200 + ha

Durati	Definition
Short	0 – 5 years
Medium	5 – 50 years
Long	51 – 200 years
Permanent	200 + years
Intens	Definition
Low	<ul style="list-style-type: none"> • Does not contravene any laws, • Is within environmental standards or objectives, • Will not constitute a precedent for future actions, • Is reversible • Will have a slight impact on the health and welfare of humans or the environment.
Medium	<ul style="list-style-type: none"> • Does not contravene any laws, • Will not constitute a precedent for future actions, • Is not within environmental standards or objectives, • Is not irreversible • Will have a moderate impact on the health and welfare of humans or the environment.
High	<ul style="list-style-type: none"> • Contravene laws, • May constitute a precedent for future actions, • Is not within environmental standards or objectives, • Is irreversible • Will have a significant impact on the health and welfare of humans or the environment.

Signifi	Definition
Negligible	The impact is insubstantial and does not require management
Low	The impact is of little importance, but requires management
Medium	The impact is important; management is required to reduce negative impacts to acceptable levels

High	The impact is of great importance, negative impacts could render options or the entire project unacceptable if they cannot be reduced or counteracted by significantly positive impacts, and management of these impacts is essential
Positive	The impact, although having no significant negative impacts, may in fact contribute to environmental or economical health

33.2 CONSTRUCTION PHASE

During the construction phase, the following activities, which are likely to have a detrimental, effect on the environmental, social and cultural aspects, will be conducted:

- Construction of mine infrastructure, which will include a diesel tank, access roads, administration buildings, workshops, weighbridge, septic tank, crushing and screening plant.
- Construction of the R.O.M stockpiling area,
- Preparation of the subsoil and overburden stockpiling areas,
- Excavation of box cut to used as an access adit,
- Formation of topsoil, subsoil and hard overburden stockpiles,
- Construction of pollution control dams,
- Construction of clean and dirty water diversion trenches and berms *and*
- Construction of product stockpile

➤ Construction of Mine Surface Infrastructure

The mine infrastructure is indicated in the Mining Layout Plan.

A block of offices will be constructed on site. This will serve as administration facilities. Wash/change rooms will be installed on site. The wash and change rooms and offices will be constructed properly to cater for all mine employees.

A septic tank will be constructed and the said tank will be constructed to have enough capacity to handle sewage to be generated by the mine personnel. Chemical toilets will be installed at strategic places within the mining area for employees working at strategic areas. Waste from these toilets will be collected and disposal of by a contractor at a permitted sewage disposal site. All necessary arrangement will be made with the Kriel/Bethal waste disposal site and proof of this arrangement will be forwarded to the Department of Mineral Resources if necessary.

A workshop will be constructed on surface for the repairs and maintenance of mine vehicles. This workshop will be constructed on a concrete slab and will have an overhead cover. A wash bay, oil separator, solid waste collection bins, new and used oil handling facilities will be constructed next to the workshop area. These structures will be constructed on concrete slabs with bund walls and an overhead cover. Ablution facilities will also be constructed within the workshop.

A diesel tank will be installed on site. The diesel tank will be installed within a bundied area. Bund walls

will be constructed around the diesel tank. The floor of the bundied area will have a cement slab. The diesel tank area will cover an area of approximately 55m² and will have a height of 3m. The diesel tank will have a capacity to contain approximately 60 000 litres of diesel. The diesel tank will be used to refill fuel for the machinery used at the proposed Witbank Colliery.

After the coal has been mined it is then conveyed onto the run of mine stockpile. The coal is then fed into the crushing and screening plant.

An access road will be constructed to the southwest of the box cut (access adit) area and will be use to access the mine offices. This road will connect to Provincial road running across the mining area and this road will be used to transport coal to the existing beneficiation plant.

A weighbridge will be constructed at the proposed Witbank Colliery. The weighbridge will be used for the weighing of truck transporting coal from the mine. The weighbridge will be built on a concrete slab. An office will also be build next to the weighbridge.

➤ **Construction of the R.O.M stockpiling area**

A R.O.M stockpiling area will be constructed at the proposed Witbank Colliery. This will be located on the eastern side of the incline adit. The R.O.M stockpile area will cover a surface area of approximately 1.5 hectares and will contain no more than 10 000 tonnes of R.O.M coal and will not exceed a height of 5m.

➤ **Preparation of Subsoil and Overburden Stockpiling Areas**

Topsoil from the subsoil and hards areas will be stripped to a depth of 300mm and stockpiled on the topsoil stockpile. The position of the topsoil stockpiling area is indicated in the Mining Layout Plan.

➤ **Excavation of the Initial Box-Cut/Adit**

A box-cut will be constructed on portion 35 of the farm Witbank 80 IS within the proposed mining area. The box-cut will be approximately 40m wide and 350m long. An access ramp will be constructed within the box cut for access to the box cut. This will be constructed to have an angle of 10⁰ with a width of 15 meters to accommodate the conveyor belt and mine vehicles and machinery. Two shafts will be constructed at the base of the adit to access the underground workings. On shaft will be used by employees and the underground conveyor belt will be install through the other shaft.

During the excavation of the box cut, the topsoil layer will be stripped to a depth of maximum of 300mm removed to the topsoil stockpile. Subsoil and hards will be stripped from the box-cut area and stockpiled as berms around the adit.

➤ **Formation of the Topsoil, Subsoil and Overburden Stockpiles**

The topsoil removed from the areas to be disturbed will stockpile separately as indicated on the Mining

Layout Plan.

During the excavation of the adit, the subsoil & hards material will be use as berms around the adit. This will prevent storm water accessing the adit.

➤ **Construction of pollution Control Dam and Storm Water Trenches**

A sump will be constructed on the lowest portion of the adit area. This sump will be used or the collection of runoff water within the adit area and some of the seepage water from the underground workings. Water from the sump will be pumped to the two pollution control dams.

A drainage channel will be constructed along the side of the access ramp. This will collect storm water into the sump.

The two pollution control dams will be constructed on surface downstream the mine infrastructure. These dams will be used for the storage of water from the adit area. Water from the dams will be used for dust suppression and for operation of the continuous miners during mining. These Dams will have enough capacity to cater for the water emanating from the adit and underground area will be installed.

A pollution control dams be constructed downstream of the R.O.M. stockpile area. The dam will be constructed to have a capacity to handle all dirty water emanating from the mine i.e. access road, mine infrastructure area and R.O.M. stockpile. The dam will be constructed to have sufficient capacity to contain addition rainfall from a 24hr, 1:50 year storm. The dirty water diversion trenches will

capture all runoff water from the mine's dirty water area and divert dirty water to the pollution control dam. The positions of the above-mentioned structures are indicated on Mining Layout Plan.

Clean and dirty water trenches will be constructed around the clean and dirty water areas. The position of the clean storm water diversion trench is indicated on Mining Layout Plan. These trenches will divert all surface water runoff around the adit, mine infrastructure, stockpiling and water management areas. The position of the dirty water diversion trench is indicated in Mining Layout Plan. Material excavated from the trenches will be used to construct a berm along the down-slope side of the trenches. These trenches will capture all dirty water runoff from the dirty water areas to the pollution control dams.

ENVIRONMENTAL IMPACT ASSESSMENT									
ACTIVITY	IMPACT	IMPACT ASSESSMENT					MITIGATION MEASURES	ANNUAL COST	CLOSURE COST
		P	A	D	I	S			
CONSTRUCTION PHASE									
Construction of Access/haul roads	Surface water emanating from the construction site will contain increased amount of silt, which will contaminate the surface water environment	H	S	S	L	M	Haul/access roads must be constructed to have contours that will contain silt.	R 200 000.00	
	The activities will generate dust that will impact the immediate air quality, which will affect residents of the neighbouring houses.	H	S	S	M	M	Conduct dust suppression over the exposed surfaces of the roads.	R 50 000.00	
	Machinery used will generate fumes and noise that may have detrimental effects on the surrounding air quality including the nearby residents and the health of the employees.	H	S	S	M	M	The used mine equipments' exhaust systems must be in good repair. Provide proper masks for the employees and enforce usage of the said masks.	R 150 000.00	
Construction of material stockpiles and use of haul and access roads.	The formation of topsoil, subsoil and overburden stockpiles will result in topographical highpoints, which will alter the local topographical patterns of the immediate area.	H	S	S	L	M	Use as little space as possible is used for the stockpiling of the overburden material. Establish vegetation on stockpiles to reduce erosion	No environment alcost	
	The activities will generate dust that will impact the immediate air quality, which will affect residents of the neighbouring houses.	H	S	S	M	M	Conduct dust suppression over the exposed surfaces of the roads.	R 50 000.00	

Construction of water management structure (pollution control dams, trenches ,etc)	The construction of the pollution control dam will result in the formation of a topographical void, which will change the local topographical patterns of the immediate area.	H	S	S	L	L	The dams must be designed by a suitably qualified person who will ensure that the dam covers as little space as possible whilst complying with the relevant legal requirements. The said dams will be lined as required by DWA.	R 2 000 000.00	
	All activities will result in the stripping and removal of the topsoil layer, which will disrupt the soil profile.	H	S	S	L	M	Stockpile removed topsoil on a topsoil stockpile area separate from other overburden materials. Establish vegetation on stockpiles to reduce erosion	R 140 000.00	
	The stripping of topsoil will result in the reduction of the land capability of the area. Land use will change from grazing to mining.	H	S	S	L	M	Limit topsoil stockpile to a height not more than 3 m, this will prevent the reduction in the fertility of the topsoil. Establish vegetation on stockpiles to reduce erosion.	No additional environmental cost	
	All activities will result in the removal of the topsoil layer, which will result in the loss of natural vegetation cover.	H	S	S	L	M	All topsoil material to be stockpiled separately at height of not more than 3 meters. Note that the topsoil will retain its seed bank if stockpiled properly.	No additional environmental cost	
	Surface water emanating from the construction site will contain increased amount of silt, which will contaminate the surface water environment.	H	S	S	M	M	Construct berms along the stockpiles and contour within the disturbed areas to reduce the levels of silt that may report to the nearby stream.	R 500 000.00	

	Movement of mine vehicles over exposed areas will result in the generation of dust.	H	S	S	H	M	Conduct dust suppression on haul and access roads on a regular basis using water from pollution control dams. Monitor the dust fall out concentration.	R 30 000.00 R 80 000.00	
	Noise generated from construction activities may add to the current noise levels. This may have impacts on the surrounding farm dwellings.	M	S	S	M	M	Construction of berms to reduce the noise levels. Limit mining activities during nighttime.	No additional costs	
Construction of the crushing and screening plant	Machinery used will generate fumes and noise that may have detrimental effects on the surrounding air quality including the nearby residents and the health of the employees	L	L	L	L	L	The used mine equipments' exhaust systems must be in good repair.	No additional costs	
Construction of offices workshop and related structures (septic tank, diesel tank, weigh bridge etc)	Machinery used will generate fumes and noise that may have detrimental effects on the surrounding air quality including the nearby residents and the health of the employees	L	L	L	L	L	Provide proper masks for the employees and enforce usage of the said masks	No additional costs	
	Leaks from diesel tanks during trucks refuelling may also result in the contamination of soils.	H	S	L	M	M	A sufficient supply of absorbent fibre should be kept at the site to contain accidental spills	R 50 000.00	
	Sewage emanating from the ablution facilities can affect the quality of groundwater aquifers	H	S	S	L	M	Install a septic tank for the treatment of the sewage. Employ suitable qualified waste collector to empty the septic tank regularly.	R 250 000.00	
	The surface infrastructure may interfere with the views of surrounding farm dwellings.	H	S	S	M	H	Construct visual berms and use of appropriate paint on mine's visible structure to blend with the surrounding environment.	No additional costs	

	Potential increase in crime and petty theft. The mining operation will create employment opportunities.	H	S	S	L	L	Implementation of the Environmental Awareness Plan for the employees. Discourage squatting & recruitment on the mine premises Positive	R 100 000.00	
Construction of an adit	The excavation of an adit will result in the disturbance of the geological profile.	H	S	S	H	H	No mitigation can be undertaken for the predicted impact.	No environmental cost	
	The construction of an adit will result in the formation of topographical void, which will change the local topographical patterns of the immediate area.	H	S	S	H	H	The adit must be designed and constructed to cover as little space as possible.	R 75 000.00	
	Construction of an adit will result in the stripping and removal of the topsoil layer, which will disrupt the soil profile. This will result in the reduction of the land capability of the area. Land use will change from grazing to mining.	H	S	S	M	M	Stockpile removed topsoil on a topsoil stockpile area separate from other overburden stockpiles. Restrict topsoil stockpile to be not more than 3 m in height that will prevent the reduction in the fertility of the topsoil.	No additional environmental cost No additional environmental cost	
	Construction of an adit will result in the removal of the topsoil layer, which will result in the loss of natural vegetation cover.	H	S	S	M	M	All topsoil material to be stockpiled separately at an appropriate height. Note that the topsoil will retain its seed bank if stockpiled properly.	No additional environmental cost	
	The mining activities will result in the migration of animals away from the proposed mining area.	L	S	S	L	L	Ensure that the employees are educated in the protection of wildlife.	No additional environmental cost	

	Excavation of the adit will result in the formation of void that will result in reduced runoff within the Steenkoolspruit sub-catchments.	H	S	S	L	L	The adit must be designed and constructed to cover as little space as possible. Construct berms to divert surface runoff away the adit.	No additional environmental cost	
	Exposure of soils may lead to increased siltloads in surface water runoff.	H	S	S	L	M	Construct contours within disturbed area to reduce the levels of silt that may report to the nearby stream.	No additional environmental cost	

	Stripping of soil layers will result in the exposure of soils, which will result in the generation of dust during windy periods.	H	S	S	M	M	Conduct dust suppression daily Enforce appropriate speed limits for the mine vehicles (< 40 Km/h)	R 60 000.00 No additional environmental cost	
	During blasting vibration may have an impact on the surrounding structures, including farm dwellings	H	S	S	M	H	A qualified blasting expert will be employed to design the blasting such that nearby properties and residents are not affected.	R 150 000.00 Part of mining cost	
	Machine operators in close proximity to machinery will be exposed to noise levels in excess of 85dB. These noise levels will attenuate to acceptable levels within a short distance (500m). Note that no significant noise increases are expected within a 500m radius of the activities. During blasting noise levels may reach in excess of 130dB.	H H	S S	S S	H L	H M	Ensure that the mine employees are issued with earplugs and that they are instructed to use them. Educate employees on the dangers of hearing loss due to noise from mine machinery. A qualified blasting expert will be employed to design the blasting such that nearby residents are not affected.	R 10 000.00 R 50 000.00 No additional environmental cost	



	During construction solid and domestic wastewill be generated	L	L	L	L	L	Collection bins clearly marked for each waste generated must be install at strategic locations within the mine. Employ suitable qualified waste collector to dispose waste at a registered landfill site on a regularlybasis. Solid waste must be sold to scrap yards on a regular basis	R 20 000.00	
ANNUAL REHABILITATION CONSTRUCTION COSTS (SUB-TOTAL)								R 3 965 000.00	

➤ **Impacts on Groundwater**

It is accepted for the purposes of this document that the construction phase will consist of preparations for the underground mine, which is assumed to consist mainly of establishment of infrastructure on site.

This phase is not expected to influence the groundwater levels. With the exception of lesser oil and diesel spills, there are also no activities expected that could impact on regional groundwater quality. This phase should thus cause very little impacts in the groundwater quality. It is expected that the current status quo will be maintained.

➤ **Groundwater Management**

As only diesel and oil spills have been identified as potential groundwater pollutants during this phase, measures to prevent and contain such spills should be introduced. The following is suggested:

- It must be ensured that a credible company removes used oil after vehicle servicing.
- A sufficient supply of absorbent fibre should be kept at the site to contain accidental spills.
- Used absorbent fibre must be land-farmed, using approved methodologies.

33.3 OPERATIONAL PHASE

The following activities, which may impact on the health of people and the environment, will occur at the proposed Witbank Colliery during the operational phase:

- Systematic removal of the coal seam by underground mining methods;
- Crushing and screening of R.O.M coal
- Stockpiling and transporting of product coal materials;
- Disposal of mine affected water into the pollution control dams; *and*
- Use of the mine infrastructure during mining.

➤ **Systematic removal of the Coal Seams by underground mining methods:**

Following the opening of the box-cuts, the underground mining will commence from the box cuts high wall via shafts and migrating forward as per the mining plan. Underground mining will be conducted using mechanical continuous (continuous miners) mining technique. A Bord and Pillar mining methods will be used employing the Salmon's Formula for determination of the Pillar sizes.

➤ **Crushing and screening of R.O.M. coal**

After the coal has been mined it is then conveyed onto the run of mine stockpile. The coal is then fed into the plant by either an automatic feeder situated at the bottom of a run of mine surge bin or by means of front end loaders feeding the R.O.M over a grizzly into a bin and control fed by means of a short feed conveyor. The -150mm R.O.M. material is conveyed onto a raw coal scalping screen where the -80mm material passes through the screen apertures and the +80mm -150mm is crushed through

a primary double roll crusher. After the primary crushing process the R.O.M coal is conveyed onto a second raw coal scalping screen where the -50mm material passes through the screen apertures and the +50mm material is crushed through a secondary double roll crusher. The scalped and crushed material is then conveyed to a raw coal sizing screen where the coal is screened to the various sizes required for the dense medium separators.

➤ **Stockpiling and transportation of product coal:**

All R.O.M coal from the underground workings will be transported by an underground conveyor belt to the adit area through one of the constructed shafts. The underground conveyor will then connect via a transfer point to an overland conveyor belt that will transport the R.O.M stockpile.

This stockpiling area will be constructed to cater for coal if any breakdowns or work stoppages within the workings occur resulting in a cease in production (financial implications). The R.O.M stockpile will be designed to contain no more 10 000 tonnes of the R.O.M coal.

➤ **Disposal of mine affected water into the pollution control dams**

The two pollution control dams will be constructed during the construction phase of mining. The dams will be designed and constructed to comply with all regulatory requirements.

The pollution control dams will be utilised for the collection of all dirty runoff water from the R.O.M stockpile and mine infrastructure areas. Dirty water diversion trenches will be used to divert dirty water into the pollution control dam. Water from the pollution control dam will be evaporated and used for dust suppression.

Underground seepage water will be circulated within the underground workings and eventually will be pumped into a sump constructed at the incline adit area. This sump will also collect runoff water from the pit ramp and adit surface area. Water from this sump will be pumped into the two pollution control dams. The pollution control dams will be connected to the underground workings and will be used to feed water into the continuous miners. Some of the water from the dams will be used for dust suppression.

➤ **Use of mine infrastructure during mining:**

The constructed mine infrastructure will be used to provide services during the operational phase of the proposed mining project. These services include diesel refuelling, mine vehicle maintenance, waste management and transportation of R.O.M coal and administration duties.

OPERATIONAL PHASE									
ACTIVITY	IMPACT	IMPACT ASSESSMENT					MITIGATION MEASURES	ANNUAL COST	CLOSURE COST
		P	A	D	I	S			
Systematic removal of coal by underground mining methods	Removal of the targeted coal seam will result in the disturbance of the geological layers overlying the target coal seams.	H	M	S	H	H	No mitigation can be undertaken for this impact.	Mining cost	
	Subsidence due to pillar failure	H	M	S	H	H	Maintain Safety factor of 2.5 to ensure stability of hanging strata.	Mining Costs	
	Disturbance to and/or exclusion of animals currently occupying/utilising the site. There is a risk that uncontrolled access to the workings by mine and contractor employees will result in poaching of animals.	H	S	S	L	L	No mitigation will be undertaken. Note that fauna will naturally recolonise un-mined and rehabilitated areas. Educate employees on dangers of trapping endangered species during the mines environmental awareness plan implementation.	No environmental costs R 300 000.00	
	Water captured within the underground workings may contain elevated ion concentrations, which may impact detrimentally on the environment if allowed to enter the natural environment.	H	M	S	H	H	All dirty water from the mine will be captured within the underground workings and pumped into the pollution control dams using HDP plastic pipes.	R 300 000.00	

	<p>During the operational phase, it is expected that the main impact on the groundwater quantity will be dewatering of the surrounding aquifer and loss of groundwater contribution to catchments base flow. Water entering the workings will have to be pumped out to enable mining activities. This will cause a lowering of the groundwater table in and around the mine and hence loss of groundwater to catchments base flow.</p>	H	M	M	M	M	<p>Surrounding boreholes i.e. monitoring and boreholes used by residents must be monitored on a quarterly basis. This will determine the extent of the dewatering cone from the mining area. Preferred flow structures (dykes, sills, faults, etc) must be sealed to prevent ingress of water in the underground workings.</p>	R 200 000.00	
	<p>During mining, fine coal or coal dust may accumulate in the workings. This may have health impacts on the employees.</p>	H	S	S	H	H	<p>Employees must be issued with dust masks and instructed how to use them. Dust suppression must be undertaken when necessary.</p>	R 50 000 R 60 000	
	<p>Machine operators in close proximity to machinery will be exposed to noise levels in excess of 85dB.</p>	H	S	S	H	H	<p>Issue earplugs to employees and educate on their use and on the effect of noise on their health.</p>	No additional environmental cost	
	<p>Visual impacts will result from the proposed mining operation's infrastructure.</p>	H	L	S	M	M	<p>Ensure that the constructed visual berms along visible parts of the mine are maintained.</p>	No additional environmental cost	

	<p>Some of the social impacts on neighbouring parties relate to noise, visual, air quality deterioration etc. and have been addressed earlier in this section of the impact assessment.</p> <p>The proposed project will create much needed employment opportunities, which can be enhanced by employing members of the local communities. Capital and operating expenditure on the proposed mine will benefit the local economy both directly through local buying and indirectly through salaries earned by employees in the area. Further to the above, through the Social and labour Plan the mine will develop its employees and will initiate community projects that will increase the benefit the community will receive from the mining operation.</p> <p>Potential socio-economic impacts of the mining operation include threat of increase in crime and petty theft and poaching by labourers, if they reside on site.</p>	H	M	S	H	H	<p>No additional mitigation, refer to applicable sections of the impact assessment</p> <p>Positive impact</p> <p>Through the environmental awareness plan the employees will be made aware of the impact poaching and crime will have on the surrounding farmers and the environment.</p>	No additional environmental cost	
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	During the public participation meeting a number of issues were raised by the interested and affected parties that would need to be addressed and include <i>inter alia</i> the following: noise, blasting, etc	H	S	M	M	M	Blasting will only take place during the excavation of the adit and during mining operations continuous miner will be used, as a result minimal noise will be generated on the mine Witbank Colliery will engage relevant specialists regarding noise and blasting during operational phase and will adhere to recommendations by the said specialists	No additional environmental cost	
Operation of the ROM coal stockpile areas	The stockpiling of the R.O.M coal will result in the formation of a topographical highpoint, which may change the topography of the area.	H	S	M	M	M	The coal at the coal stockpiles will be removed as soon as possible and maintain the height to not more than 8 meters.	No additional environmental cost	
	Runoff from the run of mine stockpile may contain elevated chemical concentrations, which will impact negatively on the environment if released	H	S	M	M	M	Divert and pump all runoff water from the run of mine coal stockpile to the sump, then to pollution control dams.		
	During stockpiling of the coal (R.O.M and product coal), machinery movement and wind blowing over exposed surfaces will generate dust and diesel fumes. This dust will during windy days form dust clouds and migrate towards the wind direction, which will eventually settle on vegetation cover. This dust cloud may impact negatively on the nearby residents and on the natural vegetation cover.	M	S	M	L	L	Conduct dust suppression on the roads within the stockpiling area and limit the vehicle activity as much as possible within these roads. Keep mine vehicles in good repair order.	No additional environmental cost Mining Costs	

	The run of mine stockpile (surface stockpiling) may be visible from a certain distance resulting in a visual impact.	H	S	S	H	H	The coal at the coal stockpiles will be removed as soon as possible. Ensure that berms are constructed to shield the visible parts of the mine and conduct regular maintenance. Limit the size of the stockpiles to the recommended size.	No additional environmental cost	
Transport of coal products	Vehicle movement will be visible on the R545	H	S	M	L	M	Rapid departure of trucks minimize the impact.	No environmental cost.	
	The transportation of coal products may result in the contamination of virgin land (soil and vegetation) due to spillages along the access/haul roads.	H	S	S	M	M	Trucks to obey maximum speed limit to be set by the mine. Trucks transporting coal to the destined clients must cover the coal with tarpaulins to prevent spillages along the roads. Construct spillage control measures such as berms along the roads.	No additional environmental cost	

	Leaking oils and fluids from trucks may also result in the contamination of soils.	M	S	S	M	M	<p>All roads to be inspected regularly for any spillages. Any spillages will be removed as soon as it is practically possible.</p> <p>Maintain mine vehicles in good repair order. Maintenance of mine vehicles to be conducted at the workshops. Emergency repairs to be conducted on protected ground e.g., areas covered with tarpaulins.</p>	R 350 000	No additional environmental cost	
Operation of all mine infrastructures (pollution control facilities/mine workshop complex, diesel tank, etc) and use of hauland access roads.	Spillage of hydrocarbon fluids outside the mine's office/workshop area may result in the contamination of the soils.	H	S	S	M	M	<p>No repair must be conducted outside the mine workshop.</p> <p>Emergency repairs must be conducted on protected ground e.g., tarpaulins.</p>	No additional environmental cost		
	Sewage emanating from the ablution facilities can affect the quality of groundwater aquifers	H	S	S	L	M	<p>Install a septic tank for the treatment of the sewage.</p> <p>Employ suitable qualified waste collector to empty the septic tank regularly.</p>	No additional costs		
	Use of haul and access roads will result in the generation of dust, which may impact negatively on neighbouring farmers,	H	M	S	M	M	<p>Conduct dust suppression on the roads. Maintain the roads on a regular basis</p>	No additional environmental cost	R 50 000.00	

	Spillage of hydrocarbon fluids outside the mine's workshop area may result in the contamination of the soils, surface and groundwater	H	M	L	L	M	No repair must be conducted outside the mine workshop. Emergency repairs must be conducted on protected ground e.g., tarpaulins.	R 50 000.00	
	Runoff water from the mine workshop and haul/access roads will contain elevated levels of hydrocarbons and coal contaminated silt loads respectively, which will impact negatively on the environment if released.	H	M	S	L	M	Hydrocarbons must be separated from the water and silt before their disposal. Haul roads must be graded regularly to remove any layer of coal material from the roads.	R 150 000.00	
	Leaks from diesel tanks during trucks refuelling may also result in the contamination of soils.						A sufficient supply of absorbent fibre should be kept at the site to contain accidental spills	R 50 000.00	
	Employees working in close proximity to mine machinery will be exposed to high levels of noise, which may in a long term be detrimental to their health.	H	S	S	H	H	Issue employees with earplugs and instruct them to use the earplugs. The mine will through the implementation of the environmental awareness plan encourage the employees to use these earplugs.	No additional environmental cost R 70 000.00	
	During operational phase solid and domestic waste will be generated						Collection bins clearly marked for each waste generated must be install at strategic locations within the mine. Employ suitable qualified waste collector to dispose waste at a registered landfill site on a regularly basis. Solid waste must be sold to scrapyards on a regular basis		
ANNUAL REHABILITATION OPERATIONAL COSTS (SUB-TOTAL)								R 1 630 000.00	

33.4 DECOMMISSIONING PHASE

➤ Decommissioning Phase Activities

The decommissioning phase is taken to begin once all economically exploitable coal reserves have been extracted. This section then attempts to identify all possible impacts that may arise as a result of activities to be conducted during the decommissioning phase.

These include:

- Removal of all mine infrastructure;
- Ripping of all infrastructure areas (concrete slabs, floors and foundations);
- Filling of the final void and plug the adit;
- Ripping and rehabilitating of all haul roads; *and*
- Seeding of ripped and rehabilitated surfaces with seed mixture recommended

➤ Removal of all infrastructures:

Structures that will require to be moved will include the diesel tank, workshop, underground conveyor belt structure, septic tank, and the two pollution dams. Structure such as the pollution control dam, silttraps, diesel tank banded areas, cement supporting structures will be broken up and the resultant rubble used to backfill the incline adit. Note however that if it is requested by the landowner to keep some of the infrastructure for future purposes, the structures will not be removed.

➤ Ripping of infrastructure areas:

All concrete foundations will be broken up, and the rubble removed and placed at the base of the final cut. These areas will then be ripped, to a depth of 250mm to reduce compaction and covered with a minimum 300mm layer of topsoil and seeded with the seed mix identified.

➤ Sealing of Underground Workings and the Incline Adit

A brick wall filled with concrete will be constructed in the of the adit collar. The upper portion of the adit will be backfilled to ground level with rubble. The area will then be soiled and re-vegetated.

Stockpiled overburden, subsoil and topsoil will be used to backfill the adit. Method of material placement will be placement of overburden, followed by subsoil followed by a minimum 300mm layer of topsoil. The final void will be filled to surface and shaped to ensure that the area is free draining. No ponding will occur on the final rehabilitated surface.

➤ Ripping and rehabilitating of all haul roads

The access roads will be ripped to depth of 250mm. A 300mm topsoil layer will then be placed over the ripped area. The ripped and covered haul roads will then be seeded with the seed mix identified.

➤ Seeding of ripped and rehabilitated surfaces:

Following mechanical rehabilitation of the area, a seed mix will be applied to the rehabilitated areas to accelerate vegetation establishment. Proper seed mixture was identified to be used during

rehabilitation.

➤ **Environmental, Social and Cultural Impact Assessment**

Impacts of aspects identified during the operational phase will continue during the decommissioning phase, hence no additional impacts are predicted during the decommissioning phase.

33.5 RESIDUAL IMPACTS AFTER CLOSURE

Residual impacts after decommissioning, in context of this document, is taken as all potential impacts, which may arise as a result of the mining activities on the proposed Witbank Colliery following the decommissioning phases. Note that no partial closure will be applied for.

➤ **Geology**

During the life of the mine, approximately 25×10^6 tons of coal will be removed from the proposed Witbank Colliery project area using the underground mining methods. Except for the adit area the use of the safety calculated as per Salmon's formula will ensure that the strata within the mined out areas remain stable after mining has ceased. No surface subsidence is therefore expected after rehabilitation.

➤ **Topography**

Rehabilitation of the adit with all associated infrastructure will result in the area regaining its pre-mining topographical patterns. Volumetric analysis of the material used to fill the incline adit indicates that the pit can be filled and rehabilitated to surface.

The use of the Salmon's formula for the calculation of the safety factor for the pillars will ensure that the undermined areas are stable long after the mining has ceased. In view of the above, no subsidence is predicted hence no residual impacts predicted.

➤ **Soils**

All soils from the subsoil and topsoil stockpiles will be utilized during the decommissioning phase. The area will then be seeded with the seed mix identified in section 3.1.7 to prevent soil loss and erosion. Since the topsoil stockpile height will not exceed the height of 4m, no significant loss of soil chemical properties is expected. However if it is found that the fertility of the soil has been reduced to critical levels the soils will be fertilised before use during rehabilitation.

During the rehabilitation of the incline adit, minimum 300 mm of topsoil will be spread over the rehabilitated areas. This approximates the pre-mining topsoil conditions thus no residual long-term impacts on the soils are expected.

The infrastructure areas will be covered with a 300 mm layer of topsoil (minimum) after infrastructure removal. No significant residual impacts on soil will therefore occur.

➤ Land Use and Capability

A minimum 300mm layer of topsoil will be placed over the rehabilitated incline adit area and surface infrastructure areas. Since the pre-mining land use for the above areas is grazing, it will be possible to immediately restore the land capability of the rehabilitated area to pre-mining land use. However the rehabilitated areas will have to be maintained for a number of years before it can be used for grazing again. No significant residual impacts on land capability will therefore occur.

➤ Natural Vegetation

Seeding of all rehabilitated areas during the decommissioning phase will ensure that a sustainable vegetation cover will establish in the mining area within 2 – 4 years. An invader plants eradication plan will be initiated during the decommissioning and continued through to the closure phase. No significant residual impacts on vegetation will therefore occur

➤ Animal Life

Following cessation of mining activities in the area, animals will begin to migrate back into the area within 2 years.

➤ Surface Water

✓ Surface Water Quantity

Following re-establishment of natural runoff patterns by rehabilitation and shaping of the incline adit area, and removing of the pollution control dam, all diversion trenches and berms, R.O.M stockpile and related structures, surface water runoff will re-establish.

✓ Surface Water Quality

Following rehabilitation of the incline adit area and all associated structures, all sources of dirty water from the mining area will be eliminated. In view of this, no dirty water will be emanating from the mining area. Further to this the formation of a free draining surface will minimise the ingress of water into the replaced soils thus minimising the potential for the development of a pollution plume. No significant residual impacts on surface water quality are therefore predicted.

➤ Groundwater

This phase of the mining process is the period following the completion of mining and the subsequent flooding of the Witbank underground mine. The following possible impacts were identified at this stage:

- Following closure of the underground mine, the groundwater level will rise to an equilibrium that could differ from the pre-mining level due to the disturbance of the sub-surface and subsequent increase in hydraulic conductivity.

- Groundwater within the mining void is expected to deteriorate due to acid mine drainage and other chemical interactions between the geological and the groundwater regimes. The resulting groundwater pollution plume will commence with downstream movement.

➤ **Groundwater Quantity**

After closure, the water table will rise in the mining area to reinstate equilibrium with the surrounding groundwater systems. By simple calculation of the volume of the mining void and the predicted inflow into the mine, the rate of return of the groundwater levels is predicted to be in the order of 50 – 100 years. However, this calculation is best done during the operational phase when more reliable pumping volumes are available.

However, the groundwater will not return to the pre-mining levels. The underground mine void will have a large hydraulic conductive compared to the pre-mining situation. This will result in a relative flattening of the groundwater table over the extent of the rehabilitated underground mine, in contrast to the gradient that existed previously. The end result of this will be a permanent lowering of the groundwater level in the higher topographical area and a corresponding rise in low areas.

Intuitively, it would be expected that this raise in groundwater could result in decanting of the underground mine. Inspection of the predicted groundwater levels indicates that the post mining groundwater levels might be above surface at the unnamed stream that flows from north to south through the mining area into the Steenkoolspruit. This implies that some seepage might occur once groundwater levels have recovered. But it is expected to contribute to wetland conditions along the stream.

It is predicted that the groundwater will be lowered up to 25 metres in the high-lying sections of underground mine, with a corresponding increase of about 20 metres in the lower sections of the proposed colliery. With the exception of some boreholes on the farm it is not expected that this lowering in level of the groundwater will have any serious impact on the groundwater quantity in the area. However, some of the boreholes might be mined out, depending on depth, and will have to be replaced. For the above boreholes, a permanent lowering in the borehole yield should be expected, depending on the details of the particular water strike.

Furthermore, decanting will occur at the adits of the mine if it is not sealed properly. It is also recommended that the mine is sealed in as many positions as possible, especially in the “neck” area where the south-western section connects with the larger northern mining area.

➤ **Groundwater Quality**

Once the equilibrium groundwater flow conditions have been re-instated, polluted water can migrate

away from the rehabilitated areas. Groundwater flow will be towards the mine from the high-lying areas, and away towards the streams. As substantial coal normally remain in the mined areas, this outflow will most likely be contaminated. Estimating the potential impacts on the receiving environment through modelling of the solute transport was therefore important and the results are described on the groundwater report.

➤ **Air Quality**

Following cessation of all activities, rehabilitation of all dust generation area and seeding of the rehabilitated areas, dust generation will be reduced. No residual impacts on air quality are therefore expected.

➤ **Sensitive Landscapes**

Households within the mining boundary. Removal of households to be undertaken by the mining house.

➤ **Noise & Vibration**

Following cessation of mining activities no further noise generation will occur at the proposed Witbank Colliery. No residual impacts are predicted.

➤ **Visual Aspects**

Following cessation of mining activities, rehabilitation of the area and seeding of rehabilitated areas, the visual aesthetic of the area will be improved in comparison with operational and decommissioning phase impacts. No negative residual visual impacts are therefore predicted.

➤ **Socio-Economic Impacts**

Following cessation of mining activities, all regional socio-economic impacts, which arose during the construction and operational phases, will no longer apply. All economically viable reserves will have been exploited. Further to this, the mine will develop a mechanism that will ensure that employees can re-enter the workplace in case Dotess cannot sustain their employment. For more information on the above mechanisms please refer to Dotess Social and Labour Plan for Witbank Colliery.

➤ **Interested and Affected Parties**

Groundwater impacts, which may arise during the operational and decommissioning phase, may persist. Hence these impacts may remain after the mine has ceased operation.

➤ **Cultural Aspects**

✓ **Sites of Archaeological or Cultural Interest**

Desktop research revealed that the project area is rich in LIA archaeological sites and historical sites, the walk down survey identified burial sites and historical structures within the development site. In terms of the archaeology, there are no obvious 'Fatal Flaws' or 'No-Go' areas. However, the potential for chance finds, remains and the applicant and contractors are urged to be diligent and observant during mining. The procedure for reporting chance finds has clearly been laid out and if this report is



adopted by SAHRA, then there are no archaeological reasons why the Mining Right Application cannot be approved.

DECOMMISSIONING AND CLOSURE PHASES							
ACTIVITY	NATURE OF IMPACT	IMPACT ASSESSMENT			MITIGATION MEASURES	ANNUAL COST	CLOSURE COST
		E	P	S			
Demolition/dismantling of infrastructure/equipment i.e. crushing and screening plant, weighbridge, workshop, diesel tank, and waste collection structures	Contamination of surface water with silt from the demolition process and dismantling of mine infrastructure	M	H	H	Construct and maintain contours/berms around the affected areas.	R 500 000	See Appendix
	Generation of dust and noise	M	H	L	Dust suppression Provide earplugs to employees Ensure that mine machinery used are in good repair	R 30 000	
	Hydrocarbon spillages may render the infrastructure areas to be of no agricultural value after mining.	M	H	L	Work on protected ground (tarpaulins). Remove and dispose off all oil, diesel and grease contaminated surfaces and cover with clean topsoil.	R 10 000 R 50 000	
Rehabilitation of access roads	Generation of dust and noise	M	H	L	Dust suppression	No additional costs	
	Contamination of surface water with silt generated from the rehabilitated areas	L	H	M	Construct contours on rehabilitated areas	No additional costs	
Rehabilitation of coal and overburden stockpile areas	Generation of dust and noise	M	H	L	Dust suppression	No additional costs	
	Contamination of surface water with silt and coal contaminated runoff generated from the rehabilitated areas	L	H	M	Construct contours on rehabilitated areas. Remove carbonaceous build up on the stockpile area and place at the bottom of the open cast pit.	No additional costs	
	Hardened bare areas may cause increased runoff and erosion gullies.	S	H	L	All hardened areas must be ripped, areas with topsoil scarified and areas without topsoil covered with a layer of topsoil before being seeded.	R 300 000	

	Due to prolonged storage of topsoil, the fertility of the topsoil may have been lost, hence resulting in poor re-establishment of vegetation on the final rehabilitated area.	S	H	M	Undertake chemical tests to determine the ability of the topsoil to support vegetation, if it is found that the fertility is reduced, fertilisers must be used (under the recommendation of a specialist) to improve the fertility of the topsoil.	R 100 000	See Appendix
Rehabilitation of the adit	Generation of dust	M	H	L	Conduct dust suppression	No Additional costs	
	Machine operators in close proximity to machinery will be exposed to noise levels in excess of 85dB.	S	H	H	Issue employees with earplugs and instruct them how to use the earplugs.	R 50 000	
	The movement of mine machinery within the mine surface areas will also create noise, which may be a nuisance to the residents of the neighbouring property.	S	H	H	The mine must keep their machinery in good repair.	R 300 000	
	Contamination of surface water with silt generated from the rehabilitated areas and dirty water remaining in the adit.	L	H	M	Construct contours on rehabilitated areas. Pump water into the pollution control dam before undertaking the final rehabilitation.	No additional costs	
General surface rehabilitation	Areas of ponding may result from rehabilitated areas	L	L	L	Monitor rehabilitated areas. Any signs of ponding must be addressed by levelling as soon as possible	R 500 000	
	Rehabilitated areas may show areas of soil erosion, which may be replaced with topsoil	L	L	L	Monitor rehabilitated areas. Any signs of ponding must be addressed by levelling as soon as possible	No additional costs	
	Ponding and erosion gullies will result in the failure to revert the mined area to recommended land use after mining	L	L	L	Monitor rehabilitated areas. Any signs of ponding must be addressed by levelling as soon as possible	No additional costs	
	Invader species and noxious weeds may colonise the areas prior to the establishment of natural vegetation	L	M	M	Progress of establishment of re-vegetation must be monitored regularly. Identified declared invader species or exotic plants	R 250 000	

					species must be removed.		
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CLOSURE PHASE									
Water management	Groundwater may decant after mining has been completed.	H	M	S	M	M	Contain or use decant water	R 1 000 000.00	See Appendix
Maintenance and after care	<p>Invader species may colonise therehabilitated areas</p> <p>Rehabilitated areas may show areas of soil erosion, which may remove replaced topsoil.</p>	M	L	L	M	M	<p>Progress of re-vegetation must be monitored regularly. Identified invader species or exotic plant species must be removed.</p> <p>Monitor rehabilitated areas. Any signs of ponding must be addressed by levelling as soon as possible</p>	No additional costs	
Specialist studies that might be require during rehabilitation operations									
ANNUAL DECOMMISSIONING REHAABILITATIONN COSTS								R 1 850 000.00	
GRAND TOTAL (CONSTRUCTION, OPERATIONAL AND DECOMMISSIONING ANNUAL REHABILITATION COSTS								R 7 445 000.00	
QUANTUM FOR FINANCIAL PROVISION INCLUDING CONTINGENCIES AND VAT									R8 561 750.0

33.6 CUMULATIVE IMPACTS

This section of the environmental impact assessment will attempt to determine if the proposed Witbank Colliery mining project will contribute towards any cumulative impact. For the purpose of this document cumulative impacts will be described as those impacts that have been assessed as being insignificant but would be significant when combined with the same impact arising from other activities within the area of the proposed Witbank Colliery mining project.

It must however be mentioned that the assessment of the cumulative impacts requires a combined effort from the different industries or mines that will contribute to the cumulative impacts identified. Data from the contributing parties will be required for a thorough and accurate impact assessment. Since it is not possible to obtain data from other parties, the impact assessment described below will not be accurate and detailed.

During the impact assessment several impacts identified were rated as insignificant. However some of these impacts do not possess a cumulative nature, meaning they will not cumulate to a significant impact when combined with the same impacts from the surrounding activities. For this reason only the air quality is discussed below.

➤ **Topography**

Several mining operations are either being undertaken, commissioned or planned in the vicinity of the proposed mining projects. The presence of these mining operations will have an added impact on the regional topography of the area such that the sense of place will be affected. Drainage of the area might also be affected by the presence of other mining operations within and around the proposed mining area.

Cumulative impacts on topography over the proposed area are reduced by the undulating nature of the regional topography.

➤ **Soil, Land Use and Capability**

The area within which Witbank Colliery will be undertaken is classified as having good arable land. The presence of the other mining operations will have some effect on the soils of the area such that the area that could be used for crop production would be lost to mining. It must however be noted that the use of underground mining methods will reduce the significant of these impacts.

➤ **Surface water**

Mining has over the past decades had detrimental effects on the surface water environment. This could be attributed to previous environmentally unfriendly mining practices. The presence of several mining activities especially defunct mines within one catchment may have severe effects on the surface water environment. However due to new technologies and environmental awareness that has been promoted over the last decades, mining can be undertaken such that the impacts on the surface water environment are significantly minimised and controlled.

Agriculture, which currently dominates the area, has also been detrimental to the surface water environment. Several wetlands have been lost due to over grazing and attempted cultivation. Exposure of ground has also resulted in increased silt entering the water environment having serious consequences to the livelihood of the surface water environment. Based on the above, cumulative impacts on surface water could be serious if no mitigation measures are undertaken.

Dotess (has, in view of the seriousness of the potential impacts, undertaken necessary measures to ensure the proposed mining operation does not contribute to the identified impacts on surface water environment.

➤ **Groundwater Pollution**

Several underground mines are operative in the area. To model all these would require a regional model that is outside the scope of this study. However, since both groundwater drawdown and - pollution was found to influence mainly the mined areas, it can be assumed that neighbouring mines will have similar effects.

➤ **Groundwater Management**

Decanting will most likely occur at the adit if it is situated at a low point in the southern section of the mine, as currently planned. Furthermore, underground seepage might also take place at the lowest elevations in the vicinity of the Steenkoolspruit. It is thus important to limit and contain pollution that might develop in the underground workings.

Mitigations to prevent decanting of the mine and underground seepage, should concentrate on sealing the adit(s) and preventing the contact of the mined stopes with oxygen as far as practical. The formation of acid mine drainage is dependent on the oxidation of pyrite to sulphate and reducing the contact with oxygen is a very effective method of ultimately preventing pollution from the colliery. The following measures are specifically recommended and must be implemented:

- Adits should be placed in areas that are not environmentally sensitive and at the highest practical elevation above the coal seam, to start with.
- Treatment of the decanting water may be viable. However, all passive methods should be investigated first during the operational phase of the mine, as proposed below.
- On decommissioning if the mine, all adits must be thoroughly sealed to ensure a plug of low hydraulic conductivity is formed at these entrances. The plug must have enough lateral extent to ensure that little groundwater seepage can occur around it.
- The underground mine should be subdivided in as many isolated sections as possible to prevent the free lateral flow of groundwater through the abandoned stopes and main underground

access routes. This can be accomplished by building internal walls as soon as feasible, preferably starting even in the mining phase.

- All sulphate containing waste material should be stored underground and flooded as soon as possible to exclude oxygen, for similar reasons as above.
- Major underground fractures encountered while mining must be sealed by grouting, both on inflow and outflow areas, to ensure that the water in the underground mine is contained as much as possible.
- All potential hydrocarbon and chemical sources of hydrocarbons must be stored in secure facilities with appropriate storm water management; ensuring contaminants are not released into the environment.
- Areas of hydrocarbon contaminated soils should be removed or remediate or by following a risk based approach.
- Lastly, pollution control dams must remain after decommissioning to intercept polluted seepage water from entering water courses (streams). Regular monitoring of the streams is essential.
- It is strongly suggested that the groundwater model is being updated during the operational stage of the mine to investigate alternative options to mitigate the potential post-closure environmental liability. This should be done in close cooperation with mining personnel to ensure that the best practical solution not exceeding reasonable costs is implemented.

If these mitigations are implemented successfully, the degree of AMD formation is likely to decrease. The spread of the pollution plume, as depicted earlier in this report, was created using worst-case assumptions, and is likely to decrease to dramatically should the mitigation be correctly engineered.

Nevertheless, it is important to monitor static groundwater levels and groundwater quality on a quarterly basis in all boreholes within a zone of one kilometre surrounding the mine to ensure that any deviation of the groundwater flow from the idealised predictions is detected in time and can be countered appropriately. Preferred flow structures (dykes, sills, faults, etc) have not been included in the model due to the unknown hydraulic characteristics, and these structures could alter the actual effects considerably.

If it can be proven that the mining operation is indeed affecting the quantity or quality of groundwater available to users, the affected parties should be compensated. This may be done through the installation of additional boreholes for water supply purposes, or an alternative water supply.

Water samples must be taken from all the monitoring boreholes by using approved sampling techniques and adhering to recognised sampling procedures. Samples should be analysed for both

organic as well as inorganic pollutants, as mining activity often lead to hydrocarbon spills in the form of diesel and oil. At least the following water quality parameters should be analysed for:

- Major ions (Ca, K, Mg, Na, SO₄, NO₃, Cl, F)
- pH
- Electrical Conductivity (EC),
- Total Petroleum Hydrocarbons (TPH)
- Total Alkalinity

These results should be recorded on a data sheet. It is proposed that the data should be entered into an appropriate computer database and reported to the Department of Water and Sanitation.

As described before, this impact can only be accurately quantified if enough data is collected from other parties within the area.

➤ Air Quality

During the impact assessment it was identified that air quality, although insignificant will be impacted on by the dust from the proposed Witbank Colliery mining project. Several activities within the vicinity of the proposed Witbank Colliery are being conducted i.e. agriculture, mining and power generation.

Agricultural related activities, which dominate the immediate land use within the surrounds of the proposed mining area, require soil to be prepared especially during the planting season. During the preparation of the soils a substantial amount of dust is produced. Several underground and opencast mining operations including the proposed Witbank Colliery (this document) will also generate dust during their mining operations. The power generation station surrounding the mining will add to the impact on air quality. With the above in mind and the fact that the above-mentioned parties will require services e.g. transporting of beneficiated products, which will result in secondary air pollution, the impact on air quality might be significant. It must however be mentioned that the magnitude of the impact on air quality from the different parties will not be the same. Some activities will have more impact on the air quality than others. impact can only be accurately quantified if enough data is collected from other parties within the area

33.7 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):-

Table 35:Specialist summary

LIST OF STUDIES UNDERTAKEN	RECOMMENDATIONS OF SPECIALIST REPORTS	SPECIALIST RECOMMENDATIONS INCLUDED IN THE EIA REPORT	REFERENCE TO SECTION IN REPORT INCLUDED

<p>Biodiversity study:</p>	<ul style="list-style-type: none"> The proposed project area falls in the heavily modified and moderately modified area due to cultivation (maize and soya beans), livestock grazing, residential activities but mostly cultivation. The mixture of floral species of least concern and alien invasive species were observed on the boundaries of the cultivated areas and riparian areas. This is due to heavily modified of the proposed area and it is disturbed to an extent that it cannot be reinstated to its natural state. Critical Biodiversity Areas observed onsite are riparian areas as most of the areas are disturbed. No floral species of conservation concern observed during site assessment. Some areas provide livestock with area for grazing. When choosing areas to be mined, the applicant should prioritize development in already heavily modified areas by cultivation. Riparian areas should be avoided during mining to avoid unnecessary disturbance of sensitive areas. The applicant must ensure that animals should not be intentionally killed/poached if identified. There should be a relocation of any threatened mammal species which might be identified onsite before commencement of mining. Proper rehabilitation and after-care of the disturbed area during mining should take place to prevent colonisation by invader species. All mitigation measures proposed in this report must be implemented during all phases of the proposed project. It is recommended that the management measures stipulated in this report be included in the proposed project's official EMPr and that these be assessed for efficacy during all phases of the project and adapted accordingly to ensure minimal disturbance of the study area ecology. The significance of the impacts will be determined by the success of the mitigation measures implemented and the rehabilitation programme for the mining area.. 	<p>X</p>	<p>Part A</p>
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<p>Geo-Hydro Assessment</p>	<ul style="list-style-type: none"> • The designing of the infrastructures should take into consideration the gentle slope around the mining right to effectively manage water. • 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 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 • Mining Right Hydrogeological Study • 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. • it is recommended that to protect the wetlands onsite, it should be made easy to identify them, and further development is required before the operations commence such as planting of various plants. • It is recommended that compliance of relevant legislations be ensured, NEMA Act 107 of 1998, NWA Act 36 of 1998, NEM: waste Management Act 58 of 2008. • It is recommended that the mining project outsource water, the area does not have large quantity of surface water and the aquifer is minor, as such the abstraction of groundwater is likely to severely affect the water distribution in the area. 	<p>X</p>	<p>Part A</p>
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	<ul style="list-style-type: none"> • Regular dust monitoring should take place weekly, to detect any change in dust being produced, so that mitigation measures are implemented early. • 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 permit area, to monitor the groundwater quality and quantity. • Prior to the mining operations, Dotess Mining should conduct tests on the soil and groundwater, to trace the residues of any chemicals used during the cultivation process, and to implement measures to lower those effects. 		
<p>Soil, land use and land capability Assessment</p>	<ul style="list-style-type: none"> ➤ The project operations must stay inside the clearly delineated footprint zones; ➤ During the construction period, bare soils within the access roads can be routinely moistened with water to minimize dust, especially when strong winds are anticipated according to the local weather prediction; and ➤ Soil Compaction is usually greatest when soils are moist, so soils should be stripped when moisture content is as low as possible. If they have to be moved when wet, truck and shovel methods should be used as bowl scrapers create excessive compaction when moving wet soils; ➤ As much as is practically possible, the projected development and construction activities' footprints should be clearly marked to limit vegetation clearing activities inside the infrastructural footprint; ➤ Usable topsoil from the construction of the surface infrastructure areas must be removed prior to construction and stockpiled separately within the demarcated areas with measures to protect this valuable resource from impacts such as chemical contamination as well as mixing with less valuable overburden types. ➤ Revegetate with an indigenous grass mix, to re-establish a protective cover, in order to minimise soil erosion and dust emissions. 		<p>Part A</p>

	<ul style="list-style-type: none"> ➤ The post closure land use should be aimed at forestry with indigenous species. • Based on the stockpile management plan the following measures are proposed in order counteract the problems associated with limited topsoil stockpile: <ul style="list-style-type: none"> ➤ Ideally, infrastructure clearance once mining operations are over is usually considered. To minimize the quantity of topsoil stockpile needed for rehabilitation, all the structures on the site should be evaluated along with the authorities and the ultimate land users to determine which infrastructure areas could be utilised in the future. ➤ Where infrastructure is removed all the rubble and residual foundations need to be covered with at least one metre of cover material. ➤ The topsoil stockpile should be used only in areas where there is a likelihood for post closure use such as grazing, where the slopes are not too steep. 		
<p>Traffic Impact Assessment</p>	<ul style="list-style-type: none"> • It is expected that the majority of the workers will use public transport and the proposed development of the project can be supported from a traffic flow point of view with provision be made on site to accommodate the safe loading and off-loading of staff using public transport as well as an in-house traffic management plan. • Since the proposed development will generate less than 150 vehicles per hour during the peak hours, only a Traffic Impact Statement (TIS) is required. • Analyses of existing traffic conditions on the road network surrounding the proposed residential development showed that generally the traffic conditions during typical weekday AM and PM peak hours are good with truly little congestion during peak hours. • The analyses of the existing plus development generated traffic showed that the additional traffic generated by the proposed project development will not have a major impact on the surrounding road network. The road network is currently operating well below its capacity. Therefore, the generated traffic volumes will easily be accommodated by the existing road network without reducing the levels of service on the surrounding road network and will have minimal effect on public transport or pedestrian activities in the area. We recommend one line to be added near the access point of the proposed project area to ease the flow of traffic and not to be congested. 	<p>X</p>	<p>Part A</p>

<p>Hydrogeology</p>	<ul style="list-style-type: none"> • The designing of the infrastructures should take into consideration the gentle slope around the mining right to effectively manage water. • 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 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 • Mining Right Hydrogeological Study • 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. • it is recommended that to protect the wetlands onsite, it should be made easy to identify them, and further development is required before the operations commence such as planting of various plants. • It is recommended that compliance of relevant legislations be ensured, NEMA Act 107 of 1998, NWA Act 36 of 1998, NEM: waste Management Act 58 of 2008. • It is recommended that the mining project outsource water, the area does not have large quantity of surface water and the aquifer is minor, as such the abstraction of groundwater is likely to severely affect the water distribution in the area. 		<p>Part A</p>
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	<ul style="list-style-type: none"> Regular dust monitoring should take place weekly, to detect any change in dust being produced, so that mitigation measures are implemented early. 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 permit area, to monitor the groundwater quality and quantity. Prior to the mining operations, Dotess Mining should conduct tests on the soil and groundwater, to trace the residues of any chemicals used during the cultivation process, and to implement measures to lower those effects.. 		
<p>Heritage Impact Assessment</p>	<ul style="list-style-type: none"> It is recommended that SAHRA endorse the report as having satisfied the requirements of Section 38 (8) of the NHRA requirements. From a heritage perspective supported by the findings of this study, the Mining Right Application is supported. However, the Mining Right Application should be approved on condition that the identified burial sites and historical buildings are protected by providing for a 100m buffer zone from each. This is in accordance with SAHRA Regulations of 2020. No mitigation of heritage sites is allowed without the consent of the affected families, it is however, the responsibility of the applicant to protect burial sites and historic buildings located within the mining right application site. Should chance archaeological materials or human remains be exposed during mining on any section of the site, work should cease on the affected area and the discovery must be reported to the heritage authorities immediately so that an investigation and evaluation of the finds can be made. The overriding objective, where remedial action is warranted, is to minimize disruption in mining scheduling while recovering archaeological and any affected cultural heritage data as stipulated by the NHRA regulations. Subject to the recommendations herein made and the implementation of the mitigation measures and adoption of the project EMP, there are no significant cultural heritage resources barriers to the proposed Mining Right Application. The Heritage authority may approve the Mining Right Application as planned with special commendations to implement the recommendations here in made. This report concludes that the impacts of the proposed coal mining on the cultural environmental values are not likely to be significant on the entire site if the EMP includes recommended safeguard and mitigation measures identified in 	<p>X</p>	<p>Part A</p>

	this report.		
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Attach Specialist Reports as Appendixes: Attached as Appendixes.

38 Environmental impact statement

Summary of the key findings of the environmental impact assessment;

The impact assessment confirmed that the proposed activities (without mitigation) are expected to have impacts of high significance rating in relation to: groundwater, surface water

The key impacts that relate to the Dotess mine with a High significance before mitigation are included in Table 36.

Table 36: Summary of high impact Activities

Phase	Activity	Aspect	Potential impact	Pre Mitigation	Post Mitigation
Construction	Construction of the pollution control dam.	Surface water	<p>Loose material can contaminate surface water in the event of a storm water run-off occurring during the construction of these facilities. Runoff from areas where hydro-carbon spills are present may also cause deterioration in surface water quality.</p> <p>Blasting of surfaces, footprint clearance on the sites of the proposed processing plant and other infrastructure, and other excavations in the mining area are likely to lead to increased sediments in runoff water.</p>	High (-)	Medium (-)
Construction	Shaft development and associated conveyor route development	Surface water	Loose material can contaminate surface water in the event of a storm water run-off occurring during the construction of the roads. Runoff from areas where hydro-carbon spills are present may also cause deterioration in surface water quality.	High (-)	Low (-)

Construct ion	Shaft development and associated conveyor route development	Background noise	Construction activities may cause an increase in background noise levels. Blasting of the shafts and ramp material may cause structural damage to property and be a danger to people and animals within 500 m of the blast area. Drilling of blast holes can potentially cause an increase in background noise levels. It also has the potential to cause deterioration in air quality due to generation of dust and vehicle emissions.	High (-)	Medium (-)
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Constructio n	Shaft development and conveyor route development	Heritage structures	Construction activities have the potential to impact the historical structures.	High (-)	Medium (-)
Constructio n	Shaft development and associated conveyor route development	Noise	Noise impact that would only manifest in the operational phase but that can be avoided in the construction phase by implementation of measures in construction of ventilation shafts. Impacts of noise need to be controlled by means of berms and shielding structures. With relocation of the receptors would be an option, the recommendations would have to be altered	High (-)	Medium (-)

Construction	Construction of the Dotess project as a whole	Socio Economic	<p>Health and safety risks for workers</p> <p>Inadequate management of the construction process and general construction related activities could result in health and safety risks for workers, manifesting in the following ways:</p> <p>Construction related accidents due to structural safety of project infrastructure. The excavation of the shaft will result in the formation of topographical voids, which may be a safety risk to the employees, livestock and neighbouring landowners.</p> <p>in respiratory diseases.</p> <ul style="list-style-type: none"> ▫ High ambient noise levels caused by machinery and construction equipment resulting in health issues for workers. ▫ Poor management of the construction process resulting in pollution problems (e.g. insufficient sanitation facilities, littering and refuse), flies rodents and pests and possible contamination of water sources. ▫ Unsafe and insufficient drinking water. ▫ An increase in HIV/AIDS and other STDs due to prostitution activities and temporary sexual relationships with local women, unwanted pregnancies that place further pressure on Basic Health Care Services. ▫ Dehydration and sunburn, as high temperatures could be experienced during summer months. 	High (-)	Medium (-)
Construction	Construction of the Dotess project as a whole	Socio Economic	<p>Community health and safety</p> <p>Residents, surrounding landowners and road users could be subject to community health and safety impacts if the</p>	High (-)	Medium (-)

			<p>construction process is not managed adequately.</p> <ul style="list-style-type: none"> ▫ Road accidents, <p>This could include:</p> <p style="padding-left: 40px;">subsequently placing pressure on local emergency, disaster management and health services (fire, ambulance, police services, etc.).</p> <ul style="list-style-type: none"> ▫ Unauthorized access / trespassing at the construction site, resulting in theft, public safety issues and even death. <p style="padding-left: 40px;">the hazards at the construction site and the possibility of fires spreading and damaging surrounding farmland and infrastructure.</p> <ul style="list-style-type: none"> ▫ Dust generation and air pollution caused by gravel roads and machinery resulting in respiratory diseases. 		
Operational	Operation of shafts conveyor belt and infrastructure area containing stockpile areas	Surface water	Loose material as well as the contaminated overburden material can contaminate surface water during rainfall events resulting in dirty water runoff. Runoff from areas where hydro-carbon spills are present may also cause deterioration in surface water quality.	High (-)	Low (-)
Operational	Operation of shafts conveyor belt and infrastructure area containing stockpile areas	Groundwater	Seepage from the overburden stockpile can contaminate the groundwater immediately below the stockpile as well as adjacent areas.	High (-)	Low (-)

Operational	Operation of shafts conveyor belt and infrastructure area containing stockpile areas	Air quality	<p>Dust from Material Handling</p> <p>Material handling of coal and crushed coal are potential sources of dust emissions at the various handling stations. Handling stations include the conveyor transfer points and the loading of the conveyors. Various climatic parameters eg. Wind speed and precipitation influence the amount dust generated from material handling operations. The volume of material being moved and height that the material is dropped at also influence the dust generation at the various handling points.</p> <p>Dust can influence adjacent roads and households</p>	High (-)	Medium (-)
Operational	Operation of shafts conveyor belt and infrastructure area containing stockpile areas	Noise	During the operational phase, increased noise levels can be expected	High (-)	Medium (-)
Operational	Operation of shafts conveyor belt and infrastructure area containing stockpile areas	Ground water	<p>Underground (Lowering of groundwater levels-boreholes)</p> <p>The mining operation in the operational phase may draw down the water table, affecting boreholes of adjacent property owners</p>	High (-)	Medium (-)
	area containing stockpile areas				

Operational	crushing and screening of coal	Air quality	<p>Emissions by means of crushing and screening</p> <p>In this activity, the use of the primary and secondary crusher and discard handling are the most likely to have implications on ambient air quality. The crushing process releases fugitive dust, especially if there are no enclosure and water sprays. Dust contained within the RoM ore can be released into the atmosphere during this process i.e. fugitive dust (containing TSP, as well as PM10 and PM2.5). Wind erosion from stockpiles can be a perennial source of dust if not properly managed during and post mining operations. The plant, crushing and screening areas all have the potential to generate dust and therefore specific mitigation measures can be assigned to each of these activities.</p>	High (-)	Low (-)
Operational	Operation of the Dotess in general	Socio-Economic Impacts : Local economic impacts	<p>Impacts on procurement / supporting industries / local SMME's</p> <p>The Mining Charter sets BEE compliance guidelines and as such Dotess Colliery will have to procure all products and/or services from BEE compliant outlets. In order to ensure and promote the procurement of products and/or services from SMMEs who are BEE compliant as well as black owned and/or black empowered, strategies are identified in the Colliery's SLP. It is expected that the majority of goods and services will be available locally from within the Municipal area. Supporting industries, local SMME's and contractors include:</p> <ul style="list-style-type: none"> ▫ Contractors to transport and dispose of domestic and industrial waste; ▫ Equipment cleaning (trucks, conveyors, belt); 	Medium Positive	High Positive

			<ul style="list-style-type: none"> ▫ Maintenance and repairs of infrastructure, roads, etc.; ▫ Operation of tuck shops; undry and catering services; ▫ Gardening; ▫ Security; etc. 		
Operational		Socio-Economic Impacts : Skills development and social responsibility	<p>Impacts on the local community / community projects</p> <p>As part of a mine's Social and Economic Development responsibility, the mine must get involved with a relevant Local Economic Development Projects as identified in the IDP of a municipality.</p> <p>Dotess is however not in the position to get involved with the day-to-day running of a LED project, but will make a financial contribution of R1 000 000 annually towards a project of the municipality's choice, over a period of 5 years.</p>	Medium (+)	High (+)
Operational	Operation of the Dotess in general	Socio-Economic Impact s: Individual and family level impacts	<p>Impacts of blasting</p> <p>At this stage the exact properties to be impacted by blasting activities amounts to approximately 35 informal households. Impacts that could occur include safety issues for humans and animals, dust, illegal trespassing and security impacts (theft of infrastructure, etc.).</p> <p>▫ Accidents due to structural safety of proje</p>	High (-)	High (-)

Operational	Operation of the Dotess in general	Socio-Economic Impact: Individual and family level impacts	<p>Illegal trespassing</p> <p>Illegal trespassing could occur at the mine space, resulting in safety (death) and security issues (theft, vandalism, etc.). Should the recruitment process not be managed adequately, illegal informal settlements could be established on private land if workers and contractors want to reside close to their place of employment.</p>	High (-)	High (-)
Operational	Operation of the Dotess in general	Socio-Economic Impact: Health and safety impacts	<p>Health and safety risks for workers</p> <p>Mining activities could impact on the health and safety of workers:</p> <ul style="list-style-type: none"> ▫ Use of the continuous mechanical miners may generate dust resulting in respiratory diseases; ▫ Employees working in close proximity to mine machinery will be exposed to high levels of noise, which may in the long term be detrimental to their health; ▫ Traffic accidents on access and haul roads; ▫ An increase in HIV/AIDS and other STDs due to prostitution activities and temporary sexual relationships with local women, unwanted pregnancies that place further pressure on Basic Health Care Services. Employees that live away from their families tend to have long-term relationships with multiple partners and often do not consistently use condoms. The risk of contracting HIV is also significant when women aim to start or extend their families; <p>ct infrastructure and so forth.</p>	High (-)	High (-)

Operational	Operation of the Dotess in general	Socio-Economic Impact Health and safety impacts	<p>Community health and safety risks</p> <p>Surrounding landowners, residents and road users in and around the proposed mine development, stockpile areas and pollution dams could be subject to community health and safety impacts if the operation of the mine is not managed adequately. Possible impacts during the operational phase are not unlike those that could be experienced during construction, albeit with a lower severity and could include:</p> <p>Road accidents (it is anticipated that large construction vehicles will leave the site only for major overhaul and</p>	High (-)	High (-)
			<p>maintenance purposes, as the conveyor belt will be used to transport coal).</p> <p>Authorized access resulting in theft and related public safety issues.</p> <ul style="list-style-type: none"> ▫ Veld fires and the possibility of fires spreading and damaging surrounding farm land, private properties and infrastructure. ▫ Possible subsidence of undermined areas during the ▫ Dust generation and air pollution caused by gravel roads and vehicle emissions and machinery resulting in respiratory diseases. <p>operational phase</p>		
Closure	Closure of underground mine	Groundwater	<p>Deterioration of groundwater quality</p> <p>Leaching/Seeping of contaminants into sub-surface</p>	High (-)	Medium (-)
Closure	Closure of underground mine	Groundwater	<p>Decant</p> <p>Rise of water table</p>	High (-)	Medium (-)

Closure	Closure of underground mine	Groundwater	<p>Formation of Acid Mine Drainage (AMD)</p> <p>At the closure and decommissioning phase, ingress of water and oxygen into the voids could lead to AMD due to sulphide minerals present.</p> <p>Local patches of mine water in contact with carbonaceous material will be acidic as the carbonate minerals are not efficient to neutralize the acid produced. As the mine gets flooded this acidic water will come in contact with the neutral-alkaline drainage from the silicate minerals.</p> <p>Although the heterogeneity and the probable mixing of different geochemical units give uncertainty to the exact quantification of the groundwater parameters, the average mine water will only be slightly acidic over the long term in the post-closure mine system under the conditions assumed in the modelling.</p> <p>Should the contaminated mine water decant onto surface and then be allowed to enter into the surface water resources of the area, it would have a significant impacting potential, resulting in pollution of the surface water resource.</p>	High (-)	High (-)
Closure	Closure of underground mine	Socio Economic	<p>Loss of employment due to closure of mine</p> <p>Due to the closure of the mine, job losses will occur</p>	High (-)	Medium (-)
Closure	Rehabilitation	Topography	<p>Subsidence of the rehabilitated area will cause ponding that will cause an increase in the recharge into the mined-out workings</p>	High (-)	Medium (-)

39 Final Site Map

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

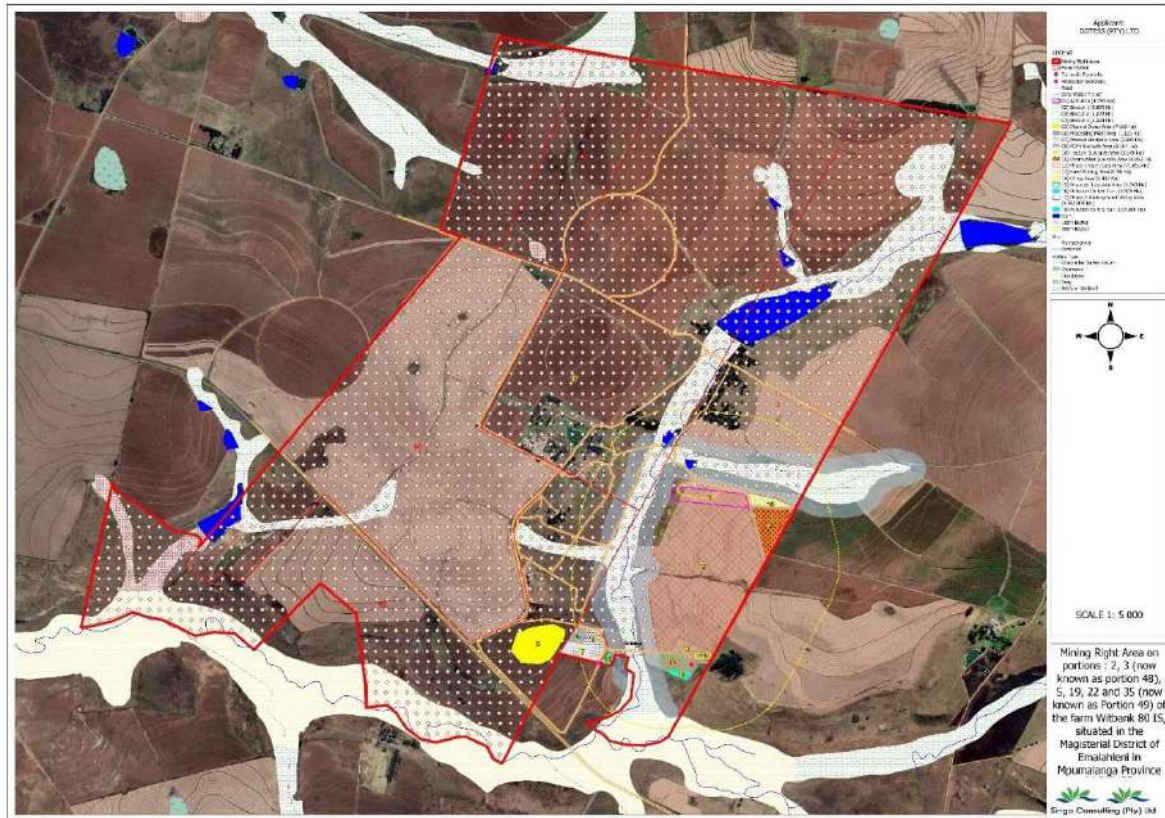


Figure 88: Final Site Map for Dotess Mine.

40 Summary of the positive and negative implications and risks of the proposed activity and identified alternatives;

All alternatives have been assessed along with the advantages and disadvantages of the various alternative options and preferred site layout options. Positive and Negative impacts were listed in this report.

41 Proposed impact management objectives and the impact management outcomes for inclusion in the EMPr;

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

The purpose of the EMPr is to provide relevant management measures to conduct activities with due care and diligence, as well as avoid/ limit any adverse impacts of the mining operation. The EMPr is compiled to help control impacts that may occur to meet acceptable standards, both as a legal and social responsibility to the environment within which the activities take place.

The objective of the EMPr is to create management structures that address the comments of stakeholders with regards to the development, establishes a method of monitoring and auditing environmental management practices during all phases of the activity and ensures that safety recommendations are complied with. Additionally, the EMPr provides a method to ensure performance and compliance with all the relevant regulatory authority provisions and guidelines while monitoring of the commitments allows for continual feedback and opportunities to improve.

42 Final proposed alternatives.

Provide an explanation for the final layout of the infrastructure and activities on the overall site as shown on the final site map together with the reasons why they are the final proposed alternatives which respond to the impact management measures, avoidance, and mitigation measures identified through the assessment.

Proposed alternatives are detailed above and the positive and negative impacts of the alternatives and preferred option have been described in this report. The final site map is a result of pre mining considerations of sensitive receptors and the evaluation of impacts as described in figure 88.

43 Aspects for inclusion as conditions of Authorisation.

43.1 Any aspects which have not formed part of the EMPr that must be made conditions of the Environmental Authorisation

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

The following assumptions and limitations have been identified with regards to the environmental baseline, impacts and mitigation measures:

- The public participation process has been sufficiently effective in identifying the critical issues

that needed to be addressed through specialist investigations and/or by the EAP. Specialist input has thus been appropriately scoped to investigate the critical issues;

- The public participation process has sought to involve key stakeholders and individual landowners. It is assumed that where participation has been sought from the organizational representative/s, that these parties have the authority to comment on behalf of their organisation;
- The public participation process provided ample opportunity for stakeholders to express any issues and concerns. It has thus been effective in identifying critical issues that the specialist investigations and/or EAP needed to address;

A monitoring and evaluation system, including auditing, will be established, in line with this EMP, to track the implementation of this specific EMP to ensure that management measures are effective to avoid, minimize and mitigate impacts; and that corrective action is being undertaken to address shortcomings and/or non-performances;

43.2 Reasoned opinion as to whether the proposed activity should or should not be authorized

43.2.1 Reasons why the activity should be authorized or not.

No fatal flaws have been identified to date. However, several environmental and social impacts are envisaged from construction phase through to post-closure, which require careful mitigation and monitoring. It is the opinion of the EAP that all major impacts have been identified and have been assigned appropriate management measures. Most HIGH negative impacts with mitigation, are reduced to a MEDIUM or LOW significance, and can be managed accordingly. There is a few impacts that will stay at a High negative significance after mitigation and include Social Economic Impacts illegal trespassing, Health and safety risk for workers and community health and safety risk. Others are Ground water impacts in the Closure phase that is associated with the formation of Acid Mine Drainage.

Other positive impacts that results in a High Positive Significance after mitigation include the impact on procurement / supporting industries / local SMME's, Impacts on the local community / community projects.

It is recommended by the EAP that the proposed mine could be authorised, on the assumption that the environmental and social management commitments included in this EIA/EMPr are adhered to, the project description remains as per the description provided in this document and considering the positive social impacts associated with the project. The negative and positive significance of impacts have to be weighed up against each other for a final decision by the Competent Authorities.

43.3 Conditions that must be included in the authorization

43.3.1 Specific conditions to be included into the compilation and approval of EMPr

To ensure compliance with, and implementation of the EMPr by:

- Appointing of a suitably qualified individual to oversee implementation of the EMPr during all phases of the project; and
- Appointing a suitably qualified Environmental Control Officer to undertake audits on a regular basis throughout the construction phase

To ensure that all staff, contractors and sub-contractors are aware of and understand the requirements of the EMPr and environmental issues in relation to their individual areas of work by:

- Developing an induction and training program covering the EMPr, environmental awareness, dealing with environmental incidents and waste management; and
- Advising staff commissioned during pre-construction and construction, including sub- contractors, of EMPr requirements through the induction program as well as on notice boards at the contractor's camps during construction and notice boards during operation. These notice boards should cover the EMPr, environmental awareness, dealing with emergencies and waste management.

A Water Use License Application is required. A detailed water balance will need to be produced before commencement and need to include all water uses, volumes and rates.

The undertaking of a detailed Geo-Hydrological study with special reference to Acid Mine Drainage.

Predicted flow simulation and decant rates for later years of mine development can significantly be improved by observation data from earlier years and subsequent updates of the groundwater model.

Authorization should be subject to the undertaking of a ground water monitoring programme with associated updated hydro census. The monitoring programme should cover pre and post mining conditions to evaluate and determine the effect of mining on ground water supply, and pollution.

43.4 Rehabilitation requirements

The requirements of the final rehabilitation, decommissioning and mine closure plan are stated in Appendix 4 of the NEMA Regulations Pertaining to the Financial Provision for Prospecting, Exploration, Mining or Production Operations (GNR 1147). The purpose is to identify a post mining land use that is feasible through the following:

- Providing the vision, objectives, targets and criteria for final rehabilitation, decommissioning and closure of the project;
- Outlining the design principles for closure
- Explaining the risk assessment approach and outcomes and link closure activities to risk rehabilitation;
- Detailing the closure actions that clearly indicate the measures that will be taken to mitigate and/or manage identified risks and describes the nature of residual risks that will need to be monitored and managed post closure;
- Committing to a schedule, budget, roles and responsibilities for final rehabilitation, decommissioning and closure of each relevant activity or item of infrastructure;
- Identifying knowledge gaps and how these will be addressed and filled;
- Detailing the full closure costs for the life of project at increasing levels of accuracy as the project develops and approaches closure in line with the final land use proposed; and
- Outlining, monitoring, auditing and reporting requirements.

45 Period for which the Environmental Authorisation is required.

Environmental authorisation will be required for the following periods:

- Construction = 2 years
- Operation = 30 years (including ramp up and ramp down)
- Closure = 2 years

46 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 EAP undertakes that the information provided is correct, and that the comments and inputs from stakeholders and Interested and Affected parties have been correctly recorded in the report. The undertaking of the EAP is included in the end of the EMPr in Part B, and is also an undertaking for Part A

47 Financial Provision

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

The rehabilitation cost is estimated at R R8 561 750,00 over the added portions 48 and 49 of the farm Witbank 80 IS. This amount is a result of demolishing capital, closure of shafts, a water treatment plant and underground water level management. This estimate is based on a 10 year forecast and is included as Environmental Cost in the Regulation 11 (1) (g)(vi) cash flow forecast as per the Mining Works Programme.

48 Explain how the aforesaid amount was derived.

The liability for closure of the aspects associated with the Dotess Project has been determined using the approach advocated in the Department of Minerals Resources and Energy (DMRE) Guideline

Document for the Evaluation of the Quantum of Closure-Related Financial Provisions Provided by a Mine (2005). The amount is a result of demolishing capital, closure of shafts, and underground water level management.

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

(Confirm that the amount, is anticipated to be an operating cost and is provided for as such in the Mining work programme, Financial and Technical Competence Report or Prospecting Work Programme as the case may be).

In terms of Section 41 of the Mineral and Petroleum Resources Development Act (Act 28 of 2002). Dotess is required to make financial provision for the interim and final rehabilitation activities on the site. This provision is reviewed annually for adequacy and amended to compensate for new activities and/or inflation. Environmental cost was included in the year 1 flow forecast and is included in the operating expenditure. Dotess will provide for the closure liability associated with the project through the purchase of a Bank Guarantee as allowed by the Financial Provision for Prospecting, Exploration, Mining or Production Operations Regulations, with the Bank Guarantee provided to the DMRE following authorisation of the project.

50 Deviations from the approved scoping report and plan of study.

50.1 Deviations from the methodology used in determining the significance of potential environmental impacts and risks.

(Provide a list of activities in respect of which the approved scoping report was deviated from, the reference in this report identifying where the deviation was made, and a brief description of the extent of the deviation).

The methodology in impact assessment did not deviate.

50.2 Motivation for the deviation.

The methodology in impact assessment did not deviate.

51. Other Information required by the competent Authority

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

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

(Provide the results of Investigation, assessment, and evaluation of the impact of the mining, bulk sampling or alluvial diamond

prospecting on any directly affected person including the landowner, lawful occupier, or, where applicable, potential beneficiaries of any land restitution claim, attach the investigation report as Appendix and confirm that the applicable mitigation is reflected).

The potential socio-economic impacts expected to arise as a result of the proposed project have been investigated and assessed in the SLP.

People in the vicinity of the mine will experience the positive and negative impacts of the proposed project. Physical displacement of households located in the direct footprint of the proposed pit has been identified as a major adverse socio-economic impact. Mitigation measures, namely the development of a Resettlement Action Plan and grievance mechanism have been proposed. The proposed Mine will provide employment opportunities, skills development, social development programmes, community upliftment and economic stimulation to the area.

51.2 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 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 national estate contemplated in section 3 (2) (i) (vi) of the Act, attach the investigation report as Appendix and confirm that the applicable mitigation is reflected herein).

Desktop research revealed that the project area is rich in LIA archaeological sites and historical sites, the walk down survey identified burial sites and historical structures within the development site. In terms of the archaeology, there are no obvious 'Fatal Flaws' or 'No-Go' areas. However, the potential for chance finds, remains and the applicant and contractors are urged to be diligent and observant during mining. The procedure for reporting chance finds has clearly been laid out and if this report is adopted by SAHRA, then there are no archaeological reasons why the Mining Right Application cannot be approved.

51.3 Other matter 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 2292)(h), exist. The EAP must attach such motivation as Appendix

Mineral resources are by nature very difficult to locate as it requires extensive prospecting and calculated determination of stock. Minerals can only be mined where they exist. The proposed property is located in an area where extensive prospecting has indicated the presence of coal on these properties. Alternatives were assessed in this report and impacts were assessed in the Impact Assessment Section of this report.

PART B

ENVIRONMENTAL MANAGEMENT PROGRAMME REPORT

52 ENVIRONMENTAL MANAGEMENT PROGRAMME.

52.1 Details of the EAP

(Confirm that the requirement for the provision of the details and expertise of the EAP are already included in PART A).

Dotess has appointed Singo Consulting as an independent EAP to undertake an S&EIA to support the application for a SEC 102 mining right. Singo Consulting has no vested interest in the proposed project and hereby declares its independence as required by the EIA Regulations. For purposes of this S&EIA, the following person may be contacted at Singo Consulting:

Table 37: Contact details of the EAP

Environmental assessment practitioner	Singo Consulting (Pty) Ltd
Contact person(s)	Rudzani Shonisani (EAP) Kenneth Singo (Senior EAP Reviewer)
Contact number(s)	Rudzani Shonisani: 078 548 1244 / 079 930 4772 Kenneth Singo: 078 272 7839 / 072 081 6682
Telephone number	013 692 0041
Fax	086 5144 103
Email(s)	Rudzani Shonisani: rudzani@singoconsulting.co.za Kenneth Singo: kenneth@singoconsulting.co.za

53 Description of the Aspects of the Activity

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

The details of the aspects of the activity are described above in Part A

54 Composite Map

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

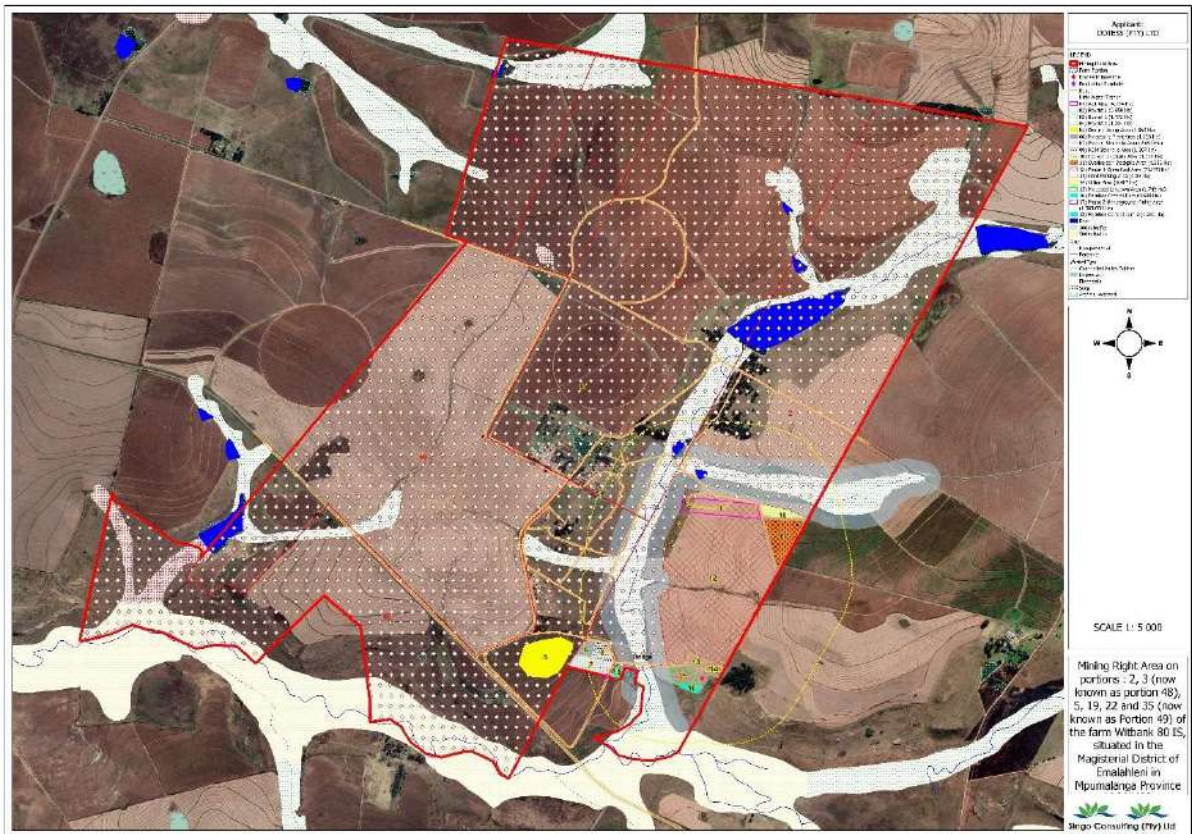


Figure 89: Composite map (i.e. buffer sensitiveness in the proposed mining area)

55 Description of Impact management objectives including management statements

55.1 Determination of closure objectives.

(ensure that the closure objectives are informed by the type of environment described in 2.4 herein)

Closure and rehabilitation is a continuous series of activities that begin with planning prior to the project's design and construction, and end with achievement of long-term site stability that creates a safe, physically-stable, rehabilitated landscape that limits long-term erosion potential and environmental degradation, and restores the land to pre-mining conditions as far as possible.

The following points outline the main objectives for rehabilitation and closure:

- Achieve a final land use that represents pre-mining conditions that is sustainable and meets both legislative requirements and stakeholder needs.
- Create opportunities for alternative post-mining livelihoods by aligning to the regional planning.
- Ensure interconnectivity between the rehabilitated landscapes with surrounding regionally biologically diverse areas.
- Encourage, if and where required, the re-instatement of terrestrial and aquatic wetland biodiversity over time.
- Maintain and monitor all rehabilitated areas following re-vegetation and establishment of landscape features like wetland pans. If this monitoring shows that the objectives have been met, make an application for closure.
- Prevent/minimise negative impacts and risks as identified in this report and specialist reports.
- Comply with local, district, provincial and national regulatory requirements.
- Follow a comprehensive consultation and communication process with all stakeholders.

55.2 The process for managing any environmental damage, pollution, pumping and treatment of extraneous water or ecological degradation as a result of undertaking a listed activity.

An Environmental Response Plan (ERP)/Emergency preparedness plan (EPP) is a process to respond rapidly and effectively to and manage emergency situations that may arise at the mine. The Emergency Preparedness and Response Code of Practice will be compiled in accordance with the following:

- Occupational Health and Safety OHSAS 18001
- The Mine Health and Safety Act, 1996 (Act No. 29 of 1996)

In the event of an emergency, the ERP and applicable Procedure will be consulted and the required actions implemented. To facilitate the effective implementation of the procedures, copies of the ERP will be placed in accessible and visible locations around the site, like the site office and contractors' yard. The applicant will ensure that employees and contractors are adequately trained with regard to the implementation of the EMPr, environmental legal requirements and obligations, and the ERP.

Environmental awareness is applicable to all project-involved personnel, as well as part-time personnel who will be trained so that they are aware of environmental obligations by the time they visit the site. An Environmental Awareness Practitioner or Environmental Control Officer (ECO) will be appointed to conduct training during site establishment and will be responsible for what the site looks like before drilling and after rehabilitation. It is recommended that the ECO be appointed full-time and based at the mine to ensure that any negative impacts are mitigated quickly. This will ensure that the site has been restored to its original state or to an acceptable level, and ensure the ERP is adequately applied in case of an emergency. Accordingly, training programmes and frequent emergency simulations are suggested to ensure that all personnel are aware of safety and emergency procedures.

A list of emergency contact numbers will be displayed at various locations around the site. If the emergency has the potential to affect surrounding communities, the communities will be alerted via alarm signals or contacted in person.

Personnel who do not comply with or ignore training and instruction regarding this, should be fined based on their offenses. First-time offenders may only get away with a written warning, depending on the seriousness of the offence. Second-time offenders may be suspended or fined, depending on the decision made by the site manager who may consult with the ECO, contractor and Safety, Health and Quality Officer of the mine.

55.3 Potential risk of Acid Mine Drainage.

(Indicate whether or not the mining can result in acid mine drainage).

As it is a coal mine there is potential for AMD from pyrite coal being exposed to oxygen and water. The potential contaminants that may emanate from the mining activities are Ca, Mg, Cl and SO₄. There may be a possibility of acid generation. This can be confirmed or disproved by performing geochemical sampling and analysis as well as constructing a geochemical model. refer to Hydrogeological assessment conducted by Singo Consulting

55.4 Steps taken to investigate, assess, and evaluate the impact of acid mine drainage

A model needs to be constructed to quantify potential impacts on receptors such as groundwater users and rivers. The mine has been advised to undertake a study closer to the development of the mine. This model will as an important step be undertaken once sufficient chemical information is available on the coal. Once this is available the applicant will undertake the necessary specialist inputs to address the problem.

55.5 Engineering or mine design solutions to be implemented to avoid or remedy acid mine drainage.

It is recommended that to avoid ADM, water need to be tested and if needed, be pumped into the pollution control dam (PCD) and used for dust suppression. These requirements, can only be implemented as part of the Water Use License Application (WULA). The WULA will have mitigation measures and conditions to be implemented. More information will be gathered as part of the WULA process for this purpose and will include the waste classification and updated Geo-Hydrological study that will include geochemical sampling and analysis as well as constructing a geochemical model.

55.6 Measures that will be put in place to remedy any residual or cumulative impact that may result from acid mine drainage.

A model needs to be constructed to quantify potential impacts on receptors such as groundwater users and rivers, only after this can measures be put forward. This study will be compiled at a later stage after the Mining right has been approved and is part of the WULA requirements.

55.7 Volumes and rate of water use required for the mining, trenching or bulk sampling operation.

Water is required for use in the crushing and screening facility, on various stockpiles, as well as for potable use. It is therefore planned that water will be abstracted from existing and/or new boreholes, and/or supplied by the local municipality (at least for potable use). These water sources and volumes are still to be confirmed by undertaking the relevant feasibility studies (i.e. water balance) and confirmed in the IWUL application.

In total, there will be two PCDs collecting the dirty water generated from the respective mining. The dirty water will be abstracted and re-used in the mining activities, to augment the plants' water deficit and for dust suppression. By augmenting the process water with dirty water run-off, the reliance on external, ground water resources can be significantly reduced. Dust suppression will be implemented on the stockpiles, loading platform, crushing area, overburden stockpiles and on internal roads.

55.8 Has a water use licence has been applied for?

An application for an IWULA and associated Integrated Water and Waste Management Plan (IWWMP) as per the requirements of the NWA was submitted to the DWS on 20 April 2023 under WUL ref: WU27572. Dotess is committed to good practice in terms of water use and, as such, the water uses which requires authorisation are limited to:

1. Section 21 (a): Taking water from a watercourse.
2. Section 21 (c): Impending or diverting the flow of water in a water course.
3. Section 21(g): Disposing of waste in a manner that may detrimentally impact a water resource.
4. Section 21 (i): Altering the bed, banks, course or characteristics of a water course.
5. Section 21 (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.

In addition, regular surface water quality monitoring will be undertaken to ensure compliance by the appointed BEE consultants and maintenance of the catchment.

55.9 DESCRIPTION OF THE APPROPRIATE TECHNICAL AND MANAGEMENT OPTIONS CHOSEN FOR EACH ENVIRONMENTAL IMPACT AND ACTION PLANS

55.9.1 CONSTRUCTION PHASE

➤ Geology

Objective: To minimise the impacts on the geological profile

Specific goals:

Ensure that the excavation of the adit has minimal impact on geological profile

Technical/Management option: The removal of the No 4 coal seam is the core function of the mine, thus the geological profile will be impacted upon and no mitigation measures will restore the said profile.

➤ Topography

Objective: To minimise the impacts of stockpiles and adit on the topography

Specific goals:

1. Ensure that stockpile construction have minimum impact on topography
2. Ensure that storm water diversion trenches are constructed to have minimum impact on topography
3. Ensure that excavation of the adit has minimum impact on topography

Technical/management options:

Before an adit can be excavated, trenches must have been constructed. It follows from the above that the following actions will be undertaken before adit excavation i.e. a geotechnical survey will be conducted on the soil at the mining area, results of the survey will be utilised to select appropriate material to be used during rehabilitation. A qualified surveyor will ensure that all stockpiles are constructed to the maximum allowable heights and that the adit is surveyed prior to construction. The Mine Engineer, Surveyor and Environmental Co-ordinator will ensure that the adit and diversion trenches are constructed as specified in the Mining Layout Plan.

Action plan:

Action plans	Time schedule
Ensure that stockpile construction have minimum impact on topography	
Topsoil stockpiled to a height of three meters.	During the excavation of adit.
Ensure that storm water diversion trenches are constructed to have minimum impact on topography	
Positions and dimensions of storm water diversion trenches to be surveyed.	During the construction phase.
Storm water diversion trenches to be constructed to specified size and depth.	During construction phase before generation of mineaffected water.
Ensure that excavation of the adit has minimum impact on topography	

Designed position and dimensions of adit to be surveyed, first.	Prior to construction phase
Excavate the adit to design specifications within surveyed area.	During construction phase of mini-pit operation

➤ **Soils**

Objectives: To minimise the impacts of mining on soils.

Specific goals:

1. Ensure that the removal of top- and subsoil layers have minimum impact on soil
2. Ensure that the compaction of soils has less impact on the fertility of the soil

Technical/management options:

The Mine manager or his appointed representative will ensure that the construction plan is followed and topsoil and subsoil is utilised as required within the mining area.

The Mine Manager or his appointed representative will insure that the maximum amount of topsoil is removed from all areas to be affected, and that the topsoil is stockpiled separately at appropriate heights.

Action plan:

Action	Time schedule
Ensure that the removal of subsoil layers have minimum impact on soil	
Topsoil and subsoil from disturbed area is removed and stockpiled properly and separately.	During construction.
Ensure that compaction of soils has less impact on fertility of the soil	
Maintain the topsoil stockpile to a height of three meters to reduce leaching.	During construction phase.

➤ **Land capability and use**

Objective: To minimise impacts of mining on land capability and use.

Specific goals:

1. Ensure that soil movement does not result in severe reduction of land capability and use.

Technical/management option:

The Mine Manager or his appointed representative will ensure that the construction plan is followed and that the soil is stockpiled at designated area.

Action plan:

Action	Time schedule
Ensure that soil movement does not result in severe reduction of land capability and use	

The topsoil and sub-soil to be stockpiled separately at designated area.	During Construction phase
Maintain correct heights of each stockpile	During Construction phase

➤ **Natural vegetation**

Objective: To minimise impacts of mining on natural vegetation

Specific goals:

1. Ensure that removal of soil during mining operation has minimum impact on natural vegetation.

Technical/management option:

The Mine Manager or the environmental co-ordinator will ensure that an appropriate seed mix is applied. A suitably qualified person will be employed to conduct vegetation survey on rehabilitated areas. The Mine Manager or his appointed representative will ensure that the vegetation surveys are conducted on rehabilitated areas on a regular basis.

Action plan:

Action	Time schedule
Ensure that removal of soil during mining construction has minimum impact on natural vegetation	
Areas of soil and vegetation clearing will be kept to a minimum	During Construction phase
Activities will be concentrated in disturbed areas as far as is possible	During construction phase
Human and vehicular activity will be restricted to construction and operational sites	During construction phase

➤ **Animal life**

Note that due to the previous grazing, crop production, only a few animal populations occur on the proposed mining, thus no significant impacts were predicted. Animal will migrate back into the mining area once healthy vegetation cover has been established.

Action:

- All employees will be instructed that poaching will not be tolerated on the mining area and adjacent farms. Employees transgressing this will be subject to disciplinary action and possible dismissal (within Labour regulations).

Technical/Management:

The Mine Manager will ensure that employees are aware and educated regarding the

protection of animals including those perceived to be dangerous.

➤ **Surface water**

Objective: To minimise impacts of mining on surface water

Specific goals:

1. Ensure that construction of the storm water diversion trenches have the least possible impact on the surface water runoff patterns, and thus loss of MAR within all the catchments.
2. Ensure that the excavation of the adit has the least possible impact on the surface water runoff patterns, and thus loss of MAR within all catchments.

Technical/management options:

Before an adit can be excavated the storm water berms and trenches must have been constructed. Geotechnical survey will be conducted on the soil and the results of the survey will be utilised to select appropriate material to be used during rehabilitation and construction. The mine manager or environmental coordinator will ensure that the said structures are constructed and maintained during the construction phase.

Action plan:

Action	Time schedule
Ensure that construction of the pollution control structures and storm water diversion trenches have the least possible impact on the surface water runoff patterns, and thus loss of MAR within the catchment.	
Construction of the said structures are done according to design specifications	During construction phase
Storm water diversion trenches/berms will separate clean and dirty water on the mine	Throughout life of mine
Maintenance and monitoring of the said structures is done on a regular basis	During construction phase and continued throughout life of mine
Ensure that the excavation of the adit has the least possible impact on the surface water runoff patterns, and thus loss of MAR within all catchments.	
Development of a comprehensive Mining Layout Plan	During construction phase
Construction of the adit as per Mining Layout Plan	During construction phase
Storm water diverted away from the initial adit	During construction phase

Objective: To minimise all potential impacts on surface water quality.

Specific goals:

1. Ensure that impacts from chemical leakages on surface water quality are minimised.

2. Ensure that dirty water captured within the mine is contained.

Technical/management options:

The Mine Manager will ensure that services of a suitably qualified person is utilised for the installation of the diesel tank and oil separator according to supplier design specifications and operated accordingly. The Mine Manager or his appointed representative will ensure that the diversion trenches are constructed timeously, and that the water quality monitoring program is initiated.

Action plan:

Action	Time schedule
Ensure that impacts from chemical leakages on surface water quality are minimised.	
All filling of machinery will be conducted at the diesel tank area and servicing of all mine equipment will be done on designated areas.	Throughout life of mine
Dirty water from the diesel tank area will be channelled to the oil separator	Throughout life of mine
Inspections will be conducted on the operation of the diesel tank and oil separator.	Throughout life of mine
Ensure that dirty water captured within the mine, does no impact on surface water quality.	
Storm water diversion trenches/berms will be constructed to separate clean and dirty water on the mine	During construction phase
Any dirty water captured within the adit will be pumped to the pollution control dams for dust suppression	Throughout life of mine
The water quality, monitoring program will be initiated.	Prior to commencement of the construction phase
Surface and ground water monitoring points will be sampled.	Surface water on a monthly and ground water on a quarterly basis respectively.

➤ **Flood events**

Objective: To reduce impacts on surface water runoff patterns, and thus loss of MAR within all catchments (surface water quantity).

Specific goals:

1. Ensure that construction of the storm water trenches/berms is done prior to mining.

Technical/management options:

See technical and management options for identified impacts on surface water.

Action plan:

Action	Time schedule
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Ensure that construction of storm water trenches is done prior to mining.	
Construction of the said structures are done according to design specifications	During construction phase

Maintain and monitor stability of the said structures.	During construction phase and throughout life of mine
Storm water diversion trenches/berms designed to separate clean and dirty water on the mine	During construction phase

➤ **Groundwater**

Objective: To minimise impacts of mining on groundwater.

Specific goals:

- 1 Ensure that impacts from lowering of groundwater levels during mining are minimised.
- 2 Ensure that groundwater quality is less affected.

Action plan:

Action	Time schedule
Ensure that impacts from lowering of groundwater levels during mining are minimised	
The static groundwater levels in all boreholes within a distance of less than 2 kilometres must be measured regularly	On a quarterly basis
Continuous monitoring of possible major structures of preferred groundwater flow during mining	Throughout the operational phase of mining
Any major structures of preferred groundwater flow such as dykes and fault zones should be grouted if excessive groundwater inflow is encountered	As soon as the structures are identified
In the event of unacceptable decrease in the yield of any affected boreholes, alternative water supply will be supplied to the affected parties	One week after notice of decrease of yield of borehole
Ensure that groundwater quality is less affected	
Mined out areas should be flooded to reduce the exposure of the remaining pyrite to the atmosphere.	Ongoing during underground mining
Regular sampling and chemical analyses of groundwater to establish a management database.	On a quarterly basis
Sewage emanating from the ablution facilities can affect the quality of groundwater aquifers	Employ suitable qualified wastecollector to empty the septic tank regularly.
If borehole is polluted beyond unacceptable level, alternative water to be supplied to the affected party	During and beyond mining

➤ **Air quality**

Objective: *To minimise the potential impacts on the atmosphere.*

Specific goals:

1. Ensure that impacts from diesel fumes generated by machinery on the atmosphere is minimised.
2. Ensure that impacts from dust generated by blowing wind on the atmosphere is minimized

Technical/management options:

The Mine Manager or his appointed representative will ensure that all machinery are maintained and in good repair. The Environmental Co-ordinator will ensure that dust suppression is undertaken as per the prescribed stipulations. A blaster will be appointed to make sure that minimum explosives are used during blasting.

Action plan:

Action	Time schedule
Ensure that impacts from diesel fumes generated by machinery on the atmosphere is minimised	
All machinery employed on site will be in good repair, and well maintained	During construction phase and throughout life of mine
All machinery will be fitted with the correct exhaust systems, which will be maintained and in good repair	During construction phase and throughout life of mine
Ensure that impacts from dust generated by blowing wind on the atmosphere is minimised	
Dust suppression will be undertaken during the construction phase. Dust suppression will be undertaken by water cart	Twice daily throughout life of mine and if necessary frequency will increase
Water for dust suppression purposes will be obtained from the evaporation dam	During construction phase and throughout life of mine

➤ **Sensitive Landscapes**

During the construction phase impacts that will result from the mining activities on the sensitive landscape will be on air quality, surface and groundwater.

Implementation of the environmental management programme described for air quality, surface and groundwater will at the same time be used to minimise impacts on sensitive landscapes.

➤ **Noise and vibrations**

Objective: To minimise the impacts of noise and vibrations on the health of people and the environment.

Specific goals:

1. Ensure that noise impacts on machine operators and/or residences are minimised.
2. Ensure impacts from noise generated during blasting are minimised

Technical/management options:

The Mine Safety officer will ensure that earplugs are issued and used. The Mine Manager or his appointed representative will conduct structural surveys, in consultation with the relevant landowners, and collect the photographic record of the adjacent houses before mining commences. The Mine Manager or his appointed representative will, in conjunction with the Blaster, inform Interested and Affected Parties of blasting times, and that all blasting is conducted correctly.

Action plan:

Action	Time schedule
Ensure that noise impacts on machine operators and/or residences are minimised.	
Machine operators will be issued with earplugs, and instructed how to use them	During construction phase and throughout life of mine
Use of muffles for soundproofing of the machinery used at the mine.	During construction phase and throughout life of mine

➤ **Visual Aspects**

Objective: To reduce the impacts on the overall visual and aesthetics of the area surrounding and within the proposed Witbank Colliery to residences and landowners.

Specific goals:

1. Ensure that visual impacts from dust generated during blasting is minimised
2. Ensure that dust generated by wind and movement of machinery is minimised to have minimum visual impacts

Technical/management options:

The Mine Manager or his appointed representative will ensure that the dust suppression program is initiated and kept up to date. The Mine Manager or his appointed representative will also ensure that the backfilled workings are re-vegetated, that the transport companies obey the speed limits, and that the clean-house policy is maintained.

Action plan:

Action	Time schedule
Ensure that visual impacts from dust generated during blasting is minimised	
Use of minimum explosives to decrease vibrations, noise and dust when blasting.	During construction phase and throughout life of mine
Ensure that dust generated by wind and movement of machinery is minimised	
Dust suppression will be conducted on all haul roads and stockpiling areas where movement of machinery takes place.	Whenever is necessary.
All trucks transporting material on the proposed mining area will be required to obey speed limit.	At any time during the construction phase of the mine.
The mine will adopt a clean-house policy. All stockpiles will be maintained at specified heights to reduce visual impact.	During construction phase and throughout life of mine.

➤ **Socio-economic impacts**

During the construction phase impacts that will result from the mining activities on the socio-economic aspects will be on air quality, noise and visual.

Implementation of the environmental programme described for air quality, noise and visual will at the same time be used to minimise impacts on the socio-economic aspects.

➤ **Interested and affected parties**

Objective: To minimise the impacts on all Interested and Affected Parties

Specific goals:

1. Maintain cordial relationships with all identified Interested and Affected Parties
2. Ensure that noise and dust impacts on surrounding landowners is minimised.
3. Ensure that Influx of labourers seeking employment is reduced.

Technical/management options:

The Mine Manager or his appointed representative would ensure that all machineries are maintained in good working order. The Mine Manager or his appointed representative will ensure that no labourers are housed on the Witbank Colliery premises. The Mine Manager or his appointed representative will attend all I & AP's forum Meetings.

Action plan:

Action	Time schedule
Ensure that noise impacts on surrounding landowners is minimised.	
Maintaining all machinery in good repair will reduce noise levels.	Throughout life of mine
Use of minimum explosives during blasting.	During construction phase
Ensure that Influx of labourers seeking employment is reduced	
The Mine will utilise people from the surrounding areas as far as possible, to minimise the influx of illegal labourers.	During construction phase and throughout life of mine
No squatters will be allowed on the property.	During construction phase and throughout life of mine
Maintain cordial relationships with all identified Interested and Affected Parties	
Mine management will maintain an open-door policy, and adheres to management measures highlighted in the Environmental Management Program.	Throughout life of mine
The Mine Manager or his appointed representative will ensure that all monitoring programs are kept up to date, and that reports are submitted regularly and timeously.	Throughout the life of mine
An Interested and Affected Parties Forum will be established. Minutes of all meetings will be taken. These Minutes will include a record of all parties in attendance. All concerns raised during the forum meeting will be recorded and addressed.	Forum will convene every six months throughout life of mine
Adjacent landowners within the identified potential affected boreholes, which show-decreased borehole yields resulting from this mining venture, will be compensated.	Groundwater levels will be monitored quarterly
All Affected Parties identified will be notified prior to blasting.	Within One (1) hour of Blasting.

55.9.2 OPERATIONAL PHASE

➤ **Geology**

Note that the removal of the No 4 coal seams is a core function of the mine, thus the coal seams will be impacted upon. No mitigation measures will be undertaken. Note that approximately 70% of the coal within the Witbank Colliery's underground section area will be removed. The remainder will be left as underground pillars to ensure that the overlying strata remain intact, and thus the possibility of surface subsidence is minimised. A safety factor of more than 2.5 (determined by the Salmon's formula) will be used to determine the pillar widths.

➤ **Topography**

Objective: To minimise the impacts of mining on the topography



Specific goals:

1. Ensure that stockpiles have minimum impact on topography

Technical/management options:

A qualified surveyor will ensure that all stockpiles are constructed to the maximum allowable heights and that the adit is surveyed prior to construction. The Mine Engineer, Surveyor and Environmental Co-ordinator will ensure that the adit and diversion trenches are constructed as specified in the surface layout plan.

Action plan:

Action plans	Time schedule
Ensure that stockpiles have minimum impact on topography	
ROM stockpiles to always be limited in height to four days production material.	During operational phase.

➤ **Soil**

Objective: To minimise the impacts of mining on soil

Specific goals:

1. Ensure that diesel and oil spillages do not impact significantly on soils.

Technical/management options:

The Mine manager or his appointed representative will ensure that the mining plan is followed and topsoil and subsoil is utilised as required within the mining area.

The Mine Manager will ensure that the maximum amount of topsoil is removed from all areas to be affected, and that the topsoil is stockpiled separately.

Action plan:

Action	Time schedule
Ensure that the removal of top- and subsoil layers have minimum impact on soil	
Ensure that diesel and oil spillages do not impact significantly on soils.	
Vehicles will not be maintained on unprotected ground.	All the time during the operational phase.
All oil and diesel fluids will be stored on suitably designed protected areas.	All the time during the operational phase.
All diesel spillages must be handled as per recommended oil/diesel spill remediation protocol.	Whenever oil and diesel spillages occur.

➤ **Land capability and use**

Objective: To minimise impacts of mining on land capability and use

Specific goals:

1. Ensure that soil movement does not result in severe reduction of land capability and use

Technical/management option:

The Mine Manager or his appointed representative will ensure that the mining plan is followed when rehabilitation is conducted.

Action plan:

Action	Time schedule
Ensure that soil movement does not result in severe reduction of land capability and use	
To ensure that the rehabilitated areas are free draining.	After rehabilitated workings are covered with topsoil.

➤ **Natural vegetation**

Objective: To minimise impacts of mining on natural vegetation

Specific goals:

1. Ensure that removal of soil during the mining operation has minimum impact on natural vegetation.

Technical/management option:

The Mine Manager or the environmental co-ordinator will ensure that an appropriate seed mix is applied. A suitably qualified person will be employed to conduct vegetation survey on rehabilitated areas. The Mine Manager will ensure that the vegetation surveys are conducted on rehabilitated areas on a regular basis.

Action plan:

Action	Time schedule
Ensure that removal of soil during the mining operation has minimum impact on natural vegetation	
Vegetation cover inspection of rehabilitated land will be conducted.	Monthly during operational phase of mining,

➤ **Animal life**

Note that due to the previous grazing, crop production and mining land use, only a few animal populations occur on the proposed mining, thus no significant impacts were predicted. Animal will migrate back into the mining area once healthy vegetation cover has been established.

Action:

- All employees will be instructed that poaching will not be tolerated on the mining area and adjacent farms. Employees transgressing this will be subject to disciplinary action and possible dismissal (within Labour regulations).

Technical/Management:

The Mine Manager will ensure that employees are aware and educated regarding the protection of animals including those perceived to be dangerous.

➤ **Surface water**

Objective: To minimise impacts of mining on surface water

Specific goals:

2. Ensure that the excavation of the adit has the least possible impact on the surface waterrunoff patterns, and thus loss of MAR within all catchments.

Technical/management options:

Before an adit can be excavated the storm water berms and trenches must have been constructed. A Geotechnical survey will be conducted on the soil and the results of the survey will be utilised to select appropriate material to be used during rehabilitation and construction. The mine manager or environmental contractor will ensure that the said structures are constructed and maintained during the operational phase.

Action plan:

Action	Time schedule
Ensure that the excavation of the adit has the least possible impact on the surface water runoff patterns, and thus loss of MAR within all catchments.	



Storm water diversion trenches/berms will be constructed before the adit is excavated to divert water away.	During construction phase
Maintenance and monitoring of the said structures is done on a regular basis	During construction phase and continued throughout life of mine

Objective: To minimise all potential impacts on surface water quality.

Specific goals:

- 1 Ensure that impacts from chemical leakages on surface water quality are minimised.
- 2 Ensure that dirty water captured within the mine, does not significantly impact on surface water quality.

Technical/management options:

The Mine Manager will ensure that services of a suitably qualified person is utilised for the installation of the diesel tank and oil separator according to supplier design specifications and operated accordingly. The Mine Manager or his appointed representative will ensure that the diversion trenches are constructed timeously, and that the water quality, monitoring program is initiated.

Action plan:

Action	Time schedule
Ensure that impacts from chemical leakages on surface water quality are minimised.	
All filling of machinery will be conducted at the diesel tank area and servicing of all mine equipment will be done on designated areas.	Throughout life of mine
Dirty water from the diesel tank area will be channelled to the oil separator	Throughout life of mine
Inspections will be conducted on the operation of the diesel tank and oil separator.	Throughout life of mine
Ensure that dirty water captured within the mine, does no impact on surface water quality.	
Storm water diversion trenches/berms will be constructed to separate clean and dirty water on the mine	During construction phase
Any dirty water captured within the adit will be pumped to the pollution control structures for dust suppression	Throughout life of mine
The water quality, monitoring program will be initiated.	Prior to commencement of the construction phase
Surface and ground water monitoring points will be sampled.	Surface water on a monthly and ground water on a quarterly basis respectively.

➤ **Groundwater**

Objective: To minimise impacts of mining on groundwater.

Specific goals:



- 1 Ensure that impacts from lowering of groundwater levels during mining are minimised.
- 2 Ensure that groundwater quality is less affected.

Technical/management options:

The Mine Manager or his appointed representative will ensure that water within the underground workings is pumped into the sump before being pumped into the pollution control dams and that the structures is managed properly. The Mine Manger or his appointed representative will ensure that the groundwater-monitoring programme is implemented.

Action plan:

Action	Time schedule
Ensure that impacts from lowering of groundwater levels during mining are minimised	
The static groundwater levels in all boreholes within a distance of less than 2 kilometres must be measured regularly	On a quarterly basis
Continuous monitoring of possible major structures of preferred groundwater flow during mining	Throughout the operational phase of mining
Any major structures of preferred groundwater flow such as dykes and fault zones should be grouted if excessive groundwater inflow is encountered	As soon as the structures are identified
In the event of unacceptable decrease in the yield of any affected boreholes, alternative water supply will be supplied to the affected parties	One weeks after notice of decrease of yield of borehole
Ensure that groundwater quality is less affected	
Mined out areas should be flooded to reduce the exposure of the remaining pyrite to the atmosphere.	Ongoing during underground mining
Regular sampling and chemical analyses of groundwater to establish a management database.	On a quarterly basis
If borehole is polluted beyond unacceptable level, alternative water to be supplied to the affected party	During and beyond mining

➤ **Air quality**

Objective: To minimise the potential impacts on the atmosphere.

Specific goals:

1. Ensure that impacts from diesel fumes generated by machinery on the atmosphere is minimised.
2. Ensure that impacts from dust generated by blowing wind on the atmosphere is minimised.

Technical/management options:

The Mine Manager or his appointed representative will ensure that all machinery are maintained and in good repair. The Environmental Co-ordinator will ensure that dust

suppression is undertaken as per the prescribed stipulations.

Action plan:

Action	Time schedule
Ensure that impacts from diesel fumes generated by machinery on the atmosphere is minimised	
All machinery employed on site will be in good repair, and well maintained	During construction phase and throughout life of mine
All machinery will be fitted with the correct exhaust systems, which will be maintained and in good repair	During construction phase and throughout life of mine
Dust suppression will be undertaken during the construction phase.	Twice daily throughout life of mine and if necessary frequency will increase
Ensure that impacts from dust generated by blowing wind on the atmosphere is minimised	
Dust suppression will be undertaken during the construction phase. Dust suppression will be undertaken by water cart	Twice daily throughout life of mine and if necessary frequency will increase
Water for dust suppression purposes will be obtained from the evaporation dam	During construction phase and Throughout life of mine

Note that employees working underground may be exposed to unacceptable amount of fine coal or coal dust and fumes generated by machinery

Objective: To minimise the impacts of mining on employees' health conditions

Specific goals:

1. Ensure that impacts from dust and diesel fumes generated by machinery on mine employees are minimised.
2. Ensure that potential health impacts on mine employees are reduced

Technical/management options:

The Mine Manager or his appointed representative will ensure that all machinery are maintained and in good repair. The Mine Manager or his appointed representative will ensure that dust suppression is undertaken as per the prescribed stipulations.

Action plan:

Action	Time schedule
Ensure that impacts from dust and diesel fumes generated by machinery on employees' health	
All machinery employed on site will be in good order, and well maintained	Throughout operational phase and life of mine
All machinery will be fitted with the correct exhaust systems, which will minimise fumes.	Throughout operational phase and life of mine

All mining vehicles will be required to obey the set maximum speed limit. This will reduce the generation of dust	Throughout operational phase and life of mine
Ensure that potential health impacts on mine employees are reduced	
Employees in the vicinity of the underground machinery will be issued with dust masks.	Once every two weeks throughout life of mine and if necessary frequency will increase or decrease
Shift bosses will ensure that employee's use mask's at all times.	As frequent as possible during working hours of the shifts
Dust suppression will be conducted utilising access water recovered underground	Daily

➤ **Sensitive Landscapes**

During the operational phase impacts that will result from the mining on the sensitive landscape will be on air quality, surface and groundwater.

Implementation of the environmental programme described for air quality, surface and groundwater will at the same time be used to minimise impacts on sensitive landscapes.

➤ **Noise and vibrations**

Objective: To minimise the impacts of noise and vibrations on the health of people and the environment.

Specific goals:

1. Ensure that noise impacts on machine operators are minimised.

Technical/management options:

The Mine Safety officer will ensure that earplugs are issued and used.

Action plan:

Action	Time schedule
Ensure that noise impacts on machine operators and/or residences are minimised.	
Machine operators will be issued with earplugs, and instructed how to use them	During operational phase and throughout life of mine

➤ **Visual Aspects**

Objective: To reduce the impacts on the overall visual and aesthetics of the area surrounding and within the proposed Witbank Colliery to residences and landowners.

Specific goals:

1. Ensure that dust generated by wind and movement of machinery is minimised to have minimum visual impacts

Technical/management options:

The Mine Manager or his appointed representative will ensure that the dust suppression program is initiated and kept up to date, that the transport companies obey the speed limits, and that the clean- house policy is maintained. All stockpiles will be maintained at required heights.

Action plan:

Action	Time schedule
Ensure that dust generated by wind and movement of machinery is minimised	
Dust suppression will be conducted on all haul roads and stockpiling areas where movement of machinery takes place	Whenever is necessary.
All trucks transporting material on the proposed mining area will be required to obey a maximum 40km/h speed limit	At any time during the operational phase of the mine
The mine will adopt a clean-house policy. All stockpiles will be maintained at specified heights to reduce visual impact	During operational phase and throughout life of mine
Ensure that visual impacts from any mine infrastructure minimised	
Maintenance of topsoil/subsoil visual berms constructed around visible areas of the mine	During operational phase

➤ **Socio-economic impacts**

During the operational phase impacts that will result from the mining on the socio-economic aspects will be on air quality.

Implementation of the environmental programme described for air quality will at the same time be used to minimise impacts on the socio-economic aspects.

➤ **Interested and affected parties**

Objective: To minimise the impacts on all Interested and Affected Parties

Specific goals:

1. Maintain cordial relationships with all identified Interested and Affected Parties
2. Ensure that noise and dust impacts on surrounding landowners is minimised.
3. Ensure that Influx of labourers seeking employment is reduced.

Technical/management options:

The Mine Manager or his appointed representative would ensure that all machineries are maintained in good working order. The Mine Manager or his appointed representative will ensure that no labourers are housed on the Witbank Colliery premises. The Mine Manager or his appointed representative will attend all I & AP's forum Meetings.

Action plan:

Action	Time schedule
Ensure that noise impacts on surrounding landowners is minimised.	
Noise levels will be reduced by maintaining all machinery in good repair	During operational phase and throughout life of mine
Ensure that Influx of labourers seeking employment is reduced	
The Mine will utilise people from the surrounding areas as far as possible, to minimise the influx of illegal labourers.	During operational phase and throughout life of mine
No squatters will be allowed on the property	During operational phase and throughout life of mine
Maintain cordial relationships with all identified Interested and Affected Parties	
Mine management will maintain an open-door policy, and adheres to management measures highlighted in the Environmental Management Program.	During operational phase and throughout life of mine
The Mine Manager or his appointed representative will ensure that all monitoring programs are kept up to date, and that reports are submitted regularly and timeously.	During operational phase and throughout the life of mine
An Interested and Affected Parties Forum will be established. Minutes of all meetings will be taken. These Minutes will include a record of all parties in attendance. All concerns raised during the forum meeting will be recorded and addressed.	Forum will convene every six months throughout life of mine
Adjacent landowners within the identified potential affected area, which show decreased borehole yields resulting from this mining venture, will be compensated.	Groundwater levels will be monitored quarterly

55.9.3 SUBSIDENCE MANAGEMENT

Proper measures have been taken to ensure that underground pillar failure which may result in surface subsidence does not occur at the mine i.e. a safety factor of more than 2 will be used for underground pillars. All incidents of surface subsidence will be reported to the Principal Inspector of Mines. However, although unlikely, in the event of pillar failure and subsequent surface subsidence Witbank Colliery will undertake the following action plan:

Action Plan:

Action	Time schedule
Ensure that pillar failure does not occur	
Remaining underground pillars will be monitored regularly, for signs of failure and for compliance with required safety factor	Once every month
Any pillar failure will be reported to Mine manager/representative immediately	On occurrence of pillar failure occur
Recommendation from Rock Engineering Services on required safety factor to avoid re-occurrence of pillar failure requested	Subsequently after reporting of pillar failure

Safety factor for the remaining portion of the mining area increased as recommended by Rock Engineering Services	Throughout remaining life of mine
Ensure that the surfaces with subsidence, if any, caused by pillar failure are rehabilitated accordingly	
The Mine Surveyor will survey the surface that is undermined.	Monthly for the entire operational phase
Monitoring of the undermined surfaces will be undertaken	Monthly for the entire operational phase
In the case of subsidence, topsoil on affected area will be stripped to a minimum depth of 300 mm over the affected area.	One week after noticing of subsidence
The affected area will be backfilled by material from the remaining stockpiles and shaped to be free draining	Two weeks after noticing of subsidence
The removed topsoil will be replaced over the area (minimum thickness = 300 mm).	Two weeks after noticing of subsidence
Ensure that any fractures that promulgate to surface after settlement has occurred is managed properly	
Fractures will be excavated to a minimum depth of 1.6 meters (stockpiling the upper 300 mm topsoil separately)	One week after noticing the fractures
Fractures will be backfilled using 150 mm compacted layers to a minimum thickness of 0,6 meters. (Compaction to be 93% MOD AASHTO)	One week after noticing the fractures
Affected areas will be backfilled to 300 mm above surface level	One week after noticing the fractures
Finally covered and shaped to conform to the surface surroundings using a minimum 300 mm layer of topsoil.	Two weeks after noticing the fractures
Ensure that the areas with surface water ponding are managed properly	

Conduct visual monitoring of areas being undermined and that have already been undermined	Monthly for the entire operational phase
Areas where surface water ponding is identified will be reshaped to a free draining topography as described in the above action plan	Two weeks after notice of water ponds
Areas reshaped will be checked for cracks and fractures and if fractures or cracks noticed the above-mentioned action plan for fractures will be applied	As necessity arises during operational phase of the mine
Ensure that the areas showing soil erosion are managed properly	
Visual monitoring of areas being undermined, areas that have already been undermined and areas rehabilitated as mentioned in the above action plan	Monthly for the entire operational phase
Areas showing signs of soil erosion will again be backfilled as described in the above action plan for surface subsidence and surface fractures.	Two weeks after notice of erosion gullies
Ensure that reshaping and backfilling of fractures, surface subsidence, soil erosion and water ponding does not have detrimental impact on natural vegetation	
Visual monitoring of the backfilled and reshaped areas for re-establishment of natural vegetation	Monthly after reshaping and backfilling of affected areas
In consultation with the land owners the affected areas will be re-vegetated with appropriate vegetation species	Annually during operational phase of mining

The Mine Manager or appointed responsible person will conduct proper surface surveys or visual monitoring and will, ensure that areas that shows subsidence, fractures, water ponding and soil erosion are reshaped and backfilled according to the action plan.

60 Financial Provision

60.1 Determination of the amount of Financial Provision.

Regulation 6 of the Financial Provision Regulations (GN R1147 in GG 39425 of 20 November 2015/2018) requires that an applicant for a mining right must determine the financial provision calculation based on the actual costs required for:

- Annual rehabilitation
- Final rehabilitation, decommissioning and closure
- The remediation of latent or residual environmental impacts, including but not limited to, the pumping and treatment of polluted or extraneous water

60.2 Describe the closure objectives and the extent to which they have been aligned to the baseline environment described under Regulation 22 (2) (d) as described in 2.4 herein.

Closure and rehabilitation is a continuous series of activities that begin with planning prior to the project's design and construction, and end with achievement of long-term site stability that creates a safe, physically stable rehabilitated landscape that limits long-term erosion potential and environmental degradation, and restores the land to pre-mining conditions as far as possible.

The following points outline the main objectives for rehabilitation and closure:

- Achieve a final land use that represents pre-mining conditions that is sustainable and meets legislative requirements and stakeholder needs.
- Create opportunities for alternative post-mining livelihoods by aligning to the regional planning.
- Ensure interconnectivity between the rehabilitated landscapes with surrounding regionally biologically diverse areas.
- Encourage, if and where required, the re-instatement of terrestrial and aquatic wetland biodiversity over time.
- Maintain and monitor all rehabilitated areas following re-vegetation and establishment of landscape features, like wetland pans. If this monitoring shows that the objectives have been met, make an application for closure.
- Prevent/minimise negative impacts and risks as identified in this report.
- Comply with local, district, provincial and national regulatory requirements.
- Follow a comprehensive consultation and communication process with all stakeholders.

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

The environmental objectives are in line with the concerns raised by Interested and Affected parties. The stakeholder and Public participation consultation is still on-going and transparent. The EIA report for public view will include the Closure objectives, specialist study findings and financial provision for scrutiny.

60.4 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.

Rehabilitation plan is attached as Appendances section and Table 38.

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

The Rehabilitation Plan has been compiled in support of the primary closure objectives. These objectives require the removal of the mining infrastructure and rehabilitation of the land to a suitable land use that represent pre-mining conditions and provide a safe and sustainable environment for surrounding receptors.

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

The Guideline Document for the Evaluation of the Quantum of Closure Related Financial Provision Provided by a Mine, Department of Minerals and Energy, 2005) was used.

The environmental liability only focuses on the proposed mining activities and was calculated by means of the DMRE standard method for assessment of mine closure. The mine areas that needed to be included in the current assessment were provided to Singo Consulting by the applicant, as indicated in the MWP. These areas were assumed to be all that the applicant was liable for and no investigation was conducted to determine whether the applicant is responsible for or liable to any additional areas. Activities incorporated into the calculation include the demolition and management of physical infrastructure, rehabilitation of the waste facilities, and the rehabilitation of these areas.

Only areas affected by the proposed mining and associated infrastructure are included. Should additionally, mining and infrastructure be identified during future exploration activities, these needs to be included.

The Master Rates will be updated on an annual basis, based on CPIX or a similar approved method, or should legislation change. The first of these updates will take place during 2020 and continue to the year in which the review is taking place. The overall document will be reviewed and updated whenever necessary (minimum requirement of annual updates). The quantum is presented in Table 38.

Table 38: Financial provision Liability Assessment

The quantum is still under construction as per DMRE guidelines. The table below represents the cash flow prediction in real time.

CALCULATION OF THE QUANTUM

Applicant: **Dotess Pty Ltd**
 Evaluator: **Rudzani Shonisani**

DMRE Ref No.: **MP-00180-MR/102**
 Date: **JULY-2023**

No.	Description	Unit	A	B	C	D	E=A*B*C*D	
			Quantity	Master Rate	Multiplication factor	Weighting factor 1	Amount (Rands)	
1	Dismantling of processing plant and related structures (including overland conveyors and powerlines)	m3	0	19	1	1	0	
2 (A)	Demolition of steel buildings and structures	m2	0	271	1	1	0	
2(B)	Demolition of reinforced concrete buildings and structures	m2	0	400	1	1	0	
3	Rehabilitation of access roads	m2	17500	49	0,01	1	8575	
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	470	542	0,01	1	2547,4	
6	Opencast rehabilitation including final voids and ramps	ha	71,853	284292	0,01	1	204272,3308	
7	Sealing of shafts adits and inclines	m3	47940	146	1	1	6999240	
8 (A)	Rehabilitation of overburden and spoils	ha	6,532	189528	0,01	1	12379,96896	
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	0,86	685612	0,01	1	5896,2632	
9	Rehabilitation of subsided areas	ha	515,584	158701	1	1	81823696,38	
10	General surface rehabilitation	ha	515,584	150138	0,01	1	774087,5059	
11	River diversions	ha	0	150138	1	1	0	
12	Fencing	m	0	171	1	1	0	
13	Water management	ha	0,86	57087	0,01	1	490,9482	
14	2 to 3 years of maintenance and aftercare	ha	515,584	19980	0,01	1	103013,6832	
15 (A)	Specialist study	Sum	0		1	1	0	
15 (B)	Specialist study	Sum				1	0	
Sub Total 1							89934199,48	
1	Preliminary and General		10792103,94		weighting factor 2		10792103,94	
					1			
2	Contingencies			8993419,948			8993419,948	
Subtotal 2							109719723,37	
Sign Date	Rudzani Shonisani 23/07/2023						VAT (15%)	16457958,51
Grand Total							R8 561 750,0	

60.7 Confirm that the financial provision will be provided as determined.

Dotess is required to make financial provision for the rehabilitation activities on the site. This provision is reviewed annually for adequacy and amended to compensate for new activities and/or inflation. During the annual review, confirmation will be provided that this amount can be provided for from operating expenditure as shown in mine work programme (MWP).

61 Mechanisms for monitoring compliance with and performance assessment against the environmental management programme and reporting thereon, including Monitoring of Impact Management Actions.

Dotess Witbank Colliery will implement an ongoing monitoring programme for its proposed operations as recommended, ensuring environmental requirements stipulated in this EMPr are complied with. Various monitoring mechanisms have been suggested and included in specialist studies and revolves around Ground water, Archeological, Blasting and soil.

61.1 Monitoring and reporting frequency

The monitoring of impacts and reporting frequency will be different for the various environmental aspects. Table 39 details the environmental aspects to be monitored, the component of the aspect and the frequency of data collection and reporting. Monitoring will include ground water, Air quality and noise.

Frequency of monitoring will differentiate from Quarterly to Annually. It should be noted that other required monitoring will be added for purposes of the water use license application.

61.2 Responsible persons

An Environmental Control Officer will be responsible for ensuring that all necessary environmental monitoring required for the Dotess Colliery project is undertaken as per the monitoring programmes.

61.3 Time period for implementing impact management actions

Impact Management will be undertaken in each respective phase in which it would be applicable. In terms of monitoring, each management action will be implemented immediately after the monitoring reporting has been undertaken.

61.4 Mechanism for monitoring compliance

Monitoring programmes as shown in table 39.

Table 39: Monitoring and management of environmental impacts.

SOURCE ACTIVITY	IMPACTS REQUIRING MONITORING PROGRAMMES	FUNCTIONAL REQUIREMENTS FOR MONITORING	ROLES AND RESPONSIBILITIES (FOR THE EXECUTION OF THE MONITORING PROGRAMMES)	MONITORING AND REPORTING FREQUENCY AND TIME PERIODS FOR IMPLEMENTING IMPACT MANAGEMENT ACTIONS
Underground mining	<ul style="list-style-type: none"> • Contamination of underground water resources • The formation of AMD in groundwater resources • Dewatering of ground water 	<ul style="list-style-type: none"> • Underground water sampling and analysis • Pump testing 	<ul style="list-style-type: none"> • Environmental officer on the mine- internal • Environmental officer – external audits 	<ul style="list-style-type: none"> • Baseline hydro census before mining. • Quarterly initial monitoring after mining commences • Bi- Annual monitoring after initial monitoring year. • Any impacts detected needs to be managed immediately.
Underground mining	<ul style="list-style-type: none"> • Pollution of surface water resources 	<ul style="list-style-type: none"> • Surface water sampling of all surface water bodies, upstream and downstream 	<ul style="list-style-type: none"> • Environmental officer on the mine- internal • Environmental officer – external audits 	<ul style="list-style-type: none"> • Quarterly initial monitoring after mining commences • Bi- Annual monitoring after initial monitoring year. • Any impacts detected needs to be managed immediately.

<p>Operation of Shafts, stockpiles, conveyors and general mine function</p>	<ul style="list-style-type: none"> Dust fallout Presence of PM10 particle dust 	<ul style="list-style-type: none"> Dust buckets sampling, monitoring and analysis 	<ul style="list-style-type: none"> Environmental officer on the mine- internal Air quality specialist Environmental officer – external audits 	<ul style="list-style-type: none"> Monthly monitoring and reporting. Management actions to be implemented immediately. Management actions will be applicable for all phases of theProject.
<p>Operation of Shafts, stockpiles, conveyors and general mine function</p>	<ul style="list-style-type: none"> Noise 	<ul style="list-style-type: none"> Noise readings undertaken with a hand held monitoring device will be required. 	<ul style="list-style-type: none"> Environmental officer on the mine- internal. Noise specialist. Environmental officer – external audits. 	<ul style="list-style-type: none"> Baseline monitoring Monthly noise monitoring in the Construction phase Monthly monitoring for the first year of operation Quarterly monitoring after the first year of operation Noise levels to be mitigated as far AS POSSIBLE
<p>Closure and Rehabilitation</p>	<ul style="list-style-type: none"> Ground water, Surface water, airand Noise, Social 	<ul style="list-style-type: none"> On-going monitoring 	<ul style="list-style-type: none"> Environmental officer on the mine- internal. Environmental officer – external audits Rehabilitation / financial auditors 	<ul style="list-style-type: none"> yearly

62 Indicate the frequency of the submission of the performance assessment report.

The EMP performance assessment (audit) must be undertaken every two years by an external auditor, and a report must be compiled and submitted to the competent authority.

Operational internal environmental inspections will need to be done once a month by the mines Environmental personnel. A yearly internal audit needs to be undertaken by the mines environmental department.

63 Environmental Awareness Plan

Manner in which the applicant intends to inform his or her employees of any environmental risk which may result from their work and Manner in which risks will be dealt with in order to avoid pollution or the degradation of the environment.

Witbank Colliery will develop an environmental awareness plan for the entire mine, which is explained in more detail below.

Note that the responsible person will revise these environmental awareness procedures from time to time. The date of commencement of the revised procedure will always be indicated to prevent confusion to whoever require any information.

63.1 Scope

This Environmental Training Standard Procedure sets out the mine's training objectives regarding to environmental awareness and EMS. It is a stand-alone procedure, which serves to improve awareness, training and competency in the environmental field. It contains no detail on the actual training initiatives but rather serves to ensure that a responsible person is appointed to deal with and increase environmental awareness on the mine.

63.2 Objectives

The following are the objectives set for this standard procedure:

- To explain and aid the personnel involved in training with regards EMS;
- To clarify the EMS training and ensure that all employees are correctly instructed with regards to the environmental issues in the mining area.

63.3 Safety risks associated with activity

Specific safety risks will have to be determined for each activity prior to commencement of emergency activities.

63.4 Responsibilities

The **Training Superintendent/contractor** is the person responsible for the management/co- ordination of this Standard Procedure. This person is responsible for keeping this Standard Procedure up to date and to ensure that the relevant persons under his/her charge carry out the instructions in this Standard Procedure. The person responsible for the Standard Procedure must also ensure that reporting sheets are completed and submitted to the EMS Co-ordinator.

63.5 Legal requirements

The following legislation and standards apply to this Standard Procedure:

- ❑ Employment Equity Act 55 of 1998 – AREAS WHERE EMPLOYMENT EQUITY ARE DEFINED, INCLUDING TRAINING & DEVELOPMENT
- ❑ National Environmental Management Act 77 of 1998 – RECOMMENDATIONS FOR INSTITUTIONAL CO-OPERATION
- ❑ Minerals and Petroleum Resources Act, 2002 (Act 28 of 2002) – DEVELOPMENT OF AN ENVIRONMENTAL AWARENESS PLAN

63.6 Activity procedures

63.6.1 Induction Programme

Training programmes and environmental awareness programme have been established. Various topics are discussed such as, but not limited to; Water Pollution Prevention, Good Environmental Housekeeping, etc. The line manager, safety officer, EMS Co-ordinator and training superintendent shall ensure that all staff receives training in:

- Administrative requirements and procedures, which will include the EMS and Emergency Procedures.
- The computer system and the operation of the computer (inputs and outputs) as relevant to the tasks of the trainee (where applicable).
- Resource conservation and environmental reporting and general environmental awareness for mine related environmental issues.

Contractors that are employed on the Colliery must prior to start any working activities complete the contractor's package. This package requires the contractor to perform SHE (Safety, Health and Environmental) Risk assessments on the activities to be undertaken. The entire risk assessment process and the applicable EMS procedures must be referenced within the contractor's package.

63.6.2 Training Needs

These shall be identified:

- a) By management or staff through:
 - Performance appraisal;
 - At time of recruitment (in the work place);
 - Training needs analysis;
 - In-task observation of performance;
 - Aspect Register
- b) Analysis of change resulting from:
 - Additions to scope in services provided;
 - The updating of procedures (quality, technical and administrative).
- c) By management and staff for the induction of:
 - New appointed permanent, contract or temporary staff.

Training needs will be identified through work performance, request by employee and work area review. Once training needs have been established it is up to the supervisor to notify the training department of the requirements. The training department will then identify pertinent and relevant courses (if not already done so by employee/supervisor) and schedule training accordingly.

63.6.3 Training Planning

Identified and agreed training needs shall be included in budgets and processed as described below. Course attendance (other than at the internal induction courses) shall be scheduled on the basis of the importance of task contribution to the maintenance, effectiveness and improvement of the objectives.

Training expenses, including conferences and symposia should be checked and approved by the Mine management. The Training Department shall complete a course authorisation form and ensure that the procedures are followed regarding course bookings, confirmations and payments.

Planning of training for job specific training (done through training needs analysis) will be co-ordinated between the Training Superintendent and the relevant section heads. This will result in a training schedule for job specific training on the mine.

The trainee shall:

- Obtain approval from the Mine management
- Request Training Department to make official booking for him/her.

External training courses shall be assessed through:

- The formal reports and recommendations of staff
- Recommendation by known competent external personnel
- Review of course content, presenters, location and facilities by knowledgeable personnel

63.6.4 E.M.S. Training

Personnel

- a) All employees, current and new, and contractors will undergo induction, a part of which is environmental awareness training and includes the environmental policy. At the end of this training, personnel will be required to complete the awareness test and the level of awareness assessed by the Training Department. Re-testing or induction may be required. The Computer Based Assessments forms part of this process.
- b) All personnel performing tasks, which can cause significant or major environmental impacts, shall be competent on the basis of training, education and/or experience. This applies to, but is not limited to, supervisor level and above – i.e. operators, artisans.

Type

- a) Awareness training must include the potential consequences of departure from specified operating procedures as well as significant environmental impacts, actual or potential, of their work activities.
- b) Training will be appropriate to the activity of individual employees.

Evaluation

Evaluation of awareness and competency training (implementation of training in the work place) will be carried out by the Environmental Contractors, Section Managers and Staff in the Training Department. Senior management if required can also supplement the evaluation.

63.6.5 Certification

Photocopies of certificates issued after completion of a training course shall be maintained in the staff member's file and Training Department's records.

63.6.6 Records

The following records shall be maintained by the Training Department when relevant:

- a) Personnel qualifications
- b) Training needs
- c) Certificates
- d) Licences
- e) Training programmes/courses attended
- f) Staff induction

Performance appraisals are kept by the Training Department due to their sensitive nature.

All foregoing records will be maintained in the employee's personnel files, Training Department records and Site Manager's records where applicable. Induction training is the responsibility of the Training Department as well as all other forms of external training facilities/courses/venues etc.

63.6.7 Reporting

This reporting requirement applies to this standard procedure and is the responsibility of the person responsible to maintain this standard procedure.

Monthly

Complete the reporting checklist and file this checklist in the Site Manager's file (Thereport sheet is shown in the table below).

Annual

Complete the reporting checklist and file this checklist in the site's EMS file (The report sheet is in shown in the table below). A copy of the report is to be kept in the EMS master file and a copy kept by the person responsible for this procedure.

Non-conformance

Complete a short explanatory note on the non-conformance and forward this to the relevant department as per the Internal and External Communication Standard Procedure.

64 Specific information required by the Competent Authority

All information committed to in the SR and as requested by the DMRE to date, has been incorporated into the EIA/EMPr. The financial provision for the environmental rehabilitation and closure requirements of mining operations is governed by NEMA, as amended, which indicates in Section 24P that the holder of a mining right must make financial provision for rehabilitation of negative environmental impacts. The financial provision will be reviewed annually, as required by the DMRE.

65 Undertaking

The EAP herewith confirms:

- 2(a) the correctness of the information provided in the reports
- 2(b) the inclusion of comments and inputs from stakeholders and I&APs
- 2(c) the inclusion of inputs and recommendations from the specialist reports where relevant
- 2(d) the acceptability of the project in relation to the findings of the assessment and level of mitigation proposed.

Regarding correctness of information

I, Rudzani Shonisani, herewith confirm that the information provided in the foregoing report is correct, and that the comments and inputs from stakeholders and Interested and Affected Parties have been correctly recorded in the report.

.....
Signature of the EAP

.....
Date

Regarding level of agreement

I, Kenneth Singo, herewith confirm that the information provided in the foregoing report is correct, and that the level of agreement with Interested and Affected Parties and stakeholders have been correctly recorded and reported herein.

.....
Signature of the EAP

.....
Date

APPENDIXES

Appendix 1: Qualifications and CV of the EAPs

(Due to POPIA, not attached here)

Appendix 2: Public participation process

- Newspaper Advert
- Site Notice
- Background Information Document (BID)
- Communication / meetings with Stakeholders (Minutes)
- Meetings
- Register of I&APs

Dotess



dunnhb@yahoo.com

To admin@singoconsulting.co.za

Cc valentine@singoconsulting.co.za

 You replied to this message on 2023/03/15 16:37.



Wed 2023/03/15 16:24

I recieved a document delivered by hand - the first page is attached for refference.

The copy is not very clear and I can't scan it properly. Please send me a copy to my mail.

I am an affected party.

HB Dunn

Owner portion 49 of the Farm Witbank 80 IS.

LANDOWNER INVITATION TO COMMENT ON THE MINING RIGHT APPLICATION ON PORTIONS 02, 05...



Valentine, Mhlanga <valentine@singoconsult>

To 'dunnhb@yahoo.com'; 'admin@singoconsulting.co.za'

Cc 'Dr Kenneth, Singo'; 'Rudzani, Radebe (RRS)'; 'Lesego, Montshiwa'; 'simangaliso@singoconsulting.co.za'



Thu 2023/03/16 11:22



Good day,

Receive warm greetings from Singo Consulting (Pty) Ltd.

Singo Consulting (Pty) Ltd has been appointed as an independent Environmental Assessment Practitioner by **Dotess (Pty) Ltd** to manage the Environmental Authorisation process by conducting an Environmental Impact Assessment, Public Participation Process (PPP), and to compile a Scoping Report & Environmental Management Programme report (SR & EMPr) for the **Mining Right Application** for the purpose of Mining for **Coal** on **Portions 02, 05, 19, 22, 48 and 49** of the farm **Witbank 80 IS**, situated under **Emalahleni (Witbank) Local Municipality**, Nkangala District Municipality in Mpumalanga Province (**DMRE Ref: MP 30/5/1/1/2/487 MR**).



May you kindly find the attached **Regulation map 2.2, KML, Background Information Document (BID), and MR co-ordinates** for detailed information about the proposed project. A **Registration and Comment Form** is included for you to register as an Interested and Affected Party and raise your comments and concerns. Kindly complete this form so we can address the comments in the **Scoping Report and Environmental Management Programme report** that will be shared with you to review for **30 calendar days** commencing on the **27th of March 2023 to the 28th of April 2022 (excluding public holidays)**. If you know anyone who might be interested or affected by this project, kindly forward this email to that person.

Should you need any clarity in relation to this project, please do not hesitate to contact me using the contact details provided below.

The banner features the Singo Consulting (Pty) Ltd logo at the top center. On the left, it says "Operation Hi Teka Hinkwaswo" above a landscape image. The main text identifies "Valentine, Mhlanga" as an "Environmental Technician Intern" with a BSc. Hons in Environmental Sciences with Geography & Environmental Management. Contact information includes a mobile number (+27 81 813 0654) and an email address (valentine@singoconsulting.co.za). The bottom left shows a phone icon with +27 13 692 0041, a WhatsApp icon with +27 86 514 4103, and a globe icon with www.singoconsulting.co.za. The right side lists "OUR SERVICES" and "MORE SERVICES" in small text, along with social media icons for LinkedIn, Facebook, and Instagram. The office address "Office 870, 5 Balalaika Street, Tasbet Park Ext 2, Witbank, 1040" is at the bottom right.

Appendix 3: Proof of notification (email); and responses received from stakeholders.

REQUEST FOR SENSITIVITY MAPS ON PORTION 02, 05, 19, 22, 48 AND 49 OF THE FARM WITBANK 80 IS



Reply Reply All Forward Sun 2023/03/12 16:24



Good day Phumla,

Receive warm greetings from Singo Consulting (Pty) Ltd.

I'd like to request for sensitivity maps on **Portions 02, 05, 19, 22, 48 and 49** of the farm **Witbank 80 IS** under **Emalaheni (Witbank)** Magisterial district, Mpumalanga Province.

Kindly find the attached regulation map and project KML.

Your assistance will be highly appreciated.





RE: REQUEST FOR SENSITIVITY MAPS ON PORTION 02, 05, 19, 22, 48 AND 49 OF THE FARM WITBANK ...



Reply Reply All Forward

Tue 2023/03/14 07:50

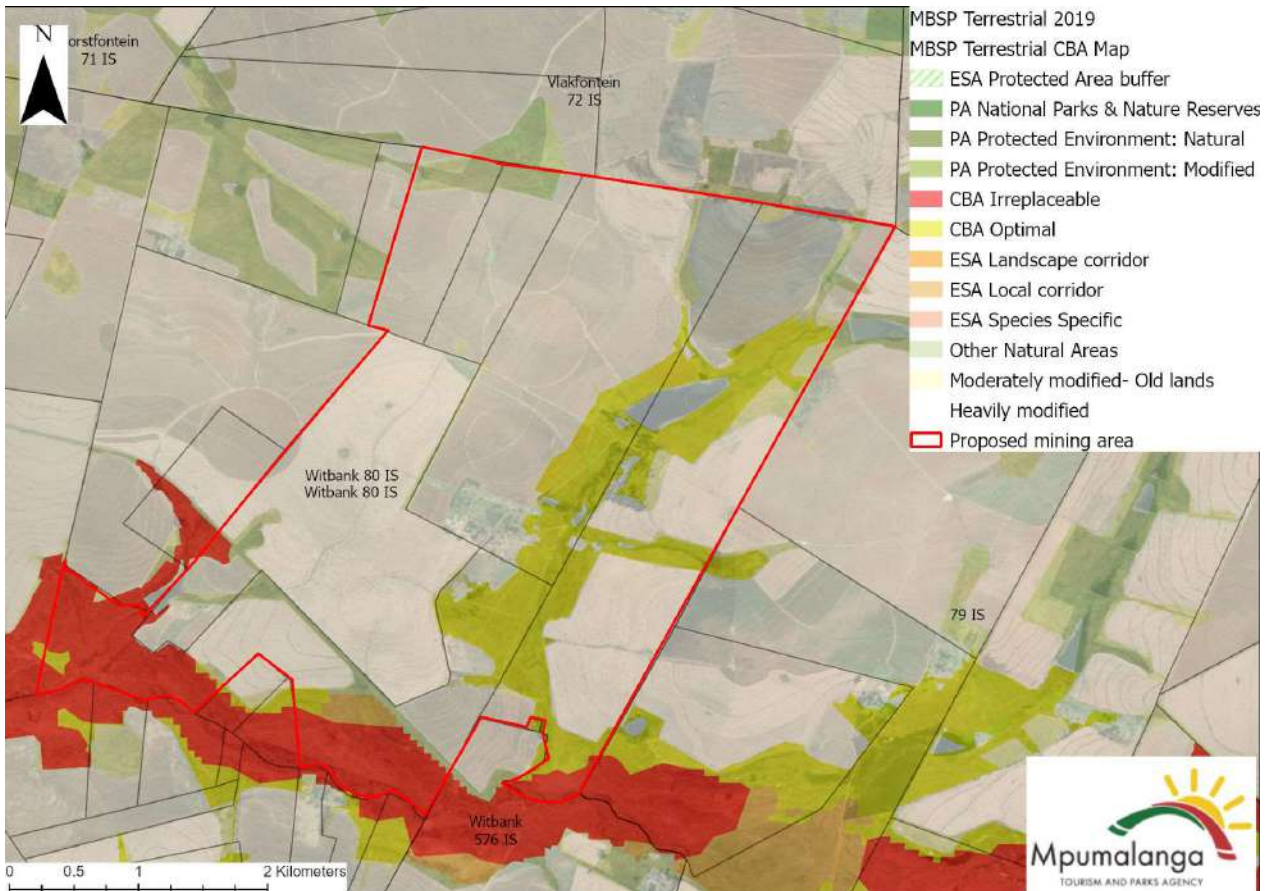
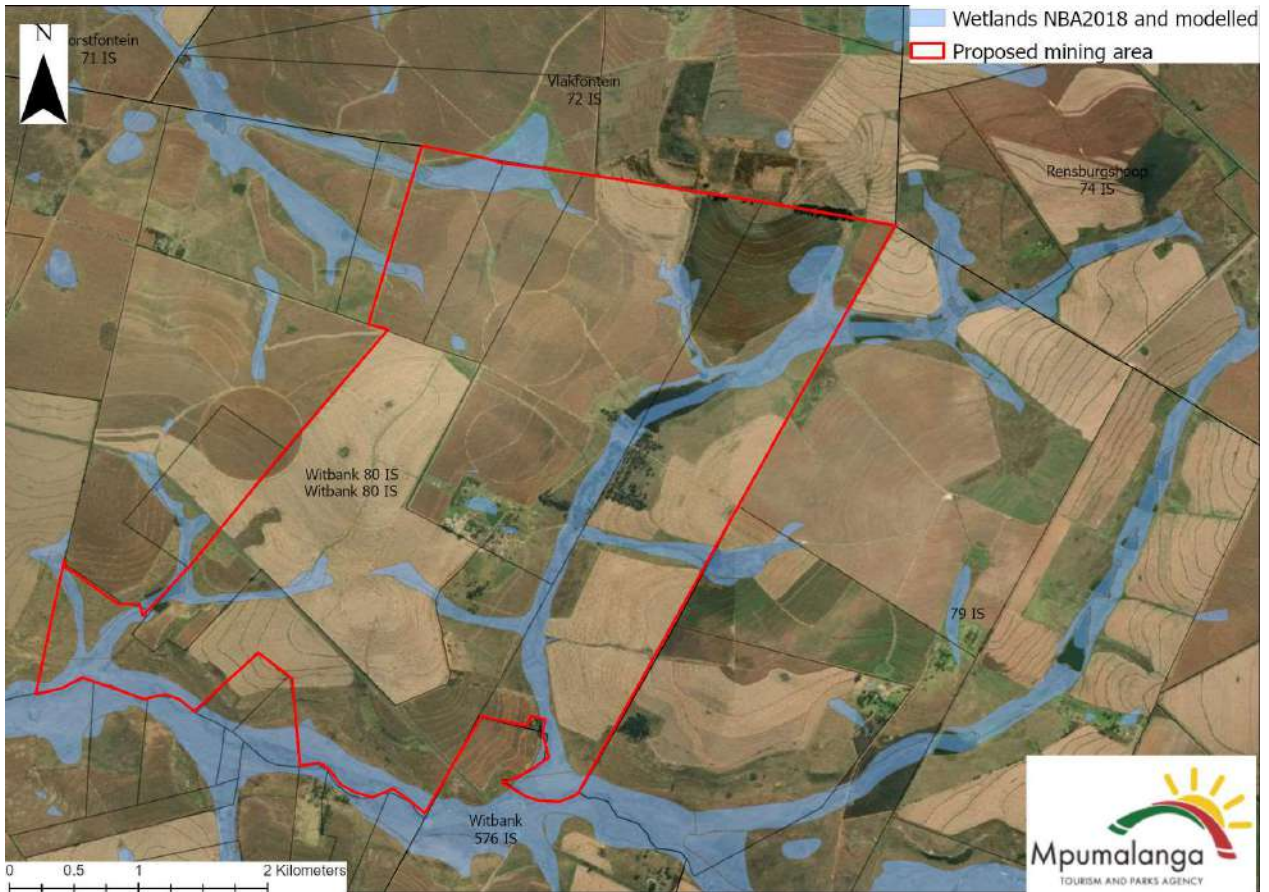
Click here to download pictures. To help protect your privacy, Outlook prevented automatic download of some pictures in this message.

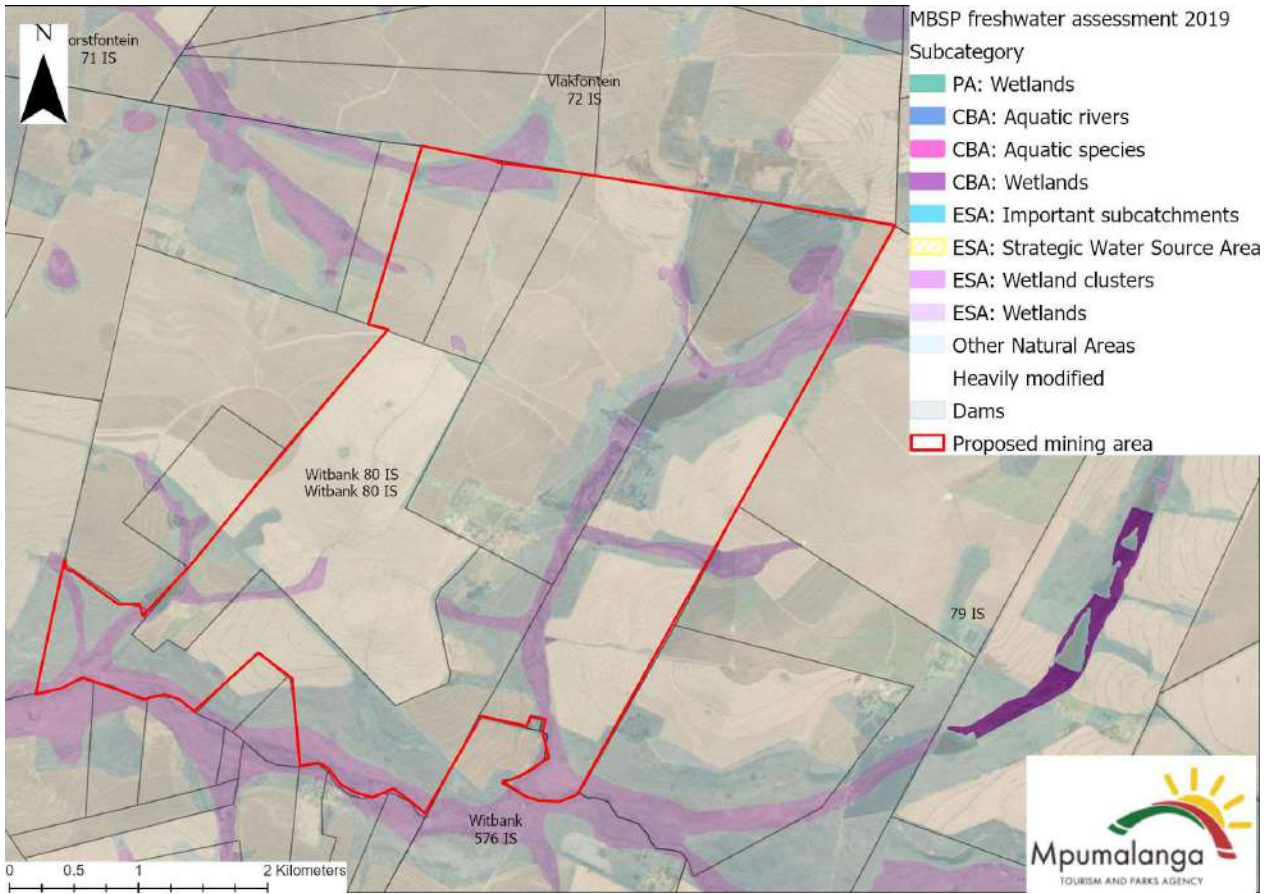


Good Morning Valentine

I trust this email finds you well. Please find the attached maps and species status report as requested.

Kind Regards
Phumla Nkosi





Species Status Report

Tuesday, March 14, 2023

Resolution <=100: Map Grid=2629AD: Databse=All

2629AD

Common Name	Scientific Name	Conservation RSA	MTPA	Endemic
Birds				
BETHAL Pallid Harrier	<i>Circus macrourus</i>	NT	NT	
ALEXANDER 102 IS Lanner Falcon	<i>Falco biarmicus</i>	VU	VU	
BLESBOKSPRUIT 150 IS African Grass-Owl	<i>Tyto capensis</i>	VU	VU	
Greater Flamingo	<i>Phoenicopterus ruber</i>	NT	NT	
DORSTFONTEIN 71 IS African Grass-Owl	<i>Tyto capensis</i>	VU	VU	
KAFFERSTAD 79 IS Black-winged Pratincoole	<i>Glareola nordmanni</i>	NT	NT	
MOOIFONTEIN 108 IS African Grass-Owl	<i>Tyto capensis</i>	VU	VU	
ONGEZIEN 105 IS African Grass-Owl	<i>Tyto capensis</i>	VU	VU	
RUSTFONTEIN 109 IS Greater Flamingo	<i>Phoenicopterus ruber</i>	NT	NT	
Lesser Flamingo	<i>Phoenicopterus minor</i>	NT	NT	
WITRAND 103 IS Blue Korhaan	<i>Eupodotis caerulescens</i>	LC	NT	RSA
YZERVARKFONTEIN 106 IS Secretarybird	<i>Sagittarius serpentarius</i>	VU	VU	
Fish				
BLESBOKSPRUIT 150 IS BANO V	<i>Enteromius anoplus</i> - Upper Vaal form	EN/CR	EN	RSA
Reptiles				
Bethal Acontias breviceps	<i>Acontias breviceps</i>	LC	VU	MP
ELANDSFONTEIN 147 IS Chamaesaura aenea	<i>Chamaesaura aenea</i>	NT	NT	RSA
Large Mammals				
KAFFERSTAD 79 IS Leptailurus serval	<i>Serval</i>	NT	NT	
WITBANK 80 IS Leptailurus serval	<i>Serval</i>	NT	NT	
Parahyaena brunnea	<i>Brown hyaena</i>	NT	NT	

WITRAND 103 IS				
Leptailurus serval	Serval	NT	NT	
Parahyaena brunnea	Brown hyaena	NT	NT	
YZERVARKFONTEIN 106 IS				
Felis silvestris	African wild cat	LC	NT	
Small Mammals				
BLESBOKSPRUIT 150 IS				
Amblysomus septentrionalis	Highveld golden mole	NT	NT	
PALMIETFONTEIN 110 IS				
Atelerix frontalis	Southern African hedgehog	NT	NT	
RIETFONTEIN 146 IS				
Atelerix frontalis	Southern African hedgehog	NT	NT	
RUSTFONTEIN 109 IS				
Atelerix frontalis	Southern African hedgehog	NT	NT	
Plants				
ALEXANDER 102 IS				
Eucomis autumnalis	Eucomis autumnalis	Declining	Declining	FSA
BETHAL				
Boophone disticha	Boophone disticha	LC	LC	NOT
Drimia robusta (NOW Drimia elata)	Drimia robusta (NOW Drimia elata)		Muthi	
Eucomis autumnalis	Eucomis autumnalis	Declining	Declining	FSA
BLESBOKSPRUIT 150 IS				
Gladiolus robertsoniae	Gladiolus robertsoniae	NT	NT	SA
Kniphofia typhoides	Kniphofia typhoides	NT	NT	SA
Nerine gracilis	Nerine gracilis	NT	NT	SA
RUSTFONTEIN 109 IS				
Nerine gracilis	Nerine gracilis	NT	NT	SA
WITRAND 103 IS				
Boophone disticha	Boophone disticha	LC	LC	NOT
Crinum bulbispermum	Crinum bulbispermum	Declining	Declining	FSA



RE: REQUEST FOR SENSITIVITY MAPS ON PORTION 02, 05, 19, 22, 48 AND 49 OF THE FARM WITBANK ...



Valentine, Mhlanga <valentine@singoconsult
To 'Phumla Nkosi'
Cc 'Mervyn Lotter'; 'Johan Eksteen'



Tue 2023/03/14 08:40

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 acknowledged. Your comments/ suggestions will be incorporated into the Scoping Report.

Kind Regards! Singo Consulting (Pty) Ltd
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To manage & protect the best remaining environment

Operation Hi Teka Hinkwaswo

Valentine, Mhlanga
Environmental Technician Intern
BSc. Hons Environmental Sciences
with Geography & Environmental
Management
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valentine@singoconsulting.co.za

Singo Consulting (Pty) Ltd
Rural & Mining Environmental Consulting

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applications that were lodged on **Portions 02, 05, 19, 22, 48 and 49** of the farm **Witbank 80 IS** under **Emalahleni (Witbank) Magisterial District, Mpumalanga Province: DMRE Ref: MP 30/5/1/1/2/487 MR.**

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;
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Valentine, Mhlanga
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valentine@singoconsulting.co.za

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STAKEHOLDER INVITATION TO COMMENT ON THE MINING RIGHT APPLICATION ON PORTIONS 02, 0...

 Valentine, Mhlanga <valentine@singoconsult
To: 'MandlaziN@dws.gov.za'
Cc: 'kenneth@singoconsulting.co.za'; 'Rudzani, Radebe (RRS)'; 'Lesego, Montshiwa'; 'simangaliso@singoconsulting.co.za'
Mon 2023/03/13 13:58

 Mining Right Area.kml 11 KB
 MR-Coordinates.csv 7 KB
 REG 2.2.pdf 8 MB
 BID.pdf 1 MB

Good day,

Receive warm greetings from Singo Consulting (Pty) Ltd.

Singo Consulting (Pty) Ltd on behalf of **Dotess (Pty) Ltd** hereby wishes to inform you about Section 102 Amendment on **Coal** Mining Right and Environmental Authorization applications that were lodged on **Portions 02, 05, 19, 22, 48 and 49** of the farm **Witbank 80 IS** under **Emalahleni (Witbank) Magisterial District, Mpumalanga Province: DMRE Ref: MP 30/5/1/1/2/487 MR.**

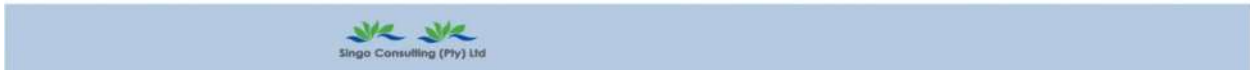
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Operation Hi Teka Hinkwaswo



Valentine, Mhlanga
Environmental Technician Intern
BSc. Hons Environmental Sciences
with Geography & Environmental
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STAKEHOLDER INVITATION TO COMMENT ON THE MINING RIGHT APPLICATION ON PORTIONS 02, 0...



VM Valentine, Mhlanga <valentine@singoconsult
To: 'BCAdmin@environment.gov.za'
Cc: 'kenneth@singoconsulting.co.za'; 'Rudzani, Radebe (RRS)'; 'Lesego, Montshiwa';
'simangaliso@singoconsulting.co.za'

Mon 2023/03/13 13:58

Mining Right Area.kml 11 KB
MR-Coordinates.csv 7 KB
REG 2.2.pdf 8 MB
BID.pdf 1 MB

Good day,

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Singo Consulting (Pty) Ltd on behalf of **Dotess (Pty) Ltd** hereby wishes to inform you about Section 102 Amendment on **Coal** Mining Right and Environmental Authorization applications that were lodged on **Portions 02, 05, 19, 22, 48 and 49** of the farm **Witbank 80 IS** under **Emalahleni (Witbank) Magisterial District, Mpumalanga Province: DMRE Ref: MP 30/5/1/1/2/487 MR.**

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The banner features the Singo Consulting (Pty) Ltd logo at the top center. Below it, on the left, is a small landscape image with the text 'Operation Hi Teka Hinkwaswo'. The main text identifies 'Valentine, Mhlanga' as an 'Environmental Technician Intern' with a 'BSc. Hons Environmental Sciences with Geography & Environmental Management' degree. Contact information includes a phone number '+27 81 813 0654' and an email 'valentine@singoconsulting.co.za'. The bottom left shows three phone numbers: '+27 13 692 0041', '+27 86 514 4103', and the website 'www.singoconsulting.co.za'. The right side of the banner lists 'OUR SERVICES' such as Mining Feasibility Studies, Environmental Impact Assessment, and Environmental Monitoring. It also includes social media icons for LinkedIn, Facebook, WhatsApp, and Instagram, and the office address: 'Office 870, 5 Balalaika Street, Tasbet Park Ext 2, Witbank, 1040'.

STAKEHOLDER INVITATION TO COMMENT ON THE MINING RIGHT APPLICATION ON PORTIONS 02, 0...

The email interface shows the sender as 'Valentine, Mhlanga <valentine@singoconsult>' with a profile picture. The recipient is 'Yuza.Chabalala@transnet.net'. The email was sent on 'Mon 2023/03/13 13:58'. The subject line is partially visible as 'STAKEHOLDER INVITATION TO COMMENT ON THE MINING RIGHT APPLICATION ON PORTIONS 02, 0...'. The email contains four attachments: 'Mining Right Area.kml' (11 KB), 'MR-Coordinates.csv' (7 KB), 'REG 2.2.pdf' (8 MB), and 'BID.pdf' (1 MB). Action buttons for 'Reply', 'Reply All', and 'Forward' are visible.

Good day,

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Operation Hi Teka Hinkwaswo

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Environmental Technician Intern
BSc. Hons Environmental Sciences with Geography & Environmental Management

+27 81 813 0654
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STAKEHOLDER INVITATION TO COMMENT ON THE MINING RIGHT APPLICATION ON PORTIONS 02, 0...



Valentine, Mhlanga <valentine@singoconsult

To 'Botha, Johan (JJ) (Mining)'

Cc 'kenneth@singoconsulting.co.za'; 'Rudzani, Radebe (RRS)'; 'Lesego, Montshiwa'; 'simangaliso@singoconsulting.co.za'



Reply

Reply All

Forward



Mon 2023/03/13 13:57



Mining Right Area.kml
11 KB



REG 2.2.pdf
8 MB



MR-Coordinates.csv
7 KB



BID.pdf
1 MB

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- ✓ Contribute to local knowledge;
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Should you know anyone who might be interested in this project, kindly forward this email to that person.



Operation Hi Teka Hinkwaswo

Valentine, Mhlanga

Environmental Technician Intern
 BSc. Hons Environmental Sciences with Geography & Environmental Management

+27 81 813 0654
 valentine@singoconsulting.co.za

Singo Consulting (Pty) Ltd
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OUR SERVICES
 Mining & Transporting Operations
 Mining Feasibility Studies, Mine Planning, Production Scheduling and Competency Based Management Development, Remediation & Rehabilitation and Compliance Reporting
 Environmental Studies (Soils and Water)
 Public Participation Processes
 Environmental Impact Assessments (EIA)
 Hydrological & Meteorological Data Collection and Assessment (Hydro)
 Social, Labour and Cultural Impact Assessment Plans (SLCIP)
 Strategic Environmental Assessment (SEA) and Socio-Economic Impact Assessment (SEIA)
 Impact and Mitigation Management (IMM)
 Air Quality Management (AQM) and Noise and Vibration Assessment (NVA)
 Environmental Monitoring and Reporting (EMR)
 Environmental Management Systems (EMS) and Environmental Management Plans (EMP)
 Environmental Impact Assessment (EIA) and Socio-Economic Impact Assessment (SEIA)
 Environmental Impact Assessment (EIA) and Socio-Economic Impact Assessment (SEIA)
 Environmental Impact Assessment (EIA) and Socio-Economic Impact Assessment (SEIA)

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 Mine Rehabilitation
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 Infrastructure Building
 Compliance and other regulatory
 Mine Management
 Environmental Management Systems (EMS) and Environmental Management Plans (EMP)
 Environmental Impact Assessment (EIA) and Socio-Economic Impact Assessment (SEIA)
 Environmental Impact Assessment (EIA) and Socio-Economic Impact Assessment (SEIA)

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

+27 13 692 0041

+27 86 514 4103

www.singoconsulting.co.za

RE: STAKEHOLDER INVITATION TO COMMENT ON THE MINING RIGHT APPLICATION ON PORTIONS 0...

Botha, Johan (JJ) (Mining) <jj.botha@sasol.co>

To Valentine, Mhlanga

Cc kenneth@singoconsulting.co.za; 'Rudzani, Radebe (RRS)'; 'Lesego, Montshiwa'; simangalis@singoconsulting.co.za; Bracey, Stanley (SD)

Thu 3/16/2023 2:28 PM

You replied to this message on 3/26/2023 7:41 PM.

Mining Right Area.kml
5 KB

REG 2.2.pdf
8 MB

MR-Coordinates.csv
1 KB

BID.pdf
1 MB

Hallo Valentine

This application is not affecting any of the Sasol pipelines. Sasol is not an I&AP.

Regards

Johan

Johan Botha, RWA
 Manager: Land and Rights
 Regional Operations and Asset Services

Tel +27 17 614 8012
 Fax +27 11 522 5187
 Mobile +27 82 499 4378
 E-mail jj.botha@sasol.com

Uno Building, Paul Kruger Street,
 Trichardt, 2300
 PO Box 699, Trichardt, 2300
www.sasol.com

RE: STAKEHOLDER INVITATION TO COMMENT ON THE MINING RIGHT APPLICATION ON PORTIONS 0...



Valentine, Mhlanga <valentine@singoconsult

To 'Botha, Johan (JJ) (Mining)'

Cc 'kenneth@singoconsulting.co.za'; 'Rudzani, Radebe (RRS)'; 'Lesego, Montshiwa'; 'simangaliso@singoconsulting.co.za'; 'Bracey, Stanley (SD)'



Sun 3/26/2023 7:42 PM

Good day

Thank you, your email has been acknowledged.



STAKEHOLDER INVITATION TO COMMENT ON THE MINING RIGHT APPLICATION ON PORTIONS 02, 0...



Valentine, Mhlanga <valentine@singoconsult

To 'wayleavesmou@eskom.co.za'

Cc 'kenneth@singoconsulting.co.za'; 'Rudzani, Radebe (RRS)'; 'Lesego, Montshiwa'; 'simangaliso@singoconsulting.co.za'



Mon 2023/03/13 13:57



Good day,

Receive warm greetings from Singo Consulting (Pty) Ltd.

Singo Consulting (Pty) Ltd on behalf of **Dotess (Pty) Ltd** hereby wishes to inform you about Section 102 Amendment on **Coal** Mining Right and Environmental Authorization applications that were lodged on **Portions 02, 05, 19, 22, 48 and 49** of the farm **Witbank 80 IS** under **Emalahleni (Witbank) Magisterial District, Mpumalanga Province: DMRE Ref: MP 30/5/1/1/2/487 MR.**

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- ✓ Raise issues of concern and provide suggestions for enhanced benefits;
- ✓ Contribute to local knowledge;



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OUR SERVICES
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Mining Feasibility Studies, Environmental Impact Assessment and Compliance Report
Management of Environmental Impact Assessment (EIA) and Compliance Reports
Public Participation Processes
Environmental Impact Assessment (EIA)
Hydrological & Environmental Impact Assessment (EIA)
Social Impact and Cultural Heritage Assessment (SICA)
Organic (Organic) Management Consulting

OUR SERVICES
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Water Use License
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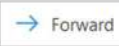
STAKEHOLDER INVITATION TO COMMENT ON THE MINING RIGHT APPLICATION ON PORTIONS 02, 0...



Valentine, Mhlanga <valentine@singoconsult

To 'Ely Thulari'

Cc 'kenneth@singoconsulting.co.za'; 'Rudzani, Radebe (RRS)'; 'Lesego, Montshiwa'; 'simangaliso@singoconsulting.co.za'



Mon 2023/03/13 13:57



MR-Coordinates.csv
7 KB



Mining Right Area.kml
11 KB



REG 2.2.pdf
8 MB



BID.pdf
1 MB

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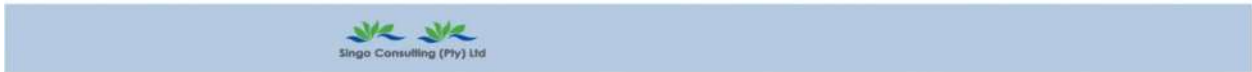
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Singo Consulting (Pty) Ltd
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OUR SERVICES
Mining & Processing Operations
Mining Feasibility Studies, Mine Design, Environmental and Compliance Report
Environmental Impact Assessment and Environmental Management Plan
Environmental Studies (Soils and Water)
Health and Safety
Environmental Impact Assessment (EIA)
Hydrological & Meteorological Studies and Assessment (HMS)
Soils, Labour and Cultural Heritage Assessment (SLCA) - Mining and Processing
Sustainable (Organic and Development) Consulting

OTHER SERVICES
Water Use License
EIA Compliance
Bidding Processes
Contract Management
Project Management
Community Development
Mining and Processing Design (Pre-feasibility and Refuse free technology)
Mining and Processing (EIA and EIM)
EIA and EIM

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Linked in f WhatsApp Instagram

STAKEHOLDER INVITATION TO COMMENT ON THE MINING RIGHT APPLICATION ON PORTIONS 02, 0...

VM Valentine, Mhlanga <valentine@singoconsult>
To 'skosanamm@nkangaladm.gov.za'
Cc 'kenneth@singoconsulting.co.za'; 'Rudzani, Radebe (RRS)'; 'Lesego, Montshiwa'; 'simangaliso@singoconsulting.co.za'

Mon 2023/03/13 13:56

REG 2.2.pdf 8 MB Mining Right Area.kml 11 KB MR-Coordinates.csv 7 KB BID.pdf 1 MB

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The banner features the Singo Consulting (Pty) Ltd logo at the top center. Below it, on the left, is a small landscape image with the text 'Operation Hi Teka Hinkwaswo'. The main text identifies 'Valentine, Mhlanga' as an 'Environmental Technician Intern' with a BSc. Hons in Environmental Sciences with Geography & Environmental Management. Contact details include a phone number (+27 81 813 0654) and an email address (valentine@singoconsulting.co.za). The right side of the banner lists 'OUR SERVICES' such as Mining Feasibility Studies, Environmental Impact Assessment, and Environmental Monitoring. It also includes social media icons for LinkedIn, Facebook, WhatsApp, and Instagram, and the office address: 'Office 870, 5 Balalaika Street, Tasbet Park Ext 2, Witbank, 1040'.

STAKEHOLDER INVITATION TO COMMENT ON THE MINING RIGHT APPLICATION ON PORTIONS 02, 0...

The email interface shows the sender as 'Valentine, Mhlanga <valentine@singoconsulting.co.za>'. The recipient list includes 'Ribamo@emalahleni.gov.za', 'kenneth@singoconsulting.co.za', 'Rudzani, Radebe (RRS)', 'Lesego, Montshiwa', and 'simangaliso@singoconsulting.co.za'. The email is dated 'Mon 2023/03/13 13:56'. Below the header, there are four attachment boxes: 'Mining Right Area.kml' (11 KB), 'MR-Coordinates.csv' (7 KB), 'REG 2.2.pdf' (8 MB), and 'BID.pdf' (1 MB).

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OUR SERVICES
Mining Feasibility Studies, Mine Planning, Environmental Impact Assessment (EIA) and Compliance (NEMA), Environmental Monitoring (Water and Air), Public Participation Processes, Environmental Impact Assessment (EIA), Environmental Management Plans (EMPs), Hydrological & Geotechnical Engineering, Pollution, Social, Labour and Community Development Plans (SLC), EIS, Safety, Response (Engineering/Development) Consulting, Mining and Rehabilitation Planning (Closure, Reclamation and Mine Site Rehabilitation), Mining Operation Services (Safes and Plans), Fuel Storage Rehabilitation.

OTHER SERVICES
Water Use License, EIA Compliance, Environmental Auditing, Cost Supply and other Logistics, Design Management, Mine Site Rehabilitation, Mining Operation Services (Safes and Plans), Fuel Storage Rehabilitation.

Linked in f WhatsApp Instagram

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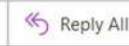
STAKEHOLDER INVITATION TO COMMENT ON THE MINING RIGHT APPLICATION ON PORTIONS 02, 0...



Valentine, Mhlanga <valentine@singoconsult

To 'MaryM@dalrrd.gov.za'

Cc 'kenneth@singoconsulting.co.za'; 'Rudzani, Radebe (RRS)'; 'Lesego, Montshiwa'; 'simangaliso@singoconsulting.co.za'



Mon 2023/03/13 13:55



Mining Right Area.kml
11 KB



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LAND CLAIMS ENQUIRY ON PORTIONS 02, 05, 19, 22, 48 AND 49 OF THE FARM WITBANK 80 IS,

The email interface shows the sender as 'Valentine, Mhlanga <valentine@singoconsult>' with a profile picture icon. The recipient list includes 'Lazarus Masuku' and two email addresses: 'kenneth@singoconsulting.co.za' and 'simangaliso@singoconsulting.co.za'. The email was sent on 'Mon 2023/03/13 13:56'. There are three attachments: 'REG 2.2.pdf' (8 MB), 'Mining Right Area.kml' (11 KB), and 'BID.pdf' (1 MB). Action buttons for 'Reply', 'Reply All', and 'Forward' are visible.

Good day

I hope this email finds you well.

You are kindly receiving this email as an enquiry for any possible land claims on **Portions 02, 05, 19, 22, 48 and 49** of the farm **Witbank 80 IS**, where Section 102 Amendment on Coal Mining Right and Environmental Authorization Application is lodged on the above-mentioned property under **Emalahleni (Witbank) Magisterial District, Mpumalanga Province: DMRE Ref: MP 30/5/1/1/2/487 MR.**

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

- Register as 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 Scoping 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 Scoping Report and EMPr.



Operation Hi Teka Hinkwaswo



Valentine, Mhlanga
Environmental Technician Intern
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with Geography & Environmental
Management

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OUR SERVICES
Mining & Environmental Rehabilitation
Mining Legislation (Licensing, Mine Closure, Post-closure Rehabilitation and Compliance) Permit
Development Environmental Impact Assessment (EIA) and Strategic Reports
Environmental Impact Assessment (EIA) and Strategic Reports
Public Participation (PP) and Strategic Reports
Environmental Management Plans (EMPs)
Environmental Management Systems (EMS)
Environmental Monitoring and Reporting (EMR)
Water Management & Environmental Compliance (WATER) Studies
Social Impact and Community Development Plans (SICDP)
SIP Studies
Corporate (Sustainable Development) Consulting

OTHER SERVICES
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EIA Compliance
Biodiversity Conservation
Construction Quality
Construction Management
Quality Management
Construction Safety
Mining (Operational Services, Tailings Work)
Post Mining Rehabilitation

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LinkedIn Facebook WhatsApp Instagram



Client: Dotess (Pty) Ltd

Apologies: No Apologies

Meeting Objective

- Presentation of the proposed project and all activities involved.

Question/Answer Session

Closing

Matter of the day:

Introduction of Singo Consulting (Pty) Ltd
Miss Rudzani Shonisani made a brief introduction of Singo consulting including all the services they render.
Presentation done by Miss Rudzani Shonisani
<p>Singo Consulting (Pty) Ltd has been appointed by Dotess (Pty) Ltd as an independent Environmental Assessment Practitioner to conduct Environmental Impact Assessment and carry out Public Participation Process for the proposed Mining Right Application and compile an Environmental Management Programme.</p> <p>The mining right area falls in the Nkangala District Municipality and Emalahleni Local Municipality, Mpumalanga Province. The mining right application will be on portions 2, 5, 19, 22, 48 7 49 of the farm Witbank 80 IS. The site is located Approximately 8,9 km southwest of Kriel, approximately 8.9 km southwest of Kriel Mall, approximately 15.4 west of Kriel Power Station approximately 21 km southwest of Reedstream Park, approximately 6.6 km northeast of Boskrans, approximately 6 km east of Dios Hostel, approximately 2.6 km northwest of Enkundleni Primary School, approximately 8.7 km northwest Adiels Carriers Bethal Depot, approximately 13.1 km west of Diepfontein, approximately 19.2 northwest of Bethal, approximately 19.8 km northeast of Trichardt, and approximately 19.1 km west of Matla Power Station. The mining right area can be accessed through the R545 provincial road.</p> <ul style="list-style-type: none"> • Project area = approximately 1529.120 hectares (ha) • Life of mine = 30 years • Mining methodology = Surface mining operation, associated infrastructure including washing plant as well as underground mining method • Surrounding Targeted Market = There are two coal fired power stations located in close proximity to the project area. The proposed project is located approximately 15.4 west of Kriel Power Station and approximately 19.1 km west of Matla Power Station located in less than 90km to the project area, namely Amajuba and Camden power stations. <p>Coal has many important uses worldwide. The most significant uses of coal are in electricity generation, steel production, cement manufacturing and as a liquid fuel. Different types of coal have different uses. Steam coal - also known as thermal coal - is mainly used in power generation.</p> <p>Prospecting work was not performed, however astonishing results were obtained from historical data (evaluations and studies) such as Zietsman (1982) and Anderson (2022).</p> <ul style="list-style-type: none"> • Should the application be granted, mining activities will be undertaken over a period of Thirty (30) years. • Associated infrastructures will include; <p>Proposed Infrastructure: Access & Haul roads (with necessary security) including the upgrading of the access point to the gravel road. Offices Workshop and stores (with septic/chemical ablution facilities)</p>

Diesel facilities and a hardstand
 Boxcut
 Surface water management measures (stormwater diversion berms and trenches, pollution control dams etc)
 Full washing plant
 Adit
 Contractor's Yard with septic/chemical ablution facilities
 Weighbridge
 Discard Facility
 Power and Water
 Stockpiles (topsoil, overburden, subsoil/softs, ROM)

Chapter 6, regulation 40(2)(3) of EIA Regulations (GNR 326, 7 April 2017) requires that the Public Participation Process provides access to all information that may have potential to influence decision regarding the applications, it further outlines that the potential interested and affected parties be provided with an opportunity to comment on project reports and plans.

Requirements for the public participation process:

- Newspaper Advertisement (Witbank News/Nuus)
- Site Notices (Various spots)
- Community Meeting

Proposed Community Development Plan

- The mine proposes to employ a maximum of 52 permanent workers who will represent 90% of Juda/Erik Community, Thubelihle, Kriel and the affected farm households and 10% may be outsourced.
- Dotess (Pty) Ltd/ Singo Consulting (Pty) Ltd will be engaging with the LED Manager at Emalahleni Local Municipality.
- Indirect Impacts will be the production, employment and income changes occurring in other business/industries due to the proposed operation.

Your comments captured in the form of a comment form will assist the DMRE to make a decision on whether to grant or refuse the application thus your comments are critical.

Project Timelines for Scoping Report (SR)

- Announcement of the Mining Right application: 10 March 2023
- Stakeholder engagement and consultation: 10 March 2023- 26 March 2023
- Review of Draft Scoping Report: 27 March 2023- 28 April 2023
- Submission of the final SR: To be confirmed

Reviewing Areas for Draft Scoping Report (DSR)

Areas	Contact Person	Addresses
Areas	Contact Details	Physical Address
Kriel Public library	017 648 2241 kriellibrary@mweb.co.za	Quintin &, Heinrich St, Kriel, 2271
Thubelihle Public library	0664855052 ncbanda@mpg.gov.za	2275 Kriel Drive, Thubelihle

eMalahleni Local Municipality Areas	013 690 6911/ 013 690 6207 Contact Details	Civic Centre, Cnr Mandela & Arras Streets, eMalahleni Physical Address
<p>SINGO CONSULTING will advise Dotess (Pty) Ltd not to mine until the processes are complete and they have a granted MINING RIGHT Letter, WASTE MANAGEMENT LICENCE AND AN INTERGRATED WATER USE LICENCE. Associated Social and Labour plans will start to be implemented (Jul-Dec) when mining has generated capital (Jan-June).</p>		
Questions and Answers		
Issue raised/ Comments	Response	Actions
Csllr: Will the applicant be available on the meeting that you may want to have with community	Yes, the plan is for him to be present as most content we believe will require his input.	Noted.
Csllr: We want the mine as it would be good for our people. When do you intend to do the meeting with public?	The intention is to do it as early as possible maybe we can look into weekends as people will be free and especially one maybe before easter holidays?	2 nd April 2022 can work for all of us.
WAY FORWARD		
Meeting will be held on the 2 nd of April 2023 and applicant will be present at Juda/Erik Community.		
End-of-Minutes		

1. Attendance Register:

SINGO CONSULTING (PTY) LTD						
Meeting venue: Kriel Municipality						
Date: 22 March 2023						
Time: 12:00						
Address: Mining Right Consultation.						
No.	Name & Surname	Designation	Company/Landowner (Other/Specific)	Contact Details	Email Address	Signature
1	Valentine Mhlango	Env. Fed.	Singo Consulting	0818134654	valentinesingoclienting.co.za	[Signature]
2	BONGANI P. H. WANA	CELLR	ward 7b	0711143277	bisingoclienting@gmail.com	[Signature]
3	Kandile Sekweba	CDM	C.O.G.T.A	0720338276	zayekw@cogeta.com	[Signature]
4	Mdiban (Monsisa)	EAP	SC	0785481911	mdiban@vividonit.org.za	[Signature]
5	Lucas Dzandza	CELLR	ward 21	0191915444	sham@vividonit.org.za	[Signature]
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						



2. Meeting Pictures



MEETING WITH COMMUNITY OF THUBELIHLE AND SINGO CONSULTING (PTY) LTD [CONSULTANT].

Date: 02 April 2023

Time: 10:30 am

Venue: Thubelihle sports ground

Attendees: Mrs. Rudzani Radebe, Ms. Mazithi Mangcu, Ms. Boitumelo Moholola Mr. Abel Mojalefa, Mr. Fhatuwani Ndongyane and Mr. Khulekani Zwane from Singo Consulting (Pty) Ltd and Mr. Bongani P Thuwela (Cllr), Mr. Lucas Dzodzi (Cllr ward 27), Ms. Zandile Sekweba from CDW and Ms. Bathabile Kulobe from Human Settlement.

Client: Dotess (Pty) Ltd

Agenda and minutes:

- 1. Opening & Welcoming:** Mr Bongani P Thuwela
- 2. Rollcall:** Bongani welcomed the community to the meeting and introduced himself, Rudzani introduced herself and her colleagues.
- 3. Introduction of the Company (Singo Consulting (Pty) Ltd)**

Ms. Rudazani Shonisani

 - Singo Consulting is an independent Environmental Consulting firm based in Witbank. We assist clients who wishes to open mines with the technicalities of the projects including but not limited to public participation process.
 - Singo Consulting (Pty) Ltd is appointed by Dotess (Pty) Ltd as an independent Environmental Consultant for the proposed Mining Right application on Portions 02, 05, 19, 22, 48 and 49 of the farm Witbank 80 IS.
 - PowerPoint presentation of a Mining Right application process.

4. Business of the day (BOD):

Bongani P Thuwela

- The consulting company needs to consult the municipality and councillor's first about the application, then as the stakeholders we would raise our questions and concerns to them. After the consultation with the stakeholders the community is included to raise their opinions regarding the application.
- In case of the removal of graves, that would be negotiated with the families that have graves there and DNA would be done to confirm that the grave belongs to them. We advise people not to take chances because of money.
- The client will only provide the community with jobs and only people from this community should benefit from this mine. The community can benefit jobs, driver's licence and business opportunities. The mine will take care of children by providing proper health care and school uniform.
- The applicant will build houses for the community, one house will be built for one household and not per person in a household.

Ms Bathabile Seloko from Human Settlement

- The community should be grateful that the applicant took the initiative to do a consultation with the community, as this is rare to happen. This is the time for the community to be united and work together to better your lives. In most cases people are moved to other areas by force and not get any benefits from the applicant. This is the chance to write down the needs of the community that would be forwarded to the applicant.

Questions and concerns by the community

- What will happen to those without qualification?
- What will happen to those who stay in the nearby hostel.
- What will happen to our cattle?
- We need one person to represent us to the applicant.
- In the next meeting we request the applicant to be present.

Response by Rudzani






















- The mine will not only employ people who have qualifications, even those without qualifications will be considered.
- People who live in hostel are few therefore they can be included in the benefits, but after the affected community.

- The applicant will provide the community with a piece of land that the community can use for their cattle.
- In the next meeting the applicant will be available as per your request.

End of Minutes (Time – 14:50pm)

Lunch was served.

Attendance Register:

SINGO CONSULTING (Pty) Ltd							
Meeting venue: ERIK / Juda sports ground							
Date: 02/04/2023							
Time: 10h00							
Community Participation Meeting (PPP)				ATTENDANCE REGISTER			
No.	Name & Surname	Designation	Company/Land Owner/ Other (Specify)	Contact Details	Email Address	Signature	
1	Amagelanga Kakhelo			0769193645			
2	Phumile Nkosi			0606735564			
3	mpheiso kaio			078437913			
4	Umdlwa cekiso			0604950658			
5	Asipha Bongelo			0049818699			
6	Elinie Makheba			0712084659			
7	Musimuzi Mkhwanazi			0723660453			
8	Upsi Mampela			0796557488			
9	Inemba Makhanga			0665883893			
10	Lundi Dlamini		Bino Group Pty Ltd	0062371318	binegroup@icloud.com		
11	Hector Madinane			0797427037	Marvceemudinane@gmail.com		
12	Khosi Myeni			0725601670			
13	Sento Makhanga			0824212291			
14	Exandiso Jale			0660532566			
15	Epsi Mtshali			0785857217			
16	Inemba Makhanga			0665883893			
17	Nkosi Kbonani Makhanga			0724212291			
18	Frank Mngomezulu			0649837520			
19	Obab Mkhankari			0728201165			
20	Abel Mqoko	EAP	Singo Consulting	0713627894			
21	Mazithi Mangcu	Intern	Singo Consulting	0728841000	mazithi@singoconsulting.co.za		

SINGO CONSULTING (Pty) Ltd
 Meeting venue: ERIC JUDA Sports Ground
 Date: 02/04/2023
 Time: 10h00



ATTENDANCE REGISTER


No.	Name & Surname	Designation	Company/LandOwner/ Other(Specify)	Contact Details	Email Address	Signature
1	ALFORD NARE			0686897361		[Signature]
2	SHEKILE MLATHA			0820590015		[Signature]
3	James Siphonkosi			092755		
4	Monweto Jyabekano			079799	0797333193	[Signature]
5	Siya Ndonnigane			0761448554		[Signature]
6	Christopher Smith			063851016		[Signature]
7	NABINATHI NAWENYA			066502502		[Signature]
8	Thomas Masitela			072582712		[Signature]
9	Moses Masitela			072582712		[Signature]
10	DALISA			0741006120		[Signature]
11	Thokozani Masitela			076593067		[Signature]
12	Thembinkosi Masitela			071263850		[Signature]
13	Magagula			072424666		[Signature]
14				07426224		
15	Mamochale Mkhambiso			0729268395		[Signature]
16	Vusumuzi Bobez			0796657315		[Signature]
17	Zakhele Mhosi			0765900686		[Signature]
18	WANDA MKOSI			074777	0799785738	[Signature]
19	Zand Nkhethwa			0727972885		[Signature]
20	Zandiso Mkhambiso			0744532039		[Signature]
21	Randini Mkhambiso		Singo Consulting	0794502439		[Signature]

SINGO CONSULTING (Pty) Ltd
 Meeting venue: ERIC JUDA Sports ground
 Date: 02/04/2023
 Time: 10h00




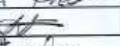
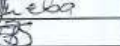





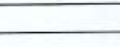
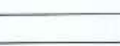
ATTENDANCE REGISTER

No.	Name & Surname	Designation	Company/LandOwner/ Other(Specify)	Contact Details	Email Address	Signature
1	Anesip Sibaya			072268557		[Signature]
2	Nothando Mhala			0828321609	16156053@gmail.com	[Signature]
3	ZINZI SHUMANE			079471674	Zinzile Shumane 7@gmail.com	[Signature]
4	GN Hlabane			0737305401	gnhlabane@gmail.com	[Signature]
5	SHIBUBO TSHALANGA			08033747635	SHIMAHLANGA@CFPS	[Signature]
6	Ninny Mhlangu			0798648001	miniasini105702@gmail.com	[Signature]
7	Kimmy Bebeza			0739023245		[Signature]
8	Sundubele			0724655515		[Signature]
9	Belinah Bongo			0731590074		[Signature]
10	Mthembu Mthembu			0722199514		[Signature]
11	George Sbezo			0716146132		[Signature]
12	John Mkhambiso			0719934497	Sbhambisentele.com	[Signature]
13	Lucas Dzandzi	City worker		0720741268		[Signature]
14	Mkhambiso Gule			0695126363		[Signature]
15	Nousa Nyauza			0787312430		[Signature]
16	Luphahle			0760907581		[Signature]
17	Ismond Gwiso			0798017106		[Signature]
18	Simon Mawela			0604362748		[Signature]
19	Bozana Mawela			0731240398		[Signature]
20	Ratilo Mhala			0798130457		[Signature]
21	Hendrik Rousseau					[Signature]


Singo Consulting (Pty) Ltd

SINGO CONSULTING (PTY) LTD
 Meeting venue: ESKILANDA sports Ground.
 Date: 02/04/2023
 Time: 10h00
Community Participation Meeting (PPP)

ATTENDANCE REGISTER

No.	Name & Surname	Designation	Company/Land Owaer/ Other (Specify)	Contact Details	Email Address	Signature
1	Richardani Shonisani	CAP	Singo Consulting	0785481294	richardani@singoconsulting.co.za	
2	Hector Madinane			0798627037	MARVEEMADINANE@gmail.com	
3	Lundi Dlamini	COA	Bingogroup	066237135	bingogroup@picloud.com	
4	Zandile Sekweba	(C.O.G.T.A)	C.O.G.T.A	0722338276	zgsckweba@gmail.com	
5	Inameanga Sekweba		Khaili trading	0731406688	khailient47@gmail.com	
6	ZWELAKHE Zitha		Alejandro smart	0815412877	AlejandroSMARToptions@gmail.com	
7	Bathabile KULOBE		Human Settle	0722204154	samaniraku lubo@gmail.com	
8	BONGANI P. Mulelo	CIIV		071115277		
9	HNULIYANI ZWANE	Hydrogeologist	Singo Consulting	0785691234	hnuliyani@singoconsulting.co.za	
10	Bontumelo Mokoala	Consultant	Singo Consulting	0711309956	bontumelo@singoconsulting.co.za	
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						

Pictures:





Comments submitted:

Tell: 013 692 0041/081 813 0654
 Fax: 086 5144 103
 Email: admin@singoconsulting.co.za
 Email (Alt): valentine@singoconsulting.co.za



Appendix A: REGISTRATION AND COMMENT FORM SHEET

NOTICE OF SECTION 102 AMENDMENT ON COAL MINING RIGHT AND ENVIRONMENTAL AUTHORIZATION APPLICATION ON PORTIONS 02, 05, 19, 22, 48 AND 49 OF THE FARM WITBANK 80 IS, IN THE MAGISTERIAL DISTRICT OF WITBANK, MPUMALANGA PROVINCE: DMRE REF NUMBER: MP 30/5/1/1/2/ 478 MR.

Please complete this form and return it to **Singo Consulting (Pty) Ltd** to ensure that you are registered as an Interested and Affected Party (I&AP).

By answering the questions below you will help us to develop a better understanding of your information requirements. The form also gives you the opportunity to make comments regarding the project. Additional pages may be attached.

I&AP Details:

Full Names and Surname: WINNIE MARTHA MAHLANGU					
Contact Details:					
Tel(w):	N/A	Tel(h):	N/A	Fax No:	N/A
				Cell No:	079 864 8001
Email: Winnie.Mahlangu0102@gmail.com					
Physical Address: ERIK FARM					
Postal Address: N/A					
Preferred method of communication: <input type="checkbox"/> fax <input checked="" type="checkbox"/> e-mail <input type="checkbox"/> post					
Preferred telephonic communication: <input checked="" type="checkbox"/> cell <input type="checkbox"/> home <input type="checkbox"/> work					
Organisation/Representative:					
Farm name, number and subdivision or Street Address (if applicable):					ERIK FARM WITBANK 80

Questions(s):

1. Where did you get information about the project?

Newspaper advertisement notice board flyer other (please specify)

NOTICE BOARD

Tell: 013 692 0041/081 813 0654
Fax: 086 5144 103
Email: admin@singoconsulting.co.za
Email (Alt): valentine@singoconsulting.co.za



2. Do you represent a company/organization or is your interest on behalf of yourself?

BEHALF OF MYSELF

3. Do you know of anyone that is affected by the proposed activity who was not informed of the project? (Please provide contact details)

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

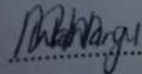
Do you have any specific concerns or comments regarding the project?

YES

NO

If yes, please indicate what the comments are?

We want to be the first priority on the Mine.
We are the first people to benefit
We must be trained before the mine start to operate so
that when the mine start we must be included
We want houses



Signed

13/04/2023

Date

Tell: 013 692 0041/081 813 0654
 Fax: 086 5144 103
 Email: admin@singoconsulting.co.za
 Email (Alt): valentine@singoconsulting.co.za



Appendix A: REGISTRATION AND COMMENT FORM SHEET

NOTICE OF SECTION 102 AMENDMENT ON COAL MINING RIGHT AND ENVIRONMENTAL AUTHORIZATION APPLICATION ON PORTIONS 02, 05, 19, 22, 48 AND 49 OF THE FARM WITBANK 80 IS, IN THE MAGISTERIAL DISTRICT OF WITBANK, MPUMALANGA PROVINCE: DMRE REF NUMBER: MP 30/5/1/1/2/ 478 MR.

Please complete this form and return it to **Singo Consulting (Pty) Ltd** to ensure that you are registered as an Interested and Affected Party (I&AP).

By answering the questions below you will help us to develop a better understanding of your information requirements. The form also gives you the opportunity to make comments regarding the project. Additional pages may be attached.

I&AP Details:

Full Names and Surname: <u>Oupa Simon Mawela</u>					
Contact Details:					
Tel(w):		Tel(h):		Fax No:	
Email:				Cell No:	<u>079307106</u>
Physical Address:	<u>Erick Farm</u>				
Postal Address:	<u>Kriel 221</u>				
Preferred method of communication: <input type="checkbox"/> fax <input checked="" type="checkbox"/> e-mail <input type="checkbox"/> post					
Preferred telephonic communication: <input type="checkbox"/> cell <input type="checkbox"/> home <input type="checkbox"/> work					
Organisation/Representative:	<u>Singo Consulting</u>				
Farm name, number and subdivision or Street Address (if applicable): <u>Erick Farm ward 24</u>					

Questions(s):

1. Where did you get information about the project?

Newspaper advertisement notice board flyer other (please specify)

I got the information to the notice board

Tell: 013 692 0041/081 813 0654
Fax: 086 5144 103
Email: admin@singoconsulting.co.za
Email (Alt): valentine@singoconsulting.co.za



2. Do you represent a company/organization or is your interest on behalf of yourself?

My interest is to employed and training a job

3. Do you know of anyone that is affected by the proposed activity who was not informed of the project? (Please provide contact details)

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

Do you have any specific concerns or comments regarding the project?

YES

NO


If yes, please indicate what the comments are?

I need the company project to provide me a new place, House holds and a job cause my work is going to broken when this proj mine starting to running

Signed
Signed

16 April 2023
Date

More comment forms attached (Separately).



**SECTION 102 AMENDMENT ON COAL MINING RIGHT APPLICATION,
ENVIRONMENTAL AUTHORIZATION (INTEGRATED EIA & EMPR), WATER USE
LICENSE AND WASTE MANAGEMENT APPLICATIONS ON PORTIONS 02, 05,
19, 22, 48 AND 49 OF THE FARM WITBANK 80 IS, LOCATED IN THE
MAGISTERIAL DISTRICT OF WITBANK, MPUMALANGA PROVINCE: DMRE
REF NUMBER: MP30/5/1/1/2/478MR.**

**PRESENTED BY: SINGO CONSULTING (PTY) LTD
PRESENTED FOR: DOTESS (PTY) LTD
DATE: 02 APRIL 2023
LOCATION: ERIK/JUDA SPORTS GROUND: FARM WITBANK 80 IS (KRIEL)**

5 Balalaika Street, Office No.870
Tasbet Park Ext 2

+27 13 692 0041

kenneth@singoconsulting.co.za

CONTENT

- ❖ INTRODUCTION
- ❖ BRIEF DESCRIPTION OF THE MINING RIGHT APPLICATION PROJECT
- ❖ PUBLIC PARTICIPATION PROCESS
- ❖ INFRASTRUCTURES INVOLVED
- ❖ SCOPING & EIA PROCESS
- ❖ SPECIALIST STUDIES INVOLVED
- ❖ EXPLORATION DRILLING
- ❖ PROPOSED SOCIAL DEVELOPMENT PLAN

+27 13 692 0041

kenneth@singoconsulting.co.za

www.singoconsulting.co.za

5 Balalaika Street, Office No.870
Tasbet Park Ext 2,
eMalaheni



INTRODUCTION

Singo Consulting (Pty) Ltd is an independent Environmental consulting company based in eMalahleni (Witbank), Mpumalanga Province. The company was established in the year 2008, started working functionally in 2012 and it has been growing rapidly and making itself known within the length breadth of the Republic of South Africa.

Singo Consulting (Pty) Ltd offers a wide range of cost effective, high quality geo-environmental services which include: -

- ❖ Mining & Prospecting Applications
- ❖ Mining Feasibility Studies
- ❖ Geological (Exploration, Resource Estimation, & Competency Report)
- ❖ Environmental Impact Assessment & Environmental Management Plan etc.

Singo Consulting (Pty) Ltd has been appointed by DOTESS (PTY) LTD as an independent Environmental Assessment Practitioner to conduct Environmental Impact Assessment and Environmental Authorisation, Water Use License & Waste Management License Applications and carry out Social Labour Plan, Public Participation Process, Rezoning & compile an Environmental Management Programme Report for the proposed Mining Right Application.

DOTESS (PTY) LTD

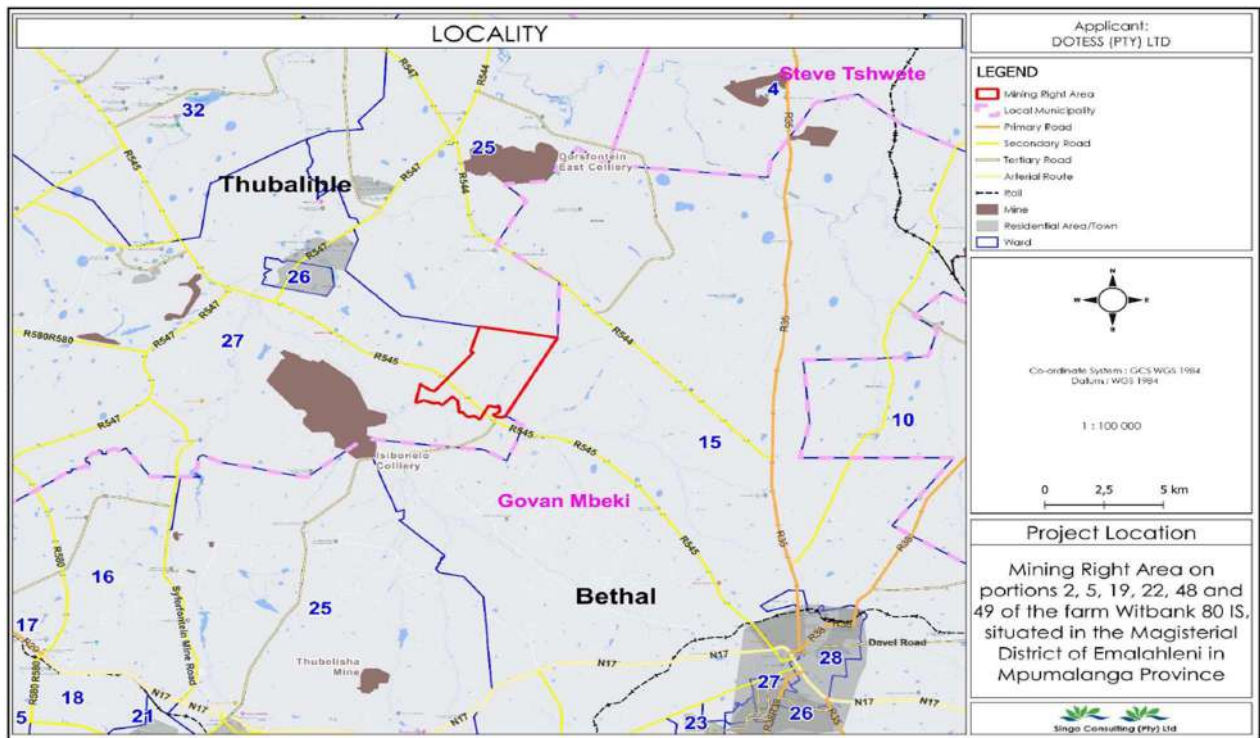


SINGO CONSULTING(PTY) LTD



BRIEF DESCRIPTION OF THE MINING RIGHT APPLICATION PROJECT

MINING RIGHT APPLICATION	HECTARES (HA)	LOCATION
<p>❖ Portions 02, 05, 19, 22, 48 and 49 of the farm Witbank 80 IS</p>	1529.120	<p>The Proposed Project Area, is situated approximately 8,9 km southwest of Kriel, approximately 8.9 km southwest of Kriel Mall, approximately 15.4 west of Kriel Power Station , approximately 21 km southwest of Reedstream Park, approximately 6.6 km northeast of Boskrans, approximately 6 km east of Dios Hostel, approximately 2.6 km northwest of Enkundleni Primary School, approximately 8.7 km northwest Adiels Carriers Bethal Depot, approximately 13.1 km west of Diepfontein, approximately 19.2 northwest of Bethal, approximately 19.8 km northeast of Trichardt, and approximately 19.1 km west of Mafra Power Station.</p>



BRIEF DESCRIPTION OF THE MINING RIGHT APPLICATIONS PROJECT

- ❖ The mining right areas fall within the Emalahleni Local Municipality, in Mpumalanga Province, South Africa.
- ❖ The mining right areas can be accessed via the existing farm roads which extend from the R545 provincial road.
- ❖ Coal is the mineral of interest

Mineral of Interest: Coal Resources



+27 13 692 0041



kenneth@singoconsulting.co.za



www.singoconsulting.co.za

5 Balalaika Street, Office No.870
Tasbet Park Ext 2,
eMalahleni



CONT...

- ❖ Application for a Mining right runs for a maximum period of 30 years.
- ❖ Mining Methodology = Surface Mining Operation (also known as open cast/ open pit), associated infrastructure including haul roads, processing plant, offices, sanitation etc. and well as Underground Mining Method

Summary of product consumers:

- ❖ Eskom: the project area is located approximately 15.4 west of Kriel Power Station and approximately 19.1 km west of Matla Power Station
- ❖ Exporting coal (South Africa as the 6th largest coal-exporting nation in the world),

+27 13 692 0041  kenneth@singoconsulting.co.za
 www.singoconsulting.co.za

5 Balalaika Street, Office No.870
Tasbe! Park Ext 2,
eMalaheni



Singo Consulting (Pty) Ltd

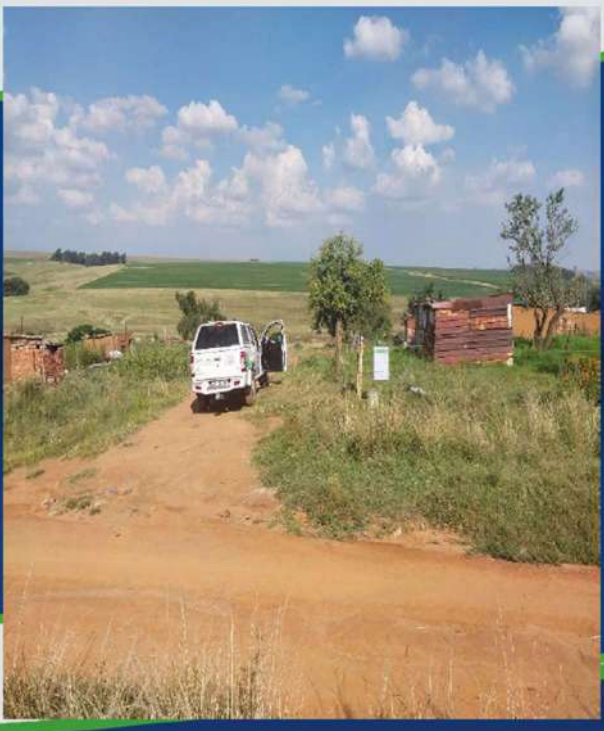
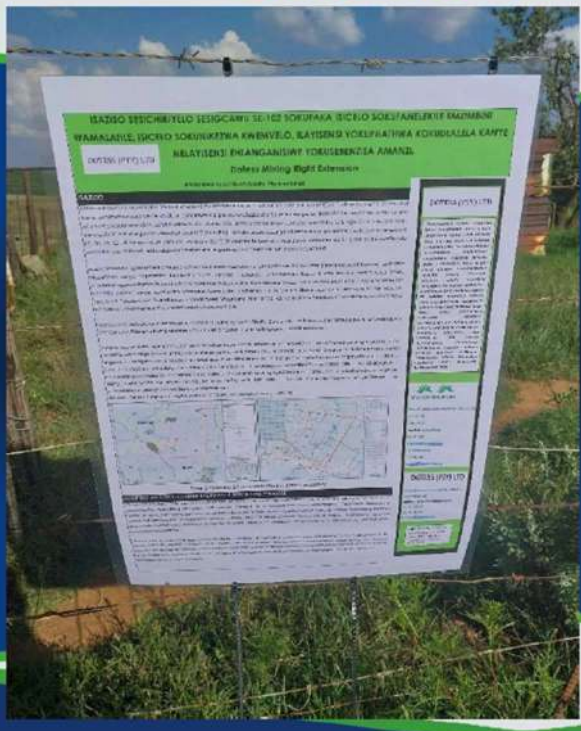
PUBLIC PARTICIPATION PROCESS

According to Chapter 6, Regulation 40(2)(3) of EIA Regulations (GNR 326, 7 April 2017) requires that the Public Participation Process provides access to all information that may have potential to influence decision regarding the applications, it further outlines that the potential interested and affected parties be provided with an opportunity to comment on project reports and plans.

Requirements for the public participation process:

- ❖ Newspaper Advertisement (Witbank News/ Nuus : 10 March 2023)
- ❖ Site Notices were placed on the farm boundaries, Erik/Juda community, the Emalaheni Local Municipality, Kriel Public Library, Thubelihle Public Library, Thubelihle Clinic, and Kriel Information Hub
- ❖ Community Meeting: Kriel (Date & Venue: To Be Announced)

SITE NOTICES PLACED

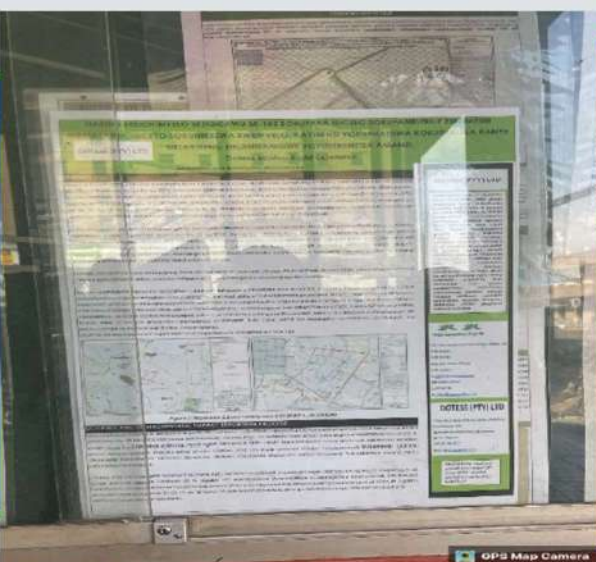
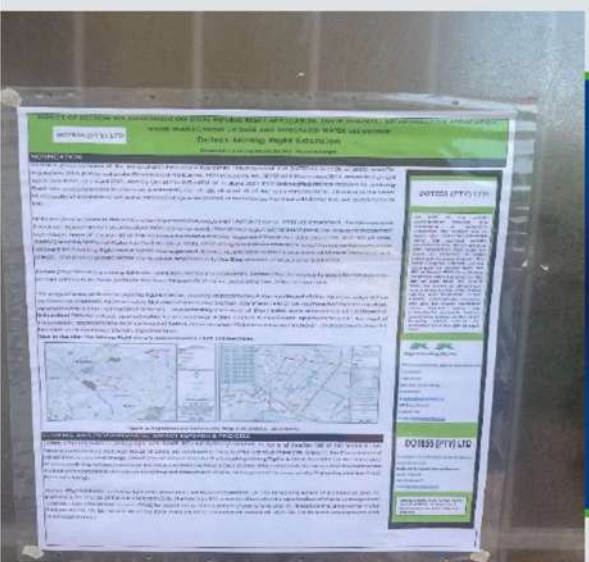


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5 Balalaika Street, Office No.870
 Tasbet Park Ext 2,
 eMalaheni



SITE NOTICES PLACED CONT....



Kriel, MP, South Africa
 Quentin Street, Kriel, 2271, MP, South Africa
 Lat -26.247467, Long 29.263267
 03/08/2023 12:18 PM GMT+02:00
 Note : Captured by GPS Map Camera

Emalaheni, MP, South Africa
 Arras Street, Emalaheni, 1034, MP, South Africa
 Lat -25.874245, Long 29.213893
 03/08/2023 10:34 AM GMT+02:00
 Note : Captured by GPS Map Camera

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EXAMPLES OF COMMUNITY MEETINGS



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CONT...

A Comment Form In The Face Of The Law Speaks Volumes.

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Fax: 086 5184 101
Email: kenneth@singoconsulting.co.za
Email (Alt): kylen@singoc.com

Appendix A: REGISTRATION AND COMMENT FORM SHEET

NOTICE OF SECTION 102 AMENDMENT ON COAL MINING RIGHT AND ENVIRONMENTAL AUTHORIZATION APPLICATION ON PORTIONS 02, 05, 19, 22, 48 AND 49 OF THE FARM WITBANK 80 IS, IN THE MAGISTERIAL DISTRICT OF WITBANK, MPUMALANGA PROVINCE. DRAWN BY NUMBER: MP 30/2/13/27/478 MR.

Please complete this form and return it to Singo Consulting (Pty) Ltd to ensure that you are registered as an Interested and Affected Party (I&AP).

By answering the questions below you will help us to develop a better understanding of your information requirements. The form also gives you the opportunity to make comments regarding the project. Additional pages may be attached.

I&AP Details:

Full Names and Surname:		Contact Details:		
Tel(w):	Tel(h):	Fax No:	Cell No:	
Email:				
Physical Address:				
Postal Address:				
Preferred method of communication: (tick) <input type="checkbox"/> email <input type="checkbox"/> post				
Preferred telephonic communication: (tick) <input type="checkbox"/> cell <input type="checkbox"/> home <input type="checkbox"/> work				
Organisation/Representative:				
Farm name, number and subdivision or Street Address (if applicable):				

Question(s):

1. Where did you get information about the project?
Newspaper advertisement notice board flyer other (please specify)



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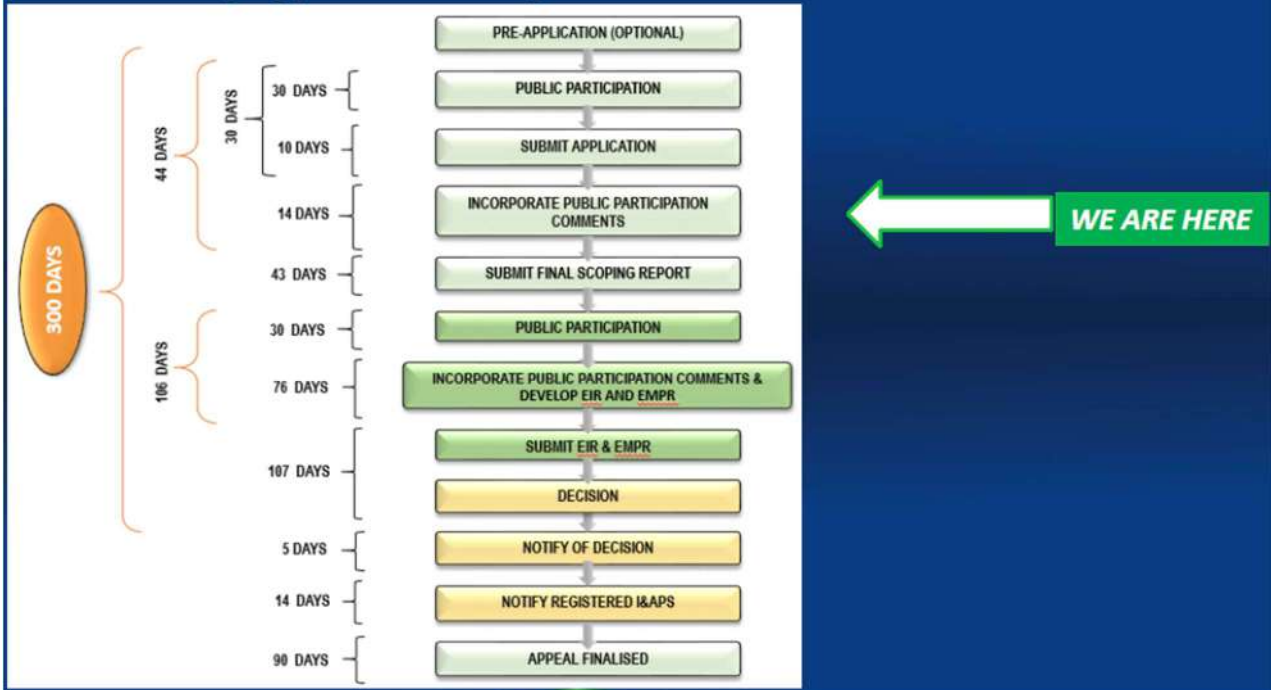
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SCOPING & EIA PROCESS

The scoping phase is conducted as the precursor to the Environmental Impact Assessment (EIA) process for 87 days.



PROJECT TIMELINES

- ❖ Public Participation Process was initiated on the 10th of March 2022.
- ❖ The Section 102 Amendment on the Mining Right & Environmental Authorisation was applied/submitted on the 6th of March 2023.
- ❖ The formal 300 days for EIA have not yet began.
- ❖ The draft Scoping Report (SR) will be made available to stakeholders and Interested and Affected Parties for a period of 30 days to review and provide comments from the 27th of March 2023 until the 28th of April 2023.
- ❖ All registered Interested and Affected Parties have been notified of the dates for the availability of the Draft Scoping Report.



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SPECIALIST STUDIES

Singo Consulting (Pty) Ltd as an independent Environmental Assessment Practitioner (EAP), is appointed to complete the necessary environmental applications and oversee the various specialist studies:

Geohydrology study	Heritage study
Biodiversity study	Hydrological Study
Blasting and vibration Assessment	Integrated Water and Waste Management
Competent Person's Report (CPR)	Wetland Delineation Study
Mine Work Programme (MWP)	Soil study
Rehabilitation Plan	Surface and Storm Water Management Report
Traffic Management Study	Water Balance Report
Social Labour Plan (SLP)	Geotechnical engineering



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SOIL STUDY

- ❖ The assessment will entail evaluating physical soil properties and current limitations to various land use purposes.
- ❖ Subsurface soil observations will be made using a manual hand auger to assess individual soil profiles.
- ❖ Equipment's used during the soil sampling will include:
 - ✓ GPS
 - ✓ Camera
 - ✓ Spade
 - ✓ Hand auger
 - ✓ Sampling bags.
- ❖ A soil field form will be completed during the sampling procedure, recording the moisture, colour, texture, and origin the soil origin.



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SOIL STUDY



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HYDROGEOLOGY & HYDROLOGY STUDY

- ❖ To assess the quality condition of surface and groundwater within and around the mining right area, and to draft a water monitoring programme for the project site and provide recommendations.

Procedure:

- ❖ Conduct hydrocensus of existing boreholes, including groundwater use type and volume.
- ❖ Identification of monitoring boreholes during which hydrogeological data such as depth to water strike and groundwater quality will be monitored.
- ❖ Laboratory testing of samples for physical, chemical, and biological parameters.

Groundwater and surface water sampling equipment:

- ✓ GPS
- ✓ Cooler box
- ✓ Bailer
- ✓ Gloves
- ✓ Field form
- ✓ Probes
- ✓ Dip meter
- ✓ Bottles
- ✓ Pen



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GEOTECHNICAL INVESTIGATION

The investigation will be carried out to assess the geotechnical conditions of the site for the proposed development. As per the Client's instructions. This will be done to identify the anticipated geotechnical constraints that may have an adverse impact on the proposed development, and to provide foundation recommendations and suitability of the in-situ soils for the construction of the proposed infrastructure.

The scope of work will include:

- ❖ Excavation of test pits.
- ❖ Laboratory testing and analysis.

The equipment used includes:

- ✓ TLB,
- ✓ Geological hammer,
- ✓ sample bags,
- ✓ marker,
- ✓ shovel,
- ✓ Tape measure,
- ✓ Field form,
- ✓ GPS and Maps.



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PROPOSED SOCIAL DEVELOPMENT PLAN

- ❖ The mine proposes to employ an estimate of 52 permanent workers who will represent 100% of Juda/Erik Community, Kriel, Thubelihle, and the affected farms households of the farm Witbank 80 IS
- ❖ Dotess (Pty) Ltd/ Singo Consulting (Pty) Ltd will be engaging with the LED Manager at Emalahleni Local Municipality.
- ❖ Indirect Impacts will be the production, employment and income changes occurring in other business/industries due to the proposed operation.



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PROPOSED SOCIAL DEVELOPMENT PROJECTS



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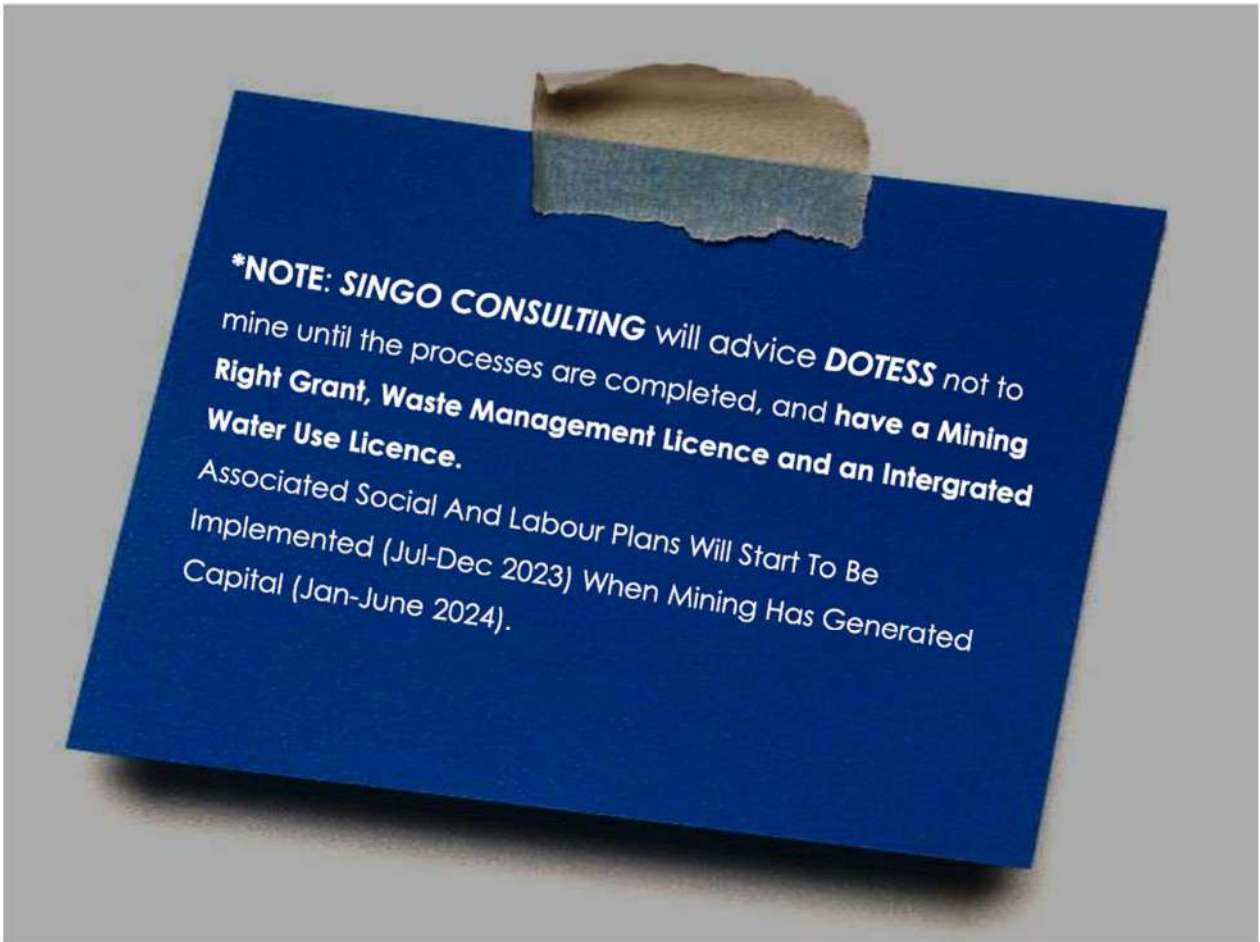


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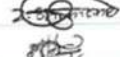






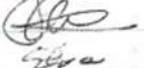
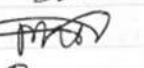




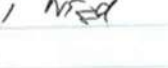



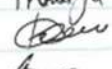
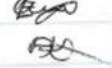

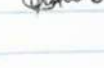




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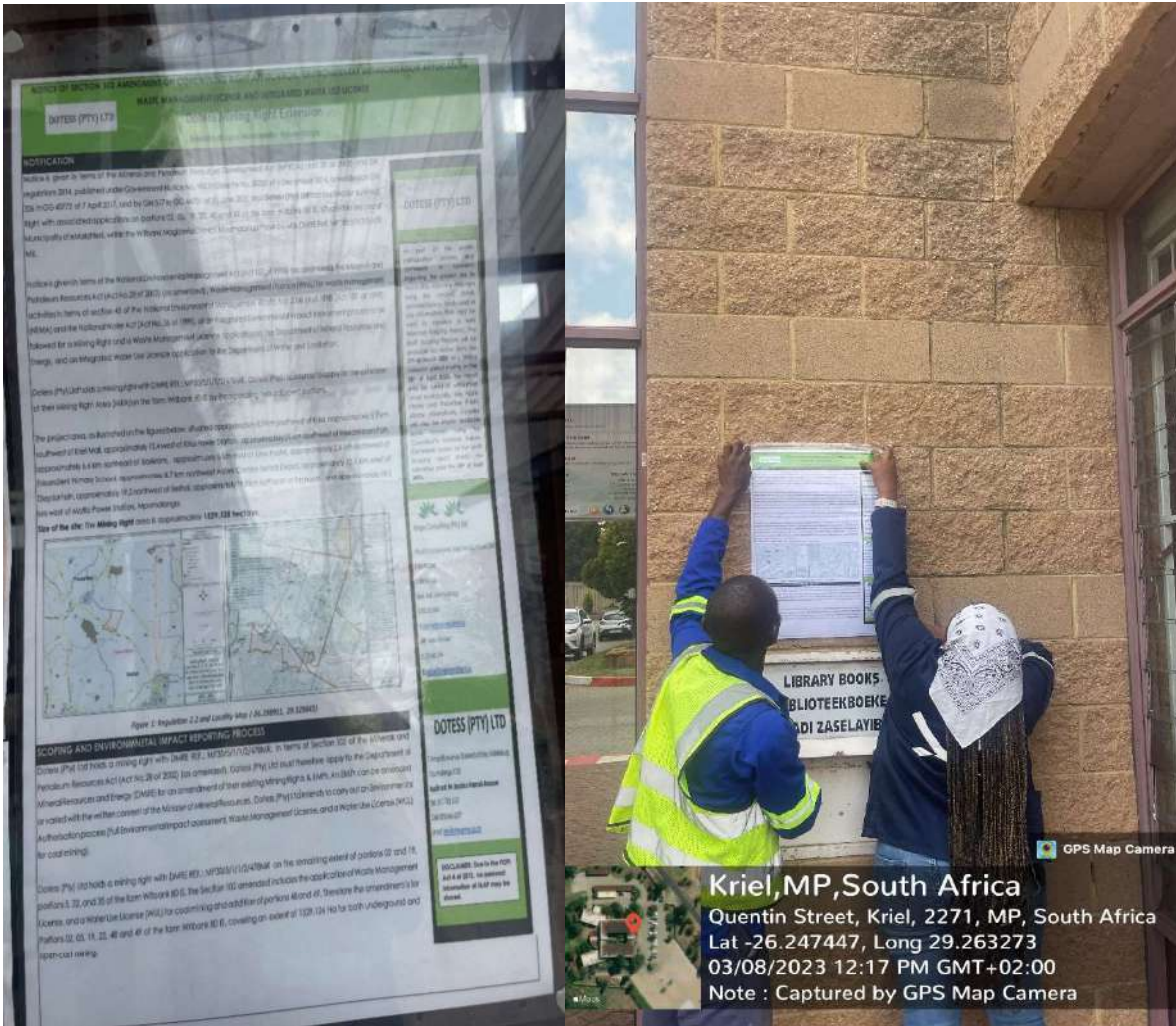


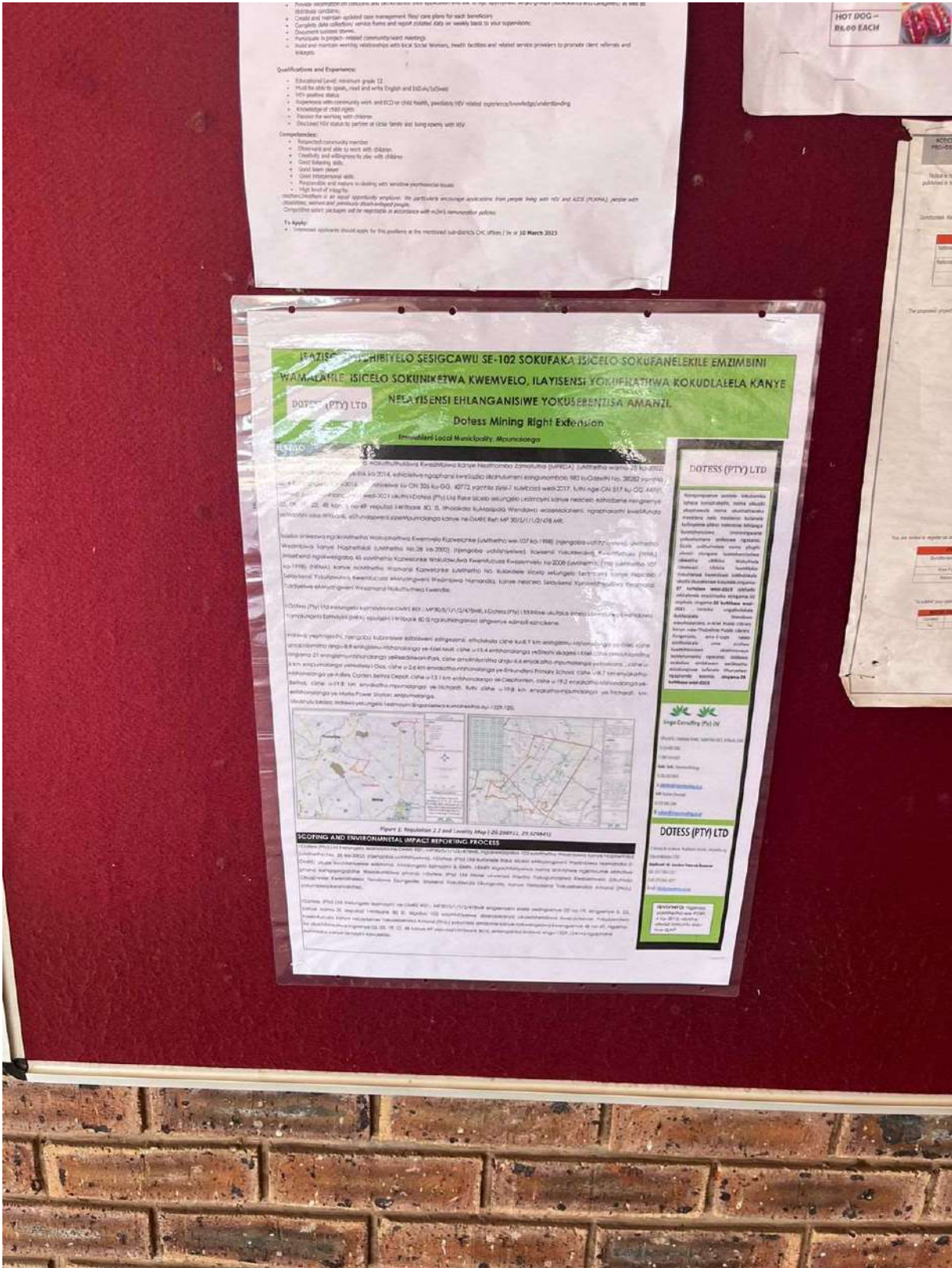
A second meeting was held amongst the community members whereby a register was shared off people who attended and that will be affected (Households).

Name and Surname	Number	Signature
1 Nathardo Inwala	0828321608	
2 SESI Mtshali	08 565 7217	
3 Zinzi Shumane	079 471 6714	
4 Phumzile Nkusi	0606735661	
5 Lulama Kalo	0727312638	
6. Khosi Myeni	072 560 1674	
7 SANDISINE Jak	0660532565	
8 Anelisa Sibaya	0725085579	
9. Mamsa Nyauza	0655136365	
10. Kusimuzi Bebeza	079 665 7315	
11. HAPPY MATHLANGU	064 866 5917	
12. Emmeyi Bebeza	073 8023 243	
13 Angelinde Mhlabiso	0728268395	
14. Palisa Makhetha	0781000400	
15. Nkhabiseng Mchola	0766425048	
16. WANDA NKOSI	079 853 5733	
17. Cekiso Lindelwa	0604980658	
18. MUGSO KALO	0784391388	
19. Mtombentse Isitse	0730258301	
20. Moses Mchola	0725829712	
21. NAYAN MASITHE		
22. SHARBY MATHLANGU	0837476253	
23. Seth Mathlangu	079 277 1006	
24. Winny Mathlangu	079 864 8001	
25. Amogelang KATHOLO	0769193615	
26. Kesetselemang Koppiso	0792886445	
27. APHEIALE BONGELE	0649818632	
28. Elinie Makhetha	0712034659	
29. ABULLE Buthelesi	066 510 6134	

30	Vusi Madonsele	079 655 7488	<i>[Signature]</i>
31	Bphiwe Mozibuko	079 5353 455	<i>[Signature]</i>
32	Vuyokazi Mxaliso	0127795657	<i>[Signature]</i>
32	Zanomkhethe Guthu	072768085	<i>[Signature]</i>
33	Bongani Frank Mngomezulu	0637297954	<i>[Signature]</i>
34	Sello Sonto Makhanyu	0824212291	<i>[Signature]</i>
35	Nusumuzi Mtsweni	0723640453	<i>[Signature]</i>
36	Jabulile mndkese	072465 5515	<i>[Signature]</i>
37	Seling Bongelo	0731590979	<i>[Signature]</i>
38	Shinykile Mlatha	0820 590015	<i>[Signature]</i>
39	Ntombifuthi Mndebele	0522199814	<i>[Signature]</i>
40	Ci M Mlawane	073 730 5401	<i>[Signature]</i>
41	Zandile Mziyane	0663623984	<i>[Signature]</i>
42	Siyeni Ndungwane	076 144 3584	<i>[Signature]</i>
43	Thomas Masilela	082 922 5212	<i>[Signature]</i>
45	Zandile Sekwaba	0722338276	<i>[Signature]</i>
46	Bathabile KuluSe	0722204156	<i>[Signature]</i>
47			
48			
49			

Proof of placement of site notices in English & Isizulu and newspaper advert.





Tell: 013 692 0041/081 813 0654
Fax: 086 5144 103
Email: admin@singoconsulting.co.za
Email (Alt): valentine@singoconsulting.co.za



Background Information Document (BID)
SECTION 102 AMENDMENT ON COAL MINING RIGHT APPLICATION, ENVIRONMENTAL AUTHORIZATION (INTEGRATED EIA & EMPR), WATER USE LICENSE AND WASTE MANAGEMENT APPLICATIONS ON PORTIONS 02, 05, 19, 22, 48 AND 49 OF THE FARM WITBANK 80 IS, LOCATED IN THE MAGISTERIAL DISTRICT OF WITBANK, MPUMALANGA PROVINCE: DMRE REF NUMBER: MP30/5/1/1/2/478MR.
MARCH 2023



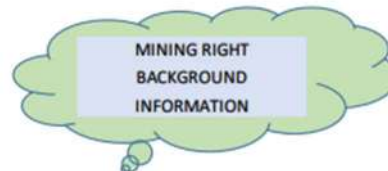
Prepared by:



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

Prepared on behalf of:

DOTESS (PTY) LTD
No. 7 Amaryllis Avenue,
Roberts Estate, Middelburg
Mpumalanga, 1055
Cell No: 063 527 1710
Email: info@cheyenne.co.za



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Dotess (Pty) Ltd has applied for Section 102 Amendment on Coal Mining Right in terms of the Minerals and Petroleum Resources Development Act (Act No.28 of 2002) (MPRDA) (as amended) on portions 02, 05, 19, 22, 48 and 49 of the farm Witbank 80 IS, located in the Magisterial District of Emalahleni (Witbank), Mpumalanga Province: DMRE REF Number: MP30/5/1/1/2/478MR.

This application for a mining right is subject to an application for an Environmental Authorization in terms of the National Environmental Management Act (NEMA), Act 107 of 1998. In addition to this, the project will also require a Water Use license in terms of the National Water Act, Act No. 36 of 1998 (NWA), and a Waste Management License (WML) for waste management activities in terms of section 45 of the National Environmental Management Waste Act 2008 (Act,1998 (Act 107 of 1998)(NEMA).

Dotess (Pty) Ltd appointed Singo Consulting (Pty) Ltd as an independent Environmental Assessment Practitioner (EAP), to complete the necessary environmental applications and oversee the various specialist studies:

Various Specialist studies:	
Geohydrology study	Heritage study
Biodiversity study	Hydrological Study
Blasting and vibration Assessment	Integrated Water and Waste Management
Mining Right Layout	Wetland Delineation Study
PCD and General Engineering Design	Soil study
Rehabilitation Plan	Surface and Storm Water Management Report
Traffic Management Study & Geotechnical Study	Water Balance Report

2. LOCATION

The mining right area falls in the Nkangala District Municipality and eMalahleni Local Municipality, Mpumalanga Province. The mining right application will be on portions 02,05, 19, 22, 48 and 49 of the farm Witbank 80 IS. Please refer to Figure 1 and Figure 2 on page 4.

3. PURPOSE OF THE BACKGROUND INFORMATION DOCUMENT

➤ *The purpose of this document is to:*

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- Provide background information to landowners and interested and affected parties (I&APs) on the proposed prospecting activities
- Consult stakeholders and provide them the opportunity to register as I&APs
- Announce the availability of a draft Scoping Report available for public review and comment
- Obtain I&AP comments and contributions to incorporate these into environmental reporting

Please complete the attached Comments and Registration Form if you wish to register as an I&AP or contribute comments. Register / comment and return the form to Singo Consulting (Pty) Ltd by Sunday the 26th of March 2023.

➤ **THE ROLE OF I&AP'S**

Communities, neighbors, government representatives, stakeholders such as community leaders, non-governmental organizations (NGO) are being invited to participate in the EIA process by means of published advertisements, site notices and written correspondence. I&APs are invited to assist in:

- Identifying issues of concern to be investigated, as well as possible impacts of the project on the natural & social environment;
- Suggesting alternative means in which to mitigate possible negative impacts and enhance positive impacts.

You are hereby invited to participate freely and submit any questions or information you feel may contribute to the process. All comments received will be recorded and addressed as part of the environmental impact assessment process. Please complete the attached comment form (APPENDIX A).

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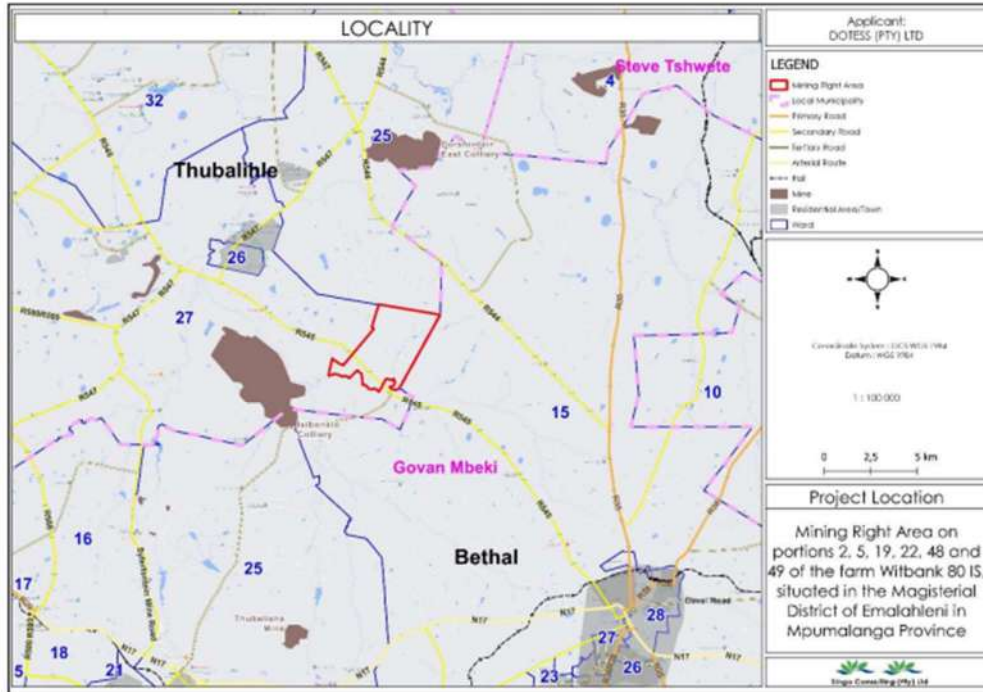


Figure 1: Locality Map of the project area (Singo Consulting (Pty) Ltd)

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Figure 2: Google Earth View of the project area, showcasing the absence of housing nearby.

4. Project Overview

Mineral Applied For: Coal

Mining Methods: Open Cast and Underground Mining

Life of Mine: 30 years lifespan

Potential Market: International markets, Eskom, other domestic (i.e., coal stove & power generation) and (i.e., for steel production, liquid fuel and for cement manufacturing).

The main components of the database included spreadsheets describing each of the following data formats, collar, lithological, raw quality, and the wash product quality database.

➤ **Mineral and Land Tenure**

The mining right is applicable for portions 02, 05, 19, 22, 48 and 49 of the farm Witbank 80 IS, located in the Magisterial District of Emalahleni (Witbank), Mpumalanga Province: DMRE REF Number:

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MP30/5/1/1/2/478MR. The Figure below shows identified landowners using Windeed Search. As observed on the Windeed results below, the proposed property is owned by H J Pieterse Vlakfontein Tweehonderd CC and Henry & Marlene Dunn Witbank Trust.

Deeds Office Property - List
 IS, 80, MPUMALANGA

Lexis® WinDeed

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

SEARCH CRITERIA			
Search Date	2022/06/13 09:23	Farm Number	80
Reference	-	Registration Division	IS
Report Print Date	2022/06/13 09:25	Portion Number	-
Farm Name	-	Remaining Extent	NO
Deeds Office	Mpumalanga	Search Source	Deeds Office

PORTION LIST				
Portion	Owner	Title Deed	Registration Date	Purchase Price (R)
0	*** NO LONGER EXISTS - SEE ENDORSEMENTS ***	-	-	-
1	ROOIBLOEM LANGGOED HOEVELD PTY LTD	T10040/2019	-	-
2	H J PIETERSE VLAKFONTEIN TWEEHONDERD CC	T131928/1997	-	-
5	H J PIETERSE VLAKFONTEIN TWEEHONDERD CC	T131928/1997	-	-
6	*** NO LONGER EXISTS - SEE ENDORSEMENTS ***	-	-	-
7	HENRY & MARLENE DUNN WITBANK TRUST	T131927/1997	-	-
8	VENTER SANDRIENA JOHANNA	T336029/2007	-	-
9	*** NO LONGER EXISTS - SEE ENDORSEMENTS ***	-	-	-
10	H J PIETERSE (VLAKFONTEIN TWEEHONDERD) CC	T21782/1999	-	-
11	*** NO LONGER EXISTS - SEE ENDORSEMENTS ***	-	-	-
13	H B DUNN BOERDERY PTY LTD	T1450/2017	-	-
15	HENRY & MARLENE DUNN WITBANK TRUST	T29488/2001	-	-
16	RE PUBLIEK VAN SUID-AFRIKA	T6674/1908	-	-

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 Email (Alt): valentine@singoconsulting.co.za



PORTION LIST				
Portion	Owner	Title Deed	Registration Date	Purchase Price (R)
17	HENRY & MARLENE DUNN WITBANK TRUST	T389/2019	-	--
18	*** NO LONGER EXISTS - SEE ENDORSEMENTS ***	-	-	--
19	H J PIETERSE VLAKFONTEIN TWEEHONDERD CC	T131928/1997	-	--
20	WITBANK PLAAS TRUST	T56292/1995	-	--
21	WITBANK PLAAS TRUST	T56292/1995	-	--
22	H J PIETERSE VLAKFONTEIN TWEEHONDERD CC	T131928/1997	-	--
23	HENRY & MARLENE DUNN WITBANK TRUST	T1351/2021	-	--
24	HENRY & MARLENE DUNN WITBANK TRUST	T1351/2021	-	--
25	HENRY & MARLENE DUNN WITBANK TRUST	T1351/2021	-	--
26	HENRY & MARLENE DUNN WITBANK TRUST	T1351/2021	-	--
27	HENRY & MARLENE DUNN WITBANK TRUST	T1351/2021	-	--
28	H B DUNN BOERDERY PTY LTD	T1450/2017	-	--
29	H B DUNN BOERDERY PTY LTD	T1450/2017	-	--
30	H B DUNN BOERDERY PTY LTD	T1450/2017	-	--
31	DUNN HENRY BROWN	T96084/1997	-	--
32	VENTER SANDRIENA JOHANNA	T336029/2007	-	--
33	VENTER SANDRIENA JOHANNA	T336029/2007	-	--
34	WITBANK PLAAS TRUST	T56292/1995	-	--
36	*** NO LONGER EXISTS - SEE ENDORSEMENTS ***	-	-	--
37	ROOIBLOM LANDGOED HOEVELD PTY LTD	T10040/2019	-	--
41	H J PIETERSE (VLAKFONTEIN TWEEHONDERD) CC	T1349/2021	-	--
48	H J PIETERSE	T1357/2021	-	--

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PORTION LIST				
Portion	Owner	Title Deed	Registration Date	Purchase Price (R)
	DILAKO NTSENI TWEI-KHONDESI CC			
49	HENRY & MARLENE DUNN WITBANK TRUST	T1356/2021	-	-

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➤ **HISTORICAL INFORMATION;**

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

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conducted by XMP Consulting available online, Ermelo coal field stretches from Carolina in the north to Wakkerstroom in the south, a distance of 150 km and the east-west extent of the field is about 80km, about 25km east of Standerton, eastwards to Sheepmoor. It is bounded by the Witbank Coalfield in the northwest, Highveld in the west and Utrecht Coalfield to the south.

Previous studies show that anthracite has been mined before in areas such as Piet Retief, Ermelo and Wakkerstroom. There are four coal seams that are most important namely, the A seam, B Seam, C Seam and Dundus. The surface geology over the project area is dominated by outcrops and sub-crops of sedimentary rocks of the Ecca Group (Vryheid Formation), with Transvaal Supergroup (Hekpoort Formation) outcrops also present at the surface in the far east of the project area.

Table 1: Schedule of Ore Reserves (Zietsman, 1982)

SCHEDULE OF POTENTIAL COAL RESERVE					
Location	Seam	In Situ	R.O.M.	Steam Coal	Export Coal
Pit No 1	No. 5	4 875 000	4 630 000	1 330 000	3 300 000
	No. 4 U	13 720 000	13 034 000	13 034 000	
	No. 4 L	19 540 000	18 563 000	11 138 000	7 425 000
Pit No 2	No. 5	2 277 000	2 163 000	415 000	1 748 000
	No. 4 U	7 378 000	7 010 000	7 010 000	
	No. 4 L	7 223 000	6 862 000	4 117 000	2 745 000
Underground	No. 5	32 670 000	19 600 000		9 410 000
	No. 4 (U)	28 500 000	14 250 000	14 250 000	
	No. 4 (L)	13 100 000	6 600 000	3 960 000	2 640 000
	No. 2	6 040 000	3 020 000		3 020 000
TOTALS		135 323 000	95 732 000	55 254 000	30 288 000

The above is a representation from the historical data that was evaluated by Zietsman (1982) and from this data it was then discovered that the potential open castable reserves are more likely to be about 2.7 million tonnes which differs with the data shown in Table 1. However, the current evaluation by Anderson (2022), using extrapolated data shows that only 5 Seam is open castable and what is shown for the open

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cast portion of 4 Seam is the coal below the 5 Seam open cast which has not yet been verified by additional drilling.

Open cast coal mining recovers a greater proportion of the coal deposit than underground methods, as more of the coal seams in the strata may be exploited. The proposed infrastructure required on site includes the following:

Proposed Infrastructure:	
Access & Haul roads (with necessary security) including the upgrading of the access point to the gravel road.	Contractor's Yard with septic/chemical ablution facilities
Offices	Weighbridge
workshop and stores (with septic/chemical ablution facilities)	Discard Facility
Diesel facilities and a hardstand	Power and Water
Boxcut	Stockpiles (topsoil, overburden, subsoil/softs, ROM)
Surface water management measures (stormwater diversion berms and trenches, pollution control dams etc.)	Full washing plant

The proposed mining method and sequence comprised of the following main mining activities for both waste and coal:

- Initial topsoil and soft overburden removal which will be stockpiled to ensure it can be replaced back in the initial box cut;
 - The physical mining of the coal seam which includes drilling of hard overburden material, charging and blasting;
 - The coal is loaded into trucks and hauled to the crushing and screening facility;
 - Discard coal will be extracted and replaced in the bottom of the opencast pit, while the product will be taken to the weighbridge via trucks and then removed off site;
 - The overburden is replaced back into the pit as mining progresses leaving a minimum area open at a single time;
 - The topsoil which was stripped and stockpiled separately before mining commenced is then replaced.
- The findings of the land capability study will determine the optimal composition to ensure pre-mining conditions for utilisation.

Service Requirements:

- ❖ Electricity for the operation will be sourced from Eskom (8MVA required).
- ❖ Process water will be sourced from the river and tributaries around through a WUL.
- ❖ It is envisaged that potable/ domestic water will be sourced from boreholes on site, other alternatives are also being considered.

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❖ General waste will be collected for disposal at the Municipal dump.
Industrial waste will be collected for disposal at a suitably licensed facility.

❖ Sewage will be collected within conservancy tanks to be emptied by honey sucker for treatment at a suitably licensed facility. Alternatively, a small, package sewage plant will be installed on site.

Employment:

❖ The project will create employment for approximately 52 people as calculated in the Social Labour Plan (SLP).

Mining Method

The commodities of interest will be mined through both open pit mining and underground method.

The Open pit mining is a type of surface mining where a large excavation or "pit" is made in the ground to extract minerals from the earth. The following is a brief overview of the open pit mining process to be followed for coal will be extracted from open pit mine using a combination of drilling, blasting, and heavy machinery. The ore is then transported to a processing plant where it is crushed, screened, and separated into different grades accordingly for further processing. Once the commodities have been extracted, they will be transported to a processing plant where they are crushed, milled, and treated with chemicals to extract each of these commodities. Once they have been extracted, they will be processed using a combination of gravity separation, flotation, and cyanide leaching. Figure 4 below for the typical crushing and screening process that will be implemented.

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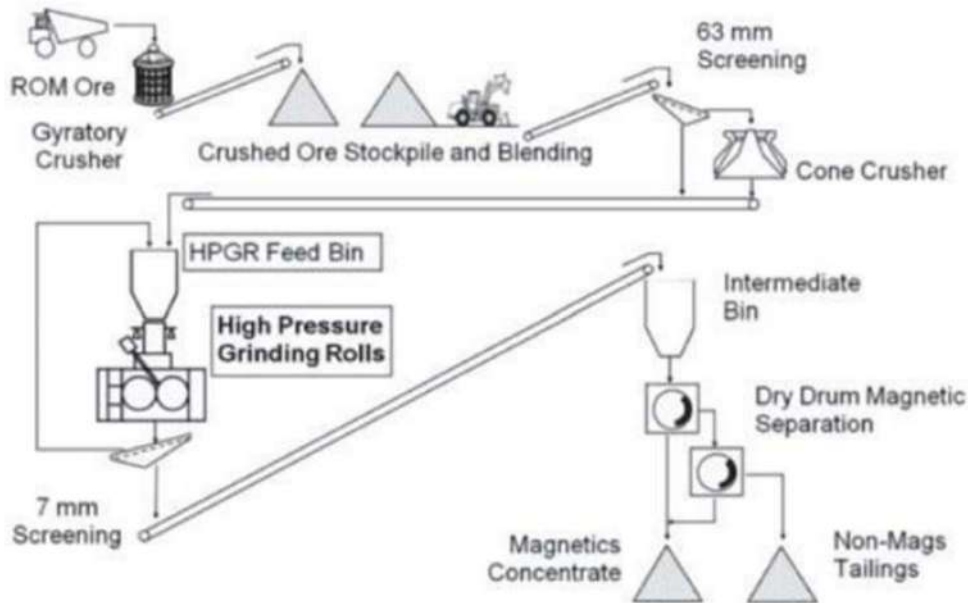


Figure 3: Typical example of crushing and screening process that will be implemented

The underground mining method we use include room and pillar, narrow vein stoping and large-scale mechanised mining. Room and pillar mining is a style of mining where tunnels are driven in a chess board pattern with massive square pillars between them which are gradually cut away as the work proceeds. Underground methods are traditionally broken into three classes: unsupported, supported, and caving methods. These classes reflect the competency of the orebody and host rock more than anything else. Underground mining is used to extract ore from below the surface of the earth safely, economically and with as little waste as possible.

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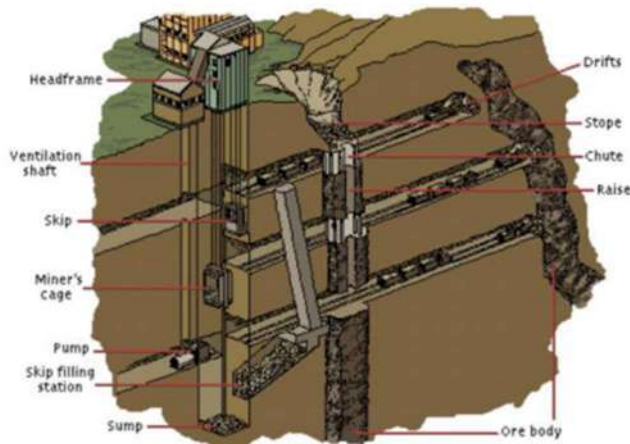


Figure 4: Typical example of underground mining method

5. LEGISLATIVE PROCESS

For the proposed mine to operate, the applicant is required to submit an application for a mining right in terms of Section 22 of the Mineral and Petroleum Resources Development Act, 2002 (Act 28 of 2002) with the DMRE. In support of the application to obtain the mining right, the applicant is required to conduct a Scoping and Environmental Impact Assessment (S&EIA) process that needs to be submitted to the DMRE for adjudication, which includes activities triggered under the Environmental Impact Assessment Regulations of 2014 (as amended) promulgated under the National Environmental Management Act, 1998 (Act 107 of 1998) and activities triggered under the National Environmental Management: Waste Act, 2008 (NEM:WA) (Act 59 of 2008).

The extent of the mining right entails a life of mine of 30 years and covers the above-mentioned farm portions. The proposed Dotess opencast and underground coal mining operations constitutes various listed activities which have been listed within the scheduled activities in Government Notice Regulation No 326 in GG 40772 (amended 7 April 2017) now amended GNR 517 in GG 44701 as of 11 June 2021 and therefore require an integrated Scoping and EIA process to be followed. Prior to any listed activity being approved by the DMRE, it is required that an environmental process is undertaken, and a report is submitted to the relevant environmental authority for consideration. The purpose of the S&EIA process is to ensure that potential environmental, economic, and social impacts associated with operation and closure/ rehabilitation of a project are identified, assessed, and appropriately managed. There are two

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primary phases, namely the scoping phase and the impact assessment phase. These two phases are discussed in more detail below:

✓ **Scoping Phase**

The scoping phase is conducted as the precursor to the Environmental Impact Assessment (EIA) process during which:

- Project and baseline environmental information is collated. Baseline information for the scoping report is gathered through visual inspections during field visits of the proposed project area and surroundings, desktop studies which include GIS mapping, and review of existing reports, guidelines, and legislation.
- Landowners, adjacent landowners, local authorities, environmental authorities, as well as other stakeholders which may be affected by the project, or that may have an interest in the environmental impacts of the project are identified.
- Interested and affected parties (I&APs) are informed about the proposed project.
- Environmental authorities are consulted to confirm legal and administrative requirements.
- Environmental issues and impacts are identified and described.
- Development alternatives are identified and evaluated, and non-feasible development alternatives are eliminated.
- The nature and extent for further investigations and specialist input required in the EIA phase is identified.
- The draft and final scoping reports are submitted for review by authorities, relevant organs of state and I&APs.
- Key I&AP issues and concerns are collated into an issues and response report for consideration in the EIA phase.

✓ **EIA Phase Process**

After the initial scoping phase, the EIA phase of the application includes:

- Specialist investigations are undertaken in accordance with the terms of reference established in the scoping assessment (plan of study for EIA appended to the scoping report). The scope for specialist work is determined accordingly to the nature and scale of the project impacts.
- An evaluation of development alternatives and identification of a proposed option.
- An assessment of existing impacts (no-go development option), environmental impacts that may be associated with the proposed project option, and cumulative impacts using the impact assessment methodology.
- Identification of mitigation measures to address the environmental impacts and development of actions required to achieve the mitigation required.
- Consultation with I&APs.



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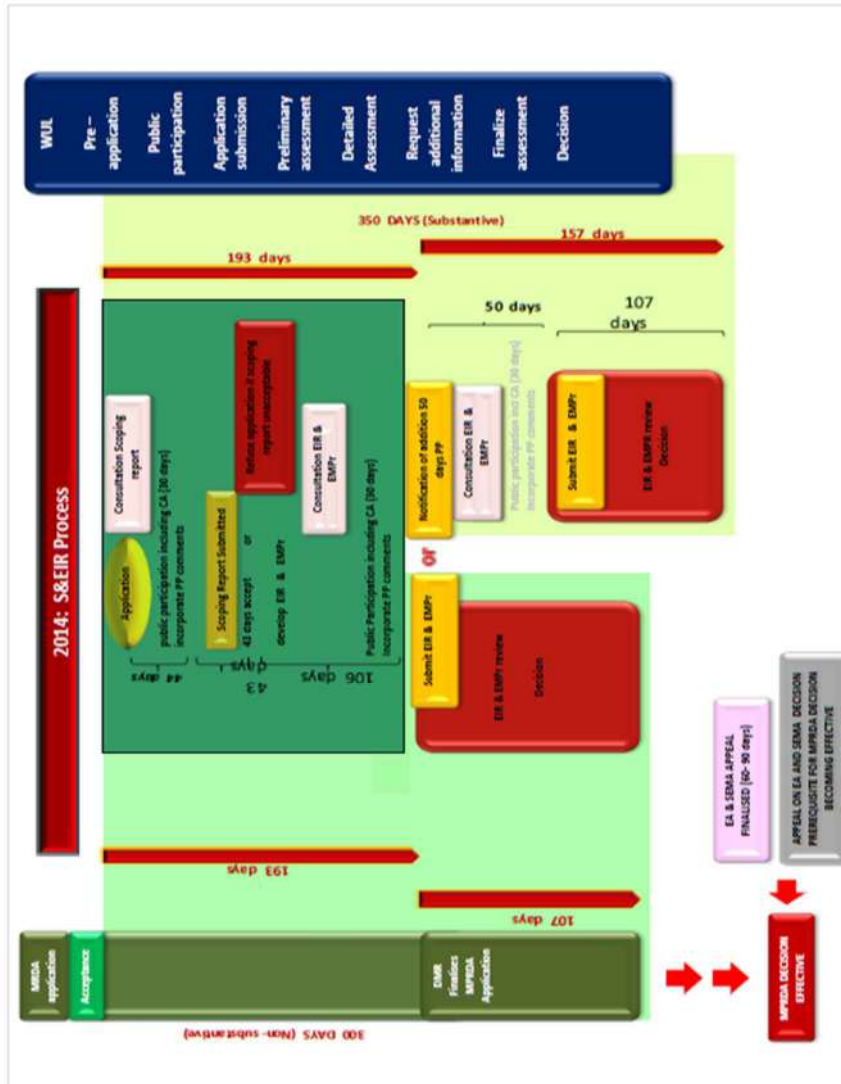


- Incorporation of public comment received during scoping and the draft EIA into the final EIA report.
- Issuing of the final EIA report for review.
- After the draft EIA report was reviewed, comments received are incorporated in the final EIA report and final Environmental Management Program (EMPr).

The requirements for the S&EIA process are specifically contained in Chapter 4 Part 3 of the NEMA Reg No 326 (amended on 7 April 2017). The EIA process can take up to 300 days to complete (87 days for scoping phase, 106 days for EIA phase, and 107 days for competent authority to review). In addition, an Integrated Water Use License Application (IWULA) has been submitted to the Department of Water and Sanitation (DWS) in accordance with the National Water Act 1998 (Act No. 36 of 1998) (NWA) for listed water uses. See illustration below;

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6. PUBLIC PARTICIPATION PROCESS (PPP)

6.1 OBJECTIVES OF PUBLIC PARTICIPATION

- Provides Interested and Affected parties (I&APs) with an opportunity to voice their support, concerns and questions regarding the project, application or decision;
- Provides an opportunity for I&APs, EAP and the Competent Authority (CA) to obtain clear, accurate and understandable information about the environmental, social and economic impacts of the proposed activity or implications of a decision;
- Provides I&APs with the opportunity of suggesting ways of reducing or mitigating negative impacts of an activity and for enhancing positive impacts
- Enables the applicant to incorporate the needs, preferences and values of affected parties into the application;

6.2 LEGISLATION

The PPP must comply with the several important sets of legislation that require public participation as part of an application for authorisation or approval; namely:

- The Mineral and Petroleum Resources Development Act (Act No. 28 of 2002 - MPRDA);
- The National Environmental Management Act (Act No. 107 of 1998 - NEMA);
- The National Environmental Management Waste Act (NEM: WA, Act No. 59 of 2008); and
- The National Water Act (NWA, Act No. 36. Of 1998).

Adherence to the requirements of the above-mentioned Acts will allow for an Integrated PPP to be conducted, and in so doing, satisfy the requirement for public participation referenced in the Acts. The details of the Integrated PPP are provided below.

6.3 IDENTIFICATION OF I&APS

An Interested and Affected Parties (I&AP) database will be compiled of key stakeholders and I&APs identified for notification of the Environmental Authorisation Application. The I&AP database includes, amongst others; landowners, communities, regulatory authorities and other specialist interest groups. I&APs are notified of the proposed project through site notices, public notices, and newspaper advertisements. Where contact information is available email notifications has also been sent out.

6.4 NOTIFICATION AND REGISTER OF I&APS

The PPP commencement is on 10th of March 2023 where I&APs are encouraged to send through their concerns or comment and call to register. The notification procedure includes:

- Newspaper advertisement;
- Site Notices;

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- Public Notices; and
- Letters and emails.

6.5 NOTIFICATION OF AVAILABILITY OF SCOPING REPORT AND SCHEDULED MEETING

With submission of the application to the DMR, the formal 300 days EIA process has been initiated, as per the NEMA Regulations (2014, as amended). The Draft Scoping Report (DSR) will be available to stakeholders and I&APs for a period of 30 days to review and provide comments. All registered I&APs will be notified via email of the **availability of the DSR from 27th of March 2023 until the 28th of April 2023** at the following locations:

Areas	Contact Details	Physical Address
Kriel Public library	017 648 2241 kriellibrary@mweb.co.za	Quintin &, Heinrich St, Kriel, 2271
Thubelihle Public library	0664855052 ncbanda@mpg.gov.za	2275 Kriel Drive, Thubelihle
eMalahleni Local Municipality	013 690 6911/ 013 690 6207	Civic Centre, Cnr Mandela & Arras Streets, eMalahleni

A public meeting to be scheduled for March 2023 either virtually or face to face.

Venue: To be announced

Time: To be confirmed

"Registered I&APs will be informed about availability of reports and scheduled stakeholder meetings. Comments raised by stakeholders will assist in informed decision-making for authorities and provides information to be considered by the project team and specialists conducting studies."



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Appendix A: REGISTRATION AND COMMENT FORM SHEET

NOTICE OF SECTION 102 AMENDMENT ON COAL MINING RIGHT AND ENVIRONMENTAL AUTHORIZATION APPLICATION ON PORTIONS 02, 05, 19, 22, 48 AND 49 OF THE FARM WITBANK 80 IS, IN THE MAGISTERIAL DISTRICT OF WITBANK, MPUMALANGA PROVINCE: DMRE REF NUMBER: MP 30/5/1/1/2/ 478 MR.

Please complete this form and return it to **Singo Consulting (Pty) Ltd** to ensure that you are registered as an Interested and Affected Party (I&AP).

By answering the questions below you will help us to develop a better understanding of your information requirements. The form also gives you the opportunity to make comments regarding the project. Additional pages may be attached.

I&AP Details:

Full Names and Surname:		Contact Details:					
Tel(w):		Tel(h):		Fax No:		Cell No:	
Email:							
Physical Address:							
Postal Address:							
Preferred method of communication: <input type="checkbox"/> fax <input type="checkbox"/> e-mail <input type="checkbox"/> post							
Preferred telephonic communication: <input type="checkbox"/> cell <input type="checkbox"/> home <input type="checkbox"/> work							
Organisation/Representative:							
Farm name, number and subdivision or Street Address (if applicable):							

Questions(s):

- Where did you get information about the project?
 Newspaper advertisement notice board flyer other (please specify)



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2. Do you represent a company/organization or is your interest on behalf of yourself?

3. Do you know of anyone that is affected by the proposed activity who was not informed of the project? (Please provide contact details)

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

Do you have any specific concerns or comments regarding the project?

YES

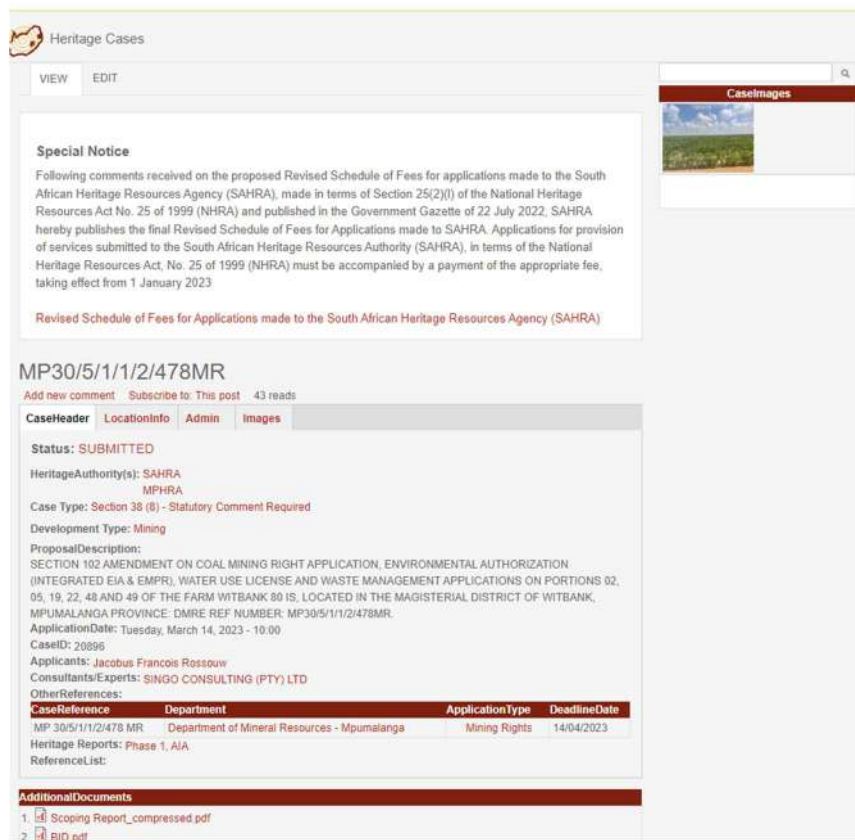
NO

If yes, please indicate what the comments are?

.....
Signed

.....
Date

Comments/ Proof of Consultations



Heritage Cases

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Special Notice

Following comments received on the proposed Revised Schedule of Fees for applications made to the South African Heritage Resources Agency (SAHRA), made in terms of Section 25(2)(f) of the National Heritage Resources Act No. 25 of 1999 (NHRA) and published in the Government Gazette of 22 July 2022, SAHRA hereby publishes the final Revised Schedule of Fees for Applications made to SAHRA. Applications for provision of services submitted to the South African Heritage Resources Authority (SAHRA), in terms of the National Heritage Resources Act, No. 25 of 1999 (NHRA) must be accompanied by a payment of the appropriate fee, taking effect from 1 January 2023.

Revised Schedule of Fees for Applications made to the South African Heritage Resources Agency (SAHRA)

MP30/5/1/1/2/478MR

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CaseHeader LocationInfo Admin Images

Status: SUBMITTED

HeritageAuthority(s): SAHRA
MPHRA

Case Type: Section 38 (B) - Statutory Comment Required

Development Type: Mining

ProposalDescription:
SECTION 102 AMENDMENT ON COAL MINING RIGHT APPLICATION, ENVIRONMENTAL AUTHORIZATION (INTEGRATED EIA & EMPR), WATER USE LICENSE AND WASTE MANAGEMENT APPLICATIONS ON PORTIONS 02, 05, 19, 22, 48 AND 49 OF THE FARM WITBANK 80 IS, LOCATED IN THE MAGISTERIAL DISTRICT OF WITBANK, MPUMALANGA PROVINCE. DMRE REF NUMBER: MP30/5/1/1/2/478MR.

ApplicationDate: Tuesday, March 14, 2023 - 10:00

CaseID: 20896

Applicants: Jacobus Francois Rossouw

Consultants/Experts: SINGO CONSULTING (PTY) LTD

OtherReferences:

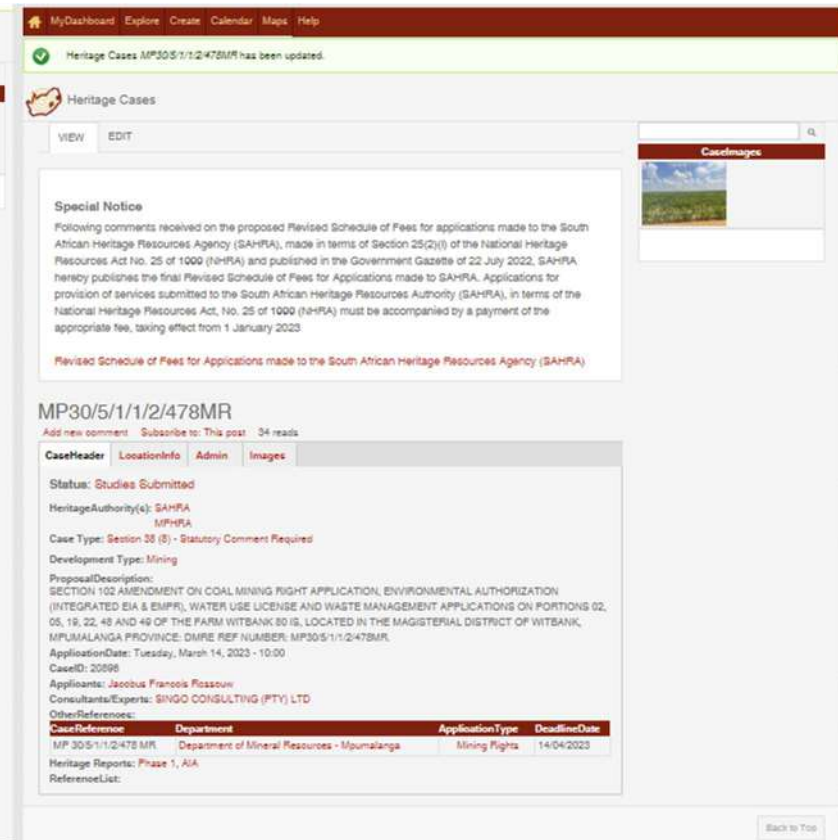
CaseReference	Department	ApplicationType	DeadlineDate
MP 30/5/1/1/2/478 MR	Department of Mineral Resources - Mpumalanga	Mining Rights	14/04/2023

Heritage Reports: Phase 1, AIA

ReferenceList:

AdditionalDocuments

- Scoping Report_compressed.pdf
- BID.pdf



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Heritage Cases MP30/5/1/1/2/478MR has been updated.

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Revised Schedule of Fees for Applications made to the South African Heritage Resources Agency (SAHRA)

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Status: Studies Submitted

HeritageAuthority(s): SAHRA
MPHRA

Case Type: Section 38 (B) - Statutory Comment Required

Development Type: Mining

ProposalDescription:
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MP 30/5/1/1/2/478 MR	Department of Mineral Resources - Mpumalanga	Mining Rights	14/04/2023

Heritage Reports: Phase 1, AIA

ReferenceList:

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 E-mail benfleur@postnet.co.za

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 Street Address 27 BROWN STREET
 Suburb Nelspruit City/Town Nelspruit - NLP
 Country South Africa Code 1201
 Contact RHULANI CHAVALALA (+27) 137540729
 E-mail

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1	DOCUMENTS	40.00	30.00	2.00	0.30

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 Name: SINGO RENNEY Date: 2023-03-14
 Signature: *R. Renney* Time: 11:11:12

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Surcharge		
Insurance		
Packaging Surcharge		
VAT		
TOTAL INCL. VAT		

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 Suburb Witbank City/Town Witbank
 Country South Africa Code 1035
 Contact SINGO renney Tel (+27) 794522439
 E-mail benfleur@postnet.co.za

To: (Receiver) MTPA
 Street Address BLOCK 6 ROOM D N4 HALLS
 Suburb Nelspruit City/Town Nelspruit - NLP
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 Contact PHUMLA NKOSI Tel (+27) 132540279
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 Name: SINGO renney Date: 2023-03-14
 Signature: *R. Renney* Time: 11:08:56

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Surcharge		
Insurance		
Packaging Surcharge		
VAT		
TOTAL INCL. VAT		

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STANDARD CONDITIONS OF CARRIAGE

1.1 These conditions of carriage apply to all services provided by PostNet - Ben Fleur (the "Company") to its customers (the "Customer") in terms of the PostNet - Ben Fleur Courier Agreement (the "Agreement") entered into between the Company and the Customer. These conditions of carriage shall apply to all services provided by the Company to its customers, whether or not the Customer is a member of the Company's loyalty program.

1.2 The Company is not liable for any loss or damage to goods or documents carried by the Company, whether or not the loss or damage is caused by the negligence of the Company, its employees, agents, subcontractors, or any other person, unless the loss or damage is caused by the negligence of the Company, its employees, agents, subcontractors, or any other person, and the loss or damage is caused by the negligence of the Company, its employees, agents, subcontractors, or any other person, and the loss or damage is caused by the negligence of the Company, its employees, agents, subcontractors, or any other person.

1.3 The Company is not liable for any loss or damage to goods or documents carried by the Company, whether or not the loss or damage is caused by the negligence of the Company, its employees, agents, subcontractors, or any other person, unless the loss or damage is caused by the negligence of the Company, its employees, agents, subcontractors, or any other person, and the loss or damage is caused by the negligence of the Company, its employees, agents, subcontractors, or any other person.

1.4 The Company is not liable for any loss or damage to goods or documents carried by the Company, whether or not the loss or damage is caused by the negligence of the Company, its employees, agents, subcontractors, or any other person, unless the loss or damage is caused by the negligence of the Company, its employees, agents, subcontractors, or any other person, and the loss or damage is caused by the negligence of the Company, its employees, agents, subcontractors, or any other person.

1.5 The Company is not liable for any loss or damage to goods or documents carried by the Company, whether or not the loss or damage is caused by the negligence of the Company, its employees, agents, subcontractors, or any other person, unless the loss or damage is caused by the negligence of the Company, its employees, agents, subcontractors, or any other person, and the loss or damage is caused by the negligence of the Company, its employees, agents, subcontractors, or any other person.

1.6 The Company is not liable for any loss or damage to goods or documents carried by the Company, whether or not the loss or damage is caused by the negligence of the Company, its employees, agents, subcontractors, or any other person, unless the loss or damage is caused by the negligence of the Company, its employees, agents, subcontractors, or any other person, and the loss or damage is caused by the negligence of the Company, its employees, agents, subcontractors, or any other person.

1.7 The Company is not liable for any loss or damage to goods or documents carried by the Company, whether or not the loss or damage is caused by the negligence of the Company, its employees, agents, subcontractors, or any other person, unless the loss or damage is caused by the negligence of the Company, its employees, agents, subcontractors, or any other person, and the loss or damage is caused by the negligence of the Company, its employees, agents, subcontractors, or any other person.

1.8 The Company is not liable for any loss or damage to goods or documents carried by the Company, whether or not the loss or damage is caused by the negligence of the Company, its employees, agents, subcontractors, or any other person, unless the loss or damage is caused by the negligence of the Company, its employees, agents, subcontractors, or any other person, and the loss or damage is caused by the negligence of the Company, its employees, agents, subcontractors, or any other person.

1.9 The Company is not liable for any loss or damage to goods or documents carried by the Company, whether or not the loss or damage is caused by the negligence of the Company, its employees, agents, subcontractors, or any other person, unless the loss or damage is caused by the negligence of the Company, its employees, agents, subcontractors, or any other person, and the loss or damage is caused by the negligence of the Company, its employees, agents, subcontractors, or any other person.

1.10 The Company is not liable for any loss or damage to goods or documents carried by the Company, whether or not the loss or damage is caused by the negligence of the Company, its employees, agents, subcontractors, or any other person, unless the loss or damage is caused by the negligence of the Company, its employees, agents, subcontractors, or any other person, and the loss or damage is caused by the negligence of the Company, its employees, agents, subcontractors, or any other person.

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To view the Standard Conditions of Carriage online, Please visit <http://www.postnet.co.za/standard-conditions-of-carriage>



PostNet Name: PostNet - Ben Fleur
Tel. No.: (+27) 013 697 1220 (Acc. No.: PN819)
From (Sender) (Company Name): PostNet - Ben Fleur
Street Address: Shop 33 Ben Fleur Boulevard, Cnr. Paul & Da Vinci Streets, Witbank
Country: South Africa **Code:** 1035
Contact: SINGO RENNEY **Tel (+27):** 794522439
E-mail: benfleur@postnet.co.za

To (Receiver) (Company Name): RIA BARKKHUIZEN
Street Address: 38 ISA STREET, MENLO PARK
City/Town: Menlo Park - PRY
Country: South Africa **Code:** 0081
Contact: RIA BARKKHUIZEN **Tel (+27):** 124266200
E-mail:

Insurance: Yes No (if yes, state value)
Domestic: Express Economy (18-27hrs) Dawn Courier Saturday
 Non Express (24-48hrs) Same Day Courier Other Specify: Public Holiday

No. of parcels	Description of goods	Length in cm	Breadth in cm	Height in cm	Weight in kg
1	DOCUMENTS	40.00	30.00	2.00	0.30
Total No. of Parcels		Total Vol		0.48	Total Mass
					0.30

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POSTNET Courrier
an aramex company

ACCEPTED BY POSTNET
MILLA Name
 Signature: *[Signature]*
 Date: 2023-03-14, 11:15:42
 Time

SENDER'S DETAILS
Name: SINGO RENNEY **Date:** 2023-03-14
Signature: *[Signature]* **Time:** 11:15:42

CHARGES	RANDS	CENTS
Basic Tariff		
Surcharge		
Insurance		
Packaging Surcharge		
VAT		
TOTAL INCL. VAT		

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PROOF OF SUBMISSION

I, Patience Ntombeni, herewith acknowledge receipt of:
1 X copy of the report titled: SLP
 for Dotes

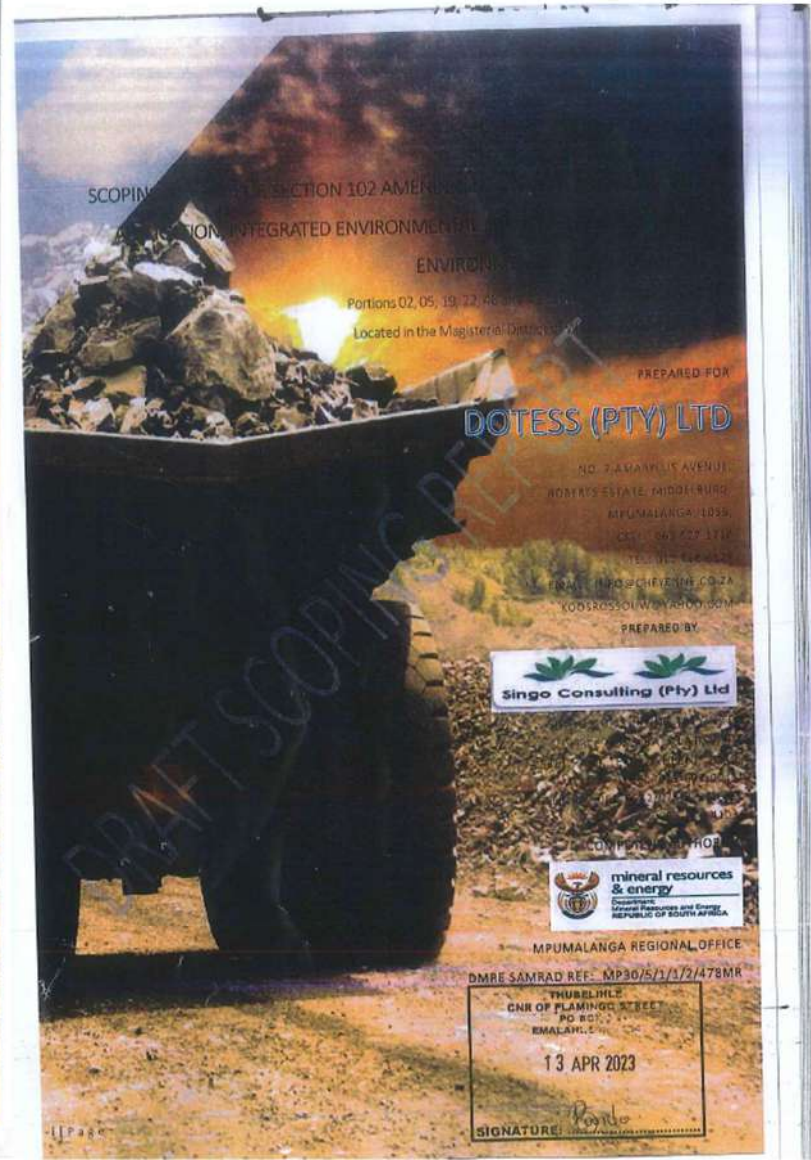
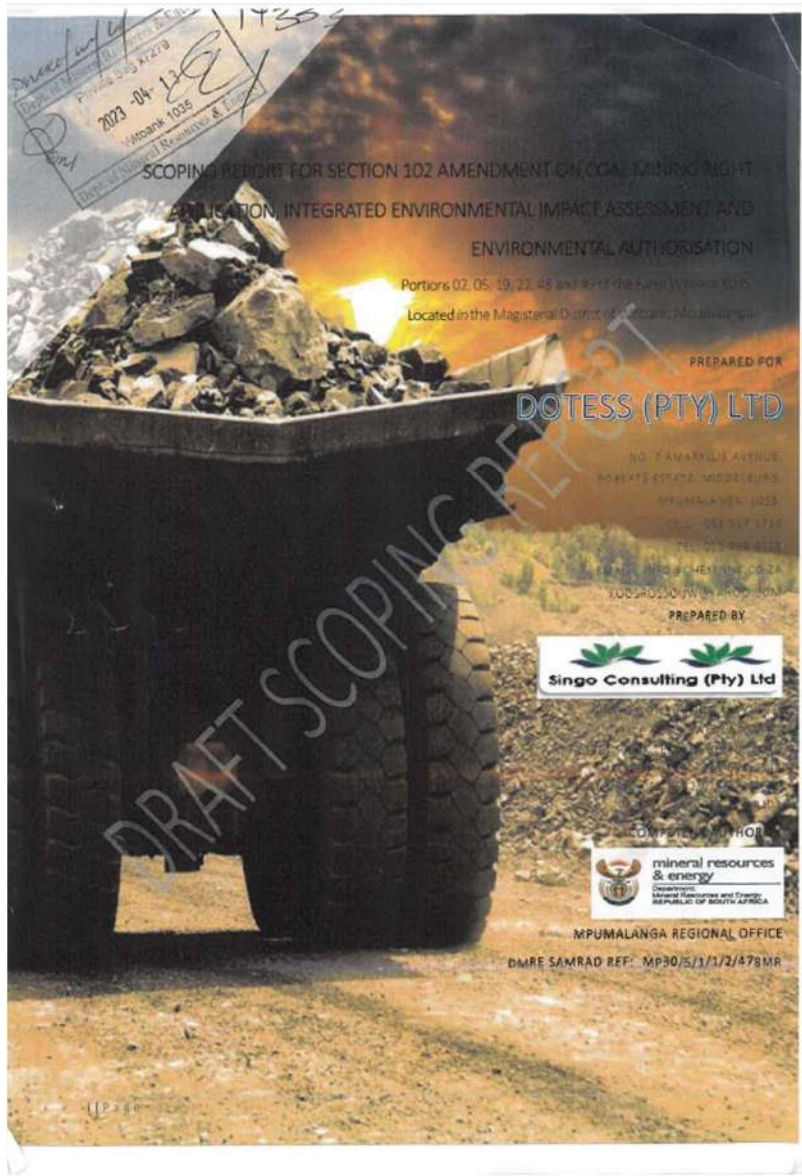
Name of Department:	Local Economic Development
Physical Address of Department:	
Tell No.:	
Email:	

Singo Consulting (Pty) Ltd

Date: 12/04/2023

Time: 09:36

Signature: *[Signature]*



PROOF OF SUBMISSION

I, MALEFI RIBA herewith acknowledge receipt of:

X copy of the report titled: DRAFT SCOPING REPORT

for _____

Name of Department:	ENVIRONMENTAL & WASTE
Physical Address of Department:	29 MANDELA STREET
Tell No.:	013 690 6732
Email:	ribam@environment.gov.za

Singo Consulting (Pty) Ltd

Date: 14 / 04 / 2023

Time: 11:34

Signature: [Signature]

RECEIVED

14 APR 2023

ENVRON & WASTE

PostNet Name: PostNet - Ben Fleur		Senders Copy													
Tel No.: (+27) 013 697 1220 Acc. No.: PN819		 PNA81905211295													
From (Sender) PostNet - Ben Fleur Street Address Shop 23 Ben Fleur Boulevard Suburb Witbank City/Town Witbank Country South Africa Code 1034 Contact SIMANGALISO (SINGO) (+27) 728321117 E-mail benfleur@postnet.co.za		To (Receiver) MTPA Street Address BLOCK G ROOM D Suburb Nelspruit City/Town Nelspruit - NLP Country South Africa Code 1201 Contact PHUMLA NKOSI Tel (+27) 132540279 E-mail													
SPECIAL INSTRUCTIONS															
Insurance <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If yes, state value Domestic <input checked="" type="checkbox"/> Express <input type="checkbox"/> Economy <input type="checkbox"/> Dawn <input type="checkbox"/> Saturday <input type="checkbox"/> Non Express (24-Hrs) <input type="checkbox"/> Same Day Courier <input type="checkbox"/> Other Specify <input type="checkbox"/> Public Holiday After Hours		International <input type="checkbox"/> DOCUMENTS <input type="checkbox"/> NON-DOCUMENTS WE HAVE BEEN ADVISED BY THE STANDARD CONDITIONS OF CARRIAGE (C/MILEAGE) WHICH WE FURTHER DECLARE THAT THIS CONSIGNMENT DOES NOT CONTAIN DANGEROUS GOODS.													
<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>No. of Parcels</th> <th>Description of goods</th> <th>Length in cm</th> <th>Breadth in cm</th> <th>Height in cm</th> <th>Mass in kg</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>DOCUMENTS</td> <td>40.00</td> <td>30.00</td> <td>8.00</td> <td>0.60</td> </tr> </tbody> </table>		No. of Parcels	Description of goods	Length in cm	Breadth in cm	Height in cm	Mass in kg	1	DOCUMENTS	40.00	30.00	8.00	0.60	EXPRESS PACK SECURITY NUMBER ON LIP OF FLYER	
No. of Parcels	Description of goods	Length in cm	Breadth in cm	Height in cm	Mass in kg										
1	DOCUMENTS	40.00	30.00	8.00	0.60										
SENDER'S DETAILS															
Total No. of Parcels 1.02 Total Vol 1.02 Total Mass 0.60		Name: SIMANGALISO (SINGO) 2023-04-12 Signature: <u>[Signature]</u> Time: 11:54:23													
POSTNET AND ARAMEX RESERVE THE RIGHT TO MARK THE SERVICE "OVERNIGHT EXPRESS" FOR "DOMESTIC" SHOULD NO SERVICE BE SELECTED.		ACCEPTED BY POSTNET CHARGES RANDS CENTS													
 an aramex company		Signature: <u>MILLA</u> Date: 2023-04-12 11:54:23 Time													
To track your shipment go to: www.postnet.co.za or download the PostNet Courier App															

Comments:

Tell: 013 692 0041/081 813 0654
 Fax: 086 5144 103
 Email: admin@singoconsulting.co.za
 Email (Alt): valentine@singoconsulting.co.za



Tell: 013 692 0041/081 813 0654
 Fax: 086 5144 103
 Email: admin@singoconsulting.co.za
 Email (Alt): valentine@singoconsulting.co.za



Appendix A: REGISTRATION AND COMMENT FORM SHEET

NOTICE OF SECTION 102 AMENDMENT ON COAL MINING RIGHT AND ENVIRONMENTAL AUTHORIZATION APPLICATION ON PORTIONS 02, 05, 19, 22, 48 AND 49 OF THE FARM WITBANK 80 IS, IN THE MAGISTERIAL DISTRICT OF WITBANK, MPUMALANGA PROVINCE: DMRE REF NUMBER: MP 30/5/1/1/2/478 MR.

Please complete this form and return it to Singo Consulting (Pty) Ltd to ensure that you are registered as an Interested and Affected Party (I&AP).

By answering the questions below you will help us to develop a better understanding of your information requirements. The form also gives you the opportunity to make comments regarding the project. Additional pages may be attached.

I&AP Details:

Full Names and Surname: <u>Doreen Sithole</u>				
Contact Details:				
Tel(w):	<u>013 7340 732</u>	Tel(h):		Cell No: <u>063 475 6367</u>
Fax No:				
Email:	<u>DoreenS@Dalrrd.gov.za</u>			
Physical Address:	<u>27 Brown Street, 2nd Floor.</u>			
Postal Address:	<u>P.O Box 8806, Nelspruit, 1200</u>			
Preferred method of communication: <input type="checkbox"/> fax <input checked="" type="checkbox"/> e-mail <input type="checkbox"/> post				
Preferred telephonic communication: <input checked="" type="checkbox"/> cell <input type="checkbox"/> home <input type="checkbox"/> work				
Organisation/Representative:	<u>Department of Agriculture, Land Reform & Rural Development</u>			
Farm name, number and subdivision or Street Address (if applicable):				

Questions(s):

1. Where did you get information about the project?

Newspaper advertisement notice board flyer other (please specify)

From Singo consulting (pty) Ltd.

2. Do you represent a company/organization or is your interest on behalf of yourself?

Represent organization: Department of Agriculture, Land Reform and Rural Development

3. Do you know of anyone that is affected by the proposed activity who was not informed of the project? (Please provide contact details)

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

Do you have any specific concerns or comments regarding the project?

YES NO

If yes, please indicate what the comments are?

Sithole 18/04/2023
 Signed Date



Private Bag X 447, Pretoria, 0001, Environment House, 473 Steve Biko Road, Pretoria, Tel: +27 12 399 9000, Fax: +27 86 625 1042

Reference: MP 30/5/1/1/2/478 MR

Enquiries: Ms. Mashudu Mudau/ Ms. Portia Makitla

Telephone: 012 399 9411/9945 E-mail: prmakitla@dffe.gov.za

Ms., Rudzani Radebe
Singo Consulting (Pty) Ltd
Office No. 870
5 Balalaika Street
Tasbet Park Ext 2
WITBANK
1040

Telephone Number: +27 13 692 0041

Email Address: admin@singoconsulting.co.za

PER E-MAIL

Dear Ms. Radebe

COMMENTS ON THE DRAFT SCOPING REPORT FOR SECTION 102 AMENDMENT ON COAL MINING RIGHT APPLICATION, FOR PORTIONS 02, 05, 19, 22, 48 AND 49 OF THE FARM WITBANK 80 IS, LOCATED IN THE MAGISTERIAL DISTRICT OF WITBANK, MPUMALANGA PROVINCE

The Directorate: Biodiversity Conservation has reviewed and evaluated the reports.

The Directorate: Biodiversity Conservation has reviewed and evaluated the reports and does not have any objection to the draft Scoping Report and the Plan of Study, however, the final report must comply with the procedures for the assessment and minimum criteria for reporting on identified environmental themes in terms of sections 24(5)(A) and (H) and 44 of the National Environmental Management Act, 1998.

The Public Participation Process documents related to Biodiversity EIA for review and queries should be submitted to the Directorate: Biodiversity Conservation at Email: BCAdmin@dffe.gov.za for the attention of Mr. Seoka Lekota.

Yours faithfully



Mr. Seoka Lekota
Control Biodiversity Officer Grade B: Biodiversity Conservation
Department of Forestry, Fisheries & the Environment
Date: 02/05/2023



OFFICE OF THE CEO

Ref: LUA 23/3434
Unit: LUA/SS
E-mail: frans@mtpa.co.za
Tel: 013 - 2540279

Dr. Kenneth Singo
Singo Consulting (Pty) Ltd
Office No: 16 Corridor Hill Crossing
09 Langa Crescent
Corridor Hill
eMalahleni
1035

Email: kenneth@singoconsulting.co.za

Dear Dr. Singo

SUBJECT: THE MTPA COMMENTS REGARDING THE SCOPING REPORT FOR A SECTION 102 AMENDMENT ON A COAL MINING RIGHT APPLICATION, ENVIRONMENTAL IMPACT ASSESSMENT AND ENVIRONMENTAL AUTHORISATION, WASTE MANAGEMENT LICENSE WATER USE LICENSE APPLICATIONS A COAL MINING OPERATION APPLICATION BY DOTESS HOLDINGS PTY LTD IN TERMS OF SECTION 40 OF THE MINERAL AND PETROLEUM RESOURCES DEVELOPMENT ACT 2002, (ACT 28 OF 2002) AND NEMA ACT, 1998 (ACT NO. 107 OF 1998), TO BE CONDUCTED IN RESPECT OF PORTIONS 2, 5, 19, 22, 48 AND 49 OF THE FARM WITBANK 80 IS, LOCATED IN THE MAGISTERIAL DISTRICT OF WITBANK, MPUMALANGA PROVINCE. DMR REF NUMBER: MP 30/5/1/1/2/ 478 MR.

Your correspondence with DMR reference **MP 30/5/1/1/2/ 478 MR** of 2023 refer.

The sensitivity of the farm Witbank 80 IS on which the proposed activity is likely to occur was assessed according to the Mpumalanga Biodiversity Sector Plan (MBSP; MTPA, 2014). This sensitivity is assessed in terms of terrestrial and freshwater assessments. In the MBSP, sensitive areas are identified in terms of Critical Biodiversity Areas (CBAs) and Ecological Support Areas (ESAs). CBAs and ESAs are deemed necessary to ensure protection of biodiversity, environmental sustainability, and human well-being, and are to remain unaltered.

The MBSP terrestrial biodiversity assessment and MBSP freshwater assessment maps were provided in previous correspondence with MTPA. Those assessments indicate that this mine lies within an area containing Critical Biodiversity Area irreplaceable areas, CBA optimal areas and

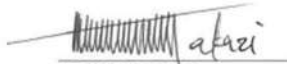


The MTPA does not object to this Scoping phase, and have the following recommendations:

- A qualified ecologist should do an on-site biophysical study. The biophysical studies should include which Conservation important species occur on site and what mitigation strategies the coal mine will follow.
- The MTPA further request that an impact risk assessment be done that includes a thorough rehabilitation strategy to ensure that no pollution, erosion and or decanting of Acid mine drainage is released into the natural system. The principle of polluter pays must be the main objective to avoid.
- The ESA wetlands must be delineated with a 100 m, and avoided.
- A water purification strategy to ensure that clean water is provided for the downstream users must be provided.

Please do not hesitate to contact this office if there are any enquiries.

Kind Regards


MR M.H. VILAKAZI
ACTING CHIEF EXECUTIVE OFFICER
DATE: 15 / 05 / 2023

Our Ref: F (N117 26160)

Your ref:

Enquiries: Cyah Buthelezi 031 344 0509 / 079 802 9616
Seipati Lekalakala 010 345 8579/ 076 305 9115
Zodwa Mamba 010 345 8593/ 071 673 7882
wayleaves@sasol.com

27 March 2023

SINGO CONSULTING (Pty) Ltd

Dear Sir / Madam,

SECTION 102 AMENDMENT ON COAL MINING RIGHT AND ENVIRONMENTAL AUTHORIZATION APPLICATIONS THAT WERE LODGED ON PORTION 02, 05, 19, 22, 48 AND 49 OF THE FARM WITBANK 80IS

In reply to your letter, we would like to advise that we have no objection against the above-mentioned application as Sasol Satellite Operations will NOT BE AFFECTED.

This wayleave is valid for 12 months.

Thank you for your co-operation in submitting this request.

Kind regards,

Rachel Mphofu 010 345 8358
Team Lead Gas Pipeline
wayleaves@sasol.com
Cell: 079 505 4588

Sasol Limited 1979/003231/06
Sasol Place 50 Katherine Street Sandton 2146 South Africa Private Bag X10014 Sandton 2196 South Africa
Telephone +27 (0)10 344 5000 Facsimile +27 (0)11 788 5092 www.sasol.com

Directors: MGV Gantsho (Chairman) SR Cornell (Joint President & Chief Executive Officer) (American) B Nqarabala (Joint President & Chief Executive Officer) C Sieggs MJ Quambe (Mozambican) MBN Dube M Ploer (German) GMB Kanyinyi NNA Nanyumza ZM Nkhize MUN Njike MEK Nkeli SA Nkosi PJ Robertson (British and American) P Victor (Chief Financial Officer) S Westwell (British)

Company Secretary: VD Kahla



Reference: N11/1/R Contact Person: Mr. J Oliver
Date: 13 July 2023 Direct Line: +27 (0) 12 426 6200
Email: nrstel@nra.co.za Website: www.nra.co.za

Directorate: Land & Soil Management, P.O. Box 8806, NELSPRUIT, 1200
27 Brown Street, 2nd Floor

Tel: (013) 754 0732 / 0701 Fax: (013) 754 0732 Email: DoreenS@Dalrd.gov.za
Enquiries: B.C. Sithole Ref: LSM/13/10/6/1/1/Nls/Mp
SINGO Consulting (pty) Ltd

Office No 870
5 Balalaika Street
Tasbet Park, Ext 2
Emalahleni,
1040

18 April 2023

Email: admin@singoconsulting.co.za

SCOPING REPORT FOR SECTION 102 AMENDMENT OF COAL MINING RIGHT APPLICATION, INTERGRATED ENVIRONMENTAL IMPACT ASSESSMENT AND ENVIRONMENTAL AUTHORIZATION, PORTIONS 02, 05, 19, 22, 48 AND 49 OF THE FARM WITBANK 80 IS LOCATED IN THE MAGISTERIAL DISTRICT OF WITBANK, MPUMALANGA PROVINCE.

Ref: (MP) 30/5/1/1/2/ (478) MR

With reference to the above mentioned application, the Department of Agriculture, Land Reform and Rural Development Directorate: Land and Soil Management does not have any comments at this stage.

Regards,

B.C. Sithole (Resource Auditor)

On behalf of: EXECUTIVE OFFICER: ACT NO. 43 of 1983
DIRECTORATE: LAND & SOIL MANAGEMENT



Department of Agriculture, Land Reform and Rural Development | Departement van Landbou, Grondhervorming en Landelike Ontwikkeling | Muhiwheko wa zwa Vhuleni, Mafiseletso ya Mavu na Mveliso ya Matshini, uMnyango Wenzima, Izinyuzi Kwezomhlaba Nokuhuthukisa Kwenkomo Zenzimela | Mafiseletso ya Vuhini, Amatsheko ka Kuvana na Mhuvuliso wa Matshini ya Lito Lehekuma, Izingubo Kwezomhlaba Nokuhuthukisa Kwenkomo Zenzimela | Ukhanyiso wezokuLima, ukuthuthukisa kweNtsho nokuThuthukisa kweNtsho zamaKhaya-Kgoro ya Temo, Paikanyolawa ya Naga le Thabolo ya Dinaga: magite - Letzapa la Temothuo, Kabotolho ya Naha le Thabolo ya Ditaka la Mahaa - Letzapa la Temothuo, Puatodindaga la Thabolo ya Metsemagae - ISebe lezoLimo, ubuyekiso lwami-haba noThuthukiso lasePhande

Page 1

Singo Consulting (Pty) Ltd

By email: admin@singoconsulting.co.za

Dear Sir / Madam

MINING RIGHT APPLICATION ON PORTIONS 02, 05, 19, 22, 48 AND 49 OF THE FARM WITBANK 80 IS

DMRE REF: MP 30/5/1/1/2/478 MR

The above-mentioned report prepared by Singo Consulting (Pty) Ltd and submitted to SANRAL for review and comment has reference.

The South African National Roads Agency SOC Limited (SANRAL) has no objection to the application as no national roads or interchanges under the jurisdiction of SANRAL will be affected.

Yours sincerely

STATUTORY CONTROL OFFICER: NORTHERN REGION

Northern Region 28 Ida Street, Menlo Park, 0801 | Postal Address: Private Bag X17, Lynnwood Ridge, 0040 | Tel +27 (0) 12 426 6200 Fax +27 (0) 12 348 1680
Email info@sanral.co.za | Visit us at www.sanral.co.za

Directors: Mr TB Mhondle (Chairperson), Mr RS Demane (CEO), Mr R Huzar, Mr TP Momoa, Mr E Makhubela, Mr C Hlabane, Mr B Buthelezi, Ms Nl Nwaka | Company Secretary: Ms A Mathew

Reg. No. 1996/005584/30. An agency of the Department of Transport.

Page 1 of 1



OFFICE OF THE REGIONAL LAND CLAIMS COMMISSIONER: MPUMALANGA
16 Bell Street, Bell Tower building, Restitution House, Nelspruit | Private Bag X11330, Nelspruit, 1200
Tel: (013) 752 4054 | Fax: (013) 752 5410

ENQUIRY: VK KHOZA
EL: 013 752 4054
DATE: 31/03/2023

SINGO CONSULTING (PTY) LTD
ATTENTION: VALENTINE MHLANGA

RE: YOUR ENQUIRY: LAND RESTITUTION CLAIM AGAINST THE FOLLOWING PROPERTY IN TERMS OF THE RESTITUTION OF LAND RIGHTS ACT NO.22 OF 1994

DETAILS OF PROPERTY DESCRIPTION

Property Description	Comments
Province of Mpumalanga Magisterial District: Property: Portion 2,5, 19, 48 & 49 of the farm Witbank 80 IS	According to our Database, there is currently no registered Land Claim which was lodged against the mentioned property.

- We refer to your letter received on 23 March 2023 regarding an enquiry to a Restitution claim against the above property.
- We advise that there is no claim lodged against the property.
- TAKE NOTICE** that land claims are lodged with the office of the Commission in accordance with the historical and or present property descriptions of the dispossessed properties and therefore may not match the current property description as described in your correspondence in respect of the above-mentioned properties. However, if the historical description of any of the above property has changed since 1913, or you are aware of any other local or official name by which it was then described or currently known, kindly supply us with such information to enable us to search further.
- TAKE NOTICE FURTHER THAT** while the Regional Land Claims Commission: Mpumalanga has taken reasonable care to ensure the accuracy of the above-mentioned information, the Commission cannot be held accountable if, through the process of further on-going investigation, additional information may be found that contradicts paragraph 2 above.

Yours Faithfully


MR. E.S. NKOSI
CHIEF DIRECTOR
OFFICE OF THE REGIONAL LAND CLAIMS COMMISSION: MPUMALANGA
DATE: 31 March 2023



Annex D - Letter of Consent

Application to encroach on Eskom's right

With reference to your application dated 13 March 2023; **Application for wayleave approval for mining right application for coal, on portions 02, 05, 19, 22, 48 and 49 of the farm Witbank 80 IS**; permission is hereby granted under the conditions listed on the attached document. Kindly indicate your acceptance of these conditions by initiating each page and signing in the appropriate area on the last page of the second copy and returning this copy to Eskom at the following address:

NemanaMM@eskom.co.za or Wayleavesmou@eskom.co.za or NekhahTT@eskom.co.za

Should you have any questions, please do not hesitate to contact us at either of the following:

TEL NUMBER: Tel +27 13 699 7467
ADDRESS: 28 Ferreira Street, Orion Building
P O Box 1567 Nelspruit 1200 SA

Yours sincerely

SIGNATURE

NAME: Mendy Nemanashi

TITLE: Ms.

The Letter of Consent should contain two copies of the selected generic and specific conditions referring to the specific application received.

The second copy should have a clause at the bottom of the last page, as shown:

I, Michael Hove (FULL NAMES AND SURNAME)

Herewith unconditionally accept the stipulations in the Letter of Consent pertaining to my co-use of an Eskom servitude.

SIGNED AT Nelspruit THIS 01 DAY OF 08 (MONTH) (YEAR) 2023

APPLICANT

WITNESS Jack G. Maseraka WITNESS Michael Hove

Mpumalanga Operating Unit
Asset Creation
28 Ferreira Street Nelspruit 1200
P O Box 579 Nelspruit 1200 SA
Tel +27 13 755 6174 Fax +27 13 755 9660 www.eskom.co.za
Eskom Holdings SOC Ltd Reg No 2002/015527/30





Singo Consulting (PTY) LTD
5 Balalaka Street
Tasbet Park Ext 2
Emalahleni
1040

Call: +27 (0) 13 692 0041
Email: admin@singoconsulting.co.za

Date:
19 April 2023

Enquiries: Mendy Nemanashi
Tel +27 76 268 5674
Our ref: LD-INV/E/MN/020/2023
Y&UJ r&f: MP 3U/5/1/1/2/48/ MK

Dear Valentine Mhlanga

APPLICATION FOR WAYLEAVE APPROVAL FOR MINING RIGHT APPLICATION FOR COAL, ON PORTIONS 02, 05, 19, 22, 48 and 49 OF THE FARM WITBANK 80 IS

This notice affects the existing Eskom Distribution line, **Bethal/Bethal North11kV**, overhead power line which traverse the proposed area.

Eskom Distribution will raise no objection to the proposed development, provided Eskom's rights and services are acknowledged and respected at all times.

There is **9** meters building and tree restriction on either side of the Centre lines of the **22 kV** power line, which must be adhered to in all future development and/or construction. Eskom's rights are protected by wayleave.

Further to the above the following conditions must be adhered to and **accepted in writing** before any construction procedures: -

1. Eskom Distribution shall at all times have unobstructed access to and egress from its services.
2. The applicant will adhere to all relevant environmental legislation. Any cost incurred by Eskom Distribution as a result of non-compliance will be charged to the applicant.
3. No construction or excavation work shall be executed within 11 metres from any Eskom power line structure, and/or within 11 metres from any stay wire.
4. If Eskom has to incur any expenditure in order to comply with statutory clearances or other regulations as a result of the applicant's activities or because of the presence of his equipment or installation within the servitude or wayleave area, the applicant shall pay such costs to Eskom on demand.
5. Changes in ground level may not infringe statutory ground to conductor clearances or statutory visibility clearances. After any changes in ground level, the surface shall be rehabilitated and stabilised so as to prevent erosion. The measures taken shall be to Eskom's requirements.
6. Eskom Distribution shall not be liable for the death of or injury to any person or for the loss of or damage to any property whor as a result of the encroachment or of the use of the area

Limanga Cluster: Mpumalanga Province
Asset creation
26 Ferreira Street Nelspruit 1200
P O Box 670 Makhopani 13100 SA
Tel +27 13 755 9045 Fax +27 13 755 9660 www.eskom.co.za
Eskom Holdings SOC Ltd Reg No 2002/015527/30



where Eskom Distribution has its services, by the applicant, his/her agent, contractors, employees, successors in title and assigns.

7. The applicant indemnifies Eskom against loss, claims or damages including claims pertaining to interference with Eskom Distribution services or apparatus or otherwise. The applicant's attention is drawn to section 27(3) of the Electricity Act 1987, as amended in 1994, which stipulates that the applicant can be fined and/or imprisoned as a result of damage to Eskom's apparatus.
8. No mechanical equipment, including mechanical excavators or high lifting machinery, shall be used in the vicinity of Eskom's apparatus and/or services, without prior written permission having been granted by Eskom. If such permission is granted the applicant must give at least seven working days prior notice of the commencement of work. This allows time for arrangements to be made for supervision and/or precautionary instructions to be issued. The Eskom's authorised area representative for **Bethal CNC: Sifiso Maphalala: Email: MaphalS@eskom.co.za and telephone details (017 801 4782/ 083 311 3527).**
9. Under no circumstances shall rubble, earth or other material be dumped within the servitude or Way Leave restriction area. The applicant shall maintain the area concerned to Eskom's satisfaction. The applicant shall be liable to Eskom for the cost of any remedial action which has to be carried out by Eskom.
10. The clearances between Eskom's live electrical equipment and the proposed construction work shall be observed as stipulated by Regulation 15 of the Electrical Machinery Regulations of the Occupational Health and Safety Act, 1993 (Act 85 of 1993).
11. Eskom may stipulate any additional requirements to illuminate any possible exposure to Customers or Public to coming into contact or be exposed to any dangers of Eskom plant.
12. Costs incurred by Eskom to comply with statutory requirements in terms of an applicant's (or his contractors) works, equipment or plant in the servitude area, shall be paid to Eskom on demand.
13. If for any reason the structure is required to be moved or dismantled the applicant will be responsible for the removal and/or possible re-location of the attachment.
14. No work may commence unless Eskom has received the applicant's written acceptance of the conditions specified in the letter of consent and/or permit and the approval is valid for a period of 60 days from date of letter.
15. The applicant or his / her contractor on site must at all times be in possession of the letter of consent. Should the site agent or contractor on site not be able to produce the required approval on inspection, all site activities will be stopped.
16. Eskom's rights and duties in the servitude shall be accepted as always having prior right and shall not be obstructed or interfered with. **NOTE:** Where and electrical outage is required, at least fourteen work days is required to arrange same.
17. Eskom Standard gates must be installed in the road reserve fence to ensure access to Eskom's services.
18. Statutory clearances as specified by the Occupational Health and Safety Act, 1993 (Act 85 of 1993), Regulation 15 of the Electrical Machinery Regulations, shall be complied with.



LD-INV/E/MN/020/2023

Should the applicant or his contractor damage any of Eskom services during commencement of any work whatsoever, then Eskom's 24 hour Contact Centre Tel: **08600 37566** must be dialed immediately to report the incident.

Any relocation of Eskom's services, due to this construction, will be for the account of the Applicant. The Applicant will also be responsible for granting Eskom an alternative route for the power line. The Eskom Customer Contact Centre at **08600 37566** must be contacted in connection with any line deviation and costs.

Attached Annexes D (Letter of consent) and E (Indemnity Form) must be completed and returned to this office before commencement of any operations, maps indicating positions of Eskom Distribution services and Clearance standards.

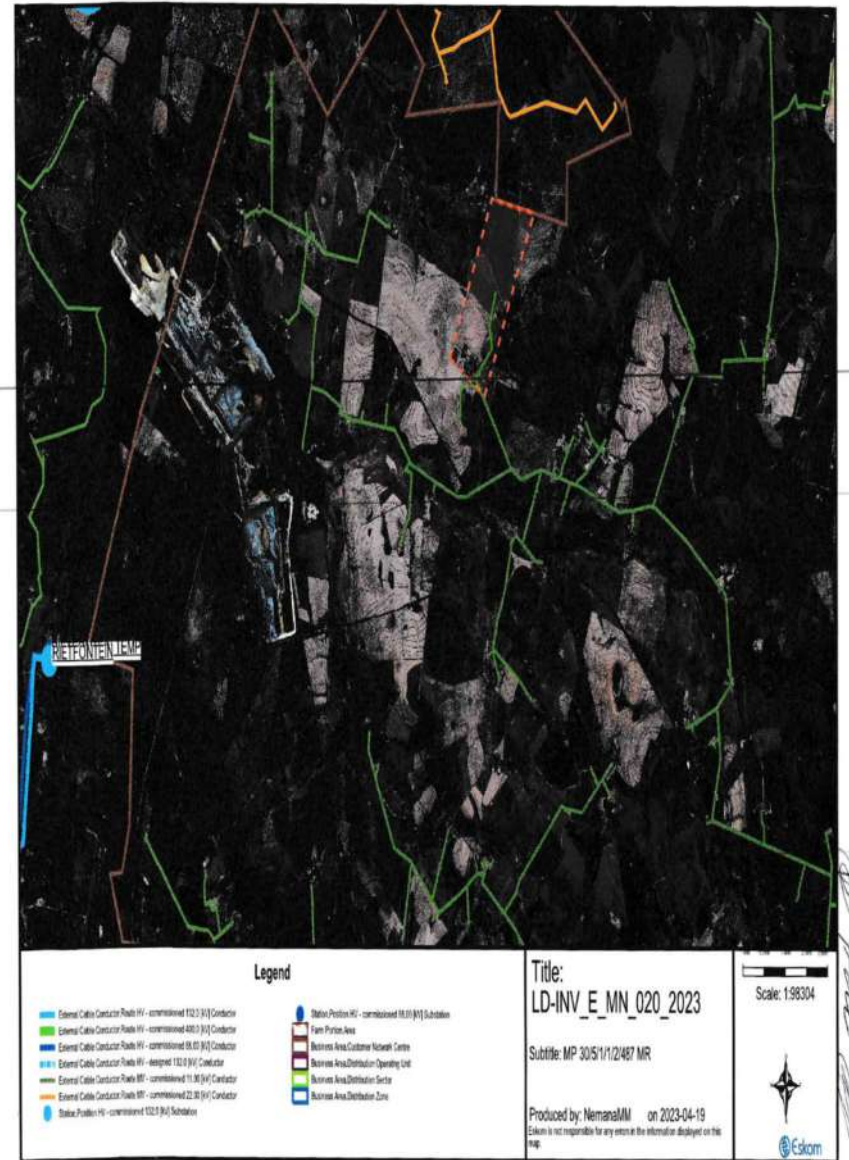
We thank you and hope you will find the above in order. Should you have technical queries on the Eskom standards and specifications please feel free to phone our Asset Creation, Manager Design Engineering Marumo at Tel: +27 13 693 3735 or email: MarumoS@eskom.co.za

Yours sincerely

**For Livhuwani Mashamba
MANAGER LAND DEVELOPMENT AND ENVIRONMENT**

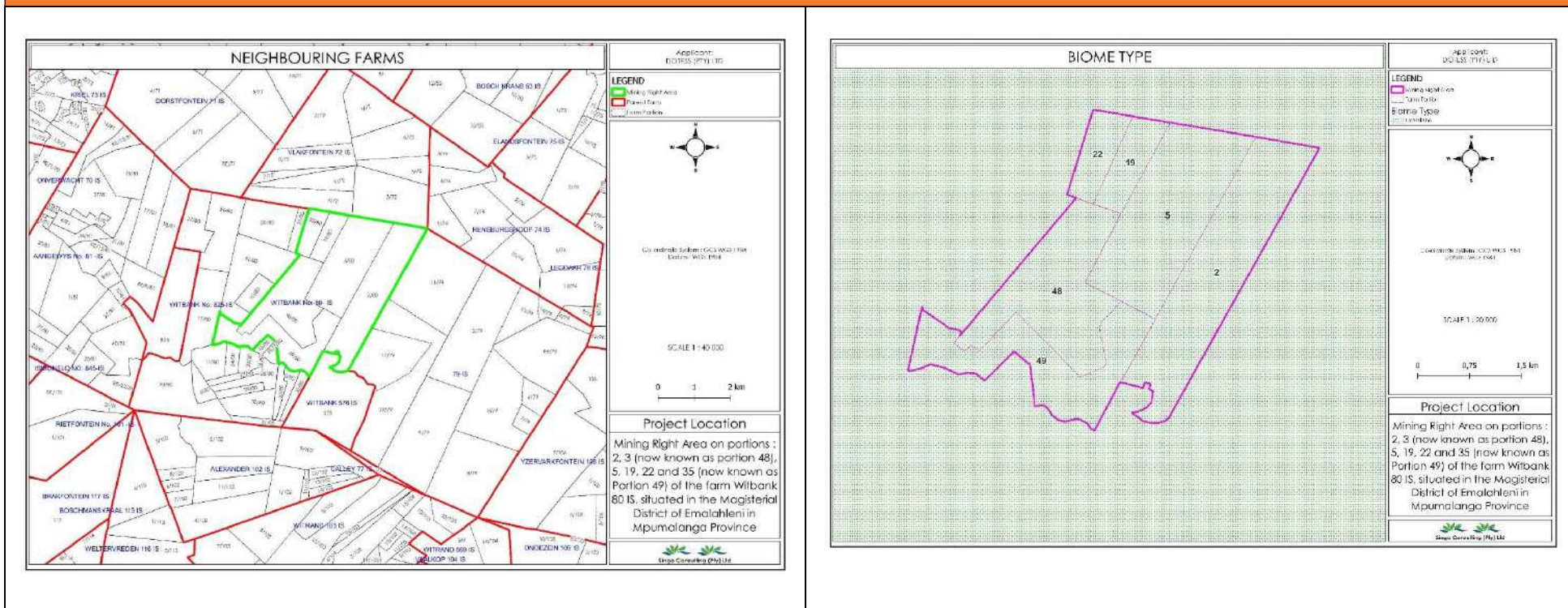
Cc Manager Design Engineering: Mr M. Marumo
Cc Senior Supervisor Bethal CNC: Sifiso Maphalala

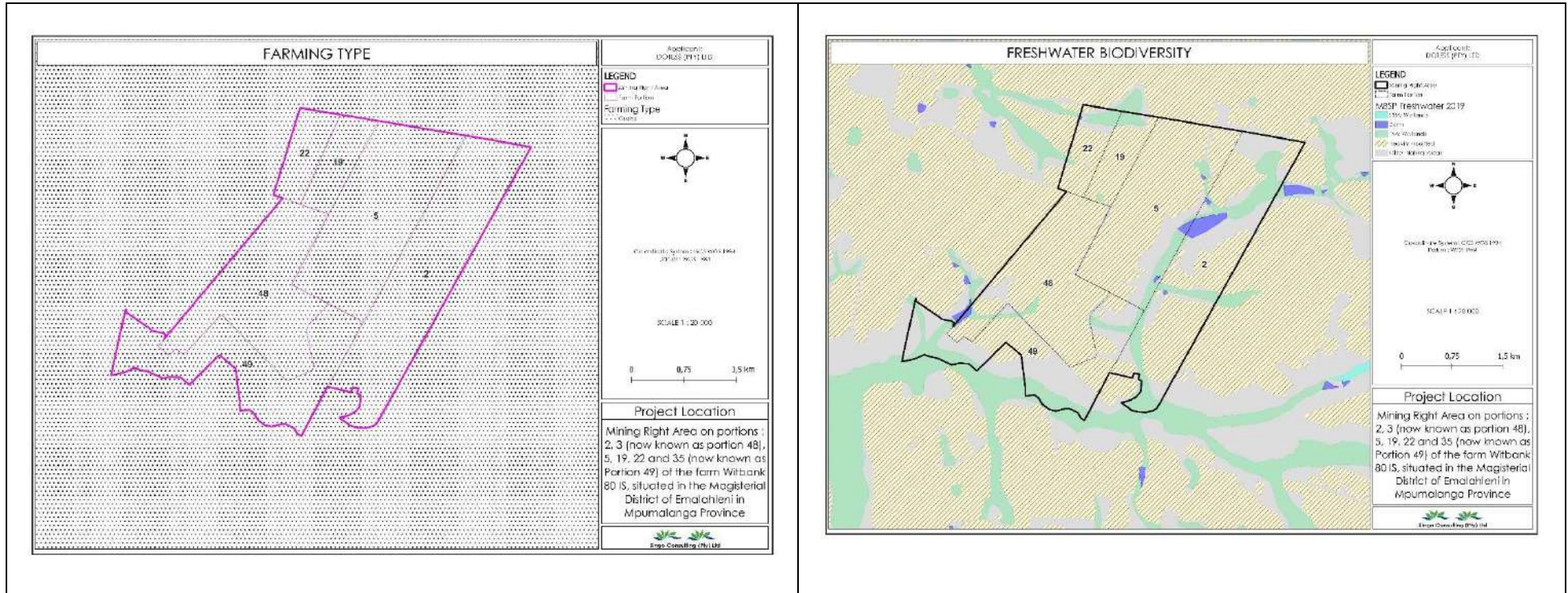
LD-INV/E/MN/020/2023

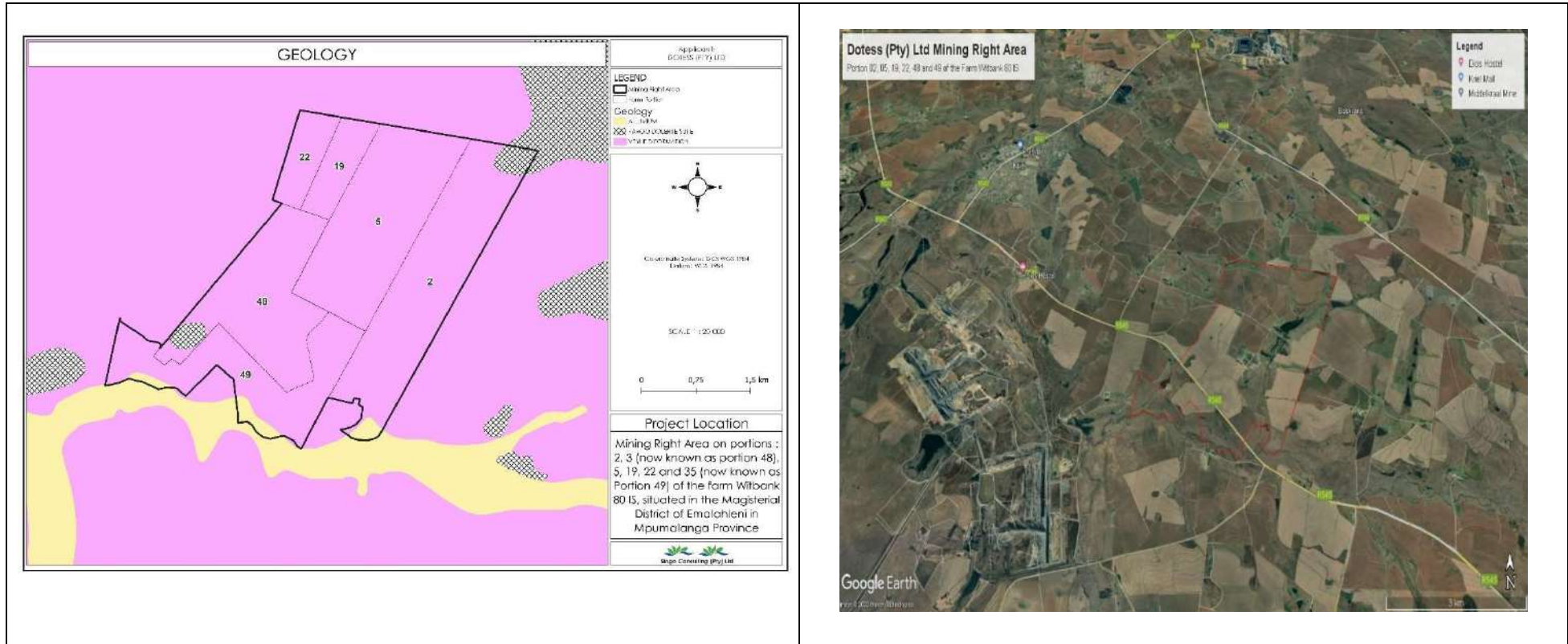


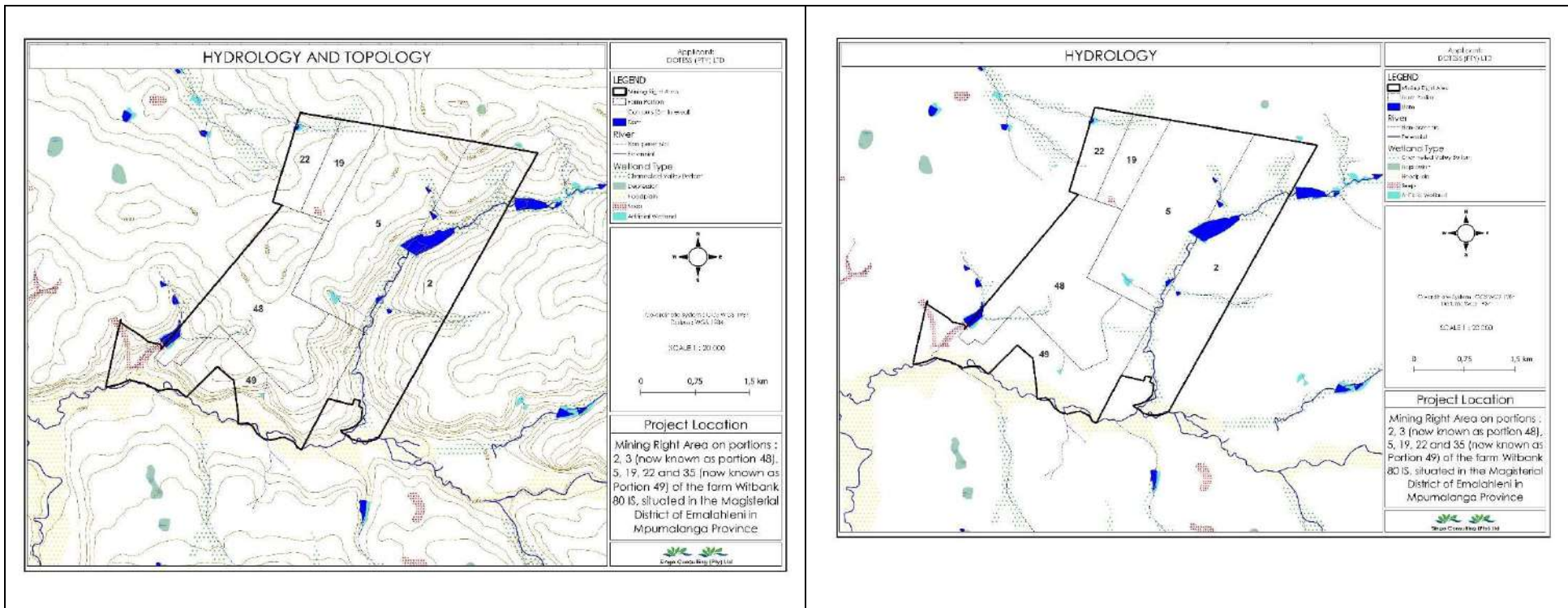
Appendix 4: Project Maps and Site conditions (pictures)

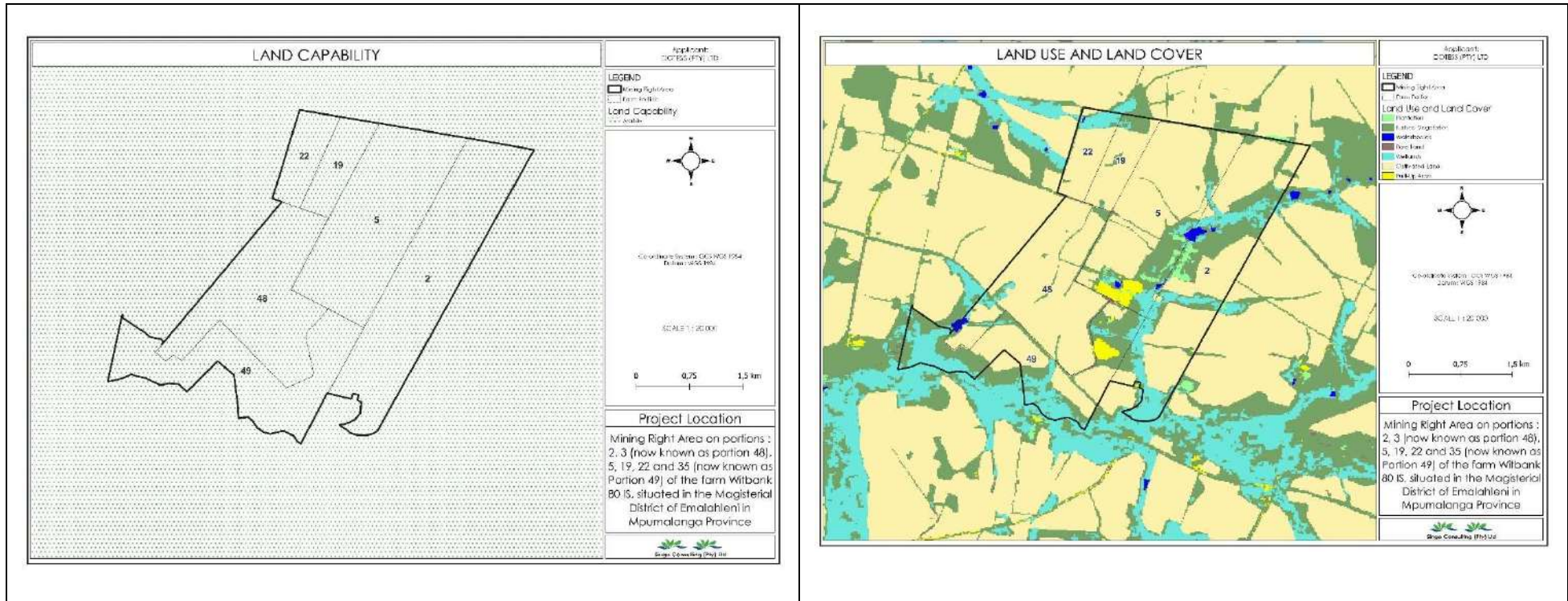
Project Maps

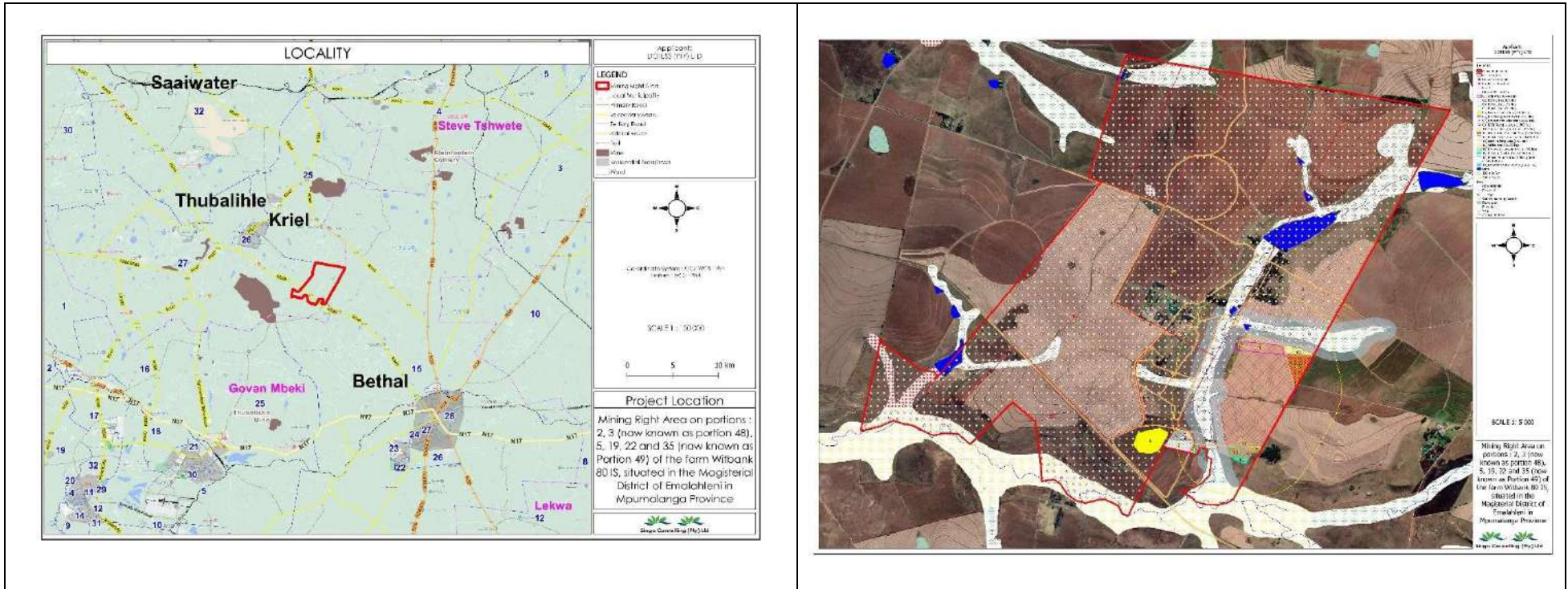


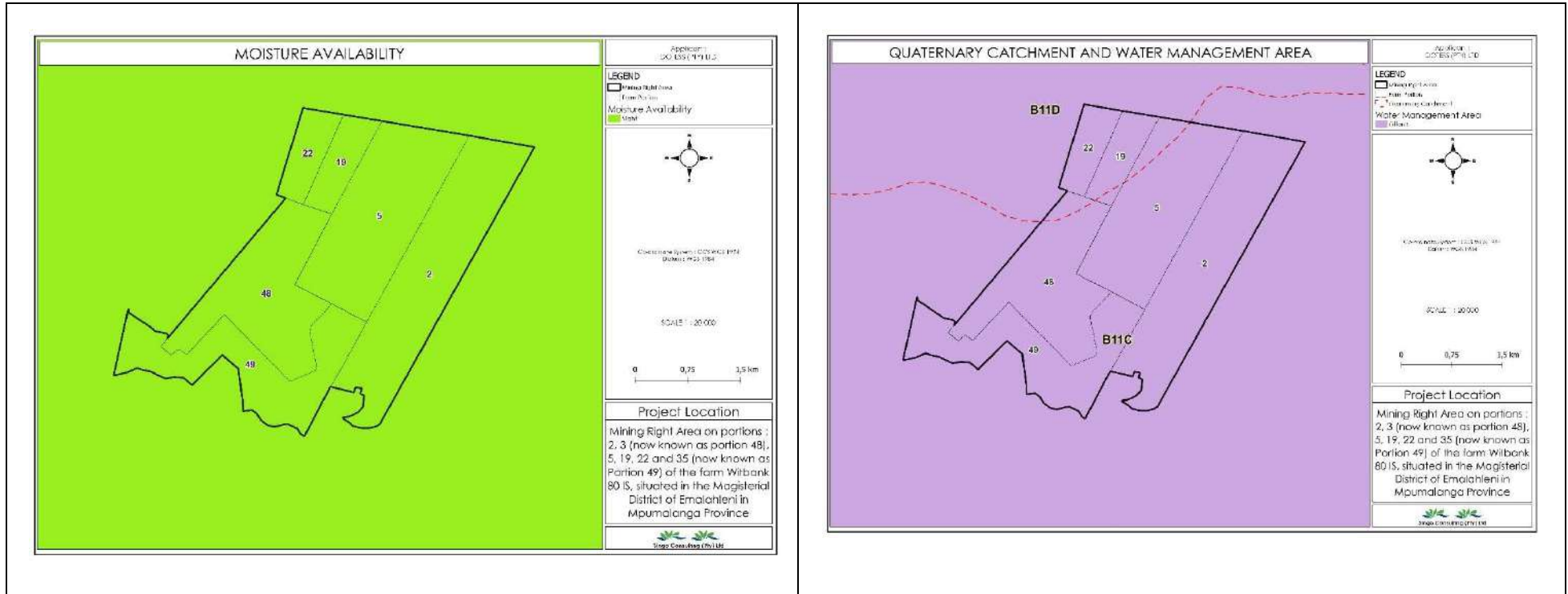


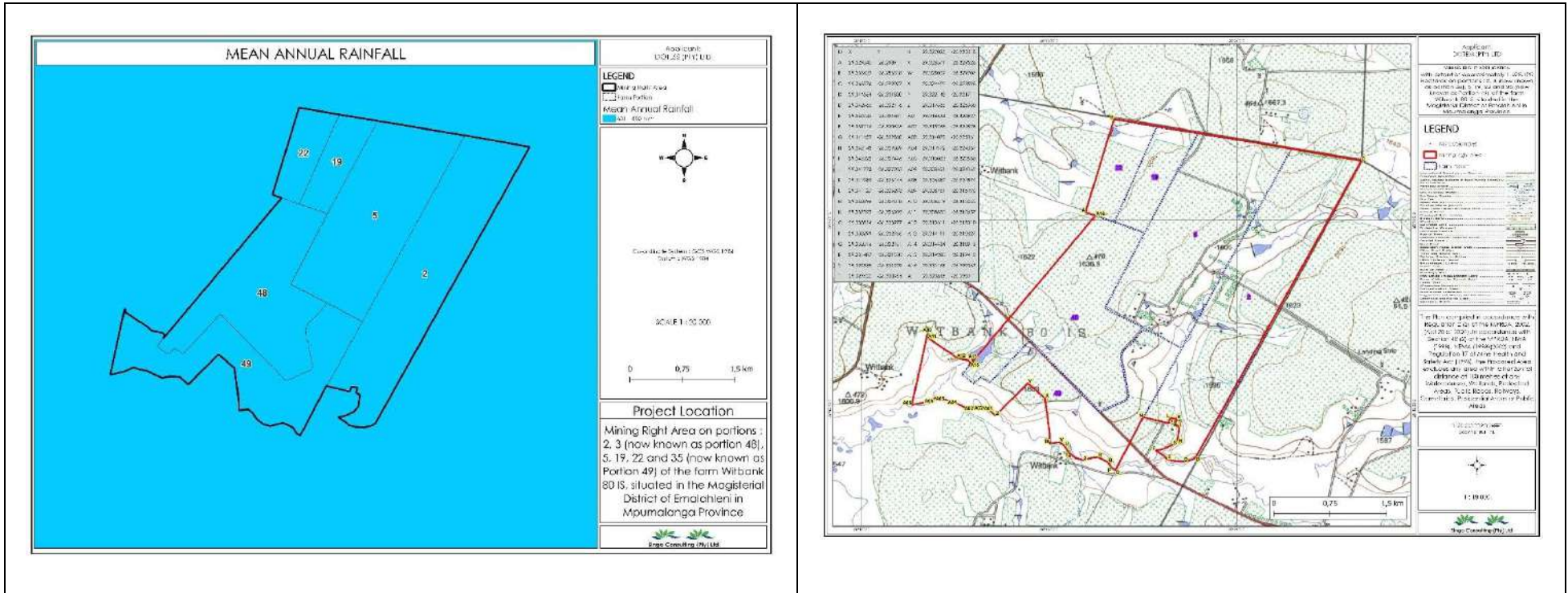


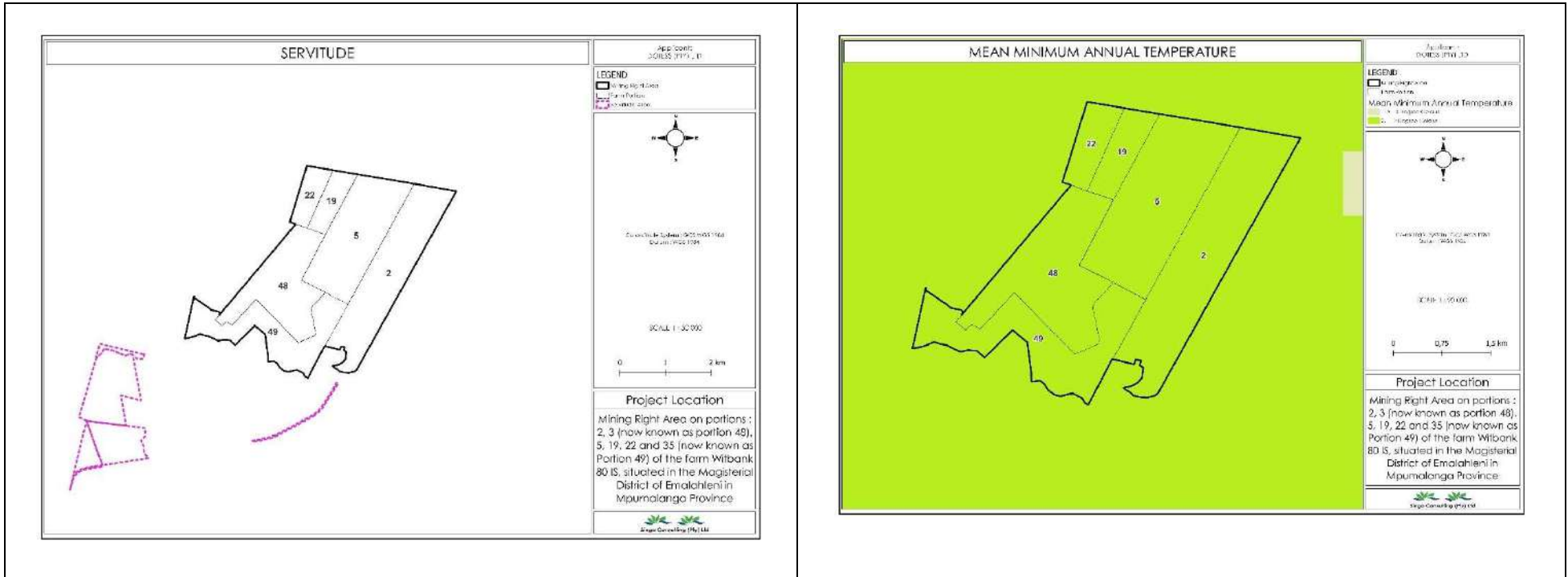


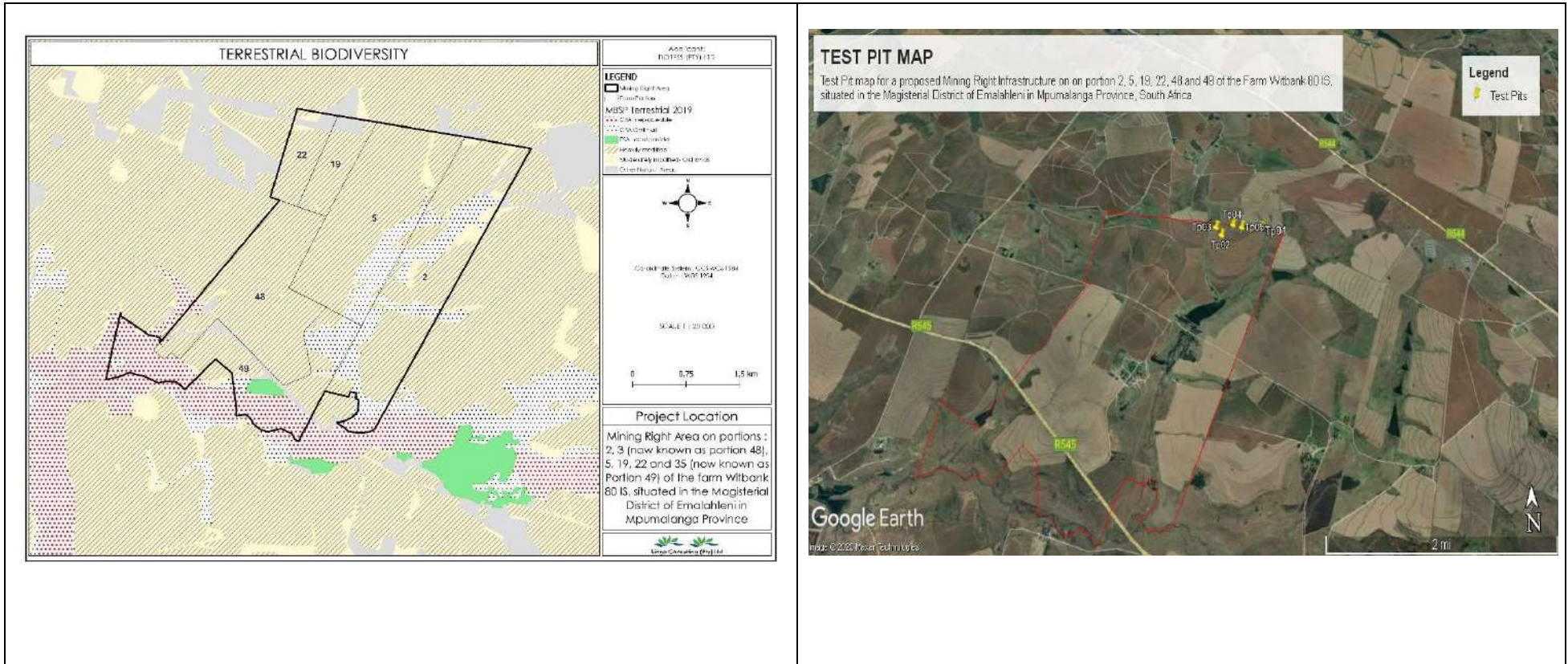


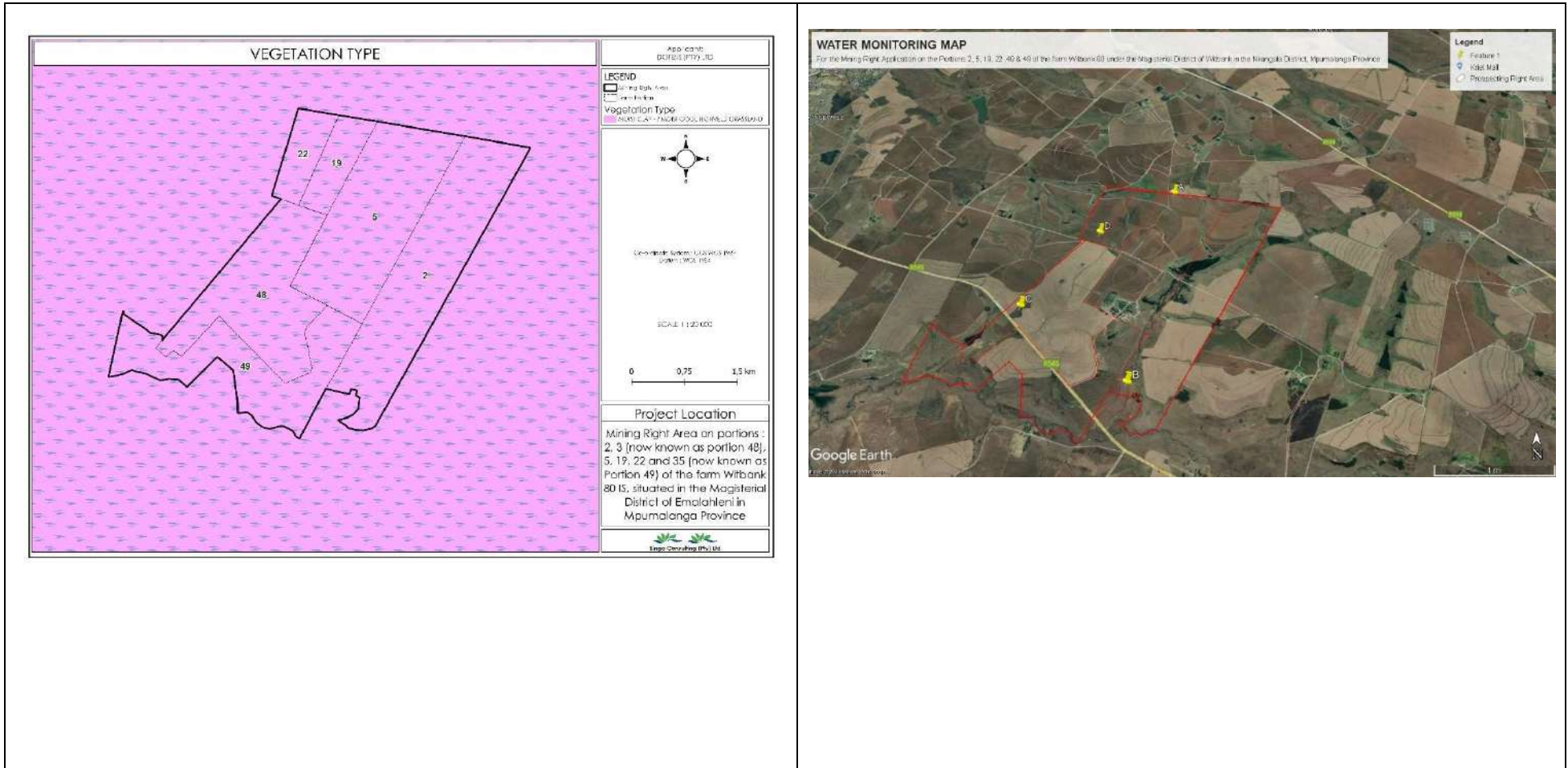


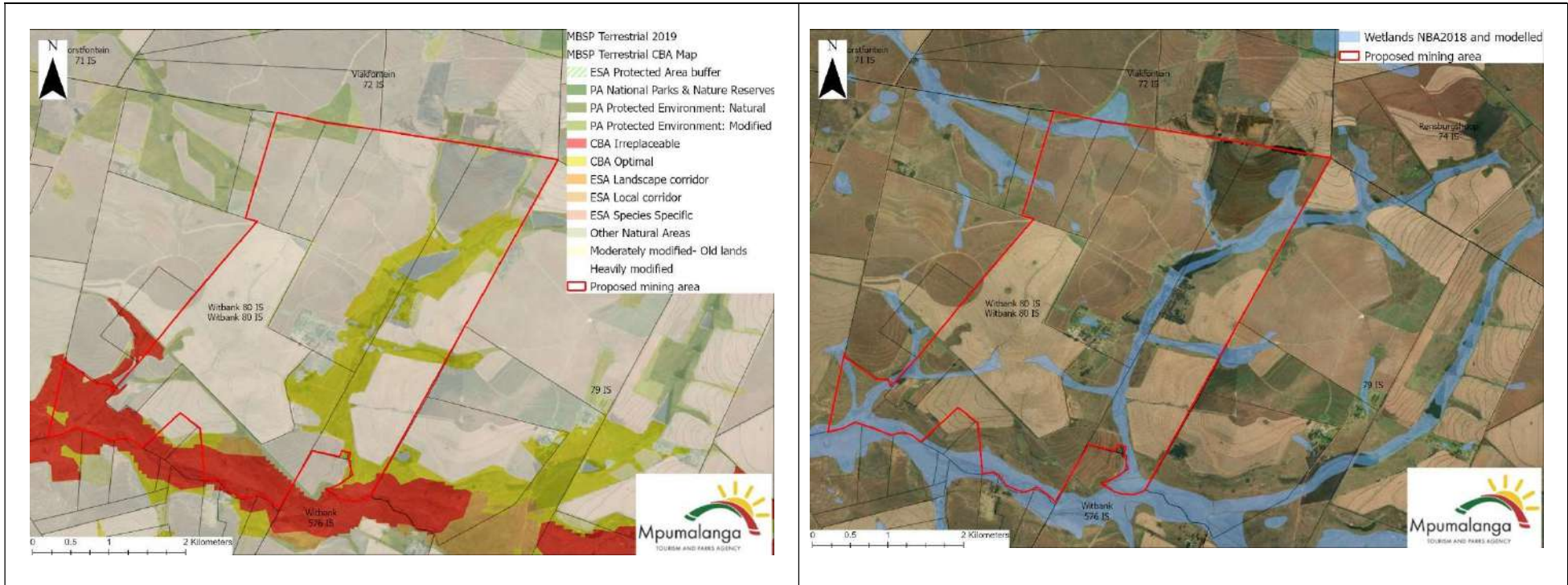












Site Condition (Pictures)





















Appendix 5: Specialist Reports

Appendix 6: DMRE Letters



mineral resources

Department:
Mineral Resources
REPUBLIC OF SOUTH AFRICA

Private Bag X7279, Emalahleni, 1035, Tel: 013-653 0500, Fax: (013) 656 0932
Saveways Centre, Mandela Drive, Witbank, 1034

Enquiries: Ms. T.T. Ntsizi Ref: MP 30/5/1/2/3/2/1 (478) EM

Sub directorate: Mine Environmental Management

Registered Mail

The Directors
Dotess (Pty) Ltd
P. O. Box 7260
EMALAHLENI
1035

Attention: Singo Kenneth

Fax no: 086 514 4103

ACKNOWLEDGEMENT RECEIPT OF AN APPLICATION FOR INTERGRATED ENVIRONMENTAL AUTHORISATION IN RESPECT OF THE REMAINING EXTENT OF PORTION 2, AND 19, PORTION 5, 22, 35 OF THE FARM WITBANK 80 IS, WITHIN THE MAGISTERIAL DISTRICT OF WITBANK, AS REQUIRED IN TERMS OF REGULATION 3(6) OF THE NATIONAL ENVIRONMENTAL MANAGEMENT ACT, 1998 (ACT NO.107 OF 1998): ENVIRONMENTAL IMPACT ASSESSMENT REGULATIONS, 2014 LODGED IN TERMS OF REGULATION 19 OF THE ABOVE-MENTIONED REGULATIONS AS READ TOGETHER WITH SECTION 12 OF THE MINERAL AND PETROLEUM RESOURCES DEVELOPMENT ACT, 2008 (ACT NO.49 OF 2008) AS AMENDED.

The above-mentioned matter refers.

1. This letter serves to inform you that your application for an Environmental Authorisation lodged is hereby acknowledged.
2. Kindly be informed that the above-mentioned application has not yet been evaluated. Once the evaluation is concluded, you shall be informed in due course of the outcome thereof. Notwithstanding this, you are reminded that all documents must be submitted in accordance with the timeframes stipulated on the NEMA: EIA Regulations, 2014.
3. For any enquire regarding this application please contact the above mentioned Official.



mineral resources

Department:
Mineral Resources
REPUBLIC OF SOUTH AFRICA

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

From: Directorate: Mineral Regulation: Mpumalanga Region

Enquiries: Mr. V.S Mayekiso **Ref:** MP 30/5/1/2/2/478 MR
MP-00180-MR/102

Subdirectorate: Mineral Laws

Registered Mail

The Directors
Dotess (Pty) Ltd
P/Bag X7297
Highveld Mall
Witbank
1035

Email: rudzani@singoconsulting.co.za

APPLICATION FOR CONSENT IN TERMS OF SECTION 102 OF THE MINERAL AND PETROLEUM RESOURCES DEVELOPMENT ACT, 2002 (ACT 28 OF 2002): TO INCLUDE PORTIONS OF PORTION 48 AND 49 OF THE FARM WITBANK 80 IS INTO THE MINING RIGHT HELD UNDER MP 30/5/1/2/2/478 MR

Receipt of your application dated **10 March 2023** for consent in terms of section 102 is hereby acknowledged.

Kindly note that the reference number **MP-00180-MR/102** has been allocated to the file on which the application is being dealt with. It would be appreciated if this reference number could be quoted in all future correspondence or enquiries.

Yours faithfully

.....
**REGIONAL MANAGER:
MPUMALANGA REGION**

DATE: 25/03/2023



SCOPING REPORT FOR SECTION 102 AMENDMENT ON COAL MINING RIGHT APPLICATION, INTEGRATED WATER USE LICENSE APPLICATION, INTEGRATED WASTE MANAGEMENT LICENSE APPLICATION, INTEGRATED ENVIRONMENTAL IMPACT ASSESSMENT AND ENVIRONMENTAL AUTHORISATION

Portions 02, 3 (Now known as Portion 48) 05, 19, 22, 35

PREPARED FOR

DOTESS (PTY) LTD

NO. 7 AMARYLLIS AVENUE,
ROBERTS ESTATE, MIDDELBURG,
MPUMALANGA, 1055
CELL: 063 527 1710
TEL 011 768 6128
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KOOSROSSOUW@YAHOO.COM

PREPARED BY



SINGO CONSULTING (PTY) LTD
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TASBET PARK, EKURHULENI, 1040
TEL: 013-697-0041
CELL: 072-084-6682/075-2727-649
FAX: 085-344-4103

COMPETENT AUTHORITY



MPUMALANGA REGIONAL OFFICE
DMRE SAMRAD REF: MP30/5/1/1/2/478MR

(Now known as Portion 49) of the Farm Witbank 80 IS,
Located in the Magisterial District of Witbank, Mpumalanga