

## Background Information Document (BID)

FOR COAL MINING RIGHT APPLICATION, INTEGRATED WATER USE LICENSE APPLICATION, INTERGRATED ENVIRONMENTAL IMPACT ASSESSMENT AND ENVIRONMENTAL AUTHORISATION, ON PORTION 08 and 11 OF THE FARM VAALBANK 177 IS, LOCATED IN THE MAGISTERIAL DISTRICT OF HENDRINA, MPUMALANGA. (DMR Ref MP30/5/1/2/2/10267MR.)

**FEBRUARY 2020** 





## **1.1 INTRODUCTION**

MWALIMU RESOURCES (PTY) LTD has applied for a mining right in terms of the Minerals and Petroleum Resources Act (Act No.28 of 2002) (MPRDA) (as amended) over Portion 08 and 11 of the farm Vaalbank 177 IS. DMR Ref: DMR Ref MP30/5/1/2/2/10267MR.

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 waste management license in terms of the National Environmental Management: Waste Act (NEM: WA), Act 59 of 2008, (amended in 2017) and a waste management licence (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). A water use license in terms of the National Water Act, Act No. 36 of 1998 (NWA) for a 5 hectare permit has been applied for by a different company, however all studies relating to WULA were conducted by Singo Consulting (Pty) Ltd, however due to other sections being triggered by a Mining Right, therefore a WULA in terms of the National Water Act, Act No. 36 of 1998 (NWA) for to include other sections.

MWALIMU RESOURCES (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:			
Agricultural Impact Assessment study	Emergency Preparedness Plans		
Geohydrology study	Heritage study		
Biodiversity study	Hydrological Study		
Blasting and vibration Assessment	Integrated Water and Waste Management		
Mining Right Layout	Paleontology		
PCD and General Engineering Design	Wetland Delineation Study		
Risk Assessment Report	Soil study		
Rehabilitation Plan	Surface and Storm Water Management Report		
Traffic Management Study	Water Balance Report		



## 2. LOCATION

The mining right area is located on Portion 08 and 11 of the farm Vaalbank 177 IS, **owned by Mr LLOYD JOHN JAMES** at Hendrina in the jurisdiction of Steve Tswete Local Municipality in the District of Nkangala in Mpumalanga Province, South Africa.

The site is 378 hectares in extent the project is located approximately 2 km east of the town of Hendrina in the Mpumalanga Province, South Africa. The project can be accessed from the R38 road that links Hendrina and Carolina. The R38 branches (in the middle of Hendrina town) from the N11 linking Hendrina and Ermelo. There is a gravel road that branches from the R38 for approximately 300m and goes through the project area. The project is located near the Klein Olifants River on the eastern direction. There are three coal fired power stations located in less than 60km to the project area, namely Hendrina, Arnot and Komati power station. 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:

- 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 Comment 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 Saturday the 7<sup>th</sup> of March** 2020.

## > THE ROLE OF I&AP's

Communities, neighbors, government representatives, stakeholders such as community leaders, Nongovernmental 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).





Figure 1: Locality Map of the project area.





Figure 2 : Locality Map, showcasing close by Power Stations.



## 4. Project Overview

Mineral Applied For: Coal resources

## Mining Methods: Open Cast Mining (Surface 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.

## Project background;

The Mwalimu Resources Vaalbank Coal Project constitutes the farm Vaalbank 177 IS Portion 8 and 11. The project is covered under prospecting right with a reference number MP30/5/1/1/2/10937PR; total extent is 378 hectares. The prospecting right was granted to Mwalimu Resources (Pty) Ltd in terms of Section 17(1) of the Mineral and Petroleum Resources Development Act (MPRDA), 2002 (Act No. 28 of 2002); effective from 22nd May 2014 for a period of 5 years; ending on the 21st of May 2019. A 5 ha Mining Permit Application with reference number MP 30/5/1/3/2/11694 MP has been since lodged and an Acceptance Letter has been received from Department of Mineral Resources (DMR), Mpumalanga. The Mining Permit was only lodged for Portion 11 of farm Vaalbank 177 IS where the stripping ratio was the lowest.

A total of 9 boreholes were drilled on portion 11 of farm Vaalbank 177 is in the year 2017. An additional 7 holes were drilled during the month of June 2018. This brings the total holes drilled over the 124 ha to 16 see Figure 3. Two seams were intersected in the project area namely;

- No.4 Seam: most economical and can be exploited by means of open cast mining.
- No.2 Seam: less economical and can be exploited by means of underground mining. The resource is now at the Measured Resource Classification for both the No.4 Seam and the No.2 Seam.

The Mwalimu Resources (Pty) Ltd, Vaalbank Coal Project (Portion 11) has an estimated Measured Resource (TTIS) of 4 028 475 t broken down as follows:

- No. 4 Seam: 2 064 678 t
- No. 2 Seam: 1 963 796 t





Figure 3: Map showing the positions of the drilled boreholes.

During drilling, each borehole was logged from surface to end of depth on Mwalimu log sheet by a qualified geologist employed by Mwalimu. The core was packed into length of 10 m; the geologist marked the different lithological units, and the coal seams were defined and sampled accordingly. All relevant horizon and interval information was captured, and accurate and comprehensive descriptions were given for all lithological intervals. The latter were described with respect to main lithotypes, secondary lithotypes, and degree of weathering, colour, grain size, sorting, bedding, sedimentary structure, tectonics, strengths, accessory minerals and fossils.

Coal seams were logged in detail with emphasis being placed on coal types, intra-seam partings, and tectonic features such as slicken-slide and jointing, weathered zones, roof, floor and parting contact angles and any other noteworthy features. Weathering is described in terms of soft weathering (soil), friable weathering



(free dig material), general weathering (resource limit cut-off) and hard weathering (last trace of weathering).

When sampling, the method of sampling was based on lithology. All highly weathered coal was not sampled and coal seam below 30cm was not sampled. Core logging and sampling were managed by a qualified internal geologist. Analysis was carried out by Umzamo Analytical Services a SANAS accredited laboratory. Data was capture and validated using an excel spread sheet. All drilled hole and sampling data were stored in an excel spread sheet. The data was validated before used for modelling. No data was found to be unusable.

Overall, two major coal seams were sampled and found to be of economic importance, the No.4 and No.2 seam. The parting between these two seams varies from 18.60m to 22.93m. The No.4 seam was discovered to be well developed and can attain a maximum of 1.93m thickness with the lowest thickness of 0.73 and the No.2 Seam is 1.05 m to 1.54 m. The No.2 Seam was noticed to be affected by dolerite intrusion which completely replaced it in some place and devolatilised it in other places thus, it is important note that the No.2 seam is economical only when it is mined together with the No.4 seam.



# Project Geology;

## Regional Geology

South African coals are hosted in sedimentary rocks of the Karoo Supergroup within the Karoo Basin, a large retro-foreland basin that developed on the Kaapvaal Craton and filled between the Late Carboniferous and Middle Jurassic periods. The Karoo Basin is filled with the Karoo Supergroup which is a lithostratigraphically unit that is subdivided into the Dwyka, Ecca, Beaufort and Stormberg groups (SACS, 1980). The coals South African coals range from bituminous to anthracite. The coal quality in South African coalfields generally increases from West to the East. The Hendrina Project is located within the Witbank Coalfield. 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. See Figure 4.



Figure 4: Witbank Coal fields isopach contours.



## Local Geology

The local geology of the project area is entirely covered by 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 idealized coarsening upwards deltaic cycle in the eastern part of the Vryheid formation comprises of dark-grey, muddy siltstone resulting from shelf suspension deposition in anoxic water of moderate depth.

The coal seams started as peat swamps developed on broad discarded alluvial plains and, less commonly in interfluves (backswamps). Most of the economically significant coal seams take place in the fluvial succession. The fluvial interval grades into deltaic sediments towards the southwest. The Vryheid formation can be subdivided into a lower fluvial -dominated deltaic interval, a middle fluvial interval and an upper fluvial-dominated deltaic interval in the east. These subdivisions correspond approximately to the lower sandstone, coal zone and upper sandstones. See Figure 5.



Figure 5: Geology Map of the Area of Interest.



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:

Access & Haul roads (with necessary security) including the	Contractor's Yard with septic/chemical ablution facilities		
upgrading of the access point to the gravel road.			
Offices	Weighbridge		
workshop and stores (with septic/chemical ablution	Rail Siding		
facilities)			
Diesel facilities and a hardstand	Power and Water		
Boxcut	Stockpiles (topsoil, overburden, subsoil/softs, ROM)		
Surface water management measures (stormwater	Crushing & screening Facility		
diversion berms and trenches, pollution control dams,			
tailings dam etc)			
Discard Facility	Screening and Crushing		

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.
- It is envisaged that potable/ domestic water will be sourced from boreholes on site, other alternatives are also being considered.
- 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.

#### **5. LEGISLATIVE PROCESS**

In order 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 DMR. 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 DMR for adjudication, which includes activities triggered under the Environmental Impact Assessment 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 portion. The proposed Vaalbank opencast coal mining operations constitute various listed activities which have been listed within the scheduled activities in Government Notice Regulation No 324, 325 and 327 (amended 7 April 2017) and therefore require an integrated Scoping and EIA process to be followed. Prior to any listed activity being approved by the DMR, 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 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.
- 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) will be 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;





## 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&AP's 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&AP's 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 commenced on the 7<sup>th</sup> of February 2020 where I&AP's are encouraged to send through their concerns or comment and call to register for a period of 30 days, ending on the 7<sup>th</sup> of March 2020. The notification procedure includes:

• Newspaper advertisement;



- Site Notices;
- 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-day 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 8<sup>th</sup> of March 2020 to 7<sup>th</sup> of April 2020** at some of the following locations:

LIBRARY	ADDRESS	OPENING HOURS		
Main Library	Wanderers Avenue	Monday to Thursday : 09:00 - 17:30		
Gerald Sekoto	MIDDELBURG	Friday : 09:00 - 13:30		
Public Library	Tel. 013 249 7314	Saturday : 08:00 - 12:00		
	Ngwako Street	Monday to Thursday : 09:00 - 13:30,		
Mhluzi Library	MHLUZI	13:30 - 16:30		
	Tel. 013 249 7146	Friday : 08:00 - 13:30		
1 - 1		Monday to Thursday : 09:00 - 13:30,		
Mhluzi Library Extension 7	Tel. 013 242 7138	13:30 - 16:30		
	Tel. 013 242 3900	Friday : 08:00 - 13:30		
•		Monday to Thursday : 09:00 - 13:30,		
Chromeville Library	Tel. 013 242 7025	13:30 - 16:30		
		Friday : 08:00 - 13:30		
· · ·	Verdenne Chreat	Monday and Tuesday : 14:00 - 17:30		
Eastdana Library	MIDDEL RUBG	Wednesday : 12:30 - 16:00		
EastGene Clonary	Tel 013 249 7275	Thursday : 14:00 - 17:30		
	101.013 243 7273	Friday : 09:00 - 12:30		
		Monday and Tuesday : 14:00 - 17:30		
Dearkan Library	Tel. 013 249 7396	Wednesday : 12:30 - 16:00		
Dourkop Cibrary	Tel. 013 245 99 21	Thursday : 14:00 - 17:30		
		Friday : 09:00 - 12:30		
		Monday and Tuesday : 14:00 - 17:30		
Rightwill Library	Tel 012 207 1122	Wednesday : 12:30 - 16:00		
cieccul cionary	101.013 237 1132	Thursday : 14:00 - 17:30		
		Friday : 09:00 - 12:30		
		Monday and Tuesday : 14:00 - 17:30		
Rulleoshope Library	Tel 013 295 1300	Wednesday : 12:30 - 16:00		
Charlenge Charly	101.013 230 1300	Thursday : 14:00 - 17:30		
		Friday : 09:00 - 12:30		
		Monday and Tuesday : 14:00 - 17:30		
Nasaret Library	Tel. 013 246 1414	Wednesday : 12:30 - 16:00		
in a survey and a survey		Thursday : 14:00 - 17:30		
		Friday : 09:00 - 12:30		
		Monday and Tuesday : 14:00 - 17:30		
Hendrina Library	Tel 013 293 0000	Wednesday : 12:30 - 16:00		
Library		Thursday : 14:00 - 17:30		
		Friday : 09:00 - 12:30		



A public meeting is scheduled for the 21 February 2020

Venue: Cosmos Community Hall at Kwazamokuhle Township, Hendrina

Address: Henxrina, 1095

Time: 10H00am

"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."



#### Appendix A: REGISTRATION AND COMMENT FORM SHEET

## NOTICE OF COAL MINING RIGHT APPLICATION AND ENVIRONMENTAL AUTHORIZATION ON PORTION 08 AND 11 OF THE FARM VAALBANK 177 IS IN THE MAGISTERIAL DISTRICT OF HENDRINA, MPUMALANGA PROVINCE: DMR REF NUMBER: MP 30/5/1/2/2/10267 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	Cell	
				No:	No:	
Email:	·					
Physical Ad	dress:					
Postal Addr	ress:					
Preferred n	nethod of commun	ication: 🛛 fax 🖓 e-r	mail 🛛 post			
Preferred to	elephonic commun	ication: 2 cell 2 ho	me 🛾 work			
<b>a</b>						
Organisatio	on/Representative:					
<b>F</b>				h.l		
Farm name	, number and subd	ivision or Street A	daress (if applica	DIE):		

Questions(s):

#### 1. Where did you get information about the project?

Newspaper advertisement 2 notice board 2 flyer 2 other (please specify)



#### 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