DRAFT SCOPING REPORT

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

NAME OF APPLICANT:	**KATMA COMMUNICATION AND PROJECT**
REFERENCE NUMBER:	**MP 30/5/1/2/2/ 10387 MR**
FARM NAME:	**PORTION 9 OF THE FARM BANKFONTEIN 215 IS**
MAGISTERIAL DISTRICT:	**ERMELO**
COMMODITY:	**COAL AND PSEUDOCOAL**
DATE:	**JANUARY 2023**

IMPORTANT NOTICE

In terms of the Mineral and Petroleum Resources Development Act (Act 28 of 2002 as amended), the Minister must grant a mining 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 (EIA) and an Environmental Management Programme report (EMPr) 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.

OBJECTIVE OF THE SCOPING PROCESS

The objective of the scoping process is to, through a consultative process

a) Identify the relevant policies and legislation relevant to the activity;

b) Motivate 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 and confirm the preferred activity and technology alternative through an impact and risk assessment and ranking process;

d) identify and confirm the preferred site, through a detailed site selection process, which includes an impact and risk assessment process inclusive of cumulative impacts and a ranking process of all the identified alternatives focusing on the geographical, physical, biological, social, economic, and cultural aspects of the environment;

e) Identify the key issues to be addressed in the assessment phase;

f) agree on the level of assessment to be undertaken, including the methodology to be applied, the expertise required as well as the extent of further consultation to be undertaken to determine the impacts and risks the activity will impose on the preferred site through the life of the activity, including the nature, significance, consequence, extent, duration and probability of the impacts to inform the location of the development footprint within the preferred site; and

g) Identify suitable measures to avoid, manage, or mitigate identified impacts and to determine the extent of the residual risks that need to be managed and monitored.

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LIST OF ACRONYMS

BID	Background Information Document
CA	Competent Authority
CSR	Consultative Scoping Report
°C	Degrees Celsius
DMREMP	Department of Mineral Resources & Energy Mpumalanga
MLM	Msukaligwa Local Municipality
DWS	Department of Water and Sanitation
EA	Environmental Authorization
EAP	Environmental Assessment Practitioner
EIA	Environmental Impact Assessment
EIR	Environmental Impact Report
EMPR	Environmental Management Programme
HIA	Heritage Impact Assessment
Ha	Hectare
I&Aps	Interested and Affected Party (ies)
IRR	Issues and Response Report
NEMA	National Environmental Management Act (No. 107 of 1998)
NEMBA	National Environmental Management Biodiversity Act (Act 10 of 2004)
NHRA	National Heritage Resource Act (Act 25 of 1999)
NWA	National Water Act (Act No. 36 of 1998)
PoS- EIA	Plan of Study for Environmental Impact Assessment
PPP	Public Participation Process
SAHRA	South African Heritage Resources Agency
SANBI	South African National Biodiversity Institute
S & EIR	Scoping and Environmental Impact Assessment Report
SR	Scoping Report
WMA	Water Management Area

DEFINITION OF TERMS

Affected Environment: The affected environment refers to those parts of the socio-economic and biophysical environment impacted on by the development.

Environment: The surroundings within which humans exist and that are made up of (i) the land, water and atmosphere of the earth; (ii) micro-organisms, plant and animal life; (iii) any part or combination of (i) and (ii) and the interrelationships among and between them; and the physical, chemical, aesthetic and cultural properties and conditions of the foregoing that influence human health and well-being. This includes the economic, cultural, historical, and political circumstances, conditions and objects that affect the existence and development of an individual, organism or group.

Environmental Impact Assessment: A planning and management tool for sustainable development, aimed at providing decision-makers with information on the likely consequences of their actions.

Environmental Impact: The positive or negative effects on human well-being and/or on the environment.

Interested and affected parties: Individuals, communities or groups, other than the proponent or the authorities, whose interests may be positively or negatively affected by a proposal or activity and/or who are concerned with a proposal or activity and its consequences. These may include local communities, investors, business associations, trade unions, customers, consumers and environmental interest groups. The principle that environmental consultants and stakeholder engagement practitioners should be independent and unbiased excludes these groups from being considered stakeholders.

Mitigate: The implementation of practical measures to reduce adverse impacts.

Public Participation Process: A process in which potential interested and affected parties are given an opportunity to comment on, or raise issues relevant to the proposed development.

Proponent: Any individual, government department, authority, industry or association proposing an activity (e.g. project, programme or policy). In this project, katma is the proponent.

Scoping: The process of determining the spatial and temporal boundaries (i.e. extent) and key issues to be addressed in an environmental assessment process. The main purpose of scoping is to focus the environmental assessment on a manageable number of important questions. Scoping should also ensure that only significant issues and reasonable alternatives are examined.

Study Area: The area that will be covered by the EIA process within which possible study corridors will be investigated.

Stakeholders: A sub-group of the public whose interests may be positively or negatively affected by a proposal or activity and/or who are concerned with a proposal or activity and its consequences. The term therefore includes the proponent, authorities (both the lead authority and other authorities) and all interested and affected parties (I&APs). The principle that environmental consultants and stakeholder engagement practitioners should be independent and unbiased excludes these groups from being considered stakeholders.

1. INTRODUCTION

1.1 BACKGROUND

TPR Mining Resources (Pty) Ltd was appointed by Katma Communication and Projects, hereafter referred to as the Proponent, as the independent environmental assessment practitioner to apply for the Environmental Authorization for the proposed mining right application for coal ore on portion 9 of the farm Bankfontein 215 IS within the jurisdiction of Msukaligwa Local Municipality, Gert Sibande district in Mpumalanga Province.

The applicant has obtained a Prospecting Right (reference number MP 30/5/1/1/2/ 14749 PR), which the Basic Assessment Report & EMPr was approved in March 2022 by the Department of Mineral Resources and Energy (DMRE) to prospect for coal and pseudocoal on Portion 9 of the farm Bankfontein 215 IS with an extent of 204.4 Ha within Mpumalanga province. The applicant has also obtained a mining permit in June 2022 covering a 5 Ha area which mining operations is intended to start soon. A Mining right application was lodged with the DMRE in November 2022 (reference number: **MP 30/5/1/2/2/ 10387 MR)** and was accepted 21st of December 2023 respectively.

It is an intent of the proponent to mine within an area covering approximately **225,72Ha** and will include mining of Coal ore by Open-cast mining method through site clearing, stripping, blasting, excavation after the ore is extracted using ADTs and frond end loaders into the Mobile crusher and its crushed and screened to produce end product, later the ore is transported to the customers by means of trucks. Construction of Pollution Control Dam, Topsoil and Overburden stockpile area, Rom

stockpile area, Installation of Diesel Storage tanks, Workshop area, Mobile Offices and Ablution Facilities and Rehabilitation

TPR Mining Resources (Pty) Ltd has applied for the mining right in terms of the National Environmental Management Act, 1998 (Act 107 of 1998) as amended and the Environmental Impact Assessment Regulations, 08 December 2014. Authorization by the Department of Mineral Resources Mpumalanga Region (DMRM) shall give way to Katma Communication and Project Company to proceed with the proposed mining right application.

South African Law requires that the environmental and social impacts associated with mining activities be assessed to identify any potential negative and / or positive consequences as result thereof. Following which measures must be proposed to avoid or minimise these impacts.

As the application relates to mining activities, a full Scoping and Environmental Impact Report (S&EIR) is required as well as an Environmental Management Plan (EMP) report. This report constitutes the Scoping Report and is the first phase in the environmental assessment process. The purpose of the Scoping Report is to identify key environmental issues for further investigation during the Environmental Impact Assessment (EIA) phase of the project; and to outline the plan of study / terms of reference for the preparation of the EIA and EMPr.

2. DETAILS OF THE PROPONENT AND EAP

2.1 DETAILS OF THE PROPONENT

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Fax no: 086 599 3318
E-mail address: Tshepho.phetla@gmail.com

Physical address:	28 Albida Avenue, Acacia Estate Polokwane 0699

2.2 DETAILS OF THE EAP

Name	TPR Mining Resources (Pty) Ltd
Tel no:	087 980 5800
Fax no:	086 599 3318
E-mail address	info@tprmining-resources.co.za
Physical address	No. 29J Woltemade Street Witbank, Mpumalanga Province

2.3 EXPERTISE OF THE EAP

TPR Mining Resources (Pty) Ltd is a mining environmental consulting firm established in 2015 by a group of young professionals with extensive experience in mining environmental management. It originated in Limpopo Province and has grown to offer consulting services in Mpumalanga, North West, Gauteng, Kwa-Zulu Natal, Northern Cape and Western Cape Provinces.

2.4 PROJECT TEAM MEMBERS

Team Authors

Project Manager: Mr. Thato Jimmy Ramoraswi

Mr. Thato Jimmy Ramoraswi obtained a Bachelor of Environmental Science in April 2009 from University of Venda as well as a Certificate in Waste Management from VBK Business Venture in January 2015. He obtained extensive experience (over 5 years) in Environmental Management in the construction and mining sector. He completed

several EIA projects. He is affiliated to the South African wing of the International Association for Impact Assessment.

Project EAP: Ms. Pheladi Mphahlele

Ms. Pheladi Mphahlele obtained a Bachelor of Earth Science in Mining and Environmental Geology (BESMEG) in September 2017 from University of Venda. She obtained knowledge in storm water management projects while working on community project in 2015 (2 months) in the construction sector. She obtained extensive experience (over 3 years) in Environmental Management in the construction and mining sector. She also worked on research project while completing her honors in BESMEG. She is now registered with EAPASA as a registered EAP.

Team member: Ms. Lethabo Chauke

Ms. LF Chauke holds a National Diploma in Environmental Sciences from Tshwane University of Technology (TUT) which was completed in 2019 and she is currently in pursuit of an Advanced Diploma qualification in the same field. She is an Environmental Consultant (Junior) with over two years' experience in a wide-range of environmental related projects, Prospecting right and Mining permit applications. She has been training and working in an Environmental Consulting Company where she is being groomed and exposed into different environmental applications, processes and documentation. This includes Environmental Impact Assessment and Basic assessment and Environmental Management Plan.

3. PURPOSE OF THE ENVIRONMENTAL IMPACT ASSESSMENT STUDY

An Environmental Impact Assessment (EIA) is a planning and management tool for sustainable development, aimed at providing decision-makers with information on the

likely consequences of their actions. The EIA defines and assesses the potential physical, biological, socio-economic and health effects of the proposed project in a manner that allows for a logical and rational decision to be made about the proposed project. It will therefore assist the environmental authorities as well as the proponent, in making decisions regarding the proposed project.

The proposed mining right application will trigger activity under listing Notice 2 (GN No.985) Activity No.4, 15, 17 and 21 the process to be followed will therefore be Scoping and Environmental Impact Assessment process.

3.1 LOCATION OF THE PROPOSED OVERALL ACTIVITY

The area where mining operation will be commissioned is situated is approximately 33 km along the R38 road connecting unnamed road south east of Hendrina to Breyten on portion 9 of the farm Bankfontein 215 IS within Msukaligwa Local Municipality, District of Gert Sibande in the Mpumalanga Province. The applicant proposes to mine Coal and Pseudocoal ore utilising the open-cast mining as determined by the shallow depth of the commodity.

Table 1: Site coordinates of the application area

Latitude	***Longitude***
A. -26.237768 S	A. 29.951777 E
B. -26.226588 S	B. 29.935534 E
C. -26.22029 S	C. 29.944951 E
D. -26.233605 S	D. 29.958821 E
E. -26.235714 S	E. 29.957618 E

Table 2: Location of the activity

Farm name	Portion 9 of the Farm Bankfontein 215 IS

Application area (Ha)	225 Ha
Magisterial district	Breyten
Distance and direction from nearest town	Approximately 33km south east of Hendrina town
21 digit Surveyor general code for each farm portion	T0IS00000000021500009

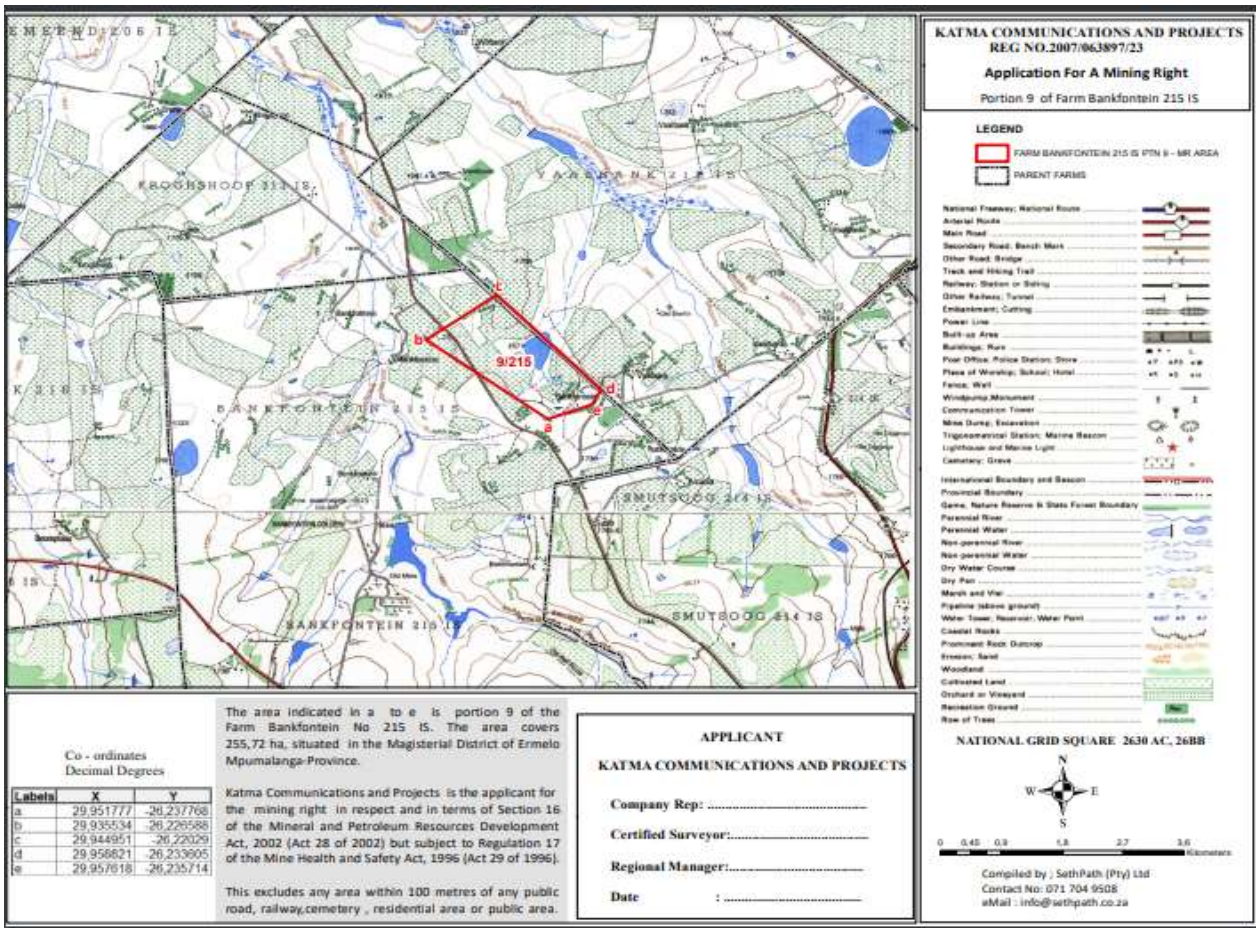


Figure 1: Locality Map of the proposed site

3.2 LISTED ACTIVITIES TO BE UNDERTAKEN

The Department of Environmental Affairs have published three notices listing activities for which environmental authorisation is required in terms of Section 24(2) and 24D of NEMA prior to commencement.

Furthermore, a list of waste management activities that have or are likely to have, a detrimental effect on the environment were published in terms of section 19(2) of the NEMWA (GN 921 of 29 November 2013). No person may commence, undertake or conduct a listed waste management activity unless a waste management license (WML) is issued in respect of that activity.

The Department of Mineral Resources (DMR) is the Competent Authority for mineral related activities in terms of both NEMA and NEMWA. As such an integrated application has been submitted as per the One Environmental System.

Table 2: details the main and ancillary activities associated with the proposed project, and identifies the applicable listed activities in terms of NEMA and NEMWA for which authorisation is being sought.

Table 2: Listed and Specified Activities

NAME OF ACTIVITY	Aerial extent of the Activity Ha or m²	LISTED NOTICE AND ACTIVITY	DESCRIPTION	WASTE MANAGEMENT AUTHORISATION
Mining Right Boundary	255,72 Ha	Listing notice 2 R325 No: 17	Any activity (including the operation of that activity) which requires a mining right as contemplated in Section 22 of the MPRDA, including – a) associated infrastructure, structures and earthworks, directly related to the extraction of a mineral resource; or b) the primary processing of a mineral resource including winning, extraction, classifying, concentrating, crushing, screening or washing but excluding the secondary processing of a mineral resource, including the smelting, beneficiation, reduction, refining, calcining or gasification of the mineral resource in which case activity 6 in this Notice applies.	-
Clearance of Vegetation and Site Establishment	250 Ha	Listing notice 2 R325 No: 15	The clearance of an area of 20 ha or more of indigenous vegetation , excluding where such clearance of indigenous vegetation is required for	-

			(i) the undertaking of a linear activity; or (ii) maintenance purposes undertaken in accordance with a maintenance management plan.	
Mobile Office and Ablution	10 Ha			
Open cast Mining(Pit area)	240 Ha			
Water supply & storage within Jojo tanks	81m3 abstracted / day and stored within 2,500 litre tank			
Pollution Control Dam	0,5 Ha	Listing notice 1 R324 No: 13	The development of facilities or infrastructure for the off-stream storage of water, including dams and reservoirs, with a combined capacity of 50,000 m3 or more.	
Mobile Crushing and Screening plant	1 Ha	Listing Notice 2 R325 No: 21	[Any activity including the operation of that activity associated with the primary processing of a mineral resource including winning, reduction, extraction, classifying, concentrating, crushing, screening and washing but excluding the smelting, beneficiation, refining, calcining or gasification of the mineral resource in which	

			case activity 6 in this Notice applies.]	
Topsoil and Overburden Stockpile	4 Ha			Category B: 7,10 and 11
RoM Stockpile (moves with active mine area)	1 Ha			Category B: 7,10 and 11
Rehabilitation	255.72			Category B: 7 and 11
Access and Haul Road	3 Ha ((10km length X 5m wide)			
Storage of Dangerous Goods	3ha	Listing notice 1 R324 No: 14	The development and related operation of facilities or infrastructure for the storage/storage and handling of dangerous good, where such storage occurs in containers with a combined capacity of 80 m3 or more, but not exceeding 500 m3 .	

3.3 DESCRIPTION OF THE ACTIVITIES TO BE UNDERTAKEN

This application relates to the open cast surface mining of Coal. There are typically used in the power generation, export, domestic, metallurgical, liquefaction and chemical sectors.

Of the overall MRA, approximately 240 Ha will be earmarked for mining, whilst a further 10 Ha will be affected by surface infrastructure.

The deposit will be harvested by means of an open-cast mining. The method that will be employed is a very basic form of open cast mining, and a 255,72 Ha area will be demarcated for mining activities. Blasting and subsequent mining of the orebody utilising a truck and shovel operation will be conducted. The mined ore will be crushed and screened utilising a mobile crushing and screening plant. A front-end loader will be utilised to load the material into haulage trucks and transported to the stockpile area.

The project infrastructure and activities will include site clearance, removal of topsoil and overburden stockpiling, site establishment, including the establishment of an access route, mobilisation of equipment and preparation of area for mining, excavation of an open cast, blasting, loading zone, loading and dust control, crushing and screening of ore, hauling and transporting of ore, ablution facilities and waste storage area and rehabilitation of site. The mining operation will commence on the shallow side and continue through con-current rehabilitation (strip mining) in order to ensure that all the Coal ore is mined out.

Table 3: Summary detail of the project item

Type of commodity	Coal ore
Mining Method	Open-cast mining
Depth of mining	Approximately 50m

Life of a mine	10 years

3.4 ASSOCIATED ACTIVITIES, INFRASTRUCTURE AND SERVICES

The infrastructure area in relation to the mine area is indicated in table 4 below. The anticipated infrastructure for the operations includes:

Table 4: Proposed Infrastructure

SURFACE INFRASTRUCTURE:	DESCRIPTION
Access and security control	Internal haul and access roads, Access will be via the existing R38 road connecting unnamed road, Security, Weighbridge (in the event product is trucked) and Fencing.
Mine Area	Soil berms , Stockpiles , Mobile crushing and screening plant , Ablution facilities (portable toilets), Clean and dirty water trenches, water management sumps and silt traps, Hard park area and A water resource covering an area of 12,2Ha on the northern side will be buffered
Infrastructure Area	Vehicle park area , Workshop and store ,Fuel storage, Container offices, Ablution facilities linked to conservancy tanks, Jojo tank to store supplied water, Stockpile Yard, Generators, Lighting and Clean and dirty water trenches, water

	management sumps and silt traps
Siding Area	Stockpile and loading area, Clean and dirty water trenches, water management sumps and silt traps and Ablution facilities (portable toilets).

3.4.1 Power supply:

All mining and ancillary services will be undertaken using diesel driven machinery. Equipment, lighting and wall sockets at the infrastructure area will be powered by solar panels and/or diesel generator (10kVa) where necessary.

3.4.2 Water supply

Water requirements on site will be limited to that of portable/domestic use, and dust suppression. The total average water demand is expected to be 81m3/day. At this stage it is anticipated that water will be transported to site from the appointed local contractor and stored in a jojo tank, to be located at the infrastructure area.

3.4.3 Waste management:

General and hazardous waste will be generated on site:

- General waste includes office and domestic waste; construction and building waste; scrap metal and old tyres.
- Hazardous waste includes used hydrocarbons, oily rags and sewage.

No landfill site will be constructed on site. All waste will be separated and stored as per the relevant Norms and Standards where applicable. Waste will be recycled and sold/given to interested parties as far as possible. Waste for disposal will be collected by a reputable contractor for transport to a suitably licensed facility. Waste safety disposal certificates will need to be obtained from disposal contractors and waste manifest will be maintained on site.

Sewage will be collected within conservancy tanks to be emptied by honey sucker for treatment at a suitably licensed facility.

3.4.4 Employment requirements

It is anticipated that the project will employ 11- 14 contractors to operate the mine. Certain skills will be required whereby employment will be sourced from Hendrina and Breyten, if the necessary skills are not found in the town then the radius will have increased for the mine to find the suitable skills needed.

3.5 PURPOSE OF SCOPING REPORT

The purpose for the scoping report is to outline the mining activities to be undertaken, identify key environmental and social issues associated with the project, identify all applicable legislation and guidelines, as well as to describe how the identified potential environmental and social benefits and impacts will be addressed during the Environmental Impact Assessment (EIA) Phase of the project. The scoping report is intended to facilitate consultation and wider stakeholder engagement in the EIA phase.

The scoping report also aims to:

- Identify all environmental impacts of the proposed project.

- Identify and address concern raised by Interested and Affected Parties (I&AP's) and stakeholders.
- Identify potential alternatives of the proposed project.
- Focus on significant environmental impacts for further study in the Environmental Impact Report
- Highlight means of mitigation of each potential impact.

3.6 TERMS OF REFERENCE

The scoping phase was undertaken in accordance with the National Environmental Management Act, 1998 (Act 107 of 1998) as amended and the Environmental Impact Assessment Regulations, 2014.

The Consultative Scoping Report (this report), contains the information as outlined in accordance with Section 28 of the Act. To meet these requirements, the Consultative Scoping Report has included the following:

- The details and expertise of the Environmental Assessment Practitioner (EAP) who prepared the report, as well as the project team members who are part of the project;
- A detailed description of the proposed project;
- A description of the location and the proposed route of the project;
- A description of the affected environment;
- All legislation and guidelines that have been considered in the preparation of the scoping report;

- A description of the feasible and reasonable alternatives that have been identified;
- A description of the public participation process;
- A summary of the findings of the specialist studies undertaken;
- A description of environmental issues and potential impacts;
- The scope of the specialist's studies to be commissioned during the Impact Assessment phase of the project;
- A plan of study for EIA and a description of the assessment process that will be used in the Impact Assessment phase.

3.7 ENVIRONMENTAL IMPACT PROCESS

Environmental assessment procedure followed so far, according to the National Environmental Management Act, 1998 (Act 107 of 1998) as amended and the Environmental Impact Assessment Regulations, 2014, include:

- Submission of application form to DMRM
- Statutory advertising on site,
- Public notification which include:
    - Inform all relevant I & APs, Stakeholders and State Departments by means of a Notice / Letter and the Background Information Document.
- Circulation of the Consultative Scoping Report to all registered I&Aps
- Submission of the Consultative Scoping Report to DMRM

3.8 NEED AND DESIRABILITY

The socio-economic status of the area where mining will take place requires such establishment for mining, which will in turn contribute to the local economy through creation of job opportunities. The type of commodity proposed to be mined is in high demand due to established Coal-powered electricity power station around Mpumalanga province. The proposed mining of coal and pseudocoal ore will give way to establishments of mining operations at the study area, which will in turn contribute to job creation around the Breyten and the local municipality.

In terms of Regulation 28(1) i, of National Environmental Management Act, 1998 (Act no. 107 of 1998) Environmental Impact Assessment Regulations, this section discusses the need and desirability of the project. In order to address the need and desirability of the project, the questions raised in the Guideline on Need and Desirability (DEA&DP, 2009) are answered in table 5 to follow.

TABLE 5: NEED AND DESIRABILITY

NO	QUESTIONS	RESPONSE
	NEED(„timing")	

1.	Is the land use (associated with the activity being applied for) considered within the timeframe intended by the existing approved Spatial Development Framework (SDF) agreed to by the relevant environmental authority? (I.e. is the proposed development in line with the projects and programmes identified as priorities within the IDP).	Yes, this area falls within SDF of MLM
2.	Should development, or if applicable, expansion of the town/area concerned in terms of this land use (associated with the activity being applied for) occur here at this point in time?	Yes, MLM has programmes for job creation mining being one of the key economic drivers
3	Does the community/area need the activity and the associated land use concerned (is it a societal priority)? This refers to the strategic as well as local level (e.g. development is a national priority, but within a specific local context it could be inappropriate)	Yes, there is an urgent need for job creation due to high unemployment rate within and around the area of Breyten and Hendrina.

4	Is this project part of a national programme to address an issue of national concern or importance?	Yes, there is an urgent need for job creation especially through mining industry
DESIRABILITY („placing")		
5	Is the development the best practicable environmental option (BPEO) for this land/site?	Yes
6	Would the approval of this application compromise the integrity of the existing approved municipal IDP and SDF as agreed to by the relevant authorities?	No
7	Would the approval of this application compromise the integrity of the existing environmental management priorities for the area (e.g. as defined in Environmental Management Frameworks), and if so, can it be justified in terms of sustainability considerations?	No

8	Do location factors favour this land use (associated with the activity applied for) at this place? (This relates to the contextualization of the proposed land use on this site within its broader context).	Yes, the area has been proposed for mining due to its geological properties which present large deposits of Coal and Pseudocoal ore, and it is in vacant area outside residential areas. There is also operational coal mines adjacent to the proposed site.
9	How will the activity or the land use associated with the activity applied for, impact on sensitive natural and cultural areas (built and rural/natural environment)?	There will be an impact on the open space areas in terms of fauna and flora. The relevant specialist studies will be undertaken to determine what the potential impacts are. This will be included in the EIR for review.
10	How will the development impact on people's health and wellbeing (e.g. Noise, odours, visual character and sense of place, etc.)?	Potential impacts during operation phase to be managed through EMPr.
11	Will the proposed activity or the land use associated with the activity applied for, result in unacceptable opportunity costs?	No
12	Will the proposed land use result in unacceptable cumulative impacts?	No

4. LEGISLATION AND POLICIES CONSIDERED

Environmental Impact Assessment process, which includes a Scoping study, is required by legislation. The process ensures that all relevant information is presented in order to facilitate good management decision - making. The legislations that require development projects to undergo through the Scoping Process are:

4.1 The Constitution of the Republic of South Africa, 1996 (Act no 108 of 1996)

The Constitution is the most important piece of legislation that provides a framework for environmental management in South Africa. There are various sections that have implications for environmental management, hence for sustainable development. Section 24(b) (i) encourages prevention of pollution and ecological degradation. Section 24(b)(iii) promotes ecologically sustainable development.

According to chapter 2 of the Bill of rights, section 24 says:

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

i) Prevent pollution and ecological degradation;

ii) Promote conservation; and

iii) Secure ecologically sustainable development and use of natural resources while promoting justifiable economic and social development.

4.2 National Environmental Management Act (Act 107 of 1998) (as Amended)

The National Environmental Management Act (Act 107 of 1998) generally known as "NEMA" is South Africa's overarching framework for environmental legislation. The NEMA Act sets out the principles of Integrated Environmental Management (IEM). NEMA aims to promote sustainable development, with wide-ranging implications for national, provincial, and local government. Included amongst the key principles is that all development must be environmentally, economically and socially sustainable and that environmental management must place people and their needs at the forefront, and equitably serve their physical, developmental, psychological, cultural and social interest. Section 2 of NEMA, sets out a range of environmental principles that are to be applied by all organs of state when taking decisions that may significantly affect the environment. Section 24, as amended, states that the activities that may significantly affect the environment and require authorization or permission by law must be investigated and assessed prior to approval. These activities are listed in Government Notice R983, R984 and R985, 08 December 2014.

4.3 Environmental Impact Assessment Regulations, 2014

The Environmental Impact Assessment (EIA) Regulations, 2014, promulgated in terms of Section 24(5) of the National Environmental Management Act ([NEMA], Act 107 of 1998) are divided into three Schedules, R983, R984 and R985. Schedule R983 defines activities which will trigger the need for a Basic Assessment and R984 defines activities which trigger a Scoping and Environmental Impact Assessment (S & EIA) process. If activities from both schedules are triggered, then an S & EIA process will be required. Regulation 985 defines certain additional listed activities per province for which a Basic Assessment would be required.

4.3.1 Environment Conservation Act (Act 73 of 1989)

The purpose of this Act is to provide for the effective protection and controlled utilization of the environment and for matters incidental thereto. The following relevant Sections of this Act are relevant:

- Sections 2-3 (Part I): Policy for Environmental Conservation;
- Sections 16-18 (Part III): Protection of Natural Environment;
- Sections 19-20 (Part IV): Control of Environmental Pollution; and
- Section 21-23 (Part V): Control of Activities which may have a Detrimental Effect on the Environment

4.4 National Environmental Management: Biodiversity Act (Act 10 of 2004)

The National Environmental Management: Biodiversity Act (NEMBA) provides for the management and conservation of South Africa's biodiversity within the framework of the National Environmental Management Act, 1998; and provides for and includes:

- The protection of species and ecosystems that warrant national protection;
- The sustainable use of indigenous biological resources;
- The fair and equitable sharing of benefits arising from bio-mining involving indigenous biological resources;
- The establishment and functions of a South African National Biodiversity Institute; and for matters connected therewith.

4.5 National Heritage Resources Act

In terms of Section 38 (1)(c) i, ii, iii, iv (d) (e) of the Heritage Resources Act (Act No 25 of 1999), a Heritage Impact Assessment has to be undertaken for the following developments:

- Any development or other activity which will change the character of a site
    - Exceeding 5 000 m² in extent; or
    - Involving three or more existing erven or subdivisions thereof; or
    - Involving three or more erven or divisions thereof which have been consolidated within the past five years; or
    - The costs of which will exceed a sum set in terms of regulations by SAHRA or a provincial heritage resources authority;
- The re-zoning of a site exceeding 10 000 m² in extent; or
- Any other category of development provided for in regulations by SAHRA or a provincial heritage resources authority, must at the very earliest stages of initiating such a development, notify the responsible heritage resources authority and furnish it with details regarding the location, nature and extent of the proposed development.

Section 34, 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 (SAHRA)

4.6 National Water Act (Act 36 of 1998)

The National Water Act ([NWA] Act 36, 1998) identifies 11 consumptive and non-consumptive water uses which must be authorized under a tiered authorization system. Section 27 of the NWA specifies that the following factors regarding water use authorization must be taken into consideration:

- The efficient and beneficial use of water in the public interest;
- The socio-economic impact of the decision whether or not to issue a license;
- Alignment with the catchment management strategy;
- The impact of the water use, resource directed measures; and
- Investments made by the applicant in respect of the water use in question.

Section 21 of the National Water Act identifies listed activities for which a Water use License should be obtained. The Section 21 listed activities include:

(a) Taking water from a water resource;

(b) Storing water;

(c) Impeding or diverting the flow of water in a water course;

(d) Engaging in a stream flow reduction activity contemplated in Section 36;

(e) Engaging in a controlled activity identified as such in section 37(1) or declared under Section 38(1);

(f) Discharging waste or water containing waste into a water resource through a pipe, canal, sewer, sea outfall or other conduit;

(g) Disposing of waste in a manner which may detrimentally impact on a water resource;

(h) Disposing in any manner which contains waste from, or which has been heated in any industrial or power generation process;

(i) Altering the bed, banks, course or characteristics of a watercourse;

(j) Removing, discharging, or disposing of waste found underground if it is necessary for the efficient continuation of an activity or for the safety of people; and

(k) Using waste for recreational purposes.

4.7 National Environmental Management: Air Quality Act (Act No 39 of 2004)

The National Air Quality Act 39 of 2004 was promulgated but only enacted in September 2005. However, some sections of the Atmospheric Pollution Prevention Act (APPA) of 1965 are still valid and implemented and enforced by DEA and more specifically, the Chief Air Pollution Control Officer or CAPCO.

4.8 The National Environmental Management: Waste Act (Act 59 of 2008)

The National Environmental Management: Waste Act, 2008 (Act No. 58 of 2008) (the Waste Act), came into operation on the 1st of July 2009. The Waste Act repealed Section 20 of the Environment Conservation Act, 1989 (Act No. 73 of 1989) (ECA) and introduced new provisions regarding the licensing of waste management activities. In terms of the Waste Act the Minister may publish a list of waste management activities that have, or are likely to have, a detrimental effect on the environment.

In terms of the Waste Act no person may commence, undertake or conduct a waste management activity except in accordance with:

- The requirements or standards determined in terms of the Waste Act for that activity; and

- A waste management license issued in respect of that activity, if a license is required.

A list of waste management activities was published on the 29th of November 2013. This list of activities identifies activities that may not be commenced, undertaken or conducted by any person unless a waste management license is issued in respect of that activity. The list of activities is divided into two Categories.

A person who wished to commence, undertake or conduct, an activity listed under Category A, must conduct a Basic Assessment process, and a person who wished to commence, undertake or conduct an activity listed under Category B, must conduct a Scoping and EIA process, as stipulated in the EIA Regulations made under NEMA, as part of a waste management license application in terms of the Waste Act.

4.9 Conservation of Agricultural Resources Act (Act No 43 of 1983)

To provide for the conservation of the natural agricultural resources of the Republic of South Africa by the preservation of the production potential of land, by the combating and prevention of erosion and weakening or destruction of the water sources, and by the protection of the vegetation and the combating of weeds and invader plants.

4.10 The minerals and Petroleum Resources Development Act (MPRDA), Act No.28

The Minerals and Petroleum Resources Development Act (MPRDA), Act No. 28 of and its Regulations (GNR 2, 7 April 2017). a) associated infrastructure, structures and earthworks, directly related to the extraction of a mineral including activities for which an exemption has been issued in terms of section 106 of the Mineral and Petroleum Resources Development Act, 2002 (Act No. 28 of 2002)] the primary

processing of a mineral resource including winning, extraction, classifying, concentrating, crushing, screening or washing;

An application for mining right was submitted to, and accepted by, the DMR in terms of the MPRDA. Submission of information has been on the prescribed forms, and submitted via the SAMRAD portal where applicable.

4.11 NEMWA National Dust Control Regulations (GNR827, November 2013)

An air quality study (including dispersion modelling) is currently underway as per the plan of the study for the EIA. A dust fallout monitoring programme will be outlined in the EMP. Monitoring data will be compared to the regulations to ensure dust fallout is within acceptable limits.

4.12 Policies and guidelines consulted

From the NEMA Environmental Impact Assessment Regulations Guideline and Information Document Series the following guidelines were used:

- Guideline on Public Participation in the Environmental Impact Assessment Process (October 2012)
- Draft Guideline on Need and Desirability in Terms of the Environmental Impact Assessment (EIA) Regulations, 2010 (October 2012)
- Guideline on Alternatives (August 2010)
- Msukaligwa Local Municipality Spatial Development Framework

5. ENVIRONMENTAL IMPACT ASSESSMENT PROCESS

Regulation 325 (07 April 2017) of the National Environmental Management Act (107 of 1998), provides for the control of identified activities that may have an impact on the environment. This act contains a list of activities that require environmental assessment before these activities can be undertaken. The proposed development is listed in this act and an EIA is therefore necessary. Environmental Authorization by the relevant authorities is required before the proposed activity may be undertaken. The relevant activities are:

- **R935 Activity 4**
- **R935 Activity 15**
- **R935 Activity 17**
- **R935 Activity 21**

The Environmental Impact Assessment will be done in terms of the legal requirements of the National Environmental Management Act, 1998 (Act No 107 of 1998) and Government Notices R935 of 2017. The proposed project will undergo the process of Scoping and Environmental Impact Assessment Process.

Authorization in this case has to be granted by Department of Mineral Resources & Energy Mpumalanga Region (DMRE). An application form for the proposed development was submitted to the competent authority on November 2022.Final Scoping Report will be submitted to the competent authority together with the application form, and will be available for comments from interested and affected parties and the state Department for comments from the 09 February 2023.

Environmental Impact Assessment (EIA) process that has been undertaken for the proposed mining right application on portion 9 of the farm Bankfontein 215 IS consists of three main phases:

- Application Phase.

- Scoping Phase, and
- EIAR Phase.

5.1 APPLICATION AND AUTHORIZATION

Katma Communication and Projects (Pty) Ltd has submit a Scoping / EIA application to DMRE and application was accepted on the 21st of December 2023.

5.1.1 Scoping phase

The Scoping study is a requirement by EIA legislation in applying for authorization with DMRE. The study involves public consultation, gathering of information to identify potential impacts to the environment and possible alternatives to the development and compiling of a Plan of Study for EIA.

5.1.2 EIAR phase

The EIAR Phase will include the integration of the findings by specialists and the outcome of the Scoping process in order to enable documentation of one report. During this phase the concerns from I&APs will be addressed and all issues and mitigation measures will be discussed. A detailed Environmental Impact Assessment will be done to determine the extent of the impacts the development might have on the environment and the surrounding community. A detailed Environmental Management Programme will also be included in this phase. An outline of Scoping and EIA Process for the proposed mining right application is provided below:

6. DESCRIPTION OF THE RECEIVING ENVIRONMENT

6.1 PROJECT DETAILS

6.1.1 Project description

The development entails open-cast mining right application for Coal and Pseudocoal ore.

Figure 2: Illustration of Coal mining

Activities to be undertaken:

- Fencing
- Construction of access roads and weight bridge
- Removal of topsoil, overburden and ROM
- Installation of mobile offices and ablution
- Construction of mobile crushing and screening plant

- PCD, Clean and dirty water trenches
- Mining area
- Stockpile and loading area
- Rehabilitation

Detailed Mining Phases

- Site Establishment / Construction phase:

Site establishment entails the demarcation of mining boundaries, clearance of vegetation (where necessary), and stripping and stockpiling of topsoil to establish mining related infrastructure, stockpile areas and the excavation zone as detailed below:

- Demarcation of mining boundaries:

Pursuant to receipt of an Environmental Authorisation (EA) and Mining Right (MR), and prior to site establishment, the boundary of the mining area has to be demarcated. Project specific areas to be demarcated within the boundary of the mining footprint will include, but not be limited to, all "no go" buffer zones identified during the EIA process, stockpile areas, the excavation, processing area (including offices, storage, and workshops), water storage and slimes dam, and the buffer associated with the explosives magazine.

- Clearing of vegetation:

The footprint area of the proposed mining right extends over an area extensively altered for agricultural purposes and although the natural vegetation was removed from the foremost portion of the earmarked footprint, areas with natural occurring vegetation are still present.

An ecological assessment specialist will be appointed with regard to the terrestrial fauna and flora of the study area as part of the EIA process. The flora-part of the study will assess the various plant communities, inform on the occurrence of endangered plant communities and red data plant species, identify areas of concern to be excluded from the mining footprint area, instruct on the management of red data species, identify the presence and distribution of threatened plants present in the study area.

The intention is to minimize the removal of natural vegetation, and in the end restore the footprint area to land suitable for agricultural/conservation purposes upon lapse of the mining right.

- Topsoil Stripping:

It is proposed that topsoil removal will be restricted to the exact footprint of areas required during the operational phase of the activity. The topsoil will be stockpiled at a designated signposted area within the mining boundary to be replaced during the rehabilitation of the area. It will be part of the obligations of site management to prevent the mixing of topsoil heaps with overburden/other soil heaps.

- Access Roads:

Presently it is proposed that access to the earmarked properties will be from the existing R38 route connecting unnamed road, currently used by landowners and the public to access the site. Within the mining boundary, the Applicant will strive to make use of the existing farm roads as far as possible, however some new roads, or upgrading of existing roads will be required. Haul roads will be extended as opencast mining progresses, and will be rehabilitated as part of the final reinstatement of the area. Road and traffic related detail will be discussed in the engineering services report that will form part of the DEIAR.

- Establishment of Site Infrastructure:

Ablution facilities will be required on site. This may involve the installation of drum or tank type portable toilets. The toilets should be emptied twice every week through the services of a registered sewage waste service provider. The ablution facilities must be provided at a ratio of 15 :1, i.e. 15 people per 1 toilet. A temporary site office area may be erected on site. The office must be established distant from the water drainage lines.

- Operational phase:

The proposed mining method to be implemented (subject to approval of the MR) will be executed in two phases. The first phase will focus on pre-stripping the top layer material, of which the topsoil will be stored separately for rehabilitation, then overburden stripping to access the ore body, and then 5 m of opencast mining on the shallowest region of the ore body (dome shaped deposit). The mining technology to be used during 1-10 years will include drilling of hard rock and blasting operation with associated truck and shovel operations. Shot rock will be hauled to the crushing and screening plant.

- Decommissioning phase:

The closure objectives will be detailed in the Environmental Impact Assessment Report and Environmental Management Programme, to be submitted as part of the application process for approval by the Department of Mineral Resources. At this stage the following baseline rehabilitation actions are proposed from which a detailed Closure Plan will be developed (to be approved as part of the EIA process):

- Rehabilitation of all the disturbed surface areas shall entail landscaping, levelling, sloping, top dressing, land preparation, seeding (if required), and weed / alien clearing.
- All unwanted infrastructures, equipment, and other items used during the mining period will be removed from the site in accordance with section 44 of the MPRDA, 2002.

- Waste material of any description, including receptacles, scrap, rubble and tyres, will be removed entirely from the mining area and disposed of at a recognized landfill facility. It will not be permitted to be buried or burned on the site.
- The rehabilitation area will be cleared of weeds and invader plant species. Priority will be given to species regarded as Category 1a and 1b invasive species in terms of NEMBA (National Environmental Management: Biodiversity Act 10 of 2004 and regulations applicable thereto).
- Final rehabilitation shall be completed within a period specified by the Regional Manager. Once the full mining area was rehabilitated the mining right holder is required to submit a closure application to the Department of Mineral Resources in accordance with section 43(4) of the MPRDA, 2002 that states: "An application for a closure certificate must be made to the Regional Manager in whose region the land in question is situated within 180 days of the occurrence of the lapsing, abandonment, cancellation, cessation, relinquishment or completion contemplated in subsection (3) and must be accompanied by the prescribed environmental risk report". The Closure Application will be submitted in terms of Regulation 62 of the MPRDA, 2002, and Government Notice 940 of NEMA, 1998.

6.1.2 Project location

The proposed site is situated approximately 33 km south east of Hendrina along the R38 route connecting unnamed road to Breyten. The mining area will be conducted on portion 9 of the farm Bankfontein 215 IS within Msukaligwa Local Municipality, Gert Sibande District in the Mpumalanga Province.

GPS coordinates for the area are as follows:

- **26° 14' 16.0" S; and**
- **29° 57' 06.4" E**

The Aerial Map is depicted in Figure 3.

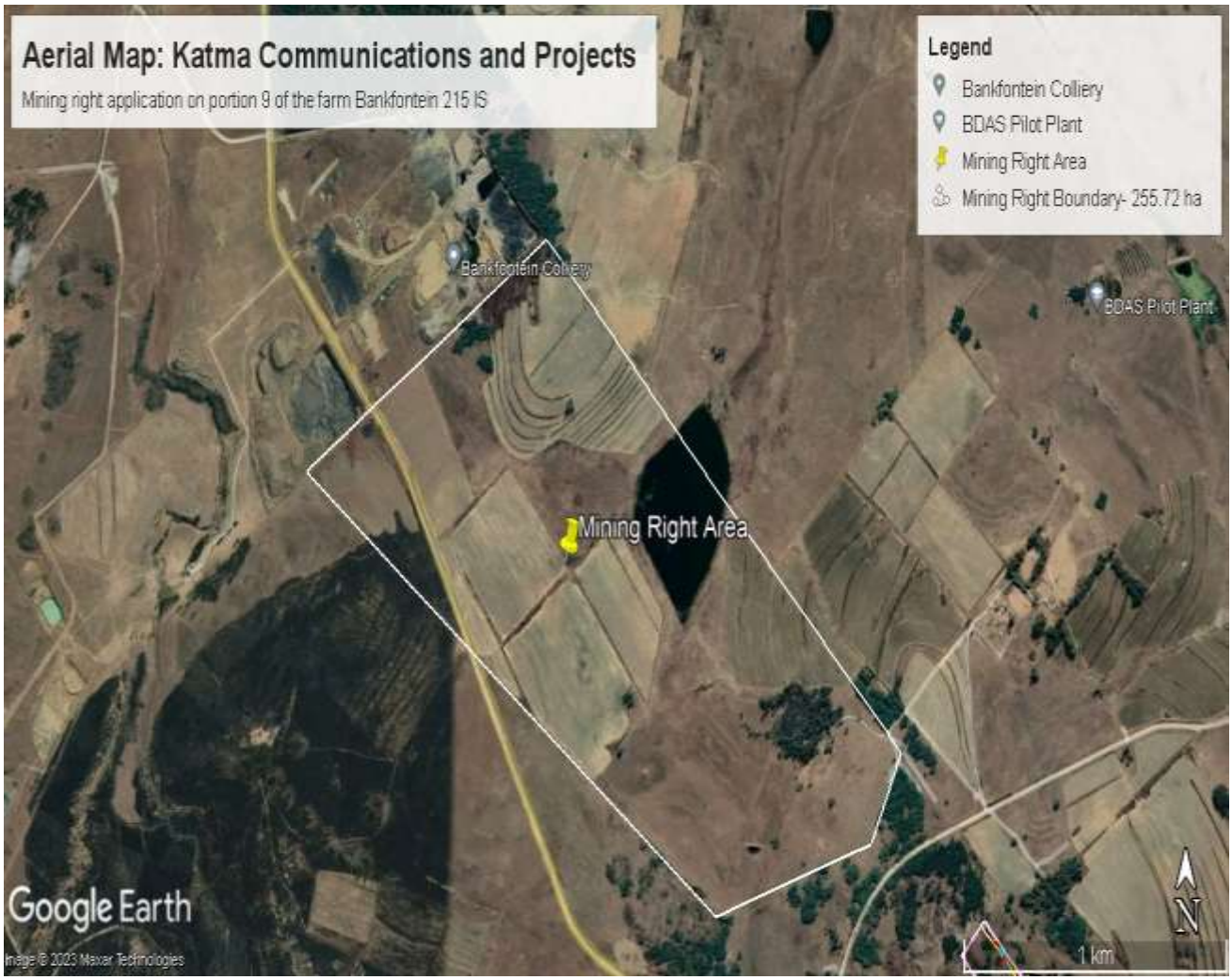


Figure 3: Aerial Map

6.1.3 Surrounding land-uses and adjacent properties

The area is situated along the R38 route connecting unnamed road from Hendrina to Breyten and the area is currently being used for crop and livestock farming and there is a small concentration of habitation scattered around the farm. The proposed mining area is surrounded by cultivated farmlands, Breyten Colliery, Apple trees plantation and grazing sites. Photoplate 1 below shows the surrounding land uses.

Photoplate 1: A photo depicting the existing land-use

6.2 DESCRIPTION OF BIOPHYSICAL ENVIRONMENT LIKELY TO BE AFFECTED

6.2.1 Climate and temperature

Description

The project area is situated in a high altitude region characterized by regular summer rains but where the winters are cool, dry and windy, resulting in conditions ideal for the drying of the environment and the wind entrainment of any loose material. Areas most affected by dust from the mine will generally lie to the west and northwest of the mine when synoptic level flow dominates while local meteorological conditions appear to favour dispersion to the south.

The area is characterised by low temperatures with mean annual temperatures of 14.4 ^{o}C and mean annual maximum temperatures of 23.1^{o}C. Temperatures drops to a mean annual minimum temperatures of 12^{o}C with extreme minimum of -8.1^{o}C, this indicates that the area is gradually considered to be cold. However at the same temperatures can rise to extreme of about 32^{o}C in summer seasons. Similarly while temperature drop to a low -8^{o}C, the area still receives mean annual precipitation of 706 mm.

Environmental Issues

There are no issues to report on with regards to climate. The proposed mining activities will not have an impact on climate in the area, and the climatological conditions in the area will not have an impact on the proposed mining activities.

Potential Impacts

The proposed mining activity is anticipated to have minimal impact on climate in terms of the release of emissions from mining vehicles.

Cumulative Impacts

The proposed project could contribute to CO_2 being released into the atmosphere which could contribute to global warming.

Specialist Studies Required

No specialist studies are required for the release of emissions from mining vehicles. The release of emissions from the vehicles will be addressed in the EMPr

6.2.2 Geology

Description

All or part of the Ermelo, Witbank, Highveld, Eastern Transvaal, South Rand and KaNgwane coalfields are included in Mpumalanga Province. A number of significant coal seams possessing diverse characteristics are present and have a variety of potential markets in the power generation, export, domestic, metallurgical, liquefaction and chemical sectors. This is the most important coal-producing area in South Africa and supports some 65 collieries working several seams in the Ecca coal measures.

The Ermelo coalfield contains a large and very important resource of high yield export quality steam coal, especially in the No. 4 seam. In the adjacent Highveld coalfield the equivalent or No. 2 seam contains low-grade bituminous coal which is better suited to synfuel and power production. As a rule, close to the surface the coal seams are highly weathered to dross and are not amenable to coal recovery from small-scale surface pig-rooting. In some cases, accidents of topography may permit the recovery of

limited quantities of coal from low-cost adit mining, but generally the scope for small-scale operations is restricted to the value that may be recovered from the hand sorting of waste tips at operating collieries.

Environmental Issues

The geology which underlies the study sites as mentioned in the Section above is considered to be stable and therefore no significant environmental issues with regards to geology occur within the study area.

Potential Impacts

During the excavation, this may lead to severe disturbance of the geological substrate, however, the geology in the study area is considered to be stable and impact could be minimal.

There is also potential for contamination to occur through:

- Inadequate management of waste water
- Inadequate waste disposal
- Incorrect storage of materials
- Fuel storage and refueling spillages
- Chemical, oil and paint spillages

Furthermore, excavation on steeper areas may result in erosion and instability.

Cumulative Impacts

None expected, but will be investigated during the EIA phase.

Specialist Studies Required

Geohydrological study will be undertaken during the EIA phase for this proposed project, and the findings of this Report will be incorporated into the Consultative Scoping and Final EIA Reports.

6.2.3 Topography

Description

The site is characterised by undulating slopes with multiple land-uses being practised on around the farm area. The area dominated by veld type after (Acocks 1988) north eastern sandy Highveld which stretches further on adjacent farm portions over to Ermelo town.

Environmental Issues

The topography of the site will change with the proposed development and development must adhere to the restrictions that are present in the Policy and that development must not occur on slopes of 5°.

Potential Impacts

The proposed open-cast mining will result in the alteration of surface topography and drainage patterns. During mining impacts to surface topography and drainage will be caused by the excavation and stockpiling of in situ soils on surface. During the operational phase surface infrastructure will result in the alteration of surface topographic flow patterns.

Cumulative Impacts

There will be no substantive increase to topographic impacts when compared to the existing level of impact in the surrounding area, and therefore no cumulative impact is expected.

Specialist Studies Required

No Specialist report will be required.

6.2.4 Soils and land capability

Description

There is a combination of soil pattern, the classification of which is used to determine the potential agricultural value of soils in the area.

Environmental Issues

The proposed development site is located on the outskirts of the town in a farming land. It is suitable for conducting mining operation of coal and pseudocoal.

Potential Impacts

Clearance of vegetation for excavations during mining will leave the soil bare and exposed to wind and water erosion. During the mining operation, activities such as topsoil stripping and excavation will impact negatively on soils and will consequently impact on the land capability of the study area. Materials lay down areas as well as heavy vehicle and contractor vehicle traffic on site will contribute to soil compaction. Areas compacted will lose their soil structure and fertility permanently. Furthermore, there is a risk of pollution by hydrocarbon spillages,

Cumulative Impacts

There are no cumulative impacts

Specialist Studies Required

No Specialist studies are required.

6.2.5 Land-use

Description

The land is currently being used for crop and livestock farming and there is a small concentration of habitation scattered around the farm. The proposed mining activities will change from the current land-use to a mining zone as the coal and pseudocoal will be mined within an area of 255, 74 Ha.

Environmental Issues

There are no anticipated concerns with regard to the proposed site for open-cast mining, due to the scale of the activities to be conducted on the site.

Potential Impacts

There will be impact on the plotted sites within the proposed area during excavations leading to loss of available for other land-uses such as agriculture.

Cumulative Impacts

The proposed project will utilise fallow space and contribute to the reduction in vacant land in the region.

Specialist Studies Required

No specialist study is required.

6.2.6 Flora

Description

The majority of the project area is dominated by Eastern Highveld Grassland. This vegetation unit is rated Endangered and it has been found that 72% of the Eastern

Highveld Grassland is under medium pressure from mining developments with only approximately 0.8% of these grasslands included under statutory reserves.

Environmental Issues

The proposed development will negatively affect the biodiversity in the area.

Potential Impacts

Potential impacts to vegetation during the bulk sampling phase include the following:

- Clearing of vegetation from the site;
- Potential loss of rare, endangered or protected vegetation species due to habitat destruction;
- Loss of topsoil due to soil stripping, wind and water erosion;
- Damage to vegetation cover due to excavation vehicle traffic as well as material lay down areas;
- Damage to vegetation due to accidental hydrocarbon spillages;
- Disturbance of natural vegetation along access or bulk sampling roads through trampling and bulk sampling vehicle traffic; and
- Establishment and spread of declared weeds and alien invader plants from disturbed areas, which can lead to the eventual replacement of indigenous vegetation.

Potential impacts to vegetation during the operational phase:

- Damage to vegetation due to movement of maintenance vehicles on vegetated areas;

- Establishment and spread of declared weeds and alien invader plants from disturbed areas, which can lead to the eventual replacement of indigenous vegetation; and
- Incorrect management of vegetation within the servitude.

Cumulative Impacts

None expected, but will be investigated during the EIA Phase.

Specialist Studies Required

A Vegetation Assessment will be undertaken during the EIA Phase.

6.2.7 Fauna

Description

It is not expected that the proposed development will have a significant detrimental impact on any bird species of conservation concern or their habitat due to extensive undeveloped areas that will remain adjacent to proposed development areas and the already transformed and degraded nature of the areas recommended for development.

As reported in Smithers (1983) small buck e.g. common duiker, steenbok and grysbok, bushbuck, rodents such as mole rats, field mice and hares, as well as carnivores such as genets, mongoose and caracal are likely to inhabit the area. Some 70 mammal species are known to occur in the bigger area (Smithers 1983).

Environmental Issues

Red Data Faunal and Avifaunal species could occur within the study area and the mining operation will not have a negative impact of the habitats of these species as there will be avoided.

Potential Impacts

Potential impacts which could occur during the mining include the following:

- Habitat loss due to vegetation clearing within the proposed site;
- Disturbance to fauna during the mining phase.

Potential impacts which could occur during the mining phase:

- Damage to habitat due to movement of vehicles on vegetated areas.

Cumulative Impacts

None expected but will be investigated during the EIA Phase.

Specialist Studies Required

A Faunal and Avifaunal Assessment will be undertaken during the EIA Phase.

6.2.8 Air quality

Description

Land uses in the study area are comprised of farmlands. Emissions from vehicular emissions are anticipated to affect the status of air quality in the study area.

Environmental Issues

There are no significant issues to report on.

Potential Impacts

Dust generation from stockpiles and soil stripping and vegetation clearing from the site during the construction phase, as well as vehicle traffic on dirt roads and contractor vehicle fumes will have an impact on air quality.

Cumulative Impacts

The potential air quality impacts which could result from activities undertaken during the construction and mining phase of the proposed project will not be significantly different to the air quality impacts already occurring in the study area, and is not expected to have a significant increase to overall impact already occurring in the area.

Specialist Studies Required

No specialist studies recommended.

6.2.9 Noise

Description

As mentioned previously, land uses in the study area are comprised of R38 route connecting unnamed road. Noise levels in the study area are currently generated by vehicles traffic.

Environmental Issues

Noise impact may result during the construction and operational phases of the proposed development.

Potential Impacts

During the operational phase, the operation of machinery and equipment, as well as the vehicle traffic will create a noise impact.

Cumulative Impacts

The construction and operational phases of the proposed development is expected to have a low cumulative impact on the noise levels in the study area.

Specialist Studies Required

No specialist studies are required

6.2.10 Visual

Area/Site Description

The site is currently fallow. The aesthetics will not be negatively impacted by the proposed development as the site does not have any scenic resources on or near the study area. The proposed development may improve the appearance of the area which will become more visually appealing.

Environmental Issues

Visual impact may result during the bulk sampling and operational phases of the proposed project.

Potential Impacts

During the construction phase, the inadequate storage of material, equipment and waste may result a potential visual impact.

Cumulative Impacts

None expected.

Specialist Studies Required

None

6.2.11 Infrastructure and services

Description

The proposed mining activities is situated in close proximity to and readily accessible via R38 route connecting unnamed road.

Environmental Issues

No substantial issues to report on.

Potential Impacts

During the construction phase and operational phase, contractor vehicles will travel to and from the site delivering Coal and Pseudocoal ore materials, which will have an impact on traffic volumes in the area. During the operational phase residential vehicle and public transport vehicles will utilize the roads. The potential impact is anticipated to be minimal.

Cumulative Impacts

During the construction and operational phases, contractor vehicles will result in additional vehicle traffic in the study area. This impact will however only occur during the mining phase.

6.2.12 Socio- economic environment

Description

The current socio-economic status for Breyten is dominated by informal settlements and low cost houses. Lack of job opportunities, poor road networks and dilapidated retail facilities are prevalent around the area. The distribution of coal reserves is in abundance around the areas of Ermelo and Breyten. This has attracted foreign

investments to the local towns and nearby communities through mineral processing of Coal. Introduction of mining operations will attract businesses to invest within the surrounding areas, there is already mining operation taking place due to the coal reserves existing around the farm areas.

Breyten consist of marginal residential site and few street with old retail facilities. Introduction of mining operations will attract businesses to invest within the surrounding area, as a result bring development of parks, shopping Malls recreation facilities. This will improve social cohesion for the local communities.

Social Issues

There could be an influx of job seekers and workers during the construction and operational phase. The mining activities will attract job seekers from the other areas as a result impact on the socio-economic status of the proposed site.

Potential Impacts

Potential job opportunities could be created during the construction and operational phases, but will be minimal due to the open-cast mining method to be used.

Cumulative Impacts

This project will provide data from the site which will give value to the ore to be mined, as a result lead to establishment of mining operations boosting local Gross Domestic Products.

Specialist Studies Required

None will be required.

6.2.13 Archaeology and Cultural Historical

Description

There are few graves on the south west of the mining permit boundary which will be buffered and mining activities will be undertaken 100m away from the graves yard.

Figure 4: A photo of existing graves

Environmental Issues

The proposed development may not impact on archaeological features

Potential Impacts

A Heritage Impact Assessment will be undertaken during the EIA Phase to determine whether any features or artefacts of historical or cultural importance occur within the study area. Impacts will be determined\ based on the outcome of the findings of the Heritage Impact Assessment Report and will be addressed in the EIA Report.

Cumulative Impacts

A Heritage Impact Assessment will be undertaken during the EIA Phase to determine whether any features or artefacts of historical or cultural importance besides the graves observed during the site visit occur within the study area. Impacts will be determined based on the outcome of the findings of the Heritage Impact Assessment Report and will be addressed in the EIA Report.

Specialist Studies Required

In terms of Section 38 of the National Heritage Resources Act (Act 25 of 1999), a Heritage Impact Assessment should be undertaken for the proposed project to determine whether any artefacts of cultural or historical importance occur on site.

6.1.2.14 Hydrology

The proposed open-cast project area is located in the Olifants Water Management Area 4 (WMA 4), with the proposed Project's footprint falling in quaternary catchments B11L, B32A and B12E, a tributary of the Doringboomspruit River. The project is located in the Upper Olifants River catchment. The DWS report (DWAF, 2009) has reiterated the deteriorating water quality, where Total Dissolved Solids (TDS) and sulfate concentrations in the Witbank, Middelburg and Loskop Dams have been increasing since 1970. Owing to these impacts, it is imperative that the DWS developed water management strategies. Hence the development of the Integrated Water Resource Management Plan for the Upper and Middle Olifants Catchment in 2009 (DWAF,2009) which was responsible for setting up the Resource Water Quality Objectives (RWQO) used in this assessment.

Figure 5: A photo of existing water resource within the boundary

Description

The proposed area consist of the water resources covering an extent of 12.2Ha area within the mining right boundary that seems to be of non-perennial stream of which it does not have continuous surface water throughout the year.

Potential Impacts

The mining operation are likely to affect water resources during the construction and operational phase in a manner that uncontrolled mining pollution has a literal ripple effect. Mine waste, heavy metals and acidic water often end up in streams and rivers.

Cumulative Impacts

Mining results in four main types of pollution: acid mine drainage (AMD), heavy metal pollution, processing chemical pollution, and sedimentation. Chemical waste can severely damage the surrounding ecosystems, as well as poison humans who drink for the water.

Specialist Studies Required

Surface Water Impact Assessment will be undertaken during the EIA Phase.

7. PERIOD FOR WHICH THE ENVIRONMENTAL AUTHORISATION IS REQUIRED

It is anticipated that construction activities will take **one (1) month** for the establishment of mobile offices and ablution. The life of mine is expected to be in excess of **10 years**. Decommissioning and closure activities are estimated at **two (2) months**.

8. DESCRIPTION OF THE PROCESS FOLLOWED TO REACH THE PROPOSED PREFERRED SITE

8.1 DETAILS OF ALTERNATIVES CONSIDERED

8.1.1 Property / Location Alternatives

Not applicable. Properties are delimited by the properties available for mining and/or mining (i.e. not held by another company); and the geology of the area.

8.1.2 Type of activity to be undertaken

The MRA has low agricultural potential and is currently utilised for grazing by livestock. The quality of the coal and pseudocoal ore makes it economically viable to

transport it to local markets in the power generation, export, domestic, metallurgical, liquefaction and chemical sectors.

Development in the area is limited and the unemployment rate is high. So although mining is expected to have greater impact on the environment in terms of land use, it will have a greater positive contribution to socio-economics in the area through the implementation of the S&LP and through limited employment. Further to this it must be noted, that of the overall mining right area of 255.72 ha and will be affected by the proposed mining operations. Thus it is expected that the remainder of the property can continue to be utilised for agricultural purposes.

8.1.3 The design or layout of the activity

Alternatives for the mining layout are limited by the extent of the coal and pseudocoal resource. The type of mining to be conducted (open-cast mining) is further limited by the shallow depth of the resource.

The surface infrastructure in relation to the mine area is indicated in **Appendix B**. The infrastructure has been placed based on a high-level analysis of the area, to avoid existing farmstead, water resources existing on the northern side within the permit boundary and other sensitive areas as far as possible.

It must be stressed that the final location of the infrastructure may shift slightly dependant on the findings of the various specialist studies and input from Interested and Affected Parties (I&APs).

8.1.4 The technology to be used in the activity

Coal and Pseudocoal ore will be mined with open-cast mining, with concurrent rehabilitation. The following equipment will be utilised:

- A CAT 633E Scraper or similar;
- A Wirtgen 2200SM or similar surface miner;
- A 40 ton/hr mobile roller crusher combined with an Astec mobile high-frequency screen engineered to provide efficient sizing;
- A CAT 950GC wheel loader;
- A CAT250B articulated dump truck;
- A Volvo 250 kVA diesel generator and a household 10 kVA diesel generator;
- A 120 kW tractor with roller for on-stockpile crushing if and when required; and
- At least 2 Toyota Hilux 2.8D 4-wheel-drive LCV's.

In all other instances, best practices as utilised in the industry have been selected and, where applicable, SANS standards and legislative requirements will be followed in design, construction and management of infrastructure and activities on site. Technological alternatives have therefore not been further assessed. It is envisaged at this stage that no permanent structures will be constructed; only mobile offices and mobile equipment will be placed on site.

8.1.5 The operational aspects of the activity

In all instances, common practices as utilised in the industry have been selected. Operational alternatives have not been considered further.

8.1.6 The option of not implementing the activity

The no-go option will result in the protection of the environment *in situ* and the continued use of the land for grazing (agriculture) purposes. Not mining the area will result in the sterilisation of the coal and pseudocoal reserve; and the contribution to socio-economics in the area through the implementation of the S&LP and employment will not be realised.

9. NO - GO" OR NO DEVELOPMENT ALTERNATIVE

9.1 Continue with project

The mining project will assist potential investors to acquire feasible data from the proposed site for establishing mining operations for coal and pseudocoal known to be available. This mining right application will result in contributing to the local economy and job creation.

9.2 SELECTION OF SITES

The site for the proposed development were selected based on geological data and drilled samples data providing presence of coal and pseudocoal ore within the area.

10. PUBLIC PARTICIPATION PROCESS

Public Participation Process (PPP) is regarded as an integral part of an EIA process. It allows the public to have access to all information regarding the proposed development in hand through transparency and provision of sufficient and accessible information about the development. Public participation plays an important role in the compilation of a Scoping Report as well as the planning, design and implementation of the project. Public participation is a process leading to informed decision - making, through a joint effort. The PPP for this project will satisfy the

requirements stipulated in Chapter 6 of the NEMA EIA Regulations, 2014 promulgated in terms of the National Environmental Management Act, Act 107 of 1998.

The Methodology that was adopted to ensure a highly consultative and interactive public participation process is outlined below.

10.1 ANNOUNCEMENT OF THE PROPOSED PROJECT

The EIA guideline document stipulates that A2 notices informing the public of the proposed development be placed on site and accessible or public areas. The project should be advertised in a local newspaper that distributes within the Gert Sibande District in Mpumalanga Province.

10.1.1.1 Media Announcements

Newspaper Advertisements (in English) will be published on **27 January 2023** on the **Khanyisa Newspaper** in order to inform all stakeholders, newspaper readers, Interested and Affected Parties about the proposed project and inviting them to register and participate regarding the proposed mining right application.

10.1.1.2 Site notices and notice boards

Site notices (English) will be fixed at a place conspicuous to the public, i.e. within the study area. Refer to Appendix C – Proof of advertisement for the placement as well as the photos of the site notices.

10.1.1.3Background Information Document (Bid)

Background Information Document (BID) was prepared as a basis for discussion with stakeholders and I&APs about the project. The BID introduced the project to the I&APs, provided the rationale for the project, the EIA and public participation processes to be followed in the project, proposed project timeframes, etc. The BID included a registration/comment sheet which was available in English. A letter of invitation addressed to the I&APs captured on the database, accompanied the BID and a registration/comment sheet The BID was distributed by electronic mail to stakeholders and I&APs.

10.2 IDENTIFICATION OF INTERESTED AND AFFECTED PARTIES

10.2.1.1 Consultation with the Municipality

Municipalities are the sphere of government closest to the people and their mandate or responsibility is to ensure that there is viable economic boost for job creation

10.2.1.2 Consultation with surrounding land owners and community

Surrounding land owners and communities that were identified were consulted throughout the duration of the project to ensure their full participation in the process.

A list of the I&APs identified during the Scoping Phase of the project are tabulated in Table 6 below.

Table 6: interested and affected parties identified during the scoping phase

Interested and Affected parties List the names of persons consulted in this column Mark with an X where who must be consulted were in fact consulted	Date comments received	Issued raised	Eap 's response to issues as mandated by the applicant	Section and paragraph reference in this report where the issues or

					responses were incorporated
Landowner/s	**X**				
Mr. Corne Butter landowner of portion 9 of Bankfontein 215 IS					**Appendix D**
Lawful occupier/s of the land					
		N/A			
Landowners or lawful occupiers of adjacent properties	**X**				
Dudu Sibiya					

Danie Van Der Berg					
Mr. Nxumalo					
Municipal Councillor					
N/A					
Municipality					
Msukaligwa Local Municipality (cmakhanye@msukaligwa.gov.za bcsibeko@msukaligwa.gov.za) Gert Sibande District LindokuhleM@gsibande.gov.za	X		Still waiting for response		**Appendix D**
Organ of state(Responsible for					

infrastructure that may be affected Roads department, Eskom, Telkom, DWA					
ESKOM (LechabaRT@eskom.co.za/ Wayleavesmou@eskom.co.za)					
SANRAL (nrstat@nra.co.za/ Barkhuizenr@nra.co.za)					
Department of Water and Sanitation (MatsiD@dws.gov.za)					
Department of Labour					

(petermolapo@labour.gov.za)					
Communities					
Breyten Community					
Department of Land Affairs					
Department of Rural Development and Land Reform(Land Restitution Support) (Themba.Mkhonto@dalrrd.gov.za/ Vusi.Khoza@dalrrd.gov.za)	X		Still waiting for response		**Appendix D**
Traditional Leaders					
N/A	X				

Department of Environmental Affairs					
Department of Environmental Affairs PMohlala@mpg.gov.za	X		Still waiting for response		**Appendix D**
Department of Forestry, fisheries and Environment (RhulaniC@daff.gov.za/ Minolta@daff.gov.za)					
Other Competent authorities affected	N/A				

Mpumalanga tourism and Parks Agency Land Advisory Unit (Thabile.Mnisi@mtpa.co.za)	x				**Appendix D**
Other affected parties					
SAHRA (Sahris website)	X				**Appendix E**
SAPS DEPT OF HEALTH					
Interested parties	N/A				

10.3 PUBLIC AND FOCUS GROUP MEETINGS

Public Meetings will be held with representatives and I&APs of the various sectors in the study area. These meetings will serve to inform I&APs of the proposed project and the engagement process, to explain technical concepts in order to build capacity and gather issues of concern. Critical requirements which will be attended in striving for successful and useful meetings are as follows:

- Clear definition of the aims and objectives of the meeting and the sharing of these with stakeholders in advance of the meetings and/or workshops.
- Advance notification, i.e. two weeks (14 days).
- Formal advance registration procedures, including acknowledgement to stakeholders that they are registered to attend, although provision will be made to accommodate stakeholders who do not follow the recommended procedures.
- Advance provision of meeting materials (reports, documents, etc) to those stakeholders that have indicated they will attend.

10.4 CIRCULATION OF THE CONSULTATIVE SCOPING REPORT

The Consultative Scoping Report will be circulated as part of the notification period for the Environmental Process. The Consultative Scoping Report will be circulated to relevant stakeholders and state departments. All I&APs, stakeholders and state departments will be given 30 days to submit their comments / concerns or recommendations.

10.5 REGISTERED INTERESTED AND AFFECTED PARTIES

A register will be kept in order to register all I&APs that are interested in the project. This register will be updated regularly to ensure that I&APs that attended public meetings, workshops or whom have registered during the Scoping or Environmental Impact Assessment Phase is included as part of the public participation process for the project. Refer to **Appendix C** for a list of the I&APs that registered during the Scoping Phase.

10.6 STAKEHOLDER FEEDBACK

Registered I&APs will be informed of the progress made at every milestone. This will be done in the form of a feedback letter. These will be distributed to registered I&APs to report on progress to date, to thank those who have commented, and to confirm the way forward in the EIA process.

10.7 SUMMARY OF THE ISSUES RAISED

Table 7: Summary of issues raised

I and Aps	Issues Raised	Responses

10.8 Description of the tasks that will be undertaken during the environmental impact assessment process

The EIA process for the proposed Coal and P9seudocoal mining project is depicted below:

1. Application for Environmental Authorization and Mining Right to the DMR;

2. The DMR responds with reference number and accepts the application;

3. Draft Scoping Report circulated for perusal to I&AP's and stakeholders;

4. Final Scoping Report (FSR) submitted to the DMRE;

5. The DMRE decision on FSR;

6. Impact Assessment Process:

- Project description and site environmental baseline;
- Impact assessment;
- Mitigation measures and recommendations;
- EMPr compilation;

7. Draft EIA report circulated for perusal by I&AP's and stakeholders;

8. Final EIA report submitted to the DMR;

9. The DMRE decision on Final EIA report;

10. Announcement of Environmental Authorization and Appeal Procedure;

11. Opportunity to Appeal;

12. Submission of Financial Provision amount;

13. Issuing of Mining Right.

11. PLAN OF STUDY FOR EIA

11.1 INTRODUCTION TO EIA

The Plan of Study for EIA for this project will be prepared in accordance with Appendix C, section 2 (i) of R.325 of NEMA EIA Regulations, 2014. The aim of the EIA Phase is to address the significant issues highlighted in the Scoping Phase through specialist investigation and detailed assessment of the biophysical and social (including heritage) environments affected by the proposed project. Also, assess the study area in terms of environmental criteria, identify and recommend appropriate mitigation measures for potentially significant environmental impacts and undertake a fully inclusive public participation process to ensure that issues and concerns as raised by the public are recorded and addressed.

11.2 SPECIALIST STUDIES

During this phase specialists will be appointed to address key issues and impacts that require further investigation, as identified during the Scoping study. Specialists will gather data that is relevant to identifying and assessing environmental impacts that may occur as a result of the proposed project. These impacts would further be assessed according to the Environmental Impact Assessment criteria; Specialists would also enhance potential benefits or recommend appropriate mitigation or

control measures to minimize potential negative impacts. The specialist information which would address the key issues and impacts identified during the EIA process, and other relevant information will be integrated into the EIA Report.

The following potential impacts were identified:

• Contamination of ground and surface water (including AMD) • Disturbance of geology and soils • Land uses and capability • Socio-economic • Flora and fauna • Traffic • Watercourses (wetlands) • Dust and air quality • Blast and vibration • Heritage and cultural resource • Paleontological

The specialist studies that will be completed for the project include:

- Heritage Impact Assessment;
- Geohydrological Impact assessment
- Terrestrial Ecological including fauna & flora Investigation
- Blasting and Vibration Assessment
- Social Labour Plan
- Aquatic Ecology, Surface Water Assessment and Floodline Determination
- Mine Work Programme
- Rehabilitation Plan and Management Plan
- Traffic Impact Assessment
- Civil Engineering pollution Control Dam Designs and Stormwater Management

11.3 CRITERIA FOR SPECIALIST ASSESSMENT OF IMPACTS

As a means of determining the significance of the various impacts that can or may be associated with the proposed project, a series of assessment criteria will be used for each impact. All possible impacts need to the assessed – the direct, in-direct as well as cumulative impacts. The following criteria will be used to evaluate significance:

During the EIA Phase impacts will be ranked according to the methodology described below. Where possible, mitigation measures will be provided to manage impacts. In order to ensure uniformity, a standard impact assessment methodology has been utilized so that a wide range of impacts can be compared. The impact assessment methodology makes provision for the assessment of impacts against the following criteria:

Nature: The nature of the impact should be classified as positive or negative, and direct or indirect.

Extent and location: Magnitude of the impact and is classified as Local: the impacted area is only at the site

– The actual extent of the activity; Regional: the impacted area extends to the surrounding, the immediate and the neighboring properties or National: the impact can be considered to be of national importance.

Duration: This measures the lifetime of the impact, and is classified as: Short term (0 – 3 years); Medium term: 3 - 10years); Long term: more 10 years or permanent.

Intensity: This is the degree to which the project affects or changes the environment, and is classified as: Low: the change is slight and often not noticeable, and the natural functioning of the environment is not affected; Medium: The environment is remarkably altered, but still functions in a modified way or High: Functioning of the affected environment is disturbed and can cease.

Probability: This is the likelihood or the chances that the impact will occur, and is classified as: Low: during the normal operation of the project, no impacts are

expected; Medium: the impact is likely to occur if extra care is not taken to mitigate them or High: the environment will be affected irrespectively; in some cases such impact can be reduced.

Confidence: This is the level knowledge/information, the environmental impact practitioner or a specialist had in his/her judgment, and is rated as: Low: the judgment is based on intuition and not on knowledge or information; Medium: common sense and general knowledge informs the decision or High: Scientific and or proven information has been used to give such a judgment.

Significance: Based on the above criteria the significance of issues will be determined. This is the importance of the impact in terms of physical extent and time scale, and is rated as: Low: the impacts are less important, but may require some mitigation action; Medium: the impacts are important and require attention; mitigation is required to reduce the negative impacts or High: the impacts are of great importance. Mitigation is therefore crucial.

Mitigation: Mitigation for significant issues will be incorporated into the EMP for bulk sampling.

Cumulative Impacts: It is important to assess the natural environment using a systems approach that will consider the cumulative impact of various actions. Cumulative impact refers to the impact on the environment, which results from the incremental impact of the actions when added to other past, present and reasonably foreseeable future actions regardless of what agencies or persons undertake such actions. Cumulative impacts can result from individually minor but collectively significant actions or activities taking place over a period of time. Cumulative effects can take place so frequently in time that the effects cannot be assimilated by the environment.

11.4 EIA REPORT

The Consultative EIA and EMPR will be made available to all stakeholders so that they can be given an opportunity to review and provide input on the findings of the EIA phase. The public review period will be announced in advance by way of a progress feedback letter that will be distributed to all registered I&APs and newspaper advert. The letter will indicate that the report is available for public review, where it can be accessed and in which ways I&APs may comment on the report. Meetings will be organized if necessary to present and discuss the findings.

All issues raised and comments received and will be recorded in a Comments and Response Report (CRR) and will be incorporated into the revised EIR prior to submission to DMRE The comments and decision received from DMRE on the EIA Report will be circulated to all registered I&APs.

11.5 ENVIRONMENTAL MANAGEMENT PROGRAMME (EMPR)

A Consultative EMPR will be compiled according to the National Environmental Management Act, 1998 (Act 107 of 1998) as amended and the Environmental Impact Assessment Regulations, 2014. This programme will allow for detailed planning of the project in terms of environmental standards for mining activities. It will be used as a guide in the monitoring of the project from the bulk sampling phase of the proposed mining activities.

12. Impact Assessment

12.1 List of impacts identified

The proposed project is anticipated to impact on a range of biophysical and socio-economic aspects of the environment. Potential impacts identified for the project are summarised in the table below.

These impacts will be investigated further during the EIA phase of the project, and will be updated in the EIA and EMPr based on the findings of the various specialist studies and input from I&APs.

Table 8: Impact Assessment

Activity	Impact	Applicable Mine Phase	STATUS	Magnitude	Extent	Duration	Reversibility	CONSEQUENCE	PROBABILITY	SIGNIFICANCE	Mitigation	Degree of loss of resource
Aspect: Topography												
All infrastructure areas, development footprints and associated activities	Excavation and creation of infrastructure foundations will alter the topographical nature of the site and associated drainage.	Construction Operational Decommissioning	Neg	1	1	3	3	8	5	40	Y	-
Mining	Altered topographical nature and associated drainage.	Construction, Operation, Decommissioning	Neg	2	1	3	3	9	5	45	Y	-
All material stockpile	Stockpiles will change the	Construction, Operation,	Neg	3	1	3	3	10	5	50	Y	-

areas	topographical nature of the area.	Decommissioning										
Rehabilitation of all disturbed areas (infrastructure and mining areas)	Eradication of stockpiles, filling and shaping of trenches and replacement of material and profiling.	Operation, Decommissioning, Closure	Pos	4	1	5	1	11	4	44	N	-
Aspect: Soil and Land Capability												
All infrastructure areas, development footprints and associated activities	Loss in grazing potential, loss of soil and deterioration of soil characteristics.	Construction, Operation, Decommissioning, Closure	Neg	3	1	3	3	10	5	50	Y	High
Soil	Loss of	Constructi	Neg	3	1	3	3	10	4	40	Y	Low

stripping and stockpiling	fertile topsoil layer and loss through erosion.	on, Operation, Decommissioning										
Soil stripping and stockpiling	Compaction and alteration of physical characteristics of soil.	Construction, Operation, Decommissioning	Neg	3	1	3	3	10	4	40	Y	Low

Activity	Impact	Applicable Mine Phase	STATUS	Magnitude	Extent	Duration	Reversibility	CONSEQUENCE	PROBABILITY	SIGNIFICANCE	Mitigation	Degree of loss of resource
Waste generation and storage	Potential contamination of soil with indiscriminately dumped waste.	Construction, Operation	Neg	3	1	2	1	7	4	28	Y	Mod
Stores, workshops	Potential hydrocarb	Construction,	Neg	3	1	2	3	9	4	36	Y	Low

, washbays, hard park and fuel Storage	on contamination of soils. Potential contamination of soil with indiscriminate use of contaminating materials (cement, oil, chemicals, etc.).	Operation										
Ablutions and associated conversancy tanks	Potential contamination of soil with sewage.	Construction, Operation, Decommissioning	Neg	2	1	3	3	9	3	27	Y	Low
Rehabilitation of all disturbed areas (infrastruc	Soil replacement and ameliorati on.	Operation, Decommissioning, Closure	Pos	4	2	1	3	10	4	40	N	-

ture and mining areas)												
Aspect: Surface Water and Associated Wetlands and Aquatic Ecosystems												
All infrastructure areas, development footprints and associated activities	**Increased runoff and associated potential silt-loading and contamination of downstream water bodies**	**Construction, Operation, Decommissioning**	**Neg**	**4**	**3**	**3**	**3**	**13**	**4**	**52**	**Y**	**Mod**
All infrastructure areas, development footprints and associated activities	**Downstream water quantity of catchment reduced.**	**Construction, Operation, Decommissioning**	**Neg**	**3**	**3**	**3**	**3**	**12**	**5**	**60**	**N**	**Mod**

Activity	Impact	Applicable Mine Phase	STATUS	Magnitude	Extent	Duration	Reversibility	CONSEQUENCE	PROBABILITY	SIGNIFICANCE	Mitigation	Degree of loss of resource
Lighting	Hindrance to nocturnal animals, including nocturnal birds and bats.	Construction, Operation	Neg	3	2	3	1	9	5	45	Y	Low
Waste generation and storage	Potential harm to flora and fauna through littering and waste toxins.	Construction, Operation, Decommissioning	Neg	3	1	3	3	10	3	30	Y	Low
Stores, workshops, washbays, fuel storage and hard park	Potential hydrocarbon contamination will be source of toxin to flora and	Construction, Operation	Neg	4	1	3	3	11	2	22	Y	Low

	fauna.											
Rehabilitation of all disturbed areas (infrastructure and mining areas)	Lack of functional vegetation due to poor rehabilitation.	Operation, Decommissioning, Closure	Neg	3	1	5	1	10	4	40	N	-
Rehabilitation of all disturbed areas (infrastructure and mining areas)	Seeding and vegetative cover and plant community succession. Influx of Animals to the area once vegetation establishes.	Decommissioning, Closure	Pos	4	1	5	1	11	4	44	N	-
Aspect: Air Quality												
All infrastruct	Emissions into the	Constructi on,	Neg	2	2	3	1	8	5	40	Y	Low

ure areas, development footprints and associated activities	atmosphere through use of diesel powered equipment, machinery and vehicles.	Operation, Decommissioning										

Activity	Impact	Applicable Mine Phase	STATUS	Magnitude	Extent	Duration	Reversibility	CONSEQUENCE	PROBABILITY	SIGNIFICANCE	Mitigation	Degree of loss of resource
All infrastructure areas, development footprints and associated activities	Dust generation and particulate matter.	Construction, Operational Decommissioning	Neg	5	2	3	1	11	5	55	Y	Mod
Material handling, stockpilin	Dust generation.	Operational	Neg	5	2	1	3	11	5	55	Y	Mod

g, screening and processing												
Rehabilitation of all disturbed areas (infrastructure areas and surface trenches)	**Dust generation associated with material handling.**	**Operation, Decommissioning**	**Neg**	**4**	**2**	**2**	**1**	**9**	**5**	**45**	**N**	**Mod**
Aspect: Noise												
All infrastructure areas, development footprints and associated activities. All activities on site.	**Increased noise levels.**	**Construction, Operation, Decommissioning**	**Neg**	**2**	**2**	**3**	**1**	**8**	**5**	**40**	**Y**	**-**
Aspect: Archaeological/Cultural Sites												

Mining	**Loss of and disturbance to archaeological / heritage sites.**	**Construction**	**Neg**	**4**	**1**	**5**	**5**	**15**	**2**	**30**	**Y**	**High**
All infrastructure areas, development footprints and associated activities. All activities on site.	**Loss of and disturbance to archaeological / heritage sites.**	**Construction**	**Neg**	**4**	**1**	**5**	**5**	**15**	**2**	**30**	**N**	**High**

Activity	**Impact**	**Applicable Mine Phase**	**STATUS**	**Magnitude**	**Extent**	**Duration**	**Reversibility**	**CONSEQUENCE**	**PROBABILITY**	**SIGNIFICANCE**	**Mitigation**	**Degree of loss of resource**
Aspect: Visual Aesthetic												
All	**Deteriorat**	**Construction**	**Neg**	**5**	**1**	**3**	**3**	**12**	**5**	**60**	**Y**	**-**

infrastructure areas, development footprints and associated activities	ion in visual aesthetics.	, Operation, Decommissioning										
Lighting	Increased visibility of the site.	Construction, Operation	Neg	3	2	3	1	9	5	45	Y	-
Waste generation and storage	Deterioration in visual aesthetics.	Construction, Operation	Neg	3	1	3	3	10	3	30	Y	-
Rehabilitation of all disturbed areas (infrastructure areas and surface trenches)	Improved visual aesthetic.	Operation, Decommissioning, Closure	Pos	4	1	5	1	11	4	44	N	-
Aspect: Land Use												
All infrastruct	Change in land use to	Construction, Operation,	Neg	3	1	4	3	11	5	55	N	-

ure areas, development footprints and associated activities	mining/.	Decommissioning										
Aspect: Traffic and Safety												
Transport via rail	Less traffic, less road incidences and road integrity does not decrease	Construction, Operation	Pos	5	2	3	4	14	5	48	Y	
Access and hauling	Increased potential for road incidences. Road degradation.	Construction, Operation, Decommissioning	Neg	5	3	3	5	16	3	48	Y	-
Activity	Impact	Applicable Mine Phase	STATUS	Magnitude	Extent	Duration	Reversibility	CONSEQUENCE	PROBABILITY	SIGNIFICANCE	Mitigation	Degree of loss of resource
Aspect: Socio-economic, Health and Safety												
All	Social ills -	Construction	Neg	4	4	5	5	18	3	54	Y	-

footprints and All activities	**Disease**	**, Operation, Decommissioning**										
All footprints and All activities	**Property damage**	**Construction, Operation**	**Neg**	**4**	**1**	**3**	**3**	**11**	**3**	**33**	**N**	**-**
All footprints and All activities	**Employment opportunities**	**Construction, Operation, Decommissioning**	**Pos**	**4**	**3**	**3**	**3**	**13**	**4**	**52**	**N**	**-**
All footprints and All activities	**Local / Regional business**	**Construction, Operation, Decommissioning**	**Pos**	**4**	**3**	**3**	**3**	**13**	**4**	**52**	**N**	**-**
All footprints and All activities	**Sense of Place**	**Construction, Operation**	**Neg**	**5**	**1**	**3**	**3**	**12**	**5**	**60**	**Y**	**-**
Aspect: Additional I&AP Issues not addressed in the above aspects												
All activities	**Increase in crime in the neighbouring farm areas and towns**	**Construction, Operation, Decommissioning**	**Neg**	**3**	**2**	**4**	**3**	**12**	**5**	**60**	**Y**	**-**

12.2 Methodology used in determining the significance of environmental impacts

Impact assessment methods were developed to:

(1) identify the potential impacts of a proposed development on the social and natural environment;

(2) predict the probability of these impacts and

(3) evaluate the significance of the potential impacts.

Table 9: Methodology to assess the impacts

The methodology used by TPR Mining Resources to assess the impacts identified in Table 9, are as follows: The status of the impact	
Status	Description
Positive:	a benefit to the holistic environment
Negative:	a cost to the holistic environment
Neutral:	no cost or benefit

The magnitude (severe or beneficial) of the impact		
Score	Severe/beneficial effect	Description
1	Slight	Little effect – negligible

		disturbance/benefit
2	Slight to moderate	Effects observable – environmental impacts reversible with time
3	Moderate	Effects observable – impacts reversible with rehabilitation
4	Moderate to high	Extensive effects – irreversible alteration to the environment
5	High	Extensive permanent effects with irreversible alteration
The extent of the impact		
Score	Extent	Description
1	Site specific	Within the site boundary
2	Local	Affects immediate surrounding areas
3	Regional	Extends substantially beyond the site boundary
4	Provincial	Extends to almost entire province or larger region
5	National	Affects country or possibly world

The duration of the impact		
Score	Duration	Description
1	Short term	Less than 2 years
2	Short to medium term	2 – 5 years
3	Medium term	6 – 25 years
4	Long term	26 – 45 years
5	Permanent	46 years or more
The reversibility of the impact		
Score	Reversibility	Description
1	Completely reversible	Reverses with minimal rehabilitation and negligible residual affects
3	Reversible	Requires mitigation and rehabilitation to ensure reversibility
5	Irreversible	Cannot be rehabilitated completely/rehabilitation not viable

The Consequence	= Magnitude + Spatial Scale + Duration +

	Reversibility.	
The probability of the impact		
Score	Rating	Description
1	Unlikely	Less than 15% sure of an impact occurring
2	Possible	Between 15% and 40% sure of an impact occurring
3	Probable	Between 40% and 60% sure that the impact will occur
4	Highly Probable	Between 60% and 85% sure that the impact will occur
5	Definite	Over 85% sure that the impact will occur
The Significance	= Consequence x Probability.	
Score out of 100	Significance	
1 to 20	Low	
21 to 40	Moderate to Low	
41 to 60	Moderate	
61 to 80	Moderate to high	
81 to 100	High	
Is mitigation possible?	Yes or no?	

Degree of loss of resource	
Low	Where the resource will recover

12.3 The Outcome of the Site Selection Matrix and Final Layout Plan

Alternatives for the mining layout are limited by the extent of the coal and pseudocoal resource. The type of mining to be conducted (open-cast mining) is further limited by the shallow depth of the resource.

The surface infrastructure in relation to the mine area is indicated in **Appendix B.** The infrastructure has been placed based on a high level analysis of the area, to avoid existing farmsteads, water resources, graves and other sensitive areas as far as possible so as to minimise the environmental impacts associated with the project. The infrastructure area was also sited based on accessibility to the site.

Table 8 assesses the positive and negative impacts of the proposed activity in line with the methodology detailed in section 12.2. It must be stressed that the final location of the infrastructure may shift slightly dependant on the findings of the various specialist studies and input from I&APs.

12.4 Motivation where no alternative sites were considered

No property / site alternatives were considered for this project. Properties are delimited by the properties available for prospecting and/or mining (i.e. not held by another company); and the geology of the area.

12.5 Statement motivating the preferred site

The preferred site layout is depicted in **Appendix B**. The overall mine and infrastructure layout has taken into account the environmental sensitivity of the site, and infrastructure has been placed to avoid or minimise environmental impacts as far as possible. The final mine plan and infrastructure layout plan will be adjusted according to the outcome of the various specialist studies.

13. OTHER INFORMATION REQUIRED BY THE COMPETENT AUTHORITY

13.1 Impact on the Socio-economic Conditions of any Directly Affected Person

The Land Claims Commissioner were consulted to determine whether any land claims have been registered over portion 9 of farm Bankfontein 215 IS.

13.2 Impact on any National Estate referred to in Section 3(2) of the National Heritage Resources Act

SAHRA has been notified as an organ of state and has been notified of the project through the various PPP procedures described in this Scoping Report. A heritage assessment study will be undertaken during the EIA/EMP phase, these reports will be submitted to SAHRA for comment.

All outcomes will be reported in the EIA and EMPr.

13.3 Other matters required in terms of Section 24(4)(a) and (b) of the Act

Section 24(4) (b) (i) of the Act specifies "investigation of the potential consequences or impacts of the alternatives to the activity on the environment and assessment of the significance of those potential consequences or impacts, including the option of not implementing the activity"

This has been addressed in the relevant sections above. As stipulated, the site is delimited by the mining rights area and the extent of the resource. The type of mining

to be conducted is limited by the depth of the resource. Processing requirements are limited to the in situ quality and market needs and demands.

Site layout alternatives are limited. Any further changes will be described and motivated in the EMPr once the specialist studies are completed.

14. CONCLUSIONS

The Scoping Report (SR) and the Plan of Study for EIA have been prepared in accordance with the NEMA EIA Regulations. The Environmental Scoping Study has outlined the proposed project, identified key environmental and social issues associated with the proposed project, and described how the identified potential environmental and social benefits and impacts will be addressed during the Environmental Impact Assessment (EIA) Phase of the project. It is believed that the methodology that is being used to assess the current state of the environment will be sufficient to identify potential impacts. The data will assist in the compilation of the Environmental Impact Assessment as an instrument in the decision-making process. Mitigation measures for the impacts identified in this Scoping Report will be described in detail in the Environmental Impact Assessment and in the Environmental Management Programme.

15. UNDERTAKING

The EAP herewith confirms

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

_____

Signature of the Environmental Assessment Practitioner:

TPR MINING RESOURCES

_____

Name of Company**:**

01 February 2023

_____

Date:

-END

16. REFERENCES

Middleton B J; Bailey AD. 2005. *Water resources of South Africa, 2005 STUDY (WR2005).* The Water Research Commission.

Mucina, L. and Rutherford, M.C. (eds) 2006. *The vegetation of South Africa, Lesotho and Swaziland.* Strelitzia 19. South African National Biodiversity Institute, Pretoria.

The Biodiversity Company, 2017. *Biodiversity Assessment, Kanakies, Northern Cape Province.*

Ubufazi Consulting & Danida. July 2005. *Proposal for the Establishment of the Olifants-Doorn Catchment Management Agency.* Northern Cape.

Cabanga, March 2018. *Scoping Report for Public Review for listed activities associated with mining right and/ bulk sampling activities including trenches of alluvial diamond prospecting*. Northern Cape.

17. APPENDICES

Appendix A: EAP CVs

- Project Manager
- Quality Reviewer

Appendix B: Study Maps

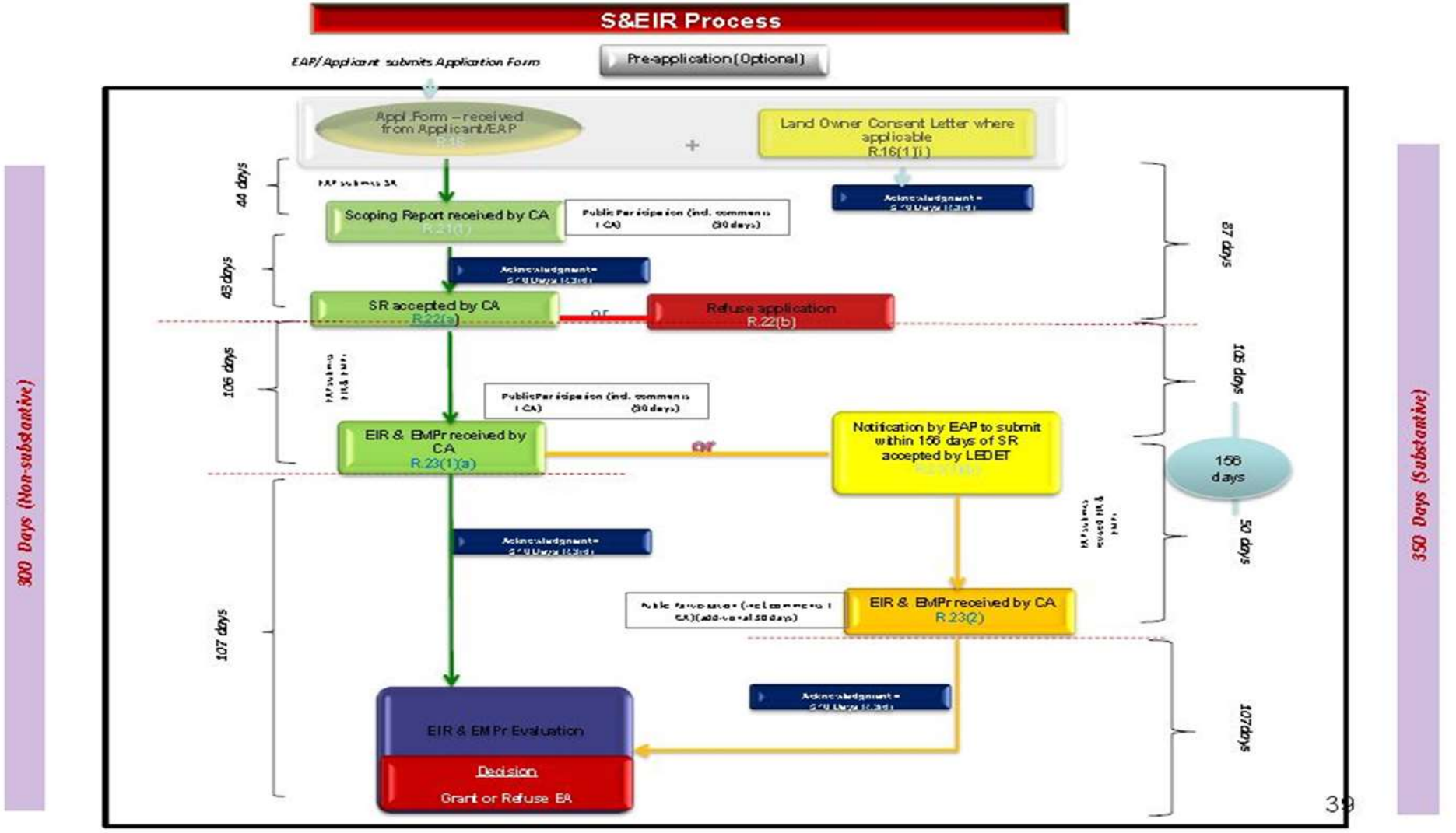
- Locality Maps
- Aerial Map
- Site Layout Plan

Appendix C: Public Participation Process

- List of Interested and Affected Party
- Site Notices and Newspaper Advertisement

Appendix D: Comments and Response Sheet

- Issues raised and Responses


S&EIR Process
EAP/Applicant submits Application Form
Pre-application (Optional)
Appl. Form – received from Applicant/EAP
Land Owner Consent Letter where applicable R.16(1)(j)
Scoping Report received by CA
Public Participation (ind. comments to CA) (30 days)
SR accepted by CA R.22(a)
or
Refuse application R.22(b)
Public Participation (ind. comments to CA) (30 days)
EIR & EMPr received by CA R.23(1)(a)
or
Notification by EAP to submit within 156 days of SR accepted by LEDET
EIR & EMPr received by CA R.23(2)
EIR & EMPr Evaluation
Decision
Grant or Refuse EA
44 days
43 days
106 days
107 days
87 days
105 days
156 days
50 days
107days
300 Days (Non-substantive)
350 Days (Substantive)