



# **DRAFT BASIC ASSESSMENT REPORT AND ENVIRONMENTAL MANAGEMENT PROGRAMME REPORT**

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

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**FILE REFERENCE NUMBER SAMRAD: NW30/5/1/3/2/11255MP**

## 1. IMPORTANT NOTICE

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

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

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

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

**i. Objective of the basic assessment process**

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

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

## **2. Project Background**

Peo Enhle Supply and Services (Pty) the applicant, appointed Beyond Green (Pty) Ltd (referred to BGES here after) as the independent Environmental Assessment Practitioner (EAP) to facilitate the environmental authorization process for its proposed mining permit for Granite/Syenite in terms of section 27 of the MPRDA (Act 28 of 2002) and section 24 of the NEMA (Act 107 of 1998). The proposed project covers an extend of 5 hectares (Ha) of land on portions 1133 and 1041 of the farm Hartebeespoort B 410 JQ, situated within Brits Local Municipality. The site is located +/- 15km from Brits in the Northwest Province. Peo Enhle proposed to undertake excavation, drilling and blasting operations, and removal of the orebody should the permit/authorization be acquired. The applicant also intends to conduct mining activities mainly through an open pit, stockpile it and load for transportation to the area of interest. This will comprise setting up the camp and mobile offices onsite and creating an access road. It is anticipated that mining activities will be undertaken over a period of 2 years with an option to renew for three (3) periods, each of which may not exceed one (1) year if the mining program is not completed.

BGES has submitted the application for environmental authorization to the Department of Mineral Resources (referred to DMR here after) for the proposed mining project. The DMR subsequently accepted and the following reference number: NW30/5/1/3/2/11185MP was assigned. As such, Peo Enhle must proceed with the Basic Assessment Report process (this report) in terms of the National Environmental Management Act (NEMA), Act of 107 of 1998 (NEMA) and its Environmental Impact Assessment (EIA) Regulations, 2014. In this regard, the requirements of the BA Process are noted in the EIA Regulations (2014, as amended). Ultimately, the outcome of the BA process is to provide the competent authority, the DMR information to provide a decision on the Application in terms of Environmental Authorization (EA), to avoid or mitigate any detrimental impacts that the proposed activity may impose on the receiving environment.

A draft of this document was sent out to the public; stakeholders; landowners and any other Interested & Affected Parties to get their issues and concerns and response thereof, before the compilation of this final BAR.

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**PART A: ACTIVITY INFORMATION****1. Contact Person and correspondence address****Table 1: EAP and Applicant details**

	<b>Environmental Assessment Practitioner (EAP)</b>	<b>Applicant</b>
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**2. Expertise of the EAP**

BGES Pty Ltd is contracted by Peo Enhle as the independent environmental consultant to undertake the Environmental Basic Assessment Process for the proposed project. BGES is not a subsidiary of or affiliated with the applicant. Furthermore, BGES does not have any interests in secondary developments that may arise out of the authorization of the proposed project.

The EAP from BGES who is responsible for this project is Innesse Marsial Kouben (assistant) and Ms. Nonkululeko Mbasane (reviewer).

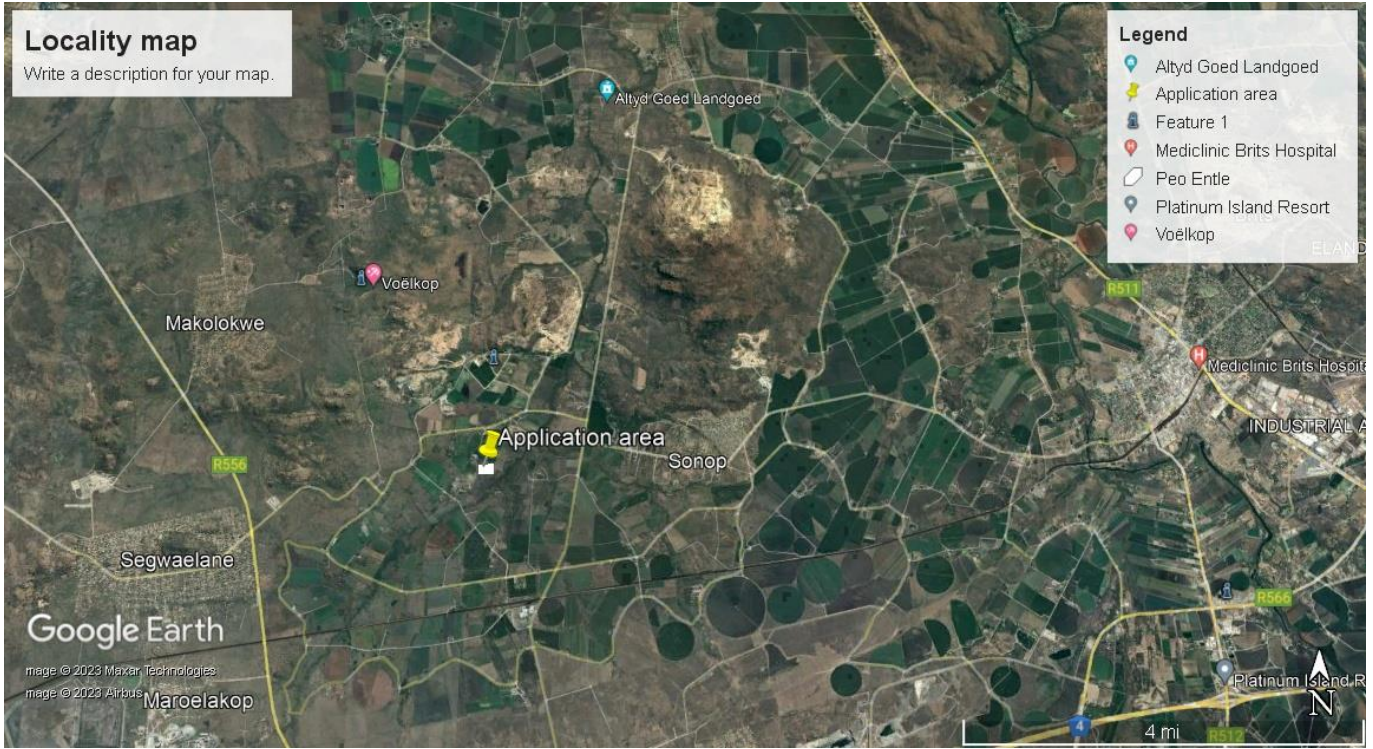
### 3. Location of the overall Activity

**Table 2: Details of Location**

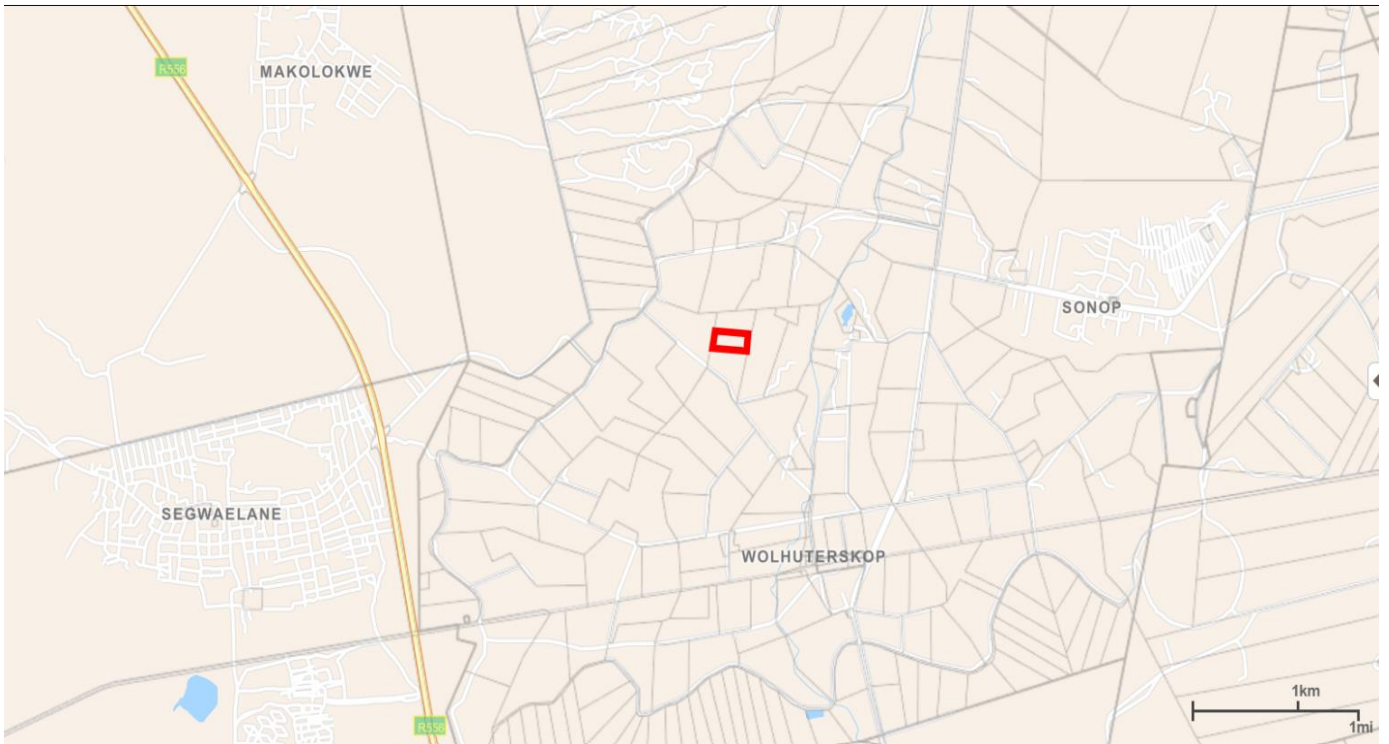
<b>Farm Name:</b>	Portion Of Portions 1133 & 1041 Of The Farm Hartbeespoort B 410JQ.
<b>Application area (Ha)</b>	5 Ha
<b>Magisterial district:</b>	Bojanala Platinum District Municipality, Madibeng Local Municipality, Northwest Province
<b>Distance and direction from nearest town</b>	The area is situated +/- 15 km from Brits in the Northwest Province
<b>21-digit Surveyor General Code for each farm portion</b>	TOJP0000000041001133 TOJP0000000041001041
<b>Locality map</b>	Attach a locality map at a <b>scale not smaller than 1:250000 and attach as Appendix 2</b>
<b>Description of the overall activity. (Indicate Mining Right, Mining Permit, Prospecting right, Bulk Sampling, Production Right, Exploration Right, Reconnaissance permit, technical co-operation permit, Additional listed activity)</b>	<p>Peo Enhle Supply and Services is undertaking a mining permit application for granite ore. The layers of earth above which the stones are formed will be removed to uncover the granite. After this, an open cast mining process will be used to extract it from the earth. This will involve the blasting, excavation, crushing and processing of the ore body. Holes will be drilled into the ore body and explosives will be dropped into the holes drilled. Blasting will then occur which will remove the rock from the pit wall, and then using hydraulic hammers to detach the individual blocks of stone from their surroundings. Once the blocks are singled out, cranes are used to lift them to the surrounding surface.</p> <p>After quarrying, the raw granite extracted in blocks weigh up to 10 tons each of which will be transported by trucks and transport to the area of interest that include warehouses and harbour for further processing.</p>

**i. Locality map**

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



**Figure 1: Application area in relation to the nearest town.**



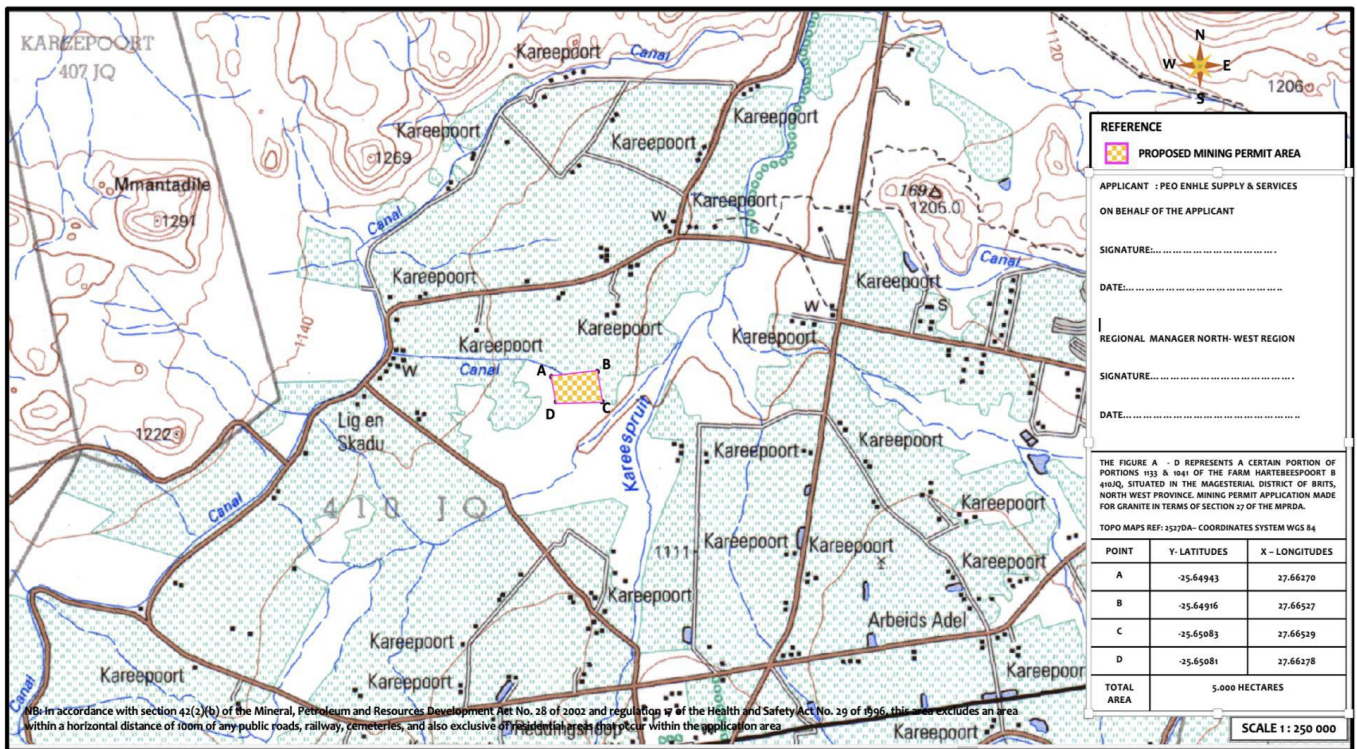
**Figure 2: areas surrounding the proposed mining area**

**ii. Description of the scope of the proposed overall activity**

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

Peo Enhle (the applicant) intends to mine granite through open cast/pit mining from a harbour of illegal mining area, located approximately 15Km Northwest of Brits and 3km Northwest of Sonop community within the Madibeng Local Municipality in Bojanala Platinum District, Northwest Province. The applicant is committed and aware that the area has a liability from the disturbances and impact as a result of illegal activities in the area. Figure 3 below illustrates the mining permit area.

**PLAN CONTEMPLATED IN REGULATION 2.2 OF THE MPRDA, 2002 SHOWING THE LAND AND PROSPECTING AREA TO WHICH THE APPLICATION RELATES**



**Figure 3: Layout Map**

#### 4. Listed and specified activities

**Table 3: Applicable Listed Activities**

<b>NAME OF ACTIVITY</b> (E.g., For prospecting - drill site, site camp, ablution facility, accommodation, etc. E.g., for mining, - excavations, blasting, stockpiles, discard dumps	<b>Aerial extent of the Activity</b> Ha or m <sup>2</sup>	<b>LISTED ACTIVITY</b>	<b>APPLICABLE LISTING NOTICE</b>	<b>WASTE MANAGEMENT AUTHORISATION (Mark with an</b>
Any activity including the operation of that activity which requires a mining permit in terms of section 27 of the Mineral and Petroleum Resources Development Act, 2002 (Act No. 28 of 2002), including associated infrastructure, structures and earthworks directly related to the extraction of a mineral resource, including activities for which an exemption has been issued in terms of section 106 of the Mineral and Petroleum Resources Development Act, 2002 (Act No. 28 of 2002).	5ha	X	GNR 983 (as amended GNR 544, as amended GNR 327); Activity 21	Not applicable
The clearance of an area of 1 hectare or more, but less than 20 hectares of indigenous vegetation, except where such clearance of indigenous vegetation is required for- i. the undertaking of a linear activity or ii. Maintenance purposes undertaken in accordance with a maintenance management plan.	1ha	X	GNR 327, Activity 27	Not applicable

#### 5. DESCRIPTION OF THE ACTIVITIES TO BE UNDERTAKEN

*(Describe Methodology or technology to be employed, including the type of commodity to be prospected/ mined and for a linear activity, a description of the route of the activity)*

The area extent covers 5 hectares, inclusive of the stockpile area situated on portions 1133 and 1041 of the Farm Hartbeespoort B 410 JQ. The proposed project will be developed in set phases, with each phase having a different combination of activities. For ease of reference, the proposed project has been divided into the following phases:

- **Removal of the topsoil**

The area of the proposed mining site is mostly covered with sand loamy soil, and there won't be the removal of topsoil as the granite stone to be cut are visible within the surface. But if the need arise it shall be done so. This process will be done throughout the mining lifespan and when necessary, mainly starting on the second year of the mining permit.

Extent: About 200m<sup>2</sup> of the overall mining area with about 5 ha of the proposed area.

- **Building and placing of important structures**

Setup is required to establish operating areas. Construction will include preparing the area for the mobile facilities that is the toilet and security? office, establish mobile offices, demarcate the mining area, haulage roads and place the crusher plant, plus erecting mine signage and waste bins, services, etc.

- **Mining of Granite/Syenite**

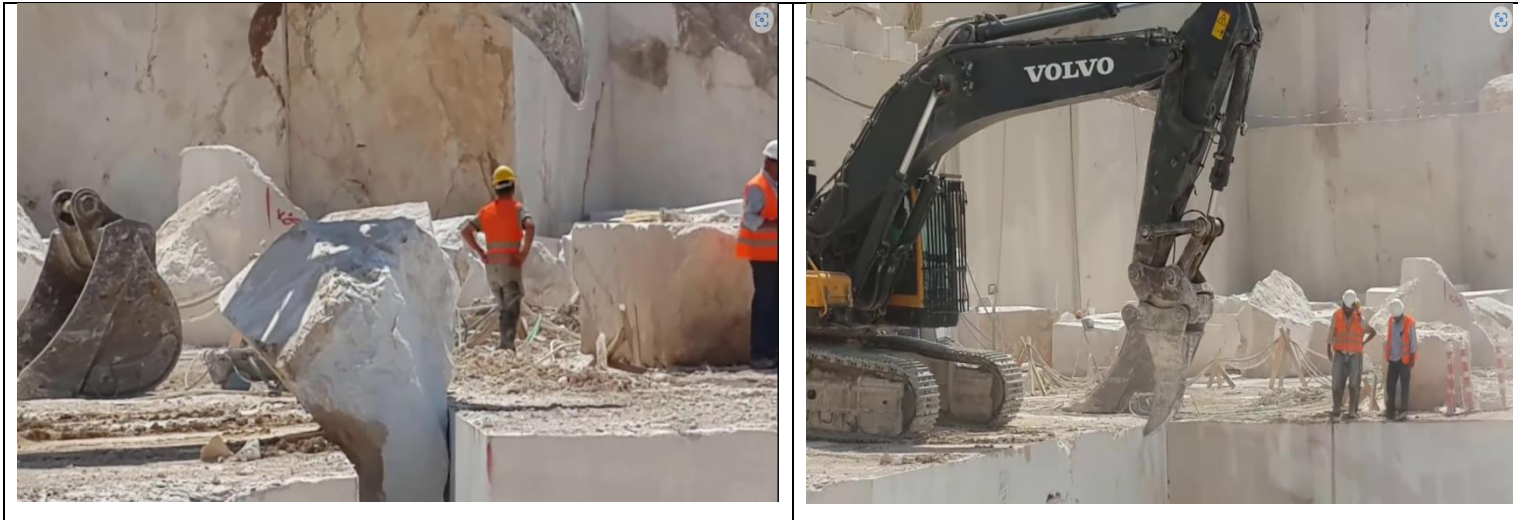
The proposed mining will be done making use of granite cutting machines and there will be an avoidance of making use of blasting as the mineral will be torn in pieces and might not get the desired size. In between mining there will be blasting, and the notices of awareness will also be placed in the area for informing surrounding residents of the blasting times.

- **Mineral processing**

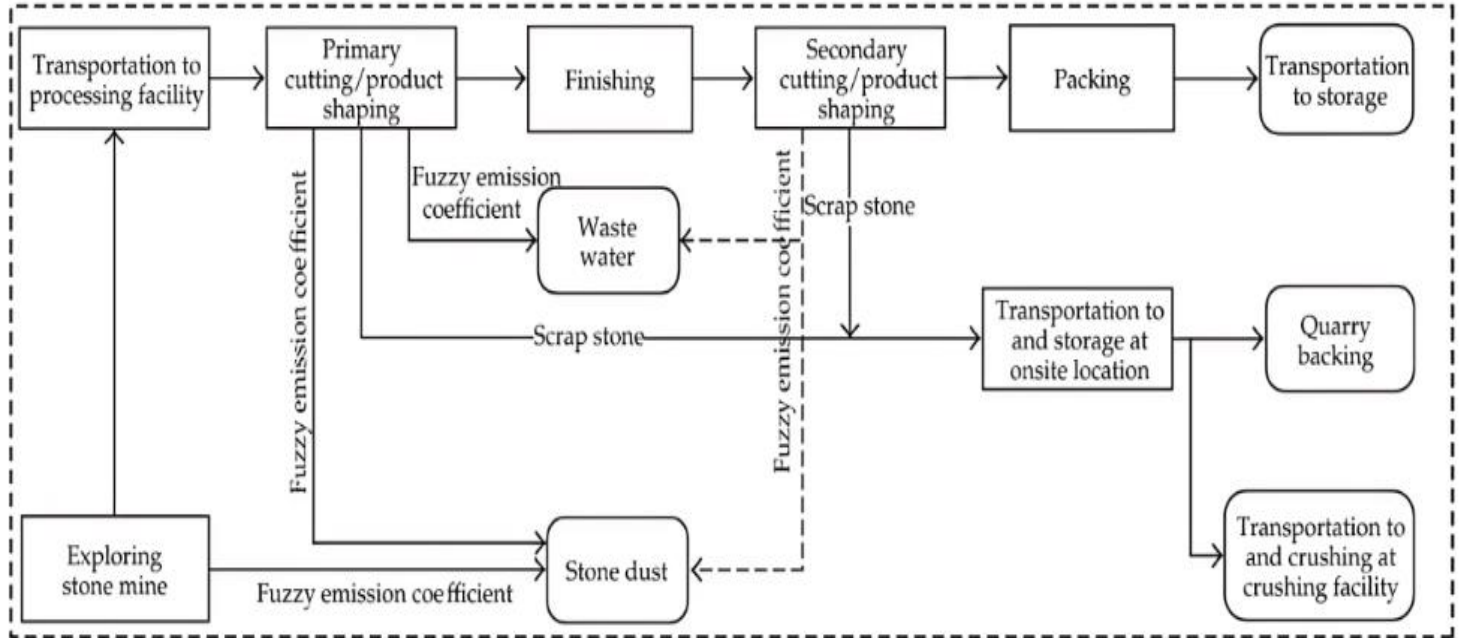
No mineral processing will be done on site but only the hauling of the granite minerals to the market or customers.

- **Rehabilitation**

The proposed rehabilitation method is the continuous rehabilitation to avoid permanent damage to the environment. All the waste material of the stones will be hauled to a waste collection area, with consideration of the local landscape. The waste rock area will be levelled to a resultant desired environment all standard of the overall landscape of the area. A typical granite mine area is illustrated in Figure 4 below. A typical mining process for granite is indicated in Figure 5.



**Figure 4: Typical granite mine showing heights of benches.**



**Figure 5: Typical granite mining process**



## Access Roads

Existing access roads will be used to access the mining site. The road will need to be properly cleared and upgraded. Access to the site is via P 532 Road, joining from the main road R556 and several gravel roads (See Figure 5).



**Figure 5: Access Road to the farm**

## Security and Access Control

A mobile security house and boom gates will be constructed at the site for access control.

## Water Supply

This operation will not require process water supply. There will be minimal instances where water will be required for mining purposes. Water may be required and used for dust suppression of access roads. Dust suppression will be conducted as and when necessary.

## Potable Water Supply

Potable water required for the proposed operation is approximately 40 litres per capita per day (ℓ/capita/day). The water will be used for drinking purposes and will be sourced from local water vendors within Brits and Sonop community. The water will be supplied in cooled water dispensers.

## Ablution Facility

The proposed project site will utilize a chemical portable toilet for ablution needs. A contractual agreement will be signed with the local municipality to collect sewage waste and dispose of it at their nearest wastewater treatment works and other eligible and registered service providers will be used in

this regard. Records of sewage disposal volumes will be kept.

### Office Complex

Project office complex will be established on site and will include the following:

- Vehicles and equipment area
- Ablution facility (chemical mobile toilet)
- Mobile office (mobile container).

## 6. POLICY AND LEGISLATIVE CONTEXT

**Table 4: List of applicable legislation**

<b>APPLICABLE LEGISLATION AND GUIDELINES USED TO COMPILE THE REPORT</b>	<b>REFERENCE WHERE APPLIED</b>	<b>HOW DOES THIS DEVELOPMENT COMPLY WITH AND RESPOND TO THE LEGISLATION AND POLICY CONTEXT?</b>
National Environmental Management Act (Act No. 107 of 1998)	EIA & EMPr	EA has been applied for
National Environmental Management: Biodiversity Act 2004 (Act No. 10 of 2004) (NEM: BA)	Impact assessment of vegetation	Did not trigger the requirement for any NEMBA licence
Minerals and Petroleum Resources Development Act (Act 28 of 2002)	EIA & EMPr	Mining Permit has been lodged
National Water Act (Act No 36 of 1998)	Water use. The Act controls the pollution of water bodies (wetlands, underground water etc.)	Did not trigger the requirement for Water use licence
Occupational Health and Safety Act, 1993(Act No. 85 of 1993)	EMPr	This Act will be enforced during the construction and operational phases. It serves to mitigate any potentially negative impacts the proposed project may have on any of the labour force. Particular reference is made to this

		<p>given that the project entails the handling of a “dangerous good”. The Act controls the exposure of employees and the public to the dangerous and toxic substances or activities.</p>
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## **7. NEED AND DESIRABILITY OF THE PROPOSED ACTIVITIES.**

*(Motivate the need and desirability of the proposed development including the need and desirability of the activity in the context of the preferred location).*

EIA regulations require that the need and desirability of the project be considered in terms of the ecological sustainability, economic justifiability, and social development of the area.

The proposed small-scale mining project will create employment and income generation in the area. Furthermore, if this application is granted, it will reduce unauthorized mining that is currently taking place on site from time to time. The proposed area is covered mostly by the stones which can be mined and have an economical value. Brits' area is also known geologically for its mineral deposits and the area that has been proposed for development has that potential, with benefits of employment creation and community development.

The proposed mineral for the mining activity is very visible and even with no geological report to identify sites and area of potential. It is a given fact why the area proposed is preferred. Brits is a fast developing area including the Northwest Province at large, which increases the need of the granite to be mined. Granite is used in many outdoor and indoor projects; including outdoor projects like bridges, monuments, buildings, paving etc and indoor projects like counter tops, floor etc. Most construction material require the use of granite, hence a need and desire for this project was identified. Peo Enhle will seek to sell its product, first within the local market and then on the export market, depending on market conditions. The proposed mining project is also expected to add value to the mineral resource by benefiting the ore body to a higher grade. Peo Enhle will be transporting the raw material to a facility where the mineral will be further processed. This will create more employment for Northwest Province and the country at large.

### ***i. Motivation for the overall preferred site, activities, and technology alternative***

The motivation for choosing the area was that there is a 100% possibility of the availability of the minerals to be mined and with the results of the area it's safe to say that with the right procedure for mining and selling with larger scale and more responsibility. The area proximity is mostly on-going granite mining. There is a potential for community development and economic increase as in job creation. Mining activity areas include known mineral regions of the country such as chrome and

granite, and this mining project is an important development in the economic sector in the Northwest Province. The proposed location for the mining is in a secluded area within a mist of illegal mining, farming activities and other notable mining companies like Marikana/ Lonmin Mine. The applicant is committed to rehabilitating the whole area and as soon as mining activities commences, concurrent rehabilitation will be undertaken. The rehabilitation will include areas disturbed by illegal mining.

**Preferred site:** Peo Enhle preferred to operate in the area due to clear feasibility of the granite mineral and the mining potential of the site. Currently there's an illegal mining that is taking place on a portion of the farm. Brits is fast developing including the Northwest Province at large, which makes the location of the proposed site more feasible and relevant to the market. Several construction activities in the area from Brits town, Northwest and Gauteng Provinces will be very close to this site hence it is preferred by Peo Enhle. Furthermore, the area is located a few kilometres away from residential areas, and minimum social impact is expected from the project/mine. BGES Pty Ltd undertook ecological and social site screening assessments, and considered the following environmental aspects before could support the proposed site:

#### Environmental

- Water resources
- Flora, fauna and vegetation

#### Social

- Homesteads
- Farming (subsistence gardens)

#### Technical

- Topography
- Access: The site is easily accessible from existing roads used by locals and illegal miners. No new roads therefore need to be developed with no expected further clearance of vegetation.

## 8. Full description of the process followed to reach the proposed preferred alternatives within the site.

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

The identified area was selected by the applicant and proved to have the granite minerals that they are looking for during the site visit by the GIS Specialist and the EAP that was appointed. At the moment of project planning, there was no spatial conflict identified as per the results obtained from the Department of Mineral Resources (DMR). Within the site there are no location alternatives, but probably alternatives to the methods to be implemented as time goes on and if so, the Department will be notified of any change before implementation.

### *i. Details of the development footprint alternatives considered*

With reference to the site plan provided as Appendix ?? and the location of the individual activities on site, details of the alternatives were considered with respect to:

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

The identification and assessment of alternatives is a key component to the success of any EIA process. Essentially, alternatives represent different means of meeting the general purpose and need of the proposed project through the identification of the most appropriate method of development.

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

#### Site location

The mining area is over a Portions 1133 & 1041 of the farm Hartbeespoort B 410JQ in the magisterial district of Brits in the Northwest Province.

The application area has been selected based on historical and active illegal mining operations in the immediate surroundings of the application area along with historical and current data that indicate the economic viability of the granite mining to occur. The area of interest is located on the

western limb of the Bushveld Complex, the Lower Critical and Main Zones rocks of the Rustenburg Layered Suite, which underlie the Mining Permit application area. The Lower Critical Zone comprises layered norite, anorthosite and chromite. The Main Critical Zone comprises layered pyroxenite, gabbro and gabbronorite.

Peo Enhle will mine the Lower Critical and Main Zones rocks of the Rustenburg Layered over a 5 ha area for a minimum period of two years, with an option to renew for three (3) periods, each of which may not exceed one (1) year if the mining programme is not completed.

### **(b) The type of activity to be undertaken**

#### Open cast mining alternative

The activity to be undertaken is the mining of granite by making use of stone cutting and also blasting if need arises. The geology is the primary driver in determining the location and type of mineral for mining. As such, no activity alternative was considered.

### **(c) The design or layout of the activity**

The site layout was determined by considering both spatial and practical mining operation aspects. The proposed layout and temporary nature of the mining activity and associated infrastructure will be implemented with the aim to reduce substantial impacts on the area. The following Table summarises the proposed activity (Table 7):

**Table 5: Proposed Activities**

<b>Phases</b>	<b>Activity</b>	<b>Description of the Activity</b>	<b>Duration</b>
1.	Clearing of vegetation on about 200m <sup>2</sup> per phase.	For the mining to commence, there will be clearing done in the small area where mining will be done in portions	1 to 2 months
2.	Mining of granite rock.	The mining of the proposed mineral in the area.	This will be done continuously.
3.	Rehabilitation Phase.	The rehabilitation will be carried out on a monthly basis in order to avoid scattering of the stones within the site.	This will also be done continuously throughout the mining process

#### **Access road alternative:**

There is an existing road tracks to the site which were used by illegal miners and for other general community activities. Access to the site is via P 532 Road & unnamed road and several gravel roads.

**(d) The technology to be used in the activity**

The method that will be employed is a very basic form of open pit mining. There are four operations that will be involved in the processing of granite. The technology to be adopted will be the use of stone cutting machine, blasting and also the front loaders for the final or finished product. With this technology being adopted it will ensure that the area is rehabilitated, and no stones or granite waste material will be left onsite. All the temporary structures will be removed during the closure phase. Most operations are currently undertaken manually whilst electric operations are slowly being introduced. Peo Enhle will follow manual operation due to its environmental friendliness when compared to the electrical operation.

**(e) The operational aspects of the activity**

The operational aspect of the activity will include:

- Stockpiling of topsoil that will be monitored throughout the mining process to avoid clearance due to erosion
- Stockpiling of the overburden materials, where it is available in substantial amounts.
- Pollution control, including the solid waste management and also to ensure that the containers used for waste collection are being emptied as to the municipal time frames of collections. Water will be used as dust suppressor in control of air pollution.
- Overall, the mining activity will be operational based on the results and demand of the clients on the products and will be managed by continuous rehabilitation.

The optimal operational activities have been proposed, inclusive of the site layout and mobile infrastructure, in consideration of spatial aspects, post-mining appearance, as well as reducing costs and impacts associated with stripping down built infrastructure.

**(f) Option of not implementing the activity**

Mining contributes greatly to local economic stimulation through direct employment, business opportunities, royalties and tax revenues. If the ore reserves on the property are not mined, South Africa and the local communities will forego the benefits of the associated employment, business opportunities, royalties and, continues tax revenue loss due to illegal mining operations that are manifested at the site. There will be no one taking responsibility for rehabilitating the site should Peo Enhle not be granted with a Mining Permit.



## 9. Details of the Public Participation Process Followed

*(Describe the process undertaken to consult interested and affected parties including public meetings and one on one consultation. NB the affected parties must be specifically consulted regardless of whether or not they attended public meetings. (Information to be provided to affected parties must include sufficient detail of the intended operation to enable them to assess what impact the activities will have on them or on the use of their land.)*

The Public Participation Process (PPP) for the proposed project iwa undertaken in accordance with the requirements of the MPRDA, and NEMA in line with the principles of Integrated Environmental Management (IEM). A PPP has been implemented to engage with I&AP's and meet the requirements for Public Participation as stipulated by the relevant legislation.

In terms of the NEMA, I&AP's must be given the opportunity to comment on the proposed project. The Basic Assessment aims to describe the proposed project, the environment in which the project is located and the potential impacts that may result if the project goes ahead. The draft Basic Assessment Report was made available for public comment for a period of 30 days.

### *i. Identifying Regulatory Authorities:*

The relevant authorities for this project were identified from similar projects in the past. The authorities contacted with regards to this project include:

- Department of Mineral Resources (DMR).
- Department of Water and Sanitation (DWS).
- Land Claims Commissioners Office.
- Madibeng Local Municipality
- Bojanala Platinum District Municipality
- Northwest Provincial Government
- Department of Economic Development, Environment, Conservation and Tourism (DEDECT)
- South African Heritage Resource Agency (SAHRA)
- Department of Rural Development and Land Affairs (DRDLA)
- Landowners in the area
- South African National Roads Agency Ltd (SANRAL)
- Northwest Parks Board.

Public participation activities that have been undertaken to inform the public, stakeholders and Organs of State of the application and availability of the draft Basic Assessment Report are listed below.

(Refer to public participation report: *Appendix A*).

*i. Notices*

Posters informing the public of the proposed activities, written in English, were erected and displayed on the nearest areas to the site.

*ii. Adverts*

An advertisement, informing people of the proposed activities and requesting readers to register as I&AP's was placed in the local newspaper(s) on the 20<sup>th</sup> of May 2022.

*iii. Introductory Public Meeting*

A public meeting was held on the 21<sup>st</sup> of May 2022 next to the site to discuss the proposed project and access to the site. Minutes of the meeting and a copy of the agenda are attached within this final Basic Assessment Report (Appendix A: Public Participation Process report).

*iv. Landowner consultation*

The landowner was consulted regarding the proposed mining project. The consultation was done with the Department of Land Reform and the Land Commission.

*v. BAR/EMP Reviewing*

The draft BAR/EMP was subjected to a 30-day public review for two rounds that is from the 5<sup>th</sup> of September to 6<sup>th</sup> of October 2022 and 07 June 2022 to 06 July 2022.

*vi. Summary of issues raised by I&AP's*

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

**Table 6: Issues raised by I&APs**

<b><u>Interested and Affected Parties</u></b> <b><u>List the names of persons consulted in this column, and mark with an X where those who must be consulted were in fact consulted.</u></b>		<b>Date</b> <b>Comments</b> <b>Received</b>	<b>Issues raised</b>	<b>EAPs response to</b> <b>issues as</b> <b>mandated by the</b> <b>applicant</b>	<b>Section and paragraph</b> <b>reference in this report where</b> <b>the issues and or response</b> <b>were incorporated.</b>
<b>AFFECTED PARTIES</b>					
<b>Landowner/s</b>	X		stated on the minutes of the minutes		
<b>Lawful occupier/s of the land</b>	X				
<b>Landowners or lawful occupiers on adjacent properties</b>	X				
<b>Municipal councillor</b>	X				
<b>Municipality</b>	X				
<b>Organs of state (Responsible for infrastructure that may be affected Roads Department, Eskom, Telkom, DWA.</b>	X		Refer to the consultation Report attached Appendix C		
<b>Communities</b>	X				

<b>Department of Land Affairs</b>	X				
<b>Traditional Leaders</b>	X				
<b>Department of Environmental Affairs</b>	X				
<b>Department of Transport</b>	X				
<b>Other Authorities affected:</b>	X				
<b>OTHER AFFECTED PARTIES</b>					
<b>INTERESTED PARTIES</b>					

## 10. Environmental attributes associated with the alternatives

*(The environmental attributes described must include socioeconomic, social, heritage, cultural, geographical, physical and biological aspects)*

### Baseline Environment

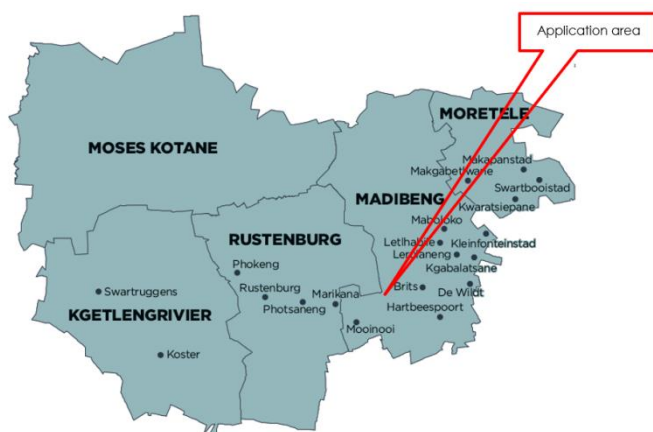
Type of environment affected by the proposed activity.

*(Its current geographical, physical, biological, socioeconomic, and cultural character).*

The following paragraphs describe the baseline environmental conditions of the proposed project.

#### *i. Regional site description*

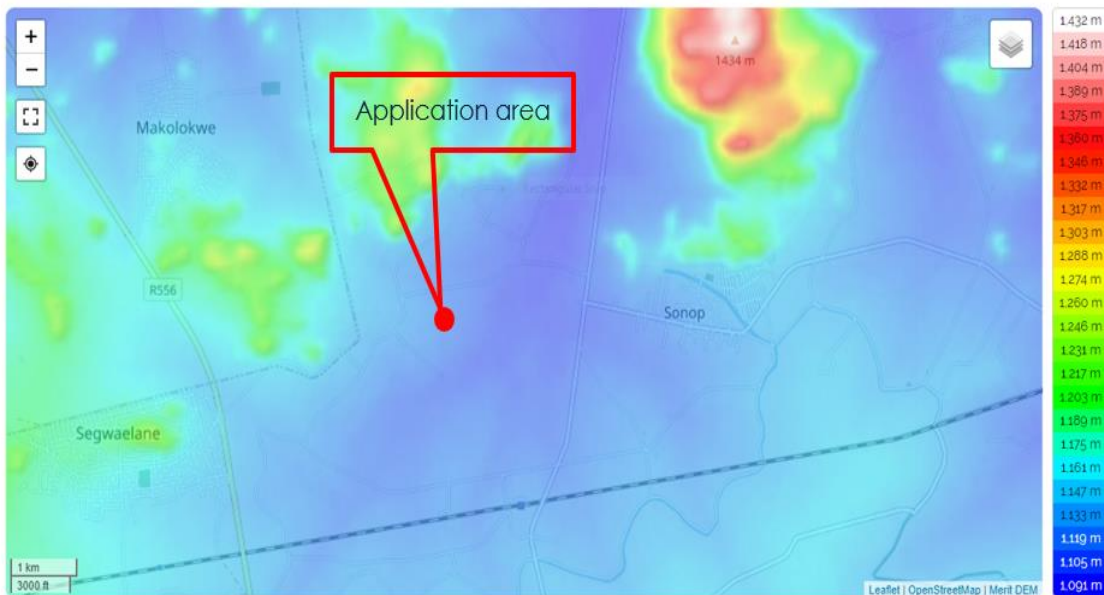
Madibeng Local Municipality is classified as a category B municipality, functioning through the Executive Mayoral System, located within the Bojanala District in the Northwest Province. The seat of local municipality is situated in the town of Brits. The popular tourist area of Hartbeespoort is also located in the municipality (Figure 6). Brits is a town situated in a fertile citrus, vegetable and grain-producing area that is irrigated by the waters of the Hartbeespoort Dam in Northwest Province of South Africa. It is close to the City of Tshwane Metropolitan Municipality in Gauteng, which includes Pretoria. The city also plays an important role in the South African mining industry: 94% of South Africa's platinum comes from the Rustenburg and Brits districts, which together produce more Platinum than any other single area in the world. In addition, there is a large Vanadium mine in the district.



**Figure 6: Map of Northwest\_Madibeng Local Municipality**

## ii. Topography

The topography is generally flat, with small rocky outcrops some due to illegal mining activities located within the boundary of the project site. The elevation ranges from approximately 1 083 meters to 1 163 meters above mean sea level (Figure 7).



**Figure 7: Madibeng Local Municipality, Bojanala Platinum District Municipality, elevation.**

## iii. Geology

The application area is underlined by Pyramid Gabbro-Norite, Rustenburg Layered suite it is situated on the western limb of the Bushveld Complex which represents the world's largest chrome and Platinum depository (Figure 8). The Bushveld Complex consists of the Rustenburg Layered Suite, Rashop Granophyre Suite, Lebowa Granite Suite and the Rooiberg Felsites. Thickness of the Rustenburg Layered Suite, which hosts the chromite seams, range from seven to nine kilometres (Figure 9). The large-scale lateral continuity of the layering forms the basis for a general subdivision and lends itself to mine planning. The Critical Zone, which hosts the Lower Group and Main Group chromite layers underlies the application area and it comprises of layered Platinum Group Metals (PGM) deposit, Rustenburg suite, Granitic, Rooiberg Group etc.

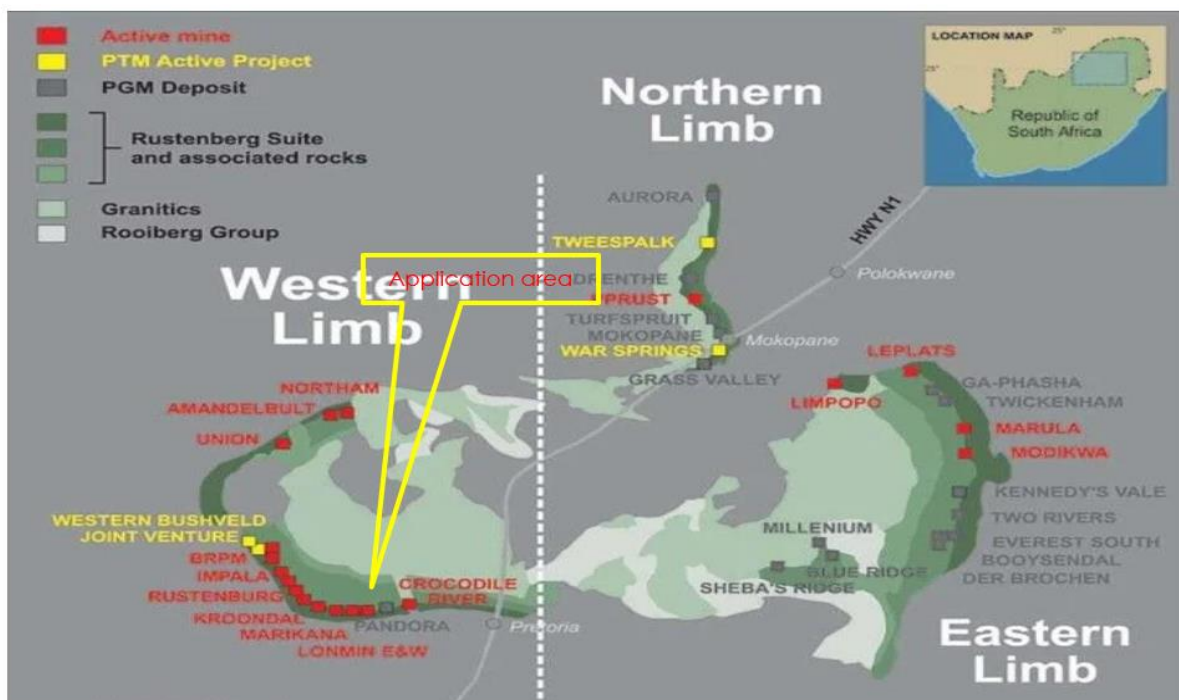


Figure 8: General geology of the Bushveld Complex.

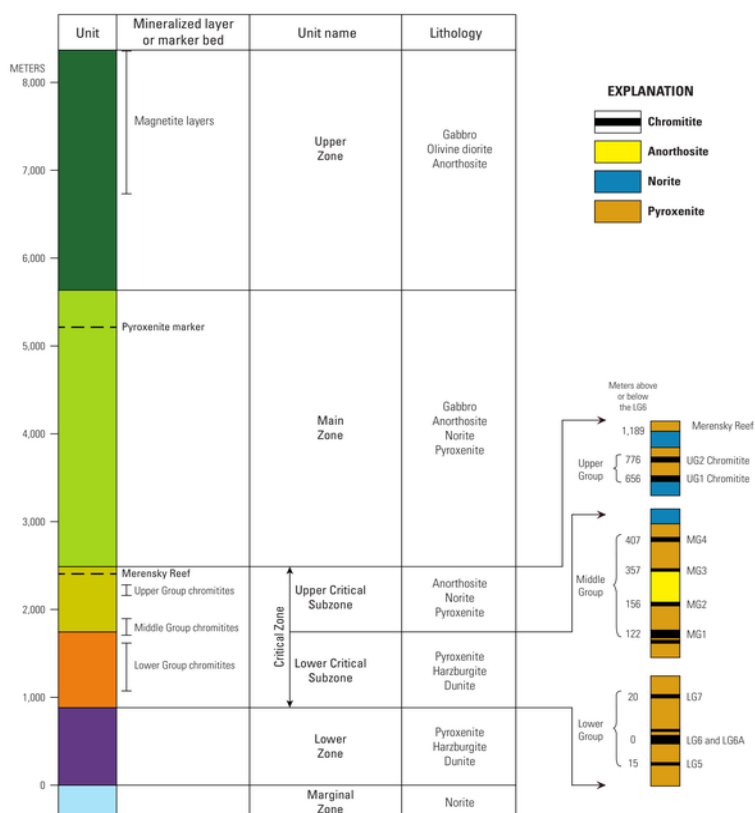


Figure 9: Schematic stratigraphic section illustrating the zones of the Rustenburg Layered Suite.

iv. Biodiversity

The study area does not fall within any National Priority listings such as the South African National Biodiversity Institute (SANBI), National Priority Areas (NPA), and the National list of threatened terrestrial ecosystems for South Africa. A Conservation Plan has not yet been developed for the Northwest Province.

The Mixed Bushveld vegetation type prominent at the site is characterized by plains with layers of scattered, low to medium high, deciduous microphyllous trees and shrubs with a few broad-leaved tree species, and an almost continuous herbaceous layer dominated by grass species. The conservation status of this vegetation type is considered least threatened and the nationally set conservation target is 19%, with 6% statutorily conserved, mostly in the Madikwa Nature Reserve and the Pilanesberg National Park. On Rooderand, it is considered to be flat Savanna with large rocky outcrops/hills which hosts pockets of vegetation associated with the Dwaalboom Thornveld. It is a limited vegetation type, restricted to a few ridges and hills in a vast plain with clay soils.

A number of protected red data and conservation important fauna and floral species occur within the area. These include mammal, bird, reptile and invertebrate species. The near-threatened Natal long-fingered bat and giant bullfrog have been identified in the area surrounding the mine. A number of species have been identified and includes species such as *Aves-Torgos tracheliotos* which is of a conservation concern with very high environmental sensitivity and *Mammalia-Dasymys robertsii* with a medium environmental sensitivity.

The site has a history of extensive farming (over 30% of the area), with some areas in recovery. These areas have now been grouped into the black turf soils habitat type due to extensive similarities and advancement of the recovery. Black turf is characteristically waterlogged during the rainy season but dry in the seasons that do not have rain. Plants in this environment are thus suitably adapted to withstand these extremes. There was a noticeably lower diversity of fauna in the northern section of the farm, which was dominated by black turf savanna.

This vegetation was typified by an open canopy of a *tortilis* (Umbrella Thorn); Acacia species and an abundance of *Dichrostachys cinerea* (Sickle Bush). The under story consisted mainly of grasses: *Aristida bipartita* (Rolling Grass); *Bothriochloa insculpta* (Pinhole Grass); *E. rigidior* (Broad Curly Leaf) and *Panicum maximum* (Guinea Grass) as well as dominant forbs *Asparagus larycinus* (Cluster-leaf asparagus); *Hibiscus trionum* (Bladder Hibiscus); *Nidorella anomala*. Black turf savanna extended up to the river boundary in some areas. The average tree height ranged from 3 to 5m, with a grass



height of less than 1m. The majority of grass species in this vegetation type were sub-climax increase 2 species, which offer moderate to poor grazing potential and are usually indicators of disturbance. These grasses, however; act as effective protection against erosion by covering bare patches of ground (Figure 10).

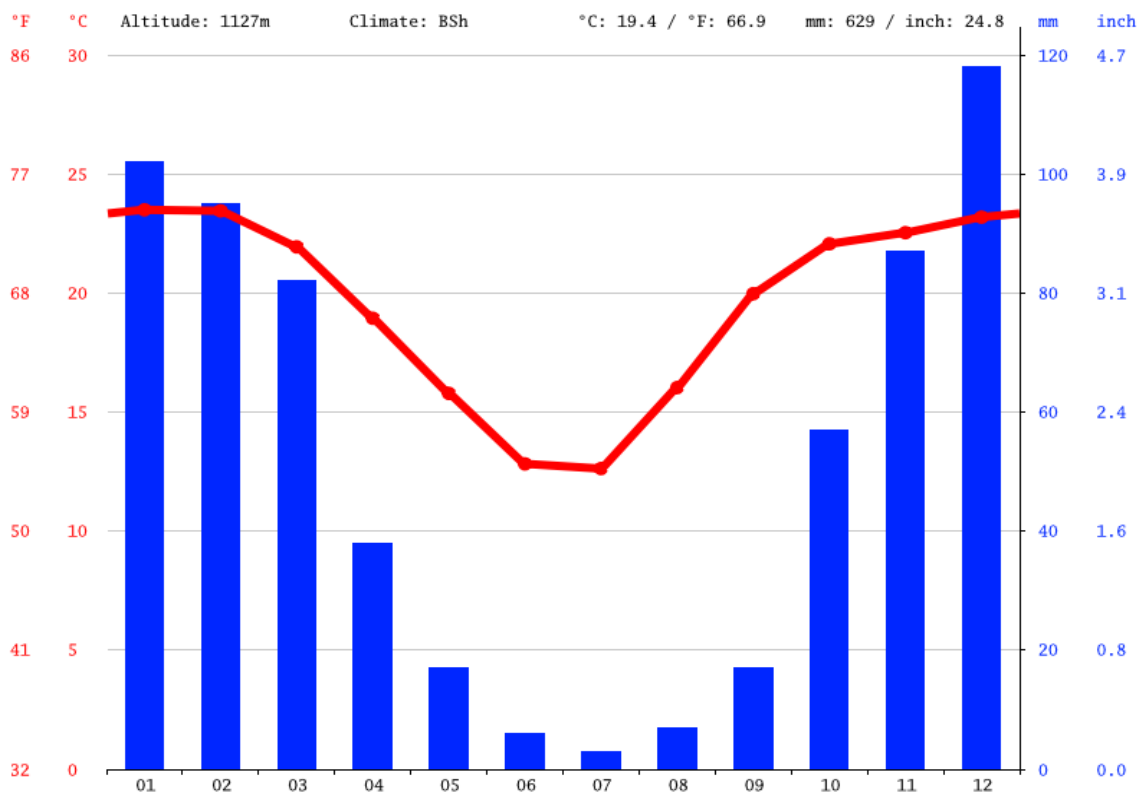


**Figure 10: Current view of the site**

#### *v. Climate*

The climatic regime of the application area experiences summer rainfall, and it is characterized by afternoon thunderstorms. According to the Köppen-Geiger climate classification, the area is classified as hot semi-arid (Prescali, 2018). January is the hottest month at an average temperature of 24.5 °C and June is the coldest month at an average temperature of 12.2 °C. The average annual temperature in Brits is 19.4 °C | 66.9 °F. The mean annual precipitation at the application area is 604 mm per year. Brits's climate is a local steppe climate. There is little rainfall throughout the year. About 629 mm |

24.8 inch of precipitation falls annually. According to Köppen and Geiger, this climate is classified as BSh. Figure 11 summarises the annual climate parameters (reference source).



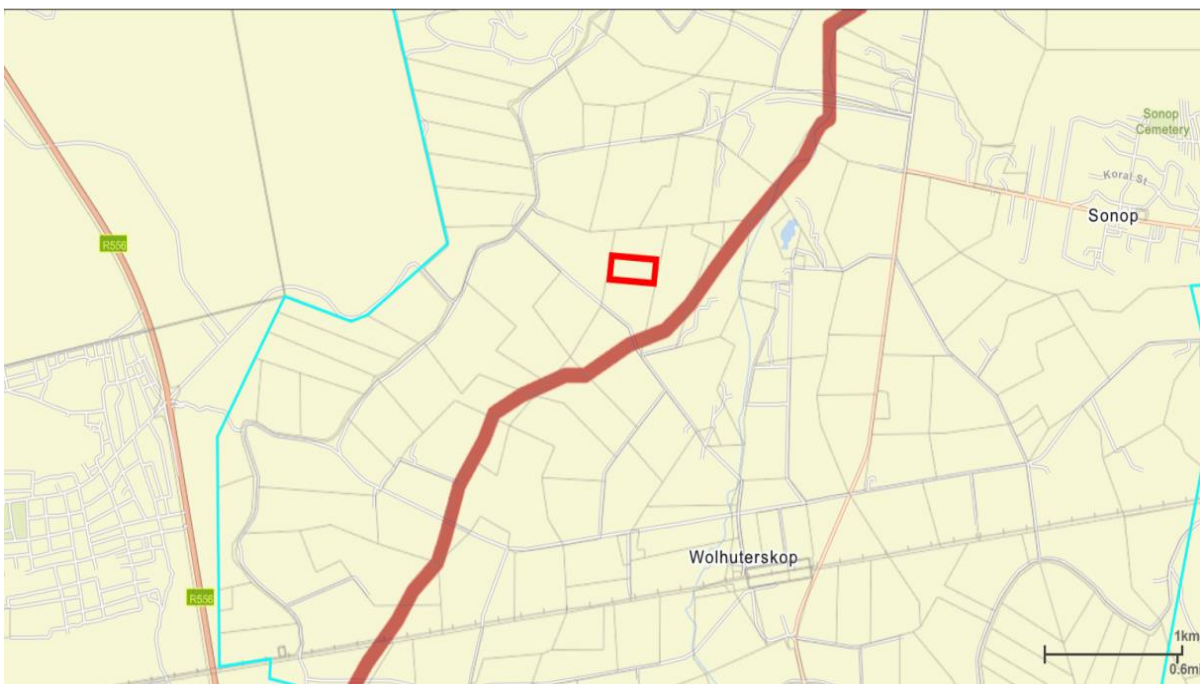
**Figure 11: Climate in Brits and surroundings**

*vi. Air quality*

The air quality around the targeted area is generally acceptable for most individuals consulted?. However, sensitive groups may experience minor to moderate symptoms from long-term exposure. Major sources of air pollution in the immediate vicinity of the proposed project site include emissions from the mines in the area like Lonmin, farming activities, traffic movement and manufacturing industry. All these activities are unlikely to impact on the mine as there are several operations within the area. Communities living around Segwaelane and Sonop may also contribute through domestic fuel burning, biomass burning, and various miscellaneous fugitive dust sources such as agricultural activities, wind erosion of open areas, and vehicle entrainment of dust along unpaved roads. However, the contribution to air quality is negligible since the area is rural and a lot of activities are taking place.

### vii. *Surface Hydrology*

The project area falls within the upper Crocodile River sub-management area that corresponds to the catchment of the Crocodile River upstream of the confluence of the Elands River which includes the major tributaries of the Sterkstroom River, Magalies River, Bloubankspruit, Jukskei River and Hennops River. All runoff from the project area is eventually drained north into the Limpopo River. The project site is located in the west of the secondary catchment A2 (Crocodile) within Quaternary Catchment A24D upstream of Hartbeespoort Dam at the outlet of the catchment.



**Figure 12: Water resources in the Upper Crocodile River, Kareespruit non-perennial river in the area**

### viii. *Physical environment*

The largest threat to the natural vegetation in the area is the uncontrolled illegal mining taking place from time to time, agriculture, human settlement, and the invasion by alien invader plants. Most of the areas have been transformed due to anthropogenic activities and residential informal settlement.

### ix. *Description of specific environmental features and infrastructure on the site*

The application area can be described as located in a brownfield area, where the surrounding area is fertile citrus, vegetable and grain-producing area that is irrigated by the waters of the Hartbeespoort Dam in Northwest Province of South Africa (Figure 13).



*Figure 13: Image depicting the various infrastructures close to the application area mainly agricultural activities (green areas).*

Peo Enhle intends to mine granite from a harbour of illegal mining area, and there is evidence of various excavations that are because of those activities. Surrounding land uses include agriculture, residential areas, ecotourism/hospitality related and community activities such as grazing and subsistence farming. Only the Kareespruit River has been identified within the boundaries of the proposed mining site. Several access road infrastructures are found around the site.

#### **x. Socioeconomic**

The community in the area is living below the poverty line. Madibeng Local Municipality has among the highest unemployment rate of 51%, indicating that approximately one third of the labour force wants to work but cannot find employment opportunities. Most people survive through social grants. The proposed mining operation will create employment opportunities for the locals and improve the economic statuses of the area.

The economy of Madibeng is characterized mainly by tourism, mining and agriculture owing to its location within the major tourism and mining belt of the province, Hartbeespoort Dam and Sun City. Almost half (47, 4%) of the economically active youth (15 – 34 years) in the municipality are unemployed (Reference source).

#### *xi. Cultural and Heritage*

No heritage resources occur within the proposed site (reference source). However, the proposed application area is underlain by igneous rocks of the Rustenburg layered suite of the Bushveld Complex. The BIC is an intrusive igneous body comprising a series of ultramafic-mafic layers and a suite of associated granitoid rocks. As these rocks are Precambrian in age and are of igneous origin, so it is highly unlikely that fossils would be affected by any development of the mine.

#### *xii. Description of the current land uses*

The current land uses on the project site include mine related activity, livestock grazing, crop farming and community activities. The current land uses immediately surrounding the project site include subsistence farming (livestock grazing and crops); formal (villages) and informal (livestock herders and farmers) residential dwellers. Agricultural activities in the Madibeng Local Municipality consist of subsistence crop and livestock farming. Crop farming mainly includes maize, sorghum and sunflowers, with relatively low yields for home consumption and even lower yields for selling. Livestock farming mainly includes cattle and goat farming. Livestock is commonly kept in subdivided communal farms reserved for grazing.

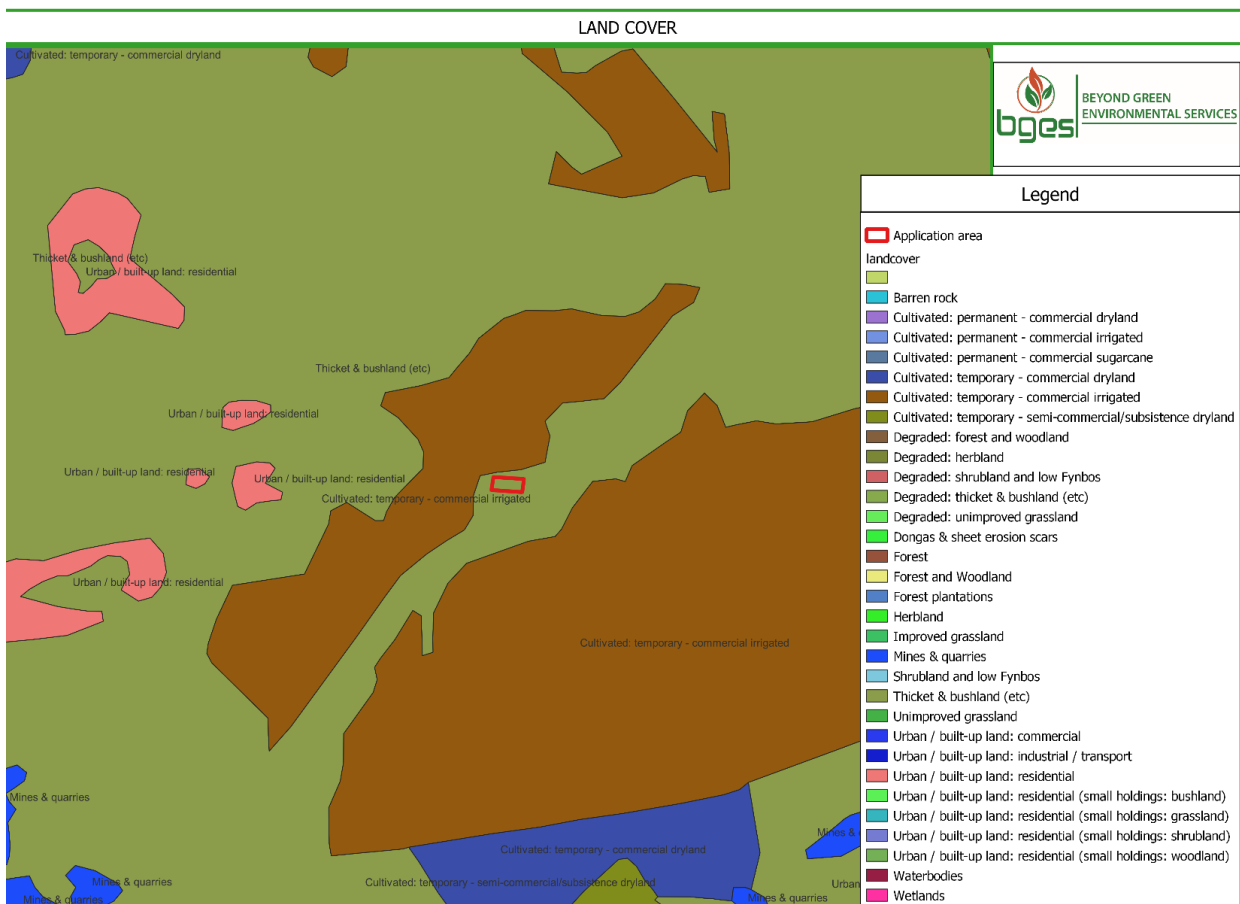
The lack of sufficient water precludes any intensive commercial farming requiring irrigation. Limited crop farming takes place in the project site due to the lack of water and suitable soil types. Crop farming typically takes place close to residences and is at a subsistence level.

In conclusion, land uses on and immediately surrounding the project site comprises of farming, wilderness, livestock grazing, subsistence agriculture and community related activities. Further afield, there are a number of residential areas, recreational facilities and mining operations.

**Environmental and current land use map.**

*(Show all environmental and current land use features):*

The current land use of the area is farming and nearby is also granite mines (Figure 14).



**Figure 14: Land cover map**

## 11. Impacts and risks identified

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

The following Table 7 indicates impacts and risks identified for the proposed project.

**Table 7: Impacts and Risks**

Name of Activity	Potential Impact	Aspects Affected	Mining Phase	Significance if not mitigated	Mitigation type	Significance if mitigated
Mining	Surface Disturbance	Vegetation and Soil	Operational phase	Permanent damage to the land use	Continuous rehabilitation and soil stockpiling	The area will be reinstated to the original land use
	Air Pollution	Humans, vegetation, fauna and Soil	Operational phase	Health issues to receiving aspects	Implementation of dust suppressors with water trucks	Healthy I&Aps and biodiversity.
	Erosion	Soil	Operational Phase	Loss of topsoil	Erosion control	Topsoil preservation
	Loss of vegetation	Soil and vegetation	Operational Phase	Permanent damage to the current land use	Stockpiling and recovering of disturbed areas with the topsoil	Reinstating of the natural environment
Mining area setup	Surface Disturbance	Soil and vegetation	Post-construction phase	Permanent damage to the surface	Design measures and remove all infrastructures	The area will be back to the original land use.

- i. ***Methodology used in determining and ranking the nature, significance, consequences, extent, duration and probability of potential environmental impacts and risks;***

*(Describe how the significance, probability, and duration of the aforesaid identified impacts that were identified through the consultation process was determined in order to decide the extent to which the initial site layout needs revision).*

This section describes the impact assessment methodology of the proposed mining activities. The impacts are rated according to nature, extent, duration, probability of occurring and significance.

#### **(a) Impact assessment methodology**

The impact of a project (or of an activity associated with a project) on the environment may be positive, negative or neutral. Similarly, any impact may be reversible over time or irreversible. These aspects are described when assessing impacts. A scoring method is used to evaluate the extent over which an impact may be expressed, the duration of the impact, the magnitude of the impact and the probability of occurrence of the impact.

**Nature of impact** - this reviews the type of effect that a proposed activity will have on the environment and includes what will be affected and how.

**Extent** - this indicates whether the impact will be local and limited to the immediate area of development (the site); limited to within 5km of the development; or whether the impact may be realized regionally, nationally or even internationally.

**Duration** - this reviews the lifetime of the impact, as being short term (0 - 2 years), medium term (2 - 5 years), long term (5 - 15 years), or where the impacts will cease after the operation of the site, or permanent.

**Intensity** – describes whether the impact is destructive or innocuous, and it is described as either low (where no environmental functions and processes are affected), medium (where the environment continues to function but in a modified manner) or high (where environmental functions and processes are altered in such a way that they temporarily or permanently cease).

**Probability** - this considers the likelihood of the impact occurring and is described as improbable (low likelihood), probable (distinct possibility), highly probable (most likely) or definite (impact will occur regardless of prevention measures).

**Reversibility** - this considers the degree to which the adverse environmental impacts are reversible or irreversible. For example, an impact will be described to have low significance should the impact have little chance of being rectified to correct environmental impacts. On the other hand, an impact such as the nuisance factor caused by noise impacts from wind turbines



can be considered to be highly reversible at the end of the project lifespan. The status of the impacts and degree of confidence with respect to the assessment of the significance must be stated as follows:

**Status of the impact:** A description as to whether the impact will be positive (a benefit), negative (a cost), or neutral.

**Degree of confidence in predictions:** The degree of confidence in the predictions, based on the availability of information and EAP knowledge. This is assessed as high, medium or low. Based on the above considerations, the EAP provided an overall evaluation of the significance of the potential impacts, which is described as follows:

**Low:** Where the impact will not have an influence on the decision nor require to be significantly accommodated in the project design.

**Medium:** Where it could have an influence on the environment which will require modification of the project design or alternative mitigation.

**High:** Where it could have a “no-go” implication for the project unless mitigation or re-design is practically achievable.

The impact significance rating system is presented in the Table 8 below and involves three parts:

**Part A:** Define impact consequence using the three primary impact characteristics of magnitude, spatial scale/population and duration;

**Part B:** Use the matrix to determine a rating for impact consequence based on the definitions identified in Part A; and

**Part C:** Use the matrix to determine the impact significance rating (S), which is a function of the impact consequence rating (from Part B) and the probability of occurrence.

The table below presents a high-level identification of potential impacts associated with the construction, operation and decommissioning of the mining and service road. The significance ratings provided are prior to the implementation of mitigation measures.

**Table 8: Impact Significance Rating**

<b>Part A: Defining consequence in terms of magnitude, duration and spatial scale/population.</b>		
<b>Use these definitions to define the consequence in part B</b>		
Impact Characteristics	Definition	Criteria

<b>Magnitude</b>	<b>Major = -5</b>	Substantial deterioration or harm to receptors; receiving environment has an inherent value to stakeholders; receptors of impact are of conservation importance; or identified threshold often exceeded.
	<b>Moderate = -3</b>	Moderate/measurable deterioration or harm to receptors; receiving environment moderately sensitive; or identified threshold occasionally exceeded.
	<b>Minor = -1</b>	Minor deterioration (nuisance or minor deterioration) or harm to receptors; change to receiving environment not measurable; or identified threshold never exceeded.
	<b>Minor = +1</b>	Minor improvement; change not measurable; or threshold never exceeded.
	<b>Moderate = +3</b>	Moderate improvement; within or better than the threshold; or no observed reaction.
	<b>Major = +5</b>	Substantial improvement; within or better than the threshold; or favorable publicity.
<b>Spatial Scale or Population</b>	<b>Site or local = 2</b>	Site specific or confined to the immediate project area i.e. $\leq 5$ ha.
	<b>Regional = 4</b>	May be defined in various ways, e.g. cadastral, catchment, Topographic i.e. $\leq 50$ ha.
	<b>National = 5</b>	Nationally or beyond i.e. $\geq 100$ ha.
<b>Duration</b>	<b>Short term= 1</b>	Up to 24 months.
	<b>Medium term= 3</b>	24 months to 5 years.
	<b>Long term = 5</b>	Longer than 5 years.
<b>Probability</b>	<b>Definite = 5</b>	Impact will occur regardless of prevention measures i.e., $\geq 90\%$ chances.
	<b>Possible = 3</b>	There is a possibility that the impact will occur, depending on the circumstances i.e., $\geq 50\%$ chances.

	<b>Unlikely = 1</b>	There is low likelihood that the impact will occur i.e., ≤50% chances.
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**PART B: DETERMINING CONSEQUENCE RATING**

**Rate consequence based on definition of magnitude, spatial extent and duration**

		Spatial Scale/ Population			
		Site or Local	Regional	National/ international	
<b>Magnitude</b>					
<b>Minor</b>	<b>Duration</b>	<b>Long term</b>	Medium	Medium	High
		<b>Medium term</b>	Low	Low	Medium
		<b>Short term</b>	Low	Low	Medium
<b>Moderate</b>	<b>Duration</b>	<b>Long term</b>	Medium	High	High
		<b>Medium term</b>	Medium	Medium	High
		<b>Short term</b>	Low	Medium	Medium
<b>Major</b>	<b>Duration</b>	<b>Long term</b>	High	High	High
		<b>Medium term</b>	Medium	Medium	High
		<b>Short term</b>	Medium	Medium	High

**PART C: DETERMINING Environmental Risk (ER)**

*Rate significance based on consequence and probability*

		CONSEQUENCE			
		Low	Medium	High	
<b>PROBABILITY</b> <b>exposure to</b> <b>impacts)</b>	<b>(of</b>	<b>Definite</b>	Medium	Medium	High
		<b>Possible</b>	Low	Medium	High
		<b>Unlikely</b>	Low	Low	Medium

Once the Part B value has been determined, the Environmental Risk (ER) is determined in accordance with the standard risk assessment relationship by multiplying the Consequence and the Probability.

#### 1. Determination of Environmental Risk

$$\text{Environmental Risk} = (\text{Magnitude} + \text{Scale} + \text{Duration}) * \text{Probability}$$

The outcome of the environmental risk assessment will result in a range of scores, ranging from 1 through to 100. These ER scores are then grouped into respective classes as described in the Table 9 below.

**Table 9: Environmental Risk Classes**

Description	Value	Symbol
Low	$\leq 30$	
Medium	$\geq 30; \leq 60$	
High	$> 60$	

The Matrix table is attached

The impact evaluation took into consideration the cumulative effects associated with this proposed granite mining and related site infrastructure which are either developed or in the process of being developed.

Management actions: Where negative impacts are identified, the EAP specified practical mitigation objectives (i.e., ways of avoiding or reducing negative impacts). Where no mitigation is feasible, this was stated, and the reasons given. Where positive impacts are identified, management actions to enhance the benefit were also recommended. The EAP set quantifiable standards for measuring the effectiveness of mitigation and enhancement.

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

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

The proposed mining site is in a vacant area with a lot of disturbances. The comparative impact assessment indicates that opencast mining will have great environmental impacts followed by

residential development and subsistence livestock agriculture. However, if one had to give the scale of that impact measuring between low, medium and high; the impact will be at medium significant and low significant after mitigation measures. The assessment also considered the scale of the operation which is approximately 5ha and the area is already under considerable human interaction. Mining and its associated activities will have the greatest impact on the environment and is the least sustainable. But upon completion of mining and with proper rehabilitation, all the current land uses can be considered for the area. Most of the mining impacts will also be for a very limited time (not more than 5 years overall period if renewals are considered) and occurred in a very small area (5ha). In general, responsible mining and rehabilitation from the start of the operation can mitigate a lot of the residual impacts associated with mining. Mining will also have a great positive economic impact and should be considered a viable land use for the area, especially since the surrounding area has no major sensitive environmental features.

The positive impacts include the following:

- Employment for the community
- Community development in infrastructure
- Proximity of building sand for the community
- **Use of the sand** that is being blown away during windy seasons.

The negative impacts include the following:

- The loss of vegetation
- The loss of the original environment
- Dust from stone cutting
- Noise from the blasting machines
- Loss of peace for habitat.

The assurance has been given to the community that all the negative impacts will not cause permanent damage as it will all be rehabilitated in a continuous mining and rehabilitation method. And if they have any query, they are welcome to send all to the site and their inputs will be addressed accordingly.

### 13. IMPACT RANKING

The following Table summarises the potential impacts associated with the proposed project.

**Table 10: Potential Impacts**

Construction Phase				
Potential Impact	Mitigation	Significance	Probability	Duration
Disturbance and loss of vegetation due to construction activities.	<ul style="list-style-type: none"> <li>Rehabilitation to original natural state after removal of bedrock material is not practically viable.</li> <li>Keep vegetation clearance to a minimum, clearing only those sections that will be mined next in order to mitigate secondary impacts.</li> </ul>	Low Negative Mitigation measures will not make much difference (-)	Definite	Long term
Loss of soil because of clearance of vegetation and overburden.	<ul style="list-style-type: none"> <li>Rehabilitation to original natural state after removal of bedrock material is not practically viable.</li> <li>Keep vegetation clearance to a minimum, clearing only those sections that will be mined next to mitigate secondary impacts.</li> <li>Control storm water runoff from the onset of clearance and construction.</li> </ul>	Low Negative Mitigation measures will not make much difference (-)	Definite	Long term
Spillage of contaminants: Contamination of surface water from fuel spills and leakages	<ul style="list-style-type: none"> <li>Equipment used in the mining process must be adequately maintained, such that during operation they must not spill oil, diesel, fuel or hydraulic fluid.</li> <li>Spills must be cleaned up immediately after occurrence by removing the spills, together</li> </ul>	Medium (-)	Definite	Short term

	<p>with the polluted soil, and disposing thereof at a recognized facility.</p> <ul style="list-style-type: none"> <li>• Oil and chemicals must not be stored on site.</li> </ul>			
Increase of road users and traffic	<ul style="list-style-type: none"> <li>• Enforcement of speed limits to reduce the chances of impact with road users and animals.</li> <li>• Fine for road sign offenders employed by the Mine</li> <li>• Avoid transportation during busy hours of the day (that's 6:00-9:00am and 16:00-18:00pm)</li> <li>• The Mine must not use the southern access road used by the community</li> </ul>	Medium (-)	Definite	Short term
Dust and fumes from mine vehicles/machines and from exposed product stockpiles	<ul style="list-style-type: none"> <li>• The sensitive receptors in this case are such a distance away that the dust deposition resulting from the proposed operation on these receptors are negligible.</li> <li>• According to the Australian NPI, dust generation from material transfer points can be reduced by 50% where water sprays are applied.</li> <li>• Adding wind break can reduce the dust emissions with 30%. Enclosing the operations, the emissions will become insignificant.</li> </ul> <p>The liberation of dust into the atmosphere must be controlled by:</p>	Low Negative	Definite	Short term

	<ul style="list-style-type: none"> <li>• Spraying water and limiting the speed of haul trucks.</li> <li>• Regular maintenance of the access road.</li> <li>• Reducing activities during windy days.</li> <li>• Implementing a speed limit of 30km/h on unpaved surfaces.</li> <li>• Minimizing exposed areas prone to wind erosion.</li> </ul>			
Noise generation from construction machinery.	<ul style="list-style-type: none"> <li>• Silencers on machinery.</li> <li>• Earmuffs for employees and machine operators.</li> </ul>	Medium negative	Definite	Short term
Blasting	<ul style="list-style-type: none"> <li>• Extreme noise generation.</li> <li>• Effects on buildings in the nearest communities.</li> </ul>	Highly negative	High	Short term
Visual impacts from site infrastructure establishment and lighting.	<ul style="list-style-type: none"> <li>• All lights should face the mine side.</li> </ul>	Medium negative.	Definite	Short term
Cumulative impacts associated with the proposed development on the vegetation of the surrounding local areas will come from increased human and livestock activity in the area. Such impacts include an increased demand for firewood, grazing, browsing, water, access to electricity and sanitation, increased distribution of invasive alien plant species, increased dust pollution along the transport route, increased soil erosion along the transport route,	<ul style="list-style-type: none"> <li>• Keep vegetation clearance to a minimum.</li> <li>• Control storm water runoff.</li> <li>• Control soil erosion.</li> <li>• Control alien invasive plants.</li> <li>• Prevent illegal electrical connections from the power supply grid associated with the proposed development.</li> <li>• Control dust pollution without causing sediment runoff into nearby drainage systems.</li> </ul>	Medium Negative	Definite	Short to Long term



increased sedimentation within drainage lines along the transport route and a reduction of ecosystem services.				
Operational Phase				
Potential Impact	Mitigation	Significant	Probability	Duration
Disturbance and loss of vegetation due to operational activities	<ul style="list-style-type: none"> <li>Rehabilitation to original natural state after removal of bedrock material is not practically viable.</li> <li>Keep vegetation clearance to a minimum, clearing only those sections that will be mined next to mitigate secondary impacts.</li> </ul>	Low Negative Mitigation measures will not make much difference	Definite	Long Term
Loss of soil because of clearance of vegetation and overburden	<ul style="list-style-type: none"> <li>Rehabilitation to original natural state after removal of bedrock material is not practically viable</li> <li>Keep vegetation clearance to a minimum, clearing only those sections that will be mined next to mitigate secondary impacts.</li> <li>Control storm water runoff from the onset of clearance and construction.</li> </ul>	Low Negative Mitigation measures will not make much difference	Definite	Long Term
Spillage of contaminants: Contamination of surface water from fuel spills and leakages	<ul style="list-style-type: none"> <li>Equipment used in the mining process must be adequately maintained, such that during operation they must not spill oil, diesel, fuel, or hydraulic fluid.</li> <li>Spills must be cleaned up immediately after occurrence by removing the spills, together with the polluted soil, and</li> </ul>	Medium (-)	Definite	Short term

	<p>disposing thereof at a recognized facility.</p> <ul style="list-style-type: none"> <li>• Oil and chemicals must not be stored on site.</li> </ul>			
Increase of road users and traffic	<ul style="list-style-type: none"> <li>• Enforcement of speed limits to reduce the chances of impact with road users and animals</li> <li>• Fine road sign offenders employed by the Mine</li> <li>• Avoid transportation during busy hours of the day (that's 6:00-9:00am and 16:00-18:00pm)</li> <li>• • The Mine must not use the southern access road used by the community</li> </ul>	Medium (-)	Definite	Short term
Job creation	<ul style="list-style-type: none"> <li>• Prioritise locals on available jobs depending on availability of skills.</li> <li>• Train and transfer skills to locals.</li> </ul>	Medium positive	Definite	Short term
Improved revenue and royals to authorities.	<ul style="list-style-type: none"> <li>• Enhance positive impact.</li> </ul>	Highly positive	Definite	Short term
Increased raw material for granite industry in the province and beyond	<ul style="list-style-type: none"> <li>• Enhance positive impact.</li> <li>• Increase production efficiency following good business management strategies.</li> </ul>	Highly positive	Definite	Short term
Noise generation	<ul style="list-style-type: none"> <li>• Restrict operations to daytime.</li> </ul>	Medium negative	Definite	Short term
Support to local and district municipal development plans for community development.	<ul style="list-style-type: none"> <li>• Engage municipalities on corporate social responsibility plans.</li> </ul>	Medium positive	High	Short term

	<ul style="list-style-type: none"> <li>Consult the IDPs on community development initiatives.</li> </ul>			
Support to small and medium enterprises for business opportunities at the mine.	<ul style="list-style-type: none"> <li>Prioritise locals on available opportunities through community committee.</li> </ul>	Medium positive	High	Short term
Dust and fumes from mine vehicles/ machines and from exposed product stockpiles	<ul style="list-style-type: none"> <li>The sensitive receptors in this case are such a distance away that the dust deposition resulting from the proposed operation on these receptors are negligible.</li> <li>According to the Australian NPI, dust generation from material transfer points can be reduced by 50% where water sprays are applied. Adding wind break can reduce the dust emissions with 30%. Enclosing the operations, the emissions will become insignificant.</li> <li>The liberation of dust into the atmosphere must be controlled by: <ul style="list-style-type: none"> <li>Spraying water and limiting the speed of haul trucks</li> <li>Regular maintenance of the access road</li> <li>Reducing activities during windy days</li> <li>Implementing a speed limit of 30km/h on unpaved surfaces.</li> </ul> </li> <li>Minimizing exposed areas prone to wind erosion</li> </ul>	Low Negative	Definite	Short term

<p>Cumulative impacts associated with the proposed development on the vegetation of the surrounding local areas will come from increased human and livestock activity in the area. Such impacts include an increased demand for firewood, grazing, browsing, water, access to electricity and sanitation, increased distribution of invasive alien plant species, increased dust pollution along the transport route, increased soil erosion along the transport route, increased sedimentation within drainage lines along the transport route and a reduction of ecosystem services.</p>	<ul style="list-style-type: none"> <li>• Keep vegetation clearance to a minimum.</li> <li>• Control storm water runoff.</li> <li>• Control soil erosion.</li> <li>• Control alien invasive plants.</li> <li>• Prevent illegal electrical connections from the power supply grid associated with the proposed development.</li> <li>• Control dust pollution without causing sediment runoff into nearby drainage systems.</li> </ul>	<p>High Negative</p>	<p>Definite</p>	<p>Short to Long term</p>
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**Closure phase**

Potential Impact	Mitigation	Significant	Probability	Duration
<p>Compaction of soil because of development infrastructure.</p>	<ul style="list-style-type: none"> <li>• Rehabilitate soil in places where original topography remains intact to allow vegetation to grow in the substrate again.</li> </ul>	<p>High Negative</p>	<p>Possible</p>	<p>Long term to Permanent</p>
<p>Hole left behind after mining</p>	<ul style="list-style-type: none"> <li>• Reshape the hole to decrease danger to the local human community as well as decrease the negative affect on the surrounding natural environment.</li> </ul>	<p>High Negative</p>	<p>Definite</p>	<p>Long term to Permanent</p>

Disturbance and loss of vegetation due to mining activities	<ul style="list-style-type: none"> <li>• Mitigation measures to restore topography and the original vegetation are impractical.</li> <li>• Revegetate site with indigenous vegetation.</li> <li>• Monitor increase of alien invasive species due to site disturbance.</li> </ul>	Low Negative Mitigation measures will not make much difference	Definite	Permanent
Increase of road users and traffic	<ul style="list-style-type: none"> <li>• Enforcement of speed limits to reduce the chances of impact with road users and animals.</li> <li>• Fine road sign offenders employed by the Mine.</li> <li>• Avoid transportation during busy hours of the day (that's 6:00-9:00am and 16:00-18:00pm)</li> <li>• • The Mine must not use the southern access road used by the community.</li> </ul>	Medium (-)	Definite	Short term
Dust and fumes from mine vehicles/ machines and from exposed product stockpiles	<ul style="list-style-type: none"> <li>• The sensitive receptors in this case are such a distance away that the dust deposition resulting from the proposed operation on these receptors are negligible.</li> <li>• According to the Australian NPI, dust generation from material transfer points can be reduced by 50% where water sprays are applied. Adding wind break can reduce the dust emissions with 30%. Enclosing</li> </ul>	Low Negative	Definite	Short term

	<p>the operations, the emissions will become insignificant.</p> <ul style="list-style-type: none"> <li>• The liberation of dust into the atmosphere must be controlled by:</li> <li>• •Spraying water and limiting the speed of haul trucks</li> <li>• •Regular maintenance of the access road</li> <li>• •Reducing activities during windy days</li> <li>• •Implementing a speed limit of 30km/h on unpaved surfaces</li> <li>• •Minimizing exposed areas prone to wind erosion</li> </ul>			
<p>Cumulative impacts associated with the proposed development on the vegetation of the surrounding local areas will come from increased human and livestock activity in the area. Such impacts include an increased demand for firewood, grazing, browsing, water, access to electricity and sanitation, increased distribution of invasive alien plant species, increased dust pollution along the transport route, increased soil erosion along the transport route, increased sedimentation within drainage lines along the transport route and a reduction of ecosystem services.</p>	<ul style="list-style-type: none"> <li>• Keep vegetation clearance to a minimum.</li> <li>• Control storm water runoff.</li> <li>• Control soil erosion.</li> <li>• Control alien invasive plants.</li> <li>• Prevent illegal electrical connections from the power supply grid associated with the proposed development.</li> </ul>	<p>High, negative</p>	<p>Definite</p>	<p>Short to Long term</p>

Social impacts: Loss of employment on mine closure.	<ul style="list-style-type: none"> <li>• Retrenchment according to human resources principles and SL.</li> </ul>	High negative	Definite	Long term
Noise generation by rehabilitation machinery	<ul style="list-style-type: none"> <li>• Engineering noise control on machinery.</li> <li>• Adequate PPE for employees.</li> </ul>	Medium negative	Definite	Short term
Cessation of revenue and royals to authorities.	<ul style="list-style-type: none"> <li>• Follow SLP and community development procedures on closure.</li> </ul>	Medium negative	Definite	Long term
Reduced granite raw materials for industries	<ul style="list-style-type: none"> <li>• Unavoidable since the mineral is nonrenewable.</li> <li>• Seek new areas for mine development.</li> </ul>	Highly negative	Definite	Long term

#### 14. The possible mitigation measures that could be applied and the level of risk

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

The following mitigation measures will be applied to ensure that the mining activity does abide, as discussed, with the interested and affected parties during consultation.

The possible mitigation measures include the following:

- Revegetation of disturbed areas to avoid loss of vegetation and soils
- Stockpiling of topsoil to remedy soil loss and erosion
- Dust suppression to avoid air pollution
- Waste management to avoid water contamination.

The following Table 11 summarises the mitigation measures

**Table 11: Impacts and Mitigation Measures**

Activity	Potential Impact- Significance	Mitigation measures
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<p>Establishment of haul road/access road to the site;</p> <p>Demarcating mining area, erecting mobile toilet facilities &amp; campsite;</p> <p>Designate stockpile area;</p> <p>Remove alien invasive species.</p>	Disturbance and loss of vegetation due to construction activities	<p>Keep vegetation clearance to a minimum, clearing only those sections that will be mined next to mitigate secondary impacts.</p> <p>Attempts of rehabilitation to original natural state after removal of bedrock material.</p>
	Loss of soil as a result of clearance of vegetation and overburden	<p>Keep vegetation clearance to a minimum, clearing only those sections that will be mined next to mitigate secondary impacts</p> <p>Control storm water runoff from the onset of clearance and construction.</p> <p>Attempts of rehabilitation to original natural state after removal of bedrock material.</p>
	Spillage of contaminants: Contamination of surface water from fuel spills and leakages	<ul style="list-style-type: none"> <li>• Equipment used in the mining process must be adequately maintained, such that during operation they must not spill oil, diesel, fuel or hydraulic fluid.</li> <li>• Spills must be cleaned up immediately after occurrence by removing the spills, together with the polluted soil, and disposing thereof at a recognized facility.</li> </ul> <p>Oil and chemicals must not be stored on site.</p>
	Increase of road users and traffic	<p>Enforcement of speed limits to reduce the chances of impact with road users and animals</p> <ul style="list-style-type: none"> <li>• Fine road sign offenders employed by the Mine</li> <li>• Avoid transportation during busy hours of the day (that's 6:00-9:00am and 16:00-18:00pm)</li> <li>• The Mine must not use the southern access road used by the community</li> </ul>
	Dust and fumes from mine vehicles/machines and from exposed product stockpiles	<p>The sensitive receptors in this case are such a distance away that the Dust Deposition resulting from the proposed operation on these receptors are negligible.</p>

		<p>According to the Australian NPI, dust generation from material transfer points can be reduced by 50% where water sprays are applied. Adding wind break can reduce the dust emissions with 30%. Enclosing the operations, the emissions will become insignificant.</p> <p>The liberation of dust into the atmosphere must be controlled by:</p> <ul style="list-style-type: none"> <li>•Spraying water and limiting the speed of haul trucks</li> <li>•Regular maintenance of the access road</li> <li>•Reducing activities during windy days</li> <li>•Implementing a speed limit of 30km/h on unpaved surfaces</li> <li>•Minimizing exposed areas prone to wind erosion</li> </ul>
	Noise	
	Visual impacts	
Social Impacts	Spontaneous settlement due to perceived employment opportunities Medium (-)	<ul style="list-style-type: none"> <li>• Develop employment and recruitment policy that priorities local recruitment.</li> </ul>
	Increase pressure on social services due to influx of job seekers. Low (-)	<ul style="list-style-type: none"> <li>• Support local government capacity for integrated development planning.</li> <li>• Identify and support community development programmes.</li> </ul>
	Benefits resulting from employment and income opportunities created by the operation.	<ul style="list-style-type: none"> <li>• Support local government in skills development and training initiatives.</li> <li>• Implement employment policy prioritizing local employment.</li> <li>• Work together with the local municipality.</li> </ul>

	Medium (+)	
Operational Phase		
Activity	Potential Impact	Mitigation measures
Extraction and removal of the minerals onsite; Stockpiling of product; Loading of product into transportation	Disturbance and loss of vegetation due to operational activities	Rehabilitation to mimic natural state after removal of bedrock material. Keep vegetation clearance to a minimum, clearing only those sections that will be mined next in order to mitigate secondary impacts.
	Loss of soil as a result of clearance of vegetation and overburden	Rehabilitation to mimic natural state after removal of bedrock material. Keep vegetation clearance to a minimum, clearing only those sections that will be mined next to mitigate secondary impacts. Control storm water runoff from the onset of clearance and construction
	Spillage of contaminants: Contamination of surface water from fuel spills and leakages	<ul style="list-style-type: none"> <li>• Equipment used in the mining process must be adequately maintained, such that during operation they must not spill oil, diesel, fuel or hydraulic fluid.</li> <li>• Spills must be cleaned up immediately after occurrence by removing the spills, together with the polluted soil, and disposing thereof at a recognized facility.</li> </ul> <p>Oil and chemicals must not be stored on site.</p>
	Increase of road users and traffic	<p>Enforcement of speed limits to reduce the chances of impact with road users and animals.</p> <ul style="list-style-type: none"> <li>• Fine road sign offenders employed by the mine.</li> <li>• Avoid transportation during busy hours of the day (that's 6:00-9:00am and 16:00-18:00pm).</li> <li>• The mine must not use the southern access road used by the community.</li> </ul>

	<p>Dust and fumes from mine vehicles/machines and from exposed product stockpiles</p>	<p>The sensitive receptors in this case are such a distance away that the Dust Deposition resulting from the proposed operation on these receptors are negligible.</p> <p>According to the Australian NPI, dust generation from material transfer points can be reduced by 50% where water sprays are applied. Adding wind break can reduce the dust emissions with 30%. Enclosing the operations, the emissions will become insignificant.</p> <p>The liberation of dust into the atmosphere must be controlled by:</p> <ul style="list-style-type: none"> <li>•Spraying water and limiting the speed of haul trucks.</li> <li>•Regular maintenance of the access road.</li> <li>•Reducing activities during windy days.</li> <li>•Implementing a speed limit of 30km/h on unpaved surfaces.</li> <li>•Minimizing exposed areas prone to wind erosion.</li> </ul>
	<p>Cumulative impacts associated with the proposed development on the vegetation of the surrounding local areas will come from increased human and livestock activity in the area. Such impacts include an increased demand for firewood, grazing, browsing, water, access to electricity and sanitation, increased distribution of invasive alien</p>	<p>Keep vegetation clearance to a minimum.</p> <p>Control storm water runoff.</p> <p>Control soil erosion.</p> <p>Control alien invasive plants.</p> <p>Prevent illegal electrical connections from the power supply grid associated with the proposed development.</p> <p>Control dust pollution without causing sediment runoff into nearby drainage systems.</p>

	plant species, increased dust pollution along the transport route, increased soil erosion along the transport route, increased sedimentation within drainage lines along the transport route and a reduction of ecosystem services.	
Social Impacts	Spontaneous settlement due to perceived employment opportunities Low (-)	Develop employment and recruitment policy that prioritizes local recruitment.
	Increase pressure on social services due to influx of job seekers Low (-)	Support local government capacity for integrated development planning. Identify and support community development programmes.
	Benefits resulting from employment and income opportunities created by the operation. Medium (+)	Support local government in skills development and training initiatives. Implement employment policy prioritizing local employment. Working with the councilor of the area to ensure that locals get first preference when it comes to employment opportunities.
<b>Closure phase</b>		
<b>Activity</b>	<b>Potential Environmental Impact</b>	<b>Mitigation measures</b>
Rehabilitation of haul roads;	Compaction of soil as a result of development infrastructure	Rehabilitate soil in places where original topography still remains intact to allow vegetation to grow.

Removal of any site infrastructure; Reseeding/planting of disturbed areas; Eradication of alien invasive species	Hole left behind after mining	Reshape the hole to decrease danger to the local human community as well as decrease the negative affect on the surrounding natural environment.
	Disturbance and loss of vegetation due to mining activities	Revegetate site with indigenous vegetation. Monitor increase of alien invasive species due to site disturbance.
	Spillage of contaminants: Contamination of surface water from fuel spills and leakages	<ul style="list-style-type: none"> <li>• Equipment used in the mining process must be adequately maintained, such that during operation they must not spill oil, diesel, fuel or hydraulic fluid.</li> <li>• Spills must be cleaned up immediately after occurrence by removing the spills, together with the polluted soil, and disposing thereof at a recognized facility. <ul style="list-style-type: none"> <li>• Oil and chemicals must not be stored on site.</li> </ul> </li> </ul>
	Increase of road users and traffic	<p>Enforcement of speed limits to reduce the chances of impact with road users and animals.</p> <ul style="list-style-type: none"> <li>• Fine road sign offenders employed by the mine.</li> <li>• Avoid transportation during busy hours of the day (that's 6:00-9:00am and 16:00-18:00pm).</li> <li>• The mine must not use the southern access road used by the community.</li> </ul>
Dust and fumes from mine vehicles/machines and from exposed product stockpiles	<p>The sensitive receptors in this case are such a distance away that the dust deposition resulting from the proposed operation on these receptors are negligible.</p> <p>According to the Australian NPI, dust generation from material transfer points can be reduced by 50% where water sprays are applied. Adding wind break can reduce the dust emissions with 30%. Enclosing the operations, the emissions will become insignificant.</p>	

		<p>The liberation of dust into the atmosphere must be controlled by:</p> <ul style="list-style-type: none"> <li>•Spraying water and limiting the speed of haul trucks.</li> <li>•Regular maintenance of the access road.</li> <li>•Reducing activities during windy days.</li> <li>•Implementing a speed limit of 30km/h on unpaved surfaces.</li> <li>•Minimizing exposed areas prone to wind erosion.</li> </ul>
	<p>Cumulative impacts associated with the proposed development on the vegetation of the surrounding local areas will come from increased human and livestock activity in the area. Such impacts include an increased demand for firewood, grazing, browsing, water, access to electricity and sanitation, increased distribution of invasive alien plant species, increased dust pollution along the transport route, increased soil erosion along the transport route, increased sedimentation within drainage lines along the transport route and a reduction of ecosystem services.</p>	<p>Keep vegetation clearance to a minimum.</p> <p>Control storm water runoff.</p> <p>Control soil erosion.</p> <p>Control alien invasive plants.</p> <p>Prevent illegal electrical connections from the power supply grid associated with the proposed development.</p>

## **15. Motivation where no alternative sites were considered.**

The area of interest is situated not far from other mines and on the outskirts of Rustenburg mining different minerals and most are established and long-term mines. There is no alternate area that will be considered for this project and if it arises the Department will be alerted in amendment of this existing application.

### **Statement motivating the alternative development location within the overall site.**

#### **(Provide a statement motivating the final site layout that is proposed)**

The site layout will include the implementation of temporal structures that will be removed during the rehabilitation phase. Beside that there won't be any changes in the environment.

The final site layout/design was preferred due to adequate reserves for the proposed mining period. Also, the site is on a low steep gradient thus reducing the risk of erosion under normal non-flood conditions. The eradication of alien invasive species will be an added advantage for the area during site clearance. The removal of alien invasive species around the mining area and office sites will add to the improvement of this.

#### **i) Full description of the process undertaken to identify, assess and rank the impacts and risks the activity will impose on the preferred site.**

*(In respect of the final site layout plan) through the life of the activity. (including (i) a description of all environmental issues and risks that were identified during the environmental impact assessment process and (ii) an assessment of the significance of each issue and risk and an indication of the extent to which the issue and risk could be avoided or addressed by the adoption of mitigation measures).*

The area of interest is mostly covered by grass, vegetation and granite stones; so it makes it difficult to sustain any form of agriculture beside the animal grazing farming. The methodology implemented in impacts identification was the one implemented previously in granite mining reports compiled and the existing mining results. Generally, the proposed mining of the above-mentioned minerals but with the proposed method of mining will minimize the damage that is anticipated. It is the responsibility of the



applicant to ensure that no environmental degradation will result from mining by implementation of mitigation measures and ensuring that the negative impacts are either avoided or reversed. The ranking of impacts is as it follows:

- Impacts that can be avoided

On avoidable impacts, the focus is more on fire management and storm water management. Fire management will be to ensure that fire in the mining site is prohibited.

Storm water management will be to ensure that there is stockpiling of the topsoil from the early stage of the activity and also ensuring that where there is blasting or cutting of granite there is limited movement of people. This process will be ongoing till the closure of the mine and also after closure there will be once a year inspection to ensure that the revegetation is happening as anticipated.

- Unavoidable impacts

Considering unavoidable impacts, the focus is more on impacts that forms part of the activity and cannot be avoided. Those impacts can either be remedied or rehabilitated to ensure restoration of the environment during and after closure. These unavoidable impacts include

- loss of vegetation on targeted mining and infrastructure areas.
- Loss of vegetation and soil on tracks for the entry into the mining site
- loss of habitation for natural fauna and flora on affected areas
- topography impairment due to digging up of granite rock
- change in geology due to mining out of granite rock
- noise generation from blasting.

There will implementation of continuous rehabilitation to avoid permanent damage to the environment. These unavoidable impacts can be ranked as high risk but manageable through the concept of sustainable development. The impacts will be ranked from high risk to low risk with employment of relevant mitigation measures on the day-to-day basis of the mining project.

High risk impacts includes:

- Contamination of the soil from use of hydrocarbons onsite
- Removal of vegetation
- Loss of animal habitats
- Loss of current environmental structure

Low risk and avoidable impacts include:

- Veldfires

## 16. Assessment of each identified potentially significant impact and risk

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

The following table 12 summarises impacts before and after mitigation.

**Table 12: Impacts before and after mitigation**

NAME OF ACTIVITY	POTENTIAL IMPACT	ASPECTS AFFECTED	PHASE	SIGNIFICANCE if not mitigated	MITIGATION TYPE	SIGNIFICANCE if mitigated
Granite Mining	dust, noise, fly rock, surface disturbance	Geology Topography	construction, operational,	Medium (-)	slopping, and rock clearance	Low significance
Blasting	Dust, Noise and pollution	Community and surface disturbance	Operational	Medium (-)	Notice and warnings and awareness. Blast only as and when necessary. Engage a professional blaster. Blast during low impact hours of the daytime.	Low significance

					Use environmentally friendly explosives. Report blasting procedure on each blast. Measure noise and vibration at receptor points of monitoring.	
Discard dumps	Noise and surface disturbance	Land surface and community	Construction? ?	Medium (-)	Slopping and waste removal	Low significance
Transport into and out of mine site	Dust from movement along unpaved roads.	Surface Disturbance??	Operational	Damage to current land use	Dust suppression Speed limit implementation	??
	Noise generation from moving vehicles and machinery.	People Plants Animals	Operational	Medium negative	Noise silencers Ear muffs for operators	Low significance
Establishment of haul road/access road to the site. Demarcating mining area, erecting toilet facilities & campsite,	Disturbance and loss of vegetation due to construction activities	Fauna and flora habitat	Construction and operational	Medium (-)	Rehabilitation to mimic natural state after removal of bedrock material. Keep vegetation clearance to a minimum, clearing only those sections that will be mined next in order to mitigate secondary impacts.	Low significance

Designate stockpile area; Remove alien invasive species. Extraction	Loss of soil as a result of clearance of vegetation and overburden.	Habitat	Construction	Medium (-)	Rehabilitation to mimic natural state after removal of bedrock .  Keep vegetation clearance to a minimum, clearing only those sections that will be mined next to mitigate secondary impacts  Control storm water runoff from the onset of clearance and construction.	Low significance
	Spillage of contaminants: Contamination of surface water from fuel spills and leakages	Water/soil pollution	Construction / operation	Medium (-)	<ul style="list-style-type: none"> <li>• Equipment used in the mining process must be adequately maintained, such that during operation they must not spill oil, diesel, fuel or hydraulic fluid.</li> <li>• Spills must be cleaned up immediately after occurrence by removing the spills, together with the polluted soil, and disposing thereof at a recognized facility. Oil and chemicals must not be stored on site.</li> </ul>	Medium significance
	Increase of road users and traffic	Public infrastructure and safety	Construction/ Operational/ Decommissioning	Medium (-)	Enforcement of speed limits to reduce the chances of impact with road users and animals  <ul style="list-style-type: none"> <li>• Fine road sign offenders employed by the mine</li> </ul>	Medium significance

					<ul style="list-style-type: none"> <li>• Avoid transportation during busy hours of the day (that's 6:00-9:00am and 16:00-18:00pm).</li> <li>• The mine must not use the southern access road used by the community.</li> </ul>	
	Dust and fumes from mine vehicles/machines and from exposed product stockpiles	Water resources, soil and ecosystem environment	Construction/operation	Low (-)	<p>The sensitive receptors in this case are such a distance away that the dust deposition resulting from the proposed operation on these receptors are negligible.</p> <p>According to the Australian NPI, dust generation from material transfer points can be reduced by 50% where water sprays are applied. Adding wind break can reduce the dust emissions with 30%. Enclosing the operations, the emissions will become insignificant.</p> <p>The liberation of dust into the atmosphere must be controlled by:</p> <ul style="list-style-type: none"> <li>•Spraying water and limiting the speed of haul trucks</li> <li>•Regular maintenance of the access road</li> </ul>	Low significance

					<ul style="list-style-type: none"> <li>•Reducing activities during windy days</li> <li>•Implementing a speed limit of 30km/h on unpaved surfaces</li> <li>•Minimizing exposed areas prone to wind erosion</li> </ul>	
	<p>Cumulative impacts associated with the proposed development on the vegetation of the surrounding local areas will come from increased human and livestock activity in the area. Such impacts include an increased demand for firewood, grazing, browsing, water, access to electricity and sanitation, increased distribution of invasive alien plant species, increased dust pollution along the transport route, increased soil erosion along the transport route,</p>	Surface water	Operation	Medium (-)	<p>Keep vegetation clearance to a minimum. Control storm water runoff. Control soil erosion. Control alien invasive plants.</p> <p>Control dust pollution without causing sediment runoff into nearby drainage systems.</p>	Medium significance

	increased sedimentation within drainage lines along the transport route and a reduction of ecosystem services.					
	Benefits resulting from employment and income opportunities, created by the operation	Surrounding community	Construction/ Operational	Low (+)	Hire locals and support local government in skills development and training initiatives	Medium significance
<b>NAME OF ACTIVITY</b>	<b>POTENTIAL IMPACT</b>	<b>ASPECTS AFFECTED</b>	<b>PHASE</b>	<b>SIGNIFICANCE</b>	<b>MITIGATION TYPE</b>	<b>SIGNIFICANCE</b>
Decommissioning of roads; Removal of office structures and any site infrastructure;	Compaction of soil because of development infrastructure	Ecosystem	Rehabilitation	Medium (-)	Rehabilitate soil in places where original topography remains intact to allow vegetation to grow	Low significance
Reseeding/planting of disturbed areas	Hole left behind after mining	Surrounding community and habitat	Rehabilitation	Medium (-)	Reshape the hole to decrease danger to the local human community as well as decrease the negative affect on the surrounding natural environment.	Low significance



Disturbance and loss of vegetation due to mining activities	Ecosystem environment	Rehabilitation	Medium (-)	Re-vegetate site with indigenous vegetation. Monitor increase of alien invasive species due to site disturbance.	Low significance
Spillage of contaminants: Contamination of surface water from fuel spills and leakages	Surrounding community	Rehabilitation	High (-)	<ul style="list-style-type: none"> <li>• Equipment used in the mining process must be adequately maintained, such that during operation they must not spill oil, diesel, fuel or hydraulic fluid.</li> <li>• Spills must be cleaned up immediately after occurrence by removing the spills, together with the polluted soil, and disposing thereof at a recognized facility. Oil and chemicals must not be stored on site.</li> </ul>	??
Increase of road users and traffic	Surrounding community	Rehabilitation	High (-)	<p>Enforcement of speed limits to reduce the chances of impact with road users and animals</p> <ul style="list-style-type: none"> <li>• Fine road sign offenders employed by the mine</li> <li>• Avoid transportation during busy hours of the day (that's 6:00-9:00am and 16:00-18:00pm)</li> </ul>	High significance

					<ul style="list-style-type: none"> <li>• The mine must not use the southern access road used by the community</li> </ul>	
	<p>Cumulative impacts associated with the proposed development on the vegetation of the surrounding local areas will come from increased human and livestock activity in the area. Such impacts include an increased demand for firewood, grazing, browsing, water, access to electricity and sanitation, increased distribution of invasive alien plant species, increased dust pollution along the transport route, increased soil erosion along the transport route, increased sedimentation within drainage lines along the transport route and a</p>	Surrounding community	Rehabilitation	High (-)	<p>The sensitive receptors in this case are such a distance away that the Dust Deposition resulting from the proposed operation on these receptors are negligible.</p> <p>According to the Australian NPI, dust generation from material transfer points can be reduced by 50% where water sprays are applied. Adding wind break can reduce the dust emissions with 30%. Enclosing the operations, the emissions will become insignificant.</p> <p>The liberation of dust into the atmosphere must be controlled by:</p> <ul style="list-style-type: none"> <li>•Spraying water and limiting the speed of haul trucks</li> <li>•Regular maintenance of the access road</li> <li>•Reducing activities during windy days</li> <li>•Implementing a speed limit of 30km/h on unpaved surfaces</li> </ul>	Low significance

	reduction of ecosystem services.				•Minimizing exposed areas prone to wind erosion	
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The content on tables in sections 13, 14 and 16 are the same in words and phrases. Changing phrases may improve interest in the reader than to read exactly the same. Maybe change phrases, mitigation measures, activity, atc just to make them a bit different.

### 17. Summary of specialist reports

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

**Table 13: Summary of Specialist Reports**

<b>LIST OF STUDIES UNDERTAKEN</b>	<b>RECOMMENDATIONS OF SPECIALIST REPORTS</b>	<b>SPECIALIST RECOMMENDATIONS THAT HAVE BEEN INCLUDED IN THE EIA REPORT (Mark with an X where applicable)</b>	<b>REFERENCE TO APPLICABLE SECTION OF REPORT WHERE SPECIALIST RECOMMENDATIONS HAVE BEEN INCLUDED.</b>
None	The area is quite disturbed, illegal mining has manifested the area.		

Desktop study and ground-truthing was used for the assessment. Various information was used to collate relevant facts about the area (see reference list in section...).

## 18. Environmental impact statement

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

The project will not pose any permanent damage to the environment and the extent on which the application is covering is very minimal, less than 5ha. Continuous rehabilitation of disturbed areas and monitoring of environmental aspects will be done throughout the mining project to ensure that the damage remain minimal.

After the environmental assessment was undertaken, most activities triggered by the mining have shown to be medium to minor significance impact. However, once mitigation measures are applied, the impact ranged from minor to insignificant impact. Key findings of the environmental impact assessment include:

- The significance of potential environmental impacts can be reduced to insignificant with implementation of mitigation measures and monitoring.
- Likewise, potential impacts on the socioeconomic environment and livelihoods can be mitigated from minor medium. This means locals will get preference and the method of recruitment would improve
- Cumulative noise and landscape impacts are rated with insignificance after mitigation.

## 19. Final Site Map

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

The following Figure 15 presents the final site plan for the proposed granite mining activities for Peo Enhle Projects.

AN CONTEMPLATED IN REGULATION 2.2 OF THE MPRDA, 2002 SHOWING THE LAND AND PROSPECTING AREA TO WHICH THE APPLICATION RELATES

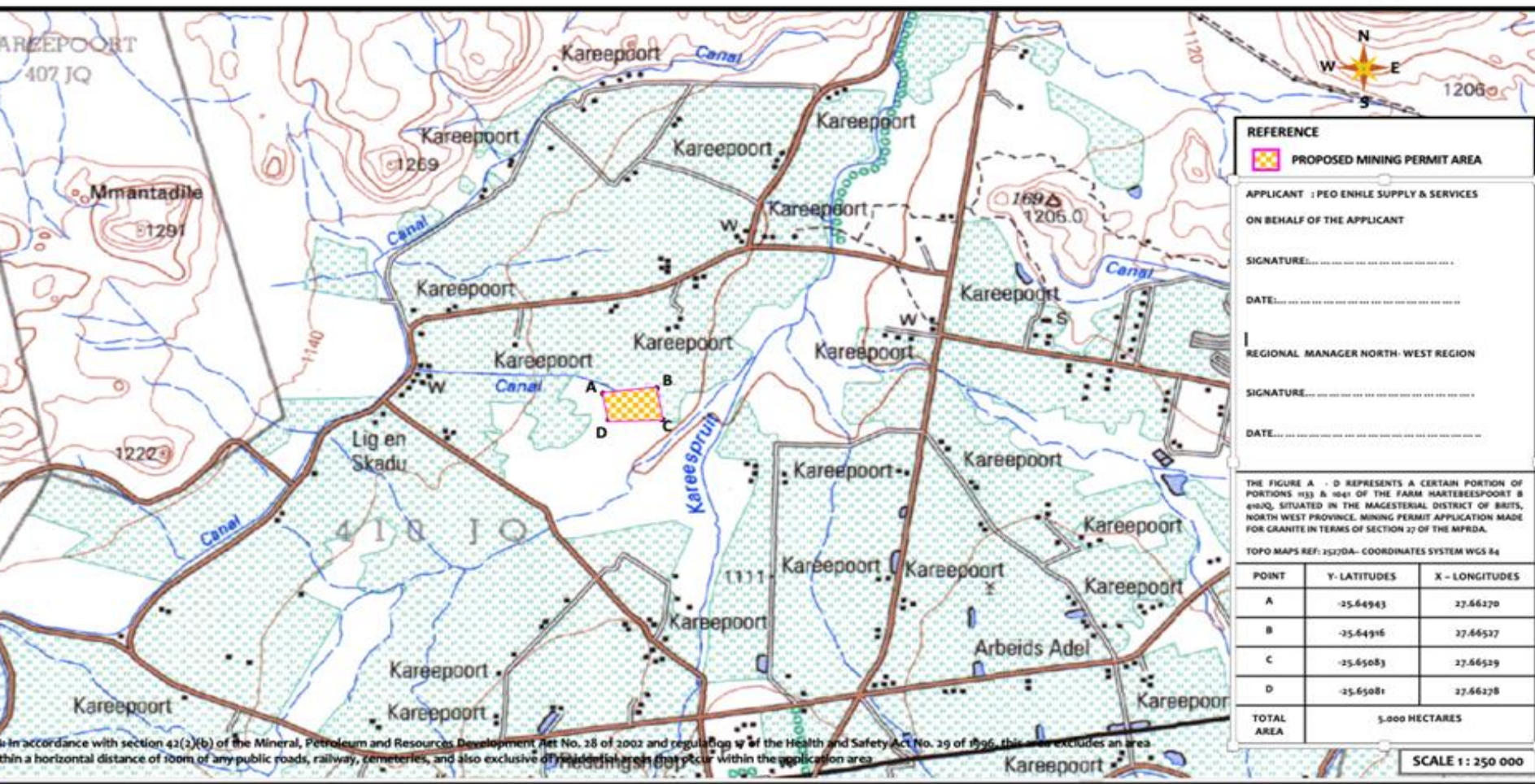


Figure 15: Final Site map



## **20. Summary of the positive and negative impacts and risks of the proposed activity and identified alternatives**

The summary of negative impacts associated with the proposed activity that should be avoided and/or mitigated include the following:

- Loss of vegetation on disturbed areas
- Disturbance of natural habitats
- Loss of topsoil
- Visual impacts
- Noise generation
- Dust generation
- Introduction of invasive alien species
- Increased community expectations.

A summary of the positive impacts that should be enhanced include the following:

- Job creation
- Improved community development
- Support to municipal development plans
- Generation of granite raw material for local industries
- Revenue and royals for authorities
- Management of existing invasive alien species
- Rehabilitation of already disturbed areas by illegal miners.

The impacts that can be avoided should be avoided and those that cannot be avoided should be mitigated in order to reduce further environmental damage. The avoidable impacts include the following

- veld fires
- Soil contamination by hydrocarbons
- Influx of job seekers.

Unavoidable impacts that may not be reversible include:

- Loss of natural geology
- Loss of original topography.



## **21. Proposed impact management objectives and the impact management outcomes for inclusion in the EMPr**

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

Impact Management Objectives:

- To ensure minimal damage to the environment.
- To leave the site in a safe state for humans and animals.
- To ensure that surface water and underground water are not affected by the mining activity.
- To ensure that identified features and infrastructures are left intact even after the mining have ceased.
- To promote indigenous vegetation growth suitable for animals grazing over the area that will be disturbed by mining.

The EMPr addresses the environmental impacts associated with the project during Construction, Operation, Decommissioning and Post Closure Phases of the proposed project.

The objectives of the EMPr will be to provide detailed information that will advise the planning design of Peo Enhle mining activities in order to avoid and/or reduce impacts that may be detrimental to the environment. The following environmental management objectives are recommended for the proposed mining development and associated infrastructure:

- It is recommended that no activities be allowed in the study area that may have any negative impacts on the drainage line ecosystems adjacent to the study area.
- A small number of invasive alien plant species were recorded within the study area. It is recommended that these species be controlled as soon as possible.

- Development planning must restrict the area of impact to a minimum and designated area only.
- Monitor and prevent contamination by hydrocarbons and undertake appropriate remedial actions.
- Limit the visual and noise impact on receptors.
- Avoid impact on possible heritage finds.
- Promote health and safety of workers.
- Limit dust and other emissions within allowable limits.
- Manage soils to prevent erosion.

## **22. Aspects for inclusion as conditions of Authorization**

Any aspects which must be made conditions of the Environmental Authorization

- On-going consultation with the public to monitor and verify any noise complaints.
- Monitoring shall be ensured so that the following results are always attained:
  - No soil erosion is permitted to occur.
  - No discharge of contaminated water is permitted into any water course.
  - Concurrent rehabilitation is facilitated and not jeopardised.
  - Removal of alien vegetation,
  - Rehabilitation shall ensure that surfaces are smooth and free-draining, and that no forms remain.
  - Only approved access routes are to be used.
  - Chemical toilet(s) must be erected; the facilities must not cause any water pollution or health hazard.
  - No domestic or any other solid waste shall be disposed of on site.
  - All waste removed from the site must be disposed of at a permitted landfill site.
  - Vegetation shall not be harmed as far as possible.
  - Vehicles shall as far as possibly stick to established access routes, so as to minimize the effects to surrounding vegetation.
  - The Duty of Care and remediation of environmental damage contained in Section 28 of the National Environmental Act (Act No.107 of 1998) must be complied with.
  - All requirements of the Local Authority shall be complied with.
  - All requirements of the Mine Health and Safety Act (no. 29 of 1996) shall be complied with.
  - Staff operating heavy machinery must wear proper PPE and the applicant must ensure that the requirements of the OHS Act number?? are met.

- All requirements shall be complied with relating to health matters.
- No landowner or authority may request the holder to carry out any activity that is not authorized in terms, conflict therewith.

### **23. Description of any assumptions, uncertainties, and gaps in knowledge**

*(Which relate to the assessment and mitigation measures proposed)*

There are no uncertainties now but if it arises that there is a need for the specialist to investigate some of the activities then it will be taken into consideration.

The position of the components of the proposed development was obtained from data provided by the client. The impacts and recommendations described in the Impact Assessment Report apply specifically to these data. Given the size of the study area and the environmental status of the area, no specialist studies have been undertaken.

The social impact component of this report relied on the report compiled by the Madibeng Local Municipality (Integrated Development Plan). It is assumed that the information contained in that report was correct.

### **24. Reasoned opinion as to whether the proposed activity should or should not be authorized**

*Reasons why the activity should be authorized.*

This proposed activity is a mining of granite making use of granite cutting machines and also if necessary, blasting will be done but not frequently. The mining activity will implement a small portion of space for mining and rehabilitation activities; in avoidance of overall 5ha environmental damage at once.

Granite use has also been one of the high demand minerals with good market that will ensure economic and social development for community and government. The area has good grade granite that is needed in both local and outside markets. And therefore, all the listed activities should be authorized in order to have access to the desired mineral.

Therefore, this activity should be authorized.

Based on the detailed environmental impact assessment undertaken and the proposed management measures proposed, the EAP is of the opinion that the proposed granite mining project can be granted Environmental Authorization (EA), if Peo Enhle adheres to the management and mitigation measures proposed. Environmental Authorization should include those conditions listed in Section 22.

**a) *Conditions that must be included in the authorization***

- No soil erosion is permitted to occur.
- No discharge of contaminated water is permitted into any water course.
- Concurrent rehabilitation is facilitated and not jeopardised.
- Removal of alien vegetation.
- Rehabilitation shall ensure that surfaces are smooth and free-draining, and that no forms remain.
- Only approved access routes are to be used.
- Chemical toilet must be erected; the facilities must not cause any water pollution or health hazard.
- No domestic or any other solid waste shall be disposed of on site.
- All waste removed from the site must be disposed of at a permitted landfill site.
- Vegetation shall not be harmed as far as possible.
- Vehicles shall as far as possibly stick to established access routes, so as to minimize the effects to surrounding vegetation.
- The Duty of Care and remediation of environmental damage contained in Section 28 of the National Environmental Act (Act No.107 of 1998) must be complied with.
- All requirements of the Local Authority shall be complied with.
- All requirements of the Mine Health and Safety Act (no. 29 of 1996) shall be complied with.
- Staff operating heavy machinery must wear proper PPE and the applicant must ensure that the requirements of the OHS Act number?? are met.
- All requirements shall be complied with relating to health matters.
- No landowner or authority may request the holder to carry out any activity that is not authorized in terms, conflict therewith.
- Mining must be contained within the approved area extent.

**25. Period for which the Environmental Authorization is required.**

The mining activity is proposed for a 2 years duration, with 3 consecutive annual renewals. The EA is therefore sought for a period of 8 years??

## 26. Undertaking

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

It can be confirmed that the undertaking required to meet the requirements of this section is provided at the end of the EMPr and is applicable to both the Basic Assessment Report and the Environmental Management Programme report. Peo Enhle have confirmed that the mitigation, management measures as well as the monitoring thereof can be undertaken by themselves for all phases (construction, operation, decommissioning and post-closure) of the general mining of granite rock.

## 27. Financial Provision

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

The amount required for management and rehabilitation of the environment was calculated at R56 928.00

### Explain how the aforesaid amount was derived

The quantum for financial provision was calculated from itemization of all activities and costs for Peo Enhle rehabilitation as per the Financial Provisioning Regulations, 2015. Based on the current scope of the project, namely one (1) mining sand associated infrastructure with a surface disturbance of approximately 5 hectares, the estimate of the rehabilitation costs is: **R 56 928.00** (refer to Table 14).

### **Table 14: Financial Provisions**

## CALCULATION OF THE QUANTUM

Applicant: **PEO ENHLE PROJECTS (PTY) LTD**  
Evaluators:

Ref No.: **NW30/5/1/3/2/11185MP**  
Date: **02/05/2023**

No.	Description	Unit	A	B	C	D	E=A*B*C*D
			Quantity	Master Rate	Multiplication factor	Weighting factor 1	Amount (Rands)
				<b>CP15.1</b>			
1	Dismantling of processing plant and related structures (including overland conveyors and powerlines)	m3	0	19.32	1	1	0
2 (A)	Demolition of steel buildings and structures	m2	0	211	1	1	0
2 (B)	Demolition of reinforced concrete buildings and structures	m2	0	293.79	1	1	0
3	Rehabilitation of access roads	m2	0	42.1	1	1	0
4 (A)	Demolition and rehabilitation of electrified railway lines	m	0	345.31	1	1	0
4 (A)	Demolition and rehabilitation of non-electrified railway lines	m	0	190.76	1	1	0
5	Demolition of housing and/or administration facilities	m2	0	396.83	1	1	0
6	Opencast rehabilitation including final voids and ramps	ha	0.18	205247.5	1	1	36944.55
7	Sealing of shafts adits and inclines	m3		115.7	1	1	0
8 (A)	Rehabilitation of overburden and spoils	ha	0	136833.4	1	1	0
8 (B)	Rehabilitation of processing waste deposits and evaporati ponds (non-polluting potential)	ha	0	170422.2	1	1	0
8 (C)	Rehabilitation of processing waste deposits and evaporati	ha	0	494976.9	1	1	0
9	Rehabilitation of subsided areas	ha	0	114578.2	1	1	0
10	General surface rehabilitation	ha	0.035	113924.1	1	1	3987.34455
11	River diversions	ha	0	108396.2	1	1	0
12	Fencing	m	0	123.94	1	1	0
13	Water management	ha	0	43320.5	1	1	0
14	2 to 3 years of maintenance and aftercare	ha	0	1521.33	1	1	0
15 (A)	Specialist study	Sum	0	40005.3	1	1	0
15 (B)	Specialist study	Sum				1	0
<b>Sub Total 1</b>							<b>4093189455</b>
1	Preliminary and General		4911.827346		<b>weighting factor 2</b>		4911.827346
					1		
2	Contingencies			4093.189455			4093.189455
<b>Subtotal 2</b>							<b>49936.91</b>
<b>VAT (15%)</b>							<b>6991.17</b>
<b>Grand Total</b>							<b>56928</b>

An amount of **R56928.00** has been provided for environmental costs. This amount will be reviewed annually based on the impact caused by mining on the environment. **Confirm that this amount can be provided for from operating expenditure.**

*(Confirm that the amount, is anticipated to be an operating cost and is provided for as such in the Mining work programme, Financial and Technical Competence Report or Prospecting Work Programme as the case may be).*

It can be confirmed that the management and rehabilitation amount is anticipated to be an operating cost and is provided for as such in the Mining work programme, Financial and Technical Competence Report.

Should Environmental Authorization be granted, Peo Enhle will make provision for the estimated closure cost by means of a Bank Guarantee or via cash deposit or any other means available and accepted by the Competent Authority.

Specific Information required by the competent Authority

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

**28. Impact on the socioeconomic conditions of any directly affected person.**

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

The socioeconomic impact will be the retention in animal grazing, which were supposed to take place during the period of the mining. However, with the land in question, the land use will continue after the mining have ceased and during the course of the mining activity, the applicant will employ the continuous rehabilitation method.

There is an anticipated growth in economic status of the community as this project is aimed at eradication of unemployment rate. Persons directly affected by the development and operation of the mining were identified as:

- Land users (grazing and farming) within the area.
- Owner of the area.

The potential socioeconomic impacts of the mining activities on these directly affected persons include:

- Creation of Employment Opportunities.
- Loss of Productive Land and Related Current and Future Income Opportunities.
- Reduced access to Natural Resources: firewood for fuel.
- Impact on Community Health and Safety.
- Increased pressure on social infrastructure i.e., road.

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

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

Not applicable.as no heritage resources were encountered within the proposed site.

The area proposed for mining is not situated in any historical or graveyards and if during the implementation of the mining activities any heritage resources are discovered, the applicant will consult the South African Heritage Resource Agency, in order to get specialist input of information missed or areas that should be avoided during the mining activity.

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

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

Section 24 (4) (b) (i) states that

*“[an] 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 [must be included]”.*

Alternative site locations for the mining activity have been discussed in Section G of this Report. An investigation of the potential impacts of only the preferred alternative has been undertaken as the other alternatives were deemed not feasible. The option of not implementing the activity (i.e., no development of the commodity extraction) would mean that Peo Enhle would not be able to access and exploit the extensive granite reserve, resulting in the mine not commencing, which would mean that there would be no development of the area and also failure to meet the requirements of the National Development Plan.



**PART B**

**ENVIRONMENTAL MANAGEMENT PROGRAMME REPORT**

**FOR**

**PEO ENHLE**

**REF: NW30/5/1/3/2/11185MP**

### 31. FINAL ENVIRONMENTAL MANAGEMENT PROGRAMME

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

Confirmed: I hereby confirm that the EAP details were included in Part A, section 1 (a).

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

Confirmed: I hereby confirm that the information required in this Section is already provided on Part A, Section (1) (h).

#### *Composite Map*

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

Map attached (Refer to **Appendix C**)

### 32. Description of Impact management objectives including management statements

*Determination of closure objectives.*

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

On completion of mining activity, the area will be rehabilitated to mimic the natural environment and farming operation will continue as usual. The area will have to be rehabilitated to MPRDA and NEMA requested standards and to cause as minimal as possible environmental damage.

Closure objectives include the following:

- To reinstate the environment to its original land use
- To ensure that the land is back to the way it was before the mining commenced
- To ensure that the water resources, if any, are not affected by the mining activity
- To leave rehabilitated ground to ensure blending with the undamaged area
- Cleaning and rehabilitation of the access roads and tracks used to access the farm.

Once mining has been completed, all areas disturbed by mining activities will be fully rehabilitated. The areas disturbed by operational activities will be rehabilitated concurrent with the mining; rehabilitation will not be banked for the mining work to cease. This will be undertaken in accordance with the rehabilitation and closure plan to be developed.

*a. Volumes and rate of water use required for the operation.*

None. The operation does not require any water use.

**4. Has a water use licence has been applied for?**

Yes. The operation does require a water use licence.

Consumption water required, also about 200L per day for dust control if required.

**6. Impacts to be mitigated in their****Respective phases**

The following table 15 presents the measures to rehabilitate the environment affected by the undertaking of any listed activity.

**Table 15: Measures to Rehabilitate the Environment**

<b>ACTIVITIES</b>	<b>PHASE</b> In which impact is anticipated,	<b>SIZE AND SCALE of disturbance</b>	<b>MITIGATION TYPE</b> (Modify, remedy, control, or stop)	<b>COMPLIANCE WITH STANDARDS</b>	<b>TIME PERIOD FOR IMPLEMENTATION</b>
Mining of granite rock	Operational	200 square metres	<b>Slopping</b> and Noise control Measures	Prescribed environmental management standards	48 months
Blasting	Operational	100 square metres	Noise and dust control	Prescribed environmental management standard	ongoing
Loading and Hauling	Operational	200m <sup>2</sup>	Noise control and dust control	Prescribed environmental management standard	ongoing 48 months

Discard dumps	Construction	200 m <sup>2</sup>	Slopping	Prescribed environmental management standard	2 months
Establishment of haul road/access road to the site. Demarcating mining area, erecting toilet facilities & campsite, Designate stockpile area. Remove alien invasive species. Extraction ...	Pre-establishment	5ha (0.5ha to be cleared for stockpile )	Rehabilitation to mimic original natural state after removal of bedrock material Keep vegetation clearance to a minimum, clearing only those sections that will be mined next to mitigate secondary impacts	Manage & Control via Soil Management Measures	On-going, until mining is completed
	Construction	±300m road	Rehabilitation to mimic original natural state after removal of bedrock material Control storm water runoff from the onset of clearance and construction.	Remedy through Rehabilitation Measures	On-going, until mining is completed
	Construction / Operation	5ha	Maintain buffer zone of natural vegetation between mining operations and the seasonal stream. Keep vegetation clearance to a minimum. Store / dispose topsoil and overburden in such a way that it does not end up in the nearby seasonal stream as silt and sand Control storm water runoff. Control soil erosion.	Control through Alien Invasive Management Measures	On-going, until mining is completed

			Control the current overgrazing and over browsing practices on and around the study area Control alien invasive plants		
	Construction / operation	5ha	Equipment used in the mining process must be adequately maintained, such that during operation they must not spill oil, diesel, fuel or hydraulic fluid.  Spills must be cleaned up immediately after occurrence by removing the spills, together with the polluted soil, and disposing thereof at a recognized facility.  Oil and chemicals must not be stored on site.	Monitor and remedy through Stormwater Management Measures	On-going, until mining is completed
	Construction/ Operational	5m <sup>2</sup>	Enforcement of speed limits to reduce the chances of impact with road users and animals  Fine road sign offenders employed by the mine  Avoid transportation during busy hours of the day (that's 6:00-9:00am and 16:00-18:00pm)	Monitor and Control through Traffic Management Measures	On-going, until mining is completed
	Construction/ operation	5ha	The sensitive receptors in this case are such a distance away that the dust deposition resulting from the proposed operation on these receptors are negligible.	Monitor and Control through Traffic Management Measures	On-going, until mining is completed

			<p>According to the Australian NPI, dust generation from material transfer points can be reduced by 50% where water sprays are applied.</p> <p>Adding wind break can reduce the dust emissions with 30%.</p> <p>Enclosing the operations, the emissions will become insignificant.</p> <p>The liberation of dust into the atmosphere must be controlled by:</p> <ul style="list-style-type: none"> <li>•Spraying water and limiting the speed of haul trucks</li> <li>•Regular maintenance of the access road</li> <li>•Reducing activities during windy days</li> <li>•Implementing a speed limit of 30km/h on unpaved surfaces.</li> <li>•Minimizing exposed areas prone to wind erosion</li> </ul>		
	Operation	Open	<p>Keep vegetation clearance to a minimum.</p> <p>Control storm water runoff.</p> <p>Control soil erosion.</p> <p>Control alien invasive plants.</p> <p>Control dust pollution without causing sediment runoff into nearby drainage systems.</p>	Environmental - Ecological Procedure/Plan	On-going, until mining is completed

NAME OF ACTIVITY	PHASE	SIZE AND SCALE	MITIGATION TYPE	COMPLIANCE WITH STANDARDS	On-going, until mining is completed
Decommissioning of roads; Removal of office structures and any site infrastructure; Reseeding/planting of disturbed areas	Rehabilitation	5ha	Rehabilitate soil in places where original topography remains intact to allow vegetation to grow	Manage & Control via Soil Management Measures	On-going, until mining is completed
	Rehabilitation	5ha	Reshape the hole to decrease danger to the local human community as well as decrease the negative affect on the surrounding natural environment.	Remedy through Rehabilitation Measures	On-going, until mining is completed
	Rehabilitation	5ha	Revegetate site with indigenous vegetation. Monitor increase of alien invasive species due to site disturbance.	Remedy through Rehabilitation Measures	On-going, until mining is completed
		5ha	Maintain buffer zone of natural vegetation between mining operations and the seasonal stream Keep vegetation clearance to a minimum. Store / dispose topsoil and overburden in such a way that it does not end up in the nearby seasonal stream as silt and sand. Control storm water runoff. Control soil erosion.	Remedy through Rehabilitation Measures, Conservation Management Measures	On-going, until mining is completed



			Control the current overgrazing and over browsing practices on and around the study area. Control alien invasive plants.		
			Equipment used in the mining process must be adequately maintained, such that during operation they must not spill oil, diesel, fuel, or hydraulic fluid.  Spills must be cleaned up immediately after occurrence by removing the spills, together with the polluted soil, and disposing thereof at a recognized facility.  Oil and chemicals must not be stored on site.	Monitor and remedy through Stormwater Management Measures	On-going, until mining is completed
	Rehabilitation	5ha	Enforcement of speed limits to reduce the chances of impact with road users and animals  Fine road sign offenders employed by the Mine  Avoid transportation during busy hours of the day (that's 6:00-9:00am and 16:00-18:00pm)  The Mine must not use the southern access road used by the community	Monitor and Control through Traffic Management Measures	On-going, until mining is completed
	Rehabilitation	5ha	The sensitive receptors in this case are such a distance away that the dust deposition resulting from the proposed operation on these receptors are negligible.	Abide to ambient air quality standards and implement dust control measures	On-going, until mining is completed

		<p>According to the Australian NPI, dust generation from material transfer points can be reduced by 50% where water sprays are applied. Adding wind break can reduce the dust emissions with 30%. Enclosing the operations, the emissions will become insignificant.</p> <p>The liberation of dust into the atmosphere must be controlled by:</p> <ul style="list-style-type: none"> <li>•Spraying water and limiting the speed of haul trucks</li> <li>•Regular maintenance of the access road</li> <li>•Reducing activities during windy days</li> <li>•Implementing a speed limit of 30km/h on unpaved surfaces</li> <li>•Minimizing exposed areas prone to wind erosion</li> </ul>		
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## 7. Impact Management Outcomes

*(A description of impact management outcomes, identifying the standard of impact management required for the aspects contemplated in paragraph 0);*

The following Table presents the impact management outcomes for identified project activities.

**Table 16: Impact Management Outcomes**

<b>NAME OF ACTIVITY</b>	<b>POTENTIAL IMPACT</b>	<b>ASPECTS AFFECTED</b>	<b>PHASE</b>	<b>MITIGATION TYPE</b>	<b>STANDARD TO BE ACHIEVED</b>
Granite mining	Dust, Noise and surface disturbance	Land surface	Upon cessation of the activity	Noise control measures, dust control, rehabilitation, avoidance	Noise levels, rehabilitation standards
Blasting	Fly rock, surface distance, Noise and Dust	Land structure	Upon cessation of the activity	Blasting controls	Noise levels, dust levels & rehabilitation Standards
Discard dumps	Dust and Noise	Land surface	Upon cessation of the activity	Noise control measures, dust control and rehabilitation	Rehabilitation standards
Transport	Air Pollution and Noise	land surface	Upon cessation of the activity	Dust control dispensers	Noise levels and dust levels
Establishment of haul road/access road to the site. Demarcating mining area, erecting toilet	Disturbance and loss of vegetation due to construction activities	Fauna and flora habitat	Pre-establishment	Rehabilitation to original natural state after removal of bedrock material is not practically viable Keep vegetation clearance to a minimum, clearing only those sections that will be mined next in order to mitigate secondary impacts	Impact reduced on vegetation disturbance

<p>facilities &amp; campsite, Designate stockpile area; Remove alien invasive species. Extraction and removal of the minerals onsite; Stockpiling of product; Loading of product into transportation</p>	<p>Loss of soil as a result of clearance of vegetation and overburden.</p>	<p>Habitat</p>	<p>Construction</p>	<p>Rehabilitation to original natural state after removal of bedrock material is not practically viable Keep vegetation clearance to a minimum, clearing only those sections that will be mined next to mitigate secondary impacts Control storm water runoff from the onset of clearance and construction.</p>	<p>Noise control – SANS 10328:2008 Minimal vegetation destruction</p>
	<p>Sedimentation of drainage line and seasonal stream directly south of the study area</p>	<p>Local residences</p>	<p>Construction / Operation</p>	<p>Maintain buffer zone of natural vegetation between mining operations and the seasonal stream. Keep vegetation clearance to a minimum. Store / dispose topsoil and overburden in such a way that it does not end up in the nearby seasonal stream as silt and sand Control storm water runoff. Control soil erosion. Control the current overgrazing and over browsing practices on and around the study area Control alien invasive plants</p>	<p>Principles of NEMA Minimal vegetation destruction</p>
	<p>Spillage of contaminants: Contamination of surface</p>	<p>Water/soil pollution</p>	<p>Construction / operation</p>	<p>Equipment used in the mining process must be adequately maintained, such that</p>	<p>Guidelines, Dept. Of Water</p>

	water from fuel spills and leakages			<p>during operation they must not spill oil, diesel, fuel or hydraulic fluid.</p> <ul style="list-style-type: none"> <li>• Spills must be cleaned up immediately after occurrence by removing the spills, together with the polluted soil, and disposing thereof at a recognized facility.</li> <li>• Oil and chemicals must not be stored on site.</li> </ul>	Affairs & Forestry, 2 <sup>nd</sup> Ed 1996. National Water Act, 36 of 1998. Avoid water pollution
	Increase of road users and traffic	Public infrastructure and safety	Construction/ Operational/ Decommissioning	<p>Enforcement of speed limits to reduce the chances of impact with road users and animals</p> <ul style="list-style-type: none"> <li>• Fine road sign offenders employed by the mine</li> <li>• Avoid transportation during busy hours of the day (that's 6:00-9:00am and 16:00-18:00pm)</li> <li>• The mine must not use the southern access road used by the community</li> </ul>	Principles of NEMA: minimize disturbance of ecosystem environment
	Dust and fumes from mine vehicles/machines and from exposed product stockpiles	Water resources, soil and ecosystem environment	Construction/ operation	The sensitive receptors in this case are such a distance away that the dust deposition resulting from the proposed operation on these receptors are negligible.	Guidelines, Dept. Of Water Affairs & Forestry, 2 <sup>nd</sup> Ed 1996.

				<p>According to the Australian NPI, dust generation from material transfer points can be reduced by 50% where water sprays are applied. Adding wind break can reduce the dust emissions with 30%. Enclosing the operations, the emissions will become insignificant.</p> <p>The liberation of dust into the atmosphere must be controlled by:</p> <ul style="list-style-type: none"> <li>•Spraying water and limiting the speed of haul trucks</li> <li>•Regular maintenance of the access road</li> <li>•Reducing activities during windy days</li> <li>•Implementing a speed limit of 30km/h on unpaved surfaces</li> <li>•Minimizing exposed areas prone to wind erosion</li> </ul>	<p>National Water Act Principles</p> <p>NEMA Principles</p>
	<p>Cumulative impacts associated with the proposed development on the vegetation of the surrounding local areas will come from increased human</p>	<p>Surface water</p>	<p>Operation</p>	<p>Keep vegetation clearance to a minimum.</p> <p>Control storm water runoff.</p> <p>Control soil erosion.</p> <p>Control alien invasive plants.</p>	<p>NEMA Principles</p> <p>Biodiversity Act; protection of indigenous species</p>

	<p>and livestock activity in the area. Such impacts include an increased demand for firewood, grazing, browsing, water, access to electricity and sanitation, increased distribution of invasive alien plant species, increased dust pollution along the transport route, increased soil erosion along the transport route, increased sedimentation within drainage lines along the transport route and a reduction of ecosystem services.</p>			<p>Prevent illegal electrical connections from the power supply grid associated with the proposed development.</p> <p>Control dust pollution without causing sediment runoff into nearby drainage systems.</p>	
	<p>Benefits resulting from employment and income opportunities, created by the operation</p>	<p>Surrounding community</p>	<p>Construction/ Operational</p>	<p>Hire locals and support local government in skills development and training initiatives</p>	<p>Community development Mining Charter Community development</p>

<b>Decommissioning of roads; Removal of office structures and any site infrastructure; Reseeding/planting of disturbed areas</b>	Compaction of soil as a result of development infrastructure	Ecosystem	Rehabilitation	Rehabilitate soil in places where original topography still remains intact to allow vegetation to grow	Community development, job opportunities Mining Charter
	Hole left behind after mining	Surrounding community and habitat	Rehabilitation	<ul style="list-style-type: none"> <li>Reshape the hole to decrease danger to the local human community as well as decrease the negative affect on the surrounding natural environment.</li> </ul>	Noise control – SANS 10328:2008 Minimal vegetation destruction
	Disturbance and loss of vegetation due to mining activities	Ecosystem environment	Rehabilitation	<p>Mitigation measures to restore topography and the original vegetation are impractical.</p> <p>Revegetate site with indigenous vegetation.</p> <ul style="list-style-type: none"> <li>Monitor increase of alien invasive species due to site disturbance.</li> </ul>	NEMA Principles Biodiversity Act; protection of indigenous species
	Spillage of contaminants: Contamination of surface water from fuel spills and leakages			<ul style="list-style-type: none"> <li>Equipment used in the mining process must be adequately maintained, such that during operation they must not spill oil, diesel, fuel or hydraulic fluid.</li> </ul>	NEMA Principles Biodiversity Act; protection



				<ul style="list-style-type: none"> <li>• Spills must be cleaned up immediately after occurrence by removing the spills, together with the polluted soil, and disposing thereof at a recognized facility.</li> <li>• Oil and chemicals must not be stored on site.</li> </ul>	of indigenous species
Increase of road users and traffic	Surrounding community	Rehabilitation	<p>Enforcement of speed limits to reduce the chances of impact with road users and animals</p> <ul style="list-style-type: none"> <li>• Fine road sign offenders employed by the mine</li> <li>• Avoid transportation during busy hours of the day (that's 6:00-9:00am and 16:00-18:00pm)</li> </ul> <p>The mine must not use the southern access road used by the community</p>	Dust control – National Ambient Air Quality Standard GNR No.263 (24	
Cumulative impacts associated with the proposed development on the vegetation of the surrounding local areas will come from increased human and livestock activity in the		Rehabilitation	<p>The sensitive receptors in this case are such a distance away that the dust deposition resulting from the proposed operation on these receptors are negligible.</p> <p>According to the Australian NPI, dust generation from material transfer points</p>	Principles of NEMA: waste disposed in a responsible manner	

	<p>area. Such impacts include an increased demand for firewood, grazing, browsing, water, access to electricity and sanitation, increased distribution of invasive alien plant species, increased dust pollution along the transport route, increased soil erosion along the transport route, increased sedimentation within drainage lines along the transport route and a reduction of ecosystem services.</p>			<p>can be reduced by 50% where water sprays are applied. Adding wind break can reduce the dust emissions with 30%. Enclosing the operations, the emissions will become insignificant.</p> <p>The liberation of dust into the atmosphere must be controlled by:</p> <ul style="list-style-type: none"> <li>•Spraying water and limiting the speed of haul trucks</li> <li>•Regular maintenance of the access road</li> <li>•Reducing activities during windy days</li> <li>•Implementing a speed limit of 30km/h on unpaved surfaces</li> <li>•Minimizing exposed areas prone to wind erosion</li> </ul>	
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## 8. Impact Management Actions

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

**Table 17: Impact Management Actions**

NAME OF ACTIVITY	POTENTIAL IMPACT	MITIGATION TYPE	TIME PERIOD FOR IMPLEMENTATION	COMPLIANCE WITH STANDARDS
Granite mining	Dust, Noise and surface disturbance	Noise control measures, dust control, rehabilitation, avoidance	Upon cessation of the activity	Prescribed environmental standards
Blasting	Fly rock, surface distance, Noise and Dust	Blasting controls	Upon cessation of the activity	Prescribed environmental standards
Discard dumpsc	Dust and Noise	Noise control measures, dust control and rehabilitation	Upon cessation of the activity	Prescribed environmental standards
Transport	Air Pollution and Noise	Dust control dispensers	Upon cessation of the activity	Prescribed environmental standards
Establishment of haul road/access road to the site.	Habitat loss and disturbance	Demarcate the mining area Use of the existing road structures, there is no need for road construction.	On-going, until mining is completed	Vegetation management

Demarcating mining area, erecting toilet facilities & campsite, Designate stockpile area; Remove alien invasive species. Extraction and removal of the minerals onsite; Stockpiling of product; Loading of product into transportation		The area chosen for these purposes must be the minimum, reasonably required for the purpose, and which will involve the least disturbance to the vegetation.		
	Disturbance due to noise/vibration	Limiting number of simultaneous noises emitting activities Fitting equipment with noise abatement measures (e.g., acoustical mufflers and white-noise generators) The area chosen for these purposes must be the minimum, reasonably required for the purpose, and which will involve the least disturbance to the vegetation	On-going, until mining is completed	Noise reduction measures
	Disturbance to wildlife and local residents	Minimizing the project footprint The area chosen for these purposes must be the minimum, reasonably required for the purpose, and which will involve the least disturbance to the vegetation Machines to be used must be adequately maintained and serviced regularly	On-going, until mining is completed	Vegetation management
	Dumping and waste	Waste skips must be provided, collected, and disposed of at an appropriately landfill site once full.	On-going, until mining is completed	Hydrocarbon and Domestic and Industrial Waste Management Protocol

	Spillage of contaminants	<p>Equipment used in the mining process, must be adequately maintained, such that during operation they do not spill any oil, diesel, fuel or hydraulic fluid</p> <p>Making sure all machinery is clean and in good working order, so no fuel or oil spills enter the water</p> <p>Spills must be cleaned up immediately by removing the spills together with the polluted soil and disposing thereof at a recognized facility</p>	On-going, until mining is completed	Hydrocarbon and Domestic and Industrial Waste Management Protocol
	Contamination of surface water from fuel spills and leakages	<p>Equipment used in the mining process, must be adequately maintained, such that during operation they do not spill any oil, diesel, fuel or hydraulic fluid</p> <p>Making sure all machinery is clean and in good working order so that no fuel or oil spills enter the water</p> <p>Spills must be cleaned up immediately by removing the spills together with the polluted soil and disposing thereof at a recognized facility</p>	On-going, until mining is completed	Hydrocarbon and Domestic and Industrial Waste Management Protocol

	Eradication of invasive alien species	An appropriate alien invasive species management plan should be implemented Species should be cleared manually regularly depending on the invasion.	On-going, until mining is completed	Alien invasive eradication programme
	Spontaneous settlement due to perceived employment opportunities	Develop employment and recruitment policy together with the community that prioritises local recruitment.	On-going, until mining is completed	Community development Mining Charter Community development
	Increase pressure on social services due to influx of job seekers	Support local government capacity for integrated development planning Identify and support community development programmes	On-going, until mining is completed	Community development Mining Charter Community development
	Benefits resulting from employment and income opportunities created by the operation	Hire locals and support local government in skills development and training initiatives	On-going, until mining is completed	Community development, job opportunities Mining Charter
Extraction and removal of the minerals onsite Stockpiling of product	Disturbance due to noise	Limiting number of simultaneous noise emitting activities Fitting equipment with noise abatement measures (e.g., acoustical mufflers and white-noise generators)	On-going, until mining is completed	Noise reduction measures

Loading of product into transportation		The area chosen for these purposes must be the minimum, reasonably required for the purpose, and which will involve the least disturbance to the vegetation.		
	Fauna and flora habitat loss; disturbances of species attached to the ground	The mining of aggregate must only take place within the approved demarcated mining area. The area chosen for these purposes must be the minimum, reasonably required for the extraction purpose, and must involve the least disturbance to the vegetation. Drill small sections at a time and allow sediment/dust to settle before continuing and rehabilitate the disturbed area.	On-going, until mining is completed	Vegetation and soil management
	Dust and fumes from mine vehicles /machines and from exposed product stockpiles	The liberation of dust into the atmosphere must be controlled by: spraying water and limiting the speed of haul trucks Regular maintenance of the access road. Reducing activities during windy days. Implementing a speed limit of 45km/h on unpaved surfaces Minimizing exposed areas prone to wind erosion	On-going, until mining is completed	Dust Reduction Processes

	Increase of road users and traffic	<p>Enforcement of speed limits to reduce the chances of impact with road users and animals</p> <p>Fine road sign offenders employed by Peo Enhle.</p> <p>Avoid transportation during busy hours of the day (that's 6:00-9:00am and 16:00-18:00pm)</p> <p>Peo Enhle must use the access road marked.</p> <p>No truck moving in &amp; out of the site during peak hours</p>	On-going, until mining is completed	Road and Traffic Management
	Contamination of surface water from fuel spills and leakages	<p>Equipment used in the mining process, must be adequately maintained, such that during operation they do not spill any oil, diesel, fuel or hydraulic fluid.</p> <p>Spills must be cleaned up immediately after occurrence by removing the spills together with the polluted soil and disposing thereof at a recognized facility.</p>	On-going, until mining is completed	Hydrocarbon and Domestic and Industrial Waste Management Protocol
	Dangerous areas that pose health risks and possible loss of life (e.g., pits, ponds, etc.)	Where a depression in the ground in which water can gather has formed, attention must be given to the outflow of water to prevent concentration of the run-off, and thus prevent erosion and any pond formation or damming.	On-going, until mining is completed	Hydrocarbon and Domestic and Industrial Waste Management Protocol. Storm-water Management System



		The <b>mining of aggregate</b> must only take place within the approved demarcated mining area Erect mine signage around the mining area		
Decommissioning of roads Removal of office structures and any site infrastructure Reseeding/planting of disturbed areas	Loss of productive land for alternative uses	Roads must be ripped or ploughed and appropriately prepared to ensure the re-growth of vegetation  The goal of rehabilitation, with respect to the area <b>from which the aggregate has been extracted</b> , is to leave the area level and even, containing no foreign debris or other materials Materials/infrastructure must be removed prior to rehabilitation and disposed of in an approved manner Removal of these materials must be on a continuous basis while the mine is operating and not only at the start of rehabilitation.	On-going, until mining is completed	Rehabilitation method
	Fauna and flora habitat loss and Disturbance	The area must be appropriately prepared, to ensure the re-growth of indigenous vegetation  An effective control programme for the eradication of invader species and other alien plants may be required.	On-going, until mining is completed	NEMA Principles Biodiversity Act; protection of indigenous species

	Windborne dust	<ul style="list-style-type: none"> <li>• The liberation of dust into the atmosphere must be controlled by: spraying water, limiting the speed of haul trucks</li> <li>• Regular maintenance of the access road</li> <li>• Reducing activities during windy days</li> <li>• Implementing a speed limit of 45km/h on unpaved surfaces</li> <li>• Minimizing exposed areas prone to wind erosion</li> </ul>	On-going, until mining is completed	Dust control – National Ambient Air Quality Standard GNR No.263 (24 December 2009); National Ambient Air Quality Standard GNR No.486 (29 June 2012);
	Dumping and waste	Precautions must be taken to prevent any refuse from spreading on and from the site.	On-going, until mining is completed	Principles of NEMA: waste disposed in a responsible manner
	Loss of employment and enterprise development opportunities	Nothing much to be done, however, education must be promoted along with promotion of skills transfer to ensure alternative livelihoods	On-going, until mining is completed	Mining Charter Community development

## 9. Financial Provision

### Determination of the amount of Financial Provision.

The quantum for financial provision was calculated itemization of all activities and costs for Peo Enhle rehabilitation as per the Financial Provisioning Regulations, 2015. Based on the current scope of the project, namely one (1) mining granite associated infrastructure with a surface disturbance of approximately 5 hectares, the estimate of the rehabilitation costs is: **R56 928.00**.

## 10. Closure Objectives

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

The area will continue as grazing and plantation farming after the closure. Peo Enhle intends to ensure that the area is left as it was before; the surface area is being scarified, levelled and left resembling the surrounding area.

Approach to mine closure planning for rehabilitation and closure for this mining project has been initiated as a conceptual process and will be refined as the project progresses through detailed design and construction. The identified closure activities, seek to achieve:

- As far as practicable, rehabilitation will achieve a stable and functioning landform which is compatible with the surrounding landscape and other environmental values.
- The closure plan must ensure the physical and geochemical stability of the mining area in the post-closure stage, as well as meeting the required DMR/NEMA environmental standards. This will require services of ecological/horticulturalist specialist who has expertise in vegetation/landscape systems to assist in development of a final rehabilitation program before the cessation of the mine.
- Rehabilitate the site in accordance with a detailed closure plan and implement an alien invasive management plan to ensure the establishment of indigenous vegetation.
- Rehabilitation of the disturbed areas to return the site to its similar visual state prior mining.

- Identify and attend to possible areas of erosion.
- Implement an effective waste management plan to contain waste on site, as well as any spills that may occur.
- Potential impacts to potable-water supplies, ecosystems, beneficial uses, environmental/cultural values or human health, associated with closure and rehabilitation of the project are identified, and must be adequately avoided, mitigated and/or minimized.
- The surface of stockpile areas to be scarified and levelled, graded evenly and the topsoil previously stored to be returned to its original depth over the area.

Rehabilitation of areas impacted by mining will ensure:

- Health risk to members of the public, including traditional owners, will be as low as is reasonably achievable. The mine closure activities must be carried out with care to ensure strict compliance with applicable legal standards to protect human health and to grant safety to people and third-party property.
- Social Objectives: Any access routes, especially if they are not beneficial to the local community would need to be scarified and levelled. Leave the area (from which the aggregate has been extracted) levelled and free of drainage or any foreign debris or materials.
- Prepare the area in such a way as to stimulate/ensure the re-growth of vegetation.

### ***11. Consultation on Environmental Objectives***

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

Yes, consultation was done with Interested and Affected Parties including the Landowner of which the letter was sent to the Department of Rural and Land Reform Northwest region as the land is stated as a state land. All people were invited to attend the public meeting that was conducted at the farm but only Interested and Affected parties showed up. All further consultation information is attached in Appendix B: Consultation Report.

## **12. Rehabilitation Plan**

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

Continuous rehabilitation will be implemented and also the monitoring of any latent impact that may arise after closure has been done.

The rehabilitation plan for the proposed Peo Enhle operation aims to mitigate the negative impacts associated with the mining activities, and ultimately to return the affected land to its desired land use standard. The objectives of the plan are to ensure that the condition of the site post mining operation is suitable to and in agreement with the affected neighbouring community, tribunal council (landowners) and the competent authority, that there is minimal loss to the biodiversity of the area, and that rehabilitation restores the land use and capability of the area/site.

The rehabilitation process will commence during the mining operation throughout the life of mine; involving concurrent rehabilitation of pits when activities are completed, thereafter the final rehabilitation will be undertaken during the mine closure phase.

A more detailed closure plan will be developed during the life of the mine, prior to the cessation of mining activities; adapted to the developed information and environmental impact status of the project in order to achieve a site-specific closure plan.

### ***13. Explain why it can be confirmed that the rehabilitation plan is compatible with the closure objectives.***

The main objective is to implement the best rehabilitation method during the mining operation which will ensure that the environment is taken back to its previous land use. The continuous rehabilitation method also ensures that there is not many quarries left open. The operation will be opening 200 square meters of box cut at a time and mine on it; and before moving to the next phase of mining, the area will be rehabilitated. This method also reduces rehabilitation cost and ensures that there is sustainable development implemented in the area.

The Rehabilitation plan for this project will allow the proposed mining operation to achieve the following objectives:

- Comply with relevant legislation and policy requirements with regards to mine rehabilitation.
- Avoid or mitigate impacts associated with the project which may be detrimental to the environment.
- Land rehabilitation to a predetermined and agreed upon state that allows sustainable land use and capability of the site, that is to return the site to the condition that existed prior to mining or an agreed upon state.
- Cost effective and efficient closure of mining operations.
- Management and monitoring of the area post-closure.

The rehabilitation plan will thus be aligned to the closure objectives and tailored to the project to achieve these objectives. It will include information about the site prior to the mining operation and provide information on the maintenance of resources required for the rehabilitation process, as well as detail on how rehabilitation will be undertaken. It will also provide information on the management and monitoring of disturbance to avoid or minimize detrimental impacts, as well as an estimate of the financial closure provision. It will also include information associated with post-closure environmental monitoring of the site to ensure that the rehabilitation plan is followed, and its objectives are achieved.

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

After the calculation, the final amount of R56 928.00 has been reached and the quantum of calculations is also attached.

**15. Confirm that the financial provision will be provided as determined.**

It is confirmed that the financial provision will be provided as determined.

**16. Monitoring Compliance**

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

*Monitoring of Impact Management Actions*

*Monitoring and reporting frequency*

*Responsible persons*

*Time period for implementing impact management actions*

*Mechanism for monitoring compliance.*

The following table presents the mechanism for monitoring compliance and performance assessment against EMPr conditions.

**Table 18: Monitoring Compliance**

<b>SOURCE ACTIVITY</b>	<b>IMPACTS REQUIRING MONITORING PROGRAMMES</b>	<b>FUNCTIONAL REQUIREMENTS FOR MONITORING</b>	<b>ROLES AND RESPONSIBILITIES (FOR THE EXECUTION OF THE MONITORING PROGRAMMES)</b>	<b>MONITORING AND REPORTING FREQUENCY and TIME PERIODS FOR</b>

				<b>IMPLEMENTING IMPACT MANAGEMENT ACTIONS</b>
Demarcation: Are posts demarcating mining permit area in place	Demarcate the mining permit area throughout the mining period	Performance assessment requires the area to be demarcated	Site manager & Surveyor	Daily monitoring, Annual reporting
Earth moving machines	Noise: Only if a complaint is received	Must not be more than 60 db.	Site manager and all employees	Daily monitoring, Annual reporting
Dust: Earth moving machines	Dust generation to be visually monitored daily. Dust monitoring to take place during operational period	Dust to be continually monitored by visual means and monitoring equipment. If complaints are received, then dust monitors to be placed at site of concern.	Site manager / Dust Measurement Consultants	ECO or consultants to investigate and recommend additional measures
Oil / fuel leaks	Vehicles to be checked regularly	To be monitored constantly Must be cleaned immediately	Site manager and all employees ECO	Daily monitoring, Annual reporting
Evidence of Erosion	Check for erosion on slopes	Soil erosion on site must be prevented at all times, i.e., pre-, during- and post- construction activities	Site manager and all employees ECO	Daily monitoring, Annual reporting
Topsoil removal & Stockpiling	Minimal topsoil is removed	Topsoil must be stockpiled and protected	Site manager	Daily monitoring, Report once
Alien vegetation	Infestation of alien vegetation	Eradication of alien vegetation	Site Manager	Formally once every 6 months
Mining trucks	Traffic speeds on road	Calm traffic during commodity trafficking	Clients and Site Manager	Daily monitoring,



## 17. Roles and Responsibilities

For the purposes of the EMPr, the generic roles that need to be defined are those of the:

- Project Developer.
- Environmental Control Officer (ECO).
- Environmental Health and Safety (EHS) Manager.
- Mine manager.

It is acknowledged that the specific titles for these functions will vary from project to project. The intent of this section is to give a generic outline of what these roles typically require. It is expected that this will be appropriately defined at a later stage.

### Project Developer

The Project Developer (i.e., Peo Enhle) is the ‘owner’ of the project and as such is responsible for ensuring that the conditions of the Environmental Authorization issued in terms of NEMA (should the project receive such authorization) are fully satisfied, as well as ensuring that any other necessary permits or licenses are obtained and complied with. It is expected that the Project Developer will appoint the Environmental Control Officer, EHS Manager and Mine Manager.

### Environmental Control Officer

An independent Environmental Control Officer (ECO) must be appointed to monitor the compliance of the proposed project with the conditions of Environmental Authorization (should such authorization be granted by DMR) during the construction phase (and possibly the operational phase, depending on the requirements of DMR). The ECO must also monitor compliance of the proposed project with environmental legislation and recommendations of the EMPr.

The ECO will be responsible for preparing the Final EMPr based on the Draft EMPr, as well as updating the EMPr as and when necessary, and compiling a monitoring checklist based on the EMPr. The roles and responsibilities of the ECO should include the following:

- The ECO must undertake periodic environmental audits during the relevant phases of the proposed project, in order to monitor and record environmental impacts and non-conformance.

It is recommended that weekly or bi-weekly environmental audits be undertaken by the ECO during the construction phase.

- Environmental compliance reports must be submitted by the ECO to the Competent Authority (i.e., DMR) on a regular basis (i.e., monthly during the construction phase or as stipulated by the DMR).
- The ECO must maintain a diary of site visits and audits, a copy of the Environmental Authorization (should such authorization be granted by DMR) and relevant permits for reference purposes, a non-conformance register, a public complaint register, and a copy of previous environmental audits undertaken.
- Prior to the commencement of construction, the ECO must meet on site with the Construction and/or Mine Manager to confirm the construction procedure and designated construction areas.

### EHS Manager

It is important to note that the EHS Manager will be appointed to fulfil the roles of the Environmental Officer during the construction phase and the Environmental Manager during the operational phase. A generic term has therefore been assigned to this sector of roles and responsibilities. The responsibilities of the EHS Manager include overseeing the implementation of the EMPr during the construction and operational phases, monitoring environmental impacts, record-keeping and updating of the EMPr as and when necessary. The EHS Manager is also responsible for monitoring compliance with the conditions of the Environmental Authorization that may be issued to Peo Enhle

During construction, the EHS Manager will be responsible for the following:

- Meeting on site with the Construction and/or Mine Manager prior to the commencement of construction activities to confirm the construction procedure and designated activity zones.
- Daily or weekly monitoring of site activities during construction to ensure adherence to the specifications contained in the EMPr and Environmental Authorization (should such authorization be granted by DMR), using a monitoring checklist that is to be prepared at the start of the construction phase.
- Preparation of the monitoring report based on the daily or weekly site visit.
- Reporting of any non-conformance within 48 hours of identification of such non-conformance to the relevant agents.
- Conducting an environmental inspection on completion of the construction period and ‘signing off’ the construction process with the Construction Manager.

During operation, the EHS Manager will be responsible for:

- Overseeing the implementation of the EMPr and monitoring programme for the operation phase.
- Reviewing the findings of the monitoring and highlight concerns to management.
- Ensuring compliance with the Environmental Authorization conditions.
- Ensuring that the necessary environmental monitoring takes place as specified in the EMPr.
- Updating the EMPr and ensuring that records are kept of all monitoring activities and results.

During decommissioning, the EHS Manager will be responsible for:

- Overseeing the implementation of the EMPr for the decommissioning phase.
- Create awareness onsite for all employees and visitors of the requirements of the EMPr.
- Conducting an environmental inspection on completion of decommissioning and ‘signing off’ the site rehabilitation process.

At the time of preparing this EMPr, the EHS Manager appointment is still to be made by the proponent. The appointment is dependent upon the project proceeding to the construction phase.

Double check if duties for ECO and EHS Manager do not duplicate. Or is ECO independent while EHS is always at the mine?

### Mine manager

The Mine Manager will be responsible for the following:

- Overall construction programme, project delivery and quality control for the construction of the facility.
- Overseeing compliance with the Health, Safety and Environmental Responsibilities specific to the project construction.
- Promoting total job safety and environmental awareness by employees, contractors and sub-contractors and stress to all employees and contractors and subcontractors the importance that the project proponent attaches to safety and the environment.
- Ensuring that each subcontractor employ an Environmental Officer (or have a designated Environmental Officer function) to monitor and report on the daily activities on-site during the construction period.
- Ensuring that safe, environmentally acceptable working methods and practices are implemented, and that sufficient plant and equipment is made available, is properly operated

and maintained in order to facilitate proper access and enable any operation to be carried out safely.

- Meeting on site with the EHS Manager prior to the commencement of construction activities to confirm the construction procedure and designated activity zones.
- Ensuring that all appointed contractors and sub-contractors are aware of this EMPr and their responsibilities in relation to the programme.
- Ensuring that all appointed contractors and sub-contractors repair, at their own cost, any environmental damage as a result of a contravention of the specifications contained in the EMPr, to the satisfaction of the EHS Manager.

At the time of preparing this EMPr, the appointment of a Mine Manager has not been made and will depend on the project proceeding to the construction phase.

*i. Indicate the frequency of the submission of the performance assessment/ environmental audit report.*

EMPr performance assessment and audit report will be carried out once every year and submitted to the competent authority.

## **18. Environmental Awareness Plan**

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

Notices will be placed onsite, and the employees will be trained on environmental issues.

Peo Enhle has to appoint an independent Environmental Control Officer whose duty is to also implement an effective environmental awareness plan aimed to educate workers and contractors in terms of the biodiversity on site, environmental risks associated with the proposed development and land management of the site. Training and/or awareness should be raised and effectively communicated prior to the commencement of the construction phase. Training sessions should incorporate the management plans addressed in this EMP, as well as any new information and documentation provided by the ECO and Environmental Health & Safety Officer.

The ECO would be the most suitable person to conduct these training sessions - identifying sensitive environments, all the risks/impacts associated with the mining operation and the methods in which to

deal with the impacts (in order to avoid environmental degradation). Training sessions can be monitored by providing an attendance register indicating the workers that received training as well as evidence of the training and/or awareness received. These sessions would also need to be carried out throughout the life of the mine, at least once a year, or as new information becomes available.

The training material should contain the following information:

- Statement of the applicant's commitment to environmental principles. This will include:

Site Induction – the purpose of the induction is to ensure that, as a minimum, all on-site personnel understand the EMPr in terms of:

- Key issues relating to the project.
- Relevant conditions of the EA.
- Location and protection of environmentally sensitive features.
- Waste management and minimization.
- Minimizing potential impacts to air, noise and water quality.
- Erosion and sediment control.
- Surface contamination.
- Spill control measures.
- Emergency Preparedness Plan.
- Incident reporting procedures.
- Best pollution prevention practices.
- Roles and responsibility relating to environmental management.

*b. Manner in which risks will be dealt with in order to avoid pollution or the degradation of the environment.*

Every day there will be pollution management and monitoring that will take place. Kindly refer to the table of possible mitigation measures that could be applied in section (viii) of Part A for an indication of the manner in which risks will be dealt with.

*c. Specific information required by the Competent Authority*

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

Yes, it's confirmed that the financial provision will be reviewed annually.

**19. UNDERTAKING**

The EAP herewith confirms

- a) the correctness of the information provided in the reports X
- b) the inclusion of comments and inputs from stakeholders and I&APs ; X
- c) the inclusion of inputs and recommendations from the specialist reports where relevant; X and
- d) That the information provided by the EAP to interested & affected parties and any responses by the EAP to comments or inputs made by interested & affected parties are correctly reflected herein. X



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Signature of the environmental assessment practitioner:

BGES Pty Ltd

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Name of company:

08/08/2023

---

Date:

## APPENDICES

### Appendix A: EAP CV and Declaration

#### **Details of the EAP**

Name of the Practitioner: Nonkululeko Khumalo

Tel No.: 0721728374

Fax No.: 0865154865

Email: Nonku.mbasane@beyondges.co.za

#### **CAREER HISTORY**

**1. Environmental Assessment Practitioner:** Beyond Green Environmental Services Pty Ltd

July 2015 to-date

#### **Responsibilities:**

- Identifying environmental impacts and developmental interventions
- Identifying & working with all potentially affected parties
- Considering environmental impacts of mining activities on the surrounding socio-economic environment, affected individuals and communities
- Liaison with the Ward Councillors and aMakhosi
- Conducting stakeholders and public engagement meetings
- Development of S&EIR /Basic Assessment report in accordance with requirements of NEMA
- Development of IWWM and water use related documents

**2. Environmental Coordinator: Petroleum Agency SA (PASA) July 2014 to June 2016**

Bellville,

Regulator (75+ employees)

#### *Job Summary:*

Responsible for environmental risk through the identification and evaluation of the potential or actual impact of the business unit on the environment. Responsible for the design and implementation of necessary systems to ensure compliance to applicable legislation and company policy.

#### *Key Responsibilities include:*

- **Administer** the environmental aspects of State and Commonwealth mineral and petroleum legislation;

- **Provide** environmental assessment, audit and monitoring services for the upstream resources industry;
- **Provide** incident investigation services and initiate the Agency's enforcement policy as required;
- **Closure** inspections to promote environmental management in the upstream industry;
- **Respond** to pollution and waste-incidents which do not constitute incidents in terms of section 30 of NEMA;
- **Evaluate** financial provisions, handle and address complaints, enquiries and request related to Environmental Management;
- **Consult** with interested and affected parties and promote co-operative governance.

### **3. Assistant Director: Dept of Mineral Resources**

**June 2009 to June 2014**

Durban, KwaZulu Natal

Minerals/Regulator (50+ employees)

#### *Job Summary:*

As an Assistant Director I was responsible for Evaluating Environmental Impact Assessment reports, Basic Assessment reports, Scoping reports, Environmental Management Plans, Closure plans and other technical and Environmental documents. I issued Environmental Authorisations and Waste Management Licenses. I conducted comprehensive environmental Inspection and environmental audits in line with NEMA and related regulations. I regulated the closure of mine within the stipulated time frames. Identify environmental liabilities for mining operations and ensure evaluation of adequacy of financial provision. Investigate and resolve mine environmental related issues, attend to investigations and resolve mine environmental related issues, attend to environmental related queries and complaints in mines. Assist public, clients through promotion of administrative justice, environmental, enforcement and investigate illegal mining. I took part in environmental related forums and meetings.

#### *Key Responsibilities:*

- **Evaluate** environmental authorizations as in accordance with NEMA and Mineral and Petroleum Resources Development Act;
- **Evaluate** Environmental Impact Assessment, Scoping and Risk Report;
- **Evaluate** Closure plans and compile Environmental reports;
- **Conduct** mine environmental compliance monitoring and auditing;
- **Closure** inspections to promote environmental management in the mining industry;
- **Respond** to NEMA Section 30 emergency incidents in mining industry;
- **Respond** to pollution and waste-incidents which do not constitute incidents in terms of section 30 of NEMA;
- **Evaluate** financial provisions, handle and address complaints, enquiries and request related to Mine Environmental Management;



- **Consult** with interested and affected parties and promote co-operative governance.

*Reason for Leaving*

Growth Opportunity after spending 5 years at DMR.

**Key projects include:**

2017 Environmental Impact Assessment (Basic Assessment) for Amabovini Group Pty Ltd; Hillcrest, kwa-Zulu Natal

2016/2017 Environmental Impact Assessment (Basic Assessment) for Gebrolter Construction Pty Ltd

2016/2017 Environmental Impact Assessment (Basic Assessment) for Phumalanga Mining, Stanger area

2016/2017 Water Use Licence Application for FM Crushers with DWS

2016/2017 Environmental Impact Assessment (Basic Assessment) for Bombo Group Pty Ltd, Ngwavuma area, Kwa-Zulu Natal Province

2015/2016 Environmental Impact Assessment (Basic Assessment) for Premax Trading 18 cc, Stanger area Kwa-Zulu Natal Province

2015/2016 Environmental Impact Assessment (Full EIA) for FM Crushers, Ngwavuma Kwa-Zulu Natal Province

2013 Environmental audit at Richards Bay Mineral, Richards Bay

2012 Environmental audit at Zululand Anthracite Colliery

Responsibilities: Conduct environmental monitoring assessment, monitor level of compliance with environmental management programme.

2012 Environmental audit at Exxaro

Responsibilities: Conduct environmental monitoring assessment, monitor level of compliance with environmental management programme.

Assist in development of rehabilitation plan.

2011 Zulti South Proposed Mining extension

Responsibilities: Involvement in the EIA/ SIA Process



# University of Zululand

This is to certify that the degree of  
**Bachelor of Science**  
**(Biological Sciences)**

has been awarded to

**Khumalo, Nonkululeko Sanele**  
**022323**

who satisfied all the requirements in the year  
**2005**



  
Vice-Chancellor

  
Registrar

  
Dean

**20-May-06**

UV PROTECTED - TAMPER EVIDENT UV





*We certify that*

**Nonkululeko Sanele Khumalo**

*having complied with the requirements of the Higher Education Act*

*and the Institutional Statute, was admitted to the degree of*

**HONOURS BACHELOR OF SCIENCE**

*in Environmental Monitoring and Modelling*

*at a congregation of the University*

*on 19 June 2009*

Vice-Chancellor

University Registrar



Executive Dean



**Environmental Assessment  
Practitioners Association  
of South Africa**



Registration No. 2020/2888

***Herewith certifies that***

**Nonkululeko Sanele  
Mbasane**

***is registered as an***

**Environmental Assessment Practitioner**

***Registered in accordance with the prescribed criteria of Regulation 15. (1)  
of the Section 24H Registration Authority Regulations  
(Regulation No. 849, Gazette No. 40154 of 22 July 2016, of the  
National Environmental Management Act (NEMA), Act No. 107 of 1998, as  
amended).***

Effective: 01 March 2023

Expires: 29 February 2024

Chairperson

Registrar



## **APPENDIX A: PUBLIC PARTICIPATION**

### **PPP REPORT**

**APPLICANT: PEO ENHLE**

**REF NO.: NW30/5/1/3/2/11185MP**

#### INCLUDED IN THE REPORT:

1. IDENTIFYING I&AP
2. DATABASE FOR I&AP
2. WRITTEN NOTICES- BID & Final
3. PROOF OF SITE NOTICE
4. PROOF OF NEWSPAPER ADVERTISEMENT
5. LANDOWNER CONSULTATION
6. MINUTES OF MEETINGS
7. ATTENDANCE REGISTERS
8. COMMENTS AND RESPONSES REPORT
9. PROOF OF ISSUES RAISED

## **INTRODUCTION**

The Public Participation Process (PPP) for the proposed project has been undertaken in accordance with the requirements of NEMA (ACT 107 OF 1998) and in line with the principles of Integrated Environmental Management (IEM). IEM implies an open and transparent participatory process, whereby stakeholders and other I&AP's are afforded an opportunity to comment on the project. A PPP has been implemented to engage with I&AP's and meet the requirements for Public Participation as stipulated by the relevant legislation. The PPP provides stakeholders with information about the proposed project, and several opportunities to comment throughout the EIA/EMP process. This will ensure public involvement at each key step in the process and allow for comments, concerns, suggestions, and objections to the proposed project to be included in each of the submissions to the relevant Government Authorities.

In terms of the MPRDA and the NEMA, I&AP's must be given the opportunity to comment on the proposed project. The Basic Assessment Report aims to describe the proposed project, the environment in which the project is located, and the potential impacts that may result if the project goes ahead. The Draft Basic Assessment Report was made available for public/stakeholders' comment (a period of 30 days). The comments received from I&AP's (if there is any) are captured in Issues and Responses Report (IRR) accompanying this Report. A Final Assessment Report, including an EMPR, is compiled and presented to the Competent Authority. During the EIA phase for this project, the following steps were initiated, and all relevant documents are attached.

*Describe the process undertaken to consult interested and affected parties including public meetings and one on one consultation. NB the affected parties must be specifically consulted regardless of whether or not they attended public meetings. (Information to be provided to affected parties must include sufficient detail of the intended operation to enable them to assess what impact the activities will have on them or on the use of their land.*

## **1. IDENTIFYING I&AP**

The authorities for this project were identified from similar projects in the past. The authorities contacted with regards to this project include:

- Department of Mineral Resources (DMR);
- Department of Water and Sanitation (DWS);
- Department of Rural Development & Land Reform: Land Claims Commissioners Office.
- Madibeng Local Municipality.
- North-West Provincial Heritage Resources Authority (NWPHRA);
- Department of Economic Development, Environmental, Conversation and Tourism (DEDECT);
- South African Heritage Resources Agency (SAHRA);
- Northwest Parks Board;
- Bojanala Platinum District Municipality.
- Department of Economic Development & Tourism (DEDT).
- Department of Environmental Affairs (DEA);
- Traditional Authorities
- Municipal Councillor
- Landowners.

## **2. DATABASE FOR I&AP**



Organisation	Full Name	Designation	Email Address	Telephone Numbers	Postal Address
<b>South African Heritage Resources Agency (SAHRA)</b>	Andrew Salomon	Archaeological Heritage Impact Assessor	<a href="mailto:asalomon@sahra.org.za">asalomon@sahra.org.za</a>		
<b>PROVINCIAL GOVERNMENT</b>					
<b>Department of Mineral Resources (DMR) - NW</b>	<del>Phumudzo Nethwadzi</del>	Regional Manager	<del><a href="mailto:Phumudzo.Nethwadzi@dmr.gov.za">Phumudzo.Nethwadzi@dmr.gov.za</a></del>	(018) 487 9830	<del>Vaal University of Technology, Cnr. Magarete Prinsloo and Voortrekker Street</del>
	<del>Ms I Wesi</del>	<b>Secretary</b>	<del><a href="mailto:lpeleng.Wesi@dmre.gov.za">lpeleng.Wesi@dmre.gov.za</a></del>	(018) 487 9830	
	<del>Percy Makamu</del>		<del><a href="mailto:desmond.makamu@dmr.gov.za">desmond.makamu@dmr.gov.za</a></del>	(018) 487 4300	
	<del>Christopher Tshisevhe</del>	Case Officer	<del><a href="mailto:Chris.tshisevhe@dmr.gov.za">Chris.tshisevhe@dmr.gov.za</a></del>	(018) 487 4300	
	<del>Lorraine Nobela</del>		<del><a href="mailto:Lorraine.Nobela@dmr.gov.za">Lorraine.Nobela@dmr.gov.za</a></del>	0635021837	
<b>Department of Environmental Affairs (DEA)</b>	<del>Siboniso Mbense</del>	Deputy Director - Public Sector	<del><a href="mailto:SMbense@environment.gov.za">SMbense@environment.gov.za</a></del>	0123999387	
	<del>Sindiswa Dlomo</del>		<del><a href="mailto:sdlomo@environment.gov.za">sdlomo@environment.gov.za</a></del>	0123999390	
	<del>Nyiko Nkosi</del>		<del><a href="mailto:nnkosi@environment.gov.za">nnkosi@environment.gov.za</a></del>	0123999392	
	<del>Seoka Lekota</del>	Biodiversity Risk Management	<del><a href="mailto:SLekota@environment.gov.za">SLekota@environment.gov.za</a></del>	0123999573	
			<del><a href="mailto:EMaradwa@environment.gov.za">EMaradwa@environment.gov.za</a></del>		
	<del>Stanley Tshitwamulomoni</del>	Biodiversity	<del><a href="mailto:StanleyT@environment.gov.za">StanleyT@environment.gov.za</a></del>	0123999587	
	<del>Thobekile Zungu</del>	Biodiversity and Conservation	<del><a href="mailto:tzungu@environment.gov.za">tzungu@environment.gov.za</a></del>		
<b>North West Provincial Heritage Resources Authority (NWPHRA)</b>	<del>Mosiane Motlhabane</del>	Heritage Coordinator	<del><a href="mailto:mosianem@nwpg.gov.za">mosianem@nwpg.gov.za</a></del>	0183882753/2936 (086) 621 1240	<del>1st Floor Gaabomotho Building 760 Dr. James Moroka Drive Private Bag X90 Mmabatho</del>
<b>Water and Sanitation: North-West</b>	<del>Chadwick Lobakeng</del>	Provincial Head	<del><a href="mailto:lobakengc@dws.gov.za">lobakengc@dws.gov.za</a></del>		Private Bag X5, Mmabatho, 2735
	<del>Mampho Ramafoko</del>	Office Manager	<del><a href="mailto:ramafokom@dws.gov.za">ramafokom@dws.gov.za</a></del>		
	<del>Elize Ferris</del>	Senior Secretary	<del><a href="mailto:ferries@dws.gov.za">ferries@dws.gov.za</a></del>		
	<del>Selby Matsheka</del>	Strategic Support	<del><a href="mailto:matshekas@dws.gov.za">matshekas@dws.gov.za</a></del>		
	<del>Wendy Ralekoa</del>		<del><a href="mailto:RalekoaW@dws.gov.za">RalekoaW@dws.gov.za</a></del>	082 875 4158	Private Bag X352 Hartbeespoort 0216
	<del>Mr. J Maluleke</del>		<del><a href="mailto:malulekej@dws.gov.za">malulekej@dws.gov.za</a></del>	012 392 1409	

<b>Department of Water and Sanitation (DWS)- North West C32A, C32B, D41A, D41B</b>	Thato <u>Mjona</u>	Commentary Authority	<a href="mailto:mjonat@dws.gov.za">mjonat@dws.gov.za</a>	07123921499 07123921408 +27834880655	
<b>North-West :Department of Public Works and Transport</b>	Mr P Manzini		<a href="mailto:pdmanzini@nwpg.gov.za">pdmanzini@nwpg.gov.za</a>	018 388 1048	Private Bag X2080, Mmabatho, 2735
	Mr Johan van Wyk		<a href="mailto:Vanwykj@nwpg.gov.za">Vanwykj@nwpg.gov.za</a>	018) 388-1391	
	Sandile <u>Mbaniwa</u>	Chief Director: Infrastructure			
	HOD		<a href="mailto:bmofokeng@nwpg.gov.za">bmofokeng@nwpg.gov.za</a>	018200 8001 / 8009	
<b>Department of Rural Development and Land Reform</b>	Mr <u>Lengane Bogatsu</u>	Chief Director: Land Restitution Support (North West): Land Claims Commissioner:	<a href="mailto:lengane.bogatsu@drdlr.gov.za">lengane.bogatsu@drdlr.gov.za</a>	018 392 3080	
	Agnes <u>Montwedi</u>		<a href="mailto:Agnes.Montwedi@drdlr.gov.za">Agnes.Montwedi@drdlr.gov.za</a>		
	Keabetswe W <u>Mothupi</u>	Office of the Regional Land Claims Commissioner: North West (RLCC NW)	<a href="mailto:keabetswe.mothupi@drdlr.gov.za">keabetswe.mothupi@drdlr.gov.za</a>	018 388 7220	Cnr James Moroka and Sekame Drive, West Gallery, Mega City, Mmabatho, 2735
	<u>Tonakgolo Setlhabi</u>		<a href="mailto:tonakgolo.setlhabi@drdlr.gov.za">tonakgolo.setlhabi@drdlr.gov.za</a>	018 388 7000 018 388 7008	
<b>Department of Economic Development,</b>	Sammy <u>Mabula</u>	Environmental quality officer	<a href="mailto:smabula@nwpg.gov.za">smabula@nwpg.gov.za</a>	(018) 299 6710	Office 79 & 78 114 Chris Hani Street

<b>Environmental, Conversation and Tourism ( DEDECT)</b>	Basi <u>Dirole</u>		<a href="mailto:bdiole@nwpg.gov.za">bdiole@nwpg.gov.za</a>	018 – 389 5032/5527	Potchefstroom 2520
	Jonathan Denga	Director: Biodiversity Management		0827868710	
	Ms <u>Tharina Boshoff</u>	Environmental Policy, Planning and Coordination	<a href="mailto:tboshoff@nwpg.gov.za">tboshoff@nwpg.gov.za</a>		
	<u>Dumisa Seshabela</u>	Departmental Spokesperson	<a href="mailto:dseshabela@nwpg.gov.za">dseshabela@nwpg.gov.za</a>	018 387 7860 079 522 7375	
<b>North West Department of Agriculture and Rural Development</b>	<u>Motshabi Mohlalisi</u>	Control Environmental Officer Grade A: Development Impact Management	<a href="mailto:mmohlalisi@nwpg.gov.za">mmohlalisi@nwpg.gov.za</a>	082 658 0159	80 Church Street, Private Bag X82298 Rustenburg
	<u>Tharina Boshoff</u>	Director: Environmental Planning and Co-ordination	<a href="mailto:tboshoff@nwpg.gov.za">tboshoff@nwpg.gov.za</a>	0183895330/ 5656 0183895646	Agricentre Building, Cnr. Dr James Moroka and Stadium Road, Mmabatho
	Queen <u>Imasiku</u>	Environmental Officer	<a href="mailto:rsello@nwpg.gov.za">rsello@nwpg.gov.za</a> <a href="mailto:emahlangu@nwpg.gov.za">emahlangu@nwpg.gov.za</a> ; <a href="mailto:qimasiku@nwpg.gov.za">qimasiku@nwpg.gov.za</a>	0145927378 0866264695	80 Church Street, Rustenburg
	Dr Poncho <u>Mokaila</u>	HOD	<a href="mailto:pmokaila@nwpg.gov.za">pmokaila@nwpg.gov.za</a>	018 389 5146	Private Bag x2039 Mmabatho 2735

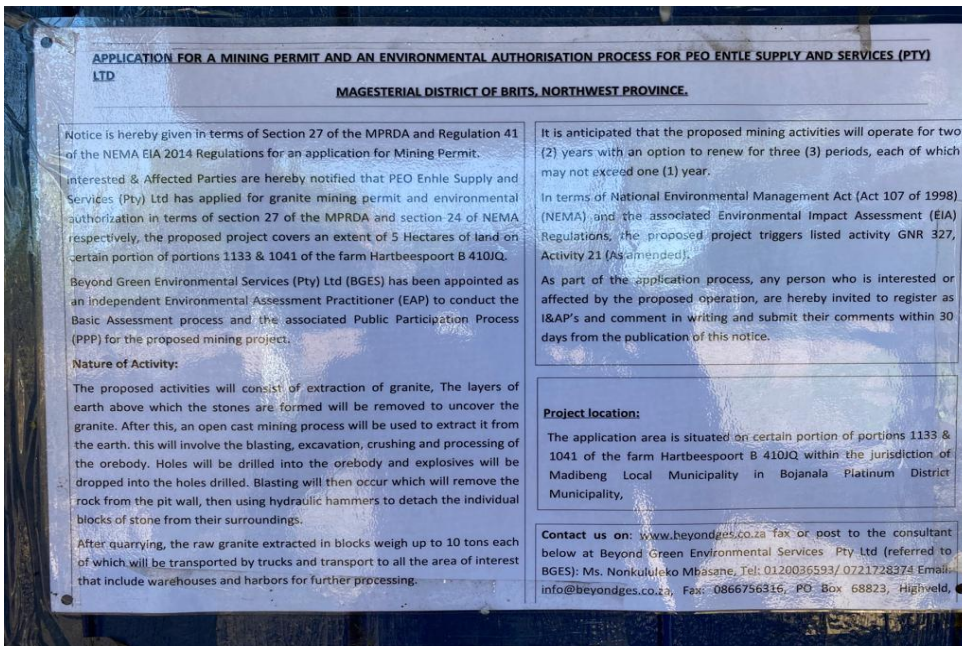
<b>Madibeng Local Municipality</b>	Given Motoma Itumeleng Masenya			012 318 8161 012 318 9107 012 318 9230	53 Van Velden Brits
<b>Bojanala Platinum District Municipality</b>	Mapula Msomi MF Mokati Lenake	Env officer	<a href="mailto:ignatiusk@bojanala.gov.za">ignatiusk@bojanala.gov.za</a> <a href="mailto:municipalmanager@bojanala.gov.za">municipalmanager@bojanala.gov.za</a> <a href="mailto:tebogoma@bojanala.gov.za">tebogoma@bojanala.gov.za</a> <a href="mailto:tsholofelod@bojanala.gov.za">tsholofelod@bojanala.gov.za</a>	014 590 4500	cnr. Beyers N Fatima Bhayat Rustenburg,

	Percy Matlapeng		<a href="mailto:pmatlapeng@nwpg.gov.za">pmatlapeng@nwpg.gov.za</a>	014 597 3597 076 494 1012	Private Bag X5, Mmabatho, 2735
	Tshegofatso Lekgari		<a href="mailto:tshegolekgari@nwpg.gov.za">tshegolekgari@nwpg.gov.za</a>	014 597 3597	
<b>Organisation</b>					
<b>Pilanesberg Platinum Mines (Pty) Ltd</b>	Info		<a href="mailto:info@ppmsa.co.za">info@ppmsa.co.za</a> <a href="http://www.ppmsa.co.za">www.ppmsa.co.za</a>	014 555 1800	
	Mr	Peter Lentsoane	<a href="mailto:PLentsoane@sedibeplatinum.com">PLentsoane@sedibeplatinum.com</a>	014 555 1800 0823190247	
<b>NW Provincial Heritage Resources Authority</b>	Mosiane Mothlabane		<a href="mailto:mosianem@nwpg.gov.za">mosianem@nwpg.gov.za</a>	+27 18 3882826	1 <sup>st</sup> Floor Gaabomotho Building 760 Dr. James Moroka Drive Mmabatho
<b>North West Parks Board</b>	Dinah Rangaka	Public Relations Manager	<a href="mailto:drangaka@nwpb.org.za">drangaka@nwpb.org.za</a>	0183971500/1507 018 397 1660 084 374 7935	
<b>South African Heritage Resources Agency (SAHRA)</b>	Natasha Higgitt	Heritage Officer: Archaeology, Palaeontology and Meteorites Unit	<a href="mailto:nhiggitt@sahra.org.za">nhiggitt@sahra.org.za</a>	021 462 4502 021 462 4509	
<b>LOCAL GOVERNMENT</b>					

### 3. WRITTEN NOTICES- BID & Final

### 4. PROOF OF SITE NOTICE





## 5. PROOF OF NEWSPAPER ADVERTISEMENT

PAGE 6

BRITS POS

5 MAY 2023



VLU-vroue spog met die voorskote wat hulle gemaak het. Christelle Buys, Fia van der Merwe, Karen Olivier-Rautenbach, Neeltjie Louw, Betsjie Putter en Yolanda de Waal.

**TLB**  
**TE HUUR**  
**(MET OPERATEUR)**  
**SKAKEL**  
**082-871-3990**

**NOTICE**  
**APPLICATION FOR MINING PERMIT**  
Notice is hereby given in terms of the MPRDA and Regulation 41 of the NEMA EIA 2014 Regulations for an application of a Mining Permit.  
**PEO Enhle Supply and Services (Pty) Ltd** have applied for a mining permit in terms of section 27 of the MPRDA and Environmental Authorization in terms of section 24 of NEMA.  
**Location:**  
The application area is situated on certain portion of portions 1133 & 1041 of the farm Hartbeespoort B 410JD within the jurisdiction of Hartbeespoort Local Municipality in Boputha District Municipality, the proposed project covers an extent of 5 Hectares of land.  
**Nature of Activity:**  
The proposed mining activity is quarry of granite; this will involve the crushing, blasting, and excavation of the rock ore. The proposed mining operation will occur as open cast mining required over a period of 2 years.  
**Opportunity to Participate:**  
Members of the public are invited to register as interested and/or affected parties (I&APs) submit written comments on the application process, via e-mail, sms, whatsapp or post, to BGES Pty Ltd.  
As part of the application process, any person who is interested or affected by the proposed operation, are hereby invited to register as I&AP's and comment in writing and submit their comments within 30 days from the date of this notice.  
For more info about the public meeting please contact Nonkululeko on the below contact details.  
Please contact: Nonkululeko Mbasane / P.O. Box 68823 / Highveld / 1 Byre Bridge Office Park, Centurion / Mobile/ Tel: 0721728374 / 0720036953 / Fax: 0866750216 / Email: nonku.mbasane@beyondges.co.za / www.beyondges.co.za



Die gasspreker, prof Carol-Ann Benn (middel) word deur Magda Owgen links en Neeltjie Louw (regs) vir haar inspirerende boodskap bedank.



Cecile du Plessis (regs) het die VLU tak se gelukkige trekking geborg en Betsjie Putter (links) het die geskenk aan April se wenner, Nadia Domus oorhandig.



Die gasvroue van die April-vergadering was Lena Pieterse, Jenny Pretorius, Aneska Small, Magda Owgen en Louise Herbst.

### Gesondheid 'n prioriteit vir VLU

**BRITS POS – BRITS – Die Vroue Landbou-unie van Brits, het tydens hulle April-vergadering, prof Carol-Ann Benn as gasspreker onthaal en sy het haar kennis oor borskanker met die vroue gedeel.**

Sy het vertel dat meeste mense dink kanker kan nie met hulle gebeur nie. Dit kan met enige mens gebeur en voorvoorsporing kan lewens red. Sy het daarop klem geleë dat mens nie moet skroom om gesondheidsorg te soek nie. Deur haar inspirerende woorde het sy vroue bemagtig en 'n bewustheid geskep vir almal om hul gesondheid, geestelik sowel as liggaamlik, 'n prioriteit te maak.

Die bestuur van die tak bedank die gasvroue (Lena Pieterse, Jenny Pretorius, Aneska Small en Louise Herbst), onder leiding van Magda Owgen, vir 'n insiggewende en gesellige oggend.

Tydens die vergadering is die wensters van Brits-tak se interne kompetisie aangekondig: Gebak: Aneska Small (1ste), Betsjie Putter (2de) en Karen Olivier Rautenbach (3de).

Skinkbord: Annelie Coetzter (1ste), Fia van der Merwe (2de) en Jana Lategan (3de).

Blomme: Karen Olivier Rautenbach (1ste), Aneska Small (2de) en Christine Janse van Rensburg (3de).

Voorskote: Neeltjie Louw (1ste), Betsjie Putter (2de) en Karen Olivier Rautenbach (3de).

Na afloop van die prysuitdeling het almal gesellig saam gekuier en heerlike verversings geniet.

**NO Joining Fee!**

Join  
Wellness  
World  
Gymnasium  
in May  
and pay no  
Joining Fee

T's & C's apply.

**Wellness**  
**WORLD**

**Brits: 012 252 2352/3/4**  
**Hartbeespoort: 081 357 1677**

## 6. LANDOWNER CONSULTATION

Landowners were consulted about the project.

### Public Meeting

Public meeting to explain more about the Environmental Authorization and mining permit application processes of the project, contents of the draft BAR and EMPr and to provide I&APs with an opportunity to raise their concerns/comments was held. Issues raised during the meeting and a copy of the agenda are attached within this final Basic Assessment Report.

## 7. MINUTES OF MEETINGS



**PROJECT NAME:** Pao Enhle Supply and Services (Pty) Ltd  
**VENUE:** Brits  
**Date:** 07 March 2023  
**Time:** 10:00

#### *Introduction*

Nonkululeko Mbasani opened the meeting and welcomed everyone she then asked the guests present to introduce themselves.

#### *Questions & Answers*

Submitted by:	Question/Comments	Response by BGES
Jafra	Where is the application situated?	Nonku: The application is within the boundary of an extend of 5 hectares (Ha) of land on portion of farm portion PORTIONS 1133&1041 OF THE FARM HARTEBESPOORT B 410JQ, (mining permit for Granite/Syenite)
Obakeng	Who's Pao Enhle?	Nonku: Its Mr Ratanang  Ratanang: As I told you before I'm in a process of applying the mining permit and once its granted I will come back and let everyone know and we can decide on how we going to work together as a community.
Charles	The next step will be us discussing the surface right?	Nonku: The department is not part of the surface right, and the community is always welcome to ask if they need clarity regarding the project
Jafra	1132 there's already an operation there, so is it possible to have someone to mine next to them mining the same granite?	Nonku: yes, its acceptable as long as its not the farm,




Fionah	What is needed from use for pao enhle to qualify for the mining Permit?	Nonku: Pao enhle need to do the environment assessment, the act says we must do the public meeting, adverts and site notice which we already done

#### *Closure.*

Closed the meeting and the meeting was adjourned.

8. ATTENDANCE REGISTERS



BEYOND GREEN  
ENVIRONMENTAL SERVICES

+27 31 003 2900 / +27 12 003 6593  
www.beyondges.co.za  
info@beyondges.co.za

Meeting Attendance Register				
Project Name: Mining Permit- PORTIONS 1133 & 1041 OF THE FARM HARTEBEEPOORT B 410JQ				
Company Name: PEO ENHLE SUPPLY AND SERVICES (PTY) LTD				
Date: 07 March 2023				
Time: 10:00		Venue: Brits		
No.	Initials and Surname of Attendee	Designation/Organization	Contact Number/Email	Signature
1	JAFIA- TSELANE	N.C.P.A SECRETARY	081-871-2444	J. S.
2	Obakeng Setshedi	NCPA	082 979 0829	Setshedi
3	Jeremie Lepone Ramatu Swane	NCPA CHAIRPERSON	066 074 9556	[Signature]
4	LERETHADI MORE	NCPA	060 252 7777	MORE
5	Charles Mose	NCPA	076 888 5908	[Signature]
6	Fioran MASILO	N.C.P.A	082 768 9765	Masilob
7	ISAAC THEKLO	NCPA	076 106 9073	[Signature]
8	Nonkululeko Mbasane	BUES	info@beyondges.co.za 0721725376	[Signature]
9	Injisekani Matam	BUES:	info@beyondges.co.za	
10				
11				
12				
13				

11 of Olievenhoutbosch & Jean Avenue  
Centurion  
0157

Director: Nonkululeko S Mbasane  
Reg no. 12015/238102/071  
VAT no. 4580290619

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## 9. COMMENTS AND RESPONSES REPORT



**dedect**

Department:  
Economic Development, Environment,  
Conservation and Tourism  
North West Provincial Government  
REPUBLIC OF SOUTH AFRICA



80 Kerk Street  
Rustenburg  
0300  
Republic of South Africa  
[www.nwpg.gov.za](http://www.nwpg.gov.za)

**CHIEF DIRECTORATE: ENVIRONMENTAL SERVICES**  
**DIRECTORATE: ENVIRONMENTAL QUALITY MANAGEMENT**

Tel: +27 (14) 597 3598  
Fax: +27(14) 592 3553  
Enquiries: R. Molemane  
E-mail: [rsello@nwpg.gov.za](mailto:rsello@nwpg.gov.za)

Attention: Nonkululeko S Mbasane  
Beyond Green Environmental Services (Pty) Ltd  
C/r Olievenhoutbosch & Jean Avenue  
**CENTURION**  
0157

REFERENCE: NWP/DMR/17/2023  
DMR REF NO: NW30/5/3/2/3/2/11185MP

Tel No.: (012) 003 6593  
Email: [info@beyondges.co.za](mailto:info@beyondges.co.za)

Dear Madam

**MINING PERMIT APPLICATION FOR GRANITE ORE ON PORTION OF PORTIONS 1133 & 1041 OF THE FARM HARTEBESPOORT B 410 JQ, MADIBENG LOCAL MUNICIPALITY, NORTH WEST PROVINCE**

The Department have received the request to comment on **Draft Basic Assessment Report** on **08 May 2023**.

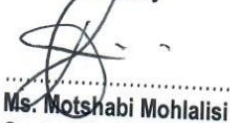
Please note that the application has been assigned to **Ms Tshegofatso Nkone**, reachable at 80 Kerk Street; **Rustenburg Office**

Tel:- 065 371 2203 / Email: - [TshegoLekari@nwpg.gov.za](mailto:TshegoLekari@nwpg.gov.za)

The file reference number is **NWP/DMR/17/2023**. Kindly quote the reference number and the name of the officer it has been assigned to in any future correspondence in respect of the application.

If you need any clarification regarding this acknowledgment letter please contact **Ms. Rose Molemane** at **072 701 9350**

Yours Faithfully



**Ms. Motshabi Mohlalisi**  
Control Environmental Officer: Grade B - Development Impact Management  
North West Department of Economic Development, Environment, Conservation & Tourism

Date: 24/05/2023



Let's Grow North West Together



**10. ISSUES RAISED**

<b>Interested and Affected Parties</b> List the names of persons consulted in this column, and mark with an X where those who must be consulted were in fact consulted.	<b>Date</b> <b>Comments</b> <b>Received</b>	<b>Issues raised</b>	<b>EAPs response to</b> <b>issues as</b> <b>mandated by the</b> <b>applicant</b>	<b>Section and paragraph reference in</b> <b>this report where the issues and or</b> <b>response were incorporated.</b>
<b>AFFECTED PARTIES</b>				
<b>Landowner/s</b>				
<b>Lawful occupier/s of the land</b>				
<b>Landowners or lawful occupiers</b> <b>On adjacent properties</b>				
<b>Municipal</b>				
<b>Organs of state (Responsible for</b> <b>infrastructure that may be affected)</b> <b>Roads Department,</b> <b>Eskom, Telkom</b>				
<b>Communities</b>				
<b>Traditional Authorities</b>				

<b>Dept. of Economic Development &amp; Tourism</b>					
<b>Dept. of Environmental Affairs</b>					
<b>Department of Environment, Forestry and Fisheries (DEFF)</b>					
<b>Dept. of Water and Sanitation (DWS)</b>					
<b>Land Claims Commissioners Office</b>					
<b>Dept. of Mineral Resources (DMR)</b>					
<b>Other Competent Authorities affected</b>					
<b>Other Affected and Interested Parties</b>					

## Appendix C: Locality Map

### PLAN CONTEMPLATED IN REGULATION 2.2 OF THE MPRDA, 2002 SHOWING THE LAND AND PROSPECTING AREA TO WHICH THE APPLICATION RELATES

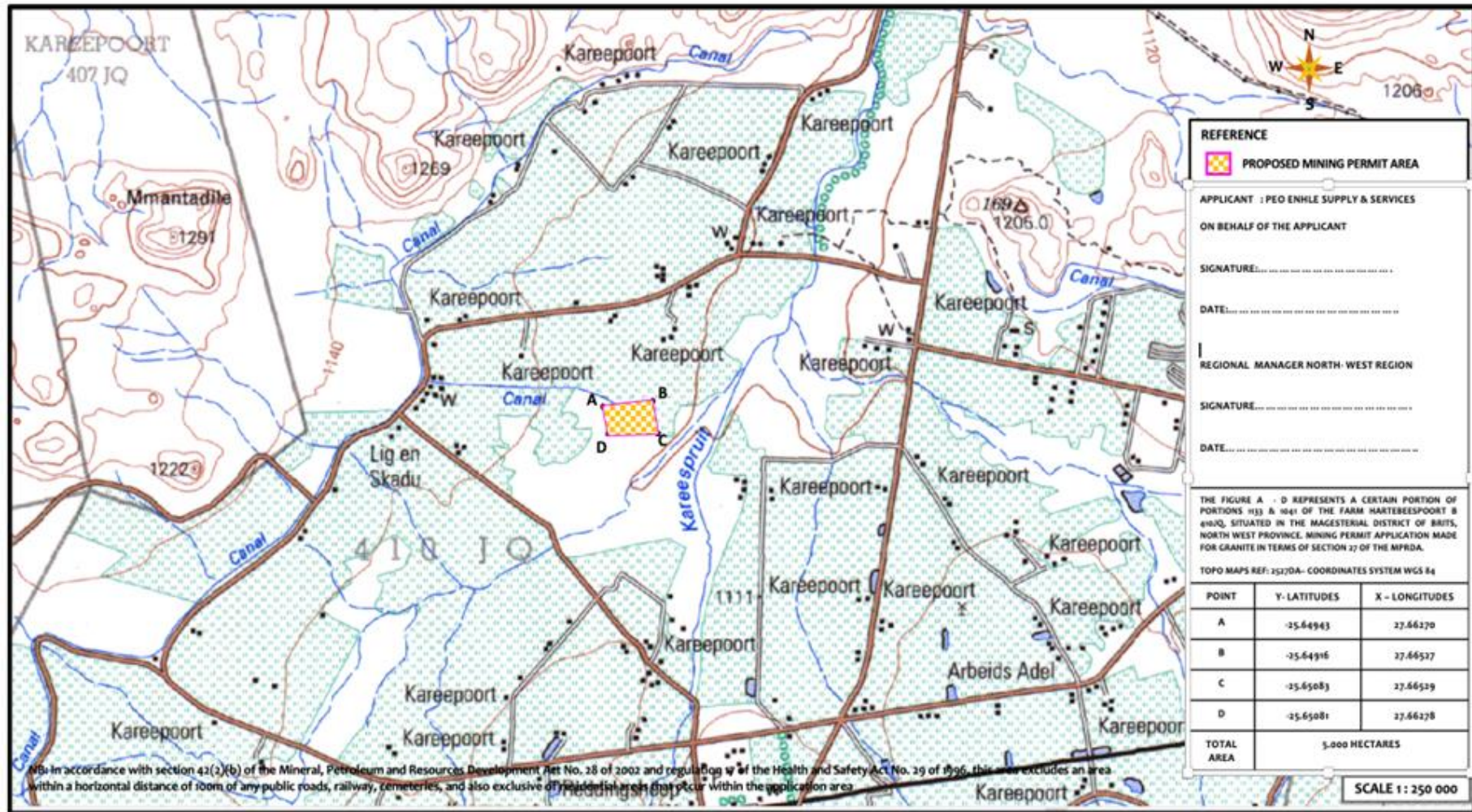


Figure 16: Locality map

-END-