



**mineral resources**

Department:  
Mineral Resources  
**REPUBLIC OF SOUTH AFRICA**

**FINAL 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).

**NAME OF APPLICANT:** [Free State Department of Community Safety, Roads and Transport](#)

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**FILE REFERENCE NUMBER SAMRAD:** [FS 30/5/1/1/2/02145 BP](#)

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## ABBREVIATIONS USED IN THIS REPORT

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<b>DMR</b>	:	Department of Mineral Resources.
<b>DWS</b>	:	Department of Water and Sanitation.
<b>ECO</b>	:	Environmental Control Official.
<b>EIA</b>	:	Environmental Impact Assessment.
<b>EMPr</b>	:	Environmental Management Programme.
<b>FS</b>	:	Free State.
<b>IAP</b>	:	Interested and Affected Parties.
<b>LOM</b>	:	Life of Mine.
<b>MPRDA</b>	:	Minerals and Petroleum Resources Development Act.
<b>NEMA</b>	:	National Environmental Management Act.
<b>SAHRA</b>	:	South African Heritage Resources Agency.
<b>SAPS</b>	:	South African Police Services.

## 1. IMPORTANT NOTICE

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

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

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

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

**It is furthermore an instruction that** the Environmental Assessment Practitioner must process and interpret his/her research and analysis and use the findings 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 uninterpreted information and that it unambiguously represents the interpretation of the applicant.

## **2. Objective of the basic assessment process**

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

- (a) determine the policy and legislative context within which the proposed activity is located and how the activity complies with and responds to the policy and legislative context;
- (b) identify the alternatives considered, including the activity, location, and technology alternatives;
- (c) describe the need and desirability of the proposed alternatives,
- (d) through the undertaking of an impact and risk assessment process inclusive of cumulative impacts which focused on determining the geographical, physical, biological, social, economic, heritage, and cultural sensitivity of the sites and locations within sites and the risk of impact of the proposed activity and technology alternatives on 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.

**PART A**  
**SCOPE OF ASSESSMENT AND BASIC ASSESSMENT REPORT**

**3. Contact Person and correspondence address**

**a) Details of**

**i) Details of the EAP**

Name of The Practitioner/s: [Mr. CW Vermeulen](#)

Tel No.: [051 412 6350 / 082 824 9308](#)

Fax No. : [051 412 6351](#)

e-mail address: [mel@envmgp.com](mailto:mel@envmgp.com) / [cwv@envmgp.com](mailto:cwv@envmgp.com)

**ii) Expertise of the EAP.**

**(1) The qualifications of the EAP**

(with evidence).

[CW Vermeulen holds a BSc. Degree in Environmental and Biological Sciences. The full CV of the EAP is attached in Appendix 1.](#)

**(2) Summary of the EAP's past experience.**

(In carrying out the Environmental Impact Assessment Procedure)

[The Registered EAP \(Mr. CW Vermeulen\) has over 7 years environmental assessment experience in projects covering waste management, mining permits or rights, road construction, infrastructure developments, agricultural developments, etc.](#)

**b) Location of the overall Activity.**

<b>Farm Name:</b>	<a href="#">Farm Beersheba No.13, Portion 2</a>
<b>Application area (Ha)</b>	<a href="#">4,9ha</a>
<b>Magisterial district:</b>	<a href="#">Lindley Magisterial District</a>
<b>Distance and direction from nearest town</b>	<a href="#">12km south west of Lindley</a>
<b>21 digit Surveyor General Code for each farm portion</b>	<a href="#">F0220000000006100002</a>

### **c) Locality map**

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

The locality map is shown in [Appendix 2](#)

### **d) 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

**Environmental Management Group** is submitting an application for a borrow pit on behalf of the Free State Department of Community Safety, Roads, and Transport (**The Applicant**). This Final Basic Assessment pertains to the proposed borrow pit operation located approximately 12 km Southwest of Lindley town, falling under the jurisdiction of the Lindley Magisterial district. The primary objective of this endeavour is to legalize and permit the use of the existing borrow pit into conformity with the updated regulations set forth by the **Department of Mineral Resources and Energy**.

The envisioned project encompasses an area of approximately 4.9ha, marked by disturbed indigenous vegetation. The focal point of this undertaking revolves around the extraction of weathered dolerite material, a resource vital for the forthcoming refurbishment of the R707 road, and as a critical resource for future development projects. To achieve this, the extraction process will employ surface mining techniques, involving a series of steps, including winning, classifying, concentrating, crushing, screening, and washing, all designed to prepare the dolerite material for its intended purpose.

Throughout the operational phase of the proposed borrow pit, only mobile and temporary structures will be employed. This entails the establishment of a site office and an area for vehicle parking spanning approximately 0.5ha. Furthermore, approximately 853,07m of fencing will be erected to enclose the borrow pit mining area.

It is essential to highlight that due to the specific nature of the material being extracted (weathered dolerite), the excavation process will exclusively employ Excavators and TLBs. This mining operation will be characterized as a shallow surface mining endeavour, systematically creating "cuts" or mineable faces before transitioning to the subsequent cut. It is important to note that no blasting activities will be necessary. The Environmental Assessment Practitioner overseeing this proposed project is committed to ensuring that all activities are executed in a manner that aligns with environmental responsibility and full compliance with the requisite regulations.

**(i) Listed and specified activities**

<b>NAME OF ACTIVITY</b>  (E.g. For prospecting - drill site, site camp, ablution facility, accommodation, equipment storage, sample storage, site office, access route etc...etc...etc  E.g. for mining,- excavations, blasting, stockpiles, discard dumps or dams, Loading, hauling and transport, Water supply dams and boreholes, accommodation, offices, ablution, stores, workshops, processing plant, storm water control, berms, roads, pipelines, power lines, conveyors, etc...etc...etc.)	<b>Aerial extent of the Activity</b>  <b>Ha or m<sup>2</sup></b>	<b>LISTED ACTIVITY</b>  <b>Mark with an X where applicable or affected.</b>	<b>APPLICABLE LISTING NOTICE</b>  <b>(GNR 544, GNR 545 or GNR 546)</b>
<p><b>Listing Notice 1, Activity 21 E - Any activity including the operation of that activity for which the Minister responsible for the mineral resources has issued an exemption in a Government Notice in terms of section 106(1) of the Mineral and Petroleum Resources Development Act, as well any other applicable activity as contained in this Listing Notice or in Listing Notice 3 of 2014, required for the exercising of such exempted activity.</b></p> <p><i>Activity 21E of Listing Notice 1 will only be triggered for activities commencing on or after 11 December 2021. If an organ of state has commenced with the use of a borrow pit before the effective date of 11 December 2021, environmental authorisation will not be required for the current operations covered in the scope of the approved EMPr (under the MPRDA).</i></p>	<p>4,9ha</p>	<p>Activity No.21 E X</p>	<p>NEMA Listing Notice 1, GNR 517 of 11 June 2021</p>

**(ii) 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 Free State Department of Roads and Public Works requires building aggregates and materials that will be resourceful to the forthcoming refurbishment and upgrading of the R707 road. This will also be a critical resource to future development projects surrounding the area. When mining activities start, existing gravel roads will be used to grant access to the borrow.

Due to the historical mining activities and operations that occurred in the past from the proposed borrow pit, the ecological status and the vegetation of the proposed site is already disturbed meaning the proposed borrow pit activities and the environmental impacts to be relatively low. If topsoil and overburden need to be removed before mining the materials, they will be stockpiled correctly and used again during the rehabilitation of the borrow pit. Mining activities will be done primarily by excavator and tipper trucks will remove mined materials from the site.



**Material excavated from the borrow pit will be processed onsite in the following manner:**

For the excavation of G5 to G7 material, an excavator will be utilised and all mining operation will be of a shallow surface open cast. An excavator will simply excavate the material and load the excavated material on to hauling trucks

**e) Policy and Legislative Context**

<b>APPLICABLE LEGISLATION AND GUIDELINES USED TO COMPILE THE REPORT</b> (a description of the policy and legislative context within which the development is proposed including an identification of all legislation, policies, plans, guidelines, spatial tools, municipal development planning frameworks and instruments that are applicable to this activity and are to be considered in the assessment process)	<b>REFERENCE WHERE APPLIED</b>	<b>HOW DOES THIS DEVELOPMENT COMPLY WITH AND RESPOND TO THE LEGISLATION AND POLICY CONTEXT.</b>  (E.g. In terms of the National Water Act a Water Use License has/ has not been applied for)
<a href="#">Mineral and Petroleum Resources Development Act, No. 28 of 2002</a>	<a href="#">Section 106</a>	<a href="#">Section 106 exempts the organ of state from the provisions of section 27 of the MPRDA (Act 28 of 2002). Provided subsection (2) is adhered to (refer to section 39 of the MPRDA Act 28 of 2002).</a>
<a href="#">Mineral and Petroleum Resources Development Act, No. 49 of 2008</a>	<a href="#">Section 76</a>	<a href="#">Section 76 of the MPRDA (Act 49 of 2008) indicates the repeal of section 39 of the MPRDA Act 28 of 2002 and introduces the need for the organ of state to submit the relevant reports in accordance with chapter 5 of the NEMA in order to obtain environmental authorisation.</a>

**f) 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).

In light of South Africa's rapid growth and the increasing demand for infrastructure development, it is imperative to examine the essential role of a proposed borrow pit which will be situated at Farm Beersheba No. 13, Portion 2 and is 12km south west of Lindley and falls within Nketoana local municipality. This discussion will underscore the significance and desirability of such a resource in facilitating the much-needed refurbishment and expansion of our road networks.

Constructing and refurbishing roads plays a pivotal role in the socio-economic development and overall well-being of a region or nation. Firstly, a well-maintained road network enhances connectivity, allowing for the efficient movement of goods, services, and people. This, in turn, fosters economic growth by reducing transportation costs and enabling businesses to reach new markets more easily. Improved roads also lead to increased access to education, healthcare, and other essential services, particularly in remote areas where transportation infrastructure is often lacking. Additionally, better road conditions enhance road safety, reducing accidents and fatalities, which is crucial for preserving human lives and minimizing the social and economic burden of road accidents.

Furthermore, road construction and refurbishment projects generate significant employment opportunities. They create jobs not only directly through construction work but also indirectly by supporting related industries such as construction materials manufacturing and transportation.

This boost to employment helps alleviate poverty and supports local economies. Moreover, modernizing and maintaining road infrastructure contributes to environmental sustainability. New road construction projects can incorporate eco-friendly designs and materials, while maintenance efforts can reduce emissions by optimizing traffic flow and minimizing congestion. In summary, investing in road construction and refurbishment is essential for economic growth, social development, job creation, safety, and environmental sustainability, making it a cornerstone of infrastructure development in any region or country.

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

The selected borrow pit mining area has been carefully chosen as the most suitable option for the intended upcoming development. This proposed borrow pit mining area contains weathered dolerite materials, which are crucial resources needed for the restoration of the R707 road. The necessary authorization and permit must be obtained to enable the responsible use of this borrow pit for infrastructure development and redevelopment, as outlined in the proposed plans.

The selection of alternative sites hinges on various factors, with paramount importance placed on their suitability for the intended road refurbishment and potential future development projects. Prior to the final selection, a meticulous process was employed to screen potential borrow pit alternatives based on the following criteria:

- Proximity to the R707, which directly influences hauling costs.
- Historical evidence of landowner compensation for these borrow pits.
- Proximity to environmentally sensitive elements such as rivers, wetlands, and areas of ecological significance.
- Material suitability, as only a specific quality of crushed dolerite is acceptable for road construction purposes.

The mining activities will be basic with the following occurring on the proposed site:

- Construction and upgrading of existing gravel roads to gain access to the borrow pit,
- Clearance of vegetation and stockpiling of topsoil and overburden,
- Step wise (cuts) excavation of the dolerite material through means of an excavator.
- Transportation of the excavated material through means of tipper trucks to the project location.

Modern mining techniques will be employed to reduce both operational expenses/costs and environmental repercussions. Given the straightforward nature of borrow pit, there are no other technology alternatives recommended or available.

To safeguard the well-being of the local community and the welfare of free-roaming wildlife, individuals with a strong sense of responsibility will oversee these operations. This oversight will include strict adherence to the guidelines set forth in the Mine Health and Safety Act and the National Environmental Management Act to ensure the safety and protection of both people and the environment.

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

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

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

With reference to the site plan provided as Appendix 4 and the location of the individual activities on site, provide details of the alternatives considered with respect to:

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

a) The site is located on Beersheba No. 13, Portion 2, Lindley, Nketoana Local Municipality, Free State Province.

b) The activity that will be undertaken is mining and the method used will be basic shallow surface open-cast mining.

c) Areas that will be dedicated for the storage of topsoil and mined material stockpiles will be demarcated prior to the commencement of stripping. Due to the limited scope of the activities, only one layout is considered in this report.

d) No technology alternatives are considered in the report.

e) No operational alternatives are considered in the report.

f) The No-go alternative implies that no material from the proposed area will be available.

## ii) 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 following public participation process was conducted for the project:

- Advertisements was placed in a local and provincial newspaper
- A background information document with key aspects of the project drafted and provided to interested and affected parties.
- Site notices were placed at the site.
- Written notices were given to the municipality and to identified government departments and provincial government with infrastructure close to the project site.
- Written notices were given to government department whose jurisdiction cover environmental issues.
- The landowner and lawful occupiers were contacted directly and notified of the project.

The following Interested and affected parties were identified:

- Free State Department of Water and Sanitation (DWS)
- Free State Department of Public Works and Infrastructure
- Free State Department Cooperative Governance and Traditional Affairs
- Department of Agriculture, Land Reform and Rural Development (DALRRD)
- Free State Department of Agriculture and Rural Development
- Thabo Mofutsanyane District Municipality Municipal Manager
- Nketoana Local Municipality (Municipal Manager)
- Nketoana Local Municipality (Mayor)
- Nketoana Local Municipality (Councillor)
- SAHRIS
- Free State Department of Mineral Resources and Energy

iii) **Summary of issues raised by I&As**  
 (Complete the table summarising comments and issues raised, and reaction to those responses)

Interested and Affected Parties		Date	Issues raised	EAPs response to issues as mandated by the applicant	Section and paragraph reference in this report where the issues and or response were incorporated.
List the names of persons consulted in this column, and Mark with an X where those who must be consulted were in fact consulted.		Comments Received			
<b><u>AFFECTED PARTIES</u></b>					
Landowner/s	X				
Mr. Willie van Huyssteen	X	N/A	No issues were raised	Not Applicable	Not Applicable
<b>Lawful occupier/s of the land</b>					
Not Applicable	X	N/A	No issues were raised	Not Applicable	Not Applicable
Landowners or lawful occupiers on adjacent properties	X				
Not Applicable	X	N/A	No issues were raised	Not Applicable	Not Applicable
Municipal councillor	X				
Municipality	X				
<b>Organs of state (Responsible for infrastructure that may be affected Roads Department, Eskom, Telkom, DWA e</b>					
Department of water and sanitation	X	Not Applicable	No issues were raised	Not Applicable	Not Applicable

Thabo Mofutsanyane District Municipality	X	Not Applicable	No issues were raised	Not Applicable	Not Applicable
Nketoana Local Municipality	X	Not Applicable	No issues were raised	Not Applicable	Not Applicable
<b>Communities</b>					
Not Applicable					
<b>Dept. Land Affairs</b>					
Department of Agriculture, Land Reform and Rural Development	X	Not Applicable	No issues were raised	Not Applicable	Not Applicable
<b>Traditional Leaders</b>					
None are applicable	X	Not Applicable	No issues were raised	Not Applicable	Not Applicable
<b>Dept. Environmental Affairs</b>					
Department of Rural Development and Land Reform	X	Not Applicable	No issues were raised	Not Applicable	Not Applicable
Department of Mineral Resources and Energy	X	Not Applicable	No issues were raised	Not Applicable	Not Applicable
<b>Other Competent Authorities affected</b>					
Not Applicable		X			
<b><u>OTHER AFFECTED PARTIES</u></b>					
None at this stage		X			
<b><u>INTERESTED PARTIES</u></b>					
None at this stage		X			

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

**(1) Baseline Environment**

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

(its current geographical, physical, biological, socio- economic, and cultural character).

The proposed borrow pit is under the jurisdictional control of Nketoana Local Municipality, within the Thabo Mofutsanyane District Municipality. As aforementioned that the borrow pit is 12km south west from Lindley, which is a small town situated on the banks of the Vals River in the eastern region of the Free State province of South Africa. The main route to the town is the R70 road. Lindley, together with its neighbouring towns of Reitz, Petrus Steyn and Arlington form the Nketoana Local Municipality.

Physical landscape features of the Central Free State Grassland is typically undulating plains. The study area's landscape is gently sloping, with the slope ascending from the western parts of the study area to the eastern parts of the study area. Altitudes of the study area range from 1 626 m in the west to of the study area to 1 637 m in the east of the study area. The description of the physical environment observed on site agree with that of the vegetation type of Mucina and Rutherford (2006) in which the study area is located (SANBI, 2006-2018).

The study area is located within 11 km of Lindley, in a largely agricultural environment. Roughly less than 50% of the site has been transformed through previous mining activities. Remaining natural vegetation is considered in fair ecological functioning due to impacts by surrounding agricultural practices and previous mining activities within the old borrow pit area

Vegetation found on site showed signs of previous mining activities which resulted in the sites vegetation deviating slightly from the regional vegetation type of the area. This deviation is seen in the lack of several expected dominant grass species of the Central Free State Grassland vegetation type. Because of this, the ecological functioning of the site is likely negatively affected by the previous mining activities. In addition to this, there was a lack of faunal species occurrence and signs of their occurrence within the study area.

According to the Stats SA (2001-2011), The population size of the Nketoana Local Municipality is estimated at approximately 60 324, that is 8% of the total population of Thabo Mofutsanyana. The languages spoken in Nkentoana are predominantly Sesotho, Isizulu and Afrikaans. There are 17 318 households (Census 2011) in the Nketoana Local Municipality. The municipality covers a total area of 5 611km<sup>2</sup>, and has an average household size of 3,5 persons per household. In the municipality, 72% of households do not have access to piped water inside the dwelling unit, 39% are without access to flush toilets, and 15% are without access to electricity. The main economic activities in the area are agriculture and retail businesses. Nketoana Local Municipality is a fertile agricultural region and approximately 20,6% of the economically active population is employed in the agricultural sector.

**(b) Description of the current land uses.**

The description of the current land use is designated and allocated primarily for Agricultural purposes and related activities such as grazing for livestock.

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

There are no environmental features and infrastructure on to the proposed site.

**(d) Environmental and current land use map.**

(Show all environmental, and current land use features)

Please refer to [Appendix 4](#) for the visual representation of the current land use and the environment.

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

(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).

Please refer to [Appendix 5](#) for a detailed Impact assessment report.

**vi) 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).

Please refer to [Appendix 5](#) for a detailed Methodology used.

**vii) 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 borrow pit mining area lies within an already disrupted indigenous vegetation, primarily due to past unpermitted mining activities. Consequently, the environmental repercussions of the proposed project on the receiving environment are expected to be minimal. When considering both the suggested site layout and potential alternatives, the overall impact appears negligible, given that the site covers a relatively small area of 4.9ha.

**viii) 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).

Please refer to [Appendix 5](#) for the proposed mitigation measures for each aspect.

**ix) Motivation where no alternative sites were considered.**

As previously mentioned above that the selection of the alternative sites hinges on various factors, with paramount importance placed on their suitability for the intended road refurbishment and potential future development projects. Prior to the final selection, a meticulous process was employed to screen potential borrow pit alternatives based on the following criteria:

- Proximity to the R707, which directly influences hauling costs.

- Historical evidence of landowner compensation for this borrow pit.
- Proximity to environmentally sensitive elements such as rivers, wetlands, and areas of ecological significance.
- Material suitability, as only a specific quality of crushed dolerite is acceptable for road construction purposes.

As this screening process was conducted prior to the final selection of this borrow pit, all other non-feasible alternative sites were removed. Therefore, no alternative sites are considered.

**x) Statement motivating the alternative development location within the overall site. (Provide a statement motivating the final site layout that is proposed)**

No other alternative development or site layout within the overall site will or have been considered. If any such alternative does arise, the information will then be updated prior submission of this Final BAR. It is important to also consider that the proposed development site is quite small and as such leaves very little space for alternative site layouts. Also considering the site's small size, it is the EAP's opinion that if alternative layouts are drafted this will not result in any significant impacts differing from the preferred layout.

**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.)**

Information related to the environmental issues and risks about the process is contained in Appendix 5.



**j) 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).

Kindly note that a comprehensive impact assessment is attached to Appendix 5

<b>NAME OF ACTIVITY</b>  (E.g. For prospecting - drill site, site camp, ablution facility, accommodation, equipment storage, sample storage, site office, access route etc...etc...etc  E.g. For mining,- excavations, blasting, stockpiles, discard dumps or dams, Loading, hauling and transport, Water supply dams and boreholes, accommodation, offices, ablution, stores, workshops, processing plant, storm water control, berms, roads, pipelines, power lines, conveyors, etc...etc...etc.)	<b>POTENTIAL IMPACT</b>  (Including the potential impacts for cumulative impacts)  (e.g. dust, noise, drainage surface disturbance, fly rock, surface water contamination, groundwater contamination, air pollution etc...)	<b>ASPECTS AFFECTED</b>	<b>PHASE</b> In which impact is anticipated  (e.g. Construction, commissioning, operational Decommissioning, closure, post-closure)	<b>SIGNIFICANCE if not mitigated</b>	<b>MITIGATION TYPE</b>  (modify, remedy, control, or stop) through (e.g. noise control measures, storm-water control, dust control, rehabilitation, design measures, blasting controls, avoidance, relocation, alternative activity etc. etc)  E.g. Modify through alternative method. Control through noise control Control through management and monitoring through rehabilitation..	<b>SIGNIFICANCE if mitigated</b>
<b>Mining establishment (fencing, signage, access, site office, etc.).</b>	Loss of floral and faunal diversity	Plant and animal diversity and ecology and aesthetics.	Operational phase	Low	<ul style="list-style-type: none"> <li>• Remedy through restoration and rehabilitation</li> <li>• Storm-water control</li> <li>• Limit footprint and control through loss of indigenous flora and fauna mitigation measures.</li> <li>• Also refer to the recommendations and mitigations in the Ecological report and impact assessment report.</li> </ul>	Low

	Habitat destruction/loss	Plant and animal diversity, ecology and aesthetics.	Operational phase	Low	<ul style="list-style-type: none"> <li>• Remedy through habitat restoration.</li> <li>• Limit footprint and control through habitat loss mitigation measures.</li> <li>• Also refer to the recommendations and mitigations in the Ecological report and impact assessment report.</li> </ul>	Low
	Visual scarring	Aesthetics	Operational phase	Low-Medium	<ul style="list-style-type: none"> <li>• Limit footprint to the authorised area.</li> </ul>	Low-Medium
	Soil erosion and soil instability	Ecology and soil instability	Operational phase	Low-Medium	<ul style="list-style-type: none"> <li>• Limit footprint to the authorised area.</li> <li>• Soil conservation techniques</li> <li>• Dust control measures</li> </ul>	Low
<b>Clearance of area for mining/ removal of top soil</b>	Loss of floral and faunal diversity and habitat.	Plant and animal diversity, land use and aesthetics	Operational phase	Low	<ul style="list-style-type: none"> <li>• Limit footprint to the authorised area.</li> <li>• Remedy through rehabilitation</li> <li>• Also refer to the recommendations and mitigations in the Ecological report and impact assessment report.</li> </ul>	Low
	Visual scarring.	Aesthetics	Operational phase	Low-Medium	<ul style="list-style-type: none"> <li>• Remedy through site decommissioning and rehabilitation</li> </ul>	Low-Medium
	Floral alien and invasives species (AIS).	Ecology biodiversity and aesthetics	Operational phase	Low-Medium	<ul style="list-style-type: none"> <li>• Remedy through rehabilitation.</li> <li>• Control and management through floral alien and invasives species mitigation measures.</li> </ul>	Low

					<ul style="list-style-type: none"> <li>Also refer to the recommendations and mitigations in the Ecological report and impact assessment report.</li> </ul>	
	Soil erosion and soil instability	Ecology and aesthetics	Operational phase	Low-Medium	<ul style="list-style-type: none"> <li>Control through soil conservation techniques</li> <li>Remedy through soil erosion and soil instability mitigation measures.</li> </ul>	Low-Medium
<b>Excavation of material</b>	Dust	Air quality	Operational phase	Low-Medium	<ul style="list-style-type: none"> <li>Use of dust control measures</li> <li>Reduce vehicle speed to minimize dust emissions.</li> </ul>	Low
	Surface water drainage and disruption	Water resources	Operational phase	Low-Medium	<ul style="list-style-type: none"> <li>Implementation of storm water action plans.</li> <li>Mining to remain within the authorised footprint.</li> <li>Surface and water drainage mitigation measures.</li> </ul>	Low
	Soil erosion and soil instability	Ecology, topography and aesthetics	Operational phase	Low	<ul style="list-style-type: none"> <li>Control through slope management</li> <li>Soil erosion and soil instability mitigation measures.</li> </ul>	Low
	Noise and vibrations	Noise	Operational phase	Low-Medium	<ul style="list-style-type: none"> <li>Control through noise measures.</li> <li>Maintenance and regular upkeep of equipment to reduce noise and vibration.</li> <li>Install isolation under machinery.</li> </ul>	Low

	Visual scarring	Aesthetics	Operational phase	Low-Medium	<ul style="list-style-type: none"> <li>Remedy through rehabilitation of already mined areas.</li> </ul>	Low-medium
	Loss of artefacts and fossils	Heritage resources and fossil records	Operational phase	Low	<ul style="list-style-type: none"> <li>Control through loss of artefacts and fossil mitigation measures.</li> </ul>	Low
Waste disposal and material storage	Mulch, topsoil, subsoil and overburden stockpile contamination	Ecology, biodiversity, air quality and aesthetics	Operational phase	Low	<ul style="list-style-type: none"> <li>Operational control measures</li> <li>Fire prevention measures</li> <li>Site management protocols</li> <li>General waste disposal control measures</li> </ul>	Low

The supporting impact assessment conducted by the EAP must be attached as an appendix, marked **Appendix 5**

## Summary of specialist reports.

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

LIST OF STUDIES UNDERTAKEN	RECOMMENDATIONS OF SPECIALIST REPORTS	SPECIALIST RECOMMENDATIONS THAT HAVE BEEN INCLUDED IN THE EIA REPORT (Mark with an X where applicable)	REFERENCE TO APPLICABLE SECTION OF REPORT WHERE SPECIALIST RECOMMENDATIONS HAVE BEEN INCLUDED.
Ecological Assessment	<p>The old borrow pit area will influence roughly 4.9ha of a historical mining environment. The old borrow pit will not affect any nationally protected flora, but will affect one provincially protected floral species. The old borrow pit will, however, benefit the community by allowing for the refurbishment of failing infrastructure. Total vegetation clearance is expected to influence less than 4.9ha. Strict monitoring and the effective implementation of all the mentioned mitigation measures will reduce the overall impact on the receiving environment.</p> <p>As the old borrow pit area has no confirmed observations and a low probability of SCC occurrence Thus the conservation importance rating of the site is low. Site functional integrity is low due to the small size (&gt; 1 ha but &lt; 5 ha) of the old borrow pit area. The biodiversity importance of the old borrow pit area is thus Low. Habitat resilience is likely medium due to the reclamation of the old borrow pit seen as well as the moderate likeliness of reoccurrence of species observed within the study area. Site ecological importance is thus low, which requires minimisation and restoration mitigation where mining activities of medium to high impact are acceptable and needs appropriate restoration activities. It is recommended that a provincial floral permit be obtained should mining occur.</p>	X	Please refer to <b>Appendix 6.</b>
Heritage Impact Assessment	According to the findings of the Heritage specialist, the proposed borrow pit mining area lies within the outcrop area of Permian Adelaide rocks and younger, Triassic Tarkastad sedimentary strata, respectively assigned to the Dicynodon (Pne) and overlying Lystrosaurus and Cynognathus Assemblage Zones. Vertebrate fossils are frequently preserved in ancient stream deposits or as articulated skeletons within	X	Please refer to <b>Appendix 6.</b>

	<p>well-defined calcareous nodules. Burrow casts have been described from several localities within these biozones with fossils recorded on farms to the west and south of Lindley.</p> <p>Given the degree of landscape degradation, the site is not considered vulnerable and is assigned an archaeological site rating of Generally Protected C (Significance: low / Mitigation: destruction). The significance of the Palaeontological status is considered low under current conditions and low if the dolerite mining activities are renewed.</p>		
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Attach copies of Specialist Reports as appendices

## **k) Environmental impact statement**

### **(i) Summary of the key findings of the environmental impact assessment;**

The findings of the studies undertaken within the EIA to assess both benefits and potential negative impacts anticipated from the proposed borrow pit mining area conclude that:

- The old borrow pit area is found to be in a largely natural state with few signs of disturbance besides the landscape transformation and lack of several expected dominant grass species. Thus, the ecological functioning of the site is fair.
- The old borrow pit will not affect any nationally protected flora, but will affect one provincially protected floral species.
- The old borrow pit will, however, benefit the community by allowing for the refurbishment of failing infrastructure.
- Total vegetation clearance is expected to influence less than 4.9 ha.
- Strict monitoring and the effective implementation of all the mentioned mitigation measures will reduce the overall impact on the receiving environment.
- The development will have both positive and negative social impacts. It will create employment for locals during operational and closure and rehabilitation. The negative impacts are very low and restricted to the minor loss of grazing pasture.
- According to the findings of the Heritage Specialist, the degree of the landscape degradation, the site is not considered vulnerable and is assigned an archaeological site rating of Generally Protected C, significantly low.
- The management of the impacts hinge on the effective and efficient operation of the borrow pit. There is a need to ensure that competent personnel are employed and adequate training and skills development are provided for where it is lacking.
- The cumulative significance of all the negative potential impacts on the environment is considered low due to the limited scale of the development and the scarcity of development in the immediate surrounding area.

### **(ii) 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.

Please refer to the map attached in [Appendix 7](#).

### **(iii) Summary of the positive and negative impacts and risks of the proposed activity and identified alternatives;**

No other alternatives were considered since a meticulous screening process was initiated, whereby all non-feasible alternatives were discarded. One of the primary negative impacts associated with the proposed borrow pit is the alteration of the environmental parameters such as clearance of area for mining/ removal of topsoil and loss of flora and faunal diversity. However, these consequences are relatively minor and low impact on a small 4,9ha scale that is being applied for environmental authorization and if comprehensive rehabilitation is applied and adhered to correctly, the potential risks can be deemed insignificant.

The positive impacts far outweigh the negligible environmental impacts generated by the operations of the proposed borrow pit. Permitting and legalizing the proposed borrow pit mining area will stimulate the forthcoming development of the upgrading of the R707 road jointly creating temporary jobs is essential investing in the local economic growth, social development safety, and environmental sustainability, making it the cornerstone of infrastructure development in the region.

## **l) Proposed impact management objectives and the impact management outcomes for inclusion in the EMPr;**

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

The management objectives and impact management outcomes are:

- To fulfil the requirements of Mineral and Petroleum Resources Development Act, the requirements of the National Environmental Management Act and other legislative requirements.
- To promote the rational development of the borrow pit in order to reduce or eliminate the associated negative environmental impacts.
- To identify proposed mitigation and management measures to manage adverse impacts and to increase benefits.
- To ensure that the applicant use resources efficiently and effectively during the life of mine in order to reduce wastage thereby reducing associated negative environmental impacts.
- To improve the environmental awareness of all personnel who will work at the borrow pit.

## **m) Aspects for inclusion as conditions of Authorisation.**

Any aspects which must be made conditions of the Environmental Authorisation

All recommendations and mitigations as specified within the EMPr and Specialist reports should be included as conditions for the authorization. Specific reference is given to the following:

- Mining activities should remain within the authorised area.
- Topsoil should be kept in stockpiles along the edge of the excavation less than 3 m high to prevent wind erosion and dust emissions.
- A decommissioning and rehabilitation plan should be drafted.
- No waste may be disposed of or burnt within the authorised area.
- A soil erosion control plan should be drafted and adhered to.
- Strict safety measures to safeguard the well-being of workers and the surrounding community, including emergency response plans.
- Obligations for continuous environmental monitoring and regular reporting to relevant regulatory authorities.
- Job opportunities arising from the operation of the borrow pit must be fair, unbiased and indiscriminate to reduce possible conflicts within the community from arising.
- SAHRA and a qualified archaeologist be consulted immediately in the event of accidental archaeological exposure.
- During decommissioning of the borrow pit, the overburden, topsoil and mulch stock piles should be redeposited into the excavation area in levelled layers with natural contours for each type of deposition
- Consequences for non-compliance, including fines, penalties, or permit revocation if the mining project fails to meet environmental standards.



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

(Which relate to the assessment and mitigation measures proposed)

In undertaking this investigation and compiling the report, it has been assumed that:

- The information provided by the client, the applicant and specialists is accurate and unbiased.
- The scope of this investigation is limited to assessing the environmental impacts associated with the proposed mine area and does not include assessment of lifecycle analysis of equipment and other materials to be used at the mine.
- This Final Basic Assessment report acknowledges and associates its own gaps and limitations based on those gaps and limitations mentioned in the various specialist's assessments.

**o) Reasoned opinion as to whether the proposed activity should or should not be authorised**

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

The proposed activity should be permitted and legalised in consideration of the forthcoming development of upgrading R707 road. The authorization of the proposed borrow pit mining area should be favourably considered. Constructing and refurbishing roads play a pivotal role in the socio-economic development and overall well-being of a region or nation.

Firstly, a well-maintained road network enhances well connectivity, allowing for the efficient movement of goods, services, and people. This, in turn, fosters economic growth by reducing transportation costs and enabling businesses to reach new markets more easily. Improved roads also lead to increased access to education, healthcare, and other essential services, particularly in remote areas where transportation infrastructure is often lacking. Additionally, better road conditions enhance road safety, reducing accidents and fatalities, which is crucial for preserving human lives and minimizing the social and economic burden of road accidents.

Furthermore, road construction and refurbishment projects generate significant employment opportunities. They create jobs not only directly through construction work but also indirectly by supporting related industries such as construction materials manufacturing and transportation. This boost to employment helps alleviate poverty and supports local economies. Moreover, modernizing and maintaining road infrastructure contributes to environmental sustainability.

**ii) Conditions that must be included in the authorisation**

- The borrow pit will be rehabilitated properly after material has been sourced and the Municipality should give their input in the finishing off and rehabilitation of the mine (Rehabilitation Plan).
- The borrow pit must be managed in accordance with the Environmental Management Program /Plan.
- The finishing off of the borrow pit must be safe for humans and animals
- There should be no dumping of any kind of waste at or in the borrow pit area
- Environmental awareness training should be given to all employees working at the borrow pit (especially on endangered/protected species)
- No protected plant species may be harmed or removed from the borrow pit area without a permit issued by the appropriate authority.
- It is the EAP's recommendation that a Section 21 (c) and (l) water use licence be applied for before the commencement of the activity.
- The applicant should provide environmental training for all employees working at the borrow pit during life of mine.
- Obligations for continuous environmental monitoring and regular reporting to relevant regulatory authorities.
- No site of archaeological or historical significance may be moved without a permit from the SAHRA. Any permitted removal of any archaeological or historical matter must be done under the strict supervision of a qualified registered heritage specialist

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

3 years for a mining permit.

## q) Undertaking

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

The undertaking is provided at the end of this Final Basic Assessment Report.

## r) Financial Provision

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

### i) Explain how the aforesaid amount was derived.

Information related to the Financial Provision of the proposed project is attached in [Appendix 8](#).

### ii) 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).

Information related to the amount that be provided from the operational expenditure is attached in [Appendix 8](#).

## s) Specific Information required by the competent Authority

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

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

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

The proposed borrow pit location has been outlined to be in alignment with the pre-existing borrow pit location. As such no new land will be utilised other than those areas which have been previously mined. Compensation agreements have been put in place with the landowner dating back to the initial utilisation of the pre-existing borrow pit.

A comprehensive socio-economic impact assessment is considered unnecessary for this borrow pit project due to its anticipated positive ripple effects on various socio-economic levels, including the local, regional, and even national scale. These positive impacts encompass a range of benefits, such as improved connectivity through a well-maintained road network. This enhanced connectivity facilitates the efficient movement of goods, services, and people, ultimately spurring economic growth by reducing transportation costs and enabling businesses to access new markets more easily. Furthermore, upgraded roads provide increased access to vital services like education and healthcare, particularly benefiting remote areas where transportation infrastructure is often lacking. Additionally, improved road conditions contribute to enhanced road safety, leading to a reduction in accidents and fatalities, thus preserving human lives and lessening the social and economic burdens associated with road accidents.

Furthermore, road construction and refurbishment projects are notable job creators. They not only directly generate employment opportunities through construction work but also indirectly support related industries such as construction materials manufacturing and transportation. This boost in employment has a positive impact on poverty alleviation and local economies. Additionally, the modernization and maintenance of road

infrastructure play a role in promoting environmental sustainability, aligning with broader socio-economic development goals.

**(2) Impact on any national estate referred to in section 3(2) of the National Heritage Resources Act.** (Provide the results of Investigation, assessment, and evaluation of the impact of the mining, bulk sampling or alluvial diamond prospecting on any national estate referred to in section 3(2) of the National Heritage Resources Act, 1999 (Act No. 25 of 1999) with the exception of the national estate contemplated in section 3(2)(j)(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).

The National Heritage Resources Act (No. 25 of 1999) identifies what is defined as a heritage resource, the criteria for establishing its significance and lists specific activities for which a heritage specialist study may be required. In this case, the Heritage Compliance Statement serves as a prerequisite. The footprint is capped by unconsolidated residual soils, mantling palaeontologically insignificant dolerites of the Mesozoic Karoo Igneous Province. The proposed borrow pit mining area lies within the outcrop area of Permian Adelaide rocks and younger, Triassic Tarkastad sedimentary strata, respectively assigned to the Dicynodon (Pne) and overlying Lystrosaurus and Cynognathus Assemblage Zones. In the Archaeological background and context that the potential occurrences may include Stone Age archaeological sites or artefact scatters; Iron Age archaeological sites or artefacts; rock art sites.

Given the degree of landscape degradation, the site is not considered vulnerable and is assigned an archaeological site rating of **Generally Protected C (Significance: low / Mitigation: destruction)**. In the context of Palaeontological Status that the significance is considered low under current conditions, and low if dolerite mining activities are renewed. The study area is considered to be of low archaeological significance and is assigned a site rating of Generally Protected C. Proposed mining at the site is recommended.

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

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

In accordance with the NEMA Section 24 (4)(a) and (b), the EAP has initiated a comprehensive investigation to assess the potential environmental impacts and the significance thereof on the natural environment. A comprehensive impact assessment is featured in Appendix 5.

# PART B

## ENVIRONMENTAL MANAGEMENT PROGRAMME REPORT

### 1) Draft environmental management programme.

- a) 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.

The information related to the details and expertise of the EAP are provided in Part A, section 1(a). The EAP's CV is attached in the **Appendix 1**.

- b) 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.

The Information related to the description of the aspects of the activity are covered in Part A, section 1(h) as required. Additionally, the locality map and proof of activity is submitted as **Appendix 2 and 6**, respectively.

**c) Composite Map**

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

The map is attached in **Appendix 7**.

**d) Description of Impact management objectives including management statements**

- i) **Determination of closure objectives.** (ensure that the closure objectives are informed by the type of environment described)

The closure management objectives took into account the existing environment, possible environmental impacts and the expectations at closure. To ensure that the closure objectives are informed by the type of environment, the anticipated impacts and damage at closure, the sensitivity of the area and expected post closure land use were taken into account. In doing so, principles of integrated environmental management were taken into account together with the principles of sustainable development. The closure objectives are:

- To create a post mining environment that eliminates unacceptable health hazards and ensures public safety
- To leave the site in a stable, non-polluting and tidy condition with no remaining plant or infrastructure that is not required for post mining operational use.
- To minimize or eliminate the downstream environmental impacts on the ecosystem due to interruption of drainage once the borrow pit operations cease.

- To establish a stable post-mining land surface which has been rehabilitated that also supports vegetation growth, is erosion resistant and has long term sustainability.
- To reduce the need for long-term monitoring and maintenance by establishing effective stability of the disturbed areas.

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

Zero

iii) **Has a water use licence has been applied for?**

No, DWS (Department of Water and Sanitation) is one of the key stakeholders in this proposed project. The EAP will ensure that DWS receives pertinent information and responds to any queries outlined in the application. In the event that a water use license is necessary for this project, we will diligently apply for Section 21 (c ) and (l) water use license before commencement of the activity.

iv) Impacts to be mitigated in their respective phases

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

ACTIVITIES	PHASE	SIZE AND SCALE of disturbance	MITIGATION MEASURES	COMPLIANCE WITH STANDARDS	TIME PERIOD FOR IMPLEMENTATION
<p>(E.g. For prospecting - drill site, site camp, ablution facility, accommodation, equipment storage, sample storage, site office, access route etc...etc...etc</p> <p>E.g. For mining,- excavations, blasting, stockpiles, discard dumps or dams, Loading, hauling and transport, Water supply dams and boreholes, accommodation, offices, ablution, stores, workshops, processing plant, storm water control, berms, roads, pipelines, power lines, conveyors, etc...etc...etc.)</p>	<p>(of operation in which activity will take place.</p> <p>State; Planning and design, Pre-Construction' Construction, Operational, Rehabilitation, Closure, Post closure).</p>	<p>(volumes, tonnages and hectares or m<sup>2</sup>)</p>	<p>(describe how each of the recommendations in herein will remedy the cause of pollution or degradation and migration of pollutants)</p>	<p>(A description of how each of the recommendations herein will comply with any prescribed environmental management standards or practices that have been identified by Competent Authorities)</p>	<p>Describe the time period when the measures in the environmental management programme must be implemented Measures must be implemented when required.</p> <p>With regard to Rehabilitation specifically this must take place at the earliest opportunity. With regard to Rehabilitation, therefore state either: - . Upon cessation of the individual activity or.</p> <p>Upon the cessation of mining, bulk sampling or alluvial diamond prospecting as the case may be.</p>
<p>Mining establishment (fencing, signage, access, site office, etc.)</p>	<p>Pre-Construction</p>	<p>± 0.5ha</p>	<p>Please refer to <b>Appendix 5</b></p>	<p>Issues of compliance with standards will be incorporated into the day to day activities at the borrow pit. The work methods used the monitoring and measures done and the review processes will be aimed at ensuring that legal thresholds as set out in the environmental standards are complied with. This will include compliance with Mining and Petroleum Resources Development Act regulations, Mine Health and Safety Act regulations and National Water Act regulations</p>	<p>During the start-up and operational phase.</p>

Removal of vegetation and topsoil.	Start-up and operational phase	4,9ha	Please refer to <b>Appendix 5</b>	The work methods used, the monitoring and measurements done and the review processes will be aimed at ensuring that legal thresholds as set out in the environmental standards are complied with. This will include compliance with Mining and Petroleum Resources Development Act regulations, Mine Health and Safety Act regulations and Conservation of Agricultural Resources Act.	During start-up and operational phase as necessary
Excavation of material	Operational phase	4,8ha	Please refer to <b>Appendix 5</b>	Management of legal compliance will be incorporated into normal business activities. This means that particular responsibilities need to be clearly defined for the identification of relevant issues and delivery of compliance. This will help to ensure that adequate resources are available to support these activities. Environmental standards as set out in Mining and Petroleum Resources Development Act regulations, Mine Health and Safety Act regulations and National Water Act regulations. Operational phase.	Operational phase
Drilling & blasting (if needed)	Operational phase	As needed	Please refer to <b>Appendix 5</b>	All recommendations and mitigation measures will ensure little to no permanent impact on the environment this will ensure effective rehabilitation and restoration.	Operational phase (when necessary)
Waste disposal and material storage	Operational phase	Undetermined	Please refer to <b>Appendix 5</b>	The waste management hierarchy and the proximity principle will be used in ensuring that the environmental standards as set out in National Environmental Management Waste Act regulations and National Water Act regulations, are complied with.	Operational phase
Material handling, hauling and transportation	Operational phase	Undetermined	Please refer to <b>Appendix 5</b>	Issues of compliance with standards will be incorporated into the day to day business	Operational phase



				activities at the borrow pit to ensure that legal thresholds as set out in the environmental standards are complied with. This will include compliance with standards as per Mining and Petroleum Resources Development Act regulations, Mine Health and Safety Act regulations, National Water Act regulations and Mine Health and Safety Act regulations.	
Removal of infrastructure & equipment	Decommissioning and closure	Affected areas	Please refer to <b>Appendix 5</b>	The recommendations will incorporate factors that include the elimination or the minimization of negative impacts in the work methodologies used during decommissioning so as to comply with the standards as per Mining and Petroleum Resources Development Act regulations, Mine Health and Safety Act regulations and National Environmental Management Act.	At decommissioning stage
Re-shaping of borrow pit mined area	Decommissioning and closure	Affected areas	Please refer to <b>Appendix 5</b>	Considerations with the elimination or at least the minimization of any future impacts from the borrow pit and the long term stability of the facility. Also, any concerns in relation to the long term liability for the proposed borrow pit/mine and its aesthetics will be incorporated in order to ensure compliance with standards as set out in the Mine Health and Safety Act regulations, National Environmental Management Act and National Water Act regulations.	Closure stage
Community and labour relations management	Operational phase	Not Applicable	Please refer to <b>Appendix 5</b>	Will comply with Basic Conditions of Employment Act regulations, Employment	During operational phase

				equity Act, Labour Relations Act and Skills Development Act.	
Re-vegetation of disturbed areas	Closure phase	Affected areas	Please refer to <b>Appendix 5</b>	The future impacts from the borrow pit and the long term stability of the area, any concerns in relation to the long term liability for the facility and its aesthetics will be taken into account to ensure compliance with the National Environmental Management Act, Conservation of Agricultural Resources Act and National Environmental Management Biodiversity Act regulations.	During operational phase in sections where mining has been completed and during closure.

### e) Impact Management Outcomes

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

ACTIVITY  (whether listed or not listed).  (E.g. Excavations, blasting, stockpiles, discard dumps or dams, Loading, hauling and transport, Water supply dams and boreholes, accommodation, offices, ablution, stores, workshops, processing plant, storm water control, berms, roads, pipelines, power lines, conveyors, etc...etc...etc.).	POTENTIAL IMPACT  (e.g. dust, noise, drainage surface disturbance, fly rock, surface water contamination, groundwater contamination, air pollution etc....etc...)	ASPECTS AFFECTED	PHASE  In which impact is anticipated  (e.g. Construction, commissioning, operational Decommissioning, closure, post-closure)	MITIGATION TYPE  (modify, remedy, control, or stop) through (e.g. noise control measures, storm-water control, dust control, rehabilitation, design measures, blasting controls, avoidance, relocation, alternative activity etc. etc)  E.g. <ul style="list-style-type: none"> <li>• Modify through alternative method.</li> <li>• Control through noise control</li> <li>• Control through management and monitoring</li> <li>• Remedy through rehabilitation.</li> </ul>	STANDARD TO BE ACHIEVED  (Impact avoided, noise levels, dust levels, rehabilitation standards, end use objectives) etc.
	Loss of floral and faunal diversity	Biodiversity, ecology and aesthetics	Operational phase	<ul style="list-style-type: none"> <li>• Remedy through rehabilitation</li> <li>• Limit footprint</li> </ul>	Impact managed effectively

ACTIVITY	POTENTIAL IMPACT	ASPECTS AFFECTED	PHASE	MITIGATION TYPE	STANDARD TO BE ACHIEVED
Mining establishment (fencing, signage, access, site offices, etc.)	Habitat loss	Biodiversity, ecology and aesthetics	Operational phase	<ul style="list-style-type: none"> <li>Remedy through rehabilitation</li> <li>Limit footprint</li> </ul>	Impact reduced
	Visual scarring	Aesthetics	Operational Phase	<ul style="list-style-type: none"> <li>Remedy through rehabilitation</li> </ul>	Impact managed effectively
	Soil erosion and soil instability	Ecology and soil stability	Operational Phase	<ul style="list-style-type: none"> <li>Remedy through rehabilitation,</li> <li>Storm water control.</li> <li>Limit footprint</li> <li>Control through storm water control</li> </ul>	Impact avoided
Clearance of area for mining	Visual scarring	Aesthetics	Operational Phase	<ul style="list-style-type: none"> <li>Remedy through rehabilitation</li> <li>Limit footprint and,</li> <li>Removal of vegetation.</li> </ul>	Impact managed to acceptable levels (determined by the appointed Environmental Compliance Officer), residual impact reduced
	Loss of floral and faunal diversity and habitat	Biodiversity, ecology, land use and aesthetics	Operational Phase	<ul style="list-style-type: none"> <li>Remedy through rehabilitation</li> </ul>	Impact reduced to satisfactory levels
	Floral alien and invasives species (AIS)	Ecology, biodiversity and aesthetics	Operational Phase	<ul style="list-style-type: none"> <li>Remedy through rehabilitation</li> <li>Control through floral alien and invasive species (AIS) mitigation measures.</li> </ul>	Impact managed to suitable alien invasive species control levels
	Soil erosion and soil instability	Ecology and aesthetics	Operational Phase	<ul style="list-style-type: none"> <li>Control through soil techniques.</li> <li>Remedy through soil erosion and soil instability mitigation measure</li> <li>Remedy through rehabilitation,</li> <li>Storm water control</li> </ul>	Impact avoided

ACTIVITY	POTENTIAL IMPACT	ASPECTS AFFECTED	PHASE	MITIGATION TYPE	STANDARD TO BE ACHIEVED
Excavation of materials	Dust emissions	Air quality	Operational Phase	<ul style="list-style-type: none"> <li>Control with dust control measures</li> </ul>	Dust management to meet appointed Environmental Compliance Officers standards
	Surface water drainage disruption	Water resources	Operational Phase	<ul style="list-style-type: none"> <li>Remain within authorised footprint</li> <li>Control with Storm water controls</li> <li>Surface water drainage disruption mitigation measures</li> </ul>	Good surface water run-off established around the mining area.
	Slope instability	Topography	Operational Phase	<ul style="list-style-type: none"> <li>Control with slope management controls</li> </ul>	Stable surfaces established
	Noise	Noise	Operational Phase	<ul style="list-style-type: none"> <li>Control with Noise control measures</li> </ul>	Noise reduced to acceptable levels
	Visual scarring	Aesthetics	Operational Phase	<ul style="list-style-type: none"> <li>Rehabilitation</li> </ul>	Impact managed effectively, residual impact reduced
	Soil erosion	Land use	Operational Phase	<ul style="list-style-type: none"> <li>Rehabilitation, use slope management control</li> </ul>	Impact levels avoided
	Destruction of heritage resource	Heritage issues	Operational Phase	<ul style="list-style-type: none"> <li>Avoidance</li> <li>Contact SAHRIS in the event of accidental heritage resource discovery</li> </ul>	Impact avoided
Drilling & blasting (if done)	Noise and vibrations	Noise	Operational Phase	<ul style="list-style-type: none"> <li>Control with blast control measures</li> </ul>	Noise levels reduced to acceptable levels
	Dust	Air quality	Operational Phase	<ul style="list-style-type: none"> <li>Control with dust control measures</li> </ul>	Particulates reduced to acceptable levels
	Fly rock	Safety and land degradation	Operational Phase	<ul style="list-style-type: none"> <li>Control with blast control measures</li> </ul>	Fly rock avoided

ACTIVITY	POTENTIAL IMPACT	ASPECTS AFFECTED	PHASE	MITIGATION TYPE	STANDARD TO BE ACHIEVED
Waste Disposal and Material storage	Soil contamination	Land degradation	Operational Phase	• Avoidance, operational control measures	Impact avoided
	Water pollution	Water	Operational Phase	• Avoidance, operational control measures	Impact avoided
	Increased risk of fire	Safety	Operational Phase	• Avoidance, operational control measures	Impact avoided or managed to low levels
Material handling, hauling and transportation	Dust	Air quality	Operational Phase	• Control with dust control measures	Particulates reduced to acceptable levels
	Increased risk of accidents	Safety	Operational Phase	• Use site management protocols	Accidents avoided or reduced to low levels
	Noise	Noise	Operational Phase	• Control with noise control measures	Noise reduced to acceptable levels
	Soil contamination from oil/fuel leaks	Land degradation	Operational Phase	• Operational control measures	Impact managed to suitable soil fertility levels
Removal of infrastructure & equipment and re-shaping of Borrow pit	Noise	Noise	Decommissioning and Closure	• Control with noise control measures	Noise levels reduced to acceptable levels
	Dust	Air quality	Decommissioning and Closure	• Control with dust control measures	Particulates reduced to acceptable levels
	Soil contamination from oil/fuel	Land degradation and water pollution	Decommissioning and Closure	• Avoidance, Control with operational control measures	Impact managed to suitable soil fertility levels
	Disruption of surface drainage	Water movement	Decommissioning and Closure	• Control with storm water controls	Free drainage achieved
Community and labour relations management	Community conflicts and tensions	Community relations	Operational Phase	• Control using site management protocols	Reduction in complaints and incidences of conflict
	Increased risk of fire	Fire risk	Operational Phase	• Control using Site management protocols	Fires avoided and risk reduced

ACTIVITY	POTENTIAL IMPACT	ASPECTS AFFECTED	PHASE	MITIGATION TYPE	STANDARD TO BE ACHIEVED
	Reduced security on area	Safety issues	Operational Phase	<ul style="list-style-type: none"> <li>Control site management protocols</li> </ul>	Improvement in security and elimination of theft incidences
	Improved employment	Community relations	Operational Phase	<ul style="list-style-type: none"> <li>Control site management protocols</li> </ul>	Increase in number of people employed
	Improved skills	Community relations	Operational Phase	<ul style="list-style-type: none"> <li>Controls site management protocols</li> </ul>	Improvement in skills level

## f) 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).

ACTIVITY	POTENTIAL IMPACT	MITIGATION TYPE	TIME PERIOD FOR IMPLEMENTATION	COMPLIANCE WITH STANDARDS
whether listed or not listed.  (E.g. Excavations, blasting, stockpiles, discard dumps or dams, Loading, hauling and transport, Water supply dams and boreholes, accommodation, offices, ablution, stores, workshops, processing plant, storm water control, berms, roads, pipelines, power lines, conveyors, etc...etc...etc.).	(e.g. dust, noise, drainage surface disturbance, fly rock, surface water contamination, groundwater contamination, air pollution etc....etc...)	(modify, remedy, control, or stop) through (e.g. noise control measures, storm-water control, dust control, rehabilitation, design measures, blasting controls, avoidance, relocation, alternative activity etc. etc)  E.g. <ul style="list-style-type: none"> <li>• Modify through alternative method.</li> <li>• Control through noise control</li> <li>• Control through management and monitoring</li> </ul> Remedy through rehabilitation..	Describe the time period when the measures in the environmental management program must be implemented Measures must be implemented when required. With regard to Rehabilitation specifically this must take place at the earliest opportunity. With regards to Rehabilitation, therefore state either:- Upon cessation of the individual activity or. Upon the cessation of mining, bulk sampling or alluvial diamond prospecting as the case may be.	(A description of how each of the recommendations in 2.11.6 read with 2.12 and 2.15.2 herein will comply with any prescribed environmental management standards or practices that have been identified by Competent Authorities)
Mining establishment (fencing, signage, access site offices, etc.).	Loss of floral and faunal diversity	<ul style="list-style-type: none"> <li>• Remedy through rehabilitation</li> <li>• Limit footprint</li> </ul>	Operational phase	Issues of compliance with standards will be incorporated into the day to day activities at the mine. The work methods used, the monitoring and measures done, and the review processes will be aimed at ensuring that legal thresholds, as set out in the environmental standards, are complied with. This will include compliance with Mining and Petroleum Resources Development Act regulations, Mine Health and Safety Act regulations and National Water Act regulations.
	Habitat loss	<ul style="list-style-type: none"> <li>• Remedy through rehabilitation</li> <li>• Limit footprint</li> </ul>	Operational phase	
	Visual scarring	<ul style="list-style-type: none"> <li>• Remedy through rehabilitation</li> </ul>	Start-up and Operational Phase	
	Soil erosion and soil instability	<ul style="list-style-type: none"> <li>• Remedy through rehabilitation</li> <li>• Storm water control</li> <li>• Limit footprint</li> <li>• Control through storm water control</li> </ul>	Operational Phase	
Clearance of area for mining	Visual scarring	<ul style="list-style-type: none"> <li>• Remedy through rehabilitation</li> <li>• Limit footprint and removal of vegetation.</li> </ul>	Operational Phase	The work methods used, the monitoring and measurements done and the review processes will be aimed at ensuring that legal thresholds, as set out in the environmental standards, are complied with. This will include compliance with
	Loss of flora and faunal diversity and habitat	<ul style="list-style-type: none"> <li>• Remedy through rehabilitation</li> </ul>	Operational Phase	

ACTIVITY	POTENTIAL IMPACT	MITIGATION TYPE	TIME PERIOD FOR IMPLEMENTATION	COMPLIANCE WITH STANDARDS
		<ul style="list-style-type: none"> <li>Limit footprint and removal of vegetation</li> <li>Control through loss of floral and faunal diversity</li> <li>Habitat mitigation measures</li> </ul>		Mining and Petroleum Resources Development Act regulations, Mine Health and Safety Act regulations and Conservation of Agricultural Resources Act.
	Floral alien and invasive species (AIS)	<ul style="list-style-type: none"> <li>Remedy through rehabilitation</li> <li>Control through rehabilitation</li> <li>Control through floral alien and invasive species mitigation measures</li> </ul>	Operational Phase	
	Soil erosion and soil instability	<ul style="list-style-type: none"> <li>Remedy through rehabilitation,</li> <li>Control through soil conservation techniques</li> <li>Soil instability mitigation measures</li> </ul>	Operational Phase	
Excavation of material	Dust emissions	<ul style="list-style-type: none"> <li>Control with dust control measures</li> </ul>	Operational Phase	Management of legal compliance will be incorporated into normal business activities. This means that particular responsibilities need to be clearly defined for the identification of relevant issues and delivery of compliance. This will help to ensure that adequate resources are available to support these activities. Environmental standards as set out in Mining and Petroleum Resources Development Act regulations and Mine Health and Safety Act regulations and South African Heritage Resources Act.
	Surface water drainage disruption	<ul style="list-style-type: none"> <li>Control through storm water controls</li> <li>Surface water drainage mitigation measures</li> </ul>	Operational Phase	
	Soil erosion and soil instability	<ul style="list-style-type: none"> <li>Control with slope management controls</li> <li>Soil erosion and soil instability mitigation measures</li> </ul>	Operational Phase	
	Noise and vibrations	<ul style="list-style-type: none"> <li>Control with Noise control measures</li> </ul>	Operational Phase	
	Visual scarring	<ul style="list-style-type: none"> <li>Remedy through rehabilitation of already mined areas</li> </ul>	Operational Phase	
	Loss of artefacts and fossils	<ul style="list-style-type: none"> <li>Avoidance</li> <li>Control through loss of artefacts and fossils mitigation measures</li> </ul>	Operational Phase	



ACTIVITY	POTENTIAL IMPACT	MITIGATION TYPE	TIME PERIOD FOR IMPLEMENTATION	COMPLIANCE WITH STANDARDS
Drilling & blasting (if done)	Noise and vibrations	<ul style="list-style-type: none"> <li>Control with blast control measures</li> </ul>	Operational Phase	This will be achieved by clearly outlining the environmental standards to be achieved and the thresholds which are not to be exceeded in the management system used at the site. This will include compliance with standards as per, Explosive Act regulations, Mine Health and Safety Act regulations and the Hazardous Substances Act.
	Dust emissions	<ul style="list-style-type: none"> <li>Control with dust control measures</li> <li>Control with blast control measures</li> </ul>	Operational Phase	
	Fly rock	<ul style="list-style-type: none"> <li>Control with blast control measures</li> </ul>	Operational Phase	
Waste disposal and material storage	Mulch, topsoil, subsoil, and overburden stockpile contamination	<ul style="list-style-type: none"> <li>Avoidance,</li> <li>Control through mitigation measures for soil erosion</li> <li>Soil instability</li> <li>Aesthetics</li> <li>Air quality</li> <li>Loss of floral and faunal diversity</li> </ul>	Operational Phase	The waste management hierarchy and the proximity principle will be used in ensuring that the environmental standards as set out in National Environmental Management Waste Act regulations and National Water Act regulations are complied with.
	Surface water contamination	<ul style="list-style-type: none"> <li>Avoidance</li> <li>Operational control measures</li> </ul>	Operational Phase	
	General solid waste	<ul style="list-style-type: none"> <li>Avoidance</li> <li>Operational control measures</li> </ul>	Operational Phase	
Material handling, hauling and transportation	Dust emissions	<ul style="list-style-type: none"> <li>Control with dust Control measures</li> </ul>	Operational Phase	Issues of compliance with standards will be incorporated into the day to day activities at the mine to ensure that legal thresholds as set out in the environmental standards are complied with. This will include compliance with Mining and Petroleum Resources Development Act regulations, Mine Health and Safety Act regulations, National Water Act regulations and Mine Health and Safety Act regulations.
	Noise	<ul style="list-style-type: none"> <li>Control with noise control measures</li> </ul>	Operational Phase	
	Soil contamination from oil/fuel leaks	<ul style="list-style-type: none"> <li>Control with operational control measures</li> </ul>	Operational Phase	

ACTIVITY	POTENTIAL IMPACT	MITIGATION TYPE	TIME PERIOD FOR IMPLEMENTATION	COMPLIANCE WITH STANDARDS
Removal of infrastructure & equipment and shaping of borrow pit	Noise and vibrations	<ul style="list-style-type: none"> <li>Control with noise control measures</li> </ul>	Decommissioning and Closure	The recommendations will incorporate factors that include the elimination or the minimization of negative impacts in the work methodologies used during decommissioning so as to comply with the Mining and Petroleum Resources Development Act regulations, Mine Health and Safety Act regulations and National Environmental Management Act.
	Dust emissions	<ul style="list-style-type: none"> <li>Control with dust control measures</li> </ul>	Decommissioning and Closure	
	Floral alien and invasive species	<ul style="list-style-type: none"> <li>Remedy through rehabilitation</li> <li>Remedy through AIS control methods</li> </ul>	Decommissioning and Closure	
	Disruption of surface water drainage	<ul style="list-style-type: none"> <li>Remedy through storm water controls</li> <li>Remedy through rehabilitation</li> </ul>	Decommissioning and Closure	
Community and labour relations management	Community conflicts and tensions	<ul style="list-style-type: none"> <li>Control using site management protocols</li> </ul>	Operational Phase	The future impacts from the mine and the long term stability of the area, any concerns in relation to the long term liability for the facility and its aesthetics will be taken into account to ensure compliance with the National Environmental Management Act, Conservation of Agricultural Resources Act, National Environmental Management Biodiversity Act regulations and the Occupational Health and Safety Act.
	Increased risk of fire	<ul style="list-style-type: none"> <li>Control using site management protocols</li> </ul>	Operational Phase	
	Reduced security in area	<ul style="list-style-type: none"> <li>Control site management protocols</li> </ul>	Operational Phase	
	Improved employment	<ul style="list-style-type: none"> <li>Control site management protocols</li> </ul>	Operational Phase	
	Improved skills	<ul style="list-style-type: none"> <li>Use of site management protocols</li> </ul>	Operational Phase	

**i) Financial Provision**  
**(1) Determination of the amount of Financial Provision.**

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

The responsibility of rehabilitation will be the sole responsibility of the contractor using the borrow pit. Whilst steps are taken throughout the project life cycle to reduce negative environmental impacts as they occur, the specific closure objectives are as follows:

- To create a post mining environment that eliminates unacceptable health hazards and ensures public safety.
- To leave the site in a stable, non-polluting and tidy condition with no remaining plant or infrastructure that is not required for post mining operational use.
- To minimise or eliminate the downstream environmental impacts on the ecosystem due to interruption of drainage once the mine operations cease.
- To establish a stable post-mining land surface which has been rehabilitated that also supports vegetation growth, is erosion resistant and has long term sustainability.
- To rehabilitate the disturbed areas to an end land use similar to that prior to commencement of any mining activities as far possible, in this case an end land use of at least grazing.
- To reduce the need for long-term monitoring and maintenance by establishing effective stability of the disturbed areas.

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

The key environmental objectives related to the closure of the borrow pit have been set out. Consultation between the EAP, landowner, I&AP's, the applicant, its representatives and associates have taken place.

**(c) 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.**

The rehabilitation plan is shown in [Appendix 9](#).

- (d) Explain why it can be confirmed that the rehabilitation plan is compatible with the closure objectives.**

The rehabilitation takes into consideration the nature of the impacted land at the end of operational activities, objectives at closure and the need to ensure that the post closure maintenance is minimal.

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

Please refer to [Appendix 9](#) to information related to the Financial Provision.

- (f) Confirm that the financial provision will be provided as determined.**

The Applicant being the Free State Department of Community Safety, Roads and Transport will be responsible in ensuring rehabilitation is done effectively.

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

- g) Monitoring of Impact Management Actions
- h) Monitoring and reporting frequency
- i) Responsible persons
- j) Time period for implementing impact management actions
- k) Mechanism for monitoring compliance

SOURCE ACTIVITY	IMPACTS REQUIRING MONITORING PROGRAMMES	FUNCTIONAL REQUIREMENTS FOR MONITORING	ROLES AND RESPONSIBILITIES (FOR THE EXECUTION OF THE MONITORING PROGRAMMES)	MONITORING AND REPORTING FREQUENCY and TIME PERIODS FOR IMPLEMENTING IMPACT MANAGEMENT ACTIONS
Mining establishment activities (fencing, signage, access, site office etc.)	<ul style="list-style-type: none"> <li>• Loss of flora and faunal diversity</li> <li>• Habitat loss</li> <li>• Aesthetics</li> <li>• Soil erosion and soil instability</li> </ul>	<p>Visual checks, monitoring incidences of non-compliance, recording of key parameters</p> <p>See Appendix 10 for details</p>	Appointed Contractor/	<p>At site office establishment and as and when required. Record incidences of non-compliance monthly.</p> <p>See Appendix 9 for details</p>
Removal of vegetation and topsoil	<ul style="list-style-type: none"> <li>• Aesthetics</li> <li>• Loss of flora and faunal diversity</li> <li>• Habitat loss</li> </ul>	<p>Visual checks, monitoring incidences of non-compliance, recording of key parameters</p> <p>See Appendix 10 for details</p>	Appointed Contractor	<p>During operational phase and as and when required. Record incidences of non-conformances as they occur and do monthly report.</p> <p>See Appendix 9 for details</p>
Excavation of materials	<ul style="list-style-type: none"> <li>• Dust</li> <li>• Surface water disruptions</li> <li>• Soil erosion and soil instability</li> <li>• Aesthetics</li> <li>• Loss of artefacts and fossils</li> </ul>	<p>Visual checks, monitoring incidences of non-compliance, recording of key parameters</p> <p>See Appendix 10 for details</p>	Appointed Contractor	<p>During operational phase. Record measurements monthly and incidences of non-compliance.</p> <p>See Appendix 9 for details</p>

Drilling & blasting (if done)	<ul style="list-style-type: none"> <li>Noise and vibrations</li> <li>Dust</li> </ul>	<p>Visual checks, monitoring incidences of non-compliance, recording of key parameters</p> <p>See Appendix 10 for details</p>	Appointed Contractor	<p>When drilling and/or blasting is done. Record key parameters when done.</p> <p>See Appendix 9 for details</p>
Waste disposal and material storage	<ul style="list-style-type: none"> <li>Mulch</li> <li>Topsoil</li> <li>Subsoil and overburden stockpile</li> <li>Surface water contamination</li> <li>General solid waste</li> </ul>	<p>Visual checks, monitoring incidences of non-compliance, recording of key parameters</p> <p>See Appendix 9 for details</p>	Appointed Contractor	<p>During life of mine as and when required. Record key parameters monthly and non-compliances.</p> <p>See Appendix 9 for details</p>
Material handling, hauling and transportation	<ul style="list-style-type: none"> <li>Dust</li> <li>Noise and vibrations</li> </ul>	<p>Visual checks, monitoring incidences of non-compliance, recording of key parameters</p> <p>See Appendix 10 for details</p>	Appointed Contractor	<p>Ongoing during life of mine and record key parameters monthly &amp; non compliances.</p> <p>See Appendix 9 for details</p>
Removal of infrastructure & equipment and shaping of borrow pit	<ul style="list-style-type: none"> <li>Noise</li> <li>Dust</li> <li>Disruption of surface drainage</li> <li>Floral alien and invasive species</li> </ul>	<p>Visual checks, monitoring incidences of non-compliance, recording of key parameters</p> <p>See Appendix 10 for details</p>	Appointed Contractor	<p>At decommissioning and closure and when required. Maintain disposal records.</p> <p>See Appendix 9 for details</p>
Community and labour relations management	<ul style="list-style-type: none"> <li>Community conflicts</li> </ul>	<p>Monitoring incidences of complaints, recording of key parameters</p> <p>See Appendix 10 for details</p>	Appointed Contractor	<p>During life of mine and record complaints, incidents and labour statistics monthly.</p> <p>See Appendix 9 for details</p>

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

Once the borrow pit has been permitted and utilized by the contractor, they will be required to appoint an Environmental Control Officer, which then will be required to perform and ensure that monthly environmental compliance reports which includes the borrow pit mining area.

**m) Environmental Awareness Plan**

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

All employees will go through an induction of general environmental issues and given specifics on their jobs. The training will include

- Making employees aware that everyone has a right to a clean environment and that everyone has a responsibility to protect the environment.
- Explanation of the importance of complying with the EMP specifications.
- Discussion of the potential environmental impacts of operational activities and mitigation measures that must be implemented when carrying out activities.
- The importance of personal performance on dealing with environmental issues and explanations of the management structure of individuals responsible for matters pertaining to the EMP.
- Communication can be done either in a written or verbal format but will be in an appropriate format for the receiving audience. Records of all training done are to be kept.
- When encountering fossils, obtain a permit from the SAHRA. Any permitted removal of any archaeological or historical matter must be done under the strict supervision of a qualified registered heritage specialist.

Refer to Environmental Awareness Plan Appendix 11

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

- The applicant will endeavour to improve the competence and skills of personnel. A culture of environmental protection will be promoted.
- Procedures will be put in place to effectively minimize any identified high risk areas and to proactively control any environmental incidents if they occur.
- The applicant will also continuously improve and promote a code that goes beyond minimal compliance with environmental legislation

**n) Specific information required by the Competent Authority  
(Among others, confirm that the financial provision will be reviewed annually).**

Confirmed. The Applicant is applying to take responsibility for the proposed registered borrow pit.

## 2) UNDERTAKING

The EAP herewith confirms

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

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Signature of the environmental assessment practitioner

[Environmental Management Group \(Pty\) Ltd](#)

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Name of company:

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Date: 07 December 2023

**-END-**