



LIMPOPO

PROVINCIAL GOVERNMENT
REPUBLIC OF SOUTH AFRICA

DEPARTMENT OF ECONOMIC DEVELOPMENT, ENVIRONMENT & TOURISM

BASIC ASSESSMENT REPORT - EIA REGULATIONS, 2014

Basic Assessment report in terms of the Environmental Impact Assessment Regulations, 2014, promulgated in terms of the National Environmental Management Act, 1998 (Act No. 107 of 1998), as amended.

File Reference Number:

(For official use only)

NEAS Reference Number:

Date Received:

Kindly note that:

1. This BAR form is current as of 04 March 2024. It is the responsibility of the applicant to ascertain whether subsequent versions of the form have been published or produced by the competent authority.
2. The report must be compiled by an independent Environmental Assessment Practitioner.
3. The report must be typed within the spaces provided in the form. The size of the spaces provided is not necessarily indicative of the amount of information to be provided. The report is in the form of a table that can extend itself as each space is filled with typing.
4. Where applicable **tick** the boxes that are applicable in the report.
5. The use of “not applicable” in the report must be done with circumspection because if it is used in respect of material information that is required by the Department of Economic Development, Environment and Tourism as the competent authority (Department) for assessing the application, it may result in the rejection of the application as provided for in the regulations.
6. An incomplete report may be returned to the applicant for revision.
7. Unless protected by law, all information in the report will become public information on receipt by the department. Any interested and affected party should be provided with the information contained in this report on request during any stage of the application process.

Cnr Suid & Dorp Streets, POLOKWANE, 0700, P O Box 55464, POLOKWANE, 0700
Tel: 015 290 7138/ 7167, Fax: 015 295 5015, website: <http://www.ledet.gov.za>

8. This template should not restrict the EAP from providing other information that may be deemed relevant to the proposed project.
9. **Ensure that the requirements of the Screening Tool Report (STR) with regards to the specialist reports are adhered to. In a case whereby certain specialist studies recommended in the STR are not considered relevant for assessment, a motivation for such exclusions must be provided, and attached to Appendix D.**
10. The Act means the National Environmental Management Act (No. 107 of 1998) as amended.
11. Regulations refer to Environmental Impact Assessment (EIA) Regulations of 2014, as amended.
12. The Department may require that for specified types of activities in defined situations only parts of this report need to be completed. No faxed or e-mailed reports will be accepted.
13. This application form must be handed in at the offices of the Department of Economic Development, Environment and Tourism:-

<p><u>Postal Address:</u> Systems and Tools Office Environmental Impact Management Private Bag X9484 POLOKWANE 0700</p>	<p><u>Physical Address:</u> Systems and Tools Office 20 Hans Van Rensburg or 19 Biccard Streets POLOKWANE 0699</p>
<p>Queries should be directed to the System and Tools:</p> <p>For attention: Mr E V Maluleke / Ms Letsoalo MJ / Malatji MM Tel: (015) 293 8439 / 015 293 8558 / 015 293 8616 Email: malulekeev@ledet.gov.za / LetsoaloMJ@ledet.gov.za / malatjimm@ledet.gov.za</p>	

View the Department's website at <http://www.ledet.gov.za/> for the latest version of the documents.

SECTION A: ACTIVITY INFORMATION

Has a specialist been consulted to assist with the completion of this section?

YES

If YES, please complete the form entitled "Details of specialist and declaration of interest" or appointment of a specialist for each specialist thus appointed:

Any specialist reports must be contained in Appendix D.

1. ACTIVITY DESCRIPTION

Describe the activity, which is being applied for, in detail¹:

Inzalo Crushing and Aggregates (Pty) Ltd (hereafter referred to as the applicant) proposes to establish an area for stockpiling and crushing/screening (if needed) of mined material, on 11.7 ha over a disturbed area of the farm previously used for mining activities on a portion of Portion 1 of Farm Ruigtevley 97 KQ, Thabazimbi Local Municipality, Limpopo Province.

The infrastructure to be used on site will all be of temporary and mobile nature. Containers will be used for office and storage purposes and a weigh bridge will be established (temporary). The storage of fuel (if any) will be below the threshold of the NEMA EIA listed activities. The proposed stockpile area, and the plant will be powered with generators. The ablution facilities will be chemical toilets that will be serviced by registered suppliers. The office and storage containers, weigh bridge and ablution facilities will most likely be placed at the entrance to the site, while the crushing equipment will be of mobile nature, moving around the site as needed.

During the site establishment phase the applicant will clear the topsoil from the stockpiling area to allow the stockpiling of the material. Upon stripping, the topsoil will be stockpiled along the boundaries of the area to be used during the rehabilitation phase. The material will be screened/crushed if needed and stockpiled until removed from site.

Should this application be successful, the Applicant intends to:

1. demarcate the boundaries of the stockpile area;
2. strip the topsoil off the earmarked area and stockpile it for later use in rehabilitation;

¹ Please note that this description should not be a verbatim repetition of the listed activity as contained in the relevant Government Notice, but should be a brief description of activities to be undertaken as per the project description.

3. stockpile the processed material (dolerite product) in various size categories within the boundaries of the approved area;
4. process the material through crushing and screening;
5. load and transport the material from the stockpiles onto trucks

Considering this, the Applicant intends to establish the following infrastructure within the boundaries of the proposed area:

- Mobile crushing and screening infrastructure;
- Mobile containers that will be used for offices and storage purposes; and
- Ablution facilities to be used by all employees.

Should the EA be issued, and the proposed activity be allowed, the project will comprise of activities that can be divided into three key phases (discussed in more detail below) namely the:

- (1) *Site establishment/construction phase* which will involve the demarcation of the authorized area. Site establishment will also necessitate the clearing of vegetation, the stripping and stockpiling of topsoil, and the introduction of machinery and equipment.
- (2) *Operational phase* that will entail the stockpiling and crushing (when needed) of the material mined from the quarry on the property until it is transported from site.
- (3) *Decommissioning phase* which entails the rehabilitation of the affected environment. The EA holder will further be responsible for the seeding of all rehabilitated areas.

PHASES OF THE PROJECT

1. Site Establishment Phase:

Site establishment entails the demarcation of the boundaries, clearance of vegetation, and stripping and stockpiling of topsoil as detailed below:

- **Demarcation of Boundaries:**

Pursuant to receipt of the Environmental Authorization (EA) and prior to site establishment, the boundaries of the approved area will be demarcated with visible beacons.

- **Access Road:**

The Applicant intends to construct a dirt road spanning from the R510 to the designated stockpile area and extended as the activities progress and will be rehabilitated as part of the final reinstatement of the area. The access farm road turns right from the R510 road.

In the event that new roads need to be constructed, these roads will be selected as far as possible to avoid watercourses and steep gradients. Adequate drainage and erosion protection in the form of cut-off berms or trenches will be provided where necessary.

Any new roads to be established to the site will be below the threshold of the EIA regulations of the National Environmental Management Act, 1998 (Act No 107 of 1998) as amended June 2014.

The existing farm road will be used as access road to the site. Should a portion of the access road need to be newly constructed in future the following will be adhered to:

The route will be selected that a minimum number of bushes or trees are felled, and existing fence lines will be followed as far as possible.

Adequate drainage and erosion protection in the form of cut-off berms or trenches will be provided where necessary.

- **Clearing of Vegetation:**

(Also refer to Description of specific environmental features and infrastructures on the site – Site Specific Terrestrial Biodiversity, Conservation Areas, and Groundcover)

According to Mucina and Rutherford (2012) the stockpile area extends over a vegetation type known as the SVcb 16 Western Sandy Bushveld which is classified as Least Threatened. According to the Limpopo Conservation Plan, the area is classified as Ecological Support Area (ESA). To mitigate this, the clearing of vegetation must be contained to the approved stockpile footprint, and no vegetation/bush clearance, outside the approved area, may be allowed.

- **Topsoil Stripping:**

It is proposed that topsoil removal will be restricted to the exact footprint of areas required during the operational phase of the activity. The topsoil will be stockpiled at a designated signposted area within the approved boundary to be replaced during the rehabilitation of

the area. It will be part of the obligations of site management to prevent the mixing of topsoil heaps with other soil heaps. The complete A-horizon (the top 100 – 200 mm of soil which is generally darker colored due to high organic matter content) will be removed. If it is unclear where the topsoil layer ends the top 300 mm of soil will be stripped. The topsoil berm will measure a maximum of 2 m in height to preserve micro-organisms within the topsoil, which can be lost due to compaction and lack of oxygen.

- **Introduction of Machinery and Site Equipment:**

The infrastructure to be used on site will all be of temporary and mobile nature. Containers will be used for office and storage purposes, and a weigh bridge will be established (temporary). The storage of fuel (if any) will be below the threshold of the NEMA EIA listed activities. The ablution facilities will be chemical toilets that will be serviced by registered suppliers. The office and storage containers, weigh bridge and ablution facilities will most likely be placed at the entrance to the site, while the crushing plant will be of mobile nature, moving around the site as needed.

Presently, the infrastructure/equipment is expected to consist of at least:

- A temporary wash bay;
- ADT trucks;
- Chemical ablution facilities;
- Containers used as site office, workshop, and storage room;
- Crushing and screening plant (mobile);
- Earthmoving- and excavating equipment;
- Weighbridge with control room;
- Generators; and a
- Water truck.

2. *Operational Phase:*

The Applicant submitted this application for environmental authorization in need for gravel/aggregate in the area due to the proposed R510 road construction project as well as the increase in building, construction and other road maintenance projects.

Aggregate will be transported from quarries within the vicinity of the area or from other commercial sites. The rock will then be delivered to the crushing and screening plant where it

will be reduced to various sized gravels. The screened material will be delivered to various size category stockpiles. Transportation of the final product will be from the stockpile area to the end point by means of trucks.

Should this application be successful, the Applicant intends to:

1. demarcate the boundaries of the stockpile area;
2. strip the topsoil off the earmarked area and stockpile it for later use in rehabilitation;
3. stockpile the processed material in various size categories within the boundaries of the approved area;
4. process the material through crushing and screening;
5. load and transport the material from the stockpiles onto trucks that will transport it to clients.

- **Water Use:**

Dust generated on the access road will as far as possible be managed through alternative dust suppression methods to prevent the use of water for dust suppression.

These measures will include a combination of the following:

- The speed of all equipment/vehicles will be restricted to 40 km/h on the internal farm road to minimize dust generation;
- When the truck leaves the stockpile area it will be covered (e.g. shade cloth material) to minimise windblown dust from the loads;
- The Applicant will attempt to lessen denuded areas (dust source) to the absolute minimum.

Under very windy/dusty conditions the EA holder might have to substitute the above-mentioned dust suppression methods with the spraying of water, in which case water will be bought and transported to the stockpile area in a water truck that will moisten the problem area. The water truck driver will receive proper training to ensure effective use of the water on problem areas preventing water wastage. Should additional water be required at any stage of the process, water will be bought and transported to site.

- **Electricity Use:**

The proposed project will make use of diesel generators to power the infrastructure. All generators will have secondary containment in the form of a bund wall/drip tray that can contain 110% of the generator's maximum capacity.

- **Servicing and Maintenance:**

A temporary workshop and wash bay will be established on site where minor servicing and emergency repairs of project related equipment/machinery will take place. The wash bay will have an impermeable floor and drain into an oil sump that will be serviced by a qualified contractor. No wash water will be allowed to drain into the surrounding environment. No bulk storing of fuel (>60 000 l) will take place on site, and any chemicals needed at the workshop will be stored in accordance with the product specific safety data sheet in temporary containers/secured cages.

- **Waste Handling:**

Solid (general) waste, generated during the operational phase, will be contained in sealable refuse bins that will be placed at the office area until the waste is transported to a registered general waste landfill site. A registered contractor will service the chemical toilets that will serve as ablution facilities to the employees.

Due to the nature of the project very little generation of hazardous waste is expected and will mainly be the result of accidental spillages or breakdowns. Such contaminated areas will be cleaned up immediately (within two hours of the occurrence) and the contaminated soil will be contained in designated hazardous waste containers that will be kept in a bunded area with impermeable surface until it is removed from site by a registered hazardous waste handling contractor to an approved facility.

Decommissioning Phase:

The decommissioning phase will entail the reinstatement of the stockpile area by removing the stockpiled material, and site infrastructure/equipment and landscaping the disturbed footprints. The reinstated area will be seeded with an appropriate grass mix.

The decommissioning activities will therefore consist of the following:

- Removing all stockpiled material;
- Removing all machinery and equipment from site;
- Landscaping all disturbed areas and replacing the topsoil;
- Vegetating the reinstated area; and
- Controlling/monitoring the invasive plant species.

The future land use of the proposed area will be agriculture. Upon replacement of the topsoil, the area will once again be available for grazing purposes, and the planting of the cover crop (to protect the topsoil) will tie in with the proposed land use.

2. FEASIBLE AND REASONABLE ALTERNATIVES

“alternatives”, in relation to a proposed activity, means different means of meeting the general purpose and requirements of the activity, which may include alternatives 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.

Describe alternatives that are considered in this application. Alternatives should include a consideration of all possible means by which the purpose and need of the proposed activity could be accomplished in the specific instance taking account of the interest of the applicant in the activity. The no-go alternative must in all cases be included in the assessment phase as the baseline against which the impacts of the other alternatives are assessed. The determination of whether site or activity (including different processes etc.) or both is appropriate needs to be informed by the specific circumstances of the activity and its environment. After receipt of this report the Department may also request the applicant to assess additional alternatives that could possibly accomplish the purpose and need of the proposed activity if it is clear that realistic alternatives have not been considered to a reasonable extent.

Paragraphs 3 – 13 below should be completed for each alternative.

3. ACTIVITY POSITION

Indicate the position of the activity using the latitude and longitude of the centre point of the site for each alternative site. The co-ordinates should be in degrees, minutes and seconds. The projection that must be used in all cases is the Hartebeeshoek 94 WGS84 spheroid in a national or local projection.

List alternative sites, if applicable.

Alternative:	Latitude (S):			Longitude (E):		
Alternative S1 ² (preferred or only site alternative)	24°	18'	19.14"	27°	25'	1.84"
Alternative S2 (if any)						
Alternative S3 (if any)						

Preferred site corner points:

	Latitude (S):	Longitude (E):
Corner 1	24°18'15,606"S	27°24'54,364"E
Corner 2	24°18'10,962"S	27°25'6,571"E
Corner 3	24°18'21,935"S	27°25'7,597"E
Corner 4	24°18'26,582"S	27°24'55,174"E
Corner 5	24°18'23,857"S	27°24'53,798"E
Corner 6	24°18'23,058"S	27°24'55,559"E
Corner 7	24°18'21,625"S	27°24'54,893"E

It should be noted that Site Alternative 2 (S2) was assessed for the proposed activity but found not environmentally and practically suitable. Pristine areas will be disturbed which will result in a significant impact on the ecosystem. Site alternative 1, was deemed the only viable site alternative as this is the only area that will be viable for the applicant due to the current disturbed area done by previous mining activities.

(More rows can be added if needed)

² "Alternative S.." refer to site alternatives.

In the case of linear activities:

Alternative:

Latitude (S):

Longitude (E):

Alternative S1 (preferred or only route alternative)

- Starting point of the activity
- Middle/Additional point of the activity
- End point of the activity

[Redacted]				
[Redacted]	[Redacted]	[Redacted]	[Redacted]	[Redacted]
[Redacted]	[Redacted]	[Redacted]	[Redacted]	[Redacted]
[Redacted]	[Redacted]	[Redacted]	[Redacted]	[Redacted]

Alternative S2 (if any)

- Starting point of the activity
- Middle/Additional point of the activity
- End point of the activity

[Redacted]	[Redacted]	[Redacted]	[Redacted]	[Redacted]
[Redacted]	[Redacted]	[Redacted]	[Redacted]	[Redacted]
[Redacted]	[Redacted]	[Redacted]	[Redacted]	[Redacted]

Alternative S3 (if any)

- Starting point of the activity
- Middle/Additional point of the activity
- End point of the activity

[Redacted]	[Redacted]	[Redacted]	[Redacted]	[Redacted]
[Redacted]	[Redacted]	[Redacted]	[Redacted]	[Redacted]
[Redacted]	[Redacted]	[Redacted]	[Redacted]	[Redacted]

For route alternatives that are longer than 500m, please provide an addendum with co-ordinates taken every 250 meters along the route for each alternative alignment.

4. PHYSICAL SIZE OF THE ACTIVITY

Indicate the physical size of the preferred activity/technology as well as alternative activities/technologies (footprints):

Alternative:

Size of the activity:

Alternative A1³ (preferred activity alternative)

116 924 m ²
m ²
m ²

Alternative A2 (if any)

Alternative A3 (if any)

or,

for linear activities:

Length of the

³ "Alternative A.." refer to activity, process, technology or other alternatives.

Alternative:

Alternative A1 (preferred activity alternative)

Alternative A2 (if any)

Alternative A3 (if any)

activity:



Indicate the size of the alternative sites or servitudes (within which the above footprints will occur):

Alternative:

Alternative A1 (preferred activity alternative)

Alternative A2 (if any)

Alternative A3 (if any)

Size of the site/servitude:



5. SITE ACCESS

Does ready access to the site exist?

YES	
	m

If NO, what is the distance over which a new access road will be built

Describe the type of access road planned:



The Applicant intends to construct a dirt road spanning from the R510 to the designated stockpile area and extended as the activities progress and will be rehabilitated as part of the final reinstatement of the area. The access farm road turns right from the R510 road.

In the event that new roads need to be constructed, these roads will be selected as far as possible to avoid watercourses and steep gradients. Adequate drainage and erosion protection in the form of cut-off berms or trenches will be provided where necessary.

Any new roads to be established to the site will be below the threshold of the EIA regulations of the National Environmental Management Act, 1998 (Act No 107 of 1998) as amended June 2014.

The existing farm road will be used as access road to the site. Should a portion of the access road need to be newly constructed in future the following will be adhered to:

The route will be selected that a minimum number of bushes or trees are felled, and existing fence lines will be followed as far as possible.

Adequate drainage and erosion protection in the form of cut-off berms or trenches will be provided where necessary.

Include the position of the access road on the site plan and required map, as well as an indication of the road in relation to the site.

6. SITE OR ROUTE PLAN

A detailed site or route plan(s) must be prepared for each alternative site or alternative activity. It must be attached as Appendix A to this document.

LEDET BA Report, EIA Regulations, 2014, as amended: Project Name: _____

The site or route plans must indicate the following:

- 6.1 the scale of the plan which must be at least a scale of 1:500;
- 6.2 the property boundaries and numbers of all the properties within 50 metres of the site;
- 6.3 the current land use as well as the land use zoning of each of the properties adjoining the site or sites;
- 6.4 the exact position of each element of the application as well as any other structures on the site;
- 6.5 the position of services, including electricity supply cables (indicate above or underground), water supply pipelines, boreholes, street lights, sewage pipelines, storm water infrastructure and telecommunication infrastructure;
- 6.6 all trees and shrubs taller than 1.8 metres;
- 6.7 walls and fencing including details of the height and construction material;
- 6.8 servitudes indicating the purpose of the servitude;
- 6.9 sensitive environmental elements within 100 metres of the site or sites including (but not limited thereto):
 - rivers;
 - the 1:100 year flood line (where available or where it is required by Department of Water Affairs);
 - ridges;
 - cultural and historical features;
 - areas with indigenous vegetation (even if it is degraded or invested with alien species);
- 6.10 for gentle slopes the 1 metre contour intervals must be indicated on the plan and whenever the slope of the site exceeds 1:10, the 500mm contours must be indicated on the plan; and
- 6.11 the positions from where photographs of the site were taken.

7. SITE PHOTOGRAPHS

Colour photographs from the centre of the site must be taken in at least the eight major compass directions with a description of each photograph. Photographs must be attached under Appendix B to this form. It must be supplemented with additional photographs of relevant features on the site, if applicable.

8. FACILITY ILLUSTRATION

A detailed illustration of the activity must be provided at a scale of 1:200 as Appendix C for activities that include structures. The illustrations must be to scale and must represent a realistic image of the planned activity. The illustration must give a representative view of the activity.

14. ACTIVITY MOTIVATION

9(a) Socio-economic value of the activity

What is the expected capital value of the activity on completion?

R 66 600 000

What is the expected yearly income that will be generated by or as a result of the activity?

R33 300 000

Will the activity contribute to service infrastructure?

YES	<input type="checkbox"/>
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Is the activity a public amenity?

<input type="checkbox"/>	NO
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How many new employment opportunities will be created in the development phase of the activity?

±4

What is the expected value of the employment opportunities during the development phase?

R1 700 000

What percentage of this will accrue to previously disadvantaged individuals?

50%

How many permanent new employment opportunities will be created during the operational phase of the activity?

±8

What is the expected current value of the employment opportunities during the first 10 years?

R12 000 000

What percentage of this will accrue to previously disadvantaged individuals?

100%

9(b) Need and desirability of the activity

Motivate and explain the need and desirability of the activity (including demand for the activity):

NEED:

Constructing a stockpile area is essential to provide ample space for the large quantities of aggregate needed for road construction activities and to ensure a steady supply of materials, which is crucial for uninterrupted development. This helps with maintaining project schedules and avoiding delays.

Indicate any benefits that the activity will have for society in general:

The stockpile area will contribute to the Road infrastructure development which plays a vital role in the well-being and growth of communities such as:

Economic Growth

- Improves Accessibility: Better roads enhance access to markets, jobs, education,

and health services, boosting economic activities and opportunities.

- Stimulates Investment: Improved infrastructure attracts businesses and investors, leading to job creation and economic diversification.
- Reduces Transportation Costs: Efficient road networks lower the cost of transporting goods and services, benefiting businesses and consumers alike.

Social Benefits

- Enhances Mobility: Good roads provide people with greater freedom to travel, improving access to social activities and services.
- Promotes Safety: Well-designed roads with proper signage and maintenance reduce the likelihood of accidents, improving overall safety.
- Improves Health Access: Easier and faster access to healthcare facilities can lead to better health outcomes for the community.

Emergency Response

- Facilitates Quick Response: Good roads enable faster response times for emergency services, such as ambulances, fire trucks, and police, during emergencies.
- Supports Disaster Management: Robust infrastructure aids in efficient evacuation and delivery of aid during natural disasters.

Educational Opportunities

- Facilitates School Access: Children can travel to schools more safely and easily, increasing attendance and educational attainment.
- Supports Educational Infrastructure: Easier transport of educational materials and resources enhances the quality of education.
- Indicate any benefits that the activity will have for the local communities where the activity will be located.

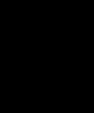
Considering the above-mentioned benefits, by establishing and maintaining stockpile areas, it will result in job creation for local workers, providing employment opportunities in the community. It will also increase the demand for services such as transportation, equipment rentals, and maintenance which supports local businesses. The activity will overall improve the economic growth of the area.

i.	Was the relevant municipality involved in the application?	YES	
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ii.	Does the proposed land use fall within the municipal Integrated Development Plan?		NO
iii.	If the answer to questions 1 and / or 2 was NO, please provide further motivation / explanation:		
	The local municipality has been informed of the project and are aware of the prior mining conditions. and will advise on whether a rezoning application is required		

DESIRABILITY:			
i.	Does the proposed land use / development fit the surrounding area?	YES	
ii.	Does the proposed land use / development conform to the relevant structure plans, Spatial development Framework, Land Use Management Scheme, and planning visions for the area?	YES	
iii.	Will the benefits of the proposed land use / development outweigh the negative impacts of it?	YES	
iv.	If the answer to any of the questions 1-3 was NO, please provide further motivation / explanation:		
v.	Will the proposed land use / development impact on the sense of place?		NO
vi.	Will the proposed land use / development set a precedent?		NO
vii.	Will any person's rights be affected by the proposed land use / development?		NO
viii.	Will the proposed land use / development compromise the "urban edge"?		NO
ix.	If the answer to any of the question 5-8 was YES, please provide further motivation / explanation.		

BENEFITS:			
i.	Will the land use / development have any benefits for society in general?	YES	

ii.	Explain: Please refer to Please refer to 9(b) <i>Need and desirability of the activity.</i>	
iii.	Will the land use / development have any benefits for the local communities where it will be located?	YES 
iv.	Explain: Please refer to 9(b) <i>Need and desirability of the activity.</i>	

10. APPLICABLE LEGISLATION, POLICIES AND/OR GUIDELINES

List all legislation, policies and/or guidelines of any sphere of government that are applicable to the application as contemplated in the EIA regulations, if applicable:

Title of legislation, policy or guideline:	Administering authority:	Date:
<p>National Environmental Management Act, 1998 (Act No. 107 of 1998) and the Environmental Impact Assessment Regulations, 2014 (as amended by GNR 326 effective 7 April 2017)</p> <p>GNR 983 Listing Notice 1 Activity 27 as amended:</p> <p>The clearance of an area of 1 hectares or more, but less than 20 hectares of indigenous vegetation.</p> <p>GNR 985 Listing Notice 1 Activity 28 as amended:</p> <p>Residential, mixed, retail, commercial, industrial or institutional developments where such land was used for agriculture, game farming, equestrian purposes or</p>	<p>Department of Economic Development, Environment & Tourism: Limpopo Province (DEDET)</p>	<p>2014 as amended</p>

<p>afforestation on or after 01 April 1998 and where such development:</p> <p>ii) will occur outside an urban area, where the total land to be developed is bigger than 1 hectare.</p> <p>excluding where such land has already been developed for residential, mixed, retail, commercial, industrial or institutional purposes.</p> <p>GNR 985 Listing Notice 3 Activity 12 as amended:</p> <p>The clearance of an area of 300 square metres or more of indigenous vegetation.</p> <p>e. Limpopo</p> <p>i. Within any critically endangered or endangered ecosystem listed in terms of section 52 of the NEMBA or prior to the publication of such a list, within an area that has been identified as critically endangered in the National Spatial Biodiversity Assessment 2004;</p> <p>ii. Within critical biodiversity areas identified in bioregional plans;</p>		
<p>Conservation of Agricultural Resources Act, 1983 (Act No. 43 of 1983).</p>	<p>DEDET</p>	<p>1983 as amended</p>
<p>National Environmental Management: Air Quality Control Act, 2004 (Act No 39 of 2004)</p>	<p>DEDET</p>	<p>2004 as amended</p>

read together with applicable amendments and regulations thereto specifically the National Dust Control Regulations, GN No R827.		
National Environmental Management Act: Biodiversity Act, 2004 (Act No. 10 of 2004) read together with applicable amendments and regulations thereto.	DEDET	2004 as amended
National Heritage Resources Act. 1999 (Act No 25 of 1999).	South African Heritage Resources Agency	1999 as amended
National Water Act, 1998 (Act No 36 of 1998) read together with applicable amendments and regulations thereto.	Department of Water and Sanitation	1998 as amended
Public Participation Guideline in terms of the NEMA EIA Regulations	DEDET	2004 as amended

11. WASTE, EFFLUENT, EMISSION AND NOISE MANAGEMENT

11(a) Solid waste management

Will the activity produce solid construction waste during the construction/initiation phase?

NO

If yes, what estimated quantity will be produced per month?

How will the construction solid waste be disposed of (describe)?

Where will the construction solid waste be disposed of (describe)?

Not applicable as no construction waste will be generated.

Will the activity produce solid waste during its operational phase?

YES

If yes, what estimated quantity will be produced per month?

5m³

How will the solid waste be disposed of (describe)?

Due to the nature of the project, the small scale of the proposed operation, and the fact that no permanent infrastructure will be established, very little to no general waste will be generated. Numerous general waste bins will be situated around the stockpile area and will be disposed of in a waste skip, which will be emptied once a month at the waste landfill site in Morgenzon.

Should any emergency vehicle repairs be done all spills must be disposed of in a 200-litre closed container/bin found inside the emergency service area.

Where will the solid waste be disposed if it does not feed into a municipal waste stream (describe)?

Not applicable, since general/ domestic waste will be generated.

If the solid waste (construction or operational phases) will not be disposed of in a registered landfill site or be taken up in a municipal waste stream, then the applicant should consult with the department to determine whether it is necessary to change to an application for scoping and EIA.

Can any part of the solid waste be classified as hazardous in terms of the relevant legislation?

NO

Is the activity that is being applied for a solid waste handling or treatment facility?

NO

11(b) Liquid effluent

Will the activity produce effluent, other than normal sewage, that will be disposed of in a municipal sewage system?

NO

If yes, what estimated quantity will be produced per month?

m³

Will the activity produce any effluent that will be treated and/or disposed of on site?

NO

If yes, what estimated quantity will be produced per month?

Will the activity produce effluent that will be treated and/or disposed of at another facility?

NO

If yes, what estimated quantity will be produced per month?

--

If yes, provide the particulars of the facility:

Facility name:

Contact person:

Postal address:

Postal code:

Telephone:

Cell:

E-mail:

Fax:

--

Describe the measures that will be taken to ensure the optimal reuse or recycling of waste water, if any:

Not applicable as no waste water will be generated

11(c) Emissions into the atmosphere

Will the activity release emissions into the atmosphere?

NO

If yes, is it controlled by any legislation of any sphere of government?

NO

If yes, the applicant should consult with the competent authority to determine whether it is necessary to change to an application for scoping and EIA.

If no, describe the emissions in terms of type and concentration:

Emission into the atmosphere is controlled by the National Environmental Management: Air Quality Act, 2004. The proposed activity does not trigger an application in terms of the said act, and emissions to be generated is expected to mainly entail dust due to the displacement of soil, crushing and screening of hard rock, and the transport of material on gravel roads. Should the Applicant implement the mitigation measures proposed in this document and the EMPR the impact on the air quality of the surrounding environment is deemed to be of low significance

11(d) Generation of noise

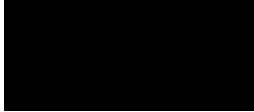
Will the activity generate noise?

YES

If yes, is it controlled by any legislation of any sphere of government?

NO

If yes, the applicant should consult with the competent authority to determine whether it is necessary to change to an application for scoping and EIA.



If no, describe the noise in terms of type and level:

The noise to be generated at the proposed stockpile area will increase daily noise levels as noise will be generated because of crushing and screening as well as transporting of material.

Although the proposed activity will have an impact on the ambient noise levels, the development will not take place in a pristine environment and will only be of temporary nature. The impact is therefore deemed acceptable with the provision that the mitigation measures and monitoring programmes (specified in Appendix E - EMP) are implemented.

12. WATER USE

Please indicate the source(s) of water that will be used for the activity by ticking the appropriate box(es)

<input type="checkbox"/> municipal water board	<input type="checkbox"/> groundwater	<input type="checkbox"/> river, stream, dam or lake	<input type="checkbox"/> other: Water will be bought and transported to site.	<input type="checkbox"/> the activity will not use water
--	--------------------------------------	---	---	--

the volume of water that is allowed to be extracted per day:

NO

Does the activity require a water use permit from the Department of Water Affairs?

If yes, please submit the necessary application to the Department of Water Affairs and attach proof thereof to this application if it has been submitted.

13. ENERGY EFFICIENCY

Describe the design measures, if any, that have been taken to ensure that the activity is energy efficient:

N/A

Describe how alternative energy sources have been taken into account or been built into the design of the activity, if any:

N/A

SECTION B: SITE/AREA/PROPERTY DESCRIPTION

Important notes:

1. For linear activities (pipelines, etc.) as well as activities that cover very large sites, it may be necessary to complete this section for each part of the site that has a significantly different environment. In such cases please complete copies of Section C and indicate the area, which is covered by each copy No. on the Site Plan.

Section C Copy
 No. (e.g. A):

2. Paragraphs 1 - 6 below must be completed for each alternative.

3. Has a specialist been consulted to assist with the completion of this section?

YES	
-----	--

If YES, please complete the form entitled "Details of specialist and declaration of interest" for each specialist thus appointed:

All specialist reports must be contained in Appendix D.

Property description/physical address:

(Farm name, portion etc.) Where a large number of properties are involved (e.g. linear activities), please attach a full list to this application.

In instances where there is more than one town or district involved, please attach a list of towns or districts to this application.

Current land-use zoning:

Bushveld

In instances where there is more than one current land-use zoning, please attach a list of current land use zonings that also indicate which portions each use pertains to , to this application.

Is a change of land-use or a consent use application required?

	NO
	NO

Must a building plan be submitted to the local authority?

Locality map:

An A3 locality map must be attached to the back of this document, as Appendix A. The scale of the locality map must be relevant to the size of the development (at least 1:50 000. For linear activities of more than 25 kilometres, a smaller scale e.g. 1:250 000 can be used. The scale must be indicated on the map.) The map must indicate the following:

- an indication of the project site position as well as the positions of the alternative sites, if any;
- road access from all major roads in the area;
- road names or numbers of all major roads as well as the roads that provide access to the site(s);
- all roads within a 1km radius of the site or alternative sites; and
- a north arrow;
- a legend; and
- locality GPS co-ordinates (Indicate the position of the activity using the latitude and longitude of the centre point of the site for each alternative site. The co-ordinates should be in degrees, minutes and seconds. The projection that must be used in all cases is the WGS84 spheroid in a national or local projection)

1. GRADIENT OF THE SITE

Indicate the general gradient of the site.

Alternative S1:

	1:20	–	
	1:15		

2. LOCATION IN LANDSCAPE

Indicate the landform(s) that best describes the site:

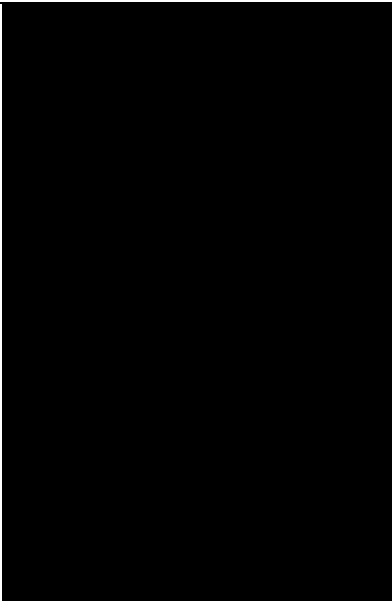
2.1 Ridgeline		2.6 Plain	
2.2 Plateau		2.7 Undulating plain / low hills	✓
2.3 Side slope of hill/mountain		2.8 Dune	
2.4 Closed valley		2.9 Seafront	
2.5 Open valley			

3. GROUNDWATER, SOIL AND GEOLOGICAL STABILITY OF THE SITE

Is the site(s) located on any of the following (tick the appropriate boxes)?

LEDET BA Report, EIA Regulations, 2014, as amended: Project Name: _____

Alternative S1:

Shallow water table (less than 1.5m deep)	NO	
Dolomite, sinkhole or doline areas	NO	
Seasonally wet soils (often close to water bodies)	NO	
Unstable rocky slopes or steep slopes with loose soil	NO	
Dispersive soils (soils that dissolve in water)	NO	
Soils with high clay content (clay fraction more than 40%)	NO	
Any other unstable soil or geological feature	NO	
An area sensitive to erosion	NO	

If you are unsure about any of the above or if you are concerned that any of the above aspects may be an issue of concern in the application, an appropriate specialist should be appointed to assist in the completion of this section. (Information in respect of the above will often be available as part of the project information or at the planning sections of local authorities. Where it exists, the 1:50 000 scale Regional Geotechnical Maps prepared by the Council for Geo Science may also be consulted).

4. GROUND COVER

Indicate the types of groundcover present on the site:

The location of all identified rare or endangered species or other elements should be accurately indicated on the site plan(s).

Natural veld - good condition ^E	Natural veld with scattered aliens ^E	Natural veld with heavy alien infestation ^E	Veld dominated by alien species ^E	Gardens
Sport field	Cultivated land	Paved surface	Building or other structure	Bare soil

If any of the boxes marked with an “E” is ticked, please consult an appropriate specialist to assist in the completion of this section if the environmental assessment practitioner doesn’t have the necessary expertise.

LEDET BA Report, EIA Regulations, 2014, as amended: Project Name: _____

5. LAND USE CHARACTER OF SURROUNDING AREA

Indicate land uses and/or prominent features that does currently occur within a 500m radius of the site and give description of how this influences the application or may be impacted upon by the application:

5.1 Natural area		5.22 School	
5.2 Low density residential		5.23 Tertiary education facility	
5.3 Medium density residential		5.24 Church	
5.4 High density residential		5.25 Old age home	
5.5 Medium industrial ^{AN}		5.26 Museum	
5.6 Office/consulting room		5.27 Historical building	
5.7 Military or police base/station/compound		5.28 Protected Area	
5.8 Spoil heap or slimes dam ^A		5.29 Sewage treatment plant ^A	
5.9 Light industrial		5.30 Train station or shunting yard ^N	
5.10 Heavy industrial ^{AN}		5.31 Railway line ^N	
5.11 Power station		5.32 Major road (4 lanes or more)	
5.12 Sport facilities		5.33 Airport ^N	
5.13 Golf course		5.34 Harbour	
5.14 Polo fields		5.35 Quarry, sand or borrow pit	
5.15 Filling station ^H		5.36 Hospital/medical centre	
5.16 Landfill or waste treatment site		5.37 River, stream or wetland	
5.17 Plantation		5.38 Nature conservation area	
5.18 Agriculture		5.39 Mountain, koppie or ridge	

5.19 Archaeological site		5.40 Graveyard	
5.20 Quarry, sand or borrow pit	✓	5.41 River, stream or wetland	
5.21 Dam or Reservoir		5.42 Other land uses (describe)	

If any of the boxes marked with an "N" are ticked, how will this impact / be impacted upon by the proposed activity?

If any of the boxes marked with an "An" are ticked, how will this impact / be impacted upon by the proposed activity?

If YES, specify and explain:	
If NO, specify:	

If any of the boxes marked with an "H" are ticked, how will this impact / be impacted upon by the proposed activity.

If YES, specify and explain:	
If NO, specify:	

6. CULTURAL/HISTORICAL FEATURES

Are there any signs of culturally or historically significant elements, as defined in section 2 of the National Heritage Resources Act, 1999, (Act No. 25 of 1999), including

NO

Archaeological or palaeontological sites, on or close (within 20m) to the site?

If YES, explain:

If uncertain, conduct a specialist investigation by a recognised specialist in the field to establish whether there is such a feature(s) present on or close to the site.

Briefly explain the findings of the specialist:

Will any building or structure older than 60 years be affected in any way?

NO

Is it necessary to apply for a permit in terms of the National Heritage Resources Act, 1999 (Act 25 of 1999)?

NO

If yes, please submit or, make sure that the applicant or a specialist submits the necessary application to SAHRA or the relevant provincial heritage agency and attach proof thereof to this application if such application has been made.

SECTION C: PUBLIC PARTICIPATION

1. ADVERTISEMENT

The person conducting a public participation process must take into account any guidelines applicable to public participation as contemplated in section 24J of the Act and must give notice to all potential interested and affected parties of the application which is subjected to public participation by—

- (a) fixing a notice board (of a size at least 60cm by 42cm; and must display the required information in lettering and in a format as may be determined by the department) at a place conspicuous to the public at the boundary or on the fence of—
 - (i) the site where the activity to which the application relates is or is to be undertaken; and
 - (ii) any alternative site mentioned in the application;
- (b) giving written notice to—
 - (i) the owner or person in control of that land if the applicant is not the owner or person in control of the land;
 - (ii) the occupiers of the site where the activity is or is to be undertaken or to any alternative site where the activity is to be undertaken;
 - (iii) owners and occupiers of land adjacent to the site where the activity is or is to be undertaken or to any alternative site where the activity is to be undertaken;
 - (iv) the municipal councillor of the ward in which the site or alternative site is situated and any organisation of ratepayers that represent the community in the area;
 - (v) the municipality which has jurisdiction in the area;
 - (vi) any organ of state having jurisdiction in respect of any aspect of the activity; and
 - (vii) any other party as required by the department;
- (c) placing an advertisement in—
 - (i) one local newspaper; or

- (ii) any official *Gazette* that is published specifically for the purpose of providing public notice of applications or other submissions made in terms of these Regulations;
- (d) placing an advertisement in at least one provincial newspaper or national newspaper, if the activity has or may have an impact that extends beyond the boundaries of the local municipality in which it is or will be undertaken: Provided that this paragraph need not be complied with if an advertisement has been placed in an official *Gazette* referred to in sub regulation 54(c)(ii); and
- (e) using reasonable alternative methods, as agreed to by the department, in those instances where a person is desiring of but unable to participate in the process due to—
 - (i) illiteracy;
 - (ii) disability; or
 - (iii) any other disadvantage.

2. CONTENT OF ADVERTISEMENTS AND NOTICES

A notice board, advertisement or notices must:

- (a) indicate the details of the application which is subjected to public participation; and
- (b) state—
 - (i) that the application has been submitted to the department in terms of these Regulations, as the case may be;
 - (ii) whether basic assessment or scoping procedures are being applied to the application, in the case of an application for environmental authorisation;
 - (iii) the nature and location of the activity to which the application relates;
 - (iv) where further information on the application or activity can be obtained; and
 - (v) the manner in which and the person to whom representations in respect of the application may be made.

3. PLACEMENT OF ADVERTISEMENTS AND NOTICES

Where the proposed activity may have impacts that extend beyond the municipal area where it is located, a notice must be placed in at least one provincial newspaper or national newspaper, indicating that an application will be submitted to the department in terms of these regulations, the nature and location of the activity, where further information on the proposed activity can be obtained and the manner in which representations in respect of the application can be made, unless a notice has been placed in any *Gazette* that is published specifically for the purpose of providing notice to the public of applications made in terms of these Regulations.

Advertisements and notices must make provision for all alternatives.

4. DETERMINATION OF APPROPRIATE MEASURES

The practitioner must ensure that the public participation is adequate and must determine whether a public meeting or any other additional measure is appropriate or not based on the particular nature of each case. Special attention should be given to the involvement of local community structures such as Ward Committees, ratepayers associations and traditional authorities where appropriate. Please note that public concerns that emerge at a later stage that should have been addressed may cause the department to withdraw any authorisation it may have issued if it becomes apparent that the public participation process was inadequate.

5. COMMENTS AND RESPONSE REPORT

The practitioner must record all comments and respond to each comment of the public before the application is submitted. The comments and responses must be captured in a comments and response report as prescribed in these Regulations and be attached to this application. The comments and response report must be attached under Appendix F.

6. AUTHORITY PARTICIPATION

Please note that a complete list of all organs of state and or any other applicable authority with their contact details must be appended to the basic assessment report or scoping report, whichever is applicable.

Authorities are key interested and affected parties in each application and no decision on any application will be made before the relevant local authority is provided with the opportunity to give input.

Name of Authority informed:	Comments received	Yes	No
<ul style="list-style-type: none"> • Waterberg District Municipality • Thabazimbi Local Municipality • Department of Social Development Limpopo Province • Department of Economic Development, Environmental Affairs and Tourism • Department of Labour • Department Of Rural Development and Agrarian Reform, Limpopo Province • Department Of Rural Development and Land Reform • Department of Transport • Department of Water and Sanitation • Department of Public Works • Department of Mineral Resources and Energy: Limpopo Province • ESKOM • South African Heritage Resources Agency • South African National Roads Agency 	<p>Not yet applicable - Any comments received on the draft BAR will be incorporated into the final BAR.</p>		

7. CONSULTATION WITH OTHER STAKEHOLDERS

Note that, for linear activities, or where deviation from the public participation requirements may be appropriate, the person conducting the public participation process may deviate from the requirements of that subregulation to the extent and in the manner as may be agreed to by the department.

Proof of any such agreement must be provided, where applicable.

Has any comment been received from stakeholders?

	NO
--	-----------

If “YES”, briefly describe the feedback below (also attach copies of any correspondence to and from the stakeholders to this application):

SECTION D: IMPACT ASSESSMENT

The assessment of impacts must adhere to the minimum requirements in the EIA Regulations, 2014, and should take applicable official guidelines into account. The issues raised by interested and affected parties should also be addressed in the assessment of impacts.

1. ISSUES RAISED BY INTERESTED AND AFFECTED PARTIES

List the main issues raised by interested and affected parties.

Not yet applicable - Any comments received on the draft BAR will be incorporated into the final BAR that will be submitted to DEDET for decision making.

Response from the practitioner to the issues raised by the interested and affected parties (A full response must be given in the Comments and Response Report that must be attached to this report as Annexure E):

Not yet applicable - Any comments received on the draft BAR will be incorporated into the final BAR that will be submitted to DEDET for decision making.

2. IMPACTS THAT MAY RESULT FROM THE PLANNING AND DESIGN, CONSTRUCTION, OPERATIONAL, DECOMMISSIONING AND CLOSURE PHASES AS WELL AS PROPOSED MANAGEMENT OF IDENTIFIED IMPACTS AND PROPOSED MITIGATION MEASURES

List the potential direct, indirect and cumulative property/activity/design/technology/operational alternative related impacts (as appropriate) that are likely to occur as a result of the planning and design phase, construction phase, operational phase, decommissioning and closure phase, including impacts relating to the choice of site/activity/technology alternatives as well as the mitigation measures that may eliminate or reduce the potential impacts listed.

IMPACTS AND RISKS IDENTIFIED PRE-MITIGATION MEASURES

SITE ESTABLISHMENT:

Visual intrusion as a result of site establishment

			Consequence			Likelihood	Significance				
Severity	Duration	Extent		Probability	Frequency		Low	Low-Medium	Medium	Medium-High	High
						1 - 4.9	5 - 9.9	10 - 14.9	15 - 19.9	20 - 25	
Rating: Medium			Site Layout Alternative 1			Degree of Mitigation: None					
3	3	1	2.3	4	2	3	6.9				

Potential impact on fauna within the footprint area

			Consequence			Likelihood	Significance				
Severity	Duration	Extent		Probability	Frequency		Low	Low-Medium	Medium	Medium-High	High
						1 - 4.9	5 - 9.9	10 - 14.9	15 - 19.9	20 - 25	
Rating: Low - Medium			Site Layout Alternative 1			Degree of Mitigation: None					
2	4	1	1.6	4	3	3.5	5.6				

Potential impact on vegetation and listed and/or protected plant species.

			Consequence			Likelihood	Significance				
Severity	Duration	Extent		Probability	Frequency		Low	Low-Medium	Medium	Medium-High	High
						1 - 4.9	5 - 9.9	10 - 14.9	15 - 19.9	20 - 25	

Rating: Low - Medium			Site Layout Alternative 1			Degree of Mitigation: None	
2	4	1	1.6	4	3	3.5	5.6

Dust nuisance due to site establishment.

			Consequence			Likelihood	Significance				
Severity	Duration	Extent		Probability	Frequency		Low	Low-Medium	Medium	Medium-High	High
						1 - 4.9	5 - 9.9	10 - 14.9	15 - 19.9	20 - 25	
Rating: Low - Medium			Site Layout Alternative 1			Degree of Mitigation: None					
3	4	1	2.6	4	3	3.5 9.1					

Potential impact on archaeological artefacts

			Consequence			Likelihood	Significance				
Severity	Duration	Extent		Probability	Frequency		Low	Low-Medium	Medium	Medium-High	High
						1 - 4.9	5 - 9.9	10 - 14.9	15 - 19.9	20 - 25	
Rating: Low			Site Layout Alternative 1			Degree of Mitigation: None					
2	5	5	4	1	1	1 4					

New job opportunities as a result of the stockpile activities(Positive Impact)

			Consequence			Likelihood	Significance				
Severity	Duration	Extent		Probability	Frequency		Low	Low-Medium	Medium	Medium-High	High
						1 - 4.9	5 - 9.9	10 - 14.9	15 - 19.9	20 - 25	
Rating: High			Site Layout Alternative 1			Degree of Mitigation: N/A					
4	4	5	4.6	5	5	5 23					

STRIPPING AND STOCKPILING OF TOPSOIL AND/OR OVERBURDEN:

Visual intrusion caused by stockpile activities.

			Consequence			Likelihood	Significance				
Severity	Duration	Extent		Probability	Frequency		Low	Low-Medium	Medium	Medium-High	High
						1 - 4.9	5 - 9.9	10 - 14.9	15 - 19.9	20 - 25	
Rating: Medium			Site Layout Alternative 1			Degree of Mitigation: None					
3	4	1	2.6	4	3	3.5 9.1					

Loss of stockpiled topsoil during stockpiling activities.

			Consequence			Likelihood	Significance				
Severity	Duration	Extent		Probability	Frequency		Low	Low-Medium	Medium	Medium-High	High
						1 - 4.9	5 - 9.9	10 - 14.9	15 - 19.9	20 - 25	
Rating: Low - Medium			Site Layout Alternative 1			Degree of Mitigation: None					
3	4	1	2.6	4	3	3.5 9.1					

Dust nuisance as a result of the disturbance of soil.

			Consequence			Likelihood	Significance				
Severity	Duration	Extent		Probability	Frequency		Low	Low-Medium	Medium	Medium-High	High
						1 - 4.9	5 - 9.9	10 - 14.9	15 - 19.9	20 - 25	
Rating: Low - Medium			Site Layout Alternative 1			Degree of Mitigation: None					
2	3	2	2.3	4	4	4	9.2				

Noise nuisance generated by crushing and screening machinery.

			Consequence			Likelihood	Significance				
Severity	Duration	Extent		Probability	Frequency		Low	Low-Medium	Medium	Medium-High	High
						1 - 4.9	5 - 9.9	10 - 14.9	15 - 19.9	20 - 25	
Rating: Medium			Site Layout Alternative 1			Degree of Mitigation: None					
2	4	1	2.3	5	5	5	11.6				

Infestation of the topsoil heaps and stockpile area with weeds or invader plant species.

			Consequence			Likelihood	Significance				
Severity	Duration	Extent		Probability	Frequency		Low	Low-Medium	Medium	Medium-High	High
						1 - 4.9	5 - 9.9	10 - 14.9	15 - 19.9	20 - 25	
Rating: Low - Medium			Site Layout Alternative 1			Degree of Mitigation: None					
3	3	1	2.3	4	2	3	6.9				

Potential impact on local fauna due to disturbance and loss of available habitat.

			Consequence			Likelihood	Significance				
Severity	Duration	Extent		Probability	Frequency		Low	Low-Medium	Medium	Medium-High	High
						1 - 4.9	5 - 9.9	10 - 14.9	15 - 19.9	20 - 25	
Rating: Low - Medium			Site Layout Alternative 1			Degree of Mitigation: None					
3	3	1	2.3	4	2	3	6.9				

Potential erosion of denuded areas.

			Consequence			Likelihood	Significance				
Severity	Duration	Extent		Probability	Frequency		Low	Low-Medium	Medium	Medium-High	High
						1 - 4.9	5 - 9.9	10 - 14.9	15 - 19.9	20 - 25	
Rating: Low - Medium			Site Layout Alternative 1			Degree of Mitigation: None					
3	3	1	2.3	4	2	3	6.9				

Loss of stockpiled material due to ineffective storm water control.

			Consequence			Likelihood	Significance				
Severity	Duration	Extent		Probability	Frequency		Low	Low-Medium	Medium	Medium-High	High
							1 - 4.9	5 - 9.9	10 - 14.9	15 - 19.9	20 - 25
Rating: Medium			Site Layout Alternative 1			Degree of Mitigation: None					
2	4	1	2.3	5	5	5	11.6				

Potential contamination of footprint area and surface runoff as a result of hydrocarbon spillages

			Consequence			Likelihood	Significance				
Severity	Duration	Extent		Probability	Frequency		Low	Low-Medium	Medium	Medium-High	High
							1 - 4.9	5 - 9.9	10 - 14.9	15 - 19.9	20 - 25
Rating: Medium			Site Layout Alternative 1			Degree of Mitigation: None					
2	4	1	2.3	5	5	5	11.6				

PROCESSING, STOCKPILING AND TRANSPORTING OF MATERIAL:

Dust nuisance generated at the processing plant.

			Consequence			Likelihood	Significance				
Severity	Duration	Extent		Probability	Frequency		Low	Low-Medium	Medium	Medium-High	High
							1 - 4.9	5 - 9.9	10 - 14.9	15 - 19.9	20 - 25
Rating: Low - Medium			Site Layout Alternative 1			Degree of Mitigation: None					
3	3	1	2.3	4	2	3	6.9				

Noise nuisance stemming from operation of the processing plant.

			Consequence			Likelihood	Significance				
Severity	Duration	Extent		Probability	Frequency		Low	Low-Medium	Medium	Medium-High	High
							1 - 4.9	5 - 9.9	10 - 14.9	15 - 19.9	20 - 25
Rating: Low - Medium			Site Layout Alternative 1			Degree of Mitigation: None					
3	3	1	2.3	4	2	3	6.9				

Visual intrusion as a result of operation of the processing plant.

			Consequence			Likelihood	Significance				
Severity	Duration	Extent		Probability	Frequency		Low	Low-Medium	Medium	Medium-High	High
						1 - 4.9	5 - 9.9	10 - 14.9	15 - 19.9	20 - 25	
Rating: Low - Medium			Site Layout Alternative 1			Degree of Mitigation: None					
3	3	1	2.3	4	2	3	6.9				

Potential contamination of environment due to improper waste management.

			Consequence			Likelihood	Significance				
Severity	Duration	Extent		Probability	Frequency		Low	Low-Medium	Medium	Medium-High	High
						1 - 4.9	5 - 9.9	10 - 14.9	15 - 19.9	20 - 25	
Rating: Low - Medium			Site Layout Alternative 1			Degree of Mitigation: None					
3	3	1	2.3	4	4	4	9.2				

Overloading of trucks impacting road infrastructure

			Consequence			Likelihood	Significance				
Severity	Duration	Extent		Probability	Frequency		Low	Low-Medium	Medium	Medium-High	High
						1 - 4.9	5 - 9.9	10 - 14.9	15 - 19.9	20 - 25	
Rating: Medium			Site Layout Alternative 1			Degree of Mitigation: None					
3	4	1	2.6	4	4	4	10.4				

CUMULATIVE IMPACTS:

Impact the broad-scale ecological processes - The loss of unprotected vegetation types on a cumulative basis from the broad area may impact the country's ability to meet its conservation targets.

			Consequence			Likelihood	Significance				
Severity	Duration	Extent		Probability	Frequency		Low	Low-Medium	Medium	Medium-High	High
							1 - 4.9	5 - 9.9	10 - 14.9	15 - 19.9	20 - 25
Rating: Low			Site Layout Alternative 1			Degree of Mitigation: None					
2	5	5	4	1	1	1	4				

Transformation of intact habitat would contribute to the fragmentation of the landscape and would potentially disrupt the connectivity of the landscape for fauna, avifauna, and flora and impair their ability to respond to environmental fluctuations.

			Consequence			Likelihood	Significance				
Severity	Duration	Extent		Probability	Frequency		Low	Low-Medium	Medium	Medium-High	High
							1 - 4.9	5 - 9.9	10 - 14.9	15 - 19.9	20 - 25
Rating: Low			Site Layout Alternative 1			Degree of Mitigation: None					
2	5	5	4	1	1	1	4				

SLOPING AND LANDSCAPING DURING REHABILITATION:

Erosion of returned topsoil after rehabilitation

			Consequence			Likelihood	Significance				
Severity	Duration	Extent		Probability	Frequency		Low	Low-Medium	Medium	Medium-High	High
							1 - 4.9	5 - 9.9	10 - 14.9	15 - 19.9	20 - 25
Rating: Medium			Site Layout Alternative 1			Degree of Mitigation: None					
3	5	1	3	4	3	3.5	10.5				

Infestation of the reinstated areas by weeds and invader plant species

			Consequence			Likelihood	Significance				
Severity	Duration	Extent		Probability	Frequency		Low	Low-Medium	Medium	Medium-High	High
							1 - 4.9	5 - 9.9	10 - 14.9	15 - 19.9	20 - 25
Rating: Medium			Site Layout Alternative 1			Degree of Mitigation: None					
3	5	1	3	4	3	3.5	10.5				

Potential impact associated with litter/waste left at the stockpile area

			Consequence			Likelihood	Significance				
Severity	Duration	Extent		Probability	Frequency		Low	Low-Medium	Medium	Medium-High	High
						1 - 4.9	5 - 9.9	10 - 14.9	15 - 19.9	20 - 25	
Rating: Medium			Site Layout Alternative 1			Degree of Mitigation: None					
3	5	1	3	4	3	3.5	10.5				

Return of the stockpile area to landscape feature upon closure (Positive Impact)

			Consequence			Likelihood	Significance				
Severity	Duration	Extent		Probability	Frequency		Low	Low-Medium	Medium	Medium-High	High
						1 - 4.9	5 - 9.9	10 - 14.9	15 - 19.9	20 - 25	
Rating: Medium-High			Site Layout Alternative 1			Degree of Mitigation: N/A					
3	5	1	3	5	5	5	15				

METHODOLOGY FOR THE ASSESSMENT OF THE POTENTIAL ENVIRONMENTAL, SOCIAL AND CULTURAL IMPACTS

DEFINITIONS AND CONCEPTS:

Environmental significance:

The concept of significance is at the core of impact identification, evaluation and decision-making. The concept remains largely undefined and there is no international consensus on a single definition. The following common elements are recognised from the various interpretations:

- Environmental significance is a value judgement.
- The degree of environmental significance depends on the nature of the impact
- The importance is rated in terms of both biophysical and socio-economic values
- Determining significance involves the amount of change to the environment perceived to be acceptable to affected communities.

Significance can be differentiated into impact magnitude and impact significance. Impact magnitude is the measurable change (i.e. intensity, duration and likelihood). Impact significance is the value placed on the change by different affected parties (i.e. level of acceptability) (DEAT (2002) Impact Significance, Integrated Environmental Management, Information Series 5).

The concept of risk has two dimensions, namely the consequence of an event or set of circumstances, and the likelihood of particular consequences being realised (Environment Australia (1999) Environmental Risk Management).

Impact

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

Consequence

The intermediate or final outcome of an event or situation OR it is the result, on the environment, of an event.

Likelihood

A qualitative term covering both probability and frequency.

Frequency

The number of occurrences of a defined event in a given time or rate.

Probability

The likelihood of a specific outcome measured by the ratio of a specific outcome to the total number of possible outcomes.

Environment

Surroundings in which an organisation operates, including air, water, land, natural resources, flora, fauna, humans and their interrelation (ISO 14004, 1996).

Methodology that will be used

The environmental significance assessment methodology is based on the following determination:

$$\text{Environmental Significance} = \text{Overall Consequence} \times \text{Overall Likelihood}$$

Determination of Overall Consequence

Consequence analysis is a mixture of quantitative and qualitative information and the outcome can be positive or negative. Several factors can be used to determine consequence. For the purpose of determining the environmental significance in terms of consequence, the following factors were chosen:

Severity/Intensity, Duration and Extent/Spatial Scale. Each factor is assigned a rating of 1 to 5, as described in the tables below.

Determination of Severity / Intensity

Severity relates to the nature of the event, aspect or impact to the environment and describes how severe the aspects impact on the biophysical and socio-economic environment.

The table below will be used to obtain an overall rating for severity, taking into consideration the various criteria.

Table 1: Table to be used to obtain an overall rating of severity, taking into consideration the various criteria.

Type of criteria	Rating				
	1	2	3	4	5
Quantitative	0-20%	21-40%	41-60%	61-80%	81-100%
Qualitative	Insignificant / Non-harmful	Small / Potentially harmful	Significant/ Harmful	Great/ Very harmful	Disastrous Extremely harmful
Social/ Community response	Acceptable / I&AP satisfied	Slightly tolerable / Possible objections	Intolerable/ Sporadic complaints	Unacceptable / Widespread complaints	Totally unacceptable / Possible legal action
Irreversibility	Very low cost to mitigate/ High potential to mitigate impacts to level of insignificance/ Easily reversible	Low cost to mitigate	Substantial cost to mitigate/ Potential to mitigate impacts/ Potential to reverse impact	High cost to mitigate	Prohibitive cost to mitigate/ Little or no mechanism to mitigate impact Irreversible
Biophysical (Air quality, water quantity and quality, waste production, fauna and flora)	Insignificant change / deterioration or disturbance	Moderate change / deterioration or disturbance	Significant change / deterioration or disturbance	Very significant change / deterioration or disturbance	Disastrous change / deterioration or disturbance

Determination of Duration

Duration refers to the amount of time that the environment will be affected by the event, risk or impact, if no intervention e.g. remedial action takes place.

Table 2: Criteria for the rating of duration.

Rating	Description
1	Up to ONE MONTH
2	ONE MONTH to THREE MONTHS (QUARTER)
3	THREE MONTHS to ONE YEAR
4	ONE to TEN YEARS
5	Beyond TEN YEARS

Determination of Extent/Spatial Scale

Extent or spatial scale is the area affected by the event, aspect or impact.

Table 3: Criteria for the rating of extent / spatial scale.

Rating	Description
1	Immediate, fully contained area
2	Surrounding area
3	Within Business Unit area of responsibility
4	Within the farm/neighbouring farm area
5	Regional, National, International

Determination of Overall Consequence

Overall consequence is determined by adding the factors determined above and summarized below, and then dividing the sum by 3.

Table 4: Example of calculating overall consequence.

Consequence	Rating
Severity	Example 4
Duration	Example 2
Extent	Example 4
SUBTOTAL	10
TOTAL CONSEQUENCE: (Subtotal divided by 3)	3.3

Determination of Likelihood:

The determination of likelihood is a combination of Frequency and Probability. Each factor is assigned a rating of 1 to 5, as described below and in tables 6 and 7.

Determination of Frequency

Frequency refers to how often the specific activity, related to the event, aspect or impact, is undertaken.

Table 5: Criteria for the rating of frequency.

Rating	Description
1	Once a year or once/more during operation
2	Once/more in 6 Months
3	Once/more a Month
4	Once/more a Week
5	Daily

Determination of Probability

Probability refers to how often the activity or aspect has an impact on the environment.

Table 6: Criteria for the rating of probability.

Rating	Description
1	Almost never / almost impossible
2	Very seldom / highly unlikely
3	Infrequent / unlikely / seldom
4	Often / regularly / likely / possible
5	Daily / highly likely / definitely

Overall Likelihood

Overall likelihood is calculated by adding the factors determined above and summarised below, and then dividing the sum by 2.

Table 7: Example of calculating overall likelihood.

Consequence	Rating
Frequency	Example 4
Probability	Example 2
SUBTOTAL	6
TOTAL LIKELIHOOD (Subtotal divided by 2)	3

Determination of Overall Environmental Significance:

The multiplication of overall consequence with overall likelihood will provide the environmental significance, which is a number that will then fall into a range of **LOW**, **LOW-MEDIUM**, **MEDIUM**, **MEDIUM-HIGH** or **HIGH**, as shown in the table below.

Table 8: Determination of overall environmental significance.

Significance or Risk	Low	Low-Medium	Medium	Medium-High	High
Overall Consequence X Overall Likelihood	1 – 4.9	5 – 9.9	10 – 14.9	15 – 19.9	20 – 25

Qualitative description or magnitude of Environmental Significance

This description is qualitative and is an indication of the nature or magnitude of the Environmental Significance. It also guides the prioritisations and decision making process associated with this event, aspect or impact.

Table 9: Description of environmental significance and related action required.

(a) Significance	Low	Low-Medium	Medium	Medium-High	High
Impact Magnitude	Impact is of very	Impact is of low	Impact is real,	Impact is real and	Impact is of the

(a) Significance	Low	Low-Medium	Medium	Medium-High	High
	low order and therefore likely to have very little real effect. Acceptable.	order and therefore likely to have little real effect. Acceptable.	and potentially substantial in relation to other impacts. Can pose a risk to company	substantial in relation to other impacts. Pose a risk to the company. Unacceptable	highest order possible. Unacceptable. Fatal flaw.
Action Required	Maintain current management measures. Where possible improve.	Maintain current management measures. Implement monitoring and evaluate to determine potential increase in risk. Where possible improve	Implement monitoring. Investigate mitigation measures and improve management measures to reduce risk, where possible.	Improve management measures to reduce risk.	Implement significant mitigation measures or implement alternatives.

Based on the above, the significance rating scale has been determined as follows:

- High** Of the highest order possible within the bounds of impacts which could occur. In the case of negative impacts, there would be no possible mitigation and / or remedial activity to offset the impact at the spatial or time scale for which it was predicted. In the case of positive impacts, there is no real alternative to achieving the benefit.
- Medium-High** Impacts of a substantial order. In the case of negative impacts, mitigation and / or remedial activity would be feasible but difficult, expensive, time-consuming or some combination of these. In the case of positive impacts, other means of achieving this benefit would be feasible, but these would be more difficult, expensive, time-consuming or some combination of these.
- Medium** Impact would be real but not substantial within the bounds of those, which could occur. In the case of negative impacts, mitigation and / or remedial activity would be both feasible and fairly easily possible, In case of positive impacts; other means of achieving these benefits would be about equal in time, cost and effort.
- Low-Medium** Impact would be of a low order and with little real effect. In the case of negative impacts, mitigation and / or remedial activity would be either easily achieved or little would be required, or both. In case of positive impacts alternative means for achieving this benefit would likely be easier, cheaper, more effective, less time-consuming, or some combination of these.
- Low** Impact would be negligible. In the case of negative impacts, almost no mitigation and or remedial activity would be needed, and any minor steps, which might be needed,

would be easy, cheap and simple. In the case of positive impacts, alternative means would almost all likely be better, in one or a number of ways, than this means of achieving the benefit.

Insignificant

There would be a no impact at all – not even a very low impact on the system or any of its parts.

IMPACTS AND RISKS IDENTIFIED PRE-MITIGATION MEASURES.

SITE ESTABLISHMENT:

Visual intrusion as a result of site establishment

			Consequence			Likelihood	Significance				
Severity	Duration	Extent					Probability	Frequency	Low	Low-Medium	Medium
							1 - 4.9	5 - 9.9	10 - 14.9	15 - 19.9	20 - 25
Rating: Low - Medium			Site Layout Alternative 1			Degree of Mitigation: Full					
2	4	1	1.6	4	3	3.5	5.6				

Potential impact on fauna within the footprint area

			Consequence			Likelihood	Significance				
Severity	Duration	Extent					Probability	Frequency	Low	Low-Medium	Medium
							1 - 4.9	5 - 9.9	10 - 14.9	15 - 19.9	20 - 25
Rating: Low			Site Layout Alternative 1			Degree of Mitigation: Full					
2	4	1	2.3	2	2	2	4.6				

Potential impact on vegetation and listed and/or protected plant species.

			Consequence			Likelihood	Significance				
Severity	Duration	Extent					Probability	Frequency	Low	Low-Medium	Medium
							1 - 4.9	5 - 9.9	10 - 14.9	15 - 19.9	20 - 25
Rating: Low - Medium			Site Layout Alternative 1			Degree of Mitigation: None					
2	4	1	1.6	4	3	3.5	5.6				

Dust nuisance due to site establishment.

			Consequence			Likelihood	Significance				
Severity	Duration	Extent					Probability	Frequency	Low	Low-Medium	Medium
							1 - 4.9	5 - 9.9	10 - 14.9	15 - 19.9	20 - 25
Rating: Low			Site Layout Alternative 1			Degree of Mitigation: Full					
2	2	1	1.6	3	2	2.5	4				

Potential impact on archaeological artefacts

			Consequence			Likelihood	Significance				
Severity	Duration	Extent					Probability	Frequency	Low	Low-Medium	Medium
							1 - 4.9	5 - 9.9	10 - 14.9	15 - 19.9	20 - 25
Rating: Low			Site Layout Alternative 1			Degree of Mitigation: Full					
2	5	5	4	1	1	1	4				

New job opportunities as a result of the stockpile activities (Positive Impact)

			Consequence			Likelihood	Significance				
Severity	Duration	Extent		Probability	Frequency		Low	Low-Medium	Medium	Medium-High	High
						1 - 4.9	5 - 9.9	10 - 14.9	15 - 19.9	20 - 25	
Rating: High			Site Layout Alternative 1			Degree of Mitigation: N/A					
4	4	5	4.6	5	5	23					

STRIPPING AND STOCKPILING OF TOPSOIL:

Visual intrusion caused by stockpile activities.

			Consequence			Likelihood	Significance				
Severity	Duration	Extent		Probability	Frequency		Low	Low-Medium	Medium	Medium-High	High
						1 - 4.9	5 - 9.9	10 - 14.9	15 - 19.9	20 - 25	
Rating: Low-Medium			Site Layout Alternative 1			Degree of Mitigation: Partial					
3	4	1	2.6	4	3	9.1					

Loss of stockpiled topsoil during stockpiling activities.

			Consequence			Likelihood	Significance				
Severity	Duration	Extent		Probability	Frequency		Low	Low-Medium	Medium	Medium-High	High
						1 - 4.9	5 - 9.9	10 - 14.9	15 - 19.9	20 - 25	
Rating: Low			Site Layout Alternative 1			Degree of Mitigation: Full					
2	4	1	2.3	2	2	4.6					

Dust nuisance as a result of the disturbance of soil.

			Consequence			Likelihood	Significance				
Severity	Duration	Extent		Probability	Frequency		Low	Low-Medium	Medium	Medium-High	High
						1 - 4.9	5 - 9.9	10 - 14.9	15 - 19.9	20 - 25	
Rating: Low - Medium			Site Layout Alternative 1			Degree of Mitigation: Full					
2	4	1	1.6	4	3	5.6					

Noise nuisance generated by crushing and screening machinery.

			Consequence			Likelihood	Significance				
Severity	Duration	Extent		Probability	Frequency		Low	Low-Medium	Medium	Medium-High	High
						1 - 4.9	5 - 9.9	10 - 14.9	15 - 19.9	20 - 25	
Rating: Low - Medium			Site Layout Alternative 1			Degree of Mitigation: Full					
2	4	2	2.6	3	3	8					

Infestation of the topsoil heaps and stockpile area with weeds or invader plant species.

			Consequence			Likelihood	Significance				
Severity	Duration	Extent		Probability	Frequency		Low	Low-Medium	Medium	Medium-High	High
						1 - 4.9	5 - 9.9	10 - 14.9	15 - 19.9	20 - 25	
Rating: Low			Site Layout Alternative 1			Degree of Mitigation: Full					
2	2	2	2	2	2	4					

Potential impact on local fauna due to disturbance and loss of available habitat.

			Consequence			Likelihood	Significance				
Severity	Duration	Extent		Probability	Frequency		Low	Low-Medium	Medium	Medium-High	High
						1 - 4.9	5 - 9.9	10 - 14.9	15 - 19.9	20 - 25	
Rating: Low			Site Layout Alternative 1			Degree of Mitigation: Full					
2	4	1	2.3	2	2	4.6					

Potential erosion of denuded areas.

			Consequence			Likelihood	Significance				
Severity	Duration	Extent		Probability	Frequency		Low	Low-Medium	Medium	Medium-High	High
						1 - 4.9	5 - 9.9	10 - 14.9	15 - 19.9	20 - 25	
Rating: Low			Site Layout Alternative 1			Degree of Mitigation: Full					
2	4	1	2.3	2	2	4.6					

Loss of stockpiled material due to ineffective storm water control.

			Consequence			Likelihood	Significance				
Severity	Duration	Extent		Probability	Frequency		Low	Low-Medium	Medium	Medium-High	High
						1 - 4.9	5 - 9.9	10 - 14.9	15 - 19.9	20 - 25	
Rating: Low-Medium			Site Layout Alternative 1			Degree of Mitigation: Full					
2	4	1	2.3	2	3	5.7					

Potential contamination of footprint area and surface runoff as a result of hydrocarbon spillages

			Consequence			Likelihood	Significance				
Severity	Duration	Extent		Probability	Frequency		Low	Low-Medium	Medium	Medium-High	High
						1 - 4.9	5 - 9.9	10 - 14.9	15 - 19.9	20 - 25	
Rating: Low-Medium			Site Layout Alternative 1			Degree of Mitigation: Full					
2	4	1	2.3	2	3	5.7					

PROCESSING, STOCKPILING AND TRANSPORTING OF MATERIAL:

Dust nuisance generated at the processing plant.

			Consequence			Likelihood	Significance				
Severity	Duration	Extent		Probability	Frequency		Low	Low-Medium	Medium	Medium-High	High
						1 - 4.9	5 - 9.9	10 - 14.9	15 - 19.9	20 - 25	
Rating: Low			Site Layout Alternative 1			Degree of Mitigation: Full					
2	2	1	1.6	2	2	3.2					

Noise nuisance stemming from operation of the processing plant.

			Consequence			Likelihood	Significance				
Severity	Duration	Extent		Probability	Frequency		Low	Low-Medium	Medium	Medium-High	High
						1 - 4.9	5 - 9.9	10 - 14.9	15 - 19.9	20 - 25	
Rating: Low			Site Layout Alternative 1			Degree of Mitigation: Full					
2	2	1	1.6	2	2	3.2					

Visual intrusion as a result of operation of the processing plant.

			Consequence			Likelihood	Significance				
Severity	Duration	Extent		Probability	Frequency		Low	Low-Medium	Medium	Medium-High	High
						1 - 4.9	5 - 9.9	10 - 14.9	15 - 19.9	20 - 25	
Rating: Low - Medium			Site Layout Alternative 1			Degree of Mitigation: Full					
3	3	1	2.3	4	2	6.9					

Potential contamination of environment due to improper waste management.

			Consequence			Likelihood	Significance				
Severity	Duration	Extent		Probability	Frequency		Low	Low-Medium	Medium	Medium-High	High
						1 - 4.9	5 - 9.9	10 - 14.9	15 - 19.9	20 - 25	
Rating: Low			Site Layout Alternative 1			Degree of Mitigation: Full					
2	4	1	2.3	2	2	4.6					

Overloading of trucks impacting road infrastructure

			Consequence			Likelihood	Significance				
Severity	Duration	Extent		Probability	Frequency		Low	Low-Medium	Medium	Medium-High	High
						1 - 4.9	5 - 9.9	10 - 14.9	15 - 19.9	20 - 25	
Rating: Low - Medium			Site Layout Alternative 1			Degree of Mitigation: Full					
3	3	1	2.3	4	4	9.2					

CUMULATIVE IMPACTS:

Impact the broad-scale ecological processes - The loss of unprotected vegetation types on a cumulative basis from the broad area may impact the country's ability to meet its conservation targets.

			Consequence			Likelihood	Significance				
Severity	Duration	Extent		Probability	Frequency		Low	Low-Medium	Medium	Medium-High	High
							1 - 4.9	5 - 9.9	10 - 14.9	15 - 19.9	20 - 25
Rating: Low			Site Layout Alternative 1			Degree of Mitigation: None					
2	5	5	4	1	1	1	4				

Transformation of intact habitat would contribute to the fragmentation of the landscape and would potentially disrupt the connectivity of the landscape for fauna, avifauna, and flora and impair their ability to respond to environmental fluctuations.

			Consequence			Likelihood	Significance				
Severity	Duration	Extent		Probability	Frequency		Low	Low-Medium	Medium	Medium-High	High
							1 - 4.9	5 - 9.9	10 - 14.9	15 - 19.9	20 - 25
Rating: Low			Site Layout Alternative 1			Degree of Mitigation: None					
2	5	5	4	1	1	1	4				

SLOPING AND LANDSCAPING DURING REHABILITATION:

Erosion of returned topsoil after rehabilitation

			Consequence			Likelihood	Significance				
Severity	Duration	Extent		Probability	Frequency		Low	Low-Medium	Medium	Medium-High	High
							1 - 4.9	5 - 9.9	10 - 14.9	15 - 19.9	20 - 25
Rating: Low-Medium			Site Layout Alternative 1			Degree of Mitigation: Full					
3	3	1	2.3	4	4	4	9.2				

Infestation of the reinstated areas by weeds and invader plant species

			Consequence			Likelihood	Significance				
Severity	Duration	Extent		Probability	Frequency		Low	Low-Medium	Medium	Medium-High	High
							1 - 4.9	5 - 9.9	10 - 14.9	15 - 19.9	20 - 25
Rating: Low-Medium			Site Layout Alternative 1			Degree of Mitigation: Full					
3	5	1	3	2	2	2	5				

Potential impact associated with litter/waste left at the stockpile area

			Consequence			Likelihood	Significance				
Severity	Duration	Extent		Probability	Frequency		Low	Low-Medium	Medium	Medium-High	High
						1 - 4.9	5 - 9.9	10 - 14.9	15 - 19.9	20 - 25	
Rating: Low-Medium			Site Layout Alternative 1			Degree of Mitigation: Full					
3	3	1	2.3	4	4	9.2					

Return of the stockpile area to landscape feature upon closure (Positive Impact)

			Consequence			Likelihood	Significance				
Severity	Duration	Extent		Probability	Frequency		Low	Low-Medium	Medium	Medium-High	High
						1 - 4.9	5 - 9.9	10 - 14.9	15 - 19.9	20 - 25	
Rating: Medium-High			Site Layout Alternative 1			Degree of Mitigation: N/A					
3	5	1	3	5	5	15					

3. ENVIRONMENTAL IMPACT STATEMENT

Taking the assessment of potential impacts into account, please provide an environmental impact statement that summarises the impact that the proposed activity and its alternatives may have on the environment after the management and mitigation of impacts have been taken into account, with specific reference to types of impact, duration of impacts, likelihood of potential impacts actually occurring and the significance of impacts.

<u>ENVIRONMENTAL IMPACT STATEMENT</u>			
SITE ALTERNATIVE 1			
<u>TYPE OF IMPACT</u>	<u>DURATION</u>	<u>LIKELIHOOD</u>	<u>SIGNIFICANCE</u>
Site establishment <ul style="list-style-type: none"> • Visual intrusion as a result of site establishment; • Potential impact on fauna within the footprint area; • Potential impact on vegetation and listed and/or protected plant species • Dust nuisance due to site establishment • Potential impact on archaeological artefacts; • Work opportunities to local residents (Positive Impact) 	Duration of site establishment phase (<1 month)	Low Possibility Low Possibility Low Possibility Low Possibility Low Possibility Definite	Low-Medium Concern Low Concern Low-Medium Concern Low Concern Low Concern Medium-High (+)

<p><u>Stripping and stockpiling of topsoil:</u></p> <ul style="list-style-type: none"> • Visual intrusion caused by stockpile activities; • Loss of stockpiled topsoil during stockpile activities; • Dust nuisance as a result of the disturbance of soil; • Noise nuisance generated by crushing and screening machinery; • Infestation of the topsoil heaps and stockpile area with weeds or invader plant species; • Potential impact on local fauna due to disturbance and loss of available habitat; • Potential erosion of denuded areas; • Loss of stockpiled material due to ineffective storm water control • Potential contamination of footprint area and surface runoff as a result of hydrocarbon spillages; 	<p>Duration of site establishment phase (<1 month)</p>	<p>Low Possibility Low Possibility Low Possibility Low Possibility Low Possibility Low Possibility Low Possibility Possible</p>	<p>Low Medium Concern Low Concern Low Medium Concern Low Medium Concern Low Concern Low Concern Low Concern Low Medium Concern Low Medium Concern</p>
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<p><u>Processing, stockpiling and transporting of material :</u></p> <ul style="list-style-type: none"> • Dust nuisance generated at the processing plant; • Noise nuisance stemming from operation of the processing plant; • Visual intrusion as a result of operation of the processing plant • Potential contamination of environment due to improper waste management; • Overloading of trucks impacting road infrastructure; 	<p>Duration of operational phase (10 years maximum)</p>	<p>Low Possibility Low Possibility Low Possibility Low Possibility Low Possibility</p>	<p>Low Concern Low Concern Low Medium Concern Low Concern Low Medium Concern</p>
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<p><u>Cumulative impacts :</u></p> <ul style="list-style-type: none"> • Impact the broad-scale ecological processes; • Transformation of intact habitat would contribute to the fragmentation of the landscape and would potentially disrupt the connectivity of the landscape for fauna, avifauna, and flora and impair their ability to respond to environmental fluctuations. 	<p>Duration of all phases</p>	<p><u>LIKELIHOOD</u></p> <p>Low Possibility</p> <p>Low Possibility</p>	<p><u>SIGNIFICANCE</u></p> <p>Low Concern</p> <p>Low Concern</p>
<p><u>Sloping and landscaping upon closure of the stockpile area:</u></p> <ul style="list-style-type: none"> • Erosion of returned topsoil after rehabilitation; • Infestation of the reinstated areas by weeds and invader plant species; • Potential impact associated with litter/waste left at the stockpile area. • Return of the stockpile area to landscape feature upon closure (Positive Impact). 	<p>Duration of decommissioning phase (±2 months)</p>	<p><u>LIKELIHOOD</u></p> <p>Low Possibility</p> <p>Low Possibility</p> <p>Low Possibility</p> <p>Definite</p>	<p><u>SIGNIFICANCE</u></p> <p>Low Medium Concern</p> <p>Low Medium Concern</p> <p>Low Medium Concern</p> <p>Medium-High (+)</p>

SECTION E. RECOMMENDATION OF PRACTITIONER

Is the information contained in this report and the documentation attached hereto sufficient to make a decision in respect of the activity applied for (in the view of the environmental assessment practitioner)?

YES	<input checked="" type="checkbox"/>
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If "YES", please list any recommended conditions, including mitigation measures that should be considered for inclusion in any authorisation that may be granted by the department in respect of the application:

Please refer to Appendix D for all general mitigation measures.

Mitigation measures as per the Terrestrial Biodiversity Compliance Statement (Appendix D):

- Laydown and construction preparation activities (such as cement mixing, temporary toilets, etc.) must be limited to already modified areas and should take up the smallest footprint possible.
- Develop post-construction environments, in conjunction with regional development plans; and the recreation of habitats, where possible; or structure altered landscapes to be compatible with regional habitats.
- It is recommended that areas to be developed/disturbed be specifically demarcated so that during the construction/activity phase, only the demarcated areas be impacted upon.
- Areas of indigenous vegetation, even secondary communities outside of the direct project footprint, should not be fragmented or disturbed further if possible.
- All vehicles and personnel must make use of existing roads and walking paths as far as possible, especially construction/operational vehicles.
- The clearing of vegetation must be minimised where possible. All activities must be restricted to within the authorised areas.
- All individuals of any protected plant species that are present need a relocation or destruction permit in order to be removed or destroyed due to the development. High-visibility flags must be placed near any threatened/protected plants in order to avoid any damage or destruction of the species. If left undisturbed, the sensitivity and importance of these species needs to be part of the environmental awareness program. If infrastructure, development areas and routes occur where protected plants cannot be avoided, the protected plants should be removed from the soil and relocated/ re-planted in similar habitats where they should be able to resprout and flourish again. All protected and red-data plants should be relocated, and as many other geophytic species as possible.
- A site walkthrough must be conducted by a suitably qualified specialist prior to the construction phase. The site walkthrough must be conducted during the summer season between November and March. Priority must be the identification of any listed flora species, particularly

protected species.

- Any observed protected plants must be clearly demarcated prior to the commencement of site clearing. If construction activities are likely to affect any protected plants these individuals must be relocated as part of a plant rescue and protection plan, and a permit must be obtained before doing so, or destruction permits must be obtained.
- Materials may not be stored for extended periods of time and must be removed from the PAOI once the construction phase has been concluded. No permanent construction phase structures should be permitted. Construction buildings should preferably be prefabricated or constructed of re-usable/recyclable materials. No storage of vehicles or equipment will be allowed outside of the designated laydown areas.
- Areas that are denuded during construction need to be re-vegetated with indigenous vegetation according to a habitat rehabilitation plan, to prevent erosion during flood and wind events and to promote the regeneration of functional habitat. This will also reduce the likelihood of encroachment by alien invasive plant species. All grazing mammals must be kept out of the areas that have recently been re-planted.
- A habitat rehabilitation plan must be implemented, and areas of bare ground must be revegetated with species indigenous to the region. This must also apply to areas below the panels.
- A hydrocarbon spill management plan must be put in place to ensure that should there be any chemical spill out or over that it does not run into the surrounding areas. The Contractor shall be in possession of an emergency spill kit that must always be complete and available on site.
- Drip trays or any form of oil absorbent material must be placed underneath vehicles/machinery and equipment when not in use.
- No servicing of equipment on site unless necessary.
- All contaminated soil / yard stone shall be treated in situ or removed and be placed in containers.
- Appropriately contain any generator diesel storage tanks, machinery spills (e.g., accidental spills of hydrocarbons oils, diesel etc.) in such a way as to prevent them from leaking and entering the environment.
- Construction activities and vehicles could cause spillages of lubricants, fuels and waste material negatively affecting the functioning of the ecosystem.
- All vehicles and equipment must be maintained, and all re-fueling and servicing of equipment is to take place in demarcated areas outside of the PAOI.
- It must be made an offence for any staff member to remove any indigenous plant species from the PAOI or bring any alien species in. This is to prevent the spread of exotic or alien species or the illegal collection of plants.
- All construction waste must be removed from site at the closure of the construction phase.
- A qualified environmental control officer must be on site when activities begin. A site walk through must be performed by a suitably qualified ecologist prior to any activities taking place and any SSC or protected species should be noted. In situations where these species are observed and must be removed, the proponent may only do so after the required permission/permits have been obtained in accordance with national and provincial legislation. In the abovementioned situation the development and implementation of a search, rescue and recovery program is suggested for the protection of these species. Should animals not move out of the area on their own, relevant specialists must be contacted to advise on how the species can be relocated.
- Clearing and disturbance activities must be conducted in a progressive linear manner, always outwards and away from the centre of the PAOI and over several days, so as to provide an easy escape route for all small mammals and herpetofauna.
- The areas to be disturbed must be specifically and responsibly demarcated to prevent the

movement of staff or any individual into the surrounding environments, signs must be put up to enforce this.

- The duration of the activities should be minimised to as short a term as possible, to reduce the period of disturbance on fauna.
- Noise must be kept to an absolute minimum during the evenings and at night to minimise all possible disturbances to reptile species and nocturnal mammals.
- No trapping, killing, or poisoning of any wildlife is to be allowed and signs must be put up to enforce this. Monitoring must take place in this regard.
- Outside lighting should be designed and limited to minimise impacts on fauna. All outside lighting should be directed away from any sensitive areas. Fluorescent and mercury vapor lighting should be avoided, and sodium vapor (green/red) lights should be used wherever possible.
- All construction and maintenance motor vehicle operators should undergo an environmental induction that includes instruction on the need to comply with speed limits, to respect all forms of wildlife. Speed limits must be enforced to ensure that road killings and erosion is limited.
- Schedule activities and operations during least sensitive periods, to avoid migration, nesting, and breeding seasons. In this case, activities should take place during the day.
- Any holes/deep excavations must be dug in a progressive manner and shouldn't be left open overnight. Should any holes remain open overnight they must be properly covered temporarily to ensure that no small fauna species fall in. Holes must be subsequently inspected for fauna prior to backfilling.
- If fencing is required: wildlife-permeable fencing with holes large enough for mongoose and other smaller mammals should be installed, the holes must not be placed in the fence where it is next to a major road as this will increase road killings in the area.
- Schedule blasting activities to avoid critical periods for wildlife, such as breeding and nesting seasons.
- Limit blasting to specific times of the day to reduce disturbance to nocturnal and diurnal species.
- Implement noise and vibration monitoring programs to ensure levels remain within acceptable limits as per South African environmental standards.
- Use controlled blasting techniques, such as delayed blasting and smaller charge sizes, to minimize noise and vibration impacts.
- An Alien Invasive Plant (AIP) Management Plan must be compiled and implemented. This should regularly be updated to reflect the annual changed in AIP composition.
- The footprint area of the construction should be kept to a minimum. The footprint area must be clearly demarcated to avoid unnecessary disturbances to adjacent areas. Footprints of the roads must be kept to prescribed widths.
- A pest control plan must be put in place and implemented; it is imperative that poisons not be used to control pests.
- Dust-reducing mitigation measures must be put in place and must be strictly adhered to. This includes the wetting of exposed soft soil surfaces. No non-environmentally friendly suppressants may be used as this could result in the pollution of water sources.
- Waste management must be a priority and all waste must be collected and stored effectively and responsibly according to a site-specific waste management plan. Dangerous waste such as metal wires and glass must only be stored in fully sealed and secure containers, before being moved off site as soon as possible.
- Litter, spills, fuels, chemical and human waste in and around the PAOI must be minimised and controlled according to the waste management plan.
- Cement mixing may not be performed on the ground. It is recommended that only closed side drum or pan type concrete mixers be utilised. Any spills must be immediately contained and

isolated from the natural environment, before being removed from site.

- Toilets at the recommended Health and Safety standards must be provided. These should be emptied regularly and once no longer required, they must be pumped dry to prevent leakage into the surrounding environment and removed from site.
- The Contractor should supply sealable and properly marked domestic waste collection bins and all solid waste collected shall be disposed of at a licensed disposal facility within every 10 days at least.
- Where a registered disposal facility is not available close to the PAOI, the Contractor shall provide a method statement with regards to waste management. Under no circumstances may domestic waste be burned on site or buried on open pits.
- Refuse bins will be responsibly emptied and secured. Temporary storage of domestic waste shall be in covered and secured waste skips. Maximum domestic waste storage period will be 10 days.
- All personnel and contractors are to undergo Environmental Awareness Training. A signed register of attendance must be kept for proof.
- Discussions are required on sensitive environmental receptors within the PAOI to inform contractors and site staff of the presence of protected species, their identification, conservation status and importance, biology, habitat requirements and management requirements in line with the Environmental Authorisation and within the EMPr.
- Speed limits must be put in place to reduce erosion. Soil surfaces must be wetted as necessary to reduce the dust generated by the project activities. Speed bumps and signs must be erected to enforce slow speeds.
- Only existing access routes and walking paths may be made use of. New roads must be authorised.
- Areas that are denuded during construction need to be re-vegetated with indigenous vegetation to prevent erosion during flood events etc.
- A stormwater management plan must be compiled and implemented if necessary.

Is an EMPr attached?

The EMPr must be attached as Appendix E.

YES

SECTION F: APPENDIXES

The following appendixes must be attached as appropriate:

Appendix A: Site plan(s)

Appendix B: Photographs

Appendix C: Facility illustration(s)

LEDET BA Report, EIA Regulations, 2014, as amended: Project Name: _____

Appendix D: Specialist reports (including Engineering Services Report, if applicable)

Appendix E: Environmental Management Programme (EMPr)

Appendix F: Comments and responses report

Appendix G: CV of EAPs

SECTION G: DECLARATION BY THE ENVIRONMENTAL ASSESSMENT PRACTITIONER

I, **Zoë Norval (Candidate EAP)**

declare that I –

- (a) act as the independent environmental practitioner in this application;
- (b) do not have and will not have any financial interest in the undertaking of the activity, other than remuneration for work performed in terms of the Environmental Impact Assessment Regulations, 2014;
- (c) do not have and will not have a vested interest in the proposed activity proceeding;
- (d) have no, and will not engage in, conflicting interests in the undertaking of the activity;
- (e) undertake to disclose, to the competent authority, any material information that has or may have the potential to influence the decision of the competent authority or the objectivity of any report, plan or document required in terms of the Environmental Impact Assessment Regulations, 2006;
- (f) will ensure that information containing all relevant facts in respect of the application is distributed or made available to interested and affected parties and the public and that participation by interested and affected parties is facilitated in such a manner that all interested and affected parties will be provided with a reasonable opportunity to participate and to provide comments on documents that are produced to support the application;
- (g) will ensure that the comments of all interested and affected parties are considered and recorded in reports that are submitted to the Department in respect of the application, provided that comments that are made by interested and affected parties in respect of a final report that will be submitted to the Department may be attached to the report without further amendment to the report;
- (h) will keep a register of all interested and affected parties that participated in a public participation process; and
- (i) will provide the Department with access to all information at my disposal regarding the application, whether such information is favourable to the applicant or not.



Signature of the Environmental Assessment Practitioner:

Greenmined Environmental

Name of company:

LEDET BA Report, EIA Regulations, 2014, as amended: Project Name: _____

Date:28/10/2024

I, Sonette Smit (Reviewer & Registered EAP) declare that I –

- (j) act as the independent environmental practitioner in this application;
- (k) do not have and will not have any financial interest in the undertaking of the activity, other than remuneration for work performed in terms of the Environmental Impact Assessment Regulations, 2014;
- (l) do not have and will not have a vested interest in the proposed activity proceeding;
- (m) have no, and will not engage in, conflicting interests in the undertaking of the activity;
- (n) undertake to disclose, to the competent authority, any material information that has or may have the potential to influence the decision of the competent authority or the objectivity of any report, plan or document required in terms of the Environmental Impact Assessment Regulations, 2006;
- (o) will ensure that information containing all relevant facts in respect of the application is distributed or made available to interested and affected parties and the public and that participation by interested and affected parties is facilitated in such a manner that all interested and affected parties will be provided with a reasonable opportunity to participate and to provide comments on documents that are produced to support the application;
- (p) will ensure that the comments of all interested and affected parties are considered and recorded in reports that are submitted to the Department in respect of the application, provided that comments that are made by interested and affected parties in respect of a final report that will be submitted to the Department may be attached to the report without further amendment to the report;
- (q) will keep a register of all interested and affected parties that participated in a public participation process; and
- (r) will provide the Department with access to all information at my disposal regarding the application, whether such information is favourable to the applicant or not.



Signature of the Environmental Assessment Practitioner:

Greenmined Environmental

LEDET BA Report, EIA Regulations, 2014, as amended: Project Name: _____

Name of company:

Date:28/10/2024