PROPOSED STOCKPILE AREA ON PORTION OF PORTION 7 OF THE FARM ROODEKRANS 457, ADMINISTRATIVE DISTRICT IS, MPUMALANGA PROVINCE

FINAL BASIC ASSESSMENT REPORT

MAY 2025

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BASIC ASSESSMENT REPORT

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Date Received:	

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

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LIST OF ABBREVIATIONS

ABSA	Aquatic Biodiversity Specialist Assessment
BGIS	Biodiversity GIS
CARA	Conservation of Agricultural Resources Act, 1983 (Act No. 43 of 1983)
CBA	Critical Biodiversity Area
DBAR	Draft Basic Assessment Report
DARDLEA	Department of Agriculture, Rural Development, Land & Environmental Affairs: Mpumalanga Province
DoT	Department of Transport
DWAF	Department of Water Affairs and Forestry
DWS	Department of Water and Sanitation
EA	Environmental Authorisation
EAP	Environmental Assessment Practitioner
ECO	Environmental Control Officer
EIA	Environmental Impact Assessment
EIA Regulations	Environmental Impact Assessment Regulations, 2014 (as amended 2017)
EMPR	Environmental Management Programme
FBAR	Final Basic Assessment Report
FEL	Front-end-loader
GDP	Gross Domestic Product
GNR	Government Notice
I&AP's	Interested and Affected Parties
MHSA	Mine Health and Safety Act, 1996 (Act No. 29 of 1996)
NEMA	National Environmental Management Act, 1998 (Act No. 107 of 1998)
NEM:AQA	National Environmental Management: Air Quality Control Act, 2004 (Act No. 39 of 2004)
NEM:BA	National Environmental Management: Biodiversity Act, 2004 (Act No. 10 of 2004)
NEM:WA	National Environmental Management: Waste Act, 2008 (Act No. 59 of 2008)
NFEPA	National Freshwater Ecosystem Priority Areas
NHRA	National Heritage Resources Act, 1999 (Act No 25 of 1999)
NRTA	National Road Traffic Act, 1996 (Act No. 93 of 1996)
NWA	National Water Act, 1998 (Act No. 36 of 1998)
PCO	Pest Control Officer
PAOI	Project Area of Influence
PPE	Personal Protective Equipment
PSM	Palaeontological Sensitivity Map
RA	Risk Assessment
REC	Recommended Ecological Category
S1	Site Alternative 1

SAIIAE	South African Inventory of Inland Aquatic Ecosystems
SAHRA	South African Heritage Resources Agency
SAHRIS	South African Heritage Resources Information System
SAMBF	South African Mining and Biodiversity Forum
WMA	Water Management Area
WULA	Water Use Licence Application

SECTION A: ACTIVITY INFORMATION

Has a specialist been consulted to assist with the completion of this section?	YES	
If YES, please complete form XX 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 detail.

The following activities is described for all site alternatives.

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 13.6 hectares on a portion of Portion 7 of the farm Roodekrans 457, Administrative district IS, Mpumalanga 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;
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 authorised 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 Authorisation (EA) and prior to site establishment, the boundaries of the approved area will be demarcated with visible beacons.

- **Access Road:**

  The farm Roodekranz 457 can be accessed off the public road R35 approximately 6.6 km North of Morgenzon in the Mpumalanga Province. The stockpile area will

be access by the existing access road as this in is only an extension of an existing quarry and therefore no new access roads will be required.

The section of the R406 from the R35 turn off to the entrance of the mining area should be maintained in order to prevent erosion and deterioration of the access road caused the high amount of vehicular movement of trucks currently collecting material.

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 Soweto Highveld Grassland and is classified as Endangered. According to the 2014 Mpumalanga Biodiversity Sector Plan (MBSP) – the area is classified as Critical Biodiversity Area (CBA). However, ground truthing done by the specialist has concluded that area has been heavily disturbed by previous mining activities. 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. Please see mitigation measures as described in Appendix D.

- **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 coloured 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 authorisation in need for gravel/aggregate in the area due to the Ummbila Emoyeni Wind Farm 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:**

  Any water required for the implementation of the project will be used from the water accumulated in the adjacent quarry pit. The contractor, B&E International (Pty) Ltd (contractor) holds a General Authorization for a section 21(c), impeding or diverting the flow of a watercourse and (i), altering the bed, banks, course, or characteristics of a watercourse. There is no other water bodies present on the mining site and the entire quarry will be rehabilitated upon closure. Presently, no washing of material is proposed, and the Applicant will therefore mainly use water for dust suppression purposes on denuded areas, the processing plant, and access road (when needed).

  Dust generation will, as far as possible, be managed through alternative dust suppression methods to restrict water use to the absolute minimum. 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;
  - Site management will attempt to lessen denuded areas (dust source) to the absolute minimum;
  - Strips of used conveyor belts can be attached to the drop end of the crusher plant where crushed material falls onto the stockpiles. This lessens the blowing of fines from the minerals;

- Compacted dust will weekly be cleaned of the crusher plant to eliminate it as a dust source.

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 a water truck will moisten the problem areas, and sprayers at the processing plant will moisten the material to alleviate dust generation at the conveyor belts. The water truck driver will receive proper training to ensure effective use of the water on problem areas preventing water wastage. It is proposed that approximately 30 000 litres ($30m^3$) of water will be needed per day during the dry months (amount to decrease during the rainy season). At present no water is proposed to be drawn from other surface water sources/courses.

- **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 competent authority 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.

Inzalo Crushing and Aggregates (Pty) Ltd appointed Greenmined Environmental (Pty) Ltd as the environmental impact assessment practitioner (EAP) to undertake the EIA associated with the stockpile (EA) application. The following site alternatives were assessed during the screening phase of this project.

Site alternative 1 (S1)

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 13.6 hectares on a portion of Portion 7 of the farm Roodekrans 457, Administrative district IS, Mpumalanga Province. The proposed area is over a disturbed area that was previously used for mining activities. Site Alternative 1 was deemed to be the only viable site alternative due to the existing disturbance of the area and the close proximity to the mining activities.

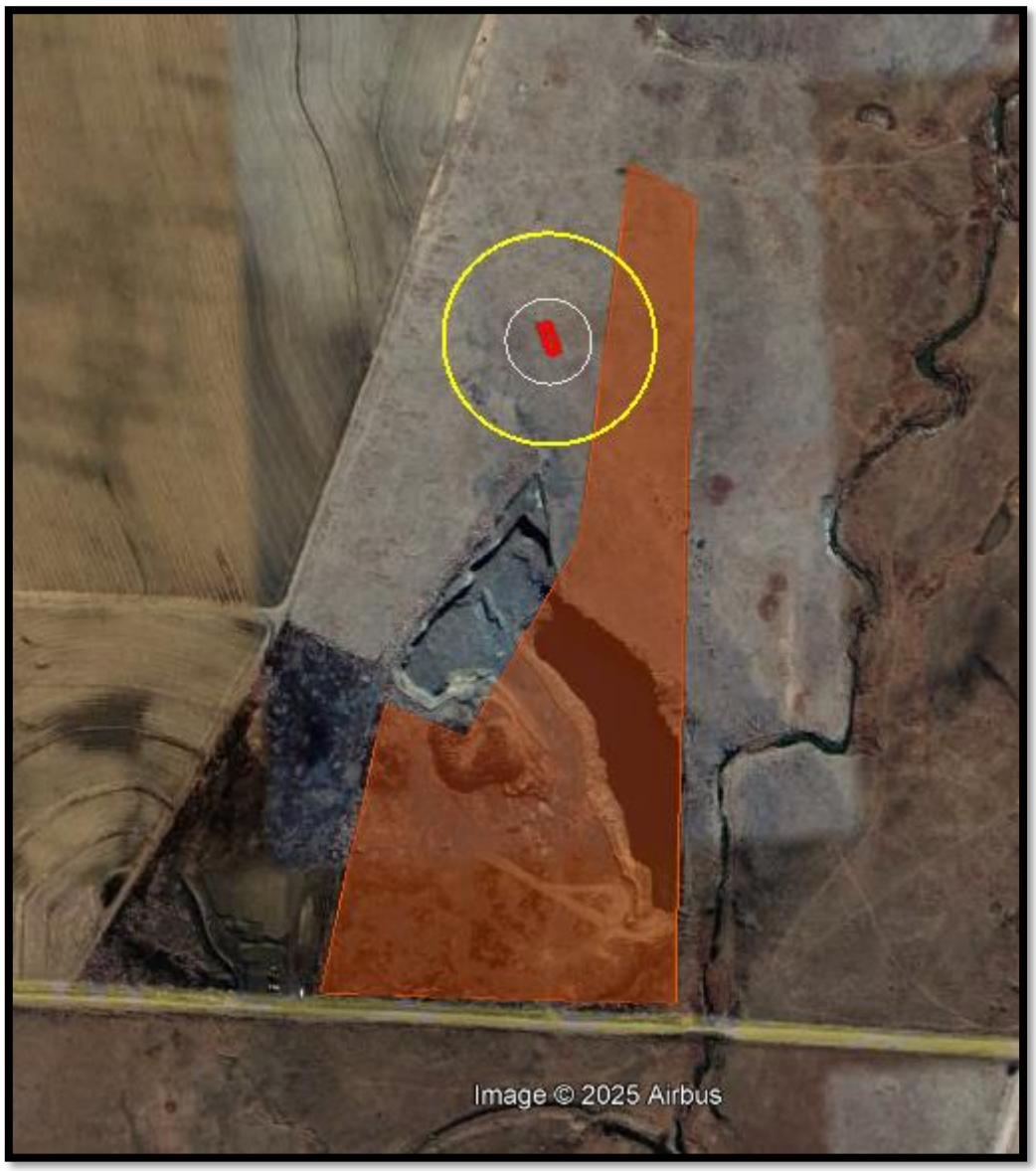

Figure 1:Satellite view showing the position of Site Alternative 1 (brown polygon) in relation to the 40m buffer (white polygon) and 100m buffer (yellow polygon)

Site Alternative 2

Site Alternative 2 (S2) was assessed for the proposed stockpile area but was found not practically suitable due to the 100-meter buffer as suggested by the Heritage Specialist (Please refer to Appendix M1). Site alternative 1, was deemed the only viable site alternative, as it is the closest location to the proposed mining permit area. This proximity is essential for minimizing transportation costs associated with moving the mineral from the quarry to the stockpile area. The potential impacts and impracticalities of Site Alternative 2, combined with its lack of alignment with project requirements, render it unjustifiable and of higher significance than any possible benefits.

Figure 2:Satellite view showing the position of Site Alternative 1 (brown polygon) & Site Alternative 2 (green polygon) in relation to the 40m buffer (white polygon) and 100m buffer (yellow polygon) and mining permit application (blue polygon).

No-go Alternative:

The no-go alternative entails no change to the *status quo* and is therefore a real alternative that needs to be considered. The aggregate to be stockpiled will be utilized for the building, road rehabilitation/maintenance and associated construction industry, if however, the no-go alternative is implemented the Applicant could not utilise the stored mineral resource on this property and the construction industry of Morgenzon will not benefit from diversification of gravel sources which will escalating product costs.

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 and decimal minutes. The minutes should have at least three decimals to ensure adequate accuracy. The projection that must be used in all cases is the WGS84 spheroid in a national or local projection.

List alternative sites if applicable.

Alternative:	**Latitude (S):**		**Longitude (E):**	
Alternative S1[1] (preferred or only site alternative)	26 ° 41'	15.40"	29° 34'	49.64"
Alternative S2 (if any)	26°41'	19.62"	29°34'	46.50"
Alternative S3 (if any)				

In the case of linear activities:

Alternative:	**Latitude (S):**	**Longitude (E):**
Alternative S1 (preferred or only route alternative)		
• Starting point of the activity		
• Middle point of the activity		
• End point of the activity		
Alternative S2 (if any)		
• Starting point of the activity		
• Middle point of the activity		
• End point of the activity		
Alternative S3 (if any)		
• Starting point of the activity		
• Middle point of the activity		
• End point of the activity		

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.

[1] "Alternative S.." refer to site alternatives.

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 A1[2] (preferred activity alternative)		13.6 m^2
Alternative A2 (if any)		5.5 m^2
Alternative A3 (if any)		

or, for linear activities:

Alternative:		**Length of the activity:**
Alternative A1 (preferred activity alternative)		
Alternative A2 (if any)		
Alternative A3 (if any)		

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

Alternative:		**Size of the site/servitude:**
Alternative A1 (preferred activity alternative)		13.6 m^2
Alternative A2 (if any)		5.5 m^2
Alternative A3 (if any)		

5. SITE ACCESS

Does ready access to the site exist?	YES
If NO, what is the distance over which a new access road will be built	
Describe the type of access road planned:	

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.

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;

[2] "Alternative A.." refer to activity, process, technology or other alternatives.

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 DWA);
ridges;
cultural and historical features;
areas with indigenous vegetation (even if it is degraded or invested with alien species);
6.9 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
6.10 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.

9. ACTIVITY MOTIVATION

9(a)Socio-economic value of the activity

What is the expected capital value of the activity on completion?	±R66 600 000
What is the expected yearly income that will be generated by or as a result of the activity?	±R 33 300 000
Will the activity contribute to service infrastructure?	YES [redacted]
Is the activity a public amenity?	[redacted] NO
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):

The main objective of the stockpile area is to store mined material from nearby mines, which will be used for constructing Ummbila Emoyeni Wind Farm project as well as the increase in building, construction and other road maintenance projects.

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 in 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.

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:
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) • **GNR 983 Listing Notice 1 Activity 27 as amended:** The clearance of an area of 1 hectares or more, but less than 20 hectares of indigenous vegetation. • **GNR 985 Listing Notice 1 Activity 28 as amended:** Residential, mixed, retail, commercial, industrial or institutional developments where such land was used for agriculture, game farming, equestrian purposes or afforestation on or after 01 April 1998 and where such development:	Department of Agriculture, Rural Development, Land & Environmental Affairs: Mpumalanga Province (DARDLEA)	2014 as amended

ii) will occur outside an urban area, where the total land to be developed is bigger than 1 hectare. o excluding where such land has already been developed for residential, mixed, retail, commercial, industrial or institutional purposes. • **GNR 985 Listing Notice 3 Activity 12 as amended:** The clearance of an area of 300 square metres or more of indigenous vegetation. Mpumalanga i. A protected area identified in terms of NEMPAA, excluding conservancies; ii.National Protected Area Expansion Strategy Focus areas vi.Critical biodiversity areas as identified in systematic biodiversity plans adopted by the competent authority or in bioregional plans;;		
Conservation of Agricultural Resources Act, 1983 (Act No. 43 of 1983).	DARDLEA	1983 as amended
National Environmental Management: Air Quality Control Act, 2004 (Act No 39 of 2004) read together with applicable amendments and regulations thereto specifically the National Dust Control Regulations, GN No R827.	DARDLEA	2004 as amended
National Environmental Management Act: Biodiversity Act, 2004 (Act No. 10 of 2004) read together with applicable amendments and regulations thereto.	DARDLEA	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	DARDLEA	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)?		
Will the activity produce solid waste during its operational phase?	YES	
If yes, what estimated quantity will be produced per month?	$5m^3$	
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 competent authority 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
If yes, inform the competent authority and request a change to an application for scoping and EIA.		
Is the activity that is being applied for a solid waste handling or treatment facility?		NO
If yes, then the applicant should consult with the competent authority to determine whether it is necessary to change to an application for scoping and EIA.		

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?	m^3	
Will the activity produce any effluent that will be treated and/or disposed of on site?		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.		
Will the activity produce effluent that will be treated and/or disposed of at another facility?		NO
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 wastewater, if any:

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 F - EMPr) 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)

municipal	water board	groundwater	river, stream, dam or lake	other: Quarry pit	the activity will not use water

If water is to be extracted from groundwater, river, stream, dam, lake or any other natural feature, please indicate:

The contractor, B&E International (Pty) Ltd (contractor) holds a General Authorization for a section 21(c), impeding or diverting the flow of a watercourse and (i), altering the bed, banks, course, or characteristics of a watercourse. There is no other water bodies present on the mining site and the entire quarry will be rehabilitated upon closure.

the volume of water that is allowed to be extracted per day:	95m³	
Does the activity require a water use permit from the Department of Water Affairs?		NO

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.

General Authorisation attached as Appendix G1

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):	

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

2. Has a specialist been consulted to assist with the completion of this section?	YES	
All specialist reports must be contained in Appendix D.		

1. GRADIENT OF THE SITE

Indicate the general gradient of the site.

Alternative S1:

Flat	

2. LOCATION IN LANDSCAPE

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

Site Alternatives	Landform type
Site Alternative 1	Undulating plain / low hills

3. GROUNDWATER, SOIL AND GEOLOGICAL STABILITY OF THE SITE

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

	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. GROUNDCOVER

Indicate the types of groundcover present on the site:

4.1 Natural veld – good condition [E]
4.2 Natural veld – scattered aliens [E]
4.3 Natural veld with heavy alien infestation [E]
4.4 Veld dominated by alien species [E]
4.5 Gardens
4.6 Sport field
4.7 Cultivated land
4.8 Paved surface
4.9 Building or other structure
4.10 Bare soil

Site Alternatives	Groundcover
Site Alternative 1	Cultivated land

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

	Alternative S1:	
Natural veld - good condition[E]		NO
Natural veld with scattered aliens[E]	YES	
Natural veld with heavy alien infestation[E]		NO
Veld dominated by alien species[E]		NO
Gardens		NO
Sport field		NO
Cultivated land	YES	
Paved surface		NO
Building or other structure		NO
Paved surface		NO
Bare soil		NO

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.

FINDINGS OF THE TERRESTRIAL BIODIVERSITY IMPACT ASSESSMENT (APPENDIX D)

According to the Terrestrial Compliance Statement (Appendix D), the proposed area exists in a predominantly modified state, having been subjected to various anthropogenic impacts such as mining, infrastructure development, pollution, unregulated livestock grazing, agriculture and edge effects associated with the nearby activities. This habitat is unlikely to fully recover without human intervention and will continue to degrade without further active rehabilitation.

The completion of this terrestrial biodiversity assessment led to a dispute of the 'Very High' Terrestrial Biodiversity Theme Sensitivity as set out in the National Environmental Screening Tool. Instead, the PAOI is assigned an overall 'Low' Terrestrial Theme Sensitivity.

A summary of the terrestrial field assessment is provided in the table below. The PAOI was surveyed to establish the overall ecological condition of the vegetation and to determine the likelihood of any flora and fauna SCC occurring within the area. Any potential sensitive habitat features were also assessed.

Table 1: Summary of the field survey conducted within the PAOI.

Habitat	GPS co-ordinates	Description	SEI	Photographs
Transformed Grassland	26°40'58.15"S 29°34'52.69"E; 26°41'3.41"S 29°34'51.39"E	This habitat type is predominantly disturbed and has been impacted by edge effects from modified habitats, as well as impacts associated with historic and ongoing livestock grazing, vegetation clearing, agriculture and infringement. These habitats exist in a constant state of disturbance and cannot recover to a more natural state due to ongoing disturbances and impacts.	Low	
Cropland	N/A	Croplands have little to no remaining natural vegetation due to land transformation attributed to agriculture. These habitats exist in a constant state of disturbance and cannot recover to a more natural state due to ongoing disturbances and impacts.	Low	No corresponding photos of croplands were taken as these fell beyond the proposed development footprint.

Modified	26°41'19.72"S 29°34'48.83"E; 26°41'14.30"S 29°34'52.87"E	The modified areas have little to no remaining natural vegetation due to land transformation attributed to human-induced impacts such as mining and infrastructure development.	Very Low	

Site Sensitivity Verification

Habitats and Site Ecological Importance (SEI)

Based on the criteria provided in Appendix B of the specialist report, all habitats within the PAOI were assigned a sensitivity category, i.e., a SEI category. Habitats within the PAOI varied in sensitivity from Very Low (i.e., modified habitats) to Low (i.e., disturbed bushveld and cropland habitats). The findings of the specialist report therefore contradict the findings set forth by the Screening Tool with regards to the combined Terrestrial Biodiversity Theme Sensitivity.

Table 2: Summary of habitat types and associated SEIs delineated within the PAOI.

Habitat	Description	Ecosystem Processes and Services	Conservation Importance	Functional Integrity	Biodiversity Importance	Receptor Resilience	Site Ecological Importance
Transformed Grassland	This habitat type is predominantly disturbed and has been impacted by edge effects from modified habitats, as well as impacts associated with historic and ongoing livestock grazing, vegetation clearing, agriculture and infringement. These habitats exist in a constant state of disturbance and cannot recover to a more natural state due to ongoing disturbances and impacts.	Provides limited grazing and foraging resources for indigenous fauna and livestock. Aids in the filtration of water permeating through the soil into the drainage areas. Corridor for fauna dispersion within the landscape.	Low	Low	**Low**	Medium	**Low**
Croplands	Croplands have little to no remaining natural vegetation due to land transformation attributed to agriculture. These habitats exist in a constant state of disturbance and cannot recover to a more natural state due to ongoing disturbances and impacts	Despite the lack of indigenous vegetation, croplands attract numerous insect pollinators that, in turn, attract a high diversity of avifauna species. Further, ecosystem services attributed with croplands include carbon storage, and water and nutrient retention.	Low	Low	**Low**	Medium	**Low**

Habitat	Description	Ecosystem Processes and Services	Conservation Importance	Functional Integrity	Biodiversity Importance	Receptor Resilience	Site Ecological Importance
Modified	The modified areas have little to no remaining natural vegetation due to land transformation attributed to (predominantly) human expansion and infrastructure development.	The ecological services provided by this habitat are limited due to the extensive cover of impermeable surfaces and the large amount of bare land. Parts of the area may be considered a movement corridor.	Very Low	Very Low	**Very Low**	Medium	**Very Low**

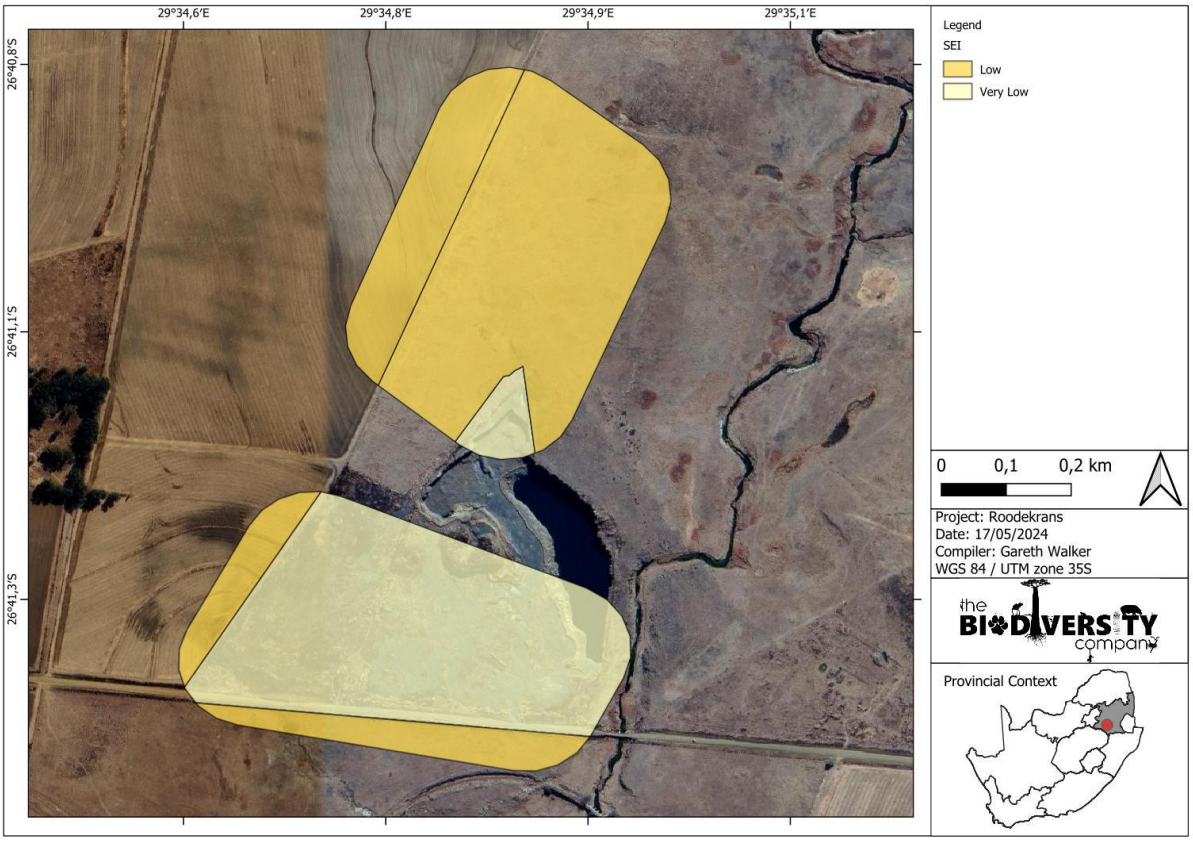

Figure 3:Map depicting the Site Ecological Importance (SEI) sensitivity for the PAOI.

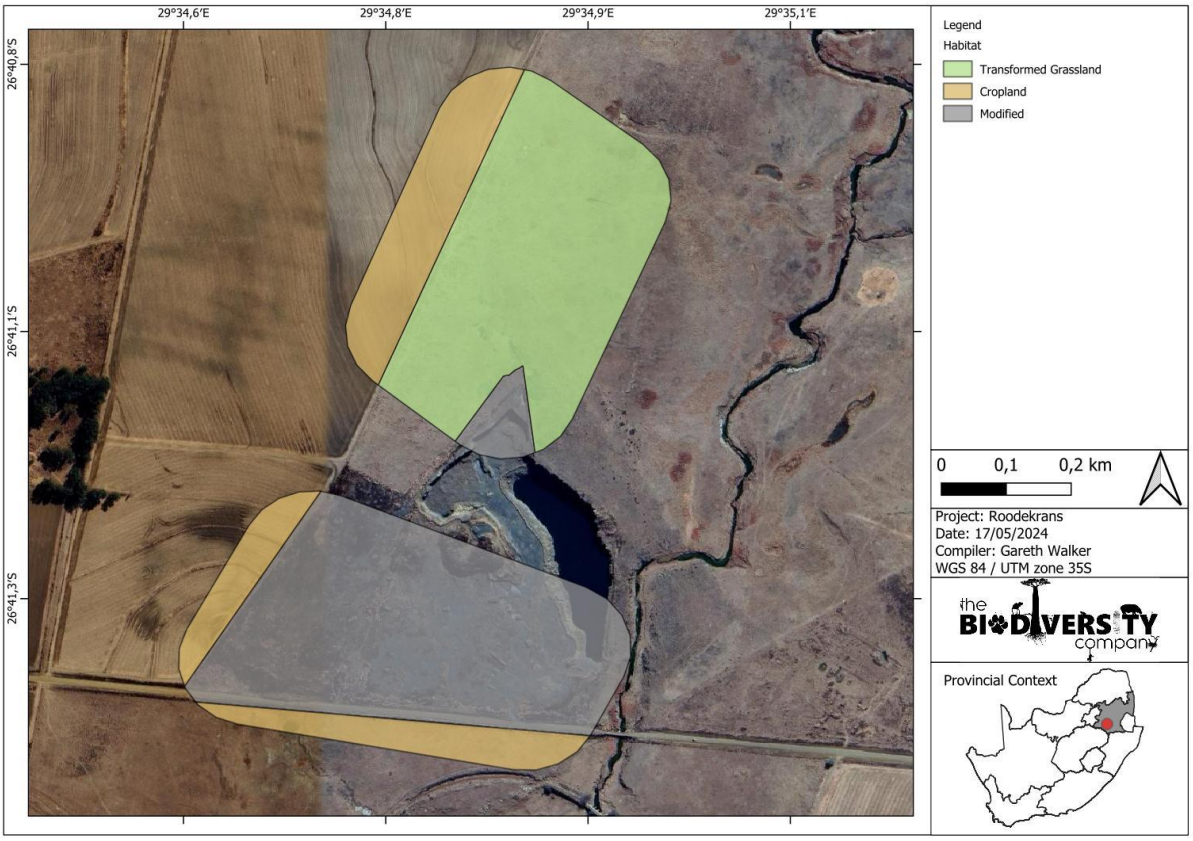

Figure 4:Map depicting the habitat types defined within the PAOI.

Screening Tool Comparison

The allocated sensitivities for each of the relevant themes are either disputed or validated in the table below. A summative explanation for each result is provided as relevant. The specialist-assigned sensitivity ratings are based largely on the SEI process followed in the previous section, and consideration is given to any observed or likely presence of SCC or protected species.

Table 3: Summary of the screening tool vs specialist assigned sensitivities.

Screening Tool Theme	Screening Tool	Specialist	Tool Validated or Disputed by Specialist - Reasoning
Terrestrial Theme	**Very High**	**Low**	Disputed – Habitat exists in a predominantly modified state with high levels of anthropogenic disturbance that has contributed to an overall loss in ecosystem functionality. Habitat will not recover without human intervention and will continue to degrade over time without rehabilitation. Habitat no longer viable constituent of a CBA2 and VU ecosystem.
Animal Theme	**Medium**	**Low**	Disputed – Habitat exists in a modified and disturbed state with high levels of anthropogenic disturbance. No SCC were observed, and none are expected to occur within the PAOI.

Plant Theme	**Low**	**Low**	Validated – Habitat exists in a degraded state with high levels of anthropogenic disturbance. High numbers of alien and invasive plants are present. No flora SCC were observed, and none are expected to occur within the PAOI.

Conclusion

A revised layout of the PAOI was sent to the specialist on the 5th of August 2024 – post hoc the completion and submission of the original terrestrial compliance statement. Although slightly disparate to the original layout that has been presented in this report, most of the areas that are indicated in the figure below were in fact surveyed on the 17th of April 2024. Consequently, it is the opinion of the specialist stipulated herein that the findings presented in this report are applicable to the newly proposed PAOI. Further, it is highly unlikely that there will be any differences in habitat sensitivities and by extension, species (both fauna and flora) composition between the two PAOI layout designs. Therefore, the findings and mitigation measures set forth in this report apply to the newly proposed PAOI layout.

Figure 5:Revised layout of the PAOI (received 50/08/2024)

6. LAND USE CHARACTER OF SURROUNDING AREA

Indicate land uses and/or prominent features that 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:

Table 4: Land uses and/or prominent features that occur within 500 m radius of all site alternatives.

LAND USE CHARACTER	SITE ALTERNATIVE 1	
Natural area		NO
Low density residential	YES	NO
Medium density residential		NO
High density residential		NO
Informal residential		NO
Retail commercial & warehousing		NO
Light industrial		NO
Medium industrial [AN]		NO
Heavy industrial [AN]		NO
Power station		NO
High voltage power line		NO
Office/consulting room		NO
Military or police base / station / compound		NO
Spoil heap or slimes dam		NO
Quarry, gravel or borrow pit		NO
Dam or reservoir		NO
Hospital/medical centre		NO
School/ crèche		NO
Tertiary education facility		NO
Church		NO
Old age home		NO
Sewage treatment plant [A]		NO
Train station or shunting yard [N]		NO
Railway line [N]		NO
Major road (4 lanes or more) [N]		NO
Airport [N]		NO
Harbour		NO
Sport facilities		NO
Golf course		NO
Polo fields		NO
Filling station [N]		NO
Landfill or waste treatment site		NO
Plantation		NO
Agriculture	YES	NO
River, stream or wetland	YES	
Nature conservation area		NO
Mountain, hill or ridge		NO
Museum		NO
Historical building		NO
Protected Area		NO
Graveyard		NO
Archaeological site		NO

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

N/A

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 YES, 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 YES, specify:

7. 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		YES	
Archaeological or palaeontological sites, on or close (within 20m) to the site?		NO	
If YES, explain:	A Heritage Specialist was appointed to conduct a Heritage Impact Assessment (HIA). Please refer to Appendix D1.		
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:	During the survey, three structures RD002, RD003, RD004 were found along the ridgeline of the proposed (preferred) stockpile and another RD001 structure close to the mining permit area. The structures are extremely overgrown and it was not possible to determine the full extent and purpose of the structures nor if an archaeological deposit is present at these sites. Please refer to the findings below of the HIA for more detail		
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.			

FINDINGS OF THE HERITAGE IMPACT ASSESSMENT (APPENDIX D1)

According to the Heritage Impact Assessment (Appendix D1), the vegetation of the Project area belongs to the Soweto Highveld Grassland of the Grassland Biome. It is described as gently to moderately undulating landscape on the Highveld plateau supporting short to medium-high, dense, tufted grassland dominated almost entirely by Themeda triandra and accompanied by a variety of other grasses such as Elionurus muticus, Eragrostis racemosa, Heteropogon contortus and Tristachya leucothrix. In places not disturbed, only scattered small wetlands, narrow stream alluvia, pans and occasional ridges or rocky outcrops interrupt the continuous grassland cover (Mucina and Rutherford 2006).

The farm area is used as grazing land for cattle. The land is largely covered with low-growing grasses and shrubs, and no trees were located within the surveyed area. The ground cover is mostly open, resulting in high visibility across most of the site.

The quarry site is characterised by extensive recent human activity. Large piles of crushed stone and gravel are evident, indicating active material extraction and processing. The terrain is visibly altered, with exposed bedrock and soil, steep artificial embankments, and areas of excavation forming water-filled depressions. The surrounding landscape includes scattered vegetation on the margins of the disturbed area, contrasting with the uniform and heavily modified quarry floor. General site conditions are indicated in (Figure 5 to 8).

Figure 6:General site conditions showing shrubs across the Project area.

Figure 7:Previously mined areas in the Project area.

Figure 8:Overgrown grasses in large sections of the Project area.

Figure 9: Ridge traversing the area.

A. HERITAGE RESOURCES

Heritage observations within the study area included a burial site (RD001) and structures (RD002, RD003 and RD004) along the ridgeline and were recorded as waypoints. The General site distribution of the recorded observations in relation to the Project layout is spatially illustrated in Figure 9 and briefly described in Table 4. Selected features are illustrated in Figure 10 to 19.

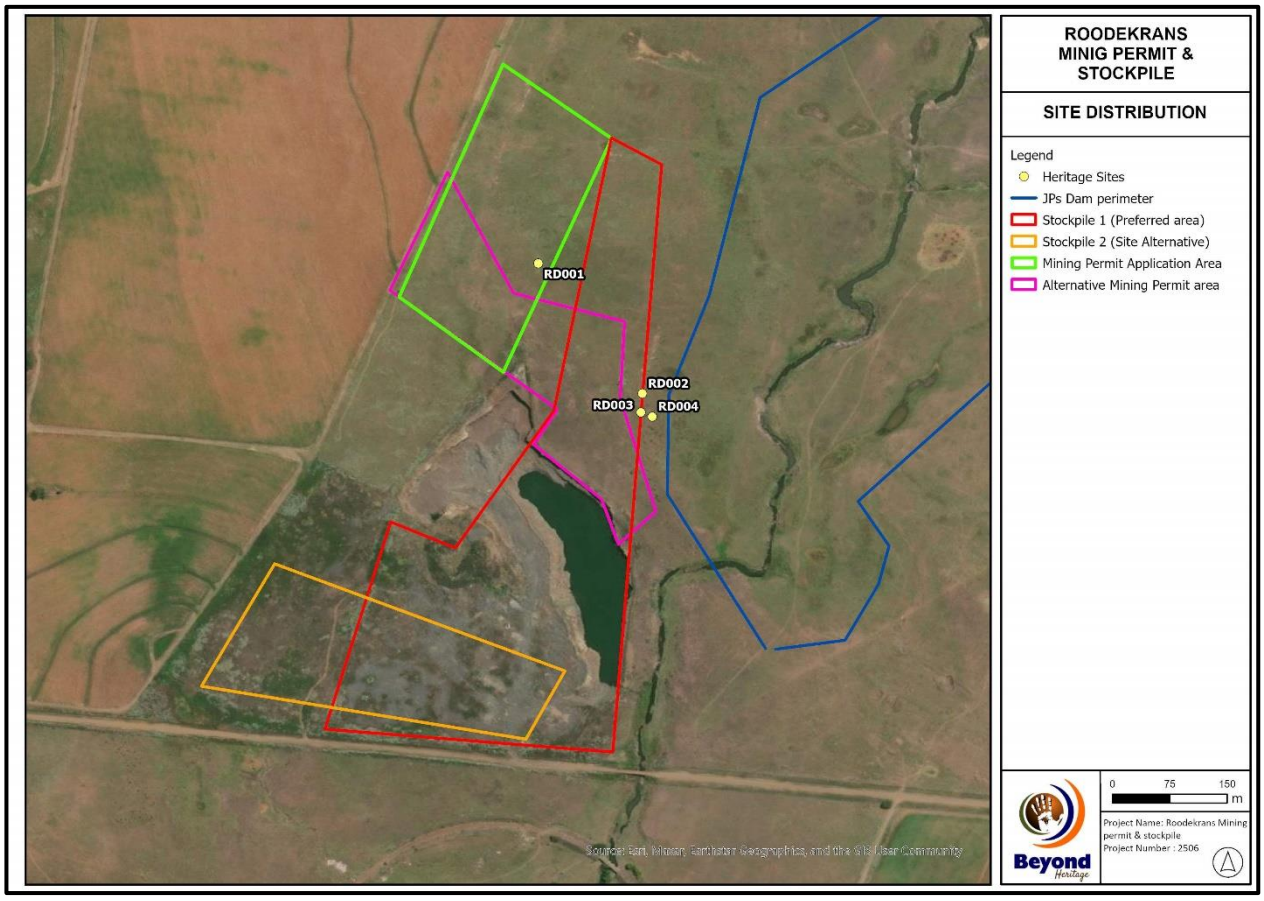

Figure 10:Site distribution map

Table 5. Sites recorded in the study area

Label	Longitude	Latitude	Description	Significance
RD001	29°34'52.59"E	26°41'2.32"S	Approximately 32 Graves are visible in the burial site. The burial site is approximately 32m x 12 m in size. One of the graves – dates to 1957. 31 Graves are unmarked. No grave goods were visible. The headstones are made of cement and stones. The grave dressing is made of cement and packed stones.	High Social Significance 3A
RD002	29°34'56.97"E	26°41'7.83"S	The overgrown stonewalling appears to be composed of roughly hewn, medium-sized stones, with an irregular arrangement indicative of dry-stone construction or a structure in a state of significant weathering and disrepair. The stones are partially obscured by dense vegetation, including shrubs and grasses, which have grown over and between the stones, further concealing their layout and structure. The wall seems to follow the natural contours of the surrounding landscape, potentially blending into the hillside. It is difficult to discern the original use of these structures as no additional context was found during the survey. The stone structures are circular in shape. The stonewalling for the RD002 and RD003 is approximately 60cm high and has a diameter of approximately 4 m. The third structure RD004 consists of a single layer 40 cm high and a diameter of approximately 5 m.	Medium Significance GP B
RD003	29°34'56.92"E	26°41'8.63"S		
RD004	29°34'57.40"E	26°41'8.80"S		

Figure 11:General view of burial site RD001.

Figure 12: View of graves at the burial site RD001

Figure 13:View of a stone packed grave at RD001.

Figure 14:Grave dating to 1957 in the burial site RD001.

Figure 15:Overgrown structure RD002.

Figure 16: Packed walling at RD002.

Figure 17:Site overview of RD003.

Figure 18:Packed walling at RD003.

Figure 19: Overview of RD004.

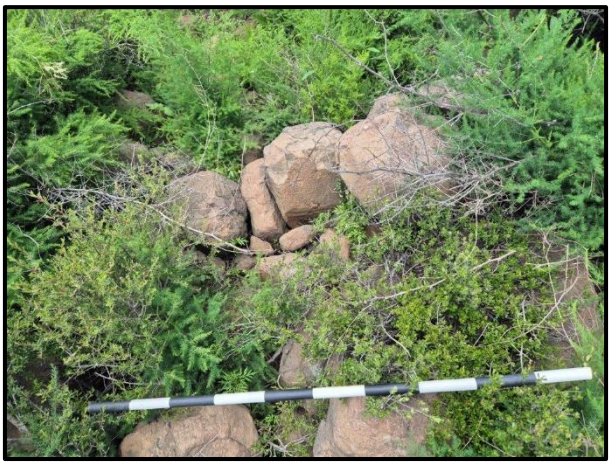

Figure 20:Packed walling at RD004.

B. CULTURAL LANDSCAPE

The Project area is rural in character and devoid of developments. The surrounding environment has been extensively utilised for agricultural activities. The area south of the Project area has been largely disturbed through mining. The structures RD002, RD003, RD004 are not indicated on the Historical topographic maps but due to their small size they may not have appeared on these maps or may be of an older age. Vegetation clearance of the sites would be required to determine an approximate age and purpose of the structures and whether an archaeological deposit is present.

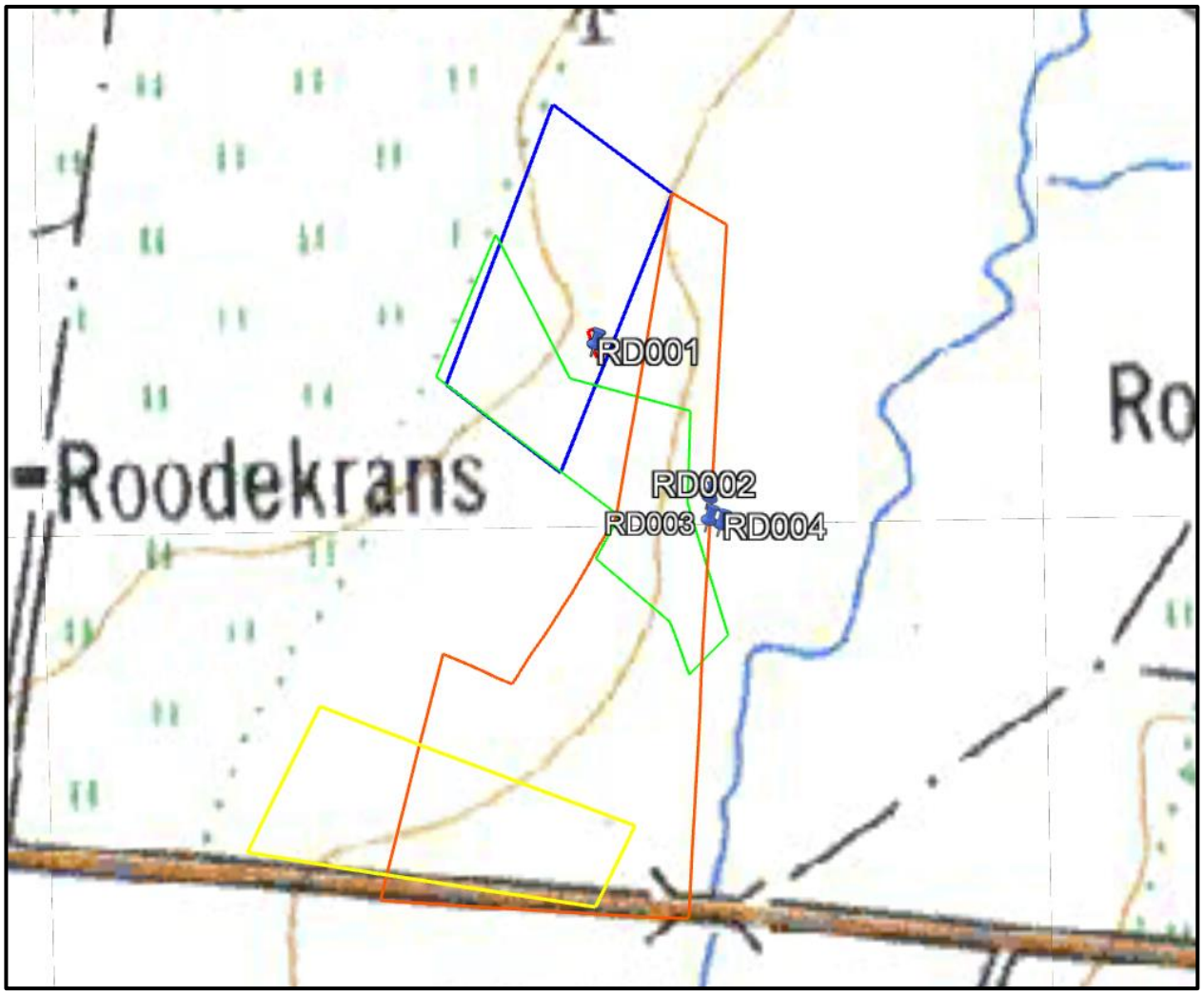

Figure 21:Extract of the 1962 topographic map showing no developments within the Project area.

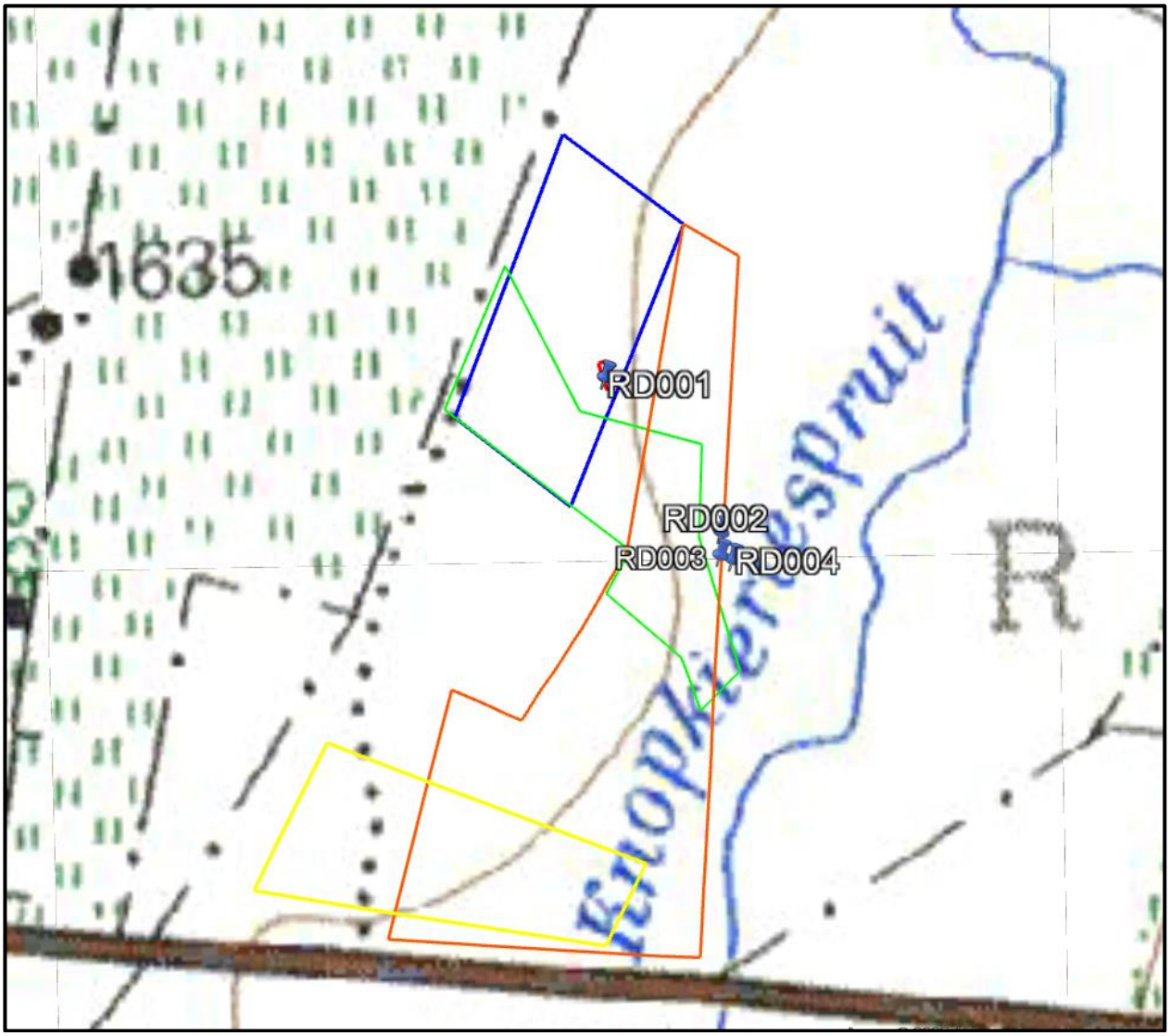

Figure 22:.Extract of the 1973 topographic map showing no developments within the Project area.

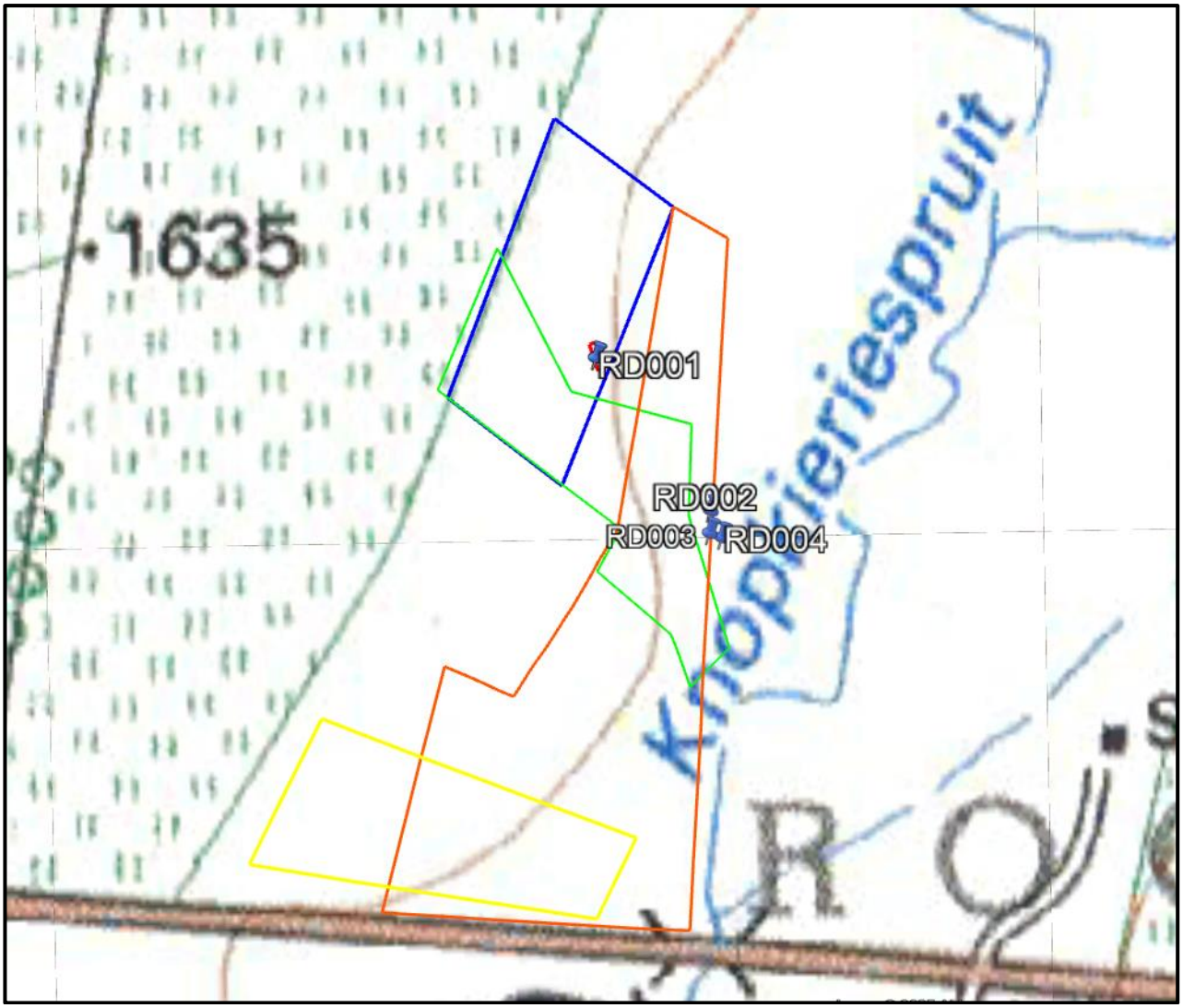

Figure 23:Extract of the 1996 topographic map showing no developments within the Project area.

C. PALEONTOLOGICAL HERITAGE

According to the SAHRA palaeontological sensitivity map, the study area is indicated as insignificant/zero palaeontological sensitivity (Figure 23), and no palaeontological studies are required for his aspect.

Colour	Sensitivity	Required Action
RED	VERY HIGH	Field assessment and protocol for finds is required
ORANGE/YELLOW	HIGH	Desktop study is required and based on the outcome of the desktop study, a field assessment is likely
GREEN	MODERATE	Desktop study is required
BLUE	LOW	No palaeontological studies are required however a protocol for finds is required
GREY	INSIGNIFICANT/ZERO	No palaeontological studies are required
WHITE/CLEAR	UNKNOWN	These areas will require a minimum of a desktop study. As more information comes to light, SAHRA will continue to populate the map

Figure 24:Paleontological sensitivity of the approximate study area (yellow polygon) as indicated on the SAHRA Palaeontological sensitivity map.

Conclusion and recommendations

The Project area is characterised by extensive surface disturbances across large portions which have been previously used as a quarry and processing site. The Project consists of a Mining Permit Area and Stockpile area, both of which Alternative locations have been provided and surveyed in order to assess the heritage significance.

During the survey, a burial site (RD001), and three structures along the ridgeline (RD002, RD003, RD004) were identified. Due to mining activities, the burial site should be avoided with a 30m buffer zone but the Applicant has requested for a relaxation on the buffer zone with an outline of potential ways to still ensure the graves be protected (see below).

The structures RD002, RD003, RD004 along the ridgeline are extremely overgrown and it was not possible to determine the full extent and purpose of the structures nor if an archaeological deposit is present at these sites. If Stockpile 1 is selected, these sites will be impacted and should be avoided with a 30m buffer zone. If avoidance is not possible, vegetation clearance will first be required in order to determine the extent of required recording process in a Phase 2 archaeological mitigation of the sites. Only after a Phase 2 mitigation is complete can a destruction permit be applied for.

From a heritage perspective, both MP areas will require a buffer zone in order to preserve the graves at RD001. The Stockpile 2 would be preferable as no sites are present here, if however Stockpile 1 is selected, avoidance or mitigation will be required for structure RD002, RD003, RD004.

According to the South African Heritage Resource Authority (SAHRA) Paleontological sensitivity map the study area of insignificant/zero palaeontological sensitivity, and no further studies are required for this aspect.

The impact to heritage resources can be mitigated to an acceptable level provided that the recommendations in this report are adhered to, based on the South African Heritage Resource Authority (SAHRA) 's approval.

Ways of reducing the buffer zone around the grave site as proposed by the Applicant:

The following measures were provided by the Applicant to ensure the graves are protected with a relaxed buffer zone of 40m, subject to the approval of SAHRA:

1) Obtaining a report from a blast expert on the effects of fly rock and Blast vibrations and possible impacts to the grave site (kindly refer to the report by Sefara, Letoka and Phiri (2025) (Appendix D2));

2) The Blast design can be modified as mining gets closer to the grave site to minimize any blast vibrations (Sefara, Letoka and Phiri (2025) (Appendix D2));

3) The Applicant/ ECO can measure and monitor the blast vibrations on every blast and record results and submit regular reports to SAHRA;

4) The site will be monitored and photographs taken after each blast to see that no damage has occurred;

5) The grave area will be fenced, maintained and kept clean of excess vegetation

Based on the Blasting Report, SAHRA approved the reduction of the 100m buffer zone around site RD001 to 40m with decking due to the number of graves and unknown SDOB of all graves, and to mitigate the impacts of Fly rock. Please refer to Appendix D3.

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 competent authority) 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 competent authority;*

(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 metropolitan or 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 subregulation 54(c)(ii); and

(e) using reasonable alternative methods, as agreed to by the competent authority, 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 competent authority 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

(iv) 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 competent authority 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 the EIA 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 competent authority 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 the EIA regulations and be attached to this application. The comments and response report must be attached under Appendix E.

6. AUTHORITY PARTICIPATION

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. The planning and the environmental sections of the local authority must be informed of the application at least 30 (thirty) calendar days before the submission of the application.

List of authorities informed:

STAKEHOLDERS
• Gert Sibande District Municipality • Lekwa Local Municipality • Department of Social Development Mpumalanga Province

STAKEHOLDERS
• Department of Economic Development, Environmental Affairs and Tourism • Department of Labour • Department Of Rural Development and Agrarian Reform, Mpumalanga 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: Mpumalanga Province • ESKOM • South African Heritage Resources Agency • South African National Roads Agency

List of authorities from whom comments have been received:

No comments were received during this and the previous lapsed application (1/3/1/16/1G-342).

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 competent authority.

Any stakeholder that has a direct interest in the site or property, such as servitude holders and service providers, should be informed of the application at least 30 (thirty) calendar days before the submission of the application and be provided with the opportunity to comment.

Has any comment been received from stakeholders?	[redacted]	NO
If "YES", briefly describe the feedback below (also attach copies of any correspondence to and from the stakeholders to this application):		
[redacted]		

DETAILS OF THE PUBLIC PARTICIPATION PROCESS FOLLOWED

During this public participation process the relevant stakeholders and I&AP's was informed of the project by means of an advertisement in Standerton Advertiser on 29 April 2025, two on-site notices were placed at visible locations, one on the farm boundary fence at the entrance, and one at a public space in Morgenzon.

A notification letter inviting comments on the DBAR over a 30-days commenting period (29 April 2025 to 30 May 2025) was sent to the landowner, neighbouring landowners, stakeholders and other I&AP that may be interested in the project. The comments received on the DBAR were incorporated into the final Basic Assessment Report (FBAR) to be submitted to DARDLEA for consideration. In accordance with the timeframes stipulated in the EIA Regulations, 2014 (as amended by GNR 326 effective 7 April 2017) the Draft Basic Assessment Report was compiled and distributed for comment and perusal to the I&AP's and stakeholders.

SECTION D: IMPACT ASSESSMENT

The assessment of impacts must adhere to the minimum requirements in the EIA Regulations, 2014 as amended, 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.

No comments were received during this and the previous lapsed application (1/3/1/16/1G-342).

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):

Not applicable as no comments were received.

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 ESTABLIHMENT:

Loss of agricultural land

							Significance				
							Low	Low-Medium	Medium	Medium-High	High
Severity	Duration	Extent	Consequence	Probability	Frequency	Likelihood	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	1	1.6	5	5	5	**8**				

Visual intrusion as a result of site establishment

							Significance				
							Low	Low-Medium	Medium	Medium-High	High
Severity	Duration	Extent	Consequence	Probability	Frequency	Likelihood	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**				

Impact on archaeological and heritage artefacts

							Significance				
							Low	Low-Medium	Medium	Medium-High	High
Severity	Duration	Extent	Consequence	Probability	Frequency	Likelihood	1 - 4.9	5 - 9.9	10 - 14.9	15 – 19.9	20 - 25
Rating: Medium			**Site Layout Alternative 1**			**Degree of Mitigation: Partial**					
5	4	2	3.6	5	5	5	**18**				

Potential impact on fauna within the footprint area

							Significance				
							Low	Low-Medium	Medium	Medium-High	High
Severity	Duration	Extent	Consequence	Probability	Frequency	Likelihood	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.

							Significance				
							Low	Low-Medium	Medium	Medium-High	High
Severity	Duration	Extent	Consequence	Probability	Frequency	Likelihood	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.

							Significance				
							Low	Low-Medium	Medium	Medium-High	High
Severity	Duration	Extent	Consequence	Probability	Frequency	Likelihood	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

							Significance				
							Low	Low-Medium	Medium	Medium-High	High
Severity	Duration	Extent	Consequence	Probability	Frequency	Likelihood	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 mining operation (Positive Impact)

							Significance				
							Low	Low-Medium	Medium	Medium-High	High
Severity	Duration	Extent	Consequence	Probability	Frequency	Likelihood	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.

							Significance				
							Low	Low-Medium	Medium	Medium-High	High
Severity	Duration	Extent	Consequence	Probability	Frequency	Likelihood	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.

							Significance				
							Low	Low-Medium	Medium	Medium-High	High
Severity	Duration	Extent	Consequence	Probability	Frequency	Likelihood	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.

							Significance				
							Low	Low-Medium	Medium	Medium-High	High
Severity	Duration	Extent	Consequence	Probability	Frequency	Likelihood	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.

							Significance				
							Low	Low-Medium	Medium	Medium-High	High
Severity	Duration	Extent	Consequence	Probability	Frequency	Likelihood	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.

							Significance				
			Consequence			Likelihood	Low	Low-Medium	Medium	Medium-High	High

Severity	Duration	Extent		Probability	Frequency		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				**Significance**				
							Low	Low-Medium	Medium	Medium-High	High
Severity	Duration	Extent		Probability	Frequency	Likelihood	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				**Significance**				
							Low	Low-Medium	Medium	Medium-High	High
Severity	Duration	Extent		Probability	Frequency	Likelihood	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				**Significance**				
							Low	Low-Medium	Medium	Medium-High	High
Severity	Duration	Extent		Probability	Frequency	Likelihood	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				**Significance**				
							Low	Low-Medium	Medium	Medium-High	High
Severity	Duration	Extent		Probability	Frequency	Likelihood	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.

							Significance				
							Low	Low-Medium	Medium	Medium-High	High
Severity	Duration	Extent	Consequence	Probability	Frequency	Likelihood	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.

							Significance				
							Low	Low-Medium	Medium	Medium-High	High
Severity	Duration	Extent	Consequence	Probability	Frequency	Likelihood	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.

							Significance				
							Low	Low-Medium	Medium	Medium-High	High
Severity	Duration	Extent	Consequence	Probability	Frequency	Likelihood	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.

							Significance				
							Low	Low-Medium	Medium	Medium-High	High
Severity	Duration	Extent	Consequence	Probability	Frequency	Likelihood	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

							Significance				
							Low	Low-Medium	Medium	Medium-High	High
Severity	Duration	Extent	Consequence	Probability	Frequency	Likelihood	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.

							Significance				
							Low	Low-Medium	Medium	Medium-High	High
Severity	Duration	Extent	Consequence	Probability	Frequency	Likelihood	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.

							Significance				
							Low	Low-Medium	Medium	Medium-High	High
Severity	Duration	Extent	Consequence	Probability	Frequency	Likelihood	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

							Significance				
							Low	Low-Medium	Medium	Medium-High	High
Severity	Duration	Extent	Consequence	Probability	Frequency	Likelihood	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

							Significance				
							Low	Low-Medium	Medium	Medium-High	High
Severity	Duration	Extent	Consequence	Probability	Frequency	Likelihood	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

				Significance				
				Low	Low-Medium	Medium	Medium-High	High
	Consequence		Likelihood					

Severity	Duration	Extent		Probability	Frequency		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)

							Significance				
							Low	Low-Medium	Medium	Medium-High	High
Severity	Duration	Extent	Consequence	Probability	Frequency	Likelihood	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:

Environmental Significance = Overall Consequence X 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 6: 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 7: 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 8: 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 9: 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 10: 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 11: 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 12: 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 13: 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 14: Description of environmental significance and related action required.

(a) Significance	Low	Low-Medium	Medium	Medium-High	High
Impact Magnitude	Impact is of very low order and therefore likely to have very little real effect. Acceptable.	Impact is of low order and therefore likely to have little real effect. Acceptable.	Impact is real, and potentially substantial in relation to other impacts. Can pose a risk to company	Impact is real and substantial in relation to other impacts. Pose a risk to the company. Unacceptable	Impact is of the 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 of 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 ESTABLIHMENT:

Loss of agricultural land

							Significance				
							Low	Low-Medium	Medium	Medium-High	High
Severity	Duration	Extent	Consequence	Probability	Frequency	Likelihood	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	2	2	2	**4.6**				

Impact on archaeological and heritage artefacts

							Significance				
							Low	Low-Medium	Medium	Medium-High	High
Severity	Duration	Extent	Consequence	Probability	Frequency	Likelihood	1 - 4.9	5 - 9.9	10 - 14.9	15 – 19.9	20 - 25
Rating: Medium			**Site Layout Alternative 1**			**Degree of Mitigation: Partial**					
3	4	2	3	3	1	2	**6**				

Visual intrusion as a result of site establishment

							Significance				
							Low	Low-Medium	Medium	Medium-High	High
Severity	Duration	Extent	Consequence	Probability	Frequency	Likelihood	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

							Significance				
							Low	Low-Medium	Medium	Medium-High	High
Severity	Duration	Extent	Consequence	Probability	Frequency	Likelihood	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.

							Significance				
							Low	Low-Medium	Medium	Medium-High	High
Severity	Duration	Extent	Consequence	Probability	Frequency	Likelihood	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.

							Significance				
							Low	Low-Medium	Medium	Medium-High	High
			Consequence			Likelihood					

Severity	Duration	Extent		Probability	Frequency		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

							Significance				
							Low	Low-Medium	Medium	Medium-High	High
Severity	Duration	Extent	Consequence	Probability	Frequency	Likelihood	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 mining operation (Positive Impact)

							Significance				
							Low	Low-Medium	Medium	Medium-High	High
Severity	Duration	Extent	Consequence	Probability	Frequency	Likelihood	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:

Visual intrusion caused by stockpile activities.

							Significance				
							Low	Low-Medium	Medium	Medium-High	High
Severity	Duration	Extent	Consequence	Probability	Frequency	Likelihood	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	3.5	**9.1**				

Loss of stockpiled topsoil during stockpiling activities.

							Significance				
							Low	Low-Medium	Medium	Medium-High	High
Severity	Duration	Extent	Consequence	Probability	Frequency	Likelihood	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**				

Dust nuisance as a result of the disturbance of soil.

							Significance				
							Low	Low-Medium	Medium	Medium-High	High
Severity	Duration	Extent	Consequence	Probability	Frequency	Likelihood	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**				

Noise nuisance generated by crushing and screening machinery.

							Significance				
							Low	Low-Medium	Medium	Medium-High	High
Severity	Duration	Extent	Consequence	Probability	Frequency	Likelihood	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	3	**8**				

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

							Significance				
							Low	Low-Medium	Medium	Medium-High	High
Severity	Duration	Extent	Consequence	Probability	Frequency	Likelihood	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	2	**4**				

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

							Significance				
							Low	Low-Medium	Medium	Medium-High	High
Severity	Duration	Extent	Consequence	Probability	Frequency	Likelihood	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 erosion of denuded areas.

							Significance				
							Low	Low-Medium	Medium	Medium-High	High
Severity	Duration	Extent	Consequence	Probability	Frequency	Likelihood	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**				

Loss of stockpiled material due to ineffective storm water control.

							Significance				
							Low	Low-Medium	Medium	Medium-High	High
Severity	Duration	Extent	Consequence	Probability	Frequency	Likelihood	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	2.5	**5.7**				

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

							Significance				
			Consequence			Likelihood					

							Low	Low-Medium	Medium	Medium-High	High
Severity	Duration	Extent		Probability	Frequency		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	2.5	**5.7**				

PROCESSING, STOCKPILING AND TRANSPORTING OF MATERIAL:

Dust nuisance generated at the processing plant.

							Significance				
							Low	Low-Medium	Medium	Medium-High	High
Severity	Duration	Extent	Consequence	Probability	Frequency	Likelihood	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	2	**3.2**				

Noise nuisance stemming from operation of the processing plant.

							Significance				
							Low	Low-Medium	Medium	Medium-High	High
Severity	Duration	Extent	Consequence	Probability	Frequency	Likelihood	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	2	**3.2**				

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

							Significance				
							Low	Low-Medium	Medium	Medium-High	High
Severity	Duration	Extent	Consequence	Probability	Frequency	Likelihood	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	3	**6.9**				

Potential contamination of environment due to improper waste management.

							Significance				
							Low	Low-Medium	Medium	Medium-High	High
Severity	Duration	Extent	Consequence	Probability	Frequency	Likelihood	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**				

Overloading of trucks impacting road infrastructure

							Significance				
							Low	Low-Medium	Medium	Medium-High	High
Severity	Duration	Extent	Consequence	Probability	Frequency	Likelihood	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**				

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.

							Significance				
							Low	Low-Medium	Medium	Medium-High	High
Severity	Duration	Extent	Consequence	Probability	Frequency	Likelihood	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.

							Significance				
							Low	Low-Medium	Medium	Medium-High	High
Severity	Duration	Extent	Consequence	Probability	Frequency	Likelihood	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

							Significance				
							Low	Low-Medium	Medium	Medium-High	High
Severity	Duration	Extent	Consequence	Probability	Frequency	Likelihood	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

							Significance				
							Low	Low-Medium	Medium	Medium-High	High
Severity	Duration	Extent	Consequence	Probability	Frequency	Likelihood	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

							Significance				
							Low	Low-Medium	Medium	Medium-High	High
Severity	Duration	Extent	Consequence	Probability	Frequency	Likelihood	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**				

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

							Significance				
							Low	Low-Medium	Medium	Medium-High	High
Severity	Duration	Extent	Consequence	Probability	Frequency	Likelihood	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**				

3. CLIMATE CHANGE ASSESSMENT

Climate change issues must be considered as part of the EIA process Please consider the Climate Change guideline. EAP must determine:
a)The potential impact of climate change on society and the economy, whether the impact is negative or positive, considering that society needs to be at the centre of the proposed development;
b)The potential alternatives of the proposed development, alternatives that will have less impact on climate change (environment and generation of waste included), the society and economy;
c)whether, and to what extent, the proposed development will result in the release of greenhouse gas (GHG) emissions;
d)whether the proposed development is necessary to achieve long term decarbonisation goals;
e)the impact of the development on social, economic, natural and built environment that are crucial for climate change, adaptation and resilience;
f) the projected impact of climate change on proposed development; and surrounding environment, and implications for the development.
g)Explanation of how the impacts is likely to be exacerbated or minimised as result of climate change and what measures are likely to be implemented to accommodate and manage (adapt to) the anticipated worst scenario where applicable
h) whether, and to what extent, the impacts identified in (a) -(g) can be mitigated.

CLIMATE CHANGE IMPACTS ASSESSMENT	
Question	**Response**
(a) The potential impact of climate change on society and the economy, whether the impact is negative or positive, considering that society needs to be at the centre of the proposed development (e) The impact of the development on social, economic, natural and built environment that are crucial for climate change, adaptation and resilience; (f) The projected impact of climate change on proposed development; and surrounding environment, and implications for the development	The potential impact of climate change on society and the economy is multifaceted and can have both negative and positive aspects. When considering the development of an aggregate stockpile area, it is crucial to center society in the planning process to maximize benefits and minimize harms. Here's a detailed analysis: **Negative Impacts** ***1.*** **Environmental Degradation** • <u>Increased Carbon Emissions</u> The conversion of natural land to aggregate stockpiles releases stored carbon, contributing to global warming. Increased carbon emissions exacerbate climate change, leading to more severe weather events, sea level rise, and other environmental changes. • <u>Loss of Biodiversity</u> Habitat destruction can lead to a loss of biodiversity, disrupting ecosystems and reducing the availability of ecosystem services such as pollination, water purification, and climate regulation. ***2.*** **Economic Consequences** • <u>Agricultural Productivity</u> Changes in local climate and soil degradation can negatively impact agricultural productivity, leading to food insecurity and increased prices. This can have a ripple effect on local economies, particularly in communities dependent on agriculture. • <u>Infrastructure Damage</u> Extreme weather events exacerbated by climate change can damage infrastructure, including roads, bridges, and buildings, leading to costly repairs and disruptions in economic activities. ***3.*** **Social Consequences** • <u>Displacement and Inequality</u>

CLIMATE CHANGE IMPACTS ASSESSMENT	
Question	**Response**
	Communities, particularly vulnerable and marginalized groups, may face displacement due to land conversion and increased risk of natural disasters. This can exacerbate social inequalities and lead to loss of cultural heritage and community cohesion. • Reduced Quality of Life Loss of natural spaces for recreation and cultural activities can reduce the quality of life for local residents. Increased heat and pollution can also affect daily living conditions. **Positive Impacts** ***1.*** **Economic Opportunities** • Job Creation Development projects, including the establishment of aggregate stockpile areas, can create jobs in construction, maintenance, and related industries, boosting local employment and economic activity. ***2.*** **Economic Growth** • Increased infrastructure development can stimulate economic growth by improving transportation networks, facilitating trade, and attracting investment. ***3.*** **Societal Benefits** • Improved Infrastructure Properly planned development can lead to improved infrastructure, such as roads and facilities, enhancing connectivity and accessibility for local communities. • Community Development Investment in local communities, including education, health care, and social services, as part of development projects can enhance overall community well-being and resilience.

CLIMATE CHANGE IMPACTS ASSESSMENT	
Question	**Response**
(b) The potential alternatives of the proposed development, alternatives that will have less impact on climate change (environment and generation of waste included), the society and economy	The site alternatives that will have less climate change impacts are Site Alternative 1 and Site Alternative 2 due to the area being previously disturbed by the local community.
(c) Whether, and to what extent, the proposed development will result in the release of greenhouse gas (GHG) emissions;	Due to the nature of the project, the small scale of the proposed operation, and the fact that no permanent infrastructure, the proposed stockpile activities will not will result in the release of greenhouse gas (GHG) emissions.
(d) Whether the proposed development is necessary to achieve long term decarbonisation goals;	Not applicable, due to the nature of the project, the small scale of the proposed operation, and the fact that no permanent infrastructure
(g) Explanation of how the impacts is likely to be exacerbated or minimised as result of climate change and what measures are likely to be implemented to accommodate and manage (adapt to) the anticipated worst scenario where applicable	**Mitigation and Adaptation Strategies (**Please see Appendix F for more detailed mitigation measures**)** To maximize positive impacts and mitigate negative ones, the following strategies should be considered: ***1.*** **Sustainable Development Practices** • Implement environmentally sustainable practices in the development of aggregate stockpile areas, including minimizing land disturbance, using green construction techniques, and restoring land post-use. ***2.*** **Community Engagement** • Engage local communities in the planning and decision-making processes to ensure their needs and concerns are addressed. This can help in gaining community support and enhancing the social license to operate. ***3.*** **Carbon Offset Programs**
(h) Whether, and to what extent, the impacts identified in (a) -(g) can be mitigated.	

CLIMATE CHANGE IMPACTS ASSESSMENT	
Question	**Response**
	• Invest in carbon offset programs, such as reforestation and renewable energy projects, to compensate for the carbon emissions associated with land conversion and aggregate stockpiling. ***4.*** **Adaptive Infrastructure** • Design infrastructure to be resilient to climate change impacts, such as extreme weather events and sea level rise, to reduce future costs and ensure long-term viability. ***5.*** **Health and Safety Measures** • Implement measures to protect public health and safety, including dust control, water management, and emergency preparedness plans.

4.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.

ENVIRONMENTAL IMPACT STATEMENT			
SITE ALTERNATIVE 1			
TYPE OF IMPACT	**DURATION**	**LIKELIHOOD**	**SIGNIFICANCE**
Site establishment • Loss of agricultural land; • 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** **Low Possibility** **Definite**	**Low Concern** **Low-Medium Concern** **Low Concern** **Low-Medium Concern** **Low Concern** **Low Concern** **Medium-High (+)**
Stripping and stockpiling of topsoil: • 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;	**Duration of site establishment phase (<1 month)**	**Low Possibility** **Low Possibility** **Low Possibility** **Low Possibility** **Low Possibility** **Low Possibility**	**Low Medium Concern** **Low Concern** **Low Medium Concern** **Low Medium Concern** **Low Concern** **Low Concern**

• 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;		**Low Possibility** **Low Possibility** **Possible**	**Low Concern** **Low Medium Concern** **Low Medium Concern**
<u>Processing, stockpiling and transporting of material :</u> • 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;	**Duration of operational phase (10 years maximum)**	**Low Possibility** **Low Possibility** **Low Possibility** **Low Possibility** **Low Possibility**	**Low Concern** **Low Concern** **Low Medium Concern** **Low Concern** **Low Medium Concern**
<u>Cumulative impacts :</u> • 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.	**Duration of all phases**	**<u>LIKELIHOOD</u>** **Low Possibility** **Low Possibility**	**<u>SIGNIFICANCE</u>** **Low Concern** **Low Concern**
<u>Sloping and landscaping upon closure of the mining area:</u> • 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 mining area. • Return of the stockpile area to landscape feature upon closure **(Positive Impact)**.	**Duration of decommissioning phase (±2 months)**	**<u>LIKELIHOOD</u>** **Low Possibility** **Low Possibility** **Low Possibility** **Definite**	**<u>SIGNIFICANCE</u>** **Low Medium Concern** **Low Medium Concern** **Low Medium Concern** **Medium-High (+)**

SECTION E. RECOMMENDATIONS 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	
Is an EMPr attached?	YES	

The EMPr must be attached as Appendix F.

If "NO", indicate the aspects that should be assessed further as part of a Scoping and EIA process before a decision can be made (list the aspects that require further assessment):

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 competent authority in respect of the application:

Please refer to Appendix F for all general mitigation measures.

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

- Demarcate work areas during the construction phase to avoid affecting outside areas. Use physical barriers e.g., safety tape, not painted lines, and use signage.
- Areas of indigenous vegetation, even secondary communities outside of the direct project footprint, should under no circumstances be fragmented or disturbed further. It is recommended that areas to be developed be specifically demarcated so that during the construction phase, only the demarcated areas be impacted upon
- All laydown areas, chemical toilets etc. should be restricted to Low SEI areas. No materials may be stored for extended periods of time and must be removed from the PAOI once the construction/closure phase has been concluded.
- Areas that are denuded during construction need to be re-vegetated with indigenous vegetation to prevent erosion. This will also reduce the likelihood of encroachment by alien invasive plant species.
- All footprints to be rehabilitated after construction is complete. Rehabilitation of the disturbed areas existing in the PAOI must be made a priority. Topsoil must also be utilised, and any disturbed area must be re-vegetated with plant and grass species which are endemic to this vegetation type.
- 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
- Leaking equipment and vehicles must be repaired immediately or be removed from PAOI to facilitate repair
- It should be made an offence for any staff to /take bring any plant species into/out of any portion of the PAOI without permission. The only exception to this involves the removal of exotic or invasive species from the PAOI, and the introduction of indigenous species for rehabilitation of the PAOI post development. Introductions and removals, however, must be closely monitored to ensure that the correct species are being removed/reintroduced.

The following mitigation measures were provided by the heritage specialist (Appendix D2):

- Avoidance of the burial site RD001 with a 100m buffer zone was preferable with access provided to family members wishing to visit the graves
- However, the Applicant requested a relaxation of the buffer zone, management plans presented by the Applicant are outlined below;
- The following was provided by the Applicant as measures to ensure the graves stay protected with a relaxed buffer zone of 100m to 40m or 20m buffer zone, for which the decision was approved by SAHRA to establish a 60-meter buffer zone.
- Obtaining a report from a blast expert on the effects of fly rock and Blast vibrations and possible impacts to the grave site (kindly refer to the report by Sefara, Letoka and Phiri (2025) (Appendix D2));
- The Blast design can be modified as mining gets closer to the grave site to minimize any blast vibrations (Sefara, Letoka and Phiri (2025) (Appendix D2));
- The Applicant/ ECO can measure and monitor the blast vibrations on every blast and record results and submit regular reports to SAHRA;
- The site will be monitored and photographs taken after each blast to see that no damage has occurred;
- The grave area will be fenced, maintained and kept clean of excess vegetation.
- The structures RD002, RD003, RD004 should preferably be avoided with a 30m buffer zone
- If avoidance is not possible then Phase 2 archaeological mitigation will be required with vegetation clearance to determine the extent of the sites in order to determine the level of mitigation required for the site;
- Development activities must be confined to the approved development footprint only;
- Monitoring of the Project area by the ECO during pre-construction and construction phases for heritage chance finds, if chance finds are encountered to implement the Chance Find Procedure for the Project as outlined in Section 9 of the HIA.
- Development of a Heritage Site Management Plan for the recorded burial site including an access protocol for Next of Kin (NoK).

SECTION F: APPENDICES

The following appendixes must be attached as appropriate:

Appendix A: Site plan(s)

Appendix B: Photographs

Appendix C: Facility illustration(s)

Appendix D: Terrestrial Biodiversity Compliance Statement

Appendix D1: Heritage Impact Assessment

Appendix D2: Blasting Report

Appendix D3: SAHRA's approval

Appendix E: Comments and responses report

Appendix F: Environmental Management Programme (EMPr)

Appendix G: EAP CVs

Appendix G1: General Authorization