

# **SITE SENSITIVITY VERIFICATION REPORT FOR THE AGGREGATE MINE ON PORTION 1 AND 2 OF THE FARM VINGERFONTEIN 162, VICTORIA WEST, NORTHERN CAPE PROVINCE**



**REFERENCE NUMBER: NC30/5/1/3/2/11318MP**

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## **EXECUTIVE SUMMARY**

The Applicant, Power Construction (Pty) Ltd has applied for environmental authorization (EA) and a mining permit to extract aggregate (dolerite) from Portions 1 and 2 of the farm Vingerfontein 162, Victoria West, Northern Cape Province. The proposed mining operation spans approximately 5 hectares over an undisturbed area of the farm, which is occasionally used for agricultural purposes.

The mining activity is planned to supply construction materials to regional projects, including Wind Farms, as well as other infrastructure developments in the Victoria West area. The operation is anticipated to last a minimum of two years, with an option for an additional three-year extension. Earth-moving equipment will be used to excavate the in-situ materials, which will be hauled to an on-site mobile crushing and screening plant for processing into various grades. Once processed, materials will be stockpiled and subsequently transported to clients via tipper trucks. All activities will occur within the boundaries specified in the mining permit.

This project aims to enhance the local construction supply chain, supporting ongoing and future infrastructure projects in the area. By establishing a reliable local source of high-quality construction materials, the quarry will help reduce transportation costs, improve efficiency, and contribute to the economic growth and development of the region.

The proposed project triggers listed activities in terms of the National Environmental Management Act, 1998 (Act 107 of 1998) and the Environmental Impact Assessment Regulations 2014 (as amended 2017) and therefore requires an environmental impact assessment (basic assessment process) that assess project specific environmental impacts and alternatives, consider public input, and propose mitigation measures, to ultimately culminate in an environmental management programme that informs the competent authority (Department of Mineral Resources and Energy) when considering the environmental authorisation. This report, the Draft Basic Assessment Report, forms part of the departmental requirements, and presents the first report of the EIA process.

## **Project description**

The proposed quarry aims to produce dolerite aggregate for local and regional construction and infrastructure projects. Mining will be conducted using a phased open-cast method involving controlled blasting, excavation, crushing, screening, and stockpiling. At any given time, only 1–1.5 ha will be actively mined to limit disturbance, and progressive rehabilitation will be implemented throughout the project's lifespan (approximately 2–5 years).

Access to the site will be gained from the R63 provincial road via a 1.5 km long new access road, which will be upgraded for safe use by heavy vehicles. Power requirements will be met using diesel generators, and water for dust suppression will be transported from authorised sources.

The mining activities will consist out of the following:

- Stripping and stockpiling of topsoil;
- Excavating / Loading of material;
- Drilling and blasting
- Crushing and screening
- Stockpiling and transporting;
- Sloping and landscaping upon closure of the site; and replacing the topsoil and vegetation the disturbed area.

The mining site will contain the following:

- Excavating / loading equipment;
- Earth moving equipment;
- Drilling and blasting equipment
- Mobile Crushers
- Access Roads;
- Site office (Container);
- Site vehicles;
- Parking area for visitors and site vehicles;
- Ablution facilities (Chemical toilets).

The proposed project will not require any additional electricity connections, as power will be supplied, when needed, by generators. All diesel storage will be below the threshold as mentioned in the EIA regulations of the National Environmental Management Act, 1998 (Act No 107 of 1998) as amended.

Access to the proposed mining area will be via an access road of the R63. An entrance road (1.5 km long new access road) and internal/haul roads will be constructed to access the mining area.

Haul roads will be extended as the open cast mining progress and will be rehabilitated as part of the final reinstatement of the area. Trucks delivering the materials to the destinations will make use of the R63.

Any water required for the implementation of the project will be sought from an authorised source and transported to site.



Figure 1: Satellite view of the proposed mining permit area (red polygon) of Power Construction (Pty) Ltd (image obtained from Google Earth).

This report addresses the findings of the Screening Tool Report (Appendix D), generated from the National Web Based Environmental Screening Tool, and provides a motivation for the various specialist studies identified to be conducted. As per the Screening Tool Report, the proposed site is located within a low sensitivity area from an agricultural perspective, a high sensitivity area from an animal species perspective, a low sensitivity area from an aquatic biodiversity perspective, a medium sensitivity area from a civil aviation perspective, a low sensitivity area from a plant species perspective, a low sensitivity area from a defense perspective, a very high sensitivity from a paleontology perspective and a very high sensitivity area from a terrestrial biodiversity perspective.

## Summary of specialist reports.

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

*Table 1: Summary of specialist reports*

LIST OF STUDIES UNDERTAKEN	RECOMMENDATIONS OF SPECIALIST REPORTS	SPECIALIST RECOMMENDATIONS THAT HAVE BEEN INCLUDED IN THE EIA REPORT  (Mark with X if applicable)	REFERENCE TO APPLICABLE SECTION OF REPORT WHERE SPECIALIST RECOMMENDATIONS HAVE BEEN INCLUDED
The screening report for an environmental authorisation, as required in terms of the 2014 NEMA EIA Regulations on portion of Portion 1 and 2 of the farm Vingerfontein 162, Victoria West, Northern Cape Province. The report identified the following list of specialist assessment for inclusion in the assessment report: <ul style="list-style-type: none"><li>■ Agricultural Impact Assessment (low sensitivity)</li><li>■ Archaeological and Cultural Heritage Impact Assessment (low sensitivity)</li><li>■ Palaeontology Impact Assessment (very high palaeontological sensitivity area)</li><li>■ Terrestrial Biodiversity Impact Assessment (very high terrestrial biodiversity sensitivity)</li><li>■ Aquatic Biodiversity Impact Assessment (low sensitivity)</li><li>■ Hydrology Assessment</li><li>■ Noise Impact Assessment</li><li>■ Radioactivity Impact Assessment</li><li>■ Traffic Impact Assessment</li><li>■ Geotechnical Assessment</li></ul>			

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<ul style="list-style-type: none"> <li>■ Socio-Economic Assessment</li> <li>■ Plant Species Assessment</li> <li>■ Animal Species Assessment</li> </ul> <p>Power Construction (Pty) Ltd (hereafter referred to as the applicant) appointed Greenmined Environmental (Pty) Ltd as the environmental impact assessment practitioner (EAP) to undertake the EIA associated with the mining permit application. In light of this Greenmined would like to respond as follows to the list of required specialist studies:</p>			
Agricultural Impact Assessment	Not required. The screening tool identified a low sensitivity for the Agricultural Theme. The area is characterised by disturbed grazing land with limited agricultural potential. The proposed 5 ha footprint will have an insignificant effect on agricultural productivity.	N/A	Section iv(a) – Baseline Environment: Land Use
Archaeological and Cultural Heritage Impact Assessment	To be undertaken as per the Guidance for Heritage Impact Assessments. The study will verify the presence or absence of heritage features and assess potential risks.	X	Section v – Specialist Inputs; Appendix M1
Palaeontology Impact Assessment	To be undertaken. The site falls within a very high palaeontological sensitivity area. The specialist will confirm fossil sensitivity and recommend mitigation measures if required.	X	Section v – Specialist Inputs; Appendix M2

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Terrestrial Biodiversity Impact Assessment (Including Flora & Fauna)	<p>Although the Screening Tool triggered a Very High terrestrial biodiversity sensitivity for the site—primarily due to its inclusion within a National Protected Area Expansion Strategy (NPAES) focus area and the potential presence of conservation-important species such as <i>Bunolagus monticularis</i> (Riverine Rabbit) and <i>Chersobius boulengeri</i> (Karoo Padloper) the specialist assessment has verified that the actual site conditions do not reflect these elevated risks. The field survey confirmed that the footprint consists of natural Eastern Upper Karoo vegetation in good condition, but lacks the dense riparian scrub required by Riverine Rabbit, resulting in a low likelihood of the species occurring on-site. While the rocky ridges provide habitat that could be suitable for Karoo Padloper, no individuals were observed, and the small 5 ha disturbance area is not expected to compromise regional habitat availability. Despite these refinements to the desktop sensitivity, the specialist recommends that mitigation remain precautionary: protected plant species must be identified and translocated, ephemeral drainage lines must be safeguarded, alien invasive species must be controlled proactively, and a pre-construction walk-through must be undertaken to ensure no sensitive fauna particularly tortoises or small mammals are harmed during clearing. These measures ensure that the project remains aligned with biodiversity best practice while addressing the sensitivities that initially triggered the compulsory specialist assessment.</p>	X	Section iv(a) – Baseline Environment: Biological Environment; Appendix M3
Aquatic Biodiversity Impact Assessment	Not required. The site does not contain any watercourses or wetlands, and the screening tool indicates low sensitivity for the Aquatic Theme.	N/A	Section iv(a) – Hydrology

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Hydrology Assessment	Not required. No drainage lines or surface water features occur within or adjacent to the footprint. Existing erosion control and stormwater measures will be sufficient.	N/A	Section iv(a) – Hydrology
Noise Impact Assessment	Not required. Operations are small-scale and remote from receptors (>2 km). Impacts are addressed through operational noise mitigation (use of mufflers, limited hours).	N/A	Section viii – Mitigation Measures
Radioactivity Impact Assessment	Not required. The project involves extraction of dolerite, a non-radioactive rock type. No potential for radiological exposure exists.	N/A	Section iv(a) – Geology
Traffic Impact Assessment	Not required. The proposed haulage will use existing gravel and regional routes (R63) with low traffic volumes. Effects can be managed through standard road safety measures.	N/A	Section viii – Mitigation Measures
Geotechnical Assessment	Not required. Dolerite is a competent material; no slope stability concerns are expected. The area is already disturbed by historical farming activity.	N/A	Section iv(a) – Geology & Soil

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Socio-Economic Assessment	Not required. The socio-economic context was comprehensively assessed using data from the Ubuntu Local Municipality IDP (2023/24). The project's impacts are positive, contributing to local employment.	N/A	Section iv(a) – Socio-Economic Environment
Plant Species Assessment	Incorporated into the Terrestrial Biodiversity Assessment. The flora will be assessed by the appointed biodiversity specialist.	X	Section iv(a) – Biological Environment
Animal Species Assessment	Incorporated into the Terrestrial Biodiversity Assessment. The fauna component will focus on species of conservation concern, as identified in the screening report.	X	Section iv(a) – Biological Environment

