

PROPOSED AGGREGATE MINE ON PORTION OF THE REMAINING EXTENT OF PORTION 19 OF THE FARM ECOWA NO 102, ELLIOT, EASTERN CAPE PROVINCE

INVASIVE PLANT SPECIES MANAGEMENT PLAN



JULY 2024

DMRE REFERENCE NUMBER: EC 30/5/1/3/2/10853 MP

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EXECUTIVE SUMMARY

The Applicant, Ecowa Quarry (Pty) Ltd, applied for environmental authorisation (EA) and a mining permit to mine stone aggregate/ gravel on the remaining extent of Portion 19 of farm Ecowa 102, Chris Hani District Municipality of the Eastern Cape Province.

The proposed mining footprint will be 4.9 ha and will be developed over an undisturbed area of the farm. The applicant intends to disturb 0.9 hectares for stockpiling and processing, and will only blast 2 hectares of the total 4.9-hectare area. The mining method will make use of blasting in order to loosen the hard rock; the material will then be loaded and hauled to the crushing plant where it will be screened to various sized stockpiles. The aggregate will be stockpiled until it is transported from site using tipper trucks. All mining related activities will be contained within the approved mining permit boundaries.

Project description

The proposed mining area is approximately 4.9 ha in extent and the applicant, Ecowa (Pty) Ltd, intends to win material from the area for at least 2 years with a possible extension of another 3 years. The aggregate to be removed from the quarry will be used for local road construction and building projects in the vicinity. The proposed quarry will therefore contribute to the upgrading / maintenance of road infrastructure.

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.

Should the MP be issued and the mining of aggregate be allowed, the proposed project will comprise of activities that can be divided into three key phases namely the:

- (1) *Site establishment/construction phase* which will involve the demarcation of the permitted mining area. Site establishment will also necessitate the clearing of vegetation, the stripping and stockpiling of topsoil, and the introduction of mining machinery and equipment

- (2) *Operational phase* that will entail the mining of aggregate from the approved footprint area via conventional open cast mining methods. The mining method will make use of blasting in order to loosen the hard rock; upon which the loosened material will be transported to the crushing and screening processing plant where it will be screened to various sized stockpiles, before it is sold and transported from site to clients
- (3) *Decommissioning phase* which entails the rehabilitation of the affected environment prior to the submission of a closure application to the Department of Mineral Resources and Energy (DMRE). The permit holder will further be responsible for the seeding of all rehabilitated areas. Once the full mining area is rehabilitated, the mining permit holder will be required to submit a closure application to the DMRE in accordance with section 43(4) of the MPRDA, 2002. The Closure Application will be submitted in terms of Regulation 62 of the MPRDA, 2002, and Government Notice 940 of NEMA, 1998 (as amended).

The mining activities will consist out of the following:

- Stripping and stockpiling of topsoil;
- Blasting;
- Excavating;
- Crushing;
- 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:

- Drilling equipment;
- Excavating equipment;
- Earth moving equipment;
- Mobile crushing and screening plants
- Access Roads;
- Site Office (Containers);
- Site vehicles;
- Parking area for visitors and site vehicles;
- Vehicle service area;
- Wash bay;
- Workshop (Containers);
- Salvage Yard;
- Bunded diesel and oil storage facilities;

- Generator on bunded area;
- Ablution Facilities (Chemical Toilets);
- Weigh Bridge; and
- Demarcated general and hazardous waste area.



Figure 1: Satellite view showing the proposed mining area (pink polygon).

This report addresses the findings of the Screening Tool Report (Appendix N), generated from the National Web Based Environmental Screening Tool, and provides motivation for the various specialist studies identified to be conducted. As per the Screening Tool Report, the proposed site is located within a medium sensitivity area from an agricultural perspective, a high sensitivity area from an animal species perspective, a very high sensitivity area from an aquatic biodiversity perspective, a high sensitivity area from a civil aviation perspective, a medium sensitivity area from a plant species perspective, a low sensitivity area from a defense perspective, a very high sensitivity form a paleontology perspective and a low 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
<p>The screening report for an environmental authorization, as required in terms of the 2014 NEMA EIA Regulations on the remaining extent of Portion 19 of farm Ecowa 102, Chris Hani District Municipality of the Eastern Cape Province, identified the following list of specialist assessment for inclusion in the assessment report:</p> <ul style="list-style-type: none"> ■ Agricultural Impact Assessment; ■ Archaeological and Cultural Heritage Impact Assessment; ■ Paleontology Impact Assessment; ■ Terrestrial Biodiversity Impact Assessment; ■ Aquatic Biodiversity Impact Assessment; ■ Hydrology Assessment; ■ Noise Impact Assessment; ■ Radioactivity Impact Assessment; ■ Traffic Impact Assessment; ■ Geotechnical Assessment; ■ Socio-economic Assessment; ■ Plant Species Assessment; 			

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<ul style="list-style-type: none"> ■ Animal Species Assessment. ■ Agricultural Impact Assessment (AIA): 	<p>As mentioned earlier, geology is dominated by mudstones and sandstones of the Tarkastad Subgroup and the Molteno Formation (Karoo Supergroup) as well as intrusive dolerites of Jurassic age. The dominant soils on the sedimentary parent material are well drained, with a depth of more than 800 mm and clay content from 15–55%, representing soil forms such as Hutton, Clovelly, Griffin and Oatsdale. On the volcanic parent material (dolerite) the soils are represented by forms such as Balmoral, Shortlands and Vimy. Most common land types Ac and Fa.</p> <p>As per the geological study done on the adjacent mining permit by Stellenryck Environmental Solutions Appendix M), a definite dolerite deposit is present in the area, although the exact depth thereof is unknown. From all the geological, topographical and environmental data available, the likelihood that the dolerite intrusion present is in the form of sill or a saucer shaped sheet, is high. This is supported by the topographical factors, dip of the dolerite, lateral extent (present, although limited) of the intrusion and by the 3126 Queenstown Geological Survey Sheet. Two distinctive sets of joints were observed in the study area, striking northwest-southeast and northeast-southwest respectively, with constant dihedral angles of approximately 90°, resulting in an orthogonal joint system</p>		
<ul style="list-style-type: none"> ■ Archaeological and Cultural Heritage Impact Assessment (HIA) & Paleontology Impact Assessment (PIA): 	<p>According to the Archaeological Desktop study conducted on the adjacent mining permit by Stellenryck Environmental Solutions (Pty) Ltd (Appendix M3), little systematic archaeological research has been conducted within the immediate area of the proposed development. Most previous archaeological research has focused on the wider regions of the north-eastern Cape, to the west of the proposed development.</p> <p>Several relevant archaeological and heritage impact assessments have been conducted in the broader region, identifying numerous Middle and Later Stone Age artifact scatters and sites. These assessments have also found evidence of Iron Age agropastoralist occupation and interaction, indicated by the presence of broken earthenware, potsherds, and associated cultural materials and settlement patterns. Should the permit holder implement the mitigation measures proposed in this document and the EMPR the impact on the Archaeological and Cultural Heritage concern of the surrounding environment is deemed to be of low significance and compatible with the current land use</p>		

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<p>■ Terrestrial Biodiversity Impact Assessment (TBIA) & Animal Species Assessment (ASA):</p> <p>The site-specific information is based on the Botanical Report by Stellenryck Environmental Solutions, conducted for the existing quarry operation. The new application area directly borders the existing quarry and comprises the same vegetation type and ground cover as described in the report. Consequently, all findings and recommendations from Botanical Report are applicable to the new application area and should be implemented accordingly.</p> <p>Thus, as per the botanical report (Appendix M1), some individuals of Boophone disticha and Aloe maculate were present on the adjacent site. A permit with reference to the PNCO is required for some of the species identified on site. The Boophone individuals are found scattered along the North-Eastern face of the hill and the Aloes are found in a small cluster along the rocky outcrops on the North-Western crest of the hill. Attempts must be made to translocate the Boophone and Aloe species found in the area. The process should not be too complicated provided that they are transplanted to an area with similar properties.</p>			
<p>■ Aquatic Biodiversity Impact Assessment (ABIA) & Hydrology Assessment (HA):</p> <p>As mentioned earlier, the proposed mining area falls within the upper reaches of the Mbashe Sub Water Management Area that is situated in the Mzimvubu to Kieskamma Water Management Area which is managed by the Department of Water and Sanitation (DWS). The proposed mining area does not fall within 500 m from a wetland and does not necessitate a Water Use License Application.</p> <p>An artificial wetland is located approximately 510 m from the proposed mining area, however this is an extension of an existing mining operation for which the finding as per the initial assessment done for the mining were that the mining site does not host any off-stream wetlands hence the proposed development will impose a zero impact on sensitive aquatic systems. The area to the northeast of the proposed mine areas hosts a wetland system, however this wetland has been completely transformed and impacted on by agricultural activities, as the wetland has been ploughed and used as cultivation areas. Should the permit holder implement the mitigation measures proposed in this document and the EMPR the impact on the hydrology of the surrounding environment is deemed to be of low significance and compatible with the current land use</p>			

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<p>■ Noise Impact Assessment (NIA):</p>	<p>The potential impact on the noise ambience of the receiving environment is expected to be of low significance and representative of the machinery already operational at the property. Due to the small scale of the operation a NIA is not deemed applicable..</p>		
<p>■ Radioactivity Impact Assessment</p>	<p>A radioactivity impact assessment is not deemed necessary for the proposed mining operation that will not store any chemicals on site, perform activities of radioactive nature or generate hazardous waste of radioactive nature.</p>		
<p>■ Traffic Impact Assessment (TIA):</p>	<p>The Applicant intends to use the existing access road from the R410 to the designated mining permit area and extended as the open cast mining progress and will be rehabilitated as part of the final reinstatement of the area. In light of the small scale of the proposed operation a TIA is not deemed necessary, should the Applicant implement the mitigation measures to be proposed in the EMPr.</p>		
<p>■ Geotechnical Assessment:</p>	<p>No reason for a geotechnical assessment could be identified as no permanent infrastructure will be established at the proposed mining area.</p>		

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<p>■ Socio-economic Assessment (SEA):</p> <p>The material to be sourced from the mining area will be used for the upgrading of the road infrastructure in the vicinity of the site. The proposed mine will be operated on an area of the farm with very low agricultural potential. Should any additional workers to be required on this mining activity they will be sourced from the local community. Workers will daily be transported to the site. The establishment of the mining area on the farm will also assist the property owner in the diversification of their income. Considering this a SEA is not deemed applicable to this project.</p> <p>In light of the above mentioned, we propose that the no specialist studies are currently deemed applicable to the proposed mining operation.</p>			

