

Appendix I.

IMPACT ASSESSMENT

Submitted in conjunction with draft Basic
Assessment Report for:

Proposed Inxu sand mine

DMR Ref: **EC30/5/1/3/3/2/1/10446 EM**

Prepared on behalf of Scribante Concrete (Pty) Ltd
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IMPACT ASSESSMENT

1. ISSUES RAISED BY INTERESTED AND AFFECTED PARTIES

1.1. Department of Roads and Public Works

The Department does not object to the project but draws attention to the following two promulgated acts, which contents are to be noted and which are included as Annexure A and Annexure B to this letter:

- 1) The Eastern Cape Roads Act 3, of 2003 which deals with the planning, proclamation, classification, management, design, construction and maintenance of roads in the Eastern Cape Province (Annexure A); and:
- 2) The Advertising on Roads Ribbon Development Act 21 of 1940: which deals with the regulations for displaying advertisements outside certain urban areas at places visible from public roads and accesses to certain land from such roads (Annexure B).

For matters pertaining to Provincial roads affected by the project the MEC's written approval and/or the Department consent may be required. Such matters may include, but is not limited to, the following:-

- Application for wayleaves to install or relocate new/ existing services through/ under/ over Provincial Roads;
- Application for Building Restriction Road relaxations;
- Application to execute roadworks for geometric improvements to Provincial roads and improving accesses from Provincial Roads;
- Application to dispose of or manage stormwater runoff;
- Application to erect temporary and/or permanent road traffic signage (directional signs) and advertisements;
- Application to create new accesses from/to Provincial Roads;
- Application for abnormal transports / abnormal loads.

We also like to note that, in accordance with Chapter 2.2 of the Manual for Traffic Impact Studies, Ref. RR 93 / 635, October 1995, by the National Department of Transport, a Traffic Impact Study or Statement may be required depending on the projected number of peak hour trips. We noted that the Draft Impact Assessment report, Chapter 2. ANTICIPATED NEGATIVE IMPACTS; sub-chapter 2.1. ENVIRONMENTAL refers to: "The proposed activity has the potential to negatively impact on traffic in the area through increased numbers of vehicles on the R396. This will however be minimal as the operation will likely only involve 3-4 truck loads per day." The Department kindly requests a formal letter from your client confirming the projected hourly vehicle trips, please.

1.2. Department of Agriculture, Forestry and Fisheries

The mining operation will result in great soil disturbance, furthermore surface water may become polluted through diffuse discharge such as fuel or oil spill. It will also increase the invasion of alien invader plants and unwanted weeds. It is recommended that the following precautionary measures be seriously considered.

1. Top soil should be stripped off the soil and overburden it to stockpiles kept grassed to avoid erosion, with a view of replacing it later to the disturbed area.

2. Strategy for ongoing monitoring should be developed to ensure negative impacts to the natural resources are minimised
3. Weeds control management plan must be developed and maintained to control the alien plants that can possibly result from the soil disturbance that will occur during the mining operations.
4. The mining should take place on the demarcated area and must be fenced to prevent danger to the livestock and community
5. The applicant must take the responsibility of any damages and disturbances related to the natural resources that may reduce agricultural activity in surrounding areas resulted from improper mining operation, access road construction and inappropriate rehabilitation.
6. Any section of the access road that erodes because of drilling programmes should be rehabilitated to a state as near natural as possible after the completion of the project as stated in the EMPr.
7. Topography and slopes shall, depending on the volume of materials exploited, be restored as closely as possible to the original condition, and the exploited vegetation should be re-established on the land concerned in order to expedite the restoration and avoid further erosion.
8. The mining operation should not take place further than 10m outside the watercourse in a manner than may cause deterioration of the natural agricultural resources.

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

2.1. Impacts that may result from the planning and design phase

The planning and design phase includes little onsite work or environmental risks. Planning and design are largely desktop exercises.

2.2. Impacts that may result from the construction/operational/decommissioning phases

The table below identifies the potential impacts identified for the construction, operation and decommissioning phase of the proposed Inxu Sand Mine.

The potential impacts are described and assessed for significance. Significance is assessed by scoring each impact on the basis of four variables, including probability, severity, duration and spatial implications.

On the understanding that a significant impact is one which, whether in isolation or in combination with other impacts, could have a material influence on the decision making process, including the specification of mitigation measures; significance in this report is scaled according to impact scores as follows:

- **Low (scoring 9 or less)**
- **Medium (scoring between 10 and 15)**
- **High (Scoring 16 or more)**

The four variables, with their score criteria are detailed below:

Frequency / Probability (FR)**(Frequency or likelihood of activities impacting on the environment)**

- 1: Almost Never / impossible
- 2: Very seldom / highly unlikely
- 3: Infrequent / Seldom
- 4: Often / Regular
- 5: daily / Highly regular

Severity (SV)**(Degree of change to the baseline environment in terms of reversibility of impact; sensitivity of receptor, duration of impact and threat to environment and health standards)**

- 1: Insignificant / not harmful
- 2: Small / potentially harmful
- 3: Significant / slightly harmful
- 4: Great / harmful
- 5: Disastrous / extremely harmful

Duration (DR)**(length of time over which activities will cause change to the environment)**

- 1: One day to a month
- 2: One month to a year
- 3: One year to ten years
- 4: Life of project
- 5: Post closure

Spatial Scope (SS)**(Geographic overage)**

- 1: Activity Specific
- 2: Site specific
- 3: Area
- 4: Regional
- 5: National

Nature of Impact	Frequency		Severity		DR	SS	Impact	Significance
	Unmitigated	Mitigated	Unmitigated	Mitigated				
<u>Construction Phase</u>								
Traffic and access	3	3	2	2	2	1	8	Low
Soil erosion	4	2	4	2	2	2	8	Low
Groundwater Pollution	5	2	4	1	2	3	8	Low
Noise and Disturbance	5	4	3	2	2	2	10	Medium
Destruction of Flora	4	2	3	2	2	1	7	Low
Disturbance of Fauna	3	2	3	2	2	2	8	Low

Waste and litter	5	2	3	1	2	2	7	Low
Visual Impacts	5	3	5	3	2	3	11	Medium
Total	34	20	27	15	16	16	67	
<u>Operational Phase</u>								
Traffic and access	3	2	3	2	3	2	9	Low
Soil erosion	5	4	5	4	3	3	14	Medium
Groundwater Pollution	5	3	5	4	3	3	13	Medium
Noise and Disturbance	5	4	4	3	3	3	13	Medium
Destruction of Flora	4	3	4	2	3	3	11	Medium
Disturbance of Fauna	4	3	4	3	3	3	12	Medium
Waste and litter	5	2	3	1	3	2	8	Low
Visual Impacts	5	4	3	3	3	3	13	Medium
Total	36	25	31	22	24	22	93	
<u>Decommissioning Phase</u>								
Traffic and access	3	3	2	2	2	1	8	Low
Soil erosion	4	2	4	2	2	2	8	Low
Groundwater Pollution	5	2	4	1	2	3	8	Low
Noise and Disturbance	5	4	3	2	2	2	10	Medium
Destruction of Flora	4	2	3	2	2	1	7	Low
Disturbance of Fauna	3	2	3	2	2	2	8	Low
Waste and litter	5	2	3	1	2	2	7	Low
Visual Impacts	5	3	5	3	2	3	11	Medium
Total	34	20	27	15	16	16	67	