



**INSPECTION SHEET ENVIRONMENTAL CONTROL OFFICER**

**SAND MINE ON A PORTION OF THE FARM DE  
KLERKSKRAAL 231 IN THE THEUNISSEN DISTRICT,  
FREE STATE PROVINCE**

**ENVIRONMENTAL AUDIT REPORT**

<b>DMR REFERENCE NUMBER:</b>	<b>FS30/5/1/3/2/10207MP</b>
<b>AUDIT PERIOD:</b>	<b>January 2021</b>

**NOVEMBER 2020**

***Prepared For:***

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**ENVIRONMENTAL PERFORMANCE ASSESSMENT**  
DE KLERKSKRAAL SAND MINE

**PROJECT DETAIL:**

<b>Permit Number:</b>	FS30/5/1/3/2/10207MP	<b>Date of Commencement:</b>	November 2019
<b>Site Name:</b>	De Klerkskraal Quarry	<b>Inspection Date:</b>	28 January 2021
<b>Permit Holder:</b>	Blazecor 226 CC	<b>Other Authorisations:</b>	4 March 2017
<b>Report Number:</b>	10		

**DETAIL OF AUDITOR**

**(APPENDIX 7 SUB-REGULATION 3(A) & (B)):**

<b>ECO:</b>	Gerhard Botha
<b>Expertise:</b>	Mrs. GA Botha has 10 years of experience in environmental legal compliance audits, (GIS) geographic information system, mining right and permit applications and applications for environmental authorizations & Water use applications.
<b>Declaration of Independence:</b>	<p>I Gerhard Botha declare that –</p> <ul style="list-style-type: none"> <li>• I act as independent environmental control officer in this compliance audit;</li> <li>• I will perform the work relating to the audit in an objective manner, even if the results and findings are not favourable to the holder of the authorisation;</li> <li>• I have expertise in conducting environmental compliance audits, including knowledge of the Act and regulations that have relevance to the activity;</li> <li>• I will adhere to and comply with all responsibilities as indicated in the National Environmental Management Act and Environmental Impact Assessment Regulations.</li> <li>• I do not have and will not have any vested interest in the activity other than remuneration for work performed in terms of the Environmental Impact Assessment Regulations, 2014.</li> </ul> <p align="center">             Signature of ECO         </p> <p align="right">Date: 17 February 2020</p>



**ENVIRONMENTAL PERFORMANCE ASSESSMENT**  
DE KLERKSDRAAI SAND MINE

**SCOPE**

**& PURPOSE OF ENVIRONMENTAL AUDIT**

**(APPENDIX 7 SUB-REGULATION 3(C)):**

This environmental audit report was compiled in terms of the requirements of the NEMA EIA Regulations, 2014.

**OBJECTIVE:**

The objective of the environmental audit report (EAR) is to evaluate compliance of the operational activities with the environmental management programme (EMPR) and mining permit.

**INSPECTED AREAS:**

The inspection included an assessment of the following areas:

- Washing and Screening plant area;
- Earthmoving and excavating equipment
- Site Vehicles
- Overburden and topsoil dumps;
- Stockpiles;
- General working area
- Office area;
- Site Storage Area

In order to establish the environmental compliance assessment of the operation, the mining site was inspected on foot by the Environmental Control Officer, Gerhard Botha of Greenmined Environmental.

**ASSUMPTIONS, UNCERTAINTIES OR GAPS IN KNOWLEDGE**

**(APPENDIX 7 SUB-REGULATION 3(F)):**

The assumptions made in this document, stem from specific information gathered during the site audit and background information gathered from site management.

**LOCATION:**

<b>Site Location:</b>	The site is situated approximately 35km south of Theunissen along the R30 towards Welkom near Bloudrif. The proposed mining area is approximately 4.8ha in extent (including current excavation)
<b>Site Coordinates:</b>	A – 28.140256°S; 26.670736°E



**ENVIRONMENTAL PERFORMANCE ASSESSMENT**

DE KLERKSKRAAL SAND MINE

B – 28.139903°S; 26.671786°E
C – 28.138353°S; 26.671411°E
D – 28.137663°S; 26.671988°E
E – 28.137252°S; 26.671658°E
F – 28.137028°S; 26.670997°E
G – 28.137403°S; 26.670481°E
H – 28.138631°S; 26.669492°E
I – 28.138828°S; 26.669611°E
J – 28.138719°S; 26.669611°E

**PROJECT DESCRIPTION:**

The applicant, Blazecor 226 CC intends to mine 4.8ha over a certain portion of the Farm De Klerkskraal 231, Theunissen magisterial district, Free State Province. The mining procedure will entail strip mining through excavation and dredging of the proposed footprint area. The material from the mine will be used for the supply of sand to building projects to supply housing and other infrastructure in and around Theunissen area. The DMR approved a section 102 mining permit with reference number FS30/5/1/3/2/10207MP.

**SITE CONDITIONS:**

At the time of the inspection the climate was warm and sunny minimal cloud cover and a very slight breeze. Some soil moisture was still present due to precipitation that occurred approximately a week ago.

**REPORTABLE ENVIRONMENTAL INCIDENTS:**

<b>Incident Date:</b>	N/A
<b>Incident No:</b>	N/A
<b>Incident:</b>	No Environmental Incidents at this stage
<b>How addressed:</b>	N/A
<b>When addressed:</b>	N/A

**ADOPTED METHODOLOGY**  
*(APPENDIX 7 SUB-REGULATION 3(D)):*

COMPLIANCE SCORE	DESCRIPTION
1	Task not achieved
2	Task 20% achieved
3	Task 50% achieved
4	Task 80% achieved
5	Task 100% achieved in accordance with the EMP



## ENVIRONMENTAL PERFORMANCE ASSESSMENT

DE KI EDELSKRAAL SAND MINE

NON-COMPLIANCE SCORE	DESCRIPTION
1	<b>LOW</b> – Mitigation not needed / mitigation measures to be maintained
2	<b>MEDIUM</b> – Mitigation should be considered
3	<b>HIGH</b> – Mitigation compulsory



**INSPECTION SHEET ENVIRONMENTAL CONTROL OFFICER**

**INSPECTION ASPECTS:**

Description	Compliance score	Non-Compliance Score	Status	Comments
<b>LEGISLATION COMPLIANCE:</b>				
National Environmental Management Act, 1998 (Act No 107 of 1998) and the Environmental Impact Assessment Regulations, 2014	5	1	Compliant	
Copy of the EA and EMPR available on site	5	1	Compliant	
Mineral and Petroleum Resources Development Act, 2002 (Act No 28 of 2002)	5	1	Compliant	
Mining Permit available on site	5	1	Compliant	
National Water Act, 1998 (Act 36 of 1998)	5	1	Compliant	
National Environmental Management: Biodiversity Act, 2004 (Act No 10 of 2004) (NEM:BA)	5	1	Compliant	
Hazardous Substances Act, 1973 (Act 15 of 1973)	5	1	Compliant	
<b>ASPECTS OF THE AFFECTED ENVIRONMENT</b>				
<b>Topsoil: Overburden Management</b>				
Topsoil stripping	5	1	Compliant	
Topsoil storage (heaps not exceeding 2 m)	5	1	Compliant	Prior to construction of the wash bay area and sump, the topsoil within the construction footprint should be removed and stockpiled.
Topsoil heaps vegetated	5	1	Compliant	
Overburden stripped & stockpiled	5	1	Compliant	

## ENVIRONMENTAL PERFORMANCE ASSESSMENT

### DE KLERKBAAL SAND MINE

Description	Compliance score	Non-Compliance Score	Status	Comments
Stockpiles monitored for erosion, weeds and foreign matter	5	1	Compliant	
Topsoil returned to rehabilitated area	NA	1	NA	No rehabilitation has occurred up to date.
<b>Vegetation</b>				
Protected plants (if any) sheltered from mining activities	5	1	Compliant	
Removal of vegetation limited to smallest possible area	5	1	Compliant	
Aliens & weeds controlled on site	4	2	Compliant	A few Category 1b Alien Invasive Plants, most notably <i>Datura ferox</i> (Olieboom) and <i>Xanthium strumarium</i> (large cocklebur, kankerroos), have started to establish within the mining footprint and should be eradicated as soon as possible.
Seeding of rehabilitated area done with indigenous vegetation found within 5 km of the site.	NA	1	NA	No rehabilitation has occurred up to date.
<b>Fauna</b>				
All animals, birds and reptiles protected on site.	5	1	Compliant	
Excavations daily monitored for trapped fauna	5	1	Compliant	
<b>Air Quality and Noise (EMP PG: 56, 98, 99):</b>				
Dust monitoring plan implemented	5	1	Compliant	Dust monitoring on a monthly basis
Dust suppression implemented	5	1	Compliant	
Speed on access road limited to 40 km/h	5	1	Compliant	
Mining equipment serviced regularly to ensure noise emissions are minimized	NA	1	NA	No servicing allowed on site
No loud music permitted on site	5	1	Compliant	
Residents on the property and surrounding areas informed if any unusual noise activities are planned	5	1	Compliant	

## ENVIRONMENTAL PERFORMANCE ASSESSMENT

DE KI EDKEDBAAL SAND MINE

Description	Compliance score	Non-Compliance Score	Status	Comments
<b>Archaeological and Cultural Interest</b>				
Archaeological and/or cultural remnants protected.	5	1	Compliant	
<b>Surface and Storm Water Management</b>				
Storm water Management Plan implemented on site	5	1	Compliant	
Storm water diverted around the mining area and access roads to prevent erosion	5	1	Compliant	Storm water have been diverted successfully around the stockpiling area.
Damming up of water in the mining area prevented	5	1	NA	A portion of the sand quarry have filled up with surface runoff and overspill from the river, following heavy rainfall and flooding of the As River. Sand mining within this portion of the quarry has been halted and mining activities were relocated to another portion of the mine area. No activities should be allowed until all of the water have drained out of the quarry.
Mining conducted in accordance with the Best Practice Guidelines for small scale mining	5	1	Compliant	
Areas with erosion reinstated	5	1	Compliant	Erosion features around the processing plant and the river bank (area around water pipeline) have been stabilised. Monitoring of these areas should be done on a regular basis and is an ongoing process. Erosion features associated with the drainage feature, draining underneath the access road via small culverts, has been stabilized. Monitoring of this area should also be done on a regular basis.
<b>Visual Exposure</b>				
Is the contractor implementing good visual and housekeeping standards	5	1	Compliant	The mining area is neat and tidy with a good visual appearance
Mining area neatly sloped and landscaped	NA	1	NA	No rehabilitation has occurred up to date.
<b>Hazardous Chemical Management</b>				
Hazardous material stored within a bunded area (110% capacity)	5	1	Compliant	Waste bins containing hazardous waste stored on an impenetrable, bunded surface.
Fuel and oil spill managed	5	1	Compliant	

## ENVIRONMENTAL PERFORMANCE ASSESSMENT

### DE KI EDKEDBAAL SAND MINE

Description	Compliance score	Non-Compliance Score	Status	Comments
Drip trays present when refuelling is done outside the service bay	5	1	Compliant	
Mining equipment mechanically sound without visible oil leaks	5	1	Compliant	
<b>Waste Management</b>				
Site free of day-to-day litter	5	1	Compliant	
Hazardous and general waste stored separately	5	1	Compliant	
General waste dumped at a recognised landfill site	5	1	Compliant	
Hazardous waste removed by a registered waste handling contractor	5	1	Compliant	
No waste stockpile area allowed outside the boundaries of the mining area	5	1	Compliant	
Suitable covered receptacles available at all times and conveniently placed for the disposal of waste	5	1	Compliant	
Integrated waste management approach implemented on site	5	1	Compliant	
<b>Potable Water and Ablution Facilities</b>				
Ablution facilities available on site more than 200m from a watercourse	5	1	Compliant	
Potable water available on site for use of workers	5	1	Compliant	
Effluent water from the camp washing facility disposed of in a French drain, situated more than 200m from a watercourse	NA	1	NA	
<b>Fire Management</b>				
Firefighting equipment available on-site	5	1	Compliant	
No open fires at mining site allowed	5	1	Compliant	
<b>Mine and Equipment Management</b>				

## ENVIRONMENTAL PERFORMANCE ASSESSMENT

### DE KI EDKEDBAAL SAND MINE

Description	Compliance score	Non-Compliance Score	Status	Comments
Mining area demarcated with visible beacons	5	1	Compliant	
Mining conducted within approved footprint area	5	1	Compliant	
Mine operational within hours as stipulated in the EMPR (6:00 – 18:00, Monday – Saturday, excl. public holidays)	5	1	Compliant	
A public complaints register maintained on site	5	1	Compliant	
Incident register maintained on site	5	1	Compliant	
Emergency preparedness plan implemented on site	5	1	Compliant	
<b>Access Roads, Vehicle and Transporting of Material</b>				
Access road maintained	5	1	Compliant	
Movement of project related vehicles and machinery restricted to the approved mining area	5	1	Compliant	
Vehicle repairs only conducted at the off-site workshop	5	1	Compliant	
Speed limit of 30km/h enforced within the mining area	5	1	Compliant	
Storm water diverted around the access roads to prevent erosion	NA	1	NA	
<b>Employee and Safety Management</b>				
Workers inducted and informed of EMP conditions	5	1	Compliant	Site induction and environmental training have been done with the staff on the 30th of June 2020.
No camping allowed on the mining area	5	1	Compliant	
Workers provided with PPE	5	1	Compliant	
Appropriate notification signage erected at the mining site, warning the public about the	5	1	Compliant	

## ENVIRONMENTAL PERFORMANCE ASSESSMENT

### DE KI EDEKBAAL SAND MINE

Description	Compliance score	Non-Compliance Score	Status	Comments
hazard around the mining site and presence of heavy vehicles and machinery				
Weather proof, durable, legible notices in at least three official languages applicable in the area displayed at the entrance to the site.	5	1	Compliant	
Effective access control to prevent unauthorised entry.	5	1	Compliant	
Mining area fenced off with lockable gates	5	1	Compliant	
Hauling routes clearly marked with appropriate signalling.	5	1	Compliant	



**INSPECTION SHEET ENVIRONMENTAL CONTROL OFFICER**

**COMMENTS OR COMPLAINTS RECEIVED FROM I&AP'S**

**(APPENDIX 7 SUB-REGULATION 3(G) & (J)):**

No written comments or complaints has been received from any of the surrounding I&AP's.

**GENERAL REPORT:**

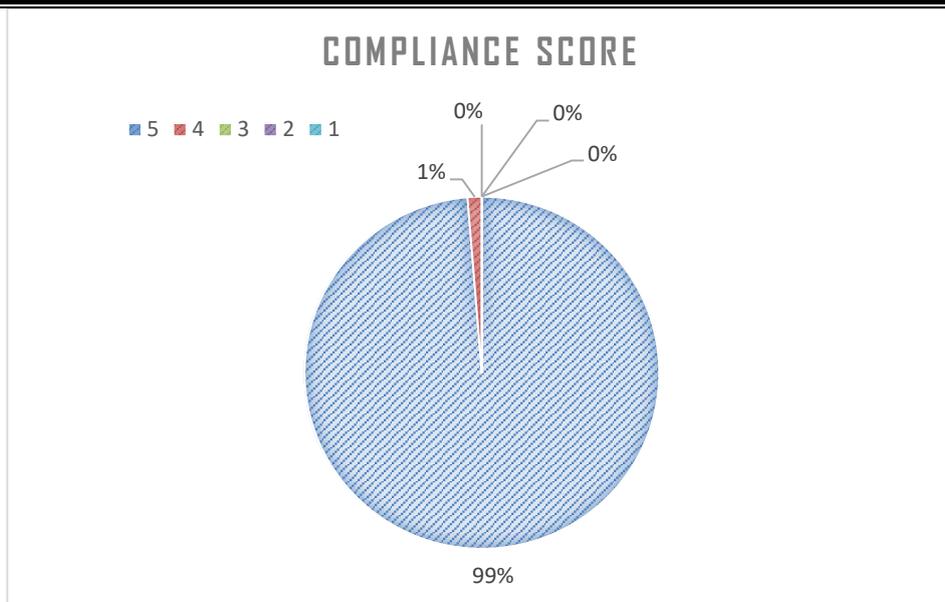
Compliance of the mining site with the EMP approved by DMR was reviewed during the site assessment. The mining area recorded a compliance score of 99.68% for the month of January 2021. This is a slight increase from the previous month's compliance score of 99.67%.

- 98.4% of tasks were executed 100% according to EMP specifications; and
- 1.3% of all tasks were executed at 80% achieving rate; and

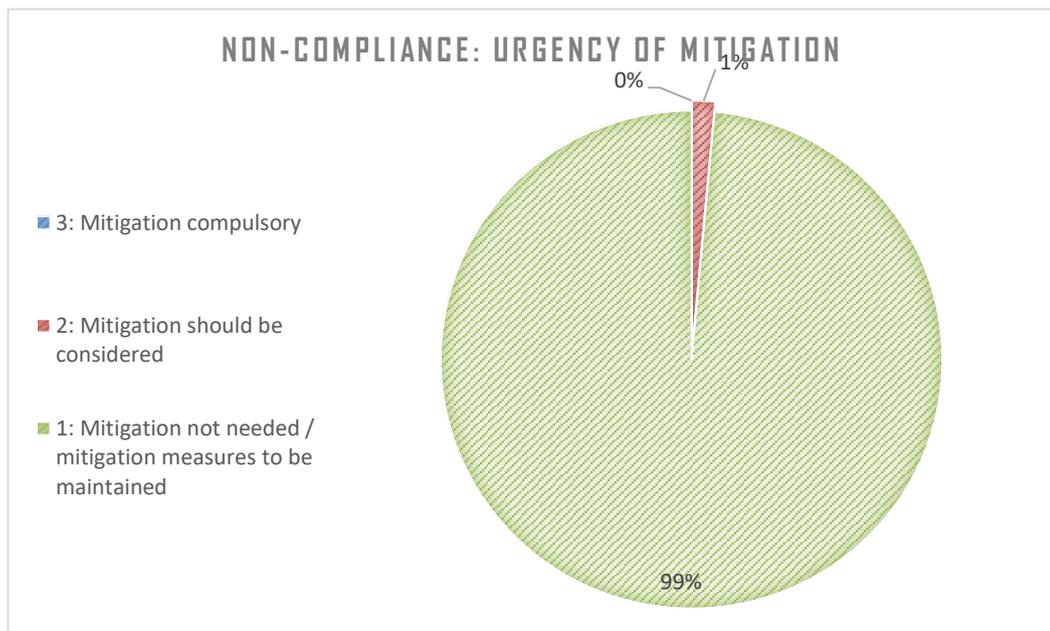
**All tasks were sill executed in accordance with the EMP specifications.**

Furthermore

- One activity requires the consideration of mitigation
  - Control of Alien Plants and Weeds: A few Category 1b Alien Invasive Plants, most notably *Datura ferox* (Olieboom) and *Xanthium strumarium* (large cocklebur, kankerroos), have started to establish within the mining footprint.
    - *Recommended Mitigation:* Within three weeks upon receipt of this report, a walk-through of the mining property should be conducted, wherein all affected (invaded) areas should be identified. These areas should then be cleared of these species with care taken not to allow the dispersal of seeds.
- The remaining 67 activities (98.5%) of activities occur sufficient enough and at acceptable levels, that no additional Mitigation Measures area required and the current active Mitigation Measures should only be maintained.



**Figure 1:** Compliance scores for all activities as listed within the approved Environmental Management Programme for the De Klerkskraal Sand Mine.



**Figure 2:** Degree of urgency in terms of mitigation for the listed non-compliance activities.

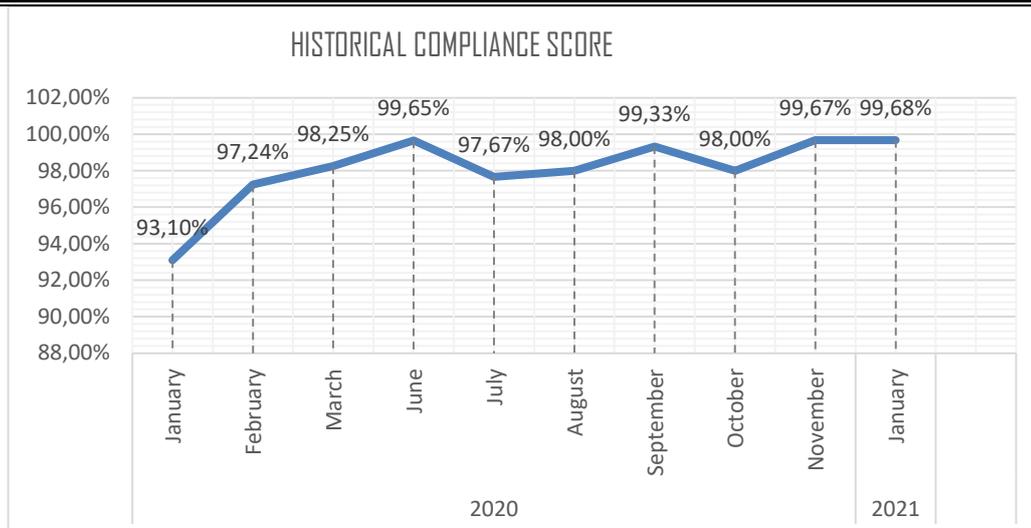


Figure 3: Historical compliance scores for the De Klerkskraal Sand Mine.

**POSITIVE FINDINGS:**

There is a clear effort made from the site manager to improve the site’s visual and environmental standards. Overall, the contractor was implementing high visual and housekeeping standards.

- The site was in a neat order.
- All signs were put up and was clear and visible.
- Clearly marked waste bins were present and easily accessible, these waste bins, including the hazardous waste bin are stored within a bunded area with an impenetrable surface.
- Fuel is kept in bunded area, fully built next to storage area.
- The identified areas, vulnerable to erosion, have been stabilised, including the installation of surface flow control and erosion preventions structures.
- General waste has also been removed to the main site in Theunissen from where the waste will be disposed of at a Waste Disposal Facility

**MATTERS TO BE ADDRESSED ON SITE:**

- Management of Alien Plants and weeds:
  - Recommended mitigation measures:
    - Within three weeks upon receipt of this report, a walk-through of the mining property should be conducted, wherein all affected (invaded) areas should be identified. These areas should then be cleared of these species with care taken not to allow the dispersal of seeds.

**ABILITY OF EMPR TO ADEQUATELY MANAGE OR MITIGATE ENVIRONMENTAL IMPACTS (APPENDIX 7 SUB-REGULATION 3(E):**

It is believed that the EMPR currently adequately manage and/or mitigate environmental impacts at the mining area.



ENVIRONMENTAL PERFORMANCE ASSESSMENT  
DE KLERKSKRAAL SAND MINE

**NEED FOR AMENDMENT OF THE EMPR:**

No need for the amendment of the EMPR could be identified during the site assessment.

**ECO SIGNATURE:**

NAME:	SIGNATURE:	DATE:
Gerhard Botha		17 February 2020

**FINANCIAL PROVISION**

The last quantum calculation compiled for the De Klerkskraal Sand Mine was in June 2020 and the financial provision amount came to R 119 554.79. The 2020 financial provision did not exceed the value of the bank guarantee in place with the DMR, and therefore the right holder was not required to provide a shortfall. The financial provision calculation was submitted to DMR.



**INSPECTION SHEET ENVIRONMENTAL CONTROL OFFICER**

**PHOTOGRAPHS: GENERAL APPEARANCE AND PROGRESS**

**MINING ACCESS ROAD**



High velocity and volume flow during the previous weeks have resulted in some of the stabilizing material being washed away. This is mainly due to inappropriate culvert size

A larger culvert should be installed and the stabilizing material re-applied following the rainy season.

SCREENING PLANT AND SITE OFFICE



STORAGE, ABLUSION AND PARKING BAY



SAND MINE (QUARRY)





ALIEN INVASIVE PLANTS RECORDED WITHIN THE MINNIG FOOTPRINT



*Datura stramonium* (olie boom)



*Xanthium strumarium* (Large cocleblur, kankerroos)

