



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

DMR REFERENCE NUMBER:	FS30/5/1/3/2/10207MP
AUDIT PERIOD:	March 2021

MARCH 2021

Prepared For:

Vengablox

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**ENVIRONMENTAL PERFORMANCE ASSESSMENT
DE KLERKSKRAAL SAND MINE**

PROJECT DETAIL:

Permit Number:	FS30/5/1/3/2/10207MP	Date of Commencement:	November 2019
Site Name:	De Klerkskraal Quarry	Inspection Date:	7 April 2021
Permit Holder:	Blazecor 226 CC	Other Authorisations:	4 March 2017
Report Number:	12		

DETAIL OF AUDITOR

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

ECO:	Gerhard Botha
Expertise:	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.
Declaration of Independence:	<p>I Gerhard Botha declare that –</p> <ul style="list-style-type: none"> • I act as independent environmental control officer in this compliance audit; • 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; • I have expertise in conducting environmental compliance audits, including knowledge of the Act and regulations that have relevance to the activity; • I will adhere to and comply with all responsibilities as indicated in the National Environmental Management Act and Environmental Impact Assessment Regulations. • 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. <div style="text-align: center;">  </div> <p>Signature of ECO Date: 3 March 2021</p>



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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:

Site Location:	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)
Site Coordinates:	A – 28.140256°S; 26.670736°E

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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 moderate warm with a slight breeze. Soil conditions was dam to wet due to some light precipitation that fell the previous day.

REPORTABLE ENVIRONMENTAL INCIDENTS:

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



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



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INSPECTION ASPECTS:

Description	Compliance score	Non-Compliance Score	Status	Comments
LEGISLATION COMPLIANCE:				
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	
ASPECTS OF THE AFFECTED ENVIRONMENT				
Topsoil: Overburden Management				
Topsoil stripping	5	1	Compliant	
Topsoil storage (heaps not exceeding 2 m)	5	1	Compliant	
Topsoil heaps vegetated	5	1	Compliant	
Overburden stripped & stockpiled	5	1	Compliant	
Stockpiles monitored for erosion, weeds and foreign matter	4	2	Compliant, In progress	» Monitoring and eradication of invasive alien plants will be an ongoing process, at least until the end of the growing season.
Topsoil returned to rehabilitated area	NA	1	NA	» No rehabilitation has occurred up to date.

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Description	Compliance score	Non-Compliance Score	Status	Comments
Vegetation				
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, In progress	<ul style="list-style-type: none"> » As mentioned, monitoring and eradication of invasive alien plants will be an ongoing process. » IAPs found within the mine footprint include Category 1b <i>Datura ferox</i> (Olieboom) and <i>Xanthium strumarium</i> (large cocklebur, kankerroos). » These species are regularly eradicated.
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.
Fauna				
All animals, birds and reptiles protected on site.	5	1	Compliant	
Excavations daily monitored for trapped fauna	5	1	Compliant	
Air Quality and Noise (EMP PG: 56, 98, 99):				
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	
Archaeological and Cultural Interest				
Archaeological and/or cultural remnants protected.	5	1	Compliant	
Surface and Storm Water Management				

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Description	Compliance score	Non-Compliance Score	Status	Comments
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. » These areas are furthermore regularly monitored and any new erosion areas are remediated.
Damming up of water in the mining area prevented	5	1	NA	
Mining conducted in accordance with the Best Practice Guidelines for small scale mining	5	1	Compliant	
Areas with erosion reinstated	5	1	Compliant,	
Visual Exposure				
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.
Hazardous Chemical Management				
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	4	3	Compliant, Immediate action to be taken	» A few small oil spills were recorded at the time of the inspection, and was due to an oil leak associated with the dump truck.
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	» The dump truck was serviced and made sound after the leak has been brought under the attention of the manager.
Waste Management				
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	

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Description	Compliance score	Non-Compliance Score	Status	Comments
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	
Potable Water and Ablution Facilities				
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	
Fire Management				
Firefighting equipment available on-site	5	1	Compliant	
No open fires at mining site allowed	5	1	Compliant	
Mine and Equipment Management				
Mining area demarcated with visible beacons	5	1	Compliant	» Beacons/Site markers have been installed, indicating the boundaries/corners of mining area.
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	
Access Roads, Vehicle and Transporting of Material				
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	

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Description	Compliance score	Non-Compliance Score	Status	Comments
Storm water diverted around the access roads to prevent erosion	NA	1	NA	
Employee and Safety Management				
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 hazard around the mining site and presence of heavy vehicles and machinery	5	1	Compliant	
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	



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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 99.03% for the month of March 2021. This is a slight improvement from the previous month's compliance score of 98.06%.

- 95.2% of tasks were executed 100% according to EMP specifications; and
- 3.9% of all tasks were executed at 80% achieving rate;

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

Furthermore

One activity has been identified which requires the consideration of mitigation or the continuation of current mitigation measures.

1) 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 and along the access route.

- *Recommended Mitigation:* Continual eradication and monitoring of these IAPs.

One activity has been identified which require compulsory mitigation namely:

2) Fuel and oil spill management:

Numerous small oil spills have been noted around mining area due to an oil leak associated with the tipper.

- *Recommended Mitigation:* A walk-through of the mining area should be done as soon as possible wherein all contaminated soil are removed and stored within a sealable container for later removal by a registered hazardous disposal company

- The remaining 65 activities (95.6%) 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.

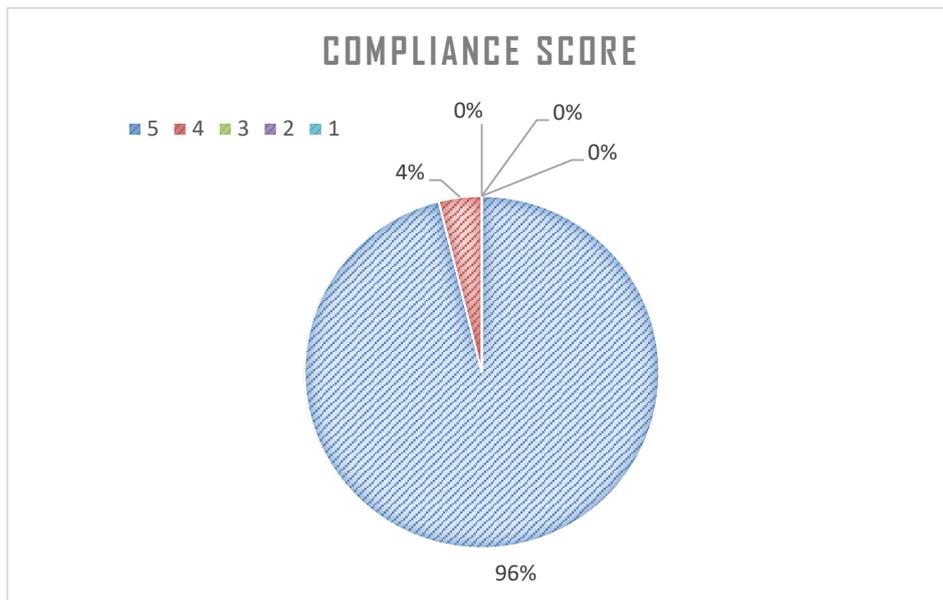


Figure 1: Compliance scores for all activities as listed within the approved Environmental Management Programme for the De Klerkskraal Sand Mine.

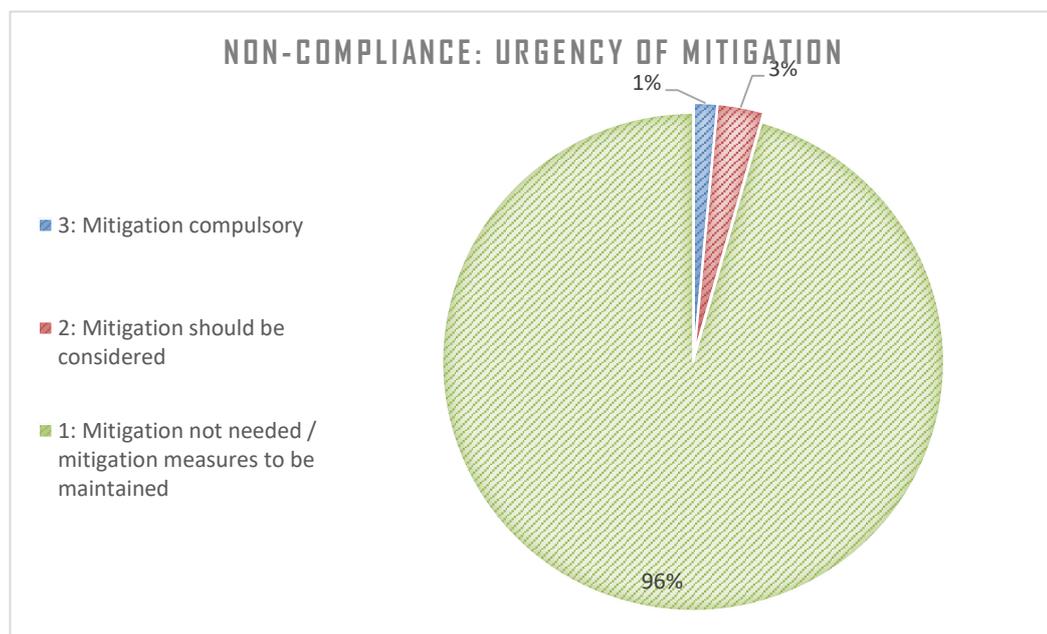


Figure 2: Degree of urgency in terms of mitigation for the listed non-compliance activities.

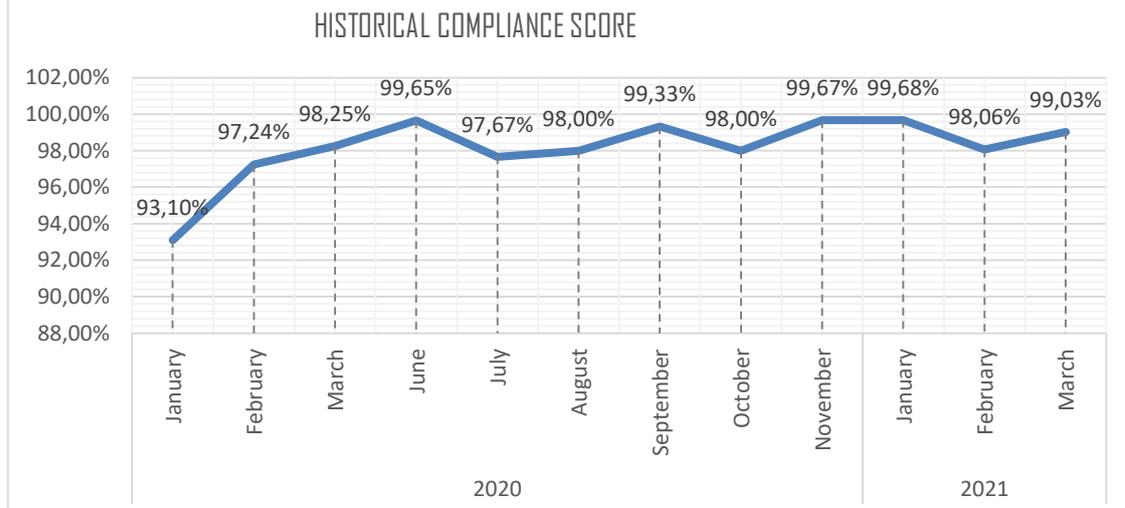


Figure 3: Historical compliance scores for the De Klerkskraal Sand Mine.

POSITIVE FINDINGS:

Overall, the contractor was implementing high visual and housekeeping standards.

- The site was in a neat order.
- 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.
- 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.
- Immediate actions were taken to remove the identified alien invasive plants.
- Upon noticing an oil leak, the dump truck was immediately parked, and a drip tray was placed underneath the leak. The dump truck was serviced and made sound within that week.
- The area is regularly monitored for erosion and prompt action is taken to rehabilitate and stabilise such areas where identified.

MATTERS TO BE ADDRESSED ON SITE:

- Control of Alien Plants and Weeds:
 - *Recommended Mitigation:* Regular monitoring and eradication of IAPs is being done. This should be maintained until the end of the growing season or until there is a clear reduction in the germination and flowering of the mentioned weeds and IAPs
- Fuel and oil spill management:
 - *Recommended Mitigation:* A walk-through of the mining area should be done as soon as possible wherein all contaminated soil are removed and stored within a sealable container for later removal by a registered hazardous disposal company



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**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.

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		3 May 2021

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.



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PHOTOGRAPHS: GENERAL APPEARANCE AND PROGRESS

MINING ACCESS ROAD



SCREENING PLANT AND SITE OFFICE





STORAGE, ABLUSION AND PARKING BAY



SAND MINE (QUARRY)





