

**OPERATIONAL PHASE: THE MINING ACTIVITIES ON MINING CLAIMS NO.  
68463 - 68472 NEAR RUACANA IN THE OMUSATI REGION**



**ENVIRONMENTAL MONITORING REPORT (EMR): ENVIRONMENTAL CLEARANCE  
CERTIFICATE (ECC) RENEWAL REPORT**

**MARCH 2020**

**APP-001212**



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## DOCUMENT VERSION

001

<b>PROJECT NAME</b>	<b>OPERATIONAL PHASE: THE MINING ACTIVITIES ON MINING CLAIMS NO. 68463 - 68472 NEAR RUACANA IN THE OMUSATI REGION</b>
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## **CONFIDENTIALITY**

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## **ACKNOWLEDGEMENTS**

Mafuta Environmental Consultants (MEC) cc wishes to thank SLS Crushers management and staff who participated in the environmental auditing process and commissioning of the EMP for the ongoing aggregate quarry and stone crushing project in Ruacana, Omusati Region of Namibia. We are most grateful to the SLS Crushers Site Manager: Mr. Lineekela Naikaku for his assistance and contributions towards the successful compilation of this document. We also wish to thank MET: DEA management and staff for enforcing environmental responsibility in social entrepreneurs for the sustainability of our economy.

## **EXECUTIVE SUMMARY**

SLS Crushers CC (SLS Crushers or hereinafter referred to as The Proponent) intends to continue with their aggregate mining operations on the currently active part of one of the ten mining claims near Ruacana in the Omusati Region. The mining claims are reported to be covering parts of the Omusati and Kunene Regions with the current mining site/activities located in the Omusati Region part only. SLS Crushers mines aggregates from their quarry and supply materials and contracting services to the building, construction, road building, railroad and the mining sectors. The quarry is situated in the Ruacana area, southwest of 30 km from the town of Ruacana on the Kamanjab-Omakange C35 road, northern Namibia. The Proponent has applied to the Ministry of Mines and Energy (MME), as the mining activities regulator to renew their mining activities on the said mining claim in line with MME requirements.

Aggregates are classified as an 'industrial mineral' along other minerals in the Minerals (Prospecting and Mining) Act 33 of 1992 under Part 3 of Schedule 1. Mining forms part of the listed activities that that may not be undertaken without an Environmental Clearance Certificate (ECC). SLS Crushers have a valid ECC (issued 18 October 2017, due to expire on 25 October 2020), but MME has requested them to renew the ECC as it is expiring in the same year in which they have made their application to MME. Therefore, in order for MME to permit the Proponent's request to renew their operations on the mining claim, a new ECC should be applied for, obtained and submitted to MME. Thus, the renewal of the mining activities is subjected to an ECC to be issued by the Ministry of Environment and Tourism (MET)'s Department of Environmental Affairs (DEA) upon submission of an updated draft Environmental Management Plan (EMP) Report.

It should be noted that the current ECC has been issued for ten (10) mining claims; 68463, 68464, 68465, 68466, 68467, 68468, 68469, 68470, 68471 and 68472. However, the current mining activities by SLS Crushers are only undertaken on certain parts of one of these claims, which as indicated above cannot be determined, due to the lack of information on the national mining portal.

As part of their environmental obligation and as stipulated in their Environmental Clearance Certificate (ECC) and requirements of the 2017 Environmental Management Plan (EMP), SLS Crushers is required to conduct biannual Environmental Compliance Monitoring at the Mine. This requirement was emphasised during the inspection done by the representatives from the Ministry of Environment and Tourism (MET), Department of Environmental Affairs (DEA) in March 2018. Monitoring is necessary to ensure that the management action plans provided in the EMP are effectively implemented and that the operations are environmentally compliant. This is also done to ensure that the anticipated impacts of the operations on the surrounding environment (as identified in the environmental scoping assessment report in 2016) remain minimal and if possible, avoided altogether.

The audit recommendations were compiled in a manner that follows the same sequence of the commitments and conditions as contained in the documents as referred to above. The following recommendations of the site audit (based on site findings) are as follow:

1. Contaminated soils should be removed and stored in designated container until their disposal to the approved waste management facility. The contaminated soils should be replaced with clean soil.
2. Equipment and vehicles may only be washed on the lined surface of the wash bay.
3. Safety signage should be put up at the areas identified during the visit.
4. The exposed mined out areas should be rehabilitated and concurrent rehabilitation undertaken on areas that may pose a visual impact.
5. Other practical uses of the waste rock should be established that the rock can be removed on site. E.g., the waste rock could be packed into small chunks, and covered with seedbank layer (topsoil) he mining areas that may pose a visual impact.
6. Onsite oil tanks should be under the shade and the site should be barricaded as danger area.
7. No animals should be allowed to roam inside the site.

8. Improvement on non-compliant activities will be checked during the next environmental audit in August 2020.



# 1 INTRODUCTION

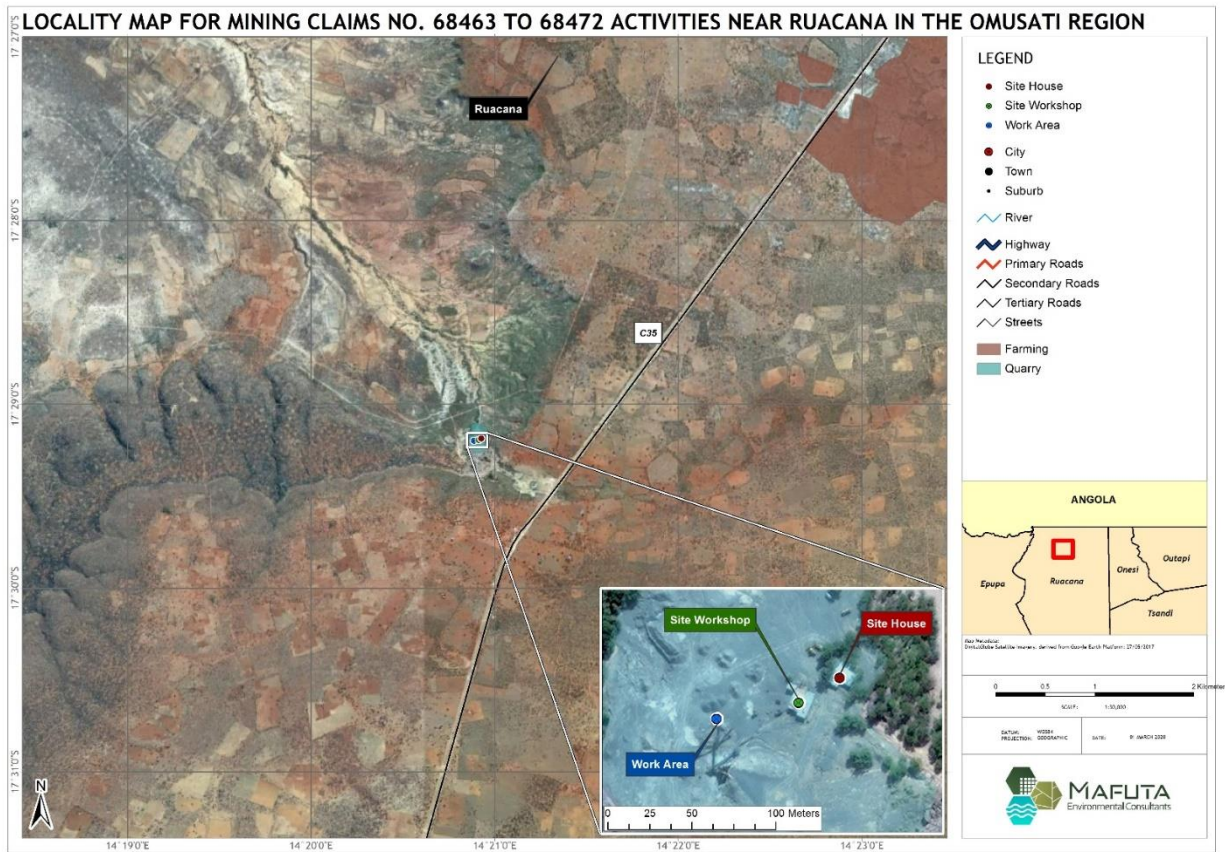
## 1.1 Background

SLS Crushers CC (SLS Crushers or hereinafter referred to as The Proponent) intends to continue with their aggregate mining operations on the currently active part of one of the ten mining claims near Ruacana in the Omusati Region. The mining claims are reported to be covering parts of the Omusati and Kunene Regions with the current mining site/activities located in the Omusati Region part only. Thus, in accordance to the requirements of the Environmental Management Act, No. 7 of 2007 Section 40, the companies' environmental clearance certificate granted on 13 April 2013 has expired as section 40 of the Act states that:

- (1) An environmental clearance certificate becomes effective and operates from the date endorsed on the certificate.
- (2) An environmental clearance certificate remains effective for a period not exceeding three years, subject to cancellation or suspension under section 42.

It is under this background that this document has been prepared following a request by the Client (SLS Crushers cc), to the consultant (Mafuta Environmental Consultants) to conduct site audit and develop an Environmental Monitoring Report (EMR) to accompany the application for renewal of the expired Environmental Clearance Certificate Renewal to the MET: DEA. The document gives an in-depth understanding of the nature of environmental, occupational health and safety and social (EOHS&S) risks associated with the current on-going aggregate quarrying and crushing activities and presents mitigation and prevention measures to manage environmental risks and non-compliance issues surrounding the operations of the venture. The site locality is shown in Figure 1 below.

**NB: All mining claims for which the ECC is being applied for are still in their dormant state and are untouched, except for the claim in Ruacana for which a site investigation and audit were done to ensure that a standard level of environmental compliance is being followed.**



**Figure 1: Location of SLS Crushers mining site near Ruacana in the Omusati Region**

As part of their environmental obligation and as stipulated in their Environmental Clearance Certificate (ECC) and requirements of the 2017 Environmental Management Plan (EMP), the Proponent is required to conduct a bi-annual Environmental Compliance Monitoring at the Mine. This requirement was emphasised during the inspection done at the Mine by the representatives from the Ministry of Environment and Tourism (MET) Department of Environmental Affairs (DEA) in March 2018. Monitoring is necessary to ensure that the management action plans provided in the EMP are implemented and that the project operations are environmentally compliant.

## 1.2 Scope of Work

The site audit was conducted based on a sample of the organisation's activities, were no non-conformances were recorded in an area of the organisation's activities, or against any requirement of the relevant standard, it does not necessarily indicate that no non-conformances exist. It should be noted that it is imperative to understand that the purpose and scope of the audit is not to identify and record all non-conformances but only to obtain sufficient information upon which the ECC was issued.

It therefore follows that future non-conformances, not identified during this environmental audit, and could be recorded during subsequent audits. It is the responsibility of the organization to determine if similar non-conformances, such as those recorded during the audit, exist in other areas of the environmental management plan and identify other potential negative impacts on the environment during their internal audit processes, to take the necessary corrective action.

The scope of work involve the following:

- **Site visit:** Environmental / site inspection which involved data collection and consultation with site employees, observation of equipment/workshops, surrounding vegetation, social observations, service infrastructures, site accommodations and fuel tanks onsite, etc.;
- **Reviewing of existing environmental documents:** Environmental Management Plan (EMP) to ensure effective implementation of the EMP and update if necessary.

This report has been compiled as the main deliverable of the audit and will be submitted to the Department of Environmental Affairs for review.

## 2 METHODOLOGIES

### 2.1 Review

An analysis of SLS Crusher's environmental files was conducted, this included complaints from neighbours, reports and recommendations from routine inspections by DEA's Environmental

Officers, scrutiny of previous EMPs and initial Scoping assessment for the project as well as other Namibian legal requirements and similar reports conducted previously.

## 2.2 Key Interviews

Interviews with the Site Manager, Plant Operators and two General hand employees was conducted to:

- Understand the activities and process operations of SLS Crushers CC.
- Establish the extent of environmental impacts, measures being implemented to manage environmental aspects/impacts.
- Source first-hand information on environmental and social issues about the operation of the project.
- Lobby for possible solutions to some of the environmental challenges being faced by SLS Crushers.

## 2.3 2.3 Site Visit and Inspection

A site visit and inspection was conducted by MEC staff on the 18th of February 2020 and the following activities were completed:

- Site walkover to inspect the status and condition of the Mine site and check compliance to Environmental Management Plan (EMP);
- Collection of all environmental information as per the EMP; and
- Training of mine workers on environmental issues stipulated in the EMP and their implementation.

## 2.4 Observations

Environmental management is based on ground truthing, hence MEC's team visited the mining claims active sites; the aggregate quarry and crushing site near Ruacana. The intention was to conduct site baseline survey and observe the nature and/or extend of environmental impacts

from the project activities. Site observations also allowed for the understanding of the affected environment for well-informed environmental management guidelines.

## 2.5 Public Consultation

Since the project is already in existence, only the immediate site neighbours and site employees were consulted on the operations of the project. The inputs of the neighbouring operations and residents have also been solicited for to establish the extended of impacts of the operations in Ruacana from the initial days of the mine operations.

## 2.6 Environmental Reporting and Submission to the DEA

This Environmental audit Reports includes the following:

- Comparison of what was recommended in the EMP and audit report compiled in 2017 and what is currently being done / implemented on site - the full details on the EMP improvements which also include the previous and current status on different site environmental components are presented in the ECC Renewal report. The main components monitored or on which the audit was carried out includes:
  - identified changes in the environment (if any),
  - waste management sites,
  - Oil spillage
  - Workshop
- Further environmental recommendations to improve environmental compliance.

After the compilation of Environmental Monitoring report, MEC will submit this report together with the environmental clearance renewal report to the Department of Environmental Affairs for archiving and decision on the issuance of the new ECC.

### **3 SITE PERFORMANCE ASSESSMENT**

#### **3.1 General Environmental Findings**

A site visit was undertaken on the 18th of February 2020, between 09h00 and 12h00 by MEC Environmental Consultants (ECs) / Control Officers (ECOs) to inspect the site environmental compliance to the EMP. The audit was also done to assess whether the site activities comply with the management objectives committed to in the EMP (as updated in 2017). Notes about the site's environmental status were taken and are presented in table format and site photos. The findings on site and recommendations, in terms of the environment have been presented in the form of an EMP checklist. Certain findings had triggered further recommendations to the EMP, whereby target dates / deadlines for implementation and responsibilities have been provided and assigned, respectively - please refer to the ECC renewal report (separate report to this).

#### **3.2 The Mining Process**

The mining activities on the SLS Crushers' site involve the use of heavy equipment such as excavator, compressors, explosives (emulsion/BS: S200 ECO) and loader to mine the aggregate in its raw form (dolomites) from the site pit. Due to heavy rainfalls at the beginning of the year 2020 and at the time this document was compiled, the mine pit was filled with rainwater. This had forced the mining operations to be put on hold until the water has evaporated from the pit or infiltrated into the ground as it is not pumped out by SLS Crushers.

### 3.3 Site Description



Due to the rain, work was halted at the time of the visit as the pit being mined was flooded. They are estimating up to two weeks for the water to evaporate and subside. The Proponent does not pump the water out of the excavated pit as the community uses it to collect water and animals drink from there.



The site has a housing structure for the employees, a workshop storage area structured from containers and steel shade with a sign of oil/ diesel spillage on the ground.



The site is fully fenced off to avoid intruders, animals, children and for the safety of the local community members. The equipment at site is considered dangerous for those that do not have knowledge on how it is operated. Therefore, in order to avoid injuries, the site gates are always kept closed especially during working hours as

animals enter for salt licks and children may get curios about site machinery.



Vegetation, surrounding the site as there's barely any on plant fenced off area, is currently green as it is rainy season with Mopane trees, and minimal thorny (acacia) shrubs. According to the site employee, it is usually not green as the leaves of the Mopane trees dried out (during dry periods). The site is surrounded by mountains, minimizing dust pollution from the crushing to neighboring villages.



The Proponent uses diesel (see tanks above) as a source of power supply for the mining equipment and equipment, thus no electricity is required for actual mining operations. The diesel is sourced from an above-ground 10 000 liter fuel storage tank installed on site. The fuel is delivered to site by TOTAL Namibia.



MINING ACTIVITIES ON MINING CLAIMS NO. 68463 - 68472 NEAR RUACANA IN THE OMUSATI REGION: ENVIRONMENTAL MONITORING  
REPORT (EMR) FOR THE ENVIRONMENTAL CLEARANCE CERTIFICATE (ECC) RENEWAL

## 4 ENVIRONMENTAL MANAGEMENT PLAN COMPLIANCE

The operation of the aggregate mining and crushing site Ruacana and other mining claims was assessed in relation to compliance with the commissioned Environmental Management Plan upon which the previous ECC was operating under. The major environmental impacts and/ aspects identified and addressed in the EMP (ECC renewal document) and mitigation measures were provided in relation to remediation or impact prevention with the corrective action measures provided for in the EMP. The EMP impacts and management objectives are presented in Table 1 below.

**Table 1: EMP Impacts and Management Objectives**

Environmental Aspect	Management Objective
Soil (contamination)	<ul style="list-style-type: none"> <li>• To conserve the soil resources on site.</li> <li>• To minimise soil degradation through contamination.</li> </ul>
Vegetation	<ul style="list-style-type: none"> <li>• To limit the impact on the vegetation to the mining area and associated infrastructure only, while protecting the rare and endangered species on site.</li> </ul>
Surface water (Contamination of surface water run-off)	<ul style="list-style-type: none"> <li>• To prevent the contamination of and the wash down of soils into the rivers close to site.</li> </ul>
Groundwater(Impact on groundwater quality and levels due to potential over-abstraction)	<ul style="list-style-type: none"> <li>• To ensure that the mining activities do not impact on groundwater quality or availability of any groundwater users.</li> </ul>

Environmental Aspect	Management Objective
	<ul style="list-style-type: none"> <li>• To prevent the contamination of groundwater and lowering of water levels due to over-abstraction.</li> <li>• To minimise seepage, prevent contact between clean and dirty areas, and to recycle contaminated water.</li> <li>• To prevent degeneration of groundwater quality.</li> <li>• To reduce the impact of abstracting water from borehole on the surrounding environment.</li> </ul>
Air Quality (dust fallout)	<ul style="list-style-type: none"> <li>• To reduce the potential of dust deposition in and around.</li> <li>• To minimize the impact of the Mine's operations on the surrounding air.</li> </ul>
Noise (Increased noise levels during operation)	<ul style="list-style-type: none"> <li>• To minimise the noise impact on the surrounding environment.</li> </ul>
Visual Aspects (Visual Intrusion/ Visibility/ Visual Exposure/ Sensitivity/ Impact on Sense of Place)	<ul style="list-style-type: none"> <li>• To reduce the visual impact caused by the mine activities on the surrounding area.</li> </ul>
Regional Socio-economic structure (Introducing different demographic profiles, social investment activities, impacts on adjacent properties, number of jobs directly and indirectly created by the mine, number of households benefiting directly and indirectly, and remittance and transfers)	<ul style="list-style-type: none"> <li>• To ensure that preference is provided to local labour.</li> <li>• To reduce the impacts associated with the potential population increase.</li> <li>• To ensure that continue with their social investment activities.</li> <li>• To ensure that safe conditions are implemented.</li> <li>• The employment (directly or indirectly) by the mine is a positive impact.</li> <li>• To reduce the impact of transfers and remittance outside the area.</li> </ul>
Storage of Diesel, Oil and Chemicals (Contamination issues associated with the storage of diesel, oils and chemicals)	<ul style="list-style-type: none"> <li>• Ensure that no contamination results from the stored diesel, oil and chemicals on site.</li> </ul>

Environmental Aspect	Management Objective
	<ul style="list-style-type: none"> <li>To ensure that all safety and environmental measures are in place during the storage and usage of hydrocarbon products on site.</li> </ul>
Health and Safety	<ul style="list-style-type: none"> <li>To ensure that the health and safety of the workers are not compromised.</li> <li>To ensure that the mine has enough safety warnings at all risk potential areas</li> <li>Ensure that there is/are site workers that are responsible for the implementation of safety measures on site at all times.</li> </ul>
Fire extinguishers	<ul style="list-style-type: none"> <li>To ensure that fire equipment are always ready for use and ensure the safety of the site infrastructure and workers.</li> </ul>
Waste Management	<ul style="list-style-type: none"> <li>To minimize environmental degradation (pollution)</li> <li>To ensure that there is enough waste management equipment on site to avoid environmental pollution.</li> </ul>

Compliance was categorized in the following:

- Non-Compliance (NC)
- Partial compliance (PC)
- Compliant (C)

**Table 2: Environmental issues observed during site inspection in February 2020**

Environmental Aspect	Environmental Impact	Compliance Status	Comments
Vegetation	Protected Species destruction.	C	-There are no protected tree species on site that would require special authorization before clearance.
	Indiscriminate tree cutting	PC	-The sites are sparsely vegetated however, on areas where operations seized they need to be rehabilitated and reforested.
Fauna	Driving away of local wild animals	C	-The area is already affected by the local communities such that there are few wild animals in the area.
	Indiscriminate killing and hunting of animals	C	-Employees have been trained on the importance of animals and the non-hunting policy of the company.
Culture and Heritage	Archaeology	C	-Employees have been trained and informed of the course of action if they come across artefacts, graves or seeming culturally important objects and sites.

Environmental Aspect	Environmental Impact	Compliance Status	Comments
	Proliferation of local cultures	C	<ul style="list-style-type: none"> <li>-SLS Crushers employed local people to ensure that the operations blend with the local cultural values</li> <li>-Employees from other areas of different cultural values have been given guidelines on conduct with the public.</li> <li>-SLS Crushers works hand in hand with the Village Headman.</li> </ul>
Environmental Quality	Soil erosion	PC	<ul style="list-style-type: none"> <li>-Stockpile material is not preserved in accordance to the EMP</li> <li>-There is visible erosion on site because of indiscriminate vegetation.</li> </ul>
Soil contamination and erosion	Hydrocarbons from stationery vehicles -Workshop oil spillages	PC	<ul style="list-style-type: none"> <li>-All stationery vehicles and trucks on site to be provided with drip trays.</li> <li>-Workshop area should be bunded and surfaced with waterproof cement</li> <li>-Emergency spillage containment kits should be available on site</li> </ul>
Noise pollution	-Blasting of stone aggregate -Truck and machinery operating on site	NC	<ul style="list-style-type: none"> <li>-Blasting, machinery operation and truck movements should only be done during the day between 8:am to 5pm</li> </ul>

Environmental Aspect	Environmental Impact	Compliance Status	Comments
Land Use change	Change in land use activity from dormant forested land to a mining area. -Obsolete quarry pits posing high risk to humans and animals. -Opening of new quarry sites on other mining claims	C	-Ensure that rehabilitation and revegetation is done on areas that have been disturbed. -Quarry pits should be rehabilitated, secured with fence and sign pit on site to warn people of the hazards. -An environmental management plan has to be commissioned for each new site that SLS Crushers propose to work on.
Generation of waste	-During the operation phase, litter in the form of papers and plastics is likely to be produced. In addition, liquid waste in the form of oils, petrol and diesel is normally generated on site.	C	-In case of any contaminated waste be it in the form of soil litter or any other material, it must be disposed at an appropriate disposal site. -Strictly, no burning of waste on the site -Once the containers for liquid waste are full, they must be removed from the site and handed over to the municipality.

Environmental Aspect	Environmental Impact	Compliance Status	Comments
	<p>-Generated liquid waste is collected and kept in waste containers. During the inspection, it was observed that the waste containers were full and petrol had over spilled. This might pose a hazard especially when it happens that it rains. Liquid waste which is also generated on site is transported through drains to the oil/water separator pit.</p>		

Measures already in place:

- Regular inspection of the site
- Employee for cleaning
- Fuel waste containers
- Environmental Audits



**Table 3: Environmental Findings (checklist) at SLS Mining Crusher in February 2020**

Report No. 2		Monitoring Date: 18 February 2020		Next Monitoring Date: August 2020	
Issue	Observation	Remedial Action	Compliance		
<b>Operations - Training</b>					
1. Have all employees undergone EMP training?	Yes	The next training to be done after 6 months	Compliant		
2. Have all employees undergone 6- monthly refresher EMP training?	No. Due to halting of site activities because of the rain, not all employees were on site	The Environmental, Health & Safety (EHS) Refresher Course to be done in 2020	Partially compliant		
<b>Operations – Waste Management</b>					
3. Is wastewater treated before released into the environment? Is the wastewater treated to the applicable national standards?	Yes	To be checked again in the next Monitoring.	Compliant		
4. Is there fuel storage tank on site? If so, is the appointed waste hydrocarbons management company have a valid Used Mineral Oil Permit?	Yes	To be checked again in the next Monitoring.	Compliant		
5. Is waste disposed of in designated containers on site and transported to nearby approved landfill sites?	Yes	To be checked again in the next Monitoring.	Compliant		
6. Has a wash bay/workshop area been constructed?	Workshop, yes but wash bay needs improvement	To be checked again in the next Monitoring.	Partially Compliant		
7. Is the wash bay/workshop lined with an impermeable surface sloping towards an oil-water separator?	No	To be checked again in the next Monitoring.	Non-compliant		
8. Is the wash bay/workshop bunded and leak-proof?	No	To be checked again in the next Monitoring.	Non-compliant		

Issue	Observation	Remedial Action	Compliance
9. All maintenance of plant and equipment takes place in workshop?	Yes	Continued implementation	Compliant
10. All plant equipment and vehicles are well maintained (no leaks)?	Yes	Continued implementation	Compliant
11. All plant and machinery have drip trays, which are checked and emptied daily?	Not observed	This will be checked again in the next Monitoring.	Partially compliant
12. All repairs on machinery using fuels or lubricants done over a drip tray?	Not observed	This will be checked again in the next Monitoring.	Partially compliant
13. Contaminated soil removed to an appropriate depth and stored as hazardous waste?	Not fully compliant	Further training required during next site visit.	Non-compliant
14. Have all waste hydrocarbons been removed from the site (annual requirement)?	Yes	This will be checked again in the next Monitoring.	Compliant
15. Workforce aware of procedures in the event of spills/leaks?	Yes	This will be checked again in the next Monitoring.	Compliant
<b>Operations – Traffic</b>			
16. No trucks parked in the road reserve?	No.	This will be checked again in the next Monitoring.	Compliant
17. All drivers have appropriate licenses?	Yes	This will be checked again in the next Monitoring.	Compliant
<b>Operations – Fuel Depot and Fire Safety</b>			
18. Has SLS Crusher compiled a fire safety plan as described in the EMP?	Partially done	Proper signage should be put up at hazardous areas.	Non-compliant
19. Have the workforce undergone fire safety training? Is the workforce aware of procedures in the event of a fire?	No	To be compliant during next audit in November.	Non-compliant
20. Safety signage provided at fuel storage areas?	Yes	This will be checked again in the next Monitoring.	Compliant

Issue	Observation	Remedial Action	Compliance
<b>21. Fire extinguishing equipment available on-site and compliant with the applicable SANS?</b>	Partially done	Proper signage should be put up at hazardous areas.	Non-compliant
<b>22. Operation of fuel depot assigned to appropriately trained members of workforce?</b>	Not observed	This will be checked again in the next Monitoring.	Compliant
<b>23. No smoking in hazardous areas?</b>	Yes, no smoking.	Proper signage should be put up at such areas.	Partially compliant
<b>Operations – General Health and Safety</b>			
<b>24. Are all hazardous materials (used and unused hydrocarbons, corrosive materials etc.) contained within designated containers?</b>	Yes	This will be checked again in the next Monitoring.	Compliant
<b>25. Sufficient stock of personal protective equipment (ear muffs, dust masks, safety boots, gloves, hard hats etc.)?</b>	Yes	This will be checked again in the next Monitoring.	Compliant
<b>26. Have unsafe work areas/surfaces been marked as such?</b>	Partially done	Proper signage should be put up at hazardous areas.	Non-compliant
<b>Operations – Air Quality</b>			
<b>27. Are dust suppressant measures (use of water) utilised around active work areas including the crushing waste material heap?</b>	Partially done	Appropriate measures should be implemented as per the EMP	Non-compliant
<b>28. Have mine workers gone for their annual health check-up?</b>	Not observed or provided	Appropriate measures should be implemented as per the EMP	Non-compliant
<b>Operations – Rehabilitation and Aesthetics</b>			
<b>29. Has a rehabilitation plan been compiled in accordance with the EMP?</b>	Not yet	Appropriate measures should be implemented as per the EMP	Non-compliant
<b>30. Have the site buildings and structures been improved to minimize the visual impact?</b>	No	Appropriate measures should be implemented as per the EMP	Non-compliant

Issue	Observation	Remedial Action	Compliance
<b>31. Topsoil stripped and stockpiled at a suitable site prior to mine operations?</b>	No	Appropriate measures should be implemented as per the EMP	Non-compliant
<b>32. Are exhausted excavated areas that may be visible from the road (C35) being camouflaged progressively / systematically?</b>	No	Appropriate measures should be implemented as per the EMP	Non-compliant
<b>33. Is the waste rock being reused - utilised for construction of access roads?</b>	Yes. It is used for construction	This will be checked again in the next Monitoring.	Compliant
<b>34. Have the contours of abandoned/exhausted mine areas been blended with the surrounding landscape?</b>	No	Appropriate measures should be implemented as per the EMP	Non-compliant
<b>35. Have abandoned/exhausted mine areas which are heavily compacted been ripped?</b>	Not yet	Appropriate measures should be implemented.	Non-compliant
<b>36. Do any endemic, or near-endemic plant species need to be removed? If so, can these be practicably transplanted and offered to the National Botanic Garden?</b>	Not necessary	Appropriate measures will be implemented at the time when deemed necessary	Compliant

## 5 ENVIRONMENTAL MONITORING

An environmental monitoring plan provides a delivery mechanism to address the adverse environmental impacts of a project during its execution, to enhance project benefits, and to introduce standards of good practice to be adopted. An environmental monitoring plan is important as it provides useful information and helps to assist in detecting the development of any unwanted environmental situation, and thus, provides opportunities for adopting appropriate control measures and their timely implementation. From the monitoring point of view, the important parameters are soil and water resources (pollution), occupational health and safety and fire and explosions. The suggested monitoring details are outlined in the following sections.

**Table 4: Environmental Monitoring Components and Schedule**

IMPACT	RECEPTORS	TYPE OF MONITORING	FREQUENCY
Pollution	Soils and water resources	Monitoring of hydrocarbons spills on the ground/site soils	Monthly
Fire and explosion	Environment	Regular inspections should be carried out to inspect and test firefighting equipment.	Quarterly
		Fire drills	Twice a year
O.H.S	Employees	Site inspection Conducting Hazard and Risk Identification Safety procedures evaluation. Health and safety incident monitoring	Weekly

IMPACT	RECEPTORS	TYPE OF MONITORING	FREQUENCY
Noise	Employees	Observation of on-site noise levels by the Site manager and reporting to the Environmental Control Officer (ECO) or Safety, Health and Environmental (SHE) officer: Quarterly.	Daily
Air quality (Dust)	Employees	Regular visual inspection A complaint register regarding emissions/smell should be kept and acted on if it becomes a regular complaint.	Daily
Generation of waste	Land	Site inspection on housekeeping	Daily
Cumulative impact	Environment	Regular inspection	Daily

## 5.1 Next Environmental Monitoring

MEC will be undertaking the next environmental monitoring and follow-up on the specific environmental compliance deadlines that were set up from previous monitoring (2017) and what has been done in February 2020. The Environmental, Health and Safety (EHS) training refresher course and environmental monitoring is scheduled for August 2020. The proposed monitoring will be undertaken under MEC' supervision for the next twelve (12) months. The proposed scope of work and date are given in **Table 3 (Environmental Checklist) above**.

## 6 CONCLUSIONS

The aim of this environmental audit was to conduct the environmental audit for the SLS Crushers as part of the site Environmental legal compliance. The Mafuta Environmental Consultants representative visited and inspected the site in February 2020. Environmental Management Plan (EMP) training was also provided to the site employees that were present on site. The site was

compliant in some of the EMP requirements, partially compliant in some and non-compliant few. It is therefore recommended, that in order to eliminate the non- and partial compliance with the environmental laws and fully promote environmental sustainability, compliance deadline action plans have been given to the responsible parties on site - please refer to the ECC Renewal report. The compliance recommendations will be checked at the next monitoring/audit exercise on site scheduled for August 2020. Therefore, SLS Crushers should ensure the implementation of these commitments in the renewal report before or in that month and ensure continued improvements of these.

The following recommendations should be implemented:

- SLS Crushers must appoint and ECO to monitor the mining site quarterly/year
- SLS Crushers should appoint SHE consultant to train employees on HSE and come up with a SHE policy for the company.
- Environmental rehabilitation and securing obsolete pits is recommended.
- Planting of trees on site to prevent erosion on cleared out areas around the office and workshop area.