

Appendix F1: Impacts requiring monitoring programmes

Appendix F2: Responsibilities and Duties

Appendix F3: Timeframes for monitoring and reporting

Appendix F1**1 Impacts Requiring Monitoring Programmes**

Main Item	Item Description	Period
MANAGEMENT GUIDELINES		
Community Liaison and Environmental Training		
Community Liaison	Information board with contact details of contractor erected at start of construction.	Continuous
Environmental Training	Environmental training has been conducted to inform staff and subcontractors of their roles and responsibilities in terms of responsible environmental practice.	Before commencing work and on revision of requirements
Complaints register kept	Record of all issues or complaints from the community is kept in a central location.	Continuous
ENVIRONMENTAL SPECIFICATIONS		
Site		
Maintenance	Site camp to be well managed & maintained.	Continuous
Ablution Facilities	Portable toilets shall be in sufficient supply, well managed and close to all construction areas.	Continuous
Designated areas for breaks (lunch etc)	Designated area for workers to assemble during breaks where conditions are safe and waste facilities and drinking water are available.	Continuous
Fires on site	Smoking shall be restricted to demarcated areas. A fire officer shall be appointed and sufficient fire-fighting equipment shall be maintained and accessible on site at all times.	Continuous
Stockpiling and dumping	Designated areas are used for stockpiling, and material is dumped at approved waste sites only.	Continuous
Access	All vehicles shall be confined to designated access roads only.	Continuous
Materials Handling		
Hazardous materials	All hazardous materials shall be stored on an impermeable surface or over a bunded area.	Continuous
Drip trays	Drip trays shall be in place beneath stationery fuel bowsers, any leaking equipment, and during pouring of fuels.	Continuous
Waste Management		
Domestic waste handling	Bins (with vermin proof lids) are provided at appropriate locations and emptied regularly. All waste is disposed of at a registered waste disposal facility.	Continuous
Hazardous waste handling	Hazardous waste is collected and appropriately stored until disposal at registered hazardous waste facility.	Continuous
Hazardous waste handling	Under no circumstances shall the spilling or spilling of hazardous materials on (or outside) the site be allowed.	Continuous
Environmental incidents	A record of environmental incidents (spills, impacts, legal transgressions etc), as well as corrective and preventive actions taken, shall be kept.	Continuous

Appendix F1

Sewage disposal	Proof of correct disposal of sewage shall be available for all chemical toilets.	Continuous
Fauna		
Protection of animals found	No animals, including snakes or other reptiles, may be intentionally disturbed, harmed or killed if found on site or en route to the site. (I.e. no poaching, hunting, trapping etc or animals).	Continuous
Vegetation		
Indigenous Vegetation	Indigenous vegetation shall be conserved and left as intact as possible (ie. No indiscriminate clearing or driving). Authorisation will be required to remove any protected species.	Continuous
Alien invasive species	Any invasive alien species that propagates within the site area during the contract and defects notification period shall be cleared by hand before seeding and chipped or disposed of at a registered waste site.	Continuous
Vegetation	No gathering of firewood shall be permitted.	Continuous
Soils		
Topsoil stockpiling	Topsoil shall be stockpiled in cleared areas, appropriately positioned and protected so as not to wash away or be subject to erosion.	Continuous
Stockpile contamination	Topsoil stockpiles are not to be contaminated with subsoil/overburden	Continuous
Stockpile maintenance	Topsoil stockpiles maintained at <2m high, with flattened top and kept weed free.	Continuous
Stormwater		
Stormwater diversion	Stormwater should be diverted away from storage areas and open excavations appropriately.	Continuous
General		
Traffic	Correct signage and traffic control are in place.	Continuous
Traffic	Trucks are adhering to the speed limit.	Continuous
Noise	Noises that could cause a major disturbance, should only be carried out during daylight hours on weekdays and Saturdays before 14h00	Continuous
Dust	Dust suppression measures shall be implemented if and when required.	Continuous

Appendix F2

Responsibilities and duties

1 The Proponent

The South African National Roads Agency Limited (SANRAL) will be the mining permit holder and will be the overall responsible entity.

The environment affected by the mining operations shall be rehabilitated by the holder, as far as is practicable, to its natural state or to a predetermined and agreed to standard or land use which conforms with the concept of sustainable development. The affected environment shall be maintained in a stable condition that will not be detrimental to the safety and health of humans and animals and that will not pollute the environment or lead to the degradation thereof.

It is the responsibility of the holder of the mining permit to ensure that the manager on the site and the employees are capable of complying with all the statutory requirements which must be met in order to mine, which includes the implementation of this EMP.

The responsibilities of the proponent will include the following:

- Establish and maintain regular and proactive communications with the Project Manager (PM) and the Environmental Control Officer (ECO);
- Review and comment on environmental reports produced by the ECO; and
- Ensure that the EMP is reviewed and updated as necessary.

2 Project Manager

It will be the PM's responsibility to ensure that conditions set out in this document, as well as all related environmental specifications, are complied with. The PM will ensure that the approved EMP is included in the contract documentation issued to prospective contractors.

The PM's responsibilities will include (but not be limited to):

- Be familiar with the contents of the EMP;
- Communicate to the contractor the advice of the ECO and the contents of the ECO reports;
- Review and approve Method Statements prepared by the contractor, in consultation with the ECO;
- Review and approve working drawings;
- Issue site instruction, giving effect to the ECO requirements where applicable;
- Review complaints received and take appropriate action;
- Maintain a record of complaints from the public and communicate these to the contractor and the ECO;
- Discuss with the ECO the application of penalties for non-compliance with the Environmental Specifications, and other possible enforcement measures where necessary;
- Implement temporary work stoppages as advised by the Eco where serious non-compliance have occurred; and

Appendix F2

- Facilitate proactive communication between all role-player in the interest of effective environmental management.

3 The Contractor

- Be familiar with the contents of the EMP;
- Comply with the Environmental Specifications contained in the EMP and subsequent revisions;
- Prepare method statements, programme of activities and drawings/plans for submission to the PM (and the ECO);
- Review the site inspection reports and implement recommendations contained therein;
- Notify the PM and ECO, verbally and in writing; immediately in the event of any accidental infringements of the environmental specifications and ensure appropriate remedial action takes place;
- Notify the PM and ECO, verbally and in writing, at least 10 working days prior to an activity he/she deems may have a significant adverse environmental impact, so that mitigatory measures may be implemented timeously;
- Ensure environmental awareness among employees and sub-contractors so that they are fully aware of, and understand, the environmental specifications and the need for them;
- Maintain a register for environmental training for site staff and sub-contractors staff for the duration of the contract;
- Undertake the required works within the designated working areas;
- Rehabilitating services, utilities, private/public property and other areas adversely affected by construction activities outside of the demarcated area in accordance with the PM's instructions; and
- Communicate and liaise frequently with the PM and the ECO to ensure effective environmental management.

4 The Environmental Control Officer

It will be the Environmental Control Officer's (ECO) duty to monitor compliance of the environmental conditions and the specifications attached to the mining of the road building material. Hence the overall role of the ECO is to be the site 'custodian' for the implementation, integration and maintenance of the EMP in accordance with the contractual requirements. The ECO will be required to liaise with the PM on the level of compliance with the EMP achieved by the contractor on a regular basis for the duration of the contract.

The ECO responsibilities include (but are not limited to):

- To advise the PM on the interpretation and enforcement of the Environmental Specifications, including discussions on non-compliances;
- To supply environmental information as and when required;
- To review and approve Method Statements produced by the Contractor with the PM;
- To demarcate particularly sensitive areas (including all No-Go areas) and to pass instructions through the PM concerning works in these areas;

Appendix F2

- To monitor any basic physical changes to the environment as a consequence of the construction works – e.g. evidence of erosion, dust generation and silt loading in runoff;
- To undertake regular audits of the construction works. These audits are to take place every three months and the ECO is to generate quarterly audit reports. These reports are to be forwarded to the PM, who will see to the further distribution;
- To communicate frequently and openly with the Contractor and the PM to ensure effective, proactive environmental management, with the overall objective of preventing or reducing negative environmental impacts and/or enhancing positive environmental impacts;
- To advise the PM on remedial actions for the protection of the environment in the event of any accidents or emergencies during construction, and to advise on appropriate clean-up activities;
- Review complaints received and make instructions as necessary;
- Identify and make recommendations for minor amendments to the EMP as and when appropriate; and
- Ensure that the Contractor, his employees and/or sub-contractors have received the appropriate environmental awareness training prior to commencing activities.

Appendix F3**Requirements, Responsibilities and Timeframes for Monitoring and Reporting**

In order to ensure that this Environmental Management Plan is effectively implemented, it is important that regular external audits of the Environmental Management plan are conducted.

The Contractor / Environmental Representative is to conduct visual inspections daily during the course of operations with the project manager conducting a visual inspection of each of the sites on a weekly basis.

An Environmental Control Officer must be appointed to audit the contractor to ensure compliance to the EMP.

The borrow pits will be inspected by the contractor and the ECO on a monthly basis to ensure compliance to the EMP and other relevant regulations, requirements and best practices.

Audits shall be done quarterly (once every 3 months) by the ECO. The audits shall aim at addressing environmental issues identified on site and to provide recommendations through the audit reports.

The audit reports shall be provided to SANRAL, the Project Managers/Engineers, and the Department of Mineral Resources (DMR) and a copy of the audit report shall be available on site at all times.

Responsibility	Task	Frequency
Contractor / Environmental Representative	Visual Inspection	On-going (daily)
Project Manager	Visual Inspection	Weekly
ECO	Site Inspection	Monthly
ECO	Site Audit report	Every 3 months