

PMG Mining

Environmental Management Plan for the Transnet Glossam Siding

Prepared for:

PMG Mining

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April 11th, 2012



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for the Transnet Glossam Siding**

Sign-off page

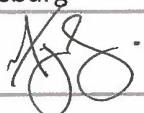



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1 Introduction

Kai Batla Minerals Industry Consultants (“KB-MIC”) was appointed by PMG Mining (Pty) Ltd to facilitate the Environmental Management Plan for the proposed upgrading and conversion of Transnet’s Glosam siding into an efficient, environmentally compliant and safe Transnet Freight Rail for the loading of 104 by 63 ton CR type wagons with manganese ore in compliance with transnet specifications and services agreement. PMG Mining has an operational manganese mine in the Northern Cape and requires a Transnet Freight Rail in order to load their production for export via Transnet rail and port infrastructure. The proposed activity will also include railway maintenance. Transnet’s Glosam siding is in close proximity to the Paling Pan mine and Bishop mine owned by PMG Mining.

The EMP is applicable to both Transnet Freight Rail and site specific development. As part of the NEMA EIA Regulation requirements an Environmental Management Plan (EMP) must be compiled for the construction, operation and decommissioning phases of the proposed development. An EMP is a tool that takes a project from a high level consideration of issues down to detailed workable mitigation measures that can be implemented in a cohesive and controlled manner. As such an EMP is a critical part of an EIA.

2 Location

PMG Mining has an operational manganese mine in the Northern Cape and requires a Transnet Freight Rail in order to load their production for export via Transnet rail and port infrastructure. The proposed project involves upgraded Glosam siding and Transnet Freight Rail. The proposed project includes:

- a) Rail turnouts from the main line from Hotazel to Posmasburg
- b) Stop block on the Ertsrand link line.
- c) Electrical point of supply.
- d) OHTE and signalling in conjunction with Transnet
- e) Water point of supply.
- f) Access road upgrade from the main tar road
- g) Road truck receiving hopper.
- h) Bottom of Transnet Freight Rail load spout.
- i) Railway Maintenance

3 Environmental management plan

3.1 Generic scope of the EMP

The scope of the EMP must ensure that the objectives outlined in Section 3.2 will be addressed, and is principally determined by the key documentation related to the EIA process, notably the Draft EIR, the Framework EMP and the Environmental Authorization (once received).

3.2 Objectives of the EMP

Environmental management does not end with obtaining the required environmental authorizations. Rather there is a need to ensure that the remedial requirements identified during the environmental process are effectively realized during project implementation, and this is where EMPs have a key role to play.

The focus of the EMP is on the identification of impacts, proposed mitigation measures and the establishment of actions and responsibilities in terms of the development activities. An EMP is defined as “an environmental management tool used to ensure that undue or reasonably avoidable adverse impacts of the construction, operation and decommissioning of a project are prevented, and that the positive benefits of the projects are enhanced”. Impacts range from those incurred during start up, through those incurred during the construction activities. Specifically, the objectives of this EMP can be articulated as follows:

1. To give effect to the construction, operation and decommissioning-related requirements.
2. To minimise disturbance to the environment – biological, physical and socio-economic.
3. To identify impacts and propose measures for their mitigation.
4. To address impacts in terms of their spatial and temporal aspects.
5. To identify potential environmental benefits, such that the development may enhance the greater environment of the area.
6. To identify the actions to be taken and related responsibilities to ensure that environmental management is effected.
7. To be a “cradle to grave” document. That is, the document is considered to be a live document that can be reviewed and updated over time to ensure optimal environmental management across the life of the development.

The applicant requires a commitment from its staff on the following issues:

- To underwrite the applicant Environmental Policy at all times.
- Ensure environmental conditions stipulated in the Record of Decision (Environmental Authorisation) are implemented.
- Resolve problems and claims arising from damage immediately to ensure a smooth flow of operations.
- To implement this Environmental Management Programme for the benefit of all involved.
- To preserve the natural environment by limiting destructive actions on site?

4 Legal requirements

Environmental legislation in South Africa was promulgated with the aim of, at the very least, minimising and at the most preventing environmental degradation. The following Acts and Regulations are applicable to the PMG mine Transnet Freight Rail project:

In order to contextualise this document, the following legal review is included. It deals with the legislation directly specific to this application.

In terms of the highest law of this country, the Constitution {Act No. 108 of 1996}, Section 24, all have the right:

- “(a) to an environment that is not harmful to their health or well-being; and*
- (b) to have the environment protected, for the benefit of present and future generations, through reasonable legislative and other measures that –*
 - (i) prevent pollution and ecological degradation;*
 - (ii) promote conservation; and*
 - (iii) secure ecologically sustainable development and use of natural resources while promoting justifiable economic and social development.”*

The current environmental laws in South Africa concentrate on protecting, promoting, and fulfilling the Nation’s social, economic and environmental rights; while encouraging public participation, implementing cultural and traditional knowledge and benefiting previously disadvantaged communities.

5 Identified environmental impacts

5.1 Impacts associated with construction, operational and decommissioning phases and mitigation measures

a) Administration Requirements

Environmental Awareness, Roles and Responsibilities for Environmental Management

- The Contractor must ensure that all permanent and temporary staff, sub-contractors and suppliers adhere to the EMP.
 - The on site implementation of the EMP.
 - weekly monitoring of activities to ensure compliance with the EMP
 - Ensuring environmental awareness among members of the workforce.
 - Ensuring that the contractor/s and members of the construction workforce are aware of the requirements of the EMP.
 - Implementing preventative and corrective actions in accordance with the requirements of the EMP and outcomes of environmental audits.
 - Reporting of environmental incidents that may occur on site in accordance with the requirements of the EMP and environmental legislation.
 - Contractors, Sub-contractors, Suppliers and Employees
 - All contractors, sub-contractors, suppliers and employees must adhere to the EMP at all times.
-

Environmental Training and Induction

- The ECO has the responsibility to ensure all personnel involved in the project are aware of, and familiar with, the EMP, the key environmental issues and consequences of non-compliance to the EMP.
- The EMP forms part of the formal site induction for all contractors, sub-contractors and casual labourers, preferably in their native language. The induction training will, as a minimum, include the following:
 - the importance of conformance with all environmental policies;
 - the environmental impacts, actual or potential, of their work activities;
 - the environmental benefits of improved personal performance;
 - the mitigation measures required to be implemented when carrying out their work activities; and
 - the potential consequences of departure from specified operating procedures.
- All contractors, sub-contractors and casual labourers must acknowledge their understanding of the EMP and environmental responsibilities by signing an induction attendance record.

Environmental Awareness

- An Environmental Awareness programme shall be implemented for all site personnel describing the key environmental issues and potential impacts thereof.

b) Layout and Site Establishment

Site establishment

- The ECO should ensure that potential impacts on the biophysical environment are kept to a minimum when establishing the site laydown area.
 - No-go areas to be clearly indicated;
 - Conservation areas to be clearly identified with danger tape and illustrated on SDP;
 - Flora earmarked for conservation will be clearly marked with danger tape and communicated to the construction team.
- The area to be disturbed for the developments of the construction site, and access roads is to be kept to a minimum, only big enough to carry out the necessary activities.
- Grassed areas along with sensitive receptors not affected by construction will be demarcated and avoided by the contractor. These will be **labeled 'no-go' areas**.
- The contractor will ensure that no materials or major construction activities extend over the site boundaries.
- Planning of development on terrain steeper than 1 vertical: 3 horizontal (>18) is not recommended.
- Any slopes where seepage activity develops may require the provision of suitable subsoil drainage controls as integral aspects of the proposed development.
- The construction site must be defined and fenced off and limited to authorised contractors only. All activities must remain confined to the construction site.
- Vegetation removed for the site establishment is to be kept to a minimum. No trees are to be removed, if possible, with the exception of alien weeds and invader plants.
- No trees or shrubs will be felled or damaged for the purpose of obtaining firewood, unless agreed to by the affected party, this could range from community leaders, heads of clinics and associated authorities.
- The construction camp is to be located to a minimum horizontal distance of 200m from any watercourse, above the 1:50 year flood line and away from sensitive habitats and silted dam located on site.
- The construction site should be kept in an orderly state at all times.

Fires

- Fires will only be allowed in facilities or equipment specially constructed for this purpose. If required by applicable legislation, a fire-break must be cleared around the perimeter of the construction site.
- No open fires or uncontrolled fires will be permitted on site unless permitted and under supervision of the HSE officer.
- Fire fighting measures such as fire extinguishers must be located on site.
- The workforce must be made aware of fire prevention and fire fighting measures.
- Lighting and noise disturbance or any other form of disturbance that may have an effect on the landowner/tenant/persons lawfully living in the vicinity must be kept to a minimum.

Sanitation

- Sufficient ablution facilities are to be constructed and linked into the existing sewage system.
- In cases where facilities are linked to existing sewerage structures, all necessary regulatory requirements concerning construction and maintenance should be adhered to.
- Chemical toilet facilities or other approved toilet facilities such as a septic drain must be away from any wetland and must not be within the 1:100 year floodline of the river.

Waste management

- Non-biodegradable refuse such as glass bottles, plastic bags, metal scrap, etc., must be stored in a container at a collecting point and collected on a weekly basis and disposed of at a recognised disposal facility. Specific precautions must be taken to prevent refuse from being dumped on or in the vicinity of the site.
- Biodegradable refuse generated from the construction camp and storage area or any other area must either be handled as indicated above and disposed off appropriately at an authorised waste disposal facility.

Noise

- No loud music should be allowed on site. Noise levels will be focused during working hours and special consent will be sought for work during weekends. The ECO will monitor noise levels and assess complaints raised by community members.

Closure

- Where a construction site has been rendered devoid of vegetation/grass or where soils have been compacted owing to traffic, the surface must be ripped and vegetated.
- If a reasonable assessment indicates that the re-establishment of vegetation is unacceptably slow, the contractor may require that the soil be analyzed and any deleterious effects on the soil arising from the construction be corrected and the area be seeded with a vegetation seed mix to his or her specification.
- Photographs of the Construction Camp, and Road sites, before and during the operation and after rehabilitation, must be taken at selected fixed points and kept on record for the information of the Construction.

c) Site Access

- The site access route must be selected based on the minimum number of bushes or trees that are felled and existing fence lines should be followed as far as possible.
 - Water courses and steep gradients should be avoided as far as possible.
 - Adequate drainage and erosion protection in the form of cut-off berms or trenches must be provided around the sites and where necessary.
 - Newly constructed access roads must be adequately maintained so as to minimise dust, erosion or undue surface damage.
 - The liberation of dust into the surrounding environment must be effectively controlled by the use of water spraying and/or other dust-allaying agents. The speed of haul trucks and other vehicles
-

must be strictly controlled to avoid dangerous conditions, excessive dust or excessive deterioration of the road being used.

- Roads must be ripped or ploughed, and if necessary, appropriately fertilised (based on soil analyses) to ensure the re-growth of vegetation. Imported road construction materials, which may hamper re-growth of vegetation must be removed and disposed of in an approved manner prior to rehabilitation.

d) Vehicle maintenance yard and secured storage areas of hazardous materials

- The area chosen for these purposes must be the minimum required and involve the least disturbance to trees and plant life.
- The storage area must be securely fenced and all hazardous substances such as fuel, oils, chemicals, etc., must be stored therein. Drip trays, a thin concrete slab or a facility with PVC lining, must be installed in such storage areas with a view to prevent soil and water pollution.
- The construction site must have one refueling area, which must be clearly demarcated.
- The location of both the vehicle maintenance yard will be off site at local truck yards and fuel stops. The ECO will audit this site on a regular basis.
- Should large amounts of fuel be required on site, bund walls will be constructed and must be positioned in an area that slopes away from surface water bodies / supplies (including stormwater) and shall be of a sufficient height to contain 110% of entire contents stored within the bund.
- Fuel dispensing areas and machinery maintenance areas shall be provided with concrete hard standing surfaces.
- Drainage from fuel storage and machinery maintenance areas shall be treated to remove oil and/or fuel.
- Soil contaminated by fuel leakage shall be removed and disposed of in an approved manner.
- Used oil shall be contained temporarily and transported to a holding facility before being disposed off by the appointed contractor.
- Petrochemicals, oils and identified hazardous substances shall only be stored under controlled conditions.
- All hazardous materials shall be stored in a secured, appointed area that is fenced and has restricted entry.
- Suitable containers will be provided by the hazardous waste contractor must be used for the storage of hazardous materials.
- No vehicle may be extensively repaired in any place other than in the maintenance yard.
- The maintenance of vehicles and equipment used for any purpose during the operation will take place only in the maintenance yard area.
- Equipment used for excavations must be adequately maintained so that during operations there is no spillage of oil, diesel, fuel, or hydraulic fluid.
- Machinery or equipment used on site must not constitute a pollution hazard in respect of the above substances. The Constructor must order such equipment to be repaired or withdrawn from use if they consider the equipment or machinery to be polluting and irreparable.
- Suitably covered receptacles must be available at all times and conveniently placed for the disposal of waste. All used oils, grease or hydraulic fluids must be placed therein and these receptacles will be removed from the site on a regular basis for disposal at a registered or licensed disposal facility.
- All spills should be cleaned up immediately to the satisfaction of the Contractor by removing the spillage together with the polluted soil and by disposing of them at a recognised Hazardous Waste facility.
- On completion of all operations, the areas must be cleared of any contaminated soil, which must be handled as specified by the hazardous waste contractor.
- All buildings, structures or objects in the vehicle maintenance yard and secured storage areas must be dealt with and removed according to the relevant legislated procedures.

e) Pollution Control Measures

- Material Safety Data Sheets (MSDS) for on site chemicals, hydrocarbon materials and / or waste and hazardous substances must be readily available. MSDS's should include information pertaining to environmental impacts and measures to minimise and mitigate against any potential environmental impacts which may result from a spill. MSDS's for the construction will be finalized once the contractor finalizes the inventory list. This will be updated accordingly.
- The Contractor should prepare a method statement and plans for the storage of hazardous substances and emergency procedure.
- Storage of hazardous substances must not be within 100m of any drainage lines;
- Static tanks containing fuel, oil, grease or bituminous material should be confined to specific secure areas under lock and key
- These containment facilities should be checked and maintained at all times.
- Provide proper warning signage to make people aware of the activities within the designated areas.
- In the event of rain, water collected within these containment facilities, can be released if not contaminated. If the contents of containment facilities are contaminated the material should be removed and disposed of as hazardous waste.
- In the case of a spill of hydrocarbons, chemicals or bituminous material in the construction camp or on the construction site, the spill should be contained and the material together with any contaminated soil collected and disposed of as hazardous waste.
- Should a pollution incident occur on site the Contractor along with the ECO must:
 - Implement reasonable measures immediately to contain and minimise the impacts of the incident;
 - Notify all persons whose health may be affected by the incident;
 - Undertake clean up procedures immediately;
 - Notify the Contractor of the incident immediately who will advise the employee as to the measures that should be implemented;
 - Record the incident in the Environmental Incident Register; and
 - Implement measures to prevent similar incidents from occurring in the future.
- Spills should be cleaned up immediately to the satisfaction of the ECO by removing the spillage together with the polluted soil and by disposing of it at a recognised facility.
- The contractor will be responsible for training staff on the safe disposal of hazardous waste and the use of spill kits.
- Soil and construction material stockpiles are to be bermed to prevent leachate and polluted run-off water from leaving the construction site.
- Concrete mixing must be confined to as few areas as possible and ad hoc mixing is to be avoided. Areas where concrete was mixed must be cleaned up after use. Concrete mixing is to be undertaken on an impervious surface and any run-off contained.
- The contractor will ensure that diverted and pumped water will not enter the work areas. All diverted water will be stored in detention ponds or trenches to be rehabilitated at closure.
- A security officer should be on duty at the construction site after hours and over weekends, in order to prevent unauthorised people from entering and tampering with equipment and materials.
- Fires will be avoided on site. While energy sources will be readily available on site the contractors will ensure that energy efficient practices are employed. For instance the workforce will use wonderbags on site that will allow staff to use the resources available wisely. Training on how to use these resources will be provided on site.
- The ECO along with the contractor will ensure all pollution control measure will be in place prior to construction

f) Solid Waste Management

- **General Waste**
 - General waste produced will be separated on site. This may include:
 - Office waste (e.g. food, waste, paper, plastic);
 - Operational waste (clean steel, wood, glass); and
 - General domestic waste (food, cardboards, paper, bottles, tins).
- No burning of waste will be permitted on site.
- An adequate number of general waste receptacles must be arranged around the construction camp, on site to collect all domestic refuse, and to minimise littering.
- The ECO along with the contractor will ensure that the construction site is tidy and free off litter.
- Tip proof metal covered bins or appropriate storage receptacles should be clearly marked and lined for efficient control and safe disposal of waste.
- Different waste bins, for different waste streams must be provided to ensure correct waste separation.
- General waste produced on site is to be collected in skips for disposal at the local waste site. Hazardous waste is not to be mixed or combined with general waste earmarked for disposal at the municipal landfill site.
 - No general waste is to be disposed of at the spoil area.
 - Under no circumstances is waste to be burnt or buried on site.
 - Waste bins should be cleaned out on a regular basis to prevent any windblown waste and/or visual disturbance.
- All general waste must be removed from the construction areas on a daily basis and disposed of in suitable waste receptacles at the construction camp.
- General waste will be disposed of at an authorised waste disposal facility,

Hazardous waste

- **Hazardous waste produced on site includes:**
 - Oil and other lubricants, diesel, paints, solvent asbestos;
 - Containers that contained chemicals, oils or greases; and
 - Equipment, steel, other material (rags), soils, gravel and water contaminated by hazardous substances (oil, fuel, grease, chemicals or bitumen).
- Hazardous waste is to be disposed at a Permitted Hazardous Waste Landfill Site. The ECO must identify an approved waste disposal site at the inception of the project.
- Hazardous waste bins must be clearly marked, stored in a contained area (or have a drip tray) and covered (either stored under a roof or the top of the container must be covered with a lid).
- A hazardous waste disposal certificate must be obtained from the waste removal company as evidence of correct disposal.
- It may be feasible for the waste to be transported to a central point where the waste disposal company can collect it in bulk. It should however be noted that:
 - Transport of hazardous materials must be done in accordance with legislative control; and
 - Relevant codes of practice should be adhered to.
- The hazardous waste must be stored in skips or appropriately banded area for collection and taken to a authorised hazardous waste disposal facility site. Safe disposal certificates must be provided for this.

g) Spoil, Topsoil and Erosion

- **Topsoil**
 - Topsoil removed from construction sites must be stockpiled in a designated area. This area must be established in accordance with pollution control measures set out in this EMP.
 - The removed topsoil must be stored on the high ground side of the construction site area outside the 1:50 year flood level.
 - Topsoil stockpiles should not be higher than 2m in height.
 - Topsoil stockpiles should be protected with sand bags and watered on a regular basis to prevent grass seedlings from drying out.
 - The stockpiling of soil or any other materials shall not be allowed near a watercourse or water body to prevent pollution or impediment to surface runoff. The developer must control and establish suitable mitigation measures to prevent the erosion of the stockpiles.

- **Spoil**
 - Spoil site should not be located within the 1:50 year flood line.
 - Litter and general waste is to be removed from the soil and spoiling before stockpiling.
 - Spoil sites will be shaped to fit the natural topography.
 - Spoil sites must receive a minimum of 75mm topsoil and be grassed with the recommended seed mixture.

- **Soil Erosion**
 - Soil erosion on site must be prevented at all times, i.e. pre, during and post construction activities. Suitable erosion control measures must be implemented in areas sensitive to erosion such as near water supply points and edges of slopes. These measures could include:
 - The suitable use of sand bags or Hessian sheets.
 - The prompt rehabilitation of exposed soil areas with indigenous vegetation to ensure that soil is protected from the elements.
 - The removal of vegetation, only as it becomes necessary for work to proceed.
 - Preventing the unnecessary removal of vegetation especially on steep areas. Taking necessary precautions in terms of design and construction and earthworks, cuts and fills must be taken.
 - Constant cognisance of the inherent high erosion risk potential of all soils and sites on the property should be taken and appropriate control and preventative measure put in place.

h) Water Management

Surface water

- The flow direction of any surface water run-off must be established prior to disturbing any area.
- Buffer zones should be maintained between the hard standing and the watercourse to allow for reduction in flow velocities there minimising the risk of erosion from the site.
- A good vegetation cover along the length of the watercourses should be established and maintained to reduce the likelihood of scour of the channel that would lead to erosion.
- Contaminated wastewater including cement contaminated water must not enter any watercourse and must be managed by the site manager to ensure that the existing water resources on and off site are not polluted by the development;
- The stockpiling of soil or any other material must not be allowed near a watercourse or water body in order to prevent pollution or impede surface runoff;
- The contractor must submit to the client his plan for prevention, containment and rehabilitation measures against environmental damage of the identified water and drainage systems in and around all the sites.

- Berms are to be constructed to divert clean water around any dirty area i.e. the construction camp and on the construction site.
- Dirty water originating from the construction camp and on the construction site is to be contained and disposed of correctly, to prevent the contamination of soil and/or any watercourses.
- The construction site must have adequate drainage and the development of areas of standing water must be prevented.
- Washing of vehicles, equipment, machinery or materials is prohibited at the construction site, unless done in a contained area that has a suitable impervious floor and is designed for this purpose.
- Bathing or washing of clothes, equipment or machinery within any watercourse is prohibited.
- The contractor in instances will provide potable drinking water where sufficient potable water is not available on site. Potable water will be monitored and tested to ensure good drinking quality.
- Erosion and loss of soil must be prevented by minimising the construction areas exposed to surface water run-off.
- Bare areas are to be rehabilitated as soon as the areas become available or after use.

Stormwater Management

- A storm water management plan/system needs to be drawn up and implemented to ensure proper management of storm water on the site during and after construction to ensure that pollutants and sediment are not released into the river and the estuary and must comply with the following:
 - “Clean” and “dirty” areas must be separated and suitable stormwater measures must be implemented to ensure that the first flush from the dirty areas are effectively managed so as not to cause any water pollution.
 - The stormwater drainage network system must be kept separate from the sewage effluent system.
 - Drainage must be controlled to ensure that runoff from the site will not culminate in off-site pollution, cause water damage to properties further down from the site or silting of any water resource.
 - The water containing waste emanating from within the dwellings or any other building on the property should not contaminate the storm water system.
 - The Stormwater Management Plan should ensure that the ultimate flow from the development does not result in any negative impacts on downstream properties or water resource and must therefore ensure that stormwater is managed within the overall site as effectively as possible.
- The potential increase in flood peaks must be mitigated to at least predevelopment levels by the provision of sufficient stormwater detention facilities at micro and macro levels.
- The potential increase in flood volumes must be mitigated where possible by subsoil infiltration, retention of runoff in on-site facilities for irrigation use and unsaturated wetland areas where evaporation and infiltration can help to reduce flood runoff rates.
- Installations must be provided to contain pollution as close to source as possible and in a practical location for servicing Solid Waste services.

i) Wastewater

- All wastewater generated at the clinics must be disposed off in a suitable manner so as not to cause any surface or sub surface water pollution or health hazard.
- Wastewater including cement-contaminated water shall not enter any water course and shall be managed by the site manager and ECO to ensure that the existing water resources on and off site are not polluted by activities emanating from the construction of the clinics
- When required sedimentation ponds should be established to capture wastewater. This pond should be given sufficient time to dry up to allow the contractor to remove solid materials. The

ECO and contractor will ensure that no hazardous materials or liquids flow into the sedimentation pond.

j) Air Quality

- Stockpiles may become sources of wind-generated dust. These must be covered during windy periods or watered.
- Areas under construction may become sources of wind-generated dust and dust suppression techniques must be implemented when necessary.
- Dust entrained from vehicular movement must be minimised by road wetting and by implementing speed limits.
- Construction vehicles should be covered in order to minimise dust entrainment.
- No burning of waste, such as plastic bags, cement bags and litter, is permitted on site. The HSE contractor will ensure that no fires are permitted on site.
- A complaints register should be provided to report any excessive dust incidents.

k) Noise

- Construction activities should be undertaken during daylight working hours between the hours of 07:00 – 17:00 on weekdays and 07:30 – 13:00 on Saturdays. No construction will be allowed on Sundays.
- Construction vehicles and equipment generating excessive noise should be fitted with appropriate noise abatement measures.
- Construction workers must be provided with the appropriate PPE i.e. ear plugs
- A complaints register should be provided to report any excessive noise.

l) Protection of fauna, flora and natural features

- The extent of the area disturbed should be kept to the minimum required to successfully implement the road upgrading activities, thus minimising the destruction of any fauna and flora.
- The use of on site dissipation of stormwater may be accommodated within the site with maintenance of general hydrology associated with site.
- No natural vegetation is to be collected for use as firewood.
- No animals are to be disturbed unnecessarily and no animals are allowed to be shot, trapped or caught for any reason.
- Livestock from villages should not be disturbed or tampered with. The contractor must ensure that livestock do not enter the site during construction.
- Protected trees may not be removed or cut without a permission from the appropriate authority.
- Invader species and weeds must be removed and disposed of in accordance with existing legislation on a regular basis.
- Natural features are not to be marked by the contractor using synthetic paints or toxic materials. The ECO will advise on appropriate measures to alert contractors on 'no-go' areas.
- The removal of indigenous/endemic shrubs and small trees should be kept to a minimum and only be removed if absolutely necessary.
- When required, trees will be fenced off by the ECO for preservation purposes.
- Should rare and endangered species occur on site and are required to be removed, the ECO will notify the client and display the location identified for transplanting on the site development plan.
- Workers are to be provided with firewood for cooking and are not permitted to cut down any vegetation for this purpose.

▪ **Transplanting**

- Transplanting entails the removal of plant material and replanting the same plants in another designated position.
- Transplant trees and shrubs during the winter (between April and September).
- Prune back the plants to limit transpiration and spray foliage with an evapo-transpiration retardant liquid if they are evergreen.
- Trees to be transplanted must be carefully removed from the soil so as to retain as large a rootball as practically possible. Use the tree's driplines as an indicator: the larger the tree the larger the rootball (and subsequently the planting hole).
- Minimise disturbance of the soil and the remaining roots in the rootball during the lifting, moving and or transportation of all species.
- Wrap the rootball in Hessian or in plastic sheeting to retain the soil and to keep the rootball moist.

m) Public Safety

▪ **Presence on and adjacent to the site**

- Members of the public adjacent to the construction area and road area should be notified of construction activities in order to limit unnecessary disturbance or interference
- Dedicated pathways for pedestrians should be developed to ensure safe passage around construction activities.
- Construction activities should be undertaken according to during daylight working hours between the hours of 07:00 – 17:00 on weekdays, pending permission and 07:30 – 13:00 on Saturdays. No construction will be allowed on Sundays.
- A safety officer is to be appointed who will continuously monitor safety conditions during construction activities.
- Flag person will be appointed and provide ample warning of road hazards.
- Construction vehicles must avoid public roads during peak hours.
- The dangers associated with entry and exit points for the construction camp should be given special consideration.
- The construction camp should be sited so as to minimise the potential hazard to motorists traveling on the main roads. The dangers associated with entry and exit points should be given special consideration.
- All members of the construction workforce working on the site or near the roads are to be provided with the appropriate high visibility clothing to ensure that they are visible to motorists.
- All construction workers handling chemical or hazardous substances must be trained in the use of such substances and the environmental, health and safety consequences of incidents.
- The workforce is to be provided with sufficient potable water and under no circumstances are they to use untreated water from local watercourses for drinking.

▪ **Traffic and Transport**

- Slow-moving construction vehicles should, where possible, avoid being on the main roads during rush hour (i.e. roughly 06:00 – 09:00 and 16:00 – 18:00) in order not to contribute to traffic congestion.
 - Traveling of these vehicles to and from the site should either be done at times when the volume of traffic is less concentrated or lesser-used back roads should be used to reach the site.
 - Potential damage by construction vehicles to the access roads will need to be addressed accordingly. Any damage caused must be appropriately rehabilitated (i.e. to a state comparable with the roads initial condition). Liaison must take place with the local roads agency or authority in this regard.
-

- Controls should be imposed on construction traffic to ensure minimal disturbance to neighbours and fellow road users

n) Complaints and Environmental Incident Register

- Complaints received from the community and other I&AP's must be registered and recorded by the ECO and also brought to the attention of the Contractor. Both parties will respond accordingly. The following information must be recorded in the case of any complaint/incident:
 - Time, date and nature of complaint;
 - Response and investigation undertaken; and
 - Actions taken and by whom.
- All complaints will be investigated and a response is to be given to the complaint within 7 days of receipt.

o) Social Impacts

- Construction vehicles and equipment must have appropriate noise abatement measures.
- Documents should be distributed in Sotho and should include statements for the use of local communities or local community organisation in supplying services and labour to the construction activities.
- Contractors should use labour intensive construction methods where possible. Local labourers should be used for such methods.
- **HIV/AIDS**
 - Due to the concentration of a workforce in the area over the construction period, the contractor shall implement an HIV/AIDS Awareness Programme on site. The contractor shall appoint an HIV/AIDS Awareness Officer for the duration of the construction period. Activities for HIV/AIDS awareness and prevention will be broad based, targeting both individuals and groups. They may consist of:
 - Information posters in public places both on and off site (eating places, guest houses, etc);
 - Peer educators (reference people) drawn from the local labour force and trained in HIV/AIDS issues for discussions with colleagues (estimate 1 per 30 employees);
 - Small focus group discussions and information covering key issues should be held;
 - Inclusion of HIV/AIDS activities at site meetings and other discussions; and
 - Voluntary Counselling and Testing (VCT).
 - Education will cover:
 - Stigma and discrimination issues;
 - Preventative behaviours including partner reduction, condom use, and awareness and importance of treatment of STDs;
 - Skills including negotiating safer sex, correct condom use, purchase without embarrassment;
 - Referral to local health centers and services available.
- **Environmental Monitoring**
 - Environmental monitoring will be undertaken by the ECO on a monthly basis, or at a frequency deemed appropriate by the client.

- This monitoring will be undertaken in order to ensure compliance with all aspects or requirements of the EMP.
 - The results of the monthly assessments will be made available to the relevant Authority upon request.
 - The ECO is to inspect and monitor on and off-site operations and to implement the necessary actions to ensure compliance with the EMP.
 - An Environmental Consultant is to undertake external audits of the EMP on a 6 monthly basis. This will involve the completion of the monthly environmental checklists.
 - The ECO should report and discuss any difficulties with the implementation of the EMP with the Environmental Consultant.
 - The ECO and Environmental Consultant should review and modify the EMP on an annual basis or as required.
- **Visual Monitoring**
 - Visual monitoring must be carried out on a monthly basis to ensure that the development activities create no impacts on the river, wetlands and/or estuary.
 - **Complaints register and environmental incident book**
 - Complaints received from the community and other I&AP's must be registered and recorded by the ECO and also brought to the attention of the contractor. Both parties will respond accordingly. The following information must be recorded in the case of any complaint/incident:
 - Time, date and nature of complaint;
 - Response and investigation undertaken; and
 - Corrective and preventative actions taken and by whom.
 - All complaints received will be investigated and a response is to be given to the complainant within 7 days.
 - All environmental incidents occurring on the site will need to be recorded in an Environmental Incident Book. The following information must be provided:
 - Time, date and nature of complaint;
 - Response and investigation undertaken; and
 - Corrective and preventative actions taken and by whom.

p) Emergency Procedures

- To avoid the occurrence of any incidents, the contractor will ensure that the entire workforces that will be responsible for the operation are trained on the operation of the facility.
- The HSE representative will ensure that all the emergency procedures relevant to the above-mentioned incidents are developed and the workforce is trained on these procedures to ensure that correct actions are followed during emergency situations.
- The list of the emergency telephone numbers will be maintained on site.

q) Rehabilitation

- All remaining construction infrastructure, building rubble and waste are to be removed from the site.
- All disturbed surfaces compacted by construction and operation activities including the ablutions and loading areas should be ripped to a minimum depth of 30cm to allow organic contaminants to breakdown and promote vegetation establishment.

- The area designated for the deposition of spoil material is to be leveled and shaped to ensure efficient drainage of the site. Water should not be allowed to pond on site. Under no circumstances is general or hazardous waste to be disposed of at this site.
- Waste material of any description, including receptacles, scrap, rubble and tyres, will be removed entirely from construction camp and disposed of at a authorised waste disposal facility.
- Final rehabilitation must be completed within a period specified by the Engineer.

- **Topsoil replacement**
 - The principle of Progressive Reinstatement must be followed wherever possible. This includes the reinstatement of disturbed areas on an ongoing basis, immediately after the specified construction activities for that area are concluded.
 - Execute top soiling activity prior to the rainy season or any expected wet weather conditions.
 - Execute topsoil placement concurrently with construction where possible, or as soon as construction in an area has ceased.
 - Replace and redistribute stockpiled topsoil together with herbaceous vegetation, overlying grass and other fine organic matter in all disturbed areas of the construction site, including temporary access routes and roads.
 - Replace topsoil to the original depth (i.e. as much as was removed prior to construction). These areas will be quantified by the ECO.
 - If there is insufficient topsoil available from a particular soil zone to produce the minimum specified depth, topsoil of similar quality may be brought from other areas of similar quality. The ECO will advise.
 - Do not use topsoil suspected to be contaminated with the seed of alien vegetation (i.e. black wattle). Alternatively, the soil is to be sprayed with specified herbicides.

- **Grassing**
 - A suitably qualified Contractor making use of the appropriate equipment must undertake grassing.
 - Grass areas using the method specified on the plant plans.
 - Trim areas to be grassed to the required level.
 - Sodding may be done at any time of the year, but seeding must be done during the summer when the germination rate is better.
 - Hydroseeding with a winter mix will only be specified where re-grassing is urgent, and cannot wait for the summer.

- **Monitoring and Maintenance**
 - The conditions of the development must be monitored for a period of one year after the development is complete to ensure that:
 - Erosion is not taking place;
 - The stormwater run-off measures are working;
 - An Environmental Complaints Register should be kept detailing complaints received, date, response and action taken;
 - Any maintenance where intrusive works are necessary should adhere to the mitigation measures put in place in the EMP; and
 - Where such measures are impractical due to the nature, duration and extent of maintenance works, a maintenance method statement should be developed prior to maintenance works being undertaken.

ACTIVITY	OBJECTIVE	IMPACT		RATING			RESPONSIBILITY	TIMEFRAME
		POSITIVE	NEGATIVE	LOW	MEDIUM	HIGH		
PRE-CONSTRUCTION								
Administration Requirements	To ensure all staff, contractors and sub-contractors are conversant with the EMP.	X				X	ECO and Contractor	Duration of the project
CONSTRUCTION PHASE								
Layout and Site Establishment	To utilize minimal land and responsibly establish site for the purposes of construction. Site establishment is crucial and will require the input of all parties to ensure establishment is completed in an environmentally responsible manner.		X		X		ECO, Contractor and Sub-contractor	Site establishment
Site Access	An important function of any construction site. The responsibility of ensuring safe access in and out of the site for staff and visitors alike should be maintained. Responsible and proper establishment of the site access points will ensure the safe running of the construction site.	X			X		Contractor	Construction phase

ACTIVITY	OBJECTIVE	IMPACT		RATING			RESPONSIBILITY	TIMEFRAME
		POSITIVE	NEGATIVE	LOW	MEDIUM	HIGH		
Vehicle maintenance yard and secured storage areas of hazardous materials	Ensuring the maintenance of vehicles and hazardous materials on site is important. This will ensure the safe handling of materials and maintenance of vehicles in designated areas.		X			X	Contractor	Construction phase
Pollution Control Measures	The contractor must ensure that appropriate measures are in place to prevent events that may cause harm to the surrounding environment. This will include, for example, the construction of bunded areas, provision of safety equipment for staff and sub-contractors as well as ensuring hazardous materials are stored in a safe manner.		X			X	Contractor	Construction phase
Solid Waste Management	Waste management on site will need to be regulated and monitored on a daily basis. Waste should be separated and initiatives within the community should be investigated. This will in turn assist the contractor in		X			X	Contractor	Construction phase

ACTIVITY	OBJECTIVE	IMPACT		RATING			RESPONSIBILITY	TIMEFRAME
		POSITIVE	NEGATIVE	LOW	MEDIUM	HIGH		
	reducing the volume of waste needed to be disposed off on site.							
Spoil, Topsoil and Erosion	Topsoil management and the protection of stockpiles and exposed patches of land is of significant importance as these play a major role in the rehabilitation process at the end of the construction period.		X		X		Contractor	Construction phase
Water Management	The use of water resources on site should be used responsibly. Any new water connections should be negotiated with the land owner or provisions should be made for the construction team for the temporary storage of water on site for the purposes of construction.		X		X		Contractor	Construction phase
Air Quality	The contractor should be weary of generating dust during the construction period. This should be mitigated according to the guidelines stipulated in the EMP.		X	X			Contractor	Construction phase
Noise	Noise levels should be kept to a minimum and monitored on a		X	X			Contractor	Construction phase

ACTIVITY	OBJECTIVE	IMPACT		RATING			RESPONSIBILITY	TIMEFRAME
		POSITIVE	NEGATIVE	LOW	MEDIUM	HIGH		
	regular basis. Concerns brought to the attention of the contractor should be documented and mitigated as soon as possible.							
Protection of fauna, flora and natural features	All sensitive fauna and flora will be identified prior to construction and protected according to the biodiversity guidelines. The contractor should always consult the ECO prior to removing large amounts of vegetation and sensitise construction workers to the surrounding environment and fauna present in the area.		X		X		ECO, Contractor	Construction phase
Public Safety	Proper management of the site is important and ensuring the smooth flow of construction worker, vehicles and visitors are not impeded is the responsibility of the contractor. Sufficient signage should be present on site, and signage should be displayed in languages used by the local communities.	X			X		Contractor	Construction phase

ACTIVITY	OBJECTIVE	IMPACT		RATING			RESPONSIBILITY	TIMEFRAME
		POSITIVE	NEGATIVE	LOW	MEDIUM	HIGH		
Social Impacts	The contractor should be weary of sensitive issues surrounding the construction of the facility. Constant interaction with the surrounding neighbours as well as the important stakeholders should occur on a regular basis. Incidents should be documented and an incident register should be maintained on site.		X			X	ECO, Contractor	Construction phase
DECOMMISSIONING								
Rehabilitation	Areas disturbed temporarily by the development will need to be rehabilitated at best to its original state. The ECO along with a rehabilitation specialist should draft a rehabilitation plan for the contractor to implement. Critical aspects include, and are not confined to, the management of erosion and the grassing of areas around the proposed development.	X			X		ECO, Rehabilitation specialist and Contractor	Decommissioning of the construction phase

6 EMP implementation structure

The EMP as presented above is the legal core to the environmental policy adopted by the Contractor. Through the use of the 'Commitment to the EMP' by the Applicant and by all future Contractors on the general site, during both Transnet Freight Rail and site-specific development, the EMP becomes a legal tool for the continued protection of the environment. Through signing the commitment, the signatory is legally obliged to comply with the conditions as set out in the EMP.

As noted, the EMP is applicable to both Transnet Freight Rail and site-specific development. Implementation of the EMP during the loading station construction phase can be simply incorporated as a condition of all contractors' and sub-contractors contracts for both Transnet Freight Rail and site specific development. Although, predominantly focussed on the Construction phase, a number of conditions relate to the ongoing operation of the development. Thus, by further use of the EMP once the development is complete, through requesting the residents to sign to the controls still relevant in their own capacity, the EMP can become a 'cradle to grave' tool for the development. If linked to the relevant by-laws for the area, the EMP could then become an internal policing document for the area, ensuring that the principles of the development are maintained, within an environmentally sustainable framework.

Specific use of the EMP itself is simple. The EMP is basically a set of conditions, grouped together within common themes, which should perpetuate the continued protection of the environment. The conditions are phrased to be clear and thus understandable whilst still being legally enforceable.

This Environmental Management Plan will be issued to the PMG mine for use during the implementation of the construction of the Transnet Freight Rail.

Steps to be followed:

1. Inclusion of the checklist for Implementation in the schedule of quantities and information of every construction contract issued for the loading station project.
2. Appointment of an ECO responsible for ensuring the EMP is implemented.
3. Notification of NCDENC of commencement of construction 30 days in advance thereof.
4. Undertaking weekly checks of construction activities and completing a checklist.
5. Submitting bi weekly report to the Main Contractor, the Project Team and Independent Environmental Consultant.
6. Submitting monthly status reports to NCDENC during the course of the implementation of the project.
7. Notification of NCDENC of commencement of operation completion of construction 30 days in advance thereof.
8. Compiling a comprehensive "Close Out" Report on completion of the projects, noting specifically that each of the construction impacts have been mitigated and how and a complete incident report with corrective measures.

6.2. Appointment of Environmental Officer

During the construction period, the Main Contractor shall appoint an Environmental Control Officer (ECO) for the full duration of the implementation contract

The ECO will have the following responsibilities during the construction period:

1. Monitor activities of the main contractor all subcontractors, and ensure that mitigation measures contained in this document are adhered to.
2. The ECO must submit regular reports to the Independent Environmental Consultant. Environmental Management and regular reports to NCDENC on the status of the environmental compliance on site.
3. The ECO will be responsible for maintaining communication channels with Interested and Affected Parties (IA&Ps) and the surrounding community throughout the construction phase. A record of all correspondence, if any, should be kept noting date, details of I&APs, details of correspondence, issues discussed and follow-up action taken.
4. Finally a complete reporting system must be implemented for the site. This reporting system shall be developed to determine when the EMP conditions have been breached, along with the responsible parties' details. This record may then be used in to enforce remediation and/or any legal actions required. The system should include a date linked register of complaints, the complainant's details, the person responsible for that function in terms of the EMP, the actions taken to remediate the problem, and finally a close-off function.

During the operational phase, an Independent Environmental Consultant will be responsible for environmental management of the loading station. A responsible person should be appointed / selected to be responsible for the following:

1. Ongoing environmental management.
2. Compliance with this report.
3. Community liaison.
4. Report back to authorities

6.3. Public Participation

Prior to the onset of the project, during the Environmental Assessment process and after completion of scope of work of the Project Team there will be meetings with the (I&APs). It is recommended that these meetings continue into the foreseeable future, perhaps on a less regular basis, to ensure the community is kept informed of developments and programmes of implementation.

6.4. EMP Compliance monitoring and audits

The ECO appointed for the construction period will conduct regular monitoring inspections to ensure compliance with this EMP and keep records of such monitoring as these may be requested by NCDENC.

The results of the monitoring inspections must be reported to the Main Contractor, Project Team (at bi weekly meetings): Environmental Management Department, in the form of a regular monthly report.

The ECO shall also keep records of non-compliance, any incidence and how this was rectified. This should be included in the monthly report.

6.5. Checklist for implementation

This checklist should be issued to all parties involved in the upgrading process, and should be included in the schedule of quantities for the construction of the project.

7. Education, training and awareness

The ECO will be responsible for putting in place an Environmental Awareness Training Programme for all staff members. Before commencing with any work, all staff members shall be briefed about the Environmental Code of Conduct. The training programme has to be approved by the ECO. After being briefed about the contents of the Environmental Code of Conduct, staff members shall sign an Environmental Training register as proof of their training. The ECO is responsible for creating awareness among employees and sub-contractors of their environmental obligations in terms of the environmental specifications, and for ensuring that employees are adequately experienced and properly trained in order to execute the Works in a manner that will minimise environmental impacts. The Contractors obligations in this regard

Include the following:

- Ensuring that a copy of the environmental specifications is readily available on site, and that all site staff are aware of the location and have access to the document. It is particularly important that the environmental officer have access to the environmental specifications in order for them to fulfil the roles and responsibilities.
- Ensuring that, prior to commencing any site works, all employees and sub-contractors have attended an Environmental Awareness Training course. The Environmental Awareness Training course would be conducted by the ECO, who must provide the site staff with an appreciation of the project's environmental requirements, and how they are to be implemented. All new staff coming onto site after the commencement of construction activities must also attend the Environmental Awareness Training course, and refresher courses should be undertaken on a quarterly basis or an appropriate time as governed by the construction period A detailed record of all training sessions, including a list of attendees must be compiled by the Contractor and submitted to the Engineer on a regular basis. Although the responsibility for the compilation of an appropriate and adequate Environmental Awareness Training course rests with the Contractor.
- Ensuring that all site staff is aware of the requirements of any approved Method Statements that have bearing on their activities, and, where necessary, that any specialized training required to ensure compliance with the approved Method Statements, has been provided.
- Ensuring that regular *ad hoc* training is provided, both as part of the daily toolbox talks as well as to address specific environmental concerns or areas of non-compliance.
- Ensuring that employee information posters, outlining the environmental “do’s” and “don’ts” (as per the environmental awareness training course) are erected at prominent locations throughout the Site.

It has become common practice for the environmental induction requirements to be addressed as part of the standard worker Health and Safety induction programme that accompanies the recruitment of new staff. Although this approach is supported, the Contractor must ensure that the environmental considerations are adequately covered during this induction process. If, in the reasonable opinion of the ECO, the Health and Safety indication training is not adequately addressing

environmental aspects, he/ she may require the Contractor to develop a stand-alone environmental induction programme.

8. Incident management and emergencies

“Incident” means an unexpected sudden occurrence including a major emission, fire or explosion leading to serious danger to the public or potentially serious pollution of or detriment to the environment whether immediate or delayed. In the case of an incident, the following actions must be undertaken:

In terms of Section 30 of the National Environmental Management Act 107 of 1998 (NEMA), the incident must be reported to the ECO as soon as the incident is discovered. The ECO must, through the most effective means reasonably available, provide details of the incident (as outlined in NEMA) to the Director General of the Department of Environmental Affairs (DEA), the South African Police Services (SAPS) and the relevant fire prevention services and all persons whose health may be affected by the incident.

The ECO, as the responsible person, must as soon as reasonably practical after knowledge of the incident:

Take all reasonable measures to contain and minimise the effects of the incident, including its effect on the environment and any risks posed by the incident to the health, safety and property of persons.

- Quick and appropriate response to environmental incidents;
- Remedy the effects of the incident;
- Assess the immediate and long-term effects of the incident on the environment and public health;
- Prevention of recurrence of similar incidents.

Records of all incidents must be retained for a period not less than three years. Photos should be taken of the incident and a comprehensive record must be taken of the incident and the corrective and preventative actions taken. The ECO, as the responsible person, must within 14 days of the incident; report to the persons outlined above such information as is available to enable an initial evaluation of the incident. All incidents should be investigated in association with the ECO. The cause should be highlighted and training should be provided to the workers to prevent a recurrence of similar incidents.

9. Management and Responsibilities in terms of the EMP

The following figures outline the responsibility of key individuals within the environmental and social team that would address potential issues on site.

Figure 1: Reporting Structure¹

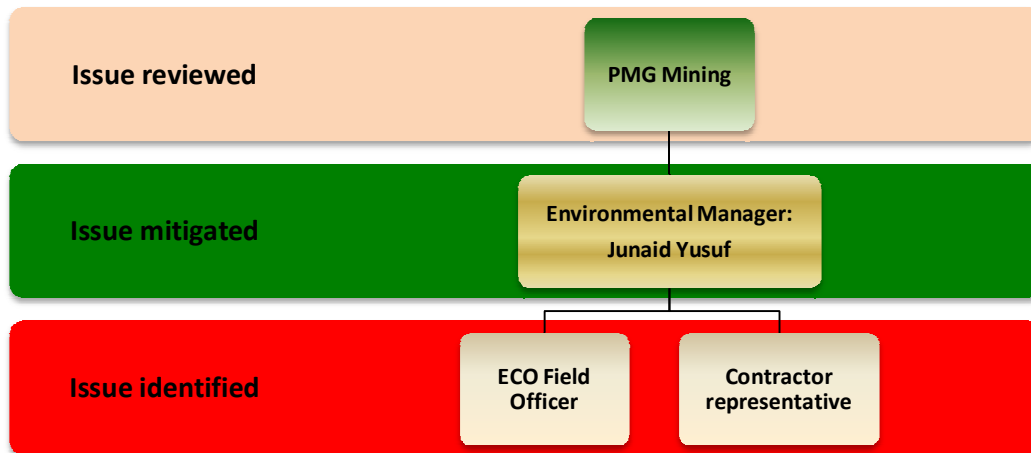
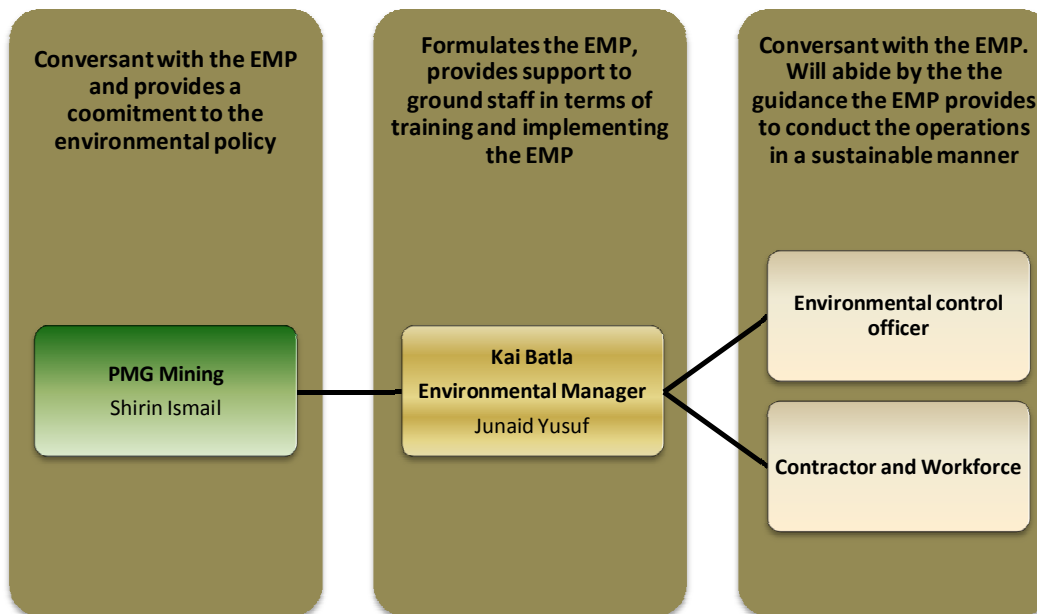


Figure 2 highlights the management structure for the project and highlights the role and responsibility of each individual in terms of the EMP.

Figure 2: Management structure



¹ *The organogram is a summary of the reporting structure and not indicative of the actual team*

10. Conclusion

This EMP has been compiled by Kai Batla Minerals Industry Consultants (“KB-MIC”) as a guideline document for the construction and implementation phase. Adherence to this EMP together with other applicable Transnet guidelines will ensure proper management of our environment.

APPENDIX A

PMG MINING PRO FORMA

PRO FORMA TO BE SIGNED BY PMG MINING PROJECT MANAGER AND CONTRACTOR AWARDED THE CONSTRUCTION.

CONTRACT NAME: _____

CONTRACT NUMBER: _____

ENVIRONMENTAL COMPLIANCE

I _____ ON BEHALF OF _____ (Contractor)

I _____ ON BEHALF OF **PMG MINING**

DECLARE AS FOLLOWS:

1. I AM AWARE ABOUT GLOSSAM SLIDING FACILITIES IMPROVEMENTS OR FACILITIES IMPROVEMENTS ACTIVITIES CAN HAVE A MAJOR IMPACT ON THE ENVIRONMENT.
2. I UNDERTAKE TO ADHERE TO THE REQUIREMENTS OF THE ENVIRONMENTAL MANAGEMENT PROGRAMME AND THE RECORD OF DECISION FROM DEPARTMENT OF ENVIRONMENTAL AFFAIRS
3. I PLEDGE TO INFORM ALL GLOSSAM SLIDING STAFF OF THEIR INVOLVEMENT IN MANAGING ENVIRONMENTAL IMPACTS ON SITE
4. I COMMIT TO IMPLEMENTING ENVIRONMENTAL BEST PRACTISE ON SITE AT ALL TIMES DURING THE CONTRACT.

SIGNED: _____ DATE: _____

CONTRACTOR

SIGNED: _____ DATE: _____

PMG MINING

SIGNED: _____ DATE: _____

KAI BATLA

APPENDIX B

POLOCIES

ENVIRONMENTAL POLICY

PMG Mining is committed to achieving world-class environmental performance in a sustainable manner and is committed to:

- Encouraging good management practices through planning and commitment to environmental issues;
 - Minimise the release of effluent;
 - Optimise resource consumption;
 - Minimise waste;
 - Rehabilitate disturbed land and protect environmental biodiversity;
 - Protect cultural heritage resources; and
 - Comply with all applicable laws, regulations, standards and guidelines for the protection of the environment;
- In terms of waste management the construction team are aware of the potential waste that will be generated during the construction period and are committed to prevention, minimisation, recycling and the treatment or disposal of hazardous waste;
- The construction team are committed to Integrating environmental management into all aspects of construction, especially considering the sensitive seasonal changes expected during the construction period making optimum use of the dry season for construction works and being aware of any limitations of the environment including the seasonality of water bodies, growth and dormancy period of fauna and flora.
- Ensuring environmental awareness and appropriate competency among our employees and promoting environmental awareness in the community.
- Ensuring the rehabilitation of construction sites, per phase, upon the completion of the works.
- Engaging with all interested and affected parties towards the shared goal of improving the environment.
- Setting objectives and, where possible, quantitative targets, to determine continual improvement in environmental performance and the prevention of pollution.
- This policy and associated objectives and targets will be regularly reviewed and updated to ensure that they adequately reflect our commitment to continually improving our environmental management systems and performance during the construction period.

Signed

Shirin Ismail
CEO
PMG Mining

HIV/AIDS POLICY

PMG Mining recognises that HIV/AIDS has a serious impact on its employees. This policy outlines the PMG Mining position with regard to the interaction with HIV/AIDS positive employees, the impact on PMG Mining and the treatment thereof.

PMG Mining encourages employees to participate in programmes, which could lead to the early detection of the virus as well as registering on wellness programmes, which add value to their lives and keep them healthy and productive.

Education and Communication:

- ♣ TBWB will endeavour to inform and educate all its employees through an awareness and education program
- ♣ All communication and education programs will be developed in consultation and co-operation with all stake holders (Management, Employees and Worker representatives)
- ♣ This program will endeavour to impart a basic knowledge of the disease and prevention of the spread thereof. Furthermore, the program will endeavour to ensure the elimination of discrimination against any employee with HIV/AIDS, inform them of their rights and services available as well as the protection of employees who potentially could be exposed to HIV/AIDS in the execution of their duties.
- ♣ The policy will seek to comply with all legislation, dealing with the management of HIV/AIDS, in particular the Labour Relations Act and the Employment Equity Act, as well as the Code of Good Practice on HIV and AIDS.

PMG Mining will not engage will not engage in pre-employment screening or testing. Neither will it compel employees to undergo screening or testing without the employee's informed consent.

HIV positive employees have the right to confidentiality and privacy regarding their health and HIV status and are under no obligation to inform co-workers or management should they have or contract the virus.

PMG Mining shall have in place and implement it's procedures and guidelines on HIV/AIDS.

Signed



Shirin Ismail
CEO
PMG Mining