ENVIRONMENTAL MANAGEMENT PROGRAMME:

PROPOSED UPGRADING OF AN EXISTING FILLING STATION ON STAND 1861 IN PHALABORWA, LIMPOPO PROVINCE

SEPTEMBER 2020

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ABBREVIATIONS

DWS	Department of Water and Sanitation
ECO	Environmental Control Officer
EMPR	Environmental Management Programme
LEDET	Limpopo Department of Economic Development, Environment and Tourism

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- BSc (Hons) Geography – *cum laude* (2004, University of Pretoria)
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- Courses: Project Management (2010, Ketler Presentations)
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1. OBJECTIVES OF THE ENVIRONMENTAL MANAGEMENT PROGRAMME

The purpose of the Environmental Management Programme (EMPR) is to provide measures for the mitigation and management of potential negative impacts and the optimisation of potential positive impacts that may be associated with the proposed project during the construction, operational and potential de-commissioning phases.

In addition to recommending measures for impact prevention, mitigation and/or management, this EMPR provides the structure according to which environmental monitoring must be done – not only over the short-term during construction, but also over the long term during the operational phase and potential decommissioning.

This EMPR must be read in conjunction with the Basic Assessment Report (BAR).

2. MANAGEMENT AND MITIGATION MEASURES: CONSTRUCTION PHASE

Responsibility: Impact prevention, mitigation and/or management measures during the construction phase are ultimately the responsibility of the applicant (Limpopo Fuels t/a Prima Phalaborwa), although the contractor will be responsible for the day-to-day implementation of the EMPR, and different components may be implemented by different sub-contractors, for instance erosion control measures will mostly be the responsibility of the earthworks contractor.

Timeframe: The measures specified in the following sections for minimisation and mitigation of construction-phase impacts will be limited to the construction phase, after which the recommended operational phase measures will become applicable.

Monitoring: Environmental compliance monitoring should be done by an independent Environmental Control Officer (ECO) on at least a monthly basis throughout the construction phase. Should any instances of non-compliance be found, this must be brought to the attention of the contractor or site foreman, along with recommended measures for rectifying the non-compliance.

Reporting: Monitoring reports, indicating the level of compliance with the specifications of the EMPR, must be submitted to the Limpopo Department of Economic Development, Environment and Tourism (LEDET) by the ECO at six-monthly intervals and at the end of the construction phase.

Table 1: Mitigation measures applicable to anticipated construction-phase impacts

ASPECT	ISSUE / IMPACT / RISK	OBJECTIVE	RECOMMENDED MITIGATION MEASURES	MONITORING	RESPONSIBILITY & REPORTING
1. Soils					
1.1. Soil erosion	Earthworks will make the site susceptible to soil erosion in case of rains during the period that bare soil is exposed.	1.1.1. Limit the risk of soil erosion.	The construction period should be limited to the shortest practicable timeframe so as to limit the period that the site is bare and susceptible to construction.	Daily visual monitoring by contractor.	Erosion prevention is the responsibility of the contractor.
			Storm water should be directed away from the exposed area for the duration of construction.	Monthly visual monitoring by ECO.	Reporting by ECO to LEDET in six-monthly compliance monitoring report.
			Soil stockpiles (if any) must <u>not</u> be placed in the natural flow path of storm water and must be protected from possible erosion, e.g. through covering of the stockpiles with tarpaulin or hessian, and limiting the height and angle of the stockpile. Soil stockpiles should not exceed 2 m in height.		
		1.1.2. Effectively remediate erosion if it does take place.	Should any signs of erosion be found, remedial action such as backfilling, compaction and re-vegetation should be taken immediately to avoid exacerbation of the erosion.	Monthly visual monitoring by ECO during remediation of erosion.	Responsibility: contractor.
			Any erosion channel(s) that may develop should be backfilled and compacted as soon as possible, and the area(s) restored to a proper condition. The contractor should ensure that cleared areas are effectively stabilised to prevent and control erosion.		Reporting by ECO to LEDET in six-monthly compliance monitoring report.
			It is the responsibility of the contractor to ensure that cleared areas are effectively stabilised to minimise erosion.		

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1.2.Soil contamination.	Possible contamination of soil by wastewater during construction	1.2.1. Prevent infiltration of sewage into soil.	No pit latrines are anticipated to be required on the site. Workers must make use of Prima Phalaborwa facilities, or alternatively must be provided with temporary toilets linked to the existing sewerage system which serves Prima Phalaborwa.	Daily visual monitoring by contractor. Monthly visual inspection by ECO for signs of spillage.	Responsibility for spillage and leakage prevention and treatment and for reporting it to the ECO lies with the contractor. The ECO will assess the situation and recommend suitable further action and report the incident to DWS and/or LEDET if needed.
		1.2.2 Prevent spillage of water potentially contaminated by cement, paint, turpentine, etc.	There are no surface water sources on the proposed development site. However, the Contractor must still prevent the discharge of any pollutants, such as cement, concrete, lime, chemicals, fuels or contaminated water which might infiltrate into the ground, resulting in deterioration of groundwater quality.		
			Mixing of cement must take place on an impermeable surface (e.g. concrete slab) which should preferably be bunded.		
			Potentially contaminated water may not be allowed to flow into the storm water drainage system or to infiltrate into the soil.		
		1.2.3. Efficiently respond to any spillage (e.g. oil, lubricants and fuel)	In case of any spillage, the ECO must be informed so that he/she can investigate the incident and recommend appropriate mitigation measures.	Visual inspection by ECO upon receiving notification from contractor. Soil sampling (upslope and downslope of spillage) and lab	
			Any significant spillage must be reported to the Department of Water and Sanitation (DWS), who may need to conduct a site visit to determine the significance of the spillage and to recommend mitigation measures. The incident must also be reported to the Limpopo Department of Economic		

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			Development, Environment and Tourism (LEDET) by the ECO. Appropriate measures must be implemented to prevent a recurrence of a spillage event.	analysis in case of spillage. Sampling directly after the incident and again at intervals as prescribed by LEDET / DWS	
2. Water					
2.1. Water quality	Possible leakage or spillage of fuel or oil from construction vehicles, during construction phase, or contamination of water by runoff of contaminated storm water containing construction-related substances such as cement or paint.	2.1.1. Prevent spillage of water contaminated by cement, etc.	Refer to 1.2.1.	Refer to 1.2.1.	Refer to 1.2.1.
		2.1.2. Efficiently respond to any spillage	Refer to 1. 2.3	Refer to 1.2.2.	Refer to 1.2.2.
2.2. Storm water	Storm water may cause soil erosion on cleared construction site.	2.2.1. Minimize water-related soil erosion	If possible, storm water should be channelled away from the exposed area for the duration of construction.	Refer to 1.1.1.	Refer to 1.1.1.
4. Air quality					
4.1. Air quality	Possible air pollution in the form of emissions from construction vehicles and equipment.	4.1.1. Limit air pollution	It must be ensured that all vehicles entering the site and machinery used in construction activities are in good working order to prevent unnecessary emissions.	Daily visual monitoring by contractor.	Responsibility: Contractor.

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			Vehicles should not be allowed to idle for unnecessarily long periods of time.	Monthly visual inspection by ECO.	Incidents or transgressions to be reported to ECO by contractor. Reporting by ECO to LEDET in six-monthly compliance monitoring report.
	Potentially high dust levels during earthworks and site establishment.	4.1.2. Limit levels of airborne dust	If necessary, exposed soil must be watered down at regular intervals to reduce levels of air-borne dust.		
			The contractor must take all reasonable measures to minimise the generation of dust resulting from construction activities.		
			Where possible, soil stockpiles (if any) should be located in sheltered areas where they are not exposed to the erosive effects of the wind. Soil stockpiles should furthermore be covered if possible (e.g. hessian cover or tarpaulin).		
			All exposed surfaces shall be re-vegetated or paved as soon as is practically possible after construction.		
5. Waste management					
5.1. Solid waste management	General solid waste generated at the construction site must be disposed of at a licensed disposal site.	5.1.1. Safely dispose of all solid waste.	All solid waste must be disposed of at a licensed landfill site.	Monthly inspection by ECO.	Responsibility: Contractor. Waste disposal location & method) to be reported to ECO by contractor. Reporting by ECO to LEDET in six-monthly
			Waste may <u>not</u> be dumped on or near the site, <u>nor</u> may it be burned or buried.		
			In the event of any hazardous waste being generated, this may <u>not</u> be disposed of with the general waste, but rather must be collected and disposed of by suitably licensed hazardous waste contractors.		

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					compliance monitoring report.
		5.1.2. Provide sufficient refuse bins and discourage littering.	Sufficient refuse bins are to be provided across the construction area for disposal of general solid waste.	Monthly visual inspection by ECO.	Responsibility: Contractor. Reporting by ECO to LEDET in six-monthly compliance monitoring report.
			Refuse bins must be emptied regularly.		
			Workers must be instructed as to the importance of not littering.		
			Litter, such as there may be, must be picked up on a daily basis and disposed of in the bins provided.		
6. Visual impacts					
6.1. Visual impact of construction site	A construction site may present a negative visual impact due to a site that might not be neat, etc.	6.1.1. The construction site must be kept as neat and tidy as possible.	Construction workers should be alerted to the importance of not littering. Apart from the potential environmental impacts of littering, it is unsightly and has a negative visual impact.	Monthly visual inspection by ECO.	Responsibility: Contractor. Reporting by ECO to LEDET in six-monthly compliance monitoring report.
			Sufficient waste bins must be provided onsite and must be emptied regularly. Bins should be secured to prevent them falling over and should be fitted with a closing mechanism to prevent the contents from blowing out.		
			Litter must be picked up as and when necessary.		
			Any building rubble should not be allowed to accumulate onsite but must at regular intervals be removed to a licensed landfill site or other licensed		

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			disposal site, or to sites where it may be used as fill in construction.		
7. Noise					
7.1. Noise caused by construction activities	Construction-related noise is expected to relate mostly to construction vehicles and machinery involved in earthworks and delivery of materials.	7.1.1. Minimize disturbance to neighbours.	Construction activities should only take place during daylight hours and where possible only during normal working hours (08:00 to 17:00 Monday to Friday and 08:00 to 13:00 Saturdays).	Monthly monitoring by ECO.	Responsibility: Contractor. Reporting by ECO to LEDET in six-monthly compliance monitoring report.
			Should noisy activities need to take place outside of accepted normal working hours, neighbouring inhabitants must be notified of this at least 24 hours prior to these activities taking place.		
			No blasting is anticipated to be required for this site.		
			Any complaints about noise must be attended to in a reasonable manner and the ECO informed of the complaint.		
			A complaints register should be maintained, in which any complaints regarding noise are noted.		
8. Socio-economic aspects					
8.1. Job creation and economic benefit to local community	Temporary employment opportunities are anticipated to be created during construction, both directly (construction workers) and indirectly (suppliers, service providers, informal traders alongside site).	Maximise local employment and economic benefit.	Where possible, construction workers as well as support personnel such as security guards are to be sourced from the local community (Phalaborwa and surrounding area).	Monthly monitoring by ECO.	Responsibility: Contractor. Reporting by ECO to LEDET in six-monthly compliance monitoring report.
			Construction materials, as well as services required during the construction process, should where possible, be sourced from the local area, within 50km of the site, in order to support the local economy and		

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			to reduce the environmental implications of long-distance transport of construction materials.		
8.2. Security	Risk of criminal elements being attracted to the site or construction workers becoming rowdy and violent.	Limit trespassing or crime.	No fire-arms to be allowed onsite. No alcohol to be allowed onsite. No site camp is anticipated to be established, and no workers will spend the night onsite. Only workers employed on the site may be allowed onto the site and particularly into the construction camp (if any). No friends or other associates of workers may loiter on the site, enter the camp or spend the night onsite.	Monthly monitoring by ECO.	Responsibility: Contractor. Reporting by ECO to LEDET in six-monthly compliance monitoring report.
9. Health and Safety					
9.1. Fire	Construction activities pose a risk of fire, particularly during "hot" activities such as welding, refuelling of equipment / machinery, and if there are open fires (for heating / cooking)	9.1.1. Prevent occurrence of fire.	Extreme caution should be exercised where open flames are used and/or where there is the potential for sparks, such as in the case of blow torches. These activities should only take place in designated areas which are clear of vegetation and other flammable material. Smoking to be restricted to designated smoking areas situated away from flammable materials. No open fires allowed on the site.	Daily visual monitoring by contractor. Monthly visual inspection by ECO.	Responsibility: Contractor. Incidents to be reported to ECO by contractor Reporting by ECO to LEDET in six-monthly compliance monitoring report.
			Emergency numbers (e.g. fire station, doctor, ambulance service and local hospital) must be		Responsibility: Contractor.

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		9.1.2. Effectively and efficiently respond to fire if it does occur.	posted in a highly visible location at the site as well as being available in the safety file in the site office.	Monthly inspection by ECO.	Reporting by ECO to LEDET in six-monthly compliance monitoring report
			Adequate firefighting equipment must always be available at the site during the construction phase. Such equipment must be clearly visible and easily accessible. Equipment must be available in all areas where construction is taking place as well as in any construction camps and cooking areas.		
			It must be ensured that fire-fighting equipment is in good order.		
			At least one person trained in the use of the fire extinguishing equipment must always be onsite.		
			If a site / construction camp is established, the camp must be situated in a position with a low fire risk, e.g. not close to any highly flammable substances (e.g. fuel) nor close to large amounts of dry vegetation, as activities will take place in the camp which may pose a fire hazard, e.g. workers spending the night onsite will use this camp to make fires for cooking and/or heating, and this will most likely also be the designated smoking area (safe for smoking).		
9.2. Health and Safety	Workers may be injured onsite during construction.	9.2.1. Apply security measures and ensure that the specifications of the Occupational Health and Safety Act (1993) are adhered to.	The site must be fenced off and access restricted to those involved in construction. Unauthorized persons may be accidentally injured or may cause damage to the site, as they are not aware of the EMP and other relevant documents, e.g. in terms of safety.	Monthly inspection by ECO.	Responsibility: Contractor. Reporting by ECO to LEDET in six-

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			A first-aid kit should always be available and readily accessible onsite. At least one person trained in basic first aid should always be onsite when construction is taking place, in case of an accident during construction activities.		monthly compliance
			Workers may not be forced to do dangerous work.		
			Any relevant necessary safety clothing / equipment must be provided to workers.		
			Any trenches or holes that cannot be filled in directly, must be clearly cordoned off by means of danger tape (or similar) to reduce the risk of accident.		
			Any relevant specifications forming part of the Occupational Health and Safety Act must be complied with.		
10. Traffic					
10.1. Traffic disruption	Slow-moving construction-related vehicles may disrupt traffic and pose a risk of road accidents.	10.1.1. Minimize disruption of traffic by construction-related activities.	As far as possible, heavy vehicles associated with construction should not travel to and from the site during peak times (07:30 – 08:30 and 16:30 to 17:30), to minimise impacts on traffic.	Monthly visual inspection by ECO.	Responsibility: Contractor.
			Vehicles associated with construction should as far as possible not be allowed to obstruct the road. They should not stop in the road (wholly or partially) but rather pull off the road or park on the site.		Reporting by ECO to LEDET in six-monthly compliance
11. Construction camp – not applicable					

3. MANAGEMENT AND MITIGATION MEASURES: OPERATIONAL PHASE

Responsibility: Responsibility for impact prevention, mitigation and/or management measures during the operational phase rests with the EA holder (Limpopo Fuels t/a Prima Phalaborwa).

Timeframe: The measures specified in the following sections for minimisation and mitigation of operational-phase impacts will be applicable for the entire operational lifetime of the development.

Monitoring: It is advisable that environmental compliance be monitored on an annual basis, although this is not a legal requirement.

It would be advisable that the EMPR be revisited at intervals of 5 years or less to ensure that changes in site conditions or operation are addressed, as well as to incorporate any new or amended legislation that may be applicable.

Table 2: Mitigation measures applicable to anticipated operational-phase impacts

ASPECT	ISSUE / IMPACT / RISK	OBJECTIVE	MITIGATION MEASURES	MONITORING	RESPONSIBILITY & REPORTING
1. Water					
1.1. Water quality	Possible leakage, accidental spillage or overfilling of fuel tanks may result in pollution of the groundwater resource.	1.1.1. Limit the risk of spillage, leakage and overfilling and prevent infiltration of contaminated storm water	Groundwater collecting around the underground fuel tanks (if any) must be pumped out.	Daily visual inspection of leakage, spillage or overfilling of fuel tanks by the facility manager Daily product recon to detect product losses 6-monthly groundwater sampling upslope & downslope of facility & lab analysis for BTEX	Responsibility: filling station manager. In case of significant spill or leak, report the incident to LEDET, DWS, BPM and/or the Mopani District Disaster Management Centre. Depending on the scale of the spill or leak, it may also be necessary to inform downslope occupants or water users.
			Secondary containment features must be installed around the filler points and on top of the tanks. These units should be sealed and will facilitate the recovery of product in the event of an overfill or spill.		
			A leak will be detected immediately by means of reconciliation of delivery and use/sales.		
			Monitoring wells (installed as per SABS 089-3 regulations) should be installed with the tanks serve as an early warning system.		
			Tanks must be fitted with on-line leak detection, for purposes of pro-actively detecting any potential product loss.		
			Leaks are also detected by means of visual inspection, smell and record keeping of fuel volumes.		
			Water finding tests must be done on a daily basis, before and after fuel delivery, and fuel loss or gain reported in order to detect any leakage.		
			The forecourt will be covered by an impermeable reinforced concrete slab, preventing infiltration of spilled oil or fuel into the soil.		
			Storm water from the forecourt will be channelled into catch pits, from where it go to an oil separator / grease		

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			trap. Water entering the storm water drainage system will therefore be clear.		
			Water used in extinguishing fires may not be allowed to enter the storm water drainage system, as it may be contaminated. Such fire water must be stored for safe disposal by a suitable firm.		
			Oil separator to be inspected and cleaned weekly to ensure continued efficient functioning.		
			Filter and dip manholes must be clear of fuel and water. If not, there might be a leakage which must be investigated.		
			During fuel delivery, wheel chocks must be placed in front of the delivery truck's wheels to prevent it rolling away and risking crash or spillage.		
			Valves must be closed and hoses properly drained before being disconnected from the filler, and the filler caps properly fitted and locked after delivery		
		1.1.2. Respond appropriately in case of a spill.	"Spill sorb" kits must always be available onsite for cleaning up minor spills.		
			Spilled material must be contained as best as possible.		
			Small spills: On hard surfaces, the spilled product should be covered and adsorbed with biodegradable absorbent materials. Soil may be used in the absence of other suitable materials. Scoop up material and place in a sealed, liquid-proof container for disposal by hazardous waste contractors.		

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			Spills on soil would require the determination of the lateral and vertical extent of the contamination and then based on the risk that the contamination pose to the receiving environment, remedial actions will be implemented.		
			Large spills: Dike spilled material or otherwise contain material to ensure runoff does not reach a waterway or storm water drainage infrastructure. Place spilled material in an appropriate container for disposal		
			Avoid dispersal of any spilled material and runoff and contact with soil, waterways, drains and sewers.		
			Should there be any significant loss of containment from fuel tanks, or spillage during filling up of tanks, DWS, LEDET, BPM and the Mopani District Disaster Management Centre (DMC) must be notified.		
			Remedial action must take place as soon as possible after spillage / leakage. Remediation must take place under the supervision of a suitable expert and must be tailored according to the type, scale and location of the spill or leak.		
			Groundwater samples must be taken upslope and downslope from the spill site and analysed by a suitably accredited laboratory for BTEX to determine whether any contamination of the groundwater resource has taken place. The results of the sampling must be submitted to DWS, LEDET, BPM and Mopani DMC		

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			along with a report on the remedial measures undertaken.		
			Records must be kept of any and all spillage / leakage events and must be made available for scrutiny by authorities upon request.		
1.2. Water use	The site is serviced by municipal water. The expansion of the filling station is anticipated to place additional strain on the water supply.	1.2.1. Minimize the volume of water used for and by the filling station	Low-flow taps and water fixtures should be installed in ablution facilities.	Regular visual monitoring of water usage and leaks by the facility manager	Responsibility: facility manager. No reporting required.
			Pavement should be cleaned through sweeping, not through hosing down these areas.		
			Leaking taps must be fixed as soon as possible to avoid unnecessary wastage of water.		
2. Visual Impacts					
2.1. Daytime visual impacts	Upgrading of the old filling station is anticipated to improve its visual impact; it is likely to look better.	2.1.1. Present an aesthetically pleasing facility	Discourage littering	No monitoring required.	No reporting required
			Perform regular maintenance on structures, paving, etc, to prevent unsightly dilapidation.		
2.2 Night-time visual impacts	Lights from the filling station will contribute to the glow of light that intrudes upon the night-time darkness.	2.2.1. Minimize light pollution.	Outdoor security lighting should be kept to a minimum and directed downward at the area that needs to be lit, to minimise upward and outward light pollution.	No monitoring required.	No reporting required.
			Unnecessary lights must be turned off at night.		
3. Fire/ explosion					
3.1 Explosion or fire	The risk exists of sparks triggering an explosion and/or fire,	3.1.1 Firefighting equipment and protection	An emergency response plan must be prepared before commissioning of the filling station, and all staff trained therein.	Regular visual inspection of safety signage	Responsibility: facility manager.

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	as petroleum and diesel are flammable		Ignition sources (e.g. lit cigarettes) must be kept away from fuel tanks or pumps at all times.	and operations to be conducted by facility manager.	No reporting required.
			Signs must be affixed in prominent, highly visible positions warning customers not to smoke, light matches / lighters or use cell phones near the fuel pumps.		
			All electric equipment within 6m of the pumps or tanks must be flame-proof.		
			Relevant warning signs must be affixed at tanks and pumps (refer to relevant Safety Data Sheets for list and examples of signs to be put up).		
			Sufficient fire extinguishers must be available at the filling station at all times and must be placed in highly visible, easily accessible positions.		
			Fire fighting equipment must be kept in the correct positions, e.g. CO_2 for electrics, dry powder for forecourt).		
			Fire fighting equipment must be serviced at least every year and the last service date displayed on the equipment.		
			Fire fighting equipment must be inspected monthly, and the associated register completed.		
			All staff must be trained in basic firefighting and the use of the fire extinguishers.		
			Fire drills must be conducted at least once annually.		
			An emergency stop switch must be in place to isolate the forecourt.		

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			Staff must know how and when to use the emergency stop switch.		
			A fireman's switch must be in place for all neon / high-voltage fittings.		
			Certificates of compliance must be available for all electrical work, including new and additions to existing installation on site.		
			Portable electrical tools and equipment must be checked monthly and inspection results recorded in a register.		
			Compressor cage must be kept free of combustible material.		
			Liquid Petroleum Gas (LPG) storage cage must be well-ventilated and must be located at least 3m away from drains, manholes, basement or any other areas in which leaking gas could accumulate.		
			A dry powder fire extinguisher must be available near the LPG storage cage.		
			Gas cylinders must be stored upright in an approved cage, away from any heat or ignition sources and with appropriate safety signage on the cage.		
			Fire extinguishing equipment must be in place close to the fuel offloading point		
			During fuel delivery, wheel chocks must be placed in front of the delivery truck's wheels to prevent it rolling away and risking crash or spillage.		

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			If illuminating paraffin is kept onsite, it must be stored in a segregated approved area which is cool and well-ventilated.		
			For illuminating paraffin: To avoid fire or explosion, dissipate static electricity during transfer by grounding and bonding containers and equipment before transferring material. Use explosion-proof electrical (ventilating, lighting and material handling) equipment.		
		5.1.2 Effectively and efficiently respond to explosion or fire if it does occur.	In case of fire, use water spray (fog), foam, dry chemicals, or CO_2.		
			If illuminating paraffin is kept onsite, please note that both the liquid and vapour are flammable. Vapour may cause flash fire. Vapours may accumulate in low or confined areas, travel considerable distance to source of ignition and flash back. Runoff to sewer may create fire or explosion hazard.		
			Illuminating paraffin is toxic to aquatic organisms. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain		
			Immediately contact emergency personnel.		
			Keep unnecessary personnel away.		
			Use suitable protective equipment.		
			Emergency numbers (e.g. fire station, doctor, ambulance, local hospital) must be posted in a highly visible location at the filling station, and the numbers		

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			must be checked from time to time to make sure that they are still correct.		
4.Health and Safety					
4.1. Health risk of exposure to hazardous substances.	Human contact with hazardous substances (inhalation, ingestion, skin contact or eye contact) can lead to injury or illness	4.1.1. Minimize exposure of staff or customers to hazardous substances or fumes.	Vents from fuel tanks must be placed in a safe place and must comply with SANS standards. Vents pipes to be installed at a level of 3.8m above ground to limit the risk to human health of possible fugitive emissions.	Regular visual inspection by facility manager.	Responsibility: facility manager. No reporting required.
			Areas where refilling of tanks takes place must be in an open, well-ventilated area away from the roofed area where customers fill up with fuel.		
			Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapours below their respective occupational exposure limits.		
			Ensure that eyewash stations and safety showers are available onsite.		
			Relevant PPE must be supplied to employees, including chemical-resistant, impervious gloves, safety eyewear, protective clothing, etc as may be required for particular tasks.		
			Relevant warning signs must be affixed at tanks and pumps according to the products' Material Safety Data Sheets (MSDSs).		
			MSDSs must be stored with the relevant products for ease of reference.		
			Staff must be briefed as to the importance of the MSDSs and aware of the steps to be taken in terms of these documents.		

ASPECT	ISSUE / IMPACT / RISK	OBJECTIVE	MITIGATION MEASURES	MONITORING	RESPONSIBILITY & REPORTING
			LPG storage cage must be well-ventilated and must be located at least 3m away from drains, manholes, basement or any other areas in which leaking gas could accumulate.		
			There should be no foul odour after fuel delivery; an odour may indicate a spillage or leakage		
		4.1.2. Effectively and efficiently respond to any medical emergency situation (general).	A sign with the basic medical emergency response steps and medical emergency numbers (e.g. ambulance, local doctors and nearest hospital) must be in a highly visible position.	Visual inspection by the facility manager.	Responsibility: facility manager. No reporting required.
			Medical / first aid recommendations specific to the products stored and handled onsite must be put up in a clearly visible position, and staff should be made aware of these. This must include the procedures to be followed in case of inhalation, ingestion or skin contact with diesel, petrol or paraffin.		
			A complete first aid kit, which complies with the Occupational Health and Safety Act (1993) must be available in the filling station manager's office. Its contents must be checked regularly to ensure that it remains fully stocked and that products have not expired.		
			At least one staff member trained in basic first aid (and with a valid first aid certificate) must be onsite at all times (during every shift) in order to be able to provide basic assistance in case of a medical emergency.		

ASPECT	ISSUE / IMPACT / RISK	OBJECTIVE	MITIGATION MEASURES	MONITORING	RESPONSIBILITY & REPORTING
			New staff members must be inducted as to the steps to be taken in case of injury or illness.		
4.3 Occupational Health and Safety Act	The conditions of the Occupational Health and Safety Act (OHSA, No 85 of 1993) must be complied with	4.3.1 Staff must be aware of their rights in terms of OHSA	A copy of the OHSA should be affixed in a visible position at the filling station.	Monitoring by the facility manager	Responsibility: Facility manager. No reporting required
		4.3.2 Compliance with OHSA must be ensured.	Occupational Health and Safety Audits should be undertaken at regular intervals.		
5. Air Quality					
5.1 Potential air pollution	Fumes from storage tanks and dispensers, and exhaust fumes from waiting vehicles, may lead to illness to those who are exposed to it. It may also contribute to photochemical smog.	5.1.1 Minimize fugitive emissions	There must be a liquid-tight connection between the fill pipe and transfer hose during refilling of storage tanks by tankers	No monitoring required	No reporting required
			A vapour transfer system should be in place (either a vapour-tight vapour return line or a coupling on the vapour return line that makes a vapour-tight connection with the fitting on the delivery tanker's vapour return hose).		
			If storage tanks are to be filled by gravity, an automatic stopper must be provided to close off the flow when fuel in the tank reaches a certain level, in order to prevent overflow.		
			Underground storage tanks must be fitted with vapour-tight caps.		
6. Noise					

ASPECT	ISSUE / IMPACT / RISK	OBJECTIVE	MITIGATION MEASURES	MONITORING	RESPONSIBILITY & REPORTING
6.1 Noise caused by the activities at the filling station	The noise of vehicles visiting the filling station, music playing from vehicles, and the voices of customers all contribute to noise associated with the filling station.	6.1.1 Minimize disturbance to neighbours and nearby shopping center.	During the night-time (from 20:00 to 07:00) no loud music may be played at the filling station. If customers play loud music from their vehicles during this time or are generally rowdy, staff should address them and request them to turn down the volume.	Facility manager must follow up any complaints	Responsibility: facility manager. No reporting required.
			Delivery of fuel by tankers should, as far as possible, take place only by day.		
7. Electricity use					
7.1 Electricity usage	Expansion may place additional pressure on the electricity supply infrastructure.	7.1.1. Minimize electricity usage.	Unnecessary lights should be turned off at night.	Regular inspection by the facility manager.	Responsibility: facility manager. No reporting required.
			LED lighting is preferred due to lower electricity use as compared to incandescent bulbs.		
9.2 Security of electricity supply	Power interruptions may cause inconvenience to customers	9.2.1 Ensure constant electricity supply.	A stand-by electricity generator should be available at the filling station to provide power during power outages.	Regular inspection by facility manager.	Responsibility: facility manager. No reporting required.
9. Waste management					
9.1 Solid waste management	General solid waste generated at the filling station needs to be safely disposed of.	9.1.1 Safely dispose of all solid waste.	All solid waste must be temporarily kept in suitable bins in the refuse yard (in accordance with relevant municipal by-law) until it is collected by the municipal waste collection service for disposal at the local landfill site.	Regular visual inspection of waste handling and storage by facility manager.	Responsibility: Facility Manager No reporting required.
			Waste may not be dumped on or near the site.		
			Hazardous waste may not be disposed of on any site, including the municipal landfill site. If hazardous waste		

ASPECT	ISSUE / IMPACT / RISK	OBJECTIVE	MITIGATION MEASURES	MONITORING	RESPONSIBILITY & REPORTING
			is generated, this must be collected and disposed of by suitably licensed hazardous waste contractors.		
		9.1.2 Minimize the volume of solid waste that needs to be disposed of at the landfill site.	Solid waste should, as far as possible, be sorted at source into recyclable and non-recyclable waste, and arrangements made with a recycling contractor to collect the recyclable waste, whilst non-recyclable waste will be collected through the municipal refuse removal service.		
		9.1.3 Provide sufficient refuse bins and discourage littering.	A sufficient number of waste bins must be provided in the public areas of the filling station as well as in sections used only by staff. These must be clearly visible and marked to make them easy to use.		
			Bins must be emptied regularly to prevent them overflowing as well as to prevent unpleasant smells from emanating from the bins.		
			Signs should be put up to discourage littering.		

4. MANAGEMENT AND MITIGATION MEASURES: DE-COMMISSIONING PHASE

It is not anticipated that the filling station will be decommissioned within the foreseeable future. Should the filling station however be decommissioned, the measures recommended in the sections below (as well as other measures which may be recommended at that stage) will have to be implemented all through the process until total rehabilitation of the site has been completed.

In the event of decommissioning, the EA holder must appoint an environmental consultant to advise on applicable legislation and appropriate measures for impact mitigation and management. Legislation in place at the time of decommissioning must be complied with. This will include environmental and water-related legislation, occupational health and safety legislation, and any other applicable legislation, by-laws and standards.

If decommissioning is planned, a detailed decommissioning EMPR must be compiled, taking into account the conditions on and around the site at that time, as well as applicable legislation. The following sections contain generic measures that will need to be adhered to, but specific measures will have to be developed at that time to address any issues or conditions that may not be present at this stage.

Table 3: Impact mitigation and management measures to be implemented during the decommissioning phase

ASPECT	ISSUE / IMPACT / RISK	OBJECTIVE	RECOMMENDED MITIGATION MEASURES	MONITORING	RESPONSIBILITY & REPORTING
1. Soils					
1.1. Soil erosion	If structures are to be demolished and cleared, the site will be susceptible to soil erosion in case of rains during the period that bare soil is exposed.	1.1.1. Limit the risk of soil erosion.	If structures are to be demolished and the site cleared, it is recommended that this be undertaken during the drier winter season.	Monthly visual inspection by ECO	Responsibility: Contractor Six-monthly reporting by ECO in compliance monitoring report.
			Storm water should be channelled away from the exposed area for the duration of the decommissioning phase.		
		1.1.2. Effectively remediate erosion if it does take place.	Should any signs of erosion be found, remedial action such as backfilling, compaction and re-vegetation should be taken immediately to avoid exacerbation of the erosion.	Monthly visual inspection by ECO	Responsibility: Contractor Six-monthly reporting by ECO in compliance monitoring report.
			Any erosion channel(s) that may develop should be backfilled and compacted as soon as possible, and the area(s) restored to a proper condition. The contractor should ensure that cleared areas are effectively stabilised to prevent and control erosion.		
			The site must be re-vegetated directly after site clearing, using locally indigenous species.		
1.2. Soil contamination	Possible contamination of soil by wastewater (generated by workers onsite), cement, etc.	1.2.1. Prevent spillage of fuel.	Fuel storage tanks must be pumped out completely before they are removed from the ground.	Daily visual inspection by onsite safety officer. Monthly visual inspection by ECO.	Responsibility: Contractor. Details on methods of storage and handling of hazardous
			The emptied tank and pipe work must be removed carefully, under the supervision of a specialist in this field who can provide technical guidance		
			It must be ensured that there is no residual contamination of the site, e.g. petrol or diesel contamination of soil or water.		

ASPECT	ISSUE / IMPACT / RISK	OBJECTIVE	RECOMMENDED MITIGATION MEASURES	MONITORING	RESPONSIBILITY & REPORTING
			Once the tanks have been removed, samples of soil and groundwater should be taken to check for subsurface contamination. The samples should be analysed for the parameters appropriate to the type of product stored (petrol and diesel). Should soil or groundwater contamination be found, additional investigations (possibly including a risk assessment) should be carried out to determine the need for remediation (extent and method of remediation required).		substances and on ablution and wastewater disposal to be reported to ECO by contractor.
		1.2.2. Safely dispose of possibly contaminated waste or soil	Tanks and pipework used to store hydrocarbons or chemicals, together with residual product, wastewater, sludge and decommissioning fill should be regarded as hazardous waste, and must be disposed of by suitably licensed hazardous waste contractors at a hazardous waste disposal site. It may not be disposed of with general waste at the local municipal landfill site or at any other dumping site not geared for hazardous waste.	In case of a serious spillage or leakage, soil samples must be taken for laboratory analysis to determine the extent of contamination. After removal or onsite treatment of soil, samples must be taken again to confirm that no	Contractor must appoint a suitably licensed contractor for transportation. Safe disposal certificate to be submitted to ECO by contractor. Results of soil sampling to be reported to LEDET by ECO.

ASPECT	ISSUE / IMPACT / RISK	OBJECTIVE	RECOMMENDED MITIGATION MEASURES	MONITORING	RESPONSIBILITY & REPORTING
				contamination remains.	
		1.2.3. Prevent infiltration of sewage into soil.	If waterborne sewerage is not available, workers must be provided with portable chemical toilets which form a sealed, closed system. Sanitation facilities must be provided at a ratio of 1 toilet per 15 workers, and the contents must be disposed of at a licensed sewerage works.	Visual inspection by ECO.	Responsibility: Contractor Reporting: ECO to report to LEDET in six-monthly monitoring report.
			Sufficient washing facilities must be provided for workers. Wash areas must be placed and erected in such a manner that the surrounding areas, including soil and groundwater, are not polluted.		
		1.2.4 Efficiently respond to any spillage	In case of any spillage, the ECO must be informed so that he/she can investigate the incident and recommend appropriate mitigation measures.	Groundwater sampling (upslope & downslope of site) & lab analysis.	Responsibility: Contractor Reporting: Any significant spillage must be reported to DWS, LEDET, BPM & Mopani DMC.
			Groundwater sampling upslope and downslope of the spill site and laboratory analysis for BTEX in case of hydrocarbon spillage, or other relevant substances in case of a different type of product being spilled, e.g. sewerage.		
		1.2.5 If tanks and other equipment are only temporarily decommissioned and left intact,	It is <u>not</u> recommended that tanks and/or pipe work be left underground if the filling station is temporarily decommissioned. Even though tanks are made safe, the possibility exists that they will be forgotten and not removed if the site fails to be reinstated at a later stage. They will then pose a long-term pollution risk,	Visual inspection by ECO upon receiving notification from contractor. Soil sampling	Responsibility for spillage and leakage prevention and treatment and for reporting it to the

ASPECT	ISSUE / IMPACT / RISK	OBJECTIVE	RECOMMENDED MITIGATION MEASURES	MONITORING	RESPONSIBILITY & REPORTING
		they must be made safe to avoid soil or groundwater pollution	exacerbated by the fact that they might not be monitored (for leakage / spillage) because of the site not being in use anymore.	(upslope and downslope of spillage) and lab analysis in case of spillage. Sampling directly after the incident and again at intervals as prescribed by LEDET / DWS	ECO lies with the contractor. The ECO will assess the situation and recommend suitable further action and report the incident to DWS and/or LEDET if needed.
			If the filling station is decommissioned only temporarily and the tanks left intact, the tanks must be filled with water or with hydroscopic foam. In case of water, the water level must be checked regularly; any drop in the level in the tank might indicate a leakage, which must then be investigated further and sealed.		
			If fuel dispensers are left intact (only suitable for short-term decommissioning), they must be electronically isolated, all suction lines drained back and any flexible connectors disconnected. The dispenser suction entries should be plugged off and the suction and any vapour lines capped off in the under pump cavity. The dispenser should also be protected from vandalism.		
			The oil interceptor chamber must emptied by a suitably licensed hazardous waste contractor, and the chambers replenished with clean water.		
2. Water					
2.1. Water quality	Possible leakage or spillage of sewage from portable toilets during construction phase, or contamination of water by runoff containing construction-related	2.1.1. Prevent spillage of fuel.	Refer to 1.2.1.	Refer to 1.2.1.	Refer to 1.2.1.
		2.1.2. Safely dispose of possibly contaminated waste			

ASPECT	ISSUE / IMPACT / RISK	OBJECTIVE	RECOMMENDED MITIGATION MEASURES	MONITORING	RESPONSIBILITY & REPORTING
	substances such as cement or paint.	2.1.3. Prevent spillage of sewage.	Refer to 1.2.2.	Refer to 1.2.2.	Refer to 1.2.2.
		2.1.4. Efficiently respond to any spillage	Refer to 1.2.3.	Refer to 1.2.3.	Refer to 1.2.3.
2.2. Storm water	Storm water may cause soil erosion on cleared construction site.	2.2.1. Minimize water-related soil erosion	If possible, storm water should be channelled away from the exposed area for the duration of the decommissioning phase.	Refer to 1.1.1.	Refer to 1.1.1.
3. Flora and Fauna					
3.1. Rehabilitation of site	If the facilities are to be demolished and the site cleared, rehabilitation of the site will be required.	3.1.1. Rehabilitate the site to a state approximating the pre-development state or a condition similar to undeveloped areas nearby.	Prepare soil for re-vegetation, e.g. by removing potentially contaminated soil (for disposal at a suitable site), "ripping" compacted soil and adding organic material.	Weekly visual inspection by ECO during rehabilitation.	Responsibility: Contractor Methods, plant species, etc to be reported to ECO by contractor prior to commencement of rehabilitation.
			Re-establish locally indigenous vegetation under the guidance of an ecologist. Re-vegetation can take the form of seeding (or hydro-seeding) broad areas with a mix of indigenous grass seeds, and planting of individual indigenous trees and shrubs. Methods and timing of rehabilitation must be prescribed by an ecologist based on site conditions at the time, and species composition should be dictated by the vegetation communities in open areas in the vicinity.		
		3.1.2. Prevent colonisation by alien invasive species	No alien plant species may be established on the site during rehabilitation.	Visual inspection by ECO prior to commencement of eradication	Responsibility: Contractor
			Any alien vegetation on the site must be eradicated before seeding / planting of indigenous vegetation.		

ASPECT	ISSUE / IMPACT / RISK	OBJECTIVE	RECOMMENDED MITIGATION MEASURES	MONITORING	RESPONSIBILITY & REPORTING
			The site must be regularly monitored for re-growth of alien invasive species, and any new seedlings etc eradicated using methods appropriate for the particular species, whether mechanical, chemical or biological.	and after eradication.	Methods to be reported to ECO by contractor prior to commencement of eradication.
4. Waste management					
4.1. Solid waste management	Solid waste generated at the site must be disposed of at a suitably licensed disposal site.	4.1.1. Remove general solid waste to a licensed landfill site.	General solid waste must be disposed of at a licensed waste disposal site.	Monthly visual inspection by ECO. Contractor to provide confirmation to ECO regarding where waste is disposed of.	Contractor to provide confirmation to ECO regarding where waste is disposed of. Reporting to LEDET by ECO in six-monthly monitoring report.
			General rubble resulting from demolition (if structures are to be demolished) can be used as fill at nearby construction sites (if any), or otherwise disposed of at a licensed landfill site.		
			Waste may not be dumped on or near the site.		
			Waste must be removed at least once every 2 weeks.		
		4.1.2. Dispose of hazardous waste at a suitably licensed disposal site	Refer to 1.2.2.		
			Any soil that might be contaminated by fuel or other hazardous substances must be removed and disposed of at a hazardous waste disposal site by suitably licensed contractors. Contaminated soil may not be disposed of at the general landfill site.		
5. Health and Safety					
5.1. Fire	Demolition-related activities may pose a risk of fire, particularly during "hot" activities such as welding, refuelling of equipment / machinery, and if there are	5.1.1. Prevent occurrence of fire.	The electrical installation should be disconnected by an electrician who will apply the appropriate degree of disconnection (up to removal of the main intake box).	Continuous monitoring by onsite safety officer. Monthly inspections by ECO	Responsibility: Contractor. Report incidents to ECO and health & safety officer
			Extreme caution should be exercised where open flames are used and/or where there is the potential for sparks, such as in the case of blow torches. These activities		

ASPECT	ISSUE / IMPACT / RISK	OBJECTIVE	RECOMMENDED MITIGATION MEASURES	MONITORING	RESPONSIBILITY & REPORTING
	open fires (for heating / cooking)		should only take place in designated areas which are clear of vegetation and other flammable material.		
			Smoking to be restricted to designated smoking areas situated away from flammable materials.		
			No open fires allowed on the site.		
		5.1.2. Effectively and efficiently respond to fire if it does occur.	Emergency numbers (e.g. fire station, doctor, ambulance service and local hospital) must be posted in a highly visible location at the site as well as being available in the safety file in the site office (if any).	Continuous monitoring by onsite safety officer. Monthly inspections by ECO	Responsibility: Contractor. Report incidents to ECO and health & safety officer
			Adequate fire fighting equipment must be available at the site at all times during the decommissioning phase. Such equipment must be clearly visible and easily accessible. Equipment must be available in all areas where construction is taking place as well as in any construction camps and cooking areas.		
			It must be ensured that fire-fighting equipment is in good order.		
			At least one person trained in the use of the fire extinguishing equipment must be onsite at all times. If a site camp is established, the camp must be situated in a position with a low fire risk, e.g. not close to any highly flammable substances (e.g. fuel) nor close to large amounts of dry vegetation.		
5.2. Health and Safety	Workers may be injured onsite during construction.	5.2.1. Apply security measures and ensure that the specifications	A first-aid kit should be available and readily accessible onsite at all times. At least one person trained in basic first aid should be onsite at all times when work is taking place, in case of an accident during construction activities	Continuous monitoring by onsite safety officer. Monthly	Responsibility: Contractor.

ASPECT	ISSUE / IMPACT / RISK	OBJECTIVE	RECOMMENDED MITIGATION MEASURES	MONITORING	RESPONSIBILITY & REPORTING
		of the Occupational Health and Safety Act (1993) are adhered to.	Workers may not be forced to do dangerous work.	inspections by ECO	Report incidents to ECO and health & safety officer
			Any relevant necessary safety clothing / equipment must be provided to workers.		
			Any relevant specifications as part of the Occupational Health and Safety Act must be complied with.		
	During emptying or removal of fuel storage tanks or containers of other hazardous substances, workers may be exposed to these substances which may cause illness or injury.	5.2.2. Prevent exposure of workers to hazardous substances.	Removal of storage tanks must be overseen by an experienced and suitably qualified specialist.		
			All workers must wear relevant protective gear such as chemical-resistant gloves, goggles for eye protection, etc.		
		5.2.3. Provide appropriate care in case of contact	If inhaled, remove to fresh air.		
			If breathing is difficult, give oxygen.		
			If not breathing, give artificial respiration.		
			If swallowed, do NOT induce vomiting unless directed by medical personnel.		
			Never give anything by mouth to an unconscious person		
			In case of skin contact, immediately flush skin with plenty of water.		
			Remove contaminated clothing and shoes. Wash clothing before reuse. Thoroughly clean shoes before reuse.		
			In case of eye contact, immediately flush eyes with plenty of water for at least 15 minutes.		
			Get medical attention.		
5.3. Security	Risk of criminal elements being attracted to the site		No fire-arms to be allowed onsite.		
			No alcohol to be allowed onsite.		

ASPECT	ISSUE / IMPACT / RISK	OBJECTIVE	RECOMMENDED MITIGATION MEASURES	MONITORING	RESPONSIBILITY & REPORTING
		5.3.1. Limit criminality and violence.	Only workers employed on the site may be allowed onto the site and particularly into the construction camp (if any). No friends or other associates of workers may loiter on the site, enter the camp or spend the night onsite.		
6. Site camp					
6.1. **If** a site camp is established, bio-physical and socio-economic impacts may be associated with it	Socio-economic impacts.	6.1.1. Minimize negative socio-economic impacts that may be associated with construction camp.	Workers will not be allowed to remain onsite overnight, apart from those responsible for security.	Continuous monitoring by onsite safety officer. Monthly inspections by ECO	Responsibility: Contractor. Report incidents to ECO and health & safety officer
			No alcohol to be allowed in the camp.		
			No firearms to be allowed in the camp.		
			No loud music will be allowed within the camp.		
			Friends or relatives (or any other acquaintances) of workers will not be allowed into the site camp at any time.		
			The camp must be clearly fenced off and have a lockable gate in order to enforce entry control.		
	Bio-physical impacts.	6.1.2. Minimize negative bio-physical impacts that may be associated with construction camp.	The site is not affected by any drainage line or flood line, therefore there is no risk of the site camp being established within any 1:100 year flood line. .	ECO to approve site camp location prior to establishment. No further monitoring required.	Site selection is the contractor's responsibility, but the location must be approved by the ECO before camp establishment. No reporting required.
			The camp must be situated in a position with a low fire risk, e.g. not close to any highly flammable substances (e.g. fuel) nor close to large amounts of dry vegetation, as activities will take place in the camp which may pose a fire hazard, e.g. workers spending the night onsite will use this camp to make cooking and/or heating fires, and this will most likely also be the designated smoking area.		

5. ENVIRONMENTAL COMPLIANCE MONITORING

5.1. Environmental Control Officer and Monitoring

Environmental compliance during the construction phase is the responsibility of the EA holder, though the contractors and sub-contractors (during construction) and onsite staff (during operation) will be responsible for the day-to-day implementation of specific aspects of the EMPR. The EA holder must ensure that all relevant parties are supplied with copies of the approved EMPR as well as copies of the environmental authorisation issued by LEDET.

An Environmental Control Officer (ECO) must be appointed before commencement of construction / site preparation activities and must remain on the project for the duration of the construction phase in order to oversee the implementation of and compliance with the EMPR and any other environmental requirements, such as that which may be contained in the environmental authorisation. The ECO will be responsible for the following:

- Compiling six-monthly monitoring / compliance reports during the construction phase for submission to LEDET;
- Formulating, and overseeing the implementation of, remedial and/or management measures in case of negative impacts or environmental damage that may not have been anticipated and provided for in the EMPR. Such measures may need to be developed in consultation with relevant authorities, specialists or stakeholders, as the case may be.
- Providing guidance and assistance to all participants in implementing and complying with the EMPR.
- Keeping a permanent written and photographic record of activities during the construction phase, in particular (but not limited to) any instances of non-compliance.
- Maintaining a complaint register and an incident register, in which any complaints or incidents during the construction phase are noted along with a description of how the incidents or complaints were mitigated.
- Must be fully conversant with the contents of the BAR and this EMPR.
- Must be fully conversant with the environmental authorisation for the project and any conditions that may be stipulated therein, as well as any conditions contained in any other authorisations in place for the development.

The EMPR must be available at the site camp during the whole of the construction phase. If the development is to be decommissioned, a copy of the decommissioning EMPR must be available at the site office for the duration of this phase.

5.2. Compliance with the Environmental Management Programme

- All persons employed by the applicant or their sub-contractors must abide by the requirements of the EMPR and environmental authorisation. Any members of the construction, operation or maintenance workforce found to be in breach of any of the specifications contained within the EMPR may be ordered to leave the site and/or to pay a fine, but the EA holder remains ultimately responsible for activities undertaken on the site and for compliance with the EMPR.
- Complaints about irresponsible behaviour or actions that cause or may cause environmental damage or pollution must be reported to the ECO, who in turn will notify LEDET.

- The designated ECO is to keep an Environmental Register in which any and all environmental incidents, transgressions of the EMPR or authorisation and/or comments or complaints received from the public and affected parties will be recorded. The regular monitoring reports are also to form part of the Register. The Register must available for perusal by representatives of LEDET if necessary.
- The contractor or EA holder (to be agreed upon between the aforementioned two parties) shall be responsible for and shall bear the cost of any delays or corrective or remedial actions required as a result of non-compliance with the specifications and clauses of the EMPR.
- The EA holder or their contractors may not direct a person to undertake any activity which would cause them to breach the specifications contained within the EMPR.
- Should a contractor be in breach of any of the specifications contained in the EMPR, the EA holder must, in writing, instruct the responsible contractor regarding corrective and/or remedial action required, specify a timeframe for implementation of these actions, implement a penalty and/or indicate that work shall be suspended should non-compliance continue.

5.3. Environmental Awareness Plan

- At the outset of the construction phase, an environmental awareness plan should be presented to the lead contractor, with specific concentration on those aspects that directly affect the workers or in which workers will be directly involved.
- A copy of the construction-phase environmental awareness plan must be available onsite at all times during construction.
- In case of decommissioning, a decommissioning environmental awareness plan must be compiled by the ECO and presented to the lead contractor responsible for overseeing the decommissioning or destruction activities. An induction session must also be presented to the workers, and a copy of the environmental awareness plan must be available onsite at all times until decommissioning and site rehabilitation have been completed.