TM ENVIRONMENTAL CONSULTANTS (PTY) LTD

DRAFT ENVIRONMENTAL MANAGEMENT PROGRAMME

THE PROPOSED MUKWEVHO FILLING STATION AND ASSOCIATED INFRASTRUCTURE SITUATED AT TSHINO NESENGANI VILLAGE (NDIITWANI) ON PORTION OF PORTION 1 OF THE FARM SCHUYNSHOOGTE 29 LT, WITHIN THE JURISDICTION MAKHADO LOCAL MUNICIPALITY WITHIN VHEMBE DISTRICT, LIMPOPO PROVINCE.

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1. INTRODUCTION

1.1 Background

Mukwevho filling station is in the process of applying for environmental authorisation for the expansion of its fuel tank capacity and related business uses on Portion of portion 1 of the Farm Schuynshoogte 29 LT, within the jurisdiction Makhado Local Municipality under the jurisdiction of Vhembe District Municipality in Limpopo Province

The development implies the following:

RELEVANT ACTIVITY	DESCRIPTION OF EACH LISTED ACTIVITY
GNR 327, 07 April 2017 Listing Notice 1	Activity 14 The development and related operation of facilities or infrastructure, for the storage, or for the storage and handling, of a dangerous good, where such storage occurs in

As part of the Basic Assessment Report to be compiled and submitted in terms of the above referred to regulations, an Environmental Management Programme is being required.

Apart from being one of the requirements of the prescribed Basic Assessment Report, an Environmental Management Programme (EMPr) is a vital tool in ensuring that the environmental controls identified by an EIA are properly understood, clearly formulated and included in the construction specifications, and that its application can be monitored and that corrective action can be undertaken when necessary.

1.2 Terms of Reference

The purpose of an EMPr is defined in the Integrated Environmental Management (IEM) Guideline Series (Department of Environmental Affairs, 1992) as: "A plan that organizes and co-ordinates mitigation, rehabilitation and monitoring measures in order to guide the implementation of the proposal".

The objectives of this EMPr are thus to:

- Prescribe the practicable control methods to abate the environmental impacts associated with the construction process; and to
- Monitor and audit the performance of construction personnel in applying such controls.

In addition to the above, the 2014 EIA Regulations as amended (Appendix 4 of Regulation 326 of 7 April 2017) prescribe the following content for an EMP:

- Details of the person who prepared the EMP;
- The expertise of that person to prepare an EMP;
- Information on any proposed management or mitigation measures that will be taken to address the identified environmental impacts including environmental impacts or objectives in respect of:
  - Planning and design;
  - Pre-construction and construction activities;
  - Operation or undertaking of the activity;
  - Rehabilitation of the environment; and
  - Closure, where relevant.
- A detailed description of the aspects of the activity that are covered by the

draft EMP;

- An identification of the persons who will be responsible for the implementation of contemplated measures;
- Proposed mechanisms for monitoring compliance with and performance assessment against the EMP and reporting thereon;
- As far as reasonably practicable, measures to rehabilitate the environment affected by the undertaking of any listed activity or specified activity to its natural or predetermined state or to a land use which conforms to the generally acceptable principle of sustainable development, including, where appropriate, concurrent or progressive rehabilitation measures;
- A description of the manner in which it intends to:
    - Modify, remedy, control or stop any action, activity or process which causes pollution or environmental degradation;
    - Remedy the cause of pollution or degradation and migration of pollutants;
    - Comply with any prescribed environmental management standards or practices;
    - Comply with any applicable provisions of the Act regarding closure, where applicable;
    - Comply with any applicable provisions of the Act regarding financial provisions for rehabilitation, where applicable;
- Time periods within which the measures contemplated in the EMP must be implemented;
- The process for managing any environmental damage, pollution, pumping and treatment of extraneous water or ecological degradation as a result of undertaking a listed activity;
- An environmental awareness plan describing the manner in which:
    - The applicant intends to inform his or her employees of any environmental risk which may result from their work; and
    - Risks must be dealt with in order to avoid pollution or the degradation of the environment;
- Where appropriate, closure plans including closure objectives.

2. ENVIRONMENTAL POLICY AND LEGISLATION

2.1 Environmental Policy Statement

The policy statement that follows is formulated specifically to support the construction phase EMPr for the proposed construction of a fuel station and related infrastructure on the subject property. All construction personnel shall be required to commit themselves to the following policy:

- Adherence to the requirements of the construction EMP for the proposed activity;
- Management of all construction and associated activities so as to minimize the risk of pollution of ground and surface water, the air and the soil;
- Management of all construction and associated activities so as to minimize the nuisance and disruption to humans working or residing in, or commuting through the area;
- Adherence to the environmental legislation relevant to the location and nature of the work being conducted; and
- Compliance with the monitoring and auditing programs contained in the EMP, to ensure its accountable and transparent implementation.

2.2 Relevant Environmental Legislation

Cognizance shall be taken of, but will not be limited to the following legislation during the construction phase of the proposed development:

Title of legislation, policy or guideline	Applicability to the project	Administering authority	Date
The National Environmental	Basic Assessment application to GDARD	GDARD	1998

Occupational Health and Safety Act (Act 85 of 1993)	Compliance by construction personnel	DH	
The Subdivision of Agricultural Land Act (Act No. 70 of 70)	Property excluded from Act	DAFF	1970
The National Water Act (Act 36 of 1998)	Services provisioning	DWAS	1998

3. RESPONSIBILITY LINKAGES

Essentially, the primary responsibility for the implementation of the relevant impact management actions begins with the applicant / his appointed contractors, who shall nominate a project manager to assume this task within his or her portfolio. In practice, on site responsibility would typically lie with an engineer who would also assume the role of project manager.

With the Project Manager (PM) and Environmental Control Officer (ECO) roles being particularly important, these are now described in more detail.

Individuals or persons will only be linked to positions and responsibilities at a later stage. This is the case since approvals still need to be obtained and contracts must still be secured.

3.1 Role of the Project Manager (PM)

The PM is responsible for ensuring that on-site activities are undertaken in accordance with the requirements of the EMP. The project manager shall thus need to ensure that:

- Environmental requirements are adequately covered in tender and contract documents;

- Appropriate corrective action is identified if non-compliance occurs or unforeseen environmental issues arise that require environmental management action;
- Corrective action is implemented as required;
- Appropriate records and information regarding compliance with the EMP requirements are maintained and made available to the ECO;
- All site instructions are copied to the ECO;
- Instructions as required by the ECO are issued to the relevant contractor.

3.2 Role of the Environmental Control Officer (ECO)

The Environmental Control Officer (ECO) is responsible for ensuring that the requirements of the EMP are implemented. Whereas the Project Manager (PM) has overall project responsibility, the ECO focuses on environmental aspects of the project. The ECO shall thus:

- Undertake ongoing site & activity monitoring through regular site inspection;
- Record important findings of the site inspection;
- Advise the PM on environmental matters during planning, construction and operation;
- Monitor the implementation of specific elements of the EMP;
- Receive and review all site instructions issued by the PM,
- Advise the PM on action or issues impacting on the environment, provide appropriate recommendation to address these and confirm the issuing of subsequent site instructions;
- Ensure that contractors have copies of the EMP;
- Act as intermediary between the applicant and directly affected parties.

3.3 Role of people responsible for the implementation of the impact management actions

As was previously mentioned. Individuals or persons will only be linked to positions and responsibilities at a later stage but prior to construction. This is the case since approvals still need to be obtained and contracts must still be secured.

4. DESCRIPTION OF THE PROPOSED DEVELOPMENT

4.1 Local Context

It is envisaged that the proposed activity will take place on Portion of portion 1 of the Farm Schuynshoogte 29 LT, within the jurisdiction Makhado Local Municipality under the jurisdiction of Vhembe District Municipality in Limpopo Province (kindly refer to the attached locality plan for purposes of orientation). A detailed discussion of the local context is found in the relevant Basic Assessment report that must be read together with this document.

4.2 Impact management objectives

The following aspects or environmental issues as was identified in the relevant impact assessment are *inter alia* covered by this EMPr:

ASPEC	IMPACT MANAGEMENT	DEVELOPMENT
Planning	Promote land use practices that will complement and enhance the existing "sense of place" during operation.	Phases 1,2,3&5

Land use zoning	Apply all conditions and impact management measures relating to all relevant development controls and approvals.	Phases 1,2,3&5
Surrounding land use	The alignment of the proposed land use with prevalent surrounding land uses.	Phase 1
Need & desirability	The alignmentof the activity with prevalent needs and desirability factors.	Phase 1
Social disruption	Promote the local sourcing of labour during construction and operation.	Phases 1,2,3&5
Safety risks	Promote safety during construction and operation.	Phases 3&5
Services availability	Ensure the establishment of sustainable engineering services	Phases 3&5
Dust generation	Provide dust suppression measures during construction as well as hard driving surfaces during operation.	Phases 2,3&5
Archaeological & heritage resources	Apply construction methods that are sensitive to the possible uncovering and preservation of scarce heritage resources.	Phases 2&3
Disturbance of natural vegetation and animal life	Minimization of biological disturbance	Phases 3&5
Fire hazard	Minimization of fire hazards	Phase 5

Hazardous waste	Minimization of hazardous waste and sustainable waste disposal procedures	Phase 5
Employment generation	Maximize employment opportunities both during construction and operation.	Phases 1,2,3&5
Patronage of local businesses	Encourage support of the local commercial sector.	Phases 1,3&5
Increased municipal revenue	Contribute towards increased municipal revenue.	Phase 5
Increased noise levels	Low overall noise levels	Phases 3 & 5
Groundwater contamination	Minimization of groundwater contamination by installing General Standard of the Water and Sanitation and insulated fuel tanks that comply exceed SABS standards.	Phases 1,2,3&5
Visual impact	Minimization of visual impacts.	Phases 1,2,3&5
Topography and gradients	Minimization of exposed surfaces and erosion, both during construction and operation.	Phases 1,2,3&5

4.3 Impact management outcomes

ASPEC	IMPACT MANAGEMENT OUTCOME
Planning	Land use practices are being implemented and promoted that complement and enhance the existing "sense of place"..
Land use zoning	Consistent adherence to all relevant impact management measures and development controls and approvals through established monitoring and reporting structures.
Surrounding land uses	A land use model that conforms to prevalent surrounding land uses with an emphasis on conservational practices.
Need and desirability	An activity that addresses articulate needs in the immediate vicinity and also complies with desirability requirements.
Social disruption	A safe environment that provides benefits to the local labor market.
Safety risks	An environment that warrants personal and societal safety.
Services availability	The sustainable operation and maintenance of engineering services that does not impact negatively on the receiving environment.
Dust generation	Dust free construction and operational conditions as well as the constant preservation of air quality.

Archaeological & heritage resources	A development aimed at the maximum preservation of scarce heritage resources.
Disturbance of natural vegetation and animal life	Construction and operational conditions that does not impact negatively on ecologically sensitive areas.
Fire hazard	A fire free environment.
Hazardous waste	An environment free from hazardous waste.
Employment generation	Employment opportunities and practices.
Patronage of local businesses	A development that provides support to the local commercial sector.
Increased municipal revenue	A development that contributes towards increased municipal revenue.
Increased noise levels	Low noise construction and operation.
Groundwater contamination	The sustainable operation and maintenance of sanitation systems that comply with or exceed the General Standard of the Department of Water and Sanitation and fuel storage facilities that comply with SABS standards..
Visual impact	Low visual impact both during construction and operation.
Topography and gradients	Absence of exposed surfaces and incidents of erosion.

DESCRIPTION OF PROPOSED IMPACT MANAGEMENT ACTIONS

5.1 Planning and design phase

Planning

The applicant shall:

- Encourage the building of structures that are compatible with existing prevalent architecture in the area.
- Encourage land uses that complement prevalent land uses in the area.

Land use zoning and planning

The applicant shall:

- Ensure compliance with the respective spatial planning initiatives for the area in question;
- Ensure that all zoning conditions and requirements will be complied with.

Surrounding land use The applicant shall:

- Ensure that the project design conforms to existing land use patterns in the area that will complement the existing rural character.

Social disruption

The applicant shall:

- Develop employment and safety policies that will:
  - Maximize local labor to allow employees to be closer to their homes and families, thereby limiting the need to accommodate employees on site.
  - Allow for strict access control measures wherever people from other areas are employed and accommodated on site with only authorized personnel allowed at the camping site.
  - Only appoint workers with valid SA identification documents who have no criminal records.
  - Only allow security guards to stay overnight on the site. Their accommodation and facilities should comply with health and safety standards.
  - Keep the local SAPS and Ward Councilor informed about the construction progress and time-lines to ensure that they would be able to adequately deal with any type of disruptive behavior.
  - Not allow the gathering of jobseekers at the construction site.
  - Not allow workers to remain in and around the construction site when they are off duty.
  - Not allow informal traders on or near the site.

Employment generation

Employment policies adhering to the following must be developed and/or imposed by the applicant:

- Allowance for the subcontracting of labour-based work. Rates for labor-based excavation, bedding and back-filling shall be obtained from local contractors before commencement of the work. Training

must be provided to local laborers to assist in the construction of structures and infrastructure. Locally sourced employment is a vital component in this regard. One controlling entity that monitors and records all "unskilled / non-contracted" labor is vital. The developer must sign on as accepting this condition.

- Recruitment strategies should clearly reflect the percentage of workers to be sourced from the local labor force.
- A policy regarding employment equity of minority groups (women, youth and the disabled) should be formulated and implemented wherever possible.
- Where deemed necessary a skills audit should be conducted of the local workforce to determine what skills are available locally, and to reduce the number of workers and specialists that are brought in from other areas.
- Stipulate the employment of local labor and enterprises in tender documents to ensure the maximum use of a local labor force, especially with regards to lower and semi-skilled positions. Locals are, in this instance, defined as the nearest communities or people that reside within a 50 km radius of the project.
- The number and extent of the employment opportunities must be communicated to the local community to avoid that unrealistic expectations be created.
- The area where workers are recruited should not be near schools or other sensitive receptors where a large influx of people could cause safety and security impacts for the residents and other sensitive receptors.
- Compel the contractor to appoint a local labor force and ensure that the recruitment strategy reflect this requirement.

Patronage of local businesses

An approach should be adopted and imposed by the applicant both during construction and operation that encourages the support of local business amongst contractors and employees.

Services availability

The applicant shall:

- Develop construction agreements stating that:
  - Adequate drinking water and appropriate sanitation facilities must be provided to the workers.
  - A water tanker must be used as a temporary measure if water connections cannot be secured up front.
  - Contractors shall be responsible for providing construction water, water required for dust control, drinking and washing water.
  - Contractors shall be responsible for providing washing facilities for all staff. Waste water from washing facilities shall be discharged into the existing sewage system, or removed from the site by the Contractor by other means, should existing services be unavailable. Such alternative means shall be submitted to the PM and ECO for approval.
  - Chemical toilets will be placed on site during the construction period.
  - Sanitation facilities must be cleaned and serviced on a regular basis.
  - If the proponent cannot supply electrical power for the Works, Contractors shall make their own arrangements for electrical power requirements.
  - Electricity connections where required need to be arranged with Eskom.
  - The contractor shall provide workers to clean up the site on a regular basis and the general cleanliness of the site shall

form part of the contractor's responsibility.

- The contractor must provide litter-bins during the construction phase for the disposal of litter and waste material.
- The contractor shall ensure that employees deposit all refuse in bins, and these shall be emptied on a regular basis to prevent overflowing. Refuse bins shall be watertight, wind-proof and scavenger-proof and shall be placed at regular intervals throughout the site.
- Identify the waste types that are likely to be produced and aim to reduce the amount of waste as much as possible, through identifying routes to reuse or recycle materials. Label all waste storage and skips, detailing the type of waste.
- All waste material generated during the construction phase, including construction rubble and waste concrete, must be removed from the site and disposed of at an approved Municipal Waste Disposal site.
- No waste material shall be disposed of at an informal waste disposal site or elsewhere.
- The contractor must provide waste bins on site for the duration of the development phase and waste material, including builders' rubble, will be removed on a regular basis to a proclaimed waste disposal site.

Groundwater contamination

- Sanitary facilities may not available on the site and contractual agreements compiled by the applicant should state that it will be required from the Contractor to supply such. All toilets shall conform to the requirements of the Local Authority and the location on the site shall be approved by the PM.
- Designs of sanitation systems must conform to the relevant engineering standards and the General Standard of the Department of Water & Sanitation. Material must adhere to SASS standards.
- Construction to be monitored by an appointed Environmental Control Officer to the stipulations of the EMP, RoD and other regulatory requirements.
- The contractor shall identify fuels and hazardous substances to be stored on site and shall ensure that he knows the effect of these substances on his staff and the environment. The contractor shall supply a copy of the fuels and hazardous substance inventory to the PM and ECO.
- The contractor shall ensure that the quantities of fuel and chemicals on site are appropriate to the requirements and are stored and handled so as to avoid the risk of spillage.
- All fuels, oils and chemical shall be confined to specific and secured areas. These materials shall be stored in an area with a concrete or other impervious base, which is adequately bonded. The volume of the bund shall be two times the volume of the container stored. Gas and fuel should not be stored in the same storage area, and any generator used on the site should be placed on a bonded surface.
- Any tank used regularly for re-fueling vehicles shall be located within a bund, which has a concrete base and brick walls.The fuel dispenser shall be suspended within the bonded area while not in use.
- Polluted storm-water run-off from the concreted storage areas shall be collected, stored and disposed of at an approved waste site. Contaminated soil shall also be removed, stored in a skip and disposed of at an approved waste disposal site.
- Contractors shall position any equipment that may leak on watertight drip trays to contain any pollutants.
- The drip trays shall be of such a size that equipment can be positioned within it.
- Drip trays shall be cleaned regularly and shall not be allowed to overflow.

- Materials collected in these drip trays shall be collected and disposed of off-site at an approved waste disposal site.
- Designs should allow for double insulated underground fuel containers.

Visual impact

Project designs and drawings must ensure that:

- Municipal building restrictions must be adhered to and building plans must be submitted and approved.
- Structures need to be designed in accordance with architectural guidelines that should take into account prevalent architectural influences in the area.
- General area lighting must be marked on an overall site plan.

Topography and gradients

- Construction timelines and schedules compiled by the applicant and agreed upon by the PM and Contractor should be limited to the non-raining season.

5.2 Pre-construction phase

- The applicant must appoint a PM to oversee the construction process.
- The applicant, together with the PM must appoint the Contractor.
- The PM must request the Contractor to submit a properly detailed construction programmer, clearly showing the critical path of the construction operation.
- The construct ion of the works will not commence until such a construction programmer is approved by the PM.
- The Contractor will be required to update this programmer if any of the programmed operations falls two weeks behind programmer or if ordered to do so by the PM.
- The Contractor's camp is defined as the demarcated area where the Contractor will establish offices, living quarters and storage facilities and forms

a discrete part of the construction site.

- In choosing a site for the camp, the following factors have to be adhered to:
  - Choose as level an area as possible;
  - Avoid watercourses;
  - If possible, the camp must be located within the construction area;
  - An already disturbed area must be used, and
  - Lighting must not be imposing.
- The construction camp and site should only have one access route, if possible, and where possible, existing roads and tracks should be used. Access road(s) must be upgraded to cope with heavy construction machinery and vehicles, and must be maintained in an adequate condition so as to minimize dust and erosion.
- The PM must recommend and approve the location of the camp prior to its establishment.

Planning

The applicant shall:

- Encourage the building of structures that are compatible with existing prevalent architecture in the area.
- Encourage land uses that complement prevalent land uses in the area.

Land use zoning

- The PM must ensure that the necessary development approvals have been obtained.
- The applicant and the PM must familiarize themselves with the conditions of such approvals and convey it to the Contractor and his staff.

Surrounding land use

- The PM must ensure that the project designs conform to existing land use patterns in the area that will complement the existing rural character.

Social disruption

The PM shall ensure that employment and safety policies have been developed and are available that will:

- Maximize local labor to allow employees to be closer to their homes and families, thereby limiting the need to accommodate employees on site.
- Allow for strict access control measures wherever people from other areas are employed and accommodated on site with only authorized personnel allowed at the camping site.
- Only appoint workers with valid SA identification documents who have no criminal records.
- Only allow security guards to stay overnight on the site. Their accommodation and facilities should comply with health and safety standards.
- Keep the local SAPS and Ward Councilor informed about the construction progress and time-lines to ensure that they would be able to adequately deal with any type of disruptive behavior.
- Not allow the gathering of jobseekers at the construction site.
- Not allow workers to remain in and around the construction site when they are off duty.
- Not allow informal traders on or near the site.

Services availability

The PM must ensure that:

- Adequate drinking water and appropriate sanitation facilities will be provided to employees during construction.
- A water tanker will be used as a temporary measure if water connections cannot be secured up front.
- Contractors shall be responsible for providing construction water, water required for dust control, drinking and washing water.

- Contractors shall be responsible for providing washing facilities for all staff. Waste water from washing facilities shall be discharged into the existing sewage system, or removed from the site by the Contractor by other means, should existing services be unavailable. Such alternative means shall be submitted to the PM and ECO for approval.
- Sanitation facilities will be cleaned and serviced on a regular basis.
- If the proponent cannot supply electrical power for the Works, Contractors shall make their own arrangements for electrical power requirements.
- Electricity connections where required need to be arranged with Eskom.
- The contractor shall provide workers to clean up the site on a regular basis and the general cleanliness of the site shall form part of the contractor's responsibility.
- The contractor must provide litter-bins during the construction phase for the disposal of litter and waste material.
- The contractor shall ensure that employees deposit all refuse in bins, and these shall be emptied on a regular basis to prevent overflowing. Refuse bins shall be watertight, wind-proof and scavenger-proof and shall be placed at regular intervals throughout the site.
- Identify the waste types that are likely to be produced and aim to reduce the amount of waste as much as possible, through identifying routes to reuse or recycle

materials. Label all waste storage and skips, detailing the type of waste.

- All waste material generated during the construction phase, including construction rubble and waste concrete, must be removed from the site and disposed of at an approved Municipal Waste Disposal site.
- No waste material shall be disposed of at an informal waste disposal site on the adjacent vacant land or elsewhere.
- The contractor must provide waste bins on site for the duration of the development phase and waste material, including builders' rubble, will be removed on a regular basis to a proclaimed waste disposal site.

<u>Dust control</u>

The PM must ensure that the following measures will be in place and implemented during construction and that the Contractor and his staff are accordingly sensitized:

- Dust control measures such as the watering of work areas, must be implemented to reduce dust arising from construction activities.
- Vehicle speeds must not exceed 40 km/h on demarcated construction roads on the site or 20 km/h when traversing unconsolidated areas.
- Wash or clean all vehicles effectively before leaving the site.
- Vehicles carrying dusty materials should be securely covered before leaving the site.
- Dusty activities and dirt roads should be damped down during dry weather.
- The use of long-term stockpiles on site should be avoided wherever possible unless it performs the function of visual or noise screening.
- Whenever possible keep stockpiles or mounds away from the site boundary, sensitive receptors, watercourses and surface drains.
- Take into account the predominant wind direction when siting stockpiles to reduce the likelihood of affecting sensitive receptors.
- No vehicles will be left idling unnecessarily.
- Vehicles should be well maintained. Should any emissions of dark smoke occur (except during start up), the relevant machinery should be stopped immediately and any problem rectified before being used.
- Engines and exhaust systems should be regularly serviced according to manufacturer's recommendations and maintained to meet statutory limits.

Archaeological & heritage resources

The PM must ensure that the Contractor and his staff have been sensitized with regard to the following measures to be taken in the event of terrestrial artefacts being uncovered during construction:

- In the event of terrestrial artefacts being uncovered, it shall be reported to the Project Manager, Environmental Control Officer and the South African Heritage Resource Authority (SAHRA) immediately.
- Work in that area shall then also be stopped until such time as the necessary

assessment has been undertaken and the required authorization to continue has been received from SAHRA.

- No archaeological material may be removed from the site without prior approval from SAHRA.

Employment generation

The PM must ensure that employment policies adhering to the following have been developed and incorporated into contractual agreements:

- Allowance for the subcontracting of labor-based work. Rates for labor-based excavation, bedding and back-filling shall be obtained from local contractors before commencement of the work. Training must be provided to local laborers to assist in the construction of structures and infrastructure. Locally sourced employment is a vital component in this regard. One controlling entity that monitors and records all "unskilled/ non-contracted" labor is vital. The developer must sign on as accepting this condition.
- Recruitment strategies should clearly reflect the percentage of workers to be sourced from the local labor force.
- A policy regarding employment equity of minority groups (women, youth and the disabled) should be formulated and implemented wherever possible.
- Where deemed necessary a skills audit should be conducted of the local workforce to determine what skills are available locally, and to reduce the number of workers and specialists that are brought in from other areas.
- Stipulate the employment of local labor and enterprises in tender documents to ensure the maximum use of a local labor force, especially with regards to lower and semi-skilled positions. Locals are, in this instance, defined as the nearest communities or people that reside within a 50 km radius of the project.
- The number and extent of the employment opportunities must be

communicated to the local community to avoid that unrealistic expectations be created.

- The area where workers are recruited should not be near schools or other sensitive receptors where a large influx of people could cause safety and security impacts for the residents and other sensitive receptors.
- Compel the contractor to appoint a local labor force and ensure that the recruitment strategy reflect this requirement.

Groundwater contamination

- The PM should ensure that contractual agreements compiled by the applicant state that it will be required from the Contractor to supply sanitary facilities. All toilets shall conform to the requirements of the Local Authority and the location on the site must be approved by the PM.
- Designs of sanitation systems for the operational phase must conform to the relevant engineering standards as well as the General Standards of the Department of Water & Sanitation. Material must adhere to SABS standards. The necessary statutory requirements will apply and the PM must ensure that these have been secured by the applicant prior to the construction phase.
- The PM must ensure that an Environmental Control Officer has been appointed to the stipulations of the EM P, ROD and other regulatory requirement s.
- The contractor shall identify fuels and hazardous substances to be stored on site and shall ensure that he knows the effect of these substances on his staff and the environment. The contractor shall supply a copy of the fuels and hazardous substance inventory to the PM and ECO.
- The contractor shall ensure that the quantities of fuel and chemicals on site are appropriate to the requirements and are stored and handled so as to avoid the risk of spillage.

- All fuels, oils and chemical shall be confined to specific and secured areas. These materials shall be stored in area with a concrete or other impervious base, which is adequately bonded. The volume of the bund shall be two times the volume of the container store d. Gas and fuel should not be stored in the same storage area, and any generator used on the site should be placed on a bonded surface.
- Any tank used regularly for re-fueling vehicles shall be located within a bund, which has a concrete base and brick walls. The fuel dispenser shall be suspended within the bonded area while not in use.
- Polluted storm-water run-off from the concreted storage areas shall be collected, stored and disposed of at an approved waste site. Contaminated soil shall also be removed, stored in a skip and disposed of at an approved waste disposal site.
- Contractors shall position any equipment that may leak on watertight drip trays to contain any pollutants.
- The drip trays shall be of such a size that equipment can be positioned within its perimeter.
- Drip trays shall be cleaned regularly and shall not be allowed to overflow.
- Materials collected in these drip trays shall be collected and disposed of off-site at an approved waste disposal site.

Visual impact

The PM must consult project designs and drawings and must ensure that:

- Municipal building restrictions will be adhered to and building plans have been submitted and approved.
- Structures have been designed in accordance with architectural guidelines that should complement prevalent architectural approaches and practices.
- General area lighting has been marked on an overall site plan.

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5.3 Construction phase

- It is required from the Contractor to submit a properly detailed construction programmer, clearly showing the critical path of the construction operation.
- The construction of the works will not commence until such a construction program is approved by the PM.
- The Contractor will be required to update this program if any of the programmed operations falls two weeks behind program or if ordered to do so by the PM.

- The Contractor's camp is defined as the demarcated area where the Contractor will establish offices, living quarters and storage facilities and forms a discrete part of the construction site.
- Contractors shall be responsible for providing construction water, water required for dust control, drinking and washing water.
- Contractors shall be responsible for providing washing facilities for all staff. Waste water from washing facilities shall be discharged into the existing sewage system, or removed from the site by the Contractor by other means, should existing services be unavailable. Such alternative means shall be submitted to the PM and ECO for approval.
- Sanitation facilities must be cleaned and serviced on a regular basis.
- The contractor shall provide workers to clean up the site on a regular basis and the general cleanliness of the site shall form part of the contractor's responsibility.
- The contractor must provide litter-bins during the construction phase for the disposal of litter and waste material.
- The contractor shall ensure that employees deposit all refuse in bins, and these shall be emptied on a regular basis to prevent overflowing. Refuse bins shall be watertight, wind-proof and scavenger-proof and shall be placed at regular intervals throughout the site.
- Identify the waste types that are likely to be produced and aimed at reducing the amount of waste as much as possible, through identifying

routes to reuse or recycle materials. Label all waste storage and skips, detailing the type of waste.

- All waste material generated during the construction phase, including construction rubble and waste concrete, must be removed from the site and disposed of at an approved Municipal Waste Disposal site.
- No waste material shall be disposed of at an informal waste disposal site or elsewhere.
- The contractor must provide waste bins on site for the duration of the development phase and waste material, including builders' rubble, will be removed on a regular basis to a proclaimed waste disposal site.
- The excavation and use of rubbish pits is forbidden.
- Burning of waste is forbidden.
- A fenced area must be allocated for waste sorting and disposal.
- Individual waste skips for different types of waste (e.g. "household" type refuse, building rubble etc.) should be provided and emptied on a regular basis.

Dust control

The Contractor shall be responsible for the following unless differently specified:

- Dust control measures such as the watering of work areas, must be implemented to reduce dust arising from construction activities.
- Vehicle speeds must not exceed 40 km/h on demarcated construct ion roads on the site or 20 km/h when traversing unconsolidated areas.
- Wash or clean all vehicles effectively before leaving the site.
- Vehicles carrying dusty materials should be securely covered before leaving the site.

- Dusty activities and dirt roads should be damped down during dry weather.
- The use of long-term stockpiles on site should be avoided wherever possible unless it performs the function of visual or noise screening.
- Whenever possible keep stockpiles or mounds away from the site boundary, sensitive receptors, watercourses and surface drains.
- Take into account the predominant wind direction when siting stockpiles to reduce the likelihood of affecting sensitive receptors.
- No vehicles will be left idling unnecessarily.
- Vehicles should be well maintained. Should any emissions of dark smoke occur (except during start up), the relevant machinery should be stopped immediately and any problem rectified before being used.
- Engines and exhaust systems should be regularly serviced according to manufacturer's recommendations and maintained to meet statutory limits/opacity tests.

Archaeological & heritage resources

The Contractor shall be responsible for the following unless differently specified:

- In the event of terrestrial artefacts being uncovered, it shall be reported to the Project Manager, Environmental Control Officer and the South African Heritage Resource Authority (SAHRA) immediately.
- Work in that area shall then also be stopped until such time as the necessary assessment has been undertaken and the required authorization to continue has been received from SAHRA.
- No archaeological material may be removed from the site without SAHRA approval.

Employment generation

The Contractor shall be responsible for the following unless differently specified:

- It is a requirement of the project that the Contractor allows for the subcontracting of labor-based work. Rates for labor-based excavation, bedding and back-filling shall be obtained from local contractors before commencement of the work. Training must be provided to local laborers to assist in the construction of structures and infra structure. Locally sourced employment is a vital component in this regard. One controlling entity that monitors and records all "unskilled / non- contracted" labor is vital. The developer must sign on as accepting this condition.
- Recruitment strategies should clearly reflect the percentage of workers to be sourced from the local labor force.
- A policy regarding employment equity of minority groups (women, youth and the disabled) should be formulated and implemented wherever possible.
- Where deemed necessary a skills audit should be conducted of the local workforce to determine what skills are available locally, and to reduce the number of workers and specialists that are brought in from other areas.
- Stipulate the employment of local labor and enterprises in tender documents to ensure the maximum use of a local labor force, especially with regards to lower and semi-skilled positions. Locals are, in this instance, defined as the nearest communities or people that reside within a 50 km radius of the project.
- The number and extent of the employment opportunities must be communicated to the local community to avoid the creation of unrealistic expectations.
- The area where workers are recruited should not be near schools or other sensitive receptors where a large influx of people could cause safety and security impacts for the residents and other sensitive receptors.
- Compel the contractor to appoint a local labor force and ensure that the recruitment strategy reflect this requirement.

<u>Patronage of local businesses</u>

The contractor must support local business and encourage the support of local business amongst employee s.

Increased noise levels

- The applicant or Contractor must inform adjacent occupants of any unusually noisy activities that will be undertaken during the construction phase.
- Contractors shall comply with local by-laws with regard to working hours and should also restrict construction hours to:
  - 6h30 - 18h30 on weekdays;
  - 7h00-17h00 on Saturdays; and
  - No operations on Sundays and public holidays.
- If Contractors wish to work outside of these hours, it must be with the agreement of the PM AND ECO. Given the general nature of the construction phase, which will mostly entail the building of structures relating to the tourist center, the noise disturbance is not seen as inimical to the project. The ECO is however to be fully informed of any complaints received regarding noise levels during the construction period.
- Noise generating methods such as mechanical excavations and piling will be limited to a minimum during the construction phase;
- Blasting shall only be undertaken with the necessary controls in place, as stipulated by the local Noise Control Regulations.
- Construction vehicles must be kept in a good state of repair.

Groundwater contamination

- It will be required from the Contractor to supply sanitary facilities. The location on the site shall be approved by the PM.
- Designs of sanitation systems must conform to the relevant engineering standards and the General Standards of the Department of Water & Sanitation. Material must adhere to SABS standards.
- Construction to be monitored by an appointed Environmental Control Officer ito the stipulations of the EMP, RoD and other regulatory requirements.
- The Contractor shall identify fuels and hazardous substances to be

stored on site and shall ensure that he knows the effect of these substances on his staff and the environment. The contractor shall supply a copy of the fuels and hazardous substance inventory to the PM and ECO.

- The Contractor shall ensure that the quantities of fuel and chemicals on site are appropriate to the requirements and are stored and handled so as to avoid the risk of spillage.
- All fuels, oils and chemical shall be confined to specific and secured areas. These materials shall be stored in areas with a concrete or other impervious base, which is adequately bonded. The volume of the bund shall be two times the volume of the container stored. Gas and fuel should not be stored in the same storage area, and any generator used on the site should be placed on a bonded surface.
- Any tank used regularly for re-fueling vehicles shall be located within a bund, which has a concrete base and brick walls. The fuel dispenser shall be suspended within the bonded area while not in use.
- *Polluted storm-water run-off from the concreted storage areas shall be collected, stored and disposed of at an approved waste site. Contaminated soil shall also be removed, stored in a skip and disposed of at an approved waste disposal site.*
- Contractors shall position any equipment that may leak on watertight drip trays to contain any pollutants.
- The drip trays shall be of such a size that equipment can be positioned within its perimeter.
- Drip trays shall be cleaned regularly and shall not be allowed to overflow.
- Materials collected in these drip trays shall be collected and disposed of off-sit e at an approved waste disposal site.
- Tests must be conducted to determine the extent of surface water and / or ground water contamination as soon as spillage of fuel occurs. Appropriate remediation must be followed. Contaminated soil must be collected and disposed of at an officially approved waste disposal site. Proof of the disposal of contaminated soil must be submitted to the North West Department of Rural, Environmental and Agricultural Development within 3 days of the disposal thereof.
- The clean-up of a spill and any damage caused by a spill shall be for

the relevant contractors account.

Above ground diesel tanks leakage

- Containment/bonded areas must be provided.
- The floor of each containment/ bonded area must be provided with a 1% fall towards the interceptor/ separator drain.

Underground petrol tanks leakage

- Only tanks manufactured to composite bonded specifications must be installed to prevent rusting (e.g. double skin Petro tank).
- Tanks must be installed to specification with sides and bottom surrounded in clean sand.
- Leak monitoring wells must be installed to the bottom level of the tank excavation.
- Effluent and wash down water from all areas where fuel spillage occurs (at dispensers and fillers) must be collected into a drainage system which passes through a $6m^3$ pollution solution oil interceptor and $3m^3$ drain box prior to discharge to the municipal sewer system.
- Concrete containment slabs must be constructed over the underground tanks and at fuel delivery & fuel dispensing positions to prevent fuel penetration into the ground.
- Tanks must be manufactured by approved suppliers to SANS 1535 & pressure tested before delivery.
- The fuel dispensing system must be installed and pressure tested before commissioning in accordance with SABS 069.
- Tanks must be installed to a depth of approx. 3,7m below final paving levels depending on the falls across the forecourt.
- All fuel lines must be made from fuel resistant material and must be secondarily contained with falls to dispenser and tank containment sumps.
- The introduction of tank holding excavations as illustrated in the relevant geological investigation report (Appendix G) should be considered as an additional mitigation measure in order to minimize the possibility and effects of leakage.

Visual impact

The Contractor must ensure the following:

- Municipal building restrictions must be adhered to and building plans must be submitted and approved;
- Night time construction activities should as far as possible be avoided by restricting construction hours to:
  - 6h30 -18h30 on weekdays;
  - 7h00-17h00 on Saturdays; and
  - No operations on Sundays and public holidays.
- In the event of night time construction activities taking place, lighting should be used that does not contravene existing night time lighting patterns of the receiving environment. The same applies to security lighting if any during the operational phase.
- If floodlights are used it should be directed at working areas and not at adjoining properties. The same applies for security lighting if any during the operational phase.
- Structures need to be designed and constructed in accordance with architectural/ building plans and guidelines.
- General area lighting must be marked on an overall site plan.
- Each Contractor is responsible for providing additional lighting so as to comply with the Occupational Health and Safety Act (Act 85 of 1993) as amended.

Topography and gradients

The Contractor shall be responsible for the following unless differently specified:

- Construction activities must be limited to the non-raining season.
- The Contractor shall take reasonable measures to prevent erosion resulting from a diversion, restriction or increase in the flow of storm-

water caused by the presence of his works, operation and activities, all to the satisfaction of the PM and ECO.

- Any storm-water collected in bonded areas containing oils, fuels, chemicals or other potentially polluting substances shall be pumped out of the bund, collected in a suitable container and removed from the site for appropriate disposal at an approved Municipal Waste Disposal Site.
- Berms or storm-water drainage systems shall be used to prevent surface runoff from entering site excavation.
- Control measures to prevent storm-water damage and erosion during construction shall include the control by sump, as well as storm-water being directed into attention ponds wherever possible. All methods of storm-water control during the construction phase are to be agreed to and approved by the PM and ECO.

General construction controls

Safety on site:

Contractors shall follow the guidelines of the Occupational Health and Safety Act (Act 85 of 1993). These include:

The wearing of hard hats by:

- all persons entering the site;
- all person within 10 m of any situation where any form of lifting or hoisting equipment is being used; and
- any person working in any other situation where the possibility of head injury is present, e.g. an area where overhead work is taking place.

The wearing of gloves by personnel:

- handling heavy materials;
- carrying out maintenance activities within a crusher;
- engaged in welding or gas cutting activities; and
- handling material/ equipment with unfinished steel edges.

The wearing of approved safety shoes or safety boots by:

- all person entering the construction site or workshop, storage and depot areas.

The wearing of safety goggles by:

- person operating equipment under dusty condition;
- person engaged in cutting or welding activities; and
- person engaged in grinding activities.

The wearing of hearing protection by:

- all person engaged in rock drilling activities (>85 decibel);
- all crushing operators; and
- any person entering into high noise areas (>85 decibel).

These areas shall be appropriately marked using a standard National Occupational Safety Association (NOSA) pictogram.

The wearing of safety belts by:

- any person carrying out work 2 m above ground level, unless it is being carried out from a safe and protected work platform; and
- all heavy equipment operators.

Where blasting is resorted to, it shall be carried out strictly according to the Explosives Act and regulation of 1956 (Act No. 26 of 1956, as amended).

In no case will blasting be allowed if a reasonable possibility exists of injury to any foundation. wall, pipe, cable or any structure, complete or partly complete.

Wherever blasting is permitted and resorted to in the vicinity of the adjacent residential area, it shall only be executed under the cover of heavy wire mesh

screens or rubber matting of adequate weight and area to prevent the blasted material from being ejected from the trench.

First aid procedure:

Contractors shall provide and maintain a suitable first aid kit on site and shall ensure that a qualified first aid practitioner is present during working hours, in accordance with the Occupational Health and Safety Act (Act 85 of 1993).

Contractors shall ensure that their staff know and carry out the procedures for dealing with accidents and shall clearly define the emergency procedure to be followed for obtaining medical treatment and assistance in the event of serious injury.

Emergency advisory procedure:

The contractor shall ensure that there is an emergency advisory procedure on site before commencing with any operation that may endanger the lives of any personnel on site, or caused damage to the environment.

The contractor shall ensure that all personnel are familiar with all emergency procedures to be followed. He must ensure that list of all emergency numbers and contact people are regularly updated and names are posted at relevant locations at all times.

Smoking should be permitted on the site only at the discretion of the Project Manager and the Contractor shall ensure that all personnel are aware of the fire risk and the need to extinguish cigarettes before disposal.

Wherever work involves welding, gas cutting or cutting of metal, fire-fighting equipment shall be immediately available.

A member of staff must be appointed to be responsible for the installation and inspection of fire extinguishers. The Project Manager shall receive copies of the inspection report. A map must be drawn up to indicate the location of fire extinguisher and they should be clearly visible and demarcated in accordance with legislation.

5.4 Post-construction rehabilitation phase

The contractor shall ensure that all temporary structures, equipment, materials, temporary stockpile areas, litter, waste, dumped material and facilities used for construction purposes are removed upon completion of the project. The site clean-up shall be to satisfaction of the PM and ECO.

Where appropriate, Contractors shall employ suitably qualified persons to rehabilitate areas damaged by construction activities within and surrounding the Contractor's camps. Contractors shall be responsible for rehabilitating areas identified by the PM and ECO, and the contractor's procedures for rehabilitation, including plans and method statements, shall be approved by the ECO and PM.

Fire hazard

Preventive measures

Ensure that:

- Pump attendants receive proper and appropriate training;
- Proper procedures are followed throughout the filling operation, e.g. dispenser nozzles are correctly inserted, delivery hoses are not stretched or kinked, etc.;
- Vehicle engines are switched off when at the dispensers;
- No one smokes in the vicinity of the dispensers (danger zones);
- No one uses portable electric/ electronic equipment such as a cellular phone in the vicinity of the dispenser.

- Conspicuous notices - e.g. 'Petrol, 'Highly Flammable', 'No Smoking', and 'Switch Off Engine' are positioned close to pumps and dispensers alerting customers to hazards.

Precautionary measures

- Supply and install water storage tanks (1X10k£ & 1X20k£) for firefighting purposes as prescribed by SANS 10089.
- Provide diesel driven water pump capable of 450£/min supply at 10 Bar pressure.
- Install 110mm fire hydrant supply 4X65mm diameter British Standard instantaneous couplings.
- Fit 2X9kg DCP fire extinguishers in close vicinity to pump and filler island.
- Ensure adequate means for contacting the Municipality's emergency services when necessary.

Emergency measures

- Stop all refueling
- Activate the emergency shut-off switch
- Notify site manager or supervisor
- Manager/supervisor to alert the fire emergency services
- Attempt to extinguish the fire using fire extinguishers or hose reel if it's safe to do so
- Isolate electrical supply at the distribution board to all equipment in the area
- Evacuate the building of customers & staff to the safe assembly area
- Close all doors and windows in the immediate vicinity of the fire
- Alert the fire emergency services if the fire is too large to handle
- If necessary, clear vehicles from the forecourt if it's safe to do so.

<u>Visual impact</u>

- Lighting should be used that does not contravene existing night time lighting patterns of the receiving environment.
- If floodlights are used it should be directed at operational structures and not at adjoining areas.

Topography and gradients

- The applicant shall take reasonable measures to prevent erosion resulting from a diversion, restriction or increase in the flow of storm- water caused by the presence of the development and its operation.
- Control measures to prevent storm-water damage and erosion during operation shall include the use and maintenance of internal paved surfaces and roads.

6. RECORD OF AUDITING AND CORRECTIVE ACTION

Auditing and implementing corrective action, should it be required, forms an important component of the EMPr management cycle. These ensure that:

- The required EMPr management conditions are being implemented, and reported appropriately;
- The desired outcomes are being achieved;
- On-going inspections of operational controls and general state of operation are undertaken and reported appropriately;
- Regular internal audits are undertaken to assess the compliance to the EMPr or to focus on particular performance issues in relation to the conditions of the EA.

As noted above, some potential impacts are difficult to monitor quantitatively, such as soil erosion and waste management. However, an on-going, but pragmatic, inspection regime has been developed, and will be updated once the detailed project program is confirmed, that should allow for potential environmental transgressions to be identified proactively so that mitigation can be quickly and effectively implemented to an appropriate level.

There are several mechanisms for implementing corrective action both during construction and operational phases. The main instruments used to address non-compliances are the following:

- Verbal instructions - Minor transgressions to the EA and EMPr to be issued by the ECO and Project Management Team;
- Written instructions -To be issued by the ECO and Project Management Team to support and formalize verbal instructions;
- Contract Notice - Following a material breech in contract to be issued by the Project Management Team;
- Directive from Regulating Authority- Following a material non-compliance with the conditions of the EA and the EMPr

7. MONITORING

In order to allow for the monitoring of both construction and operational aspects on the subject site, the appointment of an environmental control officer (ECO) by the applicant at the outset of the construction phase is being proposed. A period of three years has been set aside for construction and it is proposed that the ECO appointment remains valid for an initial period of three years. This period may be extended to coincide with continued construction activities and operational requirements.

Notification of the regulating authority by the ECO of his/her appointment as well as the commencement of construction must take place in accordance with the provisos of the relevant Record of Decision and at least fifteen days prior to commencement.

The ECO will on a monthly basis during construction activities and on a quarterly basis during operational phases monitor the program implementation for the proposed development. This will include the monitoring of:

- Control of alien vegetation;
- The contractor's waste management program used to manage the generation of waste requiring disposal; and
- Rehabilitation of the construction site, post construction.

The ECO must prior to his/her first ECO inspection compile an ECO checklist to measure compliance with all impact management actions and mitigation measures listed in this report as well as all other conditions that may form part of a Record of Decision.

The following methods will be employed by the ECO to monitor the implementation of mitigation measures linked to frequency of monitoring, the person responsible for implementation of mitigation measures as well as the timeframes within which the mitigation measures will be implemented for all phases of the development:

7.1 ECO inspections

Monitoring will take place by the ECO by means of ECO inspections at monthly intervals during construction periods, and three monthly/quarterly during operational periods (or intervals agreed upon with the regulating authority) for an initial period of three years.

The inspections will be guided by an ECO checklist that measures compliance with all impact management actions and mitigation measures listed in this report as well as all other conditions that may form part of a Record of Decision. The applicant will take primary responsibility for the implementation of mitigation measures.

7.2 ECO reporting

Reporting will take place by the ECO by means of ECO report compilation and distribution to the project team and the regulating authority. This will take place immediately after each ECO inspection

at monthly intervals during construction periods, and three monthly/quarterly during operational periods (or intervals agreed upon with the regulating authority) for an initial period of three years.

During the construction phase, the ECO will be responsible for monitoring and inspecting contractors' written records to illustrate compliance with the EMPr. This falls under the inspection role of the ECO and should coincide with the ECO inspections.

The aim of the compliance monitoring is to verify that the responsible parties are adhering to the procedures, management conditions, and specifications contained in this EMPr and the conditions set out in the EA/RoD. The applicant will take primary responsibility for the implementation of report findings and recommendations.

7.3 Record keeping

Records shall be maintained during the construction phase to enable compliance with the EMP specification to be demonstrated. These shall typically comprise a daily log of activities that record waste management, fuel and chemicals management and other environmental issues, e.g. adverse weather, surface water run- off, etc. The applicant shall take primary responsibility for record keeping and may assign this responsibility to the PM.

Issues of non- conformance noted by the ECO shall be communicated to the applicant/ PM who shall be responsible for seeing that the relevant parties are informed of the non-conformance so that appropriate corrective action can be taken by them. The ECO shall advise on the appropriate corrective action, where necessary, and these shall be agreed upon collectively.

7.4 Site meetings

Environmental issues shall be addressed at regular site meetings between the ECO and the applicant / PM. From a practical perspective it is recommended that these meetings coincide with reporting on ECO inspections on a monthly basis during construction. It may also take

place more frequently (e.g. weekly). The ECO shall present a verbal report of any environmental concern or issues that have arisen and of corrective action that have been taken. Outstanding corrective action shall be discussed and agreed at these meetings. Issues relating to complaints or comments received from the public shall also be discussed at these meetings.

8. ENVIRONMENTAL AWARENESS PLAN

The applicant acknowledges and adopts the environmental management objectives, outcomes and activities that have been identified in this document as practicable control methods to abate the environmental impacts associated with the construction and operation of the proposed activity.

The applicant further accepts that the successful implementation of these responsibilities require a shared awareness of any environmental risk which may result from the development work, as well as a shared responsibility to implement environmental management activities in such a way as to avoid pollution or the degradation of the environment.

The applicant intends to use this document as basis for the creation of environmental awareness for himself as well as his staff during all phases of the development. This awareness will relate to any environmental risk that may result from their work as well as risks that must be dealt with in order to avoid pollution or the degradation of the environment.

The following methods will *inter a/ia* be employed by the applicant to promote environmental awareness:

- The central display of the approved EMPr at work areas;
- The distribution of copies of the approved EMPr to staff;
- The discussion of relevant aspects of the EMPr as well as relevant environmental management activities with staff, both through formal and inform! channels;

- Assistance to staff with the practical implementation of relevant environmental management activities.
- An "open door" policy with regard to the implementation of environmental management activities.
- The monitoring and auditing of the performance of personnel in applying such controls and the provisioning of feedback.

The applicant further confirms that he and his staff will be guided in their environmental awareness actions by the following environmental policy:

- Adherence to the requirements of the EMPr for the proposed development and engineering services installation;
- Management of all development activities so as to minimize the risk of pollution of ground and surface water, the air and the soil;
- Management of all development activities so as to minimize the nuisance and disruption to humans working or residing in, or commuting through the area;
- Adherence to the environmental legislation relevant to the location and nature of the work being conducted; and
- Compliance with the monitoring and auditing programs contained in the EMPr, to ensure its accountable and transparent implementation.

9. PENALTIES

Non-compliance with the conditions of this EMP, which form part of the Contract agreement, shall constitute a breach of contract. Penalties may be issued to the principal contractor where applicable in the following manner:

- The contractor shall be informed in writing of any infringement of the environment control measures stipulated in this EMP, and a time frame in which corrective action must be taken will be issued;
- Should corrective action not be undertaken within the given time frame, a written warning shall be issued along with a time frame in which the issue needs resolution;

- Should the warning be ignored, a penalty shall be imposed on the Contractor, the penalty amount shall be determined by the ECO in consultation with the PM. The penalty amount may be deducted from the contractor's certificate and held in an environmental fund.

Sigidi Muthotho

Certified Environmental Assessment Practitioner