



**ENVIRONMENTAL MANAGEMENT PROGRAMME
REPORT FOR THE TRUCK STOP WITH FILLING
STATION AND ANCILLARY USES KNOWN AS MEERKAT
TRUCK STOP ON REMAINING EXTENT OF PORTION 9 (A
PORTION OF PORTION 5) OF THE FARM SMALKLOOF
122 REGISTRATION DIVISION HS SITUATED
APPROXIMATELY 2 KM OUTSIDE VOLKSRUST,
MPUMALANGA PROVINCE**

MDEDET REFERENCE NO: 17/2/3 GS-110

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A REPORT FOR TOWB TRADING CC



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DOCUMENT DESCRIPTION

Client:

TOWB Trading CC

Project Name:

Draft Environmental Management Programme Report for the proposed truck stop with filling station and ancillary uses known as Meerkat on remaining extent of portion 9 (a portion of portion situated approximately 2 km outside Volksrust, Mpumalanga Province)

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Glossary of Terms

ACCIDENT:

A motor vehicle accident.

BUILDING AND DEMOLITION WASTE:

Building and demolition waste means waste, excluding hazardous waste, produced during the construction, alteration, repair or demolition of any building structure, and includes rubble, earth, rock and wood displaced during that construction, alteration, repair or demolition.

CONTRACTOR:

Companies and or individual persons appointed on behalf of the Client to undertake activities, as well as their sub-contractors and suppliers.

CONSTRUCTION PROJECT MANAGEMENT TEAM:

The team consists of a Project Manager as well as a Safety and Health Officer as required in terms of the OHSA and an Environmental Control Officer as required in terms of NEMA.

DECONSTRUCTION

Deconstruction is the selective dismantlement of building components. Deconstruction has also been defined as “construction in reverse”. Deconstruction is commonly separated into two categories; structural and non-structural. Non-structural deconstruction, also known as “soft-stripping”, consists of reclaiming non-structural components e.g. doors, windows, and finish materials. Structural deconstruction involves dismantling the structural components of a building.

DEGRADATION

The lowering of the quality of the environment through human activities e.g. river degradation, soil degradation, atmospheric degradation.

DEMOLITION

Demolition is the tearing-down of buildings and other structures, the opposite of construction. Demolition contrasts with deconstruction, which involves taking

a building apart while carefully preserving valuable elements for re-use.

DOMESTIC WASTE:

Domestic waste means waste, excluding hazardous waste, that emanates from premises that are used wholly or mainly for residential, educational, health care, sport or recreation purposes generated directly by the consumption of products for domestic use.

EMERGENCY:

An undesired event that results in a probable significant environmental impact and requires the notification of the relevant statutory body such as a local or provincial authority.

ENVIRONMENT:

In terms of the National Environmental Management Act (NEMA) (No 107 of 1998)(as amended), “Environment” means the surroundings within which humans exist and that are made up of:

- (i) the land, water and atmosphere of the earth;
- (ii) micro-organisms, plants and animal life;
- (iii) any part or combination of (i) of (ii) and the interrelationships among and between them; and
- (iv) the physical, chemical, aesthetic and cultural properties and conditions of the foregoing that influence human health and wellbeing.

ENVIRONMENTAL CONTROL OFFICER:

An individual nominated through the Client to be present on site to act on behalf of the Client in matters concerning the implementation and day to day monitoring of the EMPr and conditions stipulated by the authorities as prescribed in NEMA

ENVIRONMENTAL IMPACT:

A change to the environment, whether adverse or beneficial, wholly or partially resulting from an organisation’s activities, products or services.

ENVIRONMENTAL MANAGEMENT PROGRAMME:

A detailed plan of action prepared to ensure that recommendations for enhancing or ensuring positive environmental impacts and limiting or preventing negative environmental impacts are implemented during the life-cycle of the project.

GENERAL WASTE:

General waste means waste that does not pose an immediate hazard or threat to health or to the environment, and includes -

- (a) domestic waste;
- (b) building and demolition waste;
- (c) business waste; and
- (d) inert waste.

GENERAL WASTE LANDFILL SITE:

A waste disposal site that is designed, managed, permitted and registered to allow for the disposal of general waste.

HAZARDOUS WASTE:

Hazardous waste means any waste that contains organic or inorganic elements or compounds that may, owing to the inherent physical, chemical or toxicological characteristics of that waste, have a detrimental impact on health and the environment.

HAZARDOUS WASTE LANDFILL SITE:

A waste disposal site that is designed managed, permitted and registered to allow for the disposal of hazardous waste.

IMPACT:

A description of the potential effect or consequence of an aspect of the development on a specified component of the biophysical, social or economic environment within a defined time and space.

INCIDENT:

An undesired event which may result in a significant environmental impact but can be managed through internal response.

MITIGATION:

Measures designed to avoid, reduce or remedy adverse impacts.

PRINCIPAL AGENT

The principal agent is appointed by the Client to oversee the overall project management and the management of the professional project team.

RECOVERY:

The controlled extraction of a material or the retrieval of energy from waste to produce a product.

RE-USE:

To utilise articles from the waste stream again for a similar or a different purpose without changing the form of properties of the articles.

RECYCLE:

A process where waste is reclaimed for further use, this involves the separation of waste from a waste stream for further use and the processing of that separated material as a product or raw material.

SAFETY, HEALTH AND ENVIRONMENTAL OFFICER:

The SHE officer is a Contractor representative, responsible for the safety, health and environmental aspects on the construction site. The SHE officer will be responsible for the day-to-day monitoring of the EMP and Health and Safety Plan as per the OHSA.

WASTE:

Waste means any substance, whether or not that substance can be reduced, re-used, recycled and recovered -

- (a) that is surplus, unwanted, rejected, discarded, abandoned or disposed of;
- (b) which the generator has no further use of for the purposes of production;
- (c) that must be treated or disposed of; or
- (d) that is identified as a waste by the relevant Minister by notice in the Gazette, and includes

waste generated by the mining, medical or other sector, but—

- (i) a by-product is not considered waste; and
- (ii) any portion of waste, once re-used, recycled and recovered, ceases to be waste.

WASTE DISPOSAL FACILITY:

Waste disposal facility means any site or premise used for the accumulation of waste with the purpose of disposing of that waste at that site or on that premises.

WORKFORCE:

The entire project team including people employed by the Applicant/Client/Developer directly, his Principal Agent or the Contractor, persons involved in activities related to the project, or person present at or visiting the construction area, including permanent contactors and casual labour.

Acronyms

<i>CBD</i>	Central Business District
<i>dB</i>	Decibel
<i>DPW</i>	Department of Public Works
<i>ECO</i>	Environmental Control Officer
<i>EMPr</i>	Environmental Management Programme
<i>NEMA</i>	National Environmental Management Act (No 107 of 1998)
<i>NEMAQA</i>	National Environmental Management Air Quality Act (No 39 of 2004)
<i>NEMWA</i>	National Environmental Management Waste Act (No 59 of 2008)
<i>MDEDET</i>	Mpumalanga Department of Economic Development, Environment and Tourism
<i>OHS</i>	Occupational Health and Safety
<i>OHSA</i>	Occupational, health and Safety Act, (Act No 181 of 1993)
<i>PHRA</i>	Provincial Heritage Resources Agency
<i>PPE</i>	Personal Protective Equipment
<i>QS</i>	Quantity Surveyor
<i>SANRAL</i>	South African National Roads Agency
<i>SANS</i>	South African National Standard
<i>SAHRA</i>	South African Heritage Resources Agency
<i>SHE</i>	Safety, Health and Environment
<i>TBA</i>	To Be Announced

1 INTRODUCTION

TOWB Trading cc proposes the construction of a truck stop including Long Haul Heavy Vehicle Service Station, together with the storage of petroleum fuel. The service station is to be complimented with convenient shops normally associated with such an activity, parking facilities for long haul heavy vehicles and minor maintenance facilities. No facilities for providing over night accommodation facilities will be provided on site. The total development footprint is approximately 8ha in size. The proposed development is expected to take place on on remaining extent of potion 9 (a portion of portion 5) of the farm Smalkloof 122 registration division HS.

The development is proposed to be undertaken in phases with the first phase being the development of the parking, ablution, convenient shop, workshop , site offices and limited petroleum fuel outlet for heavy vehicles and second phase will be the fuel filling station (fuel storage facilities, fuel bowsers and canopy). Petroleum fuel storage is expected to be contained in 7 storage tanks (5 tanks diesel of 80 000 litres each and 2 tanks of 50 000 litres LRP and ULP each). Thus the combined capacity of petroleum fuel storage is 500 000 litres. No facilities for the storage or dispersing of liquid paraffin are required.

Service station facility in the form of fuel outlet provided with a canopy, bowser islands and buildings for a small convenient shop or kiosk with ablution facilities and a kitchenette and laundrette for the benefit of vehicle operators will be developed (Total building floor area not exceeding 8000 m²). In order to provide maximum turning and holding capacity for the awaiting heavy vehicles to be refuelled, the position of the fuel outlet is to be located at the most accessible portion of the site. Driving and parking lanes for vehicles will clearly be demarcated on the ground for the management of vehicular movement and parking.

Five suitably designed, convenient and functional, ablution facilities for the vehicle operators will be developed on the proposed site, providing for both male and female patrons. The buildings for the ablution facilities will each be approximately 70 m² in size. Heavy vehicles, travelling the long hours on the road, often encounter some minor faults on the vehicles; therefore a small workshop for minor repairs is proposed on the site. Minor repairs are to include battery charging or replacement, wheel changes, light repairs on the vehicles, load securing facilities, minor engine and vehicle lubrication, exhaust and vacuum system repairs, but will exclude major work and services to vehicle engines. A building of 250 m² for the workshop function is proposed.

1.1 Applicable Documentation

The following environmental documentation is applicable for the project, and will be read in conjunction with this EMP:

- Basic Assessment Report for the proposed Truck Stop including Service Station, together with the storage of petroleum fuel, Volksrust, Mpumalanga Province.
- Environmental Authorisation from the Mpumalanga Department of Economic Development, Environment and Tourism (MDEDET) – once issued.

1.2 Structure of the Environmental Management Programme

The environmental management programme (EMPr) provides proposed mitigation and management measures for the following phases of the project (refer to Table 1).

TABLE 1: DIFFERENT PHASES OF THE PROJECT LIFE-CYCLE

Category	Phase	Description
Category A	Construction	This section of the EMPr provides management principles for the construction phase of the project. Environmental actions, procedures and responsibilities as required within the construction phase are specified. These specifications will form part of the contract documentation and, therefore, the Contractor (or Contractors, including sub-contractors) will be required to comply with the specifications to the satisfaction of the Project Manager in terms of the construction contract.
Category B	Operations and Maintenance	This section of the EMPr provides management principles for the operation phase of the project. Environmental actions, procedures and responsibilities as required from TOWB Trading within the operation and maintenance phase are specified.
Category C	Decommissioning	This section includes principles for the decommissioning phase of the project. This section of the EMPr will be required to be revisited and updated at the time of decommissioning.

Relevant environmental legislation pertaining to the project is listed within Chapter 3. TOWB Trading shall be responsible for ensuring compliance with the conditions by any person acting on their behalf, including but not limited to, an agent, contractor, sub-contractor, employee or person rendering a service to the holder of the authorisation.

This EMPr is a dynamic document which will be updated as required on a continuous basis to ensure environmental best practices. Any amendments made, must be submitted to the TOWB Trading Project Manager for approval. Amendments to the EMPr must be submitted to the MDEDET.

1.3 Objectives of the Environmental Management Plan

The EMPr has the following objectives:

- To outline functions and responsibilities of responsible persons.
- To state standards and guidelines, which are required to be achieved in terms of environmental legislations.
- To outline mitigation measures and environmental specifications which are required to be implemented for all phases of the project in order to minimise the extent of environmental impacts, and to manage environmental impacts associated with the proposed project
- To prevent long-term or permanent environmental degradation.

1.4 Details of the Environmental Assessment Practitioner (EAP)

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Expertise:	<p>Malcolm Roods is a Principal with SSI specializing in Environmental Impact Assessments (EIA) for electricity supply (generation, transmission and distribution), road infrastructure, residential developments as well as water management projects. This builds on a broad government background, which has made him particularly flexible. His past experiences include 6 years public service which included policy development, environmental law reform and EIA reviews. His experience also includes more than 3 years of environmental consulting in the field of Impact Assessment and Authorisation Applications, with a focus on legislative requirements and sector area management. Malcolm holds a BA. (Honours) in Environmental Management from the North West University, and is a registered EAP with EAPSA.</p> <p>Ntseketsi Lerotholi is a senior environmental consultant with experience in various facets of environmental management. These include compiling Environmental Impact Reports; writing Environmental Management Programmes and plans and conducting legal compliance audits. She is a registered Professional Natural Scientist (<i>Pr Sci Nat</i> 400165/12) with the South African Council for Natural Scientific Professions (SACNASP).</p>

2 MANAGEMENT AND MONITORING PROCEDURES

2.1 Organisational Structure and Responsibility

- **The Project Management Team will:**
 - Ensure that the Contractor/s is aware of all specifications and legal constraints pertaining to the project specifically with regards to the environment.
 - Ensure that all stipulations within the EMPr are communicated and adhered to by TOWB Trading and its Contractor(s).
 - Monitor the implementation of the EMPr throughout the project by means of site inspections, assessments and meetings. This will be documented as part of the site meeting minutes.
 - Be fully conversant with the Environmental Impact Assessment for the project, the conditions of the Environmental Authorisation (once issued), and all relevant environmental legislation.

- **The Contractor (including sub-contractors) will be responsible for:**
 - Complying with the environmental management specifications.
 - Adhering to any instructions issued by the Project Manager .
 - Keep record of all incidents that have occurred during construction period. This should be available during audits.
 - Maintaining a public complaints register.
 - Conduct environmental training and awareness to employees.
 - Arrange for all employees and those of subcontractors to receive training before the commencement of construction in order that they are aware of the conditions of the environmental authorisation and the EMPr.

- **The Construction Safety Officer will:**
 - Be fully conversant with the Environmental Impact Assessment study.
 - Be fully conversant with the conditions of the Environmental Authorisation.
 - Be fully conversant with the Environmental Management Programme.
 - Be fully conversant with all relevant environmental legislation and ensure compliance with them.
 - Convey the contents of this document to the Contractor site staff and discuss the contents in detail with the Project Manager and Contractor. Training will be required to ensure all staff understands the process.
 - Undertake regular and comprehensive inspection of the site and surrounding areas in order to monitor compliance with the EMPr and Environmental Authorisation.
 - Take appropriate action if the specifications contained in the EMPr are not followed.
 - Monitor and verify that environmental impacts are kept to a minimum, as far as possible.
 - Review and approve construction methods (where it could result in environmental impacts), with input from the Project Manager where necessary.
 - Ensure that activities on site comply with all relevant environmental legislation.
 - Order the removal from the construction site of any person(s) and/or equipment in contravention of the specifications of the EMPr.
 - Report any non-compliance or remedial measures that need to be applied to the appropriate environmental authorities, in line with the requirements of the Environmental Authorisation.

2.2 Training and Environmental Awareness

It is important to ensure that the Contractor has the appropriate level of environmental awareness and competence to ensure continued environmental due diligence and ongoing minimisation of environmental harm. Training needs should be identified based on the available and existing capacity of site personnel (including the Contractors and Sub-contractors) to undertake the required EMPr management actions and monitoring activities. It is vital that all personnel are adequately trained to perform their designated tasks to an acceptable standard.

The environmental training is aimed at:

- Promoting environmental awareness;
- Informing the Contractor of all environmental procedures, policies and programmes applicable;
- Providing generic training on the implementation of environmental management specifications; and
- Providing job-specific environmental training in order to understand the key environmental features of the construction site and the surrounding environment.

Training will be done in a verbal format. The training will be a once-off event; however the Contractor should make provision for weekly training or “Toolbox Talks”.

In addition to training, general environmental awareness must be fostered among the project’s workforce to encourage the implementation of environmentally sound practices throughout its duration. This ensures that environmental accidents are minimised and environmental compliance maximized.

2.3 Monitoring

A monitoring programme will be in place not only to ensure compliance with the EMPr through the contract/work instruction specifications, but also to monitor any environmental issues and impacts which have not been accounted for in the EMPr that are, or could result in significant environmental impacts for which corrective action is required. TOWB Trading will cause and or carry out the internal audits.

As part of the contract or work instruction, TOWB Trading will stipulate the period and frequency of monitoring required. This will be determined from applicable permits and authorisations from authorities. The Project Manager will ensure that the monitoring is carried out.

2.4 Reporting Procedures

2.4.1 Documentation

The following documentation must be kept on site in order to record compliance with the EMPr:

- Record of Complaints
- Monitoring Results
- Non-conformance Reports
- Written Corrective Action Instructions
- Notification of Emergencies and Incidents.

2.4.2 Reporting

The above records will form an integral part of the Contractors' Records. These records will be kept with the EMP, and will be made available for scrutiny if so requested during audits.

3 ENVIRONMENTAL GUIDELINES, STANDARDS AND PERMITS

3.1 Legal Summary

The following is a summary of the environmental legislation applicable to the proposed project.

LEGISLATION	SECTIONS	RELATES TO
The Constitution (No 108 of 1996)	Chapter 2	Bill of Rights.
	Section 24	Environmental rights.
National Environmental Management Act (No 107 of 1998 [as amended])	Section 2	Defines the strategic environmental management goals and objectives of the government. Applies through-out the Republic to the actions of all organs of state that may significantly affect the environment.
	Section 24	Provides for the prohibition, restriction and control of activities which are likely to have a detrimental effect on the environment.
	Section 28	The developer has a general duty to care for the environment and to institute such measures as may be needed to demonstrate such care.
Environment Conservation Act (No 73 of 1989) and regulations	Sections 19 and 19A	Prevention of littering by employees and subcontractors during construction and the maintenance phases of the proposed project
National Heritage Resources Act (No 25 of 1999) and regulations	Section 34	No person may alter or demolish any structure or part of a structure which is older than 60 years without a permit issued by the relevant provincial heritage resources authority.
	Section 35	No person may, without a permit issued by the responsible heritage resources authority destroy, damage, excavate, alter, deface or otherwise disturb any archaeological or palaeontological site.
	Section 36	No person may, without a permit issued by the South African Heritage Resource Agency (SAHRA) or a provincial heritage resources authority destroy, damage, alter, exhume, remove from its original position or otherwise disturb any grave or burial ground older than 60 years which is situated outside a formal cemetery administered by a local authority. "Grave" is widely defined in the Act to include the contents, headstone or other marker of such a place, and any other structure on or associated with such place.

LEGISLATION	SECTIONS	RELATES TO
	Section 38	This section provides for Heritage Impact Assessments (HIAs), which are not already covered under the ECA. Where they are covered under the ECA the provincial heritage resources authorities must be notified of a proposed project and must be consulted during the HIA process. The Heritage Impact Assessment (HIA) will be approved by the authorising body of the provincial directorate of environmental affairs, which is required to take the provincial heritage resources authorities' comments into account prior to making a decision on the HIA.
National Environmental Management: Air Quality Act (No 39 of 2004)	Section 32	Control of dust
	Section 34	Control of noise
	Section 35	Control of offensive odours
Occupational Health and Safety Act (No 85 of 1993)	Section 8	General duties of employers to their employees
	Section 9	General duties of employers and self employed persons to persons other than their employees
Occupational Health and Safety Act-Major Hazard Installation Regulations (GN R692, July 2001)	Sections 5 and 6	A risk assessment must be conducted at intervals not exceeding five years and establish an on-site emergency plan to be followed inside the premises of the installation.
National Water Act (No 36 of 1998) and regulations	Section 19	Prevention and remedying the effects of pollution
	Section 20	Control of emergency incidents
Hazardous Substances Act (No 15 of 1973) and regulations		Provides for the definition, classification, use, operation, modification, disposal or dumping of hazardous substances
National Environmental Management: Waste Act (No. 59 of 2008)		Provides for specific waste management measures and the remediation of contaminated land.

3.2 Environmental Guidelines and Standards

All applicable environmental standards contained within the environmental legislation will be adhered to. At the time of compiling this draft EMP, the following environmental guidelines and standards were identified as being applicable:

3.2.1 Major Hazardous Installation Regulations

The proposed fuel station facility is a Major Hazardous Installation (MHI) according to the Occupational Health and Safety Act-Major Hazard Installation Regulations (GN R692, July 2001) because of the quantity of product in storage, which exceeds the stress hold quantity specified in the General Machinery Regulation (Schedule A products). This therefore should form part of and addressed in the proposed site MHI report in future.

3.2.2 Air Quality Guidelines

Currently air pollution in South Africa is regulated under the National Environmental Management: Air Quality Act 39 of 2004. On 1 April 2010, the List of activities which result in atmospheric emissions in terms of section 21 of the Air Quality Act came into effect.

3.2.3 Waste Disposal

All waste (general and hazardous) generated during the construction and operation of the proposed project may only be collected, stored and transported under specific requirements.

3.2.4 Occupational Health and Safety

All safety, health and environmental standards and emergency procedures that must be adhered to in terms of the Occupational Health and Safety Act (No 85 of 1993), must be complied with during the construction and operation.

4 CATEGORY A: CONSTRUCTION PHASE

ACTIVITY / ISSUE	ENVIRONMENTAL MEASURES AND CONTROLS	MONITORING AND CORRECTIVE ACTIONS	RESPONSIBLE PERSON/S
1. Appointment of Contractor	<ul style="list-style-type: none"> • TOWB Trading must ensure that this EMPr forms part of any contractual agreements with a Contractor(s) and sub-contractors for the execution of the proposed project. • Local labour and contractors must be used wherever possible. 		Project Manager
2. Safety Training	<ul style="list-style-type: none"> • The contractor shall ensure that all its employees are adequately orientated, inducted and trained to perform the tasks. • Tool Box Talks - The contractor is expected to have safety “tool box” talks. These talks shall be in accordance with the risks and trends associated with the project. Proof of these talks shall be kept on site. • The principal contractor will develop a specific emergency procedure and implement an emergency plan for the site. 		Contractor
3. Environmental training and Awareness	<ul style="list-style-type: none"> ▪ Construction staff must be adequately educated by the ECO, OHS Officer and the SHE Officer as to the provisions included in the EMP and general environmentally friendly practice. ▪ Tool Box Talks - The Contractor is expected 		Project Manager Contractor

ACTIVITY / ISSUE	ENVIRONMENTAL MEASURES AND CONTROLS	MONITORING AND CORRECTIVE ACTIONS	RESPONSIBLE PERSON/S
	<p>to have “tool box” talks. These talks shall be in accordance with the risks and trends associated with the project. Proof of these talks shall be kept on site.</p>		
<p>4. Personal Protective Equipment (PPE)</p>	<ul style="list-style-type: none"> ▪ Tool Box Talks - The Contractor is expected to have “tool box” talks. These talks shall be in accordance with the risks and trends associated with the project. Proof of these talks shall be kept on site. • No person is allowed to enter the site without the SBU approved (SANS approved) required PPE. • All contractors shall be trained on the correct use of PPE. • All contractors are required to keep an updated register of all PPE issued. • A contractor shall ensure action is taken against an employee who continuously fails to comply. ▪ PPE minimum requirement notice boards shall be placed at all entrances. 	<ul style="list-style-type: none"> • Strict non-compliance measures must be administered to any employees not complying with the use of PPE. 	<p>Project Manager Contractor</p>
<p>5. Health and Safety</p>	<ul style="list-style-type: none"> • The Health and Safety Plan developed for the project in respect of construction worker safety must be adhered to at all times. • The Contractor must adhere to the prescriptions of the relevant health and safety legislation and standards. The Contractor 	<ul style="list-style-type: none"> • No one must be allowed on site unless they are wearing approved safety equipment. • Appropriate site inspections and audits during construction need to be conducted during construction to 	<p>Project Manager Contractor</p>

ACTIVITY / ISSUE	ENVIRONMENTAL MEASURES AND CONTROLS	MONITORING AND CORRECTIVE ACTIONS	RESPONSIBLE PERSON/S
	<p>must familiarise himself and his employees with the contents of the aforementioned legislation.</p> <ul style="list-style-type: none"> • First Aid facilities must be on hand at all times in accordance with international practice. • The Contractor must implement adequate and mandatory safety precautions relating to all aspects of the deconstruction. Such safety measures and work procedures/instructions must be communicated to construction workers. • The wearing of Personal Protective Equipment (PPE) on site is mandatory for all personnel and construction team members. Minimum requirements must include the wearing of an approved safety helmet, safety boots and dust masks, ear plugs, etc where appropriate. • PPE signs should be erected on site at the areas where it is required and the integrity and availability of the signs must be maintained. • Casual visitors must be required to sign a register at the security checkpoint; the responsible person must then be contacted before the visitor is allowed access to site. No unauthorised visitors are to be allowed on site. 	<p>ensure safety issues are carefully considered through the construction process.</p> <ul style="list-style-type: none"> • Security fence will be installed, the site secured to prevent unauthorized access and security access control measures are to be implemented. 	

ACTIVITY / ISSUE	ENVIRONMENTAL MEASURES AND CONTROLS	MONITORING AND CORRECTIVE ACTIONS	RESPONSIBLE PERSON/S
	<ul style="list-style-type: none"> • Erection of scaffolding must be undertaken by a certified practitioner. • Workers' right to refuse work in unsafe conditions must be respected. • All personnel must be trained in basic site safety procedures. • The construction staff handling chemicals or hazardous materials must be trained in the use of the substances and the environmental, health and safety consequences of incidents. • The Contractor must design, test/exercise appropriate emergency preparedness programmes (plans, schedules, procedures and methods) for addressing environmental accidents, incidents and events such as spills of fuel, oil or lubricants; fires etc. 		
<p>6. Development of foundations, relocation of utility lines (e.g. potable water line) and moving of perimeter.</p>	<ul style="list-style-type: none"> ▪ Prior to the establishment of the site camp / office, the Contractor will produce a site layout plan showing the positions of all equipment storage, waste stockpiling, fuel storage areas and other infrastructure. • All site disturbances must be limited to the areas where approved structures will be constructed. • Consider using any excess rocks and boulders that are excavated from the construction site for any erosion protection work which is required on site. • Excess material as a result of excavation 		<p>Project Manager Contractor</p>

ACTIVITY / ISSUE	ENVIRONMENTAL MEASURES AND CONTROLS	MONITORING AND CORRECTIVE ACTIONS	RESPONSIBLE PERSON/S
	<p>activities together with construction rubble must be removed, once construction is completed and appropriately disposed of.</p> <ul style="list-style-type: none"> • No fires shall be permitted on site. ▪ Access in and out of the site must be allowed only at one point to minimise impacts during construction. ▪ All areas of deconstruction activity will be fenced by the Contractor prior to deconstruction. ▪ All sites that are identified by the SHE Officer as being unsafe or no-go areas will be indicated as such with warning signs in all relevant languages 		
7. Excavation and Backfilling	<ul style="list-style-type: none"> • all excavated materials are to be utilized on site and may be used for landscaping purposes. • Storm water drains are to be constructed as in terms of the approved stormwater management plan • All site disturbances must be limited to the areas where approved structures will be constructed. • Consider using any excess rocks and boulders that are excavated from the construction site for any erosion protection work and or landscaping which is required on site. 		Contractor

ACTIVITY / ISSUE	ENVIRONMENTAL MEASURES AND CONTROLS	MONITORING AND CORRECTIVE ACTIONS	RESPONSIBLE PERSON/S
	<ul style="list-style-type: none"> • Excess material as a result of excavation activities together with construction rubble must be removed, once construction is completed and appropriately disposed of. • Backfill material must be from excavated material. • Areas to be backfilled must be cleared of all unsuitable material and debris. • Construction and domestic waste may not be used in backfill. 		
<p>8. Alteration of topography due to stockpiling of soil, building material, debris and waste material on site and Erosion Control</p>	<ul style="list-style-type: none"> • Topsoil is to be stockpiled separate from other excavated materials to be reused for landscaping purposes. • Topsoil should only be exposed for minimal periods of time and adequately stockpiled to prevent the topsoil loss and runoff. • All stockpiles must be restricted to designated areas. • Land disturbance must be minimised in order to prevent erosion and run-off – this includes leaving exposed soils open for a prolonged period of time. • Areas susceptible to erosion must be protected by installing the necessary temporary and/or permanent drainage works to prevent surface water from being concentrated in streams. • Any tunnels or erosion channels developed 		<p>Contractor</p>

ACTIVITY / ISSUE	ENVIRONMENTAL MEASURES AND CONTROLS	MONITORING AND CORRECTIVE ACTIONS	RESPONSIBLE PERSON/S
	<p>during the construction period shall be backfilled and compacted, and the area restored to a proper condition.</p> <ul style="list-style-type: none"> • Implement the appropriate topsoil and stormwater runoff control management measures to prevent the loss of topsoil. • Soil excavated on the site is to be appropriately stored for later use in back-filling. Sub-soil and topsoil (the top +/- 30-50 cm of the soil) should be stored separately. • Soil stockpiles are to be protected from possible erosion, e.g. through covering of the stockpiles with tarpaulin, and limiting the height and angle of the stockpile. Soil stockpiles are not exceed 2 m in height. • Soil stockpiling areas must be sufficiently situated away from the drainage areas. • Any erosion channels developed during the construction period or during the vegetation establishment period should be backfilled and compacted, and the areas restored to a proper condition. • The Contractor should ensure that cleared areas are effectively stabilised to prevent and control erosion. 		
<p>9. Dust Control (Sources: <i>access roads; bare area cleared for construction; Debris handling; Emissions from</i></p>	<ul style="list-style-type: none"> • There should be strict speed limits on site roads to prevent the liberation of dust into the atmosphere. • The height of all stockpiles on site are to be a 	<p>If monitoring results or complaints indicate inadequate compliance with the EMPr, the source of the problem must be identified and existing procedures</p>	<p>Contractor</p>

ACTIVITY / ISSUE	ENVIRONMENTAL MEASURES AND CONTROLS	MONITORING AND CORRECTIVE ACTIONS	RESPONSIBLE PERSON/S
<p><i>construction machinery and equipment; and Trucks transporting spoil and fill material)</i></p>	<p>maximum of 2m.</p> <ul style="list-style-type: none"> • Dust must be suppressed on the construction site, temporary dirt roads and during the transportation of material during dry periods by the regular application of water. Water used for this purpose must be used in quantities that will not result in the generation of run-off. • All site workers during construction will need to wear the appropriate PPE to avoid any exposure to contaminated dust particles. 	<p>modified to ensure that the problem is rectified.</p>	
<p>10. Water Management (Sources: <i>spillage, leakage, incorrect storage and handling of chemicals; oils; lubricants, cement, fuels and other hazardous materials.</i>)</p>	<ul style="list-style-type: none"> • The base of the fuel tank excavations should be flat and free from rocks and other foreign objects and covered by 150mm thick backfill of acceptable quality, compacted to specification with the correct backfill material and prepared using accepted construction practices to ensure stability and sustainability of underground tanks. • Adequate stormwater drainage should be constructed and no water should be allowed to pond • All hazardous substances must be stored on an impervious surface in a designated bunded area, able to contain 110% of the total volume of materials stored at any given time. • The integrity of the impervious surface and bunded area must be inspected regularly and any maintenance work conducted must be recorded in a maintenance report. 		<p>Project Manager Contractor</p>

ACTIVITY / ISSUE	ENVIRONMENTAL MEASURES AND CONTROLS	MONITORING AND CORRECTIVE ACTIONS	RESPONSIBLE PERSON/S
	<ul style="list-style-type: none"> • Shallow groundwater needs to be tested and diverted to an appropriate destination to avoid contamination. • Provide proper warning signage to make people aware of the activities within designated areas. • Employees should be provided with absorbent spill kits and disposal containers to handle spillages. • Train employees and contractors on the correct handling of spillages and precautionary measures that need to be implemented to minimise potential spillages. • All earth moving vehicles and equipment must be regularly maintained to ensure their integrity and reliability. No repairs may be undertaken beyond the contractor lay-down area. • Employees should record and report any spillages to the responsible person. • An Emergency Preparedness and Response Plan will be developed and implemented should an incident occur. • Access to storage areas on site must be restricted to authorised employees only. • Ensure the establishment of stormwater diversion berms around the contractor laydown area and other potential contaminated areas (e.g. diesel storage tanks or refuelling station). • All contaminated standing water should be 		

ACTIVITY / ISSUE	ENVIRONMENTAL MEASURES AND CONTROLS	MONITORING AND CORRECTIVE ACTIONS	RESPONSIBLE PERSON/S
	<p>immediately removed and treated or disposed of appropriately.</p> <ul style="list-style-type: none"> • All incidents must be reported to the responsible site officer as soon as it occurs. • Care must be taken to ensure that no water from the construction site enters the natural watercourse. • Preventative measures include establishing sumps from where contaminated water can be either treated in situ or removed to an appropriate waste site. • Wastewater should be directed into proper stormwater drains. • Sewage water are to be isolated from the environment and not be channelled through stormwater drains or be allowed to flow freely or stagnate on the soil surface. • Stormwater management structures (channels, bunded areas, sumps) should be designed into the project to trap any potentially contaminated stormwater and return it to the relevant process or allow it to be stored and properly disposed off. • Excess or spilled concrete should be confined within the works area and then removed to a waste site. 		
<ul style="list-style-type: none"> • Noise (Source: <i>excavating and site clearing, construction vehicles/machinery,</i> 	<ul style="list-style-type: none"> • Surrounding communities and adjacent landowners are to be notified upfront of noisy 	<p>The Contractor will respond timeously in the event of any complaints by local</p>	<p>Project Manager</p>

ACTIVITY / ISSUE	ENVIRONMENTAL MEASURES AND CONTROLS	MONITORING AND CORRECTIVE ACTIONS	RESPONSIBLE PERSON/S
<p><i>construction staff, blasting and or drilling)</i></p>	<p>construction activities (e.g excavations).</p> <ul style="list-style-type: none"> • Provide all equipment with standard silencers. Maintain silencer units in vehicles and equipment in good working order. • Construction staff working in area where the 8-hour ambient noise levels exceed 85dBA must have the appropriate Personal Protective Equipment (PPE). • Where possible, stationary noisy equipment (for example compressors, generators etc. should be encapsulated in acoustic covers, screens or sheds. Portable acoustic shields should be used in the case where noisy equipment is not stationary (for example drills, angle grinders, chipping hammers). • Noise from labourers must be controlled. 	<p>residents or others about disturbing noise. The noise source will be identified and appropriate noise mitigatory measures instituted in consultation with the affected party (ies).</p>	<p>Contractor</p>
<p>11. Waste Management <i>(Sources: domestic waste, spent grinding material, mixed concrete, paint cans and brushes, insulation material, building rubble and other construction waste)</i></p>	<ul style="list-style-type: none"> • General waste disposal bins will be made available for employees to use throughout the construction phase. • Where possible construction waste on site should be recycled or reused. • Waste will be temporarily stored on site (less than 90 days) before being disposed off appropriately. • General waste will be disposed of an approved waste disposal facility. • Records of all waste being taken off site must be recorded and kept as evidence. • Evidence of correct disposal must be kept. • Building rubble will be used, where possible, 	<ul style="list-style-type: none"> • A complaints register must be maintained, in which any complaints from the community must be logged. All complaints must be investigated and, if appropriate, acted upon. • Corrective actions are required to be undertaken immediately after a complaint is made or a non-conformance is identified. 	<p>Project Manager Contractor</p>

ACTIVITY / ISSUE	ENVIRONMENTAL MEASURES AND CONTROLS	MONITORING AND CORRECTIVE ACTIONS	RESPONSIBLE PERSON/S
	<p>in construction or buried with the necessary town planning approvals. Where this is not possible, the rubble will be disposed of at an appropriate site.</p> <ul style="list-style-type: none"> • Burning of waste material will not be permitted. • Hazardous materials will be generated if there are spillages during construction and maintenance periods. This waste should be cleaned up using absorbent material provided in spill kits on site. • Absorbent materials used to clean up spillages should be disposed of in a separate hazardous waste bin. • The storage area for hazardous material must be concreted, bunded, covered, labelled and well ventilated. • Provide employees with appropriate PPE for handling hazardous materials. • All hazardous waste will be disposed of in a registered hazardous waste disposal facility. • To lower the potential for leachate formation, domestic waste should be placed in a water tight container and disposed of on a regular basis. • Used oil must be disposed off in accordance with the correct procedures. • All equipment that has the potential for spillages or leakages shall be equipped with drip-trays. 		

ACTIVITY / ISSUE	ENVIRONMENTAL MEASURES AND CONTROLS	MONITORING AND CORRECTIVE ACTIONS	RESPONSIBLE PERSON/S
	<ul style="list-style-type: none"> • Ensure that care is taken to ensure that spillages of oils and effluent are limited during maintenance. In the event of a spill/leak, the source of the spill or leak must be identified and addressed. • The oil/effluent spill/leak must be cleaned immediately and any contaminated soil must be removed and disposed off through a recognisable waste disposal method. 		
12. Employment	<ul style="list-style-type: none"> • All labour (skilled and unskilled) and contractors should be sourced locally where possible. • The Pixley Ka Isaka Seme Local Municipality needs to be informed and involved in the influx of people. 		Project Manager Contractor
13. Traffic	<ul style="list-style-type: none"> • Caution will be taken to ensure construction vehicles are not parked close to the road. • The access, being on an important national route will need to meet certain criteria: A high standard of intersection be constructed with dedicated right turn lanes as prescribed and authorized by the relevant Roads Authority (SANRAL). • Should the entrance to the site be security 		

ACTIVITY / ISSUE	ENVIRONMENTAL MEASURES AND CONTROLS	MONITORING AND CORRECTIVE ACTIONS	RESPONSIBLE PERSON/S
	<p>controlled this is to be positioned a minimum distance of 60m from the edge of the provincial road and in terms of the approved site development plan.</p> <ul style="list-style-type: none"> On both R23 approaches to the proposed site intersection a priority crossroad sign with information plate “heavy vehicles turning” is required. All signage and road markings for the proposed site intersection are be in accordance with the South African Road Traffic Signs Manual”. 		

5 CATEGORY B: OPERATIONS

ACTIVITY / ISSUE	ENVIRONMENTAL MEASURES AND CONTROLS	MONITORING AND CORRECTIVE ACTIONS	RESPONSIBLE PERSON/S
<p>1. Handling of recovered oil – potential to contaminate water resources and soils</p>	<ul style="list-style-type: none"> There must be adequate bunding of tanks to prevent leakages into the soil and water resources. Any spill should be cleaned up immediately and contaminated soil should be disposed off at a designated site. 	<ul style="list-style-type: none"> The recovered oil will be disposed of appropriately and disposal records will be kept 	<p>Truck Stop Manager</p>

ACTIVITY / ISSUE	ENVIRONMENTAL MEASURES AND CONTROLS	MONITORING AND CORRECTIVE ACTIONS	RESPONSIBLE PERSON/S
2. Cleaning of Equipment	<ul style="list-style-type: none"> • Maintenance on the fuel tanks must be carried out during times of low inflow preferably during May, June and July. • In upset conditions (e.g. equipment malfunctioning) the flow must be diverted to available process equipment. • Chemicals that have been used for cleaning should be disposed off correctly. MSDSs should always be available. • A specialized waste disposal company is to be contracted to ensure the safe handling, storage and transportation of the chemical waste. • Emergency plan and procedures are to be in place in the event of spillage. 	<ul style="list-style-type: none"> • Emergency plan and procedures will be in place in the event of spillage. • All workers will be trained on the proper procedure for disposal of the contaminated water. • A specialized waste disposal company will be contracted to ensure the safe handling, storage and transportation of the chemical waste. 	Truck Stop Manager
3. Waste management: – i.e. sludge handling, refinery oil, other hazardous and general wastes generated during maintenance and operational activities	<ul style="list-style-type: none"> • The sludge generated in the process must be disposed of appropriately • To lower the potential for leachate formation, domestic waste is to be placed in a water tight container and disposed of on a regular basis. • Used oil must be disposed off in accordance with the correct procedures. • All equipment that has the potential for spillages or leakages shall be equipped with drip-trays. • Ensure that care is taken to ensure that spillages of oils and effluent are limited during maintenance. In the event of a spill/leak, the 	<ul style="list-style-type: none"> • Refinery oil will be disposed off at the licensed Hazardous waste disposal facility. • A specialized waste disposal company will be contracted to ensure the safe handling, storage and transportation of the chemical waste. 	Truck Stop Manager

ACTIVITY / ISSUE	ENVIRONMENTAL MEASURES AND CONTROLS	MONITORING AND CORRECTIVE ACTIONS	RESPONSIBLE PERSON/S
	<p>source of the spill or leak must be identified and correctly addressed.</p> <ul style="list-style-type: none"> The oil/effluent spill/leak must be cleaned immediately and any contaminated soil must be removed and disposed off through a recognisable waste disposal method. 		
4. Conservation of habitat	<ul style="list-style-type: none"> Work must be restricted to areas under construction and not directed towards the drainage furrow in order to minimize the potential negative effects of the lights on the natural nocturnal activities. Where lighting is required for safety or security reasons, this is to be targeted at the areas requiring attention. Yellow sodium lights should be prescribed as they do not attract as many invertebrates (insects) at night and will not disturb the existing wildlife. Exposed areas especially adjacent to the proposed truck stop, service station development and access roads are to be rehabilitated with a grass mix that blends in with the surrounding vegetation. The grass mix should consist of indigenous grasses adapted to the local environmental conditions. The use of the exotic species should be avoided and only indigenous species such as Couch Grass (<i>Cynodon dactylon</i>) or Buffalo Turf Grass (<i>Stenotaphrum secundatum</i>) should be used 		Truck Stop Manager

ACTIVITY / ISSUE	ENVIRONMENTAL MEASURES AND CONTROLS	MONITORING AND CORRECTIVE ACTIONS	RESPONSIBLE PERSON/S
	<ul style="list-style-type: none"> Fences are to have low impact to surrounding vegetation as well as allow for the natural migratory movements onto and away from the site. Ideally palisade fencing with a minimum 15cm wide gap should be erected around the site. Non-migratory fences or reverse curbing should be used to restrict the migratory movements of certain animals into high risk areas such as the service station. Unauthorised entry, stockpiling, dumping or storage of equipment or materials shall be strictly prohibited within the demarcated “no go” areas. Reasonable speeds will be maintained at all times in order to prevent accidents, excessive noise and dust and road fatalities of migrating animals. 		
5. Air Quality – (Source: fuels fumes, emissions and odours)	<ul style="list-style-type: none"> Ensure and instruct all drivers to switch off the trucks once correctly parked, and avoid idling as much as possible All operators should wear appropriate PPE to minimize exposure to fuel odours (e.g. gas masks). 	<ul style="list-style-type: none"> If monitoring results or complaints indicate inadequate compliance with the EMP, the source of the problem will be identified and existing procedures modified to ensure that the problem is rectified. 	Truck Stop Manager

ACTIVITY / ISSUE	ENVIRONMENTAL MEASURES AND CONTROLS	MONITORING AND CORRECTIVE ACTIONS	RESPONSIBLE PERSON/S
6. Fire Risks	<ul style="list-style-type: none"> • Fire extinguishers must be easily accessible. and all site operation vehicles are to have fire extinguishers • Employees are to be trained on fire safety and there are to be fire marshals. • Local emergency fire brigade number are to be known to all employees. • The prescribed fire safety precautions in terms of the Occupational Health and Safety Act must be adhered to. • The UST's, underground pipes and dispensing pumps are be monitored regularly for leaks. • Tanker delivery driver must be present during delivery of fuel with the emergency cut off switch and a fire extinguisher. • The filling station management must develop an EMERGENCY PLAN. All staff must be adequately trained in the implementation of this plan. • The following signs must be installed: <ul style="list-style-type: none"> ○ "NO SMOKING" ○ "NO NAKED FLAME" ○ "NO CELLPHONES" 		Truck Stop Manager

ACTIVITY / ISSUE	ENVIRONMENTAL MEASURES AND CONTROLS	MONITORING AND CORRECTIVE ACTIONS	RESPONSIBLE PERSON/S
7. Water Management	<ul style="list-style-type: none"> • Management and discharge of treated effluent water together with sufficient waste spill control measures are to and, maintain the unpolluted, 'stable' aquifer vulnerability status and ensure a minimal risk of groundwater pollution • The drive way areas around the dispensers/pumps where spillage may occur during refuelling are to be graded to allow effluent to first pass through a gravity separator. • Precautions should be taken to ensure that surface run-off, potential leaks or spills do not flow into the sewer system. • Precaution is to be installed for surface water run-off from areas possibly contaminated with fuel spillage, not to join normal surface run-off without first passing through a simple gravity separator /settlement pond or similar protective installation. • Submersible pumps are to be fitted with leak detectors that check the integrity of the pipework. • No major lowering of the water table should take place through increased groundwater abstraction as that could increase the hydraulic gradient and therefore accelerate pollutant transport times. • Initially, for the first 6 month of operation, monthly y groundwater quality monitoring of 	<ul style="list-style-type: none"> • The existing production boreholes and monitoring wells will be sampled regularly in terms of water quality (SANS 241) guidelines for domestic use. • A proper groundwater quality monitoring program will be implemented as soon as possible, where initial sampling and analysis should allow for all major chemical, physical and bacteriological constituents as per (SANS 241). Follow-up sampling could monitor elements in excess only as well as for traces of hydrocarbon contamination. • The monitoring data wil be reviewed by a hydrogeologist to establish performance and water quality trends and submitted to the relevant water authority for record keeping. 	Truck Stop Manager

ACTIVITY / ISSUE	ENVIRONMENTAL MEASURES AND CONTROLS	MONITORING AND CORRECTIVE ACTIONS	RESPONSIBLE PERSON/S
	<p>production wells and monitoring wells is recommended and thereafter every three months.</p> <ul style="list-style-type: none"> • Where water is supplied for human consumption, guidelines in terms of a water service provider should be adhered to. • An early warning system must be considered for placement within the monitoring wells or beneath the storage tanks. • Wellheads on boreholes down gradient of the proposed facility must be constructed to prevent any ingress of surface water either from a fuel spill or water flooding. • Shallow monitoring wells must be installed around the storage tanks to ensure any potential leakage from the tanks is detected in time. These wells must be of uPVC or HDPE material and have an internal diameter of at least 50mm. A minimum of one up gradient and two down gradient wells be installed. The depth of the well must be at least 2m below the depth of the storage tank. • Piezometers must be installed in all wells and water level monitoring carried out and recorded either manually or with electronic data loggers • Any spill should be cleaned up immediately and contaminated soil should be disposed off at a designated site • The pump, refuelling and forecourt areas 		

ACTIVITY / ISSUE	ENVIRONMENTAL MEASURES AND CONTROLS	MONITORING AND CORRECTIVE ACTIONS	RESPONSIBLE PERSON/S
	<p>should all be located on a hardened surface which drains into a common drain. This drain must feed onsite oil and water separator such as a Zorbit Grease Trap The accumulated grease and oil must be removed by an accredited company.</p> <ul style="list-style-type: none"> • Overfill and spillages during tanker refuelling and fuel dispensing should be prevented by the installation of automatic cut off devices. • Tanker delivery driver must be present during delivery of fuel with the emergency cut off switch. • In the event of the pump dispenser or the hoses being knocked over or ripped off the fuel supply must be cut off by shear off valves. • Strict procedures for the management of the site must be developed and adhered to. • Staff must be trained to prevent spillages during fuel dispensing. 		
8. Increased traffic	<ul style="list-style-type: none"> • The access, being on an important provincial route will need to meet certain criteria: It is recommended that a high standard of intersection be constructed and maintained as prescribed by the roads authority. 		Truck Stop Manager

ACTIVITY / ISSUE	ENVIRONMENTAL MEASURES AND CONTROLS	MONITORING AND CORRECTIVE ACTIONS	RESPONSIBLE PERSON/S
	<ul style="list-style-type: none"> • Should the entrance to the site be security controlled this is to be positioned a minimum distance of 80m from the edge of the provincial road. • On both R23 approaches to the proposed site intersection a high visibility W102 (priority crossroad sign) with information plate “heavy vehicles turning” is required. All signage and road markings for the proposed site intersection are to be in accordance with the South African Road Traffic Signs Manual” and properly maintained at all times. • Road surfaces in the immediate vicinity of the site should be monitored. If the road is damaged the relevant authority must be notified. • Advertising boards must not block the visibility of the R23 from the filling station access road and may not be erected without the proper authorization from the relevant authorities.. • Access to and from the site must not impact on the traffic on the R23. • Traffic must travel around the filling station in a one way circulation system. • The speed limit on the forecourt must not exceed 5km/h. 		
9. Visual Intrusion & Light Pollution	<ul style="list-style-type: none"> • Light pollution should be minimised. • Lighting on site is to be sufficient for safety and security purposes, but shall not be 	<ul style="list-style-type: none"> • Regular maintenance of lighting will be maintained 	Truck Stop Manager

ACTIVITY / ISSUE	ENVIRONMENTAL MEASURES AND CONTROLS	MONITORING AND CORRECTIVE ACTIONS	RESPONSIBLE PERSON/S
	<p>intrusive to neighbouring residents, disturb wildlife, or interfere with road trafficon the adjacent R23..</p> <ul style="list-style-type: none"> • Littering, rubbish and illegal dumping on the site is NOT allowed. • Refuse and waste must be contained on site in dedicated areas, suitably designed and constructed and disposed of at the Municipal land fill site as in terms of the relevant signed Services Agreement. • Refuse bins must be provided. These must be sufficient in number (at the pumps, ablution facilities, shop, fast food outlets and kitchen). • The buildings may not be visually intrusive. • The buildings must be regularly painted and maintained to acceptable standards.. • All lights used for non-security purposes should be energy efficient for example compact fluorescent lights (CFL). • Outside lights will have to be downward shining (eyelid type), low wattage and pedestrian walkway and parking area lights should not be positioned higher than 1m above the ground surface. 		

ACTIVITY / ISSUE	ENVIRONMENTAL MEASURES AND CONTROLS	MONITORING AND CORRECTIVE ACTIONS	RESPONSIBLE PERSON/S
	<ul style="list-style-type: none">• Electricity saving bulbs should be used• Signs must conform to the standards of South African Manual for Outdoor Advertising Control (SAMOAC) and have written authorization from the relevant authority prior to installation.• Areas that have been landscaped must be maintained.		

6 CATEGORY C: DECOMMISSIONING PHASE

6.1 General Principles for Environmental Management during Decommissioning

At this point of the project planning process, the necessity for and timing of the decommissioning of the proposed project is not anticipated nor known.

In order to minimise the extent of rehabilitation activities required during the decommissioning phase, TOWB Trading will ensure that constant effort is applied to rehabilitation activities throughout the construction, operation and maintenance phases of the project.

TOWB Trading will further ensure upon site closure and decommissioning of the authorised activity, an application in terms of Listing Notice 1 and 2 of the EIA Regulations (2010) for the relevant Environmental Authorisation will be lodged if applicable. However the possible mitigation measures are listed on table below:

ACTIVITY / ISSUE	ENVIRONMENTAL MEASURES AND CONTROLS	MONITORING AND CORRECTIVE ACTIONS	RESPONSIBLE PERSON/S
1. Waste	<ul style="list-style-type: none"> Disposal of waste must be in accordance with relevant legislative requirements. Waste must be disposed off in the appropriate manner at a licensed disposal site. The sludge remaining in the UST's must be disposed of at an accredited hazardous waste facility. 		The management of TOWB Trading
2. Handling of recovered fuel – potential to contaminate water resources and soils	<ul style="list-style-type: none"> Decommissioning should take place during the dry winter months. All the fuel must be removed from 	<ul style="list-style-type: none"> The recovered oil will be classified and tested to ensure it meets customer's specifications (i.e. TOWB Trading). 	Contractor

ACTIVITY / ISSUE	ENVIRONMENTAL MEASURES AND CONTROLS	MONITORING AND CORRECTIVE ACTIONS	RESPONSIBLE PERSON/S
	<p>the UST's, and the site, in sealed containers.</p> <ul style="list-style-type: none"> • Drained fuel must be transported back to the depot by an accredited transporter. • Dismantling of equipment must be conducted by an accredited contractor. • The sludge remaining in the UST's must be disposed of at an accredited hazardous waste facility. • Once the tanks and pipes have been degassed they may be removed from site by an accredited contractor. • The excavations where the UST's and pipes were present must be surveyed for contamination. If contaminated they must be decontaminated. • Deep excavations must be cordoned off prior to being back filled. • Certificates must be obtained for all actions performed. • Once the site has been filled it must be rehabilitated 		
3. Soil Erosion	<ul style="list-style-type: none"> • Erosion monitoring and control are to be conducted. This is to be in the form of inspections subsequent to rains. Topsoil is to be replaced in all areas that have been eroded 	<ul style="list-style-type: none"> • If monitoring results or complaints indicate inadequate compliance with the EMP, the source of the problem will be identified and existing procedures modified to ensure that the 	Contractor

ACTIVITY / ISSUE	ENVIRONMENTAL MEASURES AND CONTROLS	MONITORING AND CORRECTIVE ACTIONS	RESPONSIBLE PERSON/S
		problem is rectified.	
4. Fire Risks	<ul style="list-style-type: none"> • Fire safety are to be considered and all vehicles should have fire extinguisher • Employees are to be trained on fire safety and there should be fire marshals. • Local emergency fire brigade number should be known to all employees. • The prescribed fire safety precautions in terms of the Occupational Health and Safety Act must be adhered to. 		Contractor

