



OMURAMBA ROADHOUSE SERVICE STATION

Construction and Operation of a New Truckport Integrated with a Service Station at the Corner of B1 Highway and District Road, D2404, Otjiwarongo District, Otjozondjupa Region

Environmental Management Plan

Prepared for:
Omuramba Roadhouse Service Station

APP-002446



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Construction and Operation of a New Truckport Integrated with a Service Station at the Corner of B1 Highway and District Road, D2404, Otjiwarongo District, Otjozondjupa Region

ENVIRONMENTAL MANAGEMENT PLAN

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List of Acronyms

Acronym	Expansion
amsl	above mean sea level
BAT	Best Available Technology
CO	Carbon Monoxide
COVID-19	'CO' - Corona, 'VI'- Virus & 'D' - Disease of 2019
EC	Environmental Commissioner
ECC	Environmental Clearance Certificate
EIA	Environmental Impact Assessment
EMA	Environmental Management Act
EMP	Environmental Management Plan
GPS	Global Positioning System
GRN	Government of the Republic of Namibia
FRL	Fuel Retail Licence
HPP	The Harambee Prosperity Plan
IAPs	Interested and Affected Parties
km/hr	kilometer per hour
RFA	Road Fund Administration
LPG	Liquid Petroleum Gas
m ²	square meters
MEFT	Ministry of Environment, Forestry and Tourism
MME	Ministry of Mines and Energy
MHSS	Ministry of Health and Social Services
NHC	National Heritage Council
NO ₂	Nitrogen Dioxide
NSI	Namibia Standards Institute
ORC	Otjozondjupa Regional Council
PM	Particulate Matter
PPE	Personal Protective Equipment
SABS	South African Bureau of Standards
SHE	Safety, Health & Environment
SME	Small and Medium Enterprises
List of Road Numbers	
B1	The route number for the longest national highway in Namibia, starting from Noordoewer up to Oshikango via the towns of Keetmanshoop, Mariental, Rehoboth, Windhoek, Okahandja, Otjiwarongo, Tsumeb, Omuthiya, Oniipa and Ondangwa.
D2404	The route number for the district road leading from C30 near Osire up to D2414 at Okonjati Game Reserve /Mount Etjo and providing access to many farms in the district of Otjiwarongo.
D2414	The route number for the district road leading from Kalkfeld up to B1 north of Okahandja providing access to many farms in the Otjozondjupa Region

Definition of Terms

Term	Expansion
Anthropogenic impact	Human impacts on the environment which includes changes to the biophysical environments, ecosystems, biodiversity and natural resources caused directly or indirectly by human activities including global warming, environmental degradation, etc.
Biodiversity	The variability among living organisms from all sources including terrestrial marine and other aquatic ecosystem and ecological complexes which they are part of.
Construction Activity	A construction activity is any action taken by the Contractor, its subcontractors, suppliers or personnel employed by such a contractor during the construction process as defined in the Roads Authority Act (Act No. 17 of 1999)
Contractor	The contractor is the entity contracted by the developer to carry out construction works on the site and is therefore responsible for ensuring that the provisions of the EMP are adhered to and complied with at all times during the construction phase.
Cumulative Impact	Environmental impact is any change to the environment whether adverse or beneficial, wholly or partially, resulting from an organization activities, products or services.
Developer or Promoter	A promoter or developer remains responsible for ensuring that the project or development is implemented in compliance of the provisions and guidelines as provided for in the EMP - throughout all phases of the project – construction, operational and decommissioning.
Environment	All physical, chemical and biological factors and conditions which influence an object and or organism. It is also defined as the surroundings within which human beings exist and is made up of the land, water, atmosphere, plants and animal life (micro and macro) including interrelationships between the factors and the physical or chemical conditions that influence human health and well-being
Environmental Impact	Any change to the environment whether adverse or beneficial, wholly or partially, resulting from human activities, products or services.
Environmental Impact Assessment	A process of evaluating and assessing the likely environmental impacts that a proposed project or development will have on the environment taking into account the inter-related socio-economic, cultural and human-health impact, both beneficial and adverse.
Environmental Management Plan	An EMP is a legal bidding document which stipulates environmental and socio-economic mitigation measures which must be implemented and complied with by several parties responsible for the proposed development throughout the duration of the said development.
Hazardous material or substances	This refers to any substance that contains an element of risk and could have a deleterious effect on the environment.
Indigenous	An indigenous species is a specie which occurs or has historically occurred, naturally in a free state within the borders of Namibia. Species which have been introduced to Namibia as a result of human activity are excluded.
Interested and Affected Parties	Any person, group of persons or organisation interested in or affected by an activity contemplated in an application for Environmental Clearance Certificate, or any organ of state that may have jurisdiction over any aspect of the activity.
Mitigation	The implementation of practical measures to reduce adverse impacts to the environment
Public Participation Process	A process through which interested and affected parties are informed about the proposed development and are afforded the opportunity to provide their inputs and comments as well as to voice any concerns or objections which they might have on the proposed development
Sensitive Area	A sensitive area or environment is described as an area or environment where a unique ecosystem, habitat for plant and animal life, wetlands or conservation activity exists or where there is high potential for ecotourism
Species	Means a kind of animal, plant or other organism which does not normally interbreed with individuals of any kind. The term 'species' include any sub-species, cultivar, variety, geographic race, strain or hybrid
Vegetation	Means all undesirable vegetation, defined as but not limited to, all declared
Vulnerable	A species is 'vulnerable' when it is not critically endangered or endangered but is not facing a high risk of extinction in the wild in the medium term.
Watercourse	A river or spring; a natural channel in which water flows regularly or intermittently; a wetland, lake or dam into which, or from which, water flows; and any collection of water. A reference to a watercourse includes where applicable its bed and banks.

1.0 ENVIRONMENTAL MANAGEMENT PLAN

1.1 Introduction

This Environmental Management Plan (EMP) is prepared to allow Omuramba Roadhouse Service Station CC (hereinafter 'Omuramba' or the Promoter) to apply for an Environmental Clearance Certificate (ECC) from the Ministry of Environment, Forestry & Tourism (MEFT) for the development of a truckport integrated with a service station and charcoal loading section. The proposed site is at the intersection of B1 highway and district road, D2404 in the district of Otjiwarongo of Otjozondjupa Region.

The EMP is prepared to serve as a standalone plan for managing potential environmental impacts that are likely to be associated with the development during its construction and operation phases. Management measures (mitigation) are based on the assessment and findings of the scoping EIA report and should be read in the context of what is written in that report.

As the EMP is a working document, flexible and amenable to changes resulting from new legislations, new policies and or better technologies. Any substantial changes to the development, post the granting of the ECC will require an amendment to the EMP.

1.2 Purpose of the EMP

The EMP is to ensure that the **Environmental Impacts** as identified in the scoping report are managed, mitigated and kept to the minimum. This also includes ensuring that the mitigation measures are implemented, complied with and adhered to.

It is the aim of this EMP to provide clearly defined actions that should be implemented during the two phases of the proposed development. The EMP is a dynamic document which is flexible and responsive to new and changing circumstances, hence, it should be updated as and when required. Any substantive changes to the development such as renovations or upgrades to the development will require authorization and endorsement of the EC.

The EMP is binding on Omuramba, as the proponent as well to any contractor(s) who may be hired to construct the truckport and related activities. Furthermore, it applies to all contractors who may be hired in future to carry out renovations and maintenance to the facility, to all employees (including those hired by third parties) and to those hired by the promoter post-construction. The EMP must be included as part of any outsourcing, tendering and or any contractual documents between Omuramba and any third party.

1.3 Acceptance of the EMP

The acceptance of the EMP by MEFT will confer a legal obligation on the promoter to comply with the specifications and provisions contained therein. Should the applicant fail to comply with the provisions of this EMP, it is deemed to be a contravention in terms of the Environmental Management Act and as such is criminally prosecutable. This EMP includes all relevant documentation contained therein or referred to within it, along with any amendments, appendices or annexure to this document.

1.4 Environmental Policy

Based on the criteria provided in this EMP, Omuramba is expected to formulate an appropriate specific policy that defines its management plans for the envisaged development, that will ensure sound environmental and social performance. This policy will obligate the promoter to comply with applicable laws and regulations related to the environment, social assessment and management processes.

2.0 INFRASTRUCTURE AND SERVICES

The infrastructure and services have been described in the EIA but are briefly summarized here for easy of reference. The truckport will have a footprint of 5 ha (50 000 m²) of land leased from the landlord of Farm Wewelsburg.

2.1 Water Supply

Potable water will be sourced from a borehole located about 800 m from the truckport. From the borehole, water is pumped into two storage tanks, installed on a steel column stand with a height of about 10 m which gives the water adequate pressure to flow easily to all sections of the development. The borehole yield and quality of water are good to meet the requirements of the development.

2.2 Electricity Supply

A 33kV powerline is running across the property and electricity for the development will be sourced from there. However, at the time of the EIA, the promoter was weighing up options whether to operate the development off grid, e.g. by installing a matched fit-for purpose solar photovoltaic system. Most electrical appliances such as geysers could be of solar hybrid system to save on the expensive electricity sourced from Cenored.

2.3 Wastewater and Sewage

A gravity sewerage system will be constructed to serve the property. Sewage from the truckport and service station sections, will flow under gravity to a collective double chamber screened septic tank. Oil filters and fat traps will be installed to ensure that oil and fats do not enter the sewage system. The volume of the fat trap system is expected to be small.

Once the sewage collects in the septic tank, heavy solids would settle to the bottom where bacteria breaks them down to form a sludge layer. The liquid portion of the wastewater would then move through the middle or clear zone of the tank and flows out of the outlet pipe into a drainfield.

2.4 Site Drainage

The landscape is relatively flat but has a gentle slope to the west where the ephemeral Omuramba/Omatako River (a dry river which runs passed the development) is located. Site drainage is therefore towards this section of the property.

2.5 Access to the Project Site

The truckport is at the intersection of B1 highway and D2404. B1 is the busiest road and access to the facility is via D2404 on the left hand side when approaching the truckport from Otjiwarongo.

2.6 Design and Landscape

It is understood that the design and execution of the project will be carried out in a manner that makes the truckport to appear as an extension of the natural landscape itself, rather than as an imposition on the existing beautiful landscape. A sense of place will be maintained throughout by curving lines and muted natural colours, and where applicable, use of naturally occurring materials such as wood, sand and stones will be made.

During the construction period, big trees will be retained and not uprooted or damaged. Most of the truckport will be paved which will ensure that trucks, their operators and the staff of the facility will walk in designated areas only.

3.0 ENVIRONMENTAL MANAGEMENT MEASURES

3.1 Objectives

The implementation of this EMP is a recurring process that converts mitigation measures into actions and through monitoring, auditing, review and corrective action, ensures conformance with the overall aims and objectives of the planned development. These objectives are:

- To ensure compliance with the conditions of the ECC once granted by MEFT.
- To propose effective and practical measures to prevent, limit, minimize, mitigate and/or to rehabilitate any impacts to the receiving environment.
- To protect human health and ensure safety of the workers and the general public including complying with the guidelines recommended for combatting and containing the spread of the prevailing deadly COVID-19 pandemic.
- To propose a plan to monitor and manage the truckport in such a way that the business of Omuramba becomes commercially profitable, technically sound, socially acceptable and environmentally sustainable.

3.2 Site Documentation

A copy of this EMP is to be kept on-site during both phases of the development - construction and operation. The Site Manager (SM) or Site Agent and its employees are expected to be made familiar with the contents and provisions of this EMP. During the operational phase, the Truckport Manager (TM) as well as each prospective employee who may be hired is expected should be made familiar with the contents and provisions of this EMP.

3.3 Emergency Numbers

Emergency numbers for the following entities or stakeholders should be prominently displayed on a notice board in the office of Omuramba:

- Truckport Manager;
- Shift Supervisor (on duty);
- Ambulance (nearest);
- Fire brigade (nearest);and
- NamPol.

3.4 Management Actions

Omuramba will be required to develop guidelines and clear procedures to govern the implementation of its management actions. Guidelines and procedures should be developed by management to cover these aspects:

- marketing and promotion management plan;
- human resources guidelines;
- standard operating procedures, and
- health and safety annual audits.

4.0 IMPLEMENTATION OF THE EMP

Management measures to mitigate potential negative impacts are presented in table formats comprising of five tables, described briefly as follows:

- Roles and Responsibilities of various parties,
- EMP for Standard Terms, Conditions and Guidelines,
- EMP of Construction Induced Impacts,
- EMP of Operational Induced Impacts, and
- EMP of Impacts Induced by Decommissioning.

4.1 Roles and Responsibilities

Throughout the lifespan of the truckport, a number of individuals and entities are expected to fulfill various roles and responsibilities to ensure the effective implementation of the EMP.

In **Table 1**, various parties have been listed and their respective roles with respect to the project highlighted.

MEFT is the only statutory stakeholder listed, but the promoter has already liaised with MME which granted the Letter of Intent (LOI), annexed to the scoping EIA report as **Annexure: A**. Once the ECC has been granted, Omuramba will again engage with MME for the Fuel Retail Licence (FRL). The application for FRL is submitted accompanied by an ECC and designs/drawings for the facility. Construction for the facility may not start before a FRL has been granted.

4.2 EMP for Standard Terms, Conditions and Guidelines

Standard conditions with respect to ECC requirement, validity of the ECC once granted, reporting requirements, project execution, recruitment of personnel and good housekeeping practices are listed in **Table 2**.

4.3 The Construction Phase

The construction is expected to be carried out by an experienced and reputable contractor who will be appointed by the promoter through a tendering process. The management measures for those impacts that are associated with the construction phase have been presented in **Table 3**.

Mitigation measures have been proposed for potential impacts associated with the three core activities of this phase:

Impacts associated with the establishment of the site camp for the contractor including stockpiling of the construction materials (bricks, cement, stones, steel products, hazardous products, etc.).

Impacts induced by construction activities (waste, noise, dust, possible illegal hunting of wildlife by workers, possible illegal wood harvesting by the workers, building rubbles, etc).

Impacts associated with the rehabilitation of the site post construction, i.e. before the site is handed over to the promoter.

The timing and the party responsible for the various activities are also indicated in the tables.

4.4 The Operational Phase

The management measures for impacts associated with the business phase of the development are presented in **Table 4**. This phase starts from the date when a completed truckport is handed over to the promoter, Omuramba. It assumes that all underground storage tanks (USTs), pumps and associated equipment have been installed, tested and fully commissioned by the fuel company contracted or licensed to supply fuel and fuel related products to promoter. Employees for the facility have to be hired and given induction on the EMP.

4.5 Decommissioning

The mitigation measures provided under this section are meant to cover decommissioning resulting from the truckport having to close down prematurely, i.e. due to unforeseen circumstances, economic factors, sabotage, etc. Any modification and or major maintenance work to the truckport in the future will be considered as renovation or modification to the existing structure and should be done through an amendment to the EMP.

Mitigation measures associated with the decommissioning are presented in **Table 5**.

The implementation has been given for the construction, operation and decommissioning phases. The headings of the implementation plan are briefly discussed here:

TABLE 1: ROLES AND RESPONSIBILITIES OF VARIOUS PARTIES

Role Player	Responsibilities
<p>The Environmental Commissioner (EC)</p>	<p>EMA is implemented by the EC, a statutory office responsible for ensuring and enforcing compliance with the relevant environmental legislations and regulations. Amongst the roles and responsibilities of the EC</p> <ul style="list-style-type: none"> • granting of ECC and renewals thereof; • ensuring overall compliance with the provisions of the EMP; • reviewing this document and any revisions thereof; • undertaking site audits at their discretion; • reviewing environmental audit reports; • reviewing of any major environmental related incidents and or accidents, • enforcing legal mechanisms for contraventions to the EMP
<p>The Project Promotor or Truckport Manager (TM)</p>	<p>The promotor, as the owner of the truckport has pre-construction, construction and post-construction roles and responsibilities as follow:</p> <p><u>Pre-construction Roles:</u></p> <ul style="list-style-type: none"> • To appoint an architect to design the truckport and related building structures in accordance national standards and guidelines. • To appoint an EIA Consultant to conduct the EIA and the EMP in order to obtain an ECC for the development. • To ensure that an experienced and reputable contractor is appointed to build the facility in accordance with design specifications. <p><u>Construction Roles</u></p> <ul style="list-style-type: none"> • To provide a copy of the EMP to the appointed contractor and to ensure that the obligations of the contractor in terms of the EMP are understood and complied with. • To ensure that the development is carried out in compliance with the provisions recommended in the EMP. • To ensure that the contractor has carried out post construction rehabilitation including safe removal of all building rubbles. <p><u>Post-construction Roles</u></p> <ul style="list-style-type: none"> • To manage the day-to-day operational activities of the truckport in compliance with all relevant legislations, regulations and policies. • To ensure that the staff and all employees are given an induction training on the EMP including fire prevention, health and safety. • To ensure that a Fuel Retail Licence is granted for the facility and kept on file at the office and renewed as and when due. • To maintain open communications with all stakeholders and authorities including reporting of any significant environmental incidents, accidents and or emergencies to the relevant authority. • To ensure that all recommendations made in the monitoring and audit reports are implemented and complied with throughout the operational life cycle of the facility. • To ensure that any complaint received from any stakeholders and or patrons is recorded, investigated and corrective action taken.

Role Player	Responsibilities
<p>The Contractor or Site Manager (SM) - who will be appointed)</p>	<p>The successful contractor will have a range of responsibilities. Some of which are the following:</p> <ul style="list-style-type: none"> • To ensure that all construction activities are undertaken in accordance with the provisions of the EMP. • To ensure that all its employees and sub-contractors for various trades (plumbers, electricians, joineries, pavers, bricklayers, carpenters, etc.) are well trained, experienced and comply with the EMP. • To ensure that all complainants received from any stakeholder during the construction period is recorded, investigated and corrective action taken • To rehabilitate the construction site on completion of construction activities to the satisfaction of the developer. • To accept liability for any violations or infringement of the provisions of the EMP during the construction phase. This responsibility is extended to the service providers subcontracted by the main contractor. • To ensure that all building rubble is removed from the project site and transported to an approved offsite landfill

TABLE 2: EMP FOR STANDARD TERMS, CONDITIONS & GUIDELINES

Management Measures /Requirements	Compliance Proof	Party
Standard Conditions/Requirements		
1. The development of a truckport integrated with service station is a listed activity requiring the issuance of ECC.	ECC must be on file	Proponent
2. The conditions as contained in the EMP are binding on the proponent and compliance is mandatory.	Acknowledged by signature	Proponent
3. The ECC does not negate the proponent to comply with any other statutory requirements which may be applicable to the activity being undertaken.	Acknowledged by signature	Proponent
4. Any material changes, or deviations from the project description as previously presented to MEFT, must be approved by the EC.	On file	Proponent
5. The EC must be notified where any of the applicant's contact details change including the name of the responsible person, the physical address, etc.	Office file	Proponent
6. A copy of the ECC must be kept at the site office and should be provided to any GRN official(s) requesting such document.	Office file	Proponent
7. Unless indicated otherwise or withdrawn an ECC is normally valid for a period of three years and must be renewed well in advance.	ECC	Proponent
Project Execution		
1. Appoint a reputable and experienced civil contractor to build the truckport in line with the guidelines provided by franchisor.	Appointment on file	Proponent
2. A copy of the EMP must be provided to the appointed contractor and all its workforce acquainted with the EMP.	Contractor to sign a copy	Proponent
3. The Site Manager (SM) is expected to deal with any complaints and communication with the stakeholders impacted by the development.	Contractor File	Proponent & SM
4. All building rubbles should be removed from the construction site and disposed of at an offsite landfill.	Contractor file	Contractor
Staffing and Personnel Recruitment		
1. An experienced management team should be appointed to manage the truckport facility.	Office file	Proponent
2. The recruitment process for prospective employees should be conducted in a fair and transparent manner and must be gender and disability sensitive.	Office file	Proponent
3. In hiring preference should be given to Namibians and where non-Namibians are hired a reasonable justification must be provided.	Office file	Proponent
4. All employees who are hired must have formal employment contracts duly signed by both parties.	Office file	Proponent
5. Proper records must be kept with respect to the number of people employed, their full names, IDs, residential addresses.	On file	Proponent
6. Employees to be registered with all statutory institutions, i.e. Social Security, Workmen Compensation, Inland Revenue, etc.	On file	Proponent
7. Employees should be allowed to belong to a trade union of their choice. An employee charged with a misconduct should be allowed to have a representative.	On file	Proponent
Housekeeping		
1. Give employees an induction training on the provisions of the EMP.	On file	Proponent
2. No alcohol consumption or drugs should be allowed on the premises or while on duty		
3. No firearms are allowed on duty except for security officials who may be hired to protect the premises.		
4. No fighting and or foul language is allowed.		
5. A high standard of hygiene should be maintained around the premises.		
6. Waste must be separated and disposed of in a responsible manner.		
7. No harvesting of trees for firewood unless with the consent of the landlord. Firewood may only be harvested from dead tree.		
8. No poaching of wildlife or livestock on the farm and or the neighbouring farms.		

Management Measures /Requirements	Compliance Proof	Party
9. No loud music after sunset and trucks using the facility should be informed about this rule.		
10. No waste must be buried on site.		

TABLE 3: EMP OF CONSTRUCTION INDUCED IMPACTS

Potential Impacts	Mitigation Measures	Timing	Party
Site Camp Establishment			
<ul style="list-style-type: none"> Loss of habitat. Loss of grazing Environmental pollution Untidy & littering 	<ul style="list-style-type: none"> Locate site camp inside the confines of the 5 ha land being developed. Site camp should be located away from watercourses. Make site camp big enough to provide for overnight accommodation to the staff and workers as well as parking for all vehicles, machinery and equipment. Adequate parking must be provided for staff and visitors. Site camp must be properly secured and preferably fenced in. Storage areas for construction materials must be located away from sleeping quarters. Prevailing wind directions should be taken into account when siting ablution facilities, sleeping areas and storage areas for construction materials. 	Prior to starting with construction.	SM/TM
Establishment of Storage Areas			
<ul style="list-style-type: none"> Unightly/eyesore Leakage of toxic products Health hazard Pilferage 	<p><u>General Provisions</u></p> <ul style="list-style-type: none"> Storage areas must be secured so as to minimize the risk of theft and crime Construction materials should not be stored in such a way that they obstruct natural water pathways. Access to storage areas must be limited to authorized personnel only. <p><u>Hazardous Substances and Materials</u></p> <ul style="list-style-type: none"> Hazardous substances are those that are: diesel, petroleum, oil, bitumen, solvent based paints, lubricants and LPG. Hazardous storage areas must be bunded with an impermeable liner to avoid soil contamination. Storage areas containing hazardous substance/materials must be clearly secured and sign-posted. Staff dealing with hazardous materials/substances must be properly trained, provided with suitable PPE. 	<p>Once site has been handed over to contractor.</p> <p>Throughout the construction period.</p>	SM/TM
Maintenance of the Site Camp			
<p>Poor maintenance has the potential that could lead to:</p> <ul style="list-style-type: none"> Health issues Odour Unightly site Waste entering watercourses 	<p><u>Surfaces</u></p> <ul style="list-style-type: none"> The site camp should be kept clean and tidy and free from any material spills. Construction vehicles should be restricted to demarcated areas and turning areas within the construction site. The contractor should monitor and manage the drainage of the site camp. Runoff from the site camp may not discharge into the natural watercourses around the property. <p><u>Ablution Facilities</u></p>	Throughout the construction period	SM

Potential Impacts	Mitigation Measures	Timing	Party
	<ul style="list-style-type: none"> Toilets to be maintained and kept in a clean state at all times. Open areas or surrounding bush must not be used as toilet facilities by the workers. If chemical toilet facilities are used during the construction phase, such toilets should not cause any pollution to any water resource. <p><u>Site Camp Waste Disposal</u></p> <ul style="list-style-type: none"> All waste types must be collected from the work and site camp areas at regular intervals and disposed of at an offsite located waste landfill. No waste must be buried on site. Separate waste skips /bins should be provided for different waste. Employees should be trained on waste handling. 		
Site Surface Drainage			
<ul style="list-style-type: none"> Soil erosion Site clogging up Sedimentation 	<ul style="list-style-type: none"> The time that stripped areas are left open and exposed should be minimized wherever possible. Care should be taken to ensure that lead times are not excessive. Wind screening should be undertaken to prevent soil loss from the site. If construction work is done during the rainy season, storm water control should be exercised to avoid flooding of the work place. Moderate to high precipitation is often encountered during the months of November through to March. Procedures that are in place to conserve topsoil during the construction phase of the project should be employed during the set up phase, i.e. topsoil is to be conserved while providing access to the site and setting up the camp. 	Every month throughout the renovation period.	SM
Materials Handling Procedures			
	<ul style="list-style-type: none"> If stockpiles (e.g. building sand, etc.) are exposed to windy conditions or heavy rains they should be covered. All concrete mixing must take place on a designated impermeable surface. No vehicle transporting, placing or compacting asphalt or any bituminous products may be washed on site. Lime and other powdered products must not be mixed during excessive windy conditions. All substances required for vehicle repairs and maintenance must be stored in sealed containers until they can be disposed of or removed from site. Hazardous materials or products are to be transported in sealed containers or bags. 	Throughout the construction period	SM
Safety and Security During Construction			
<ul style="list-style-type: none"> Theft Vandalism Destruction of assets 	<p><u>Fencing</u></p> <ul style="list-style-type: none"> Secure the construction site in order to reduce the opportunity of criminal activities in the locality of the construction site. 	Throughout	SM

Potential Impacts	Mitigation Measures	Timing	Party
	<ul style="list-style-type: none"> A gated security which is manned at all times is recommended. Potentially hazardous areas such as trenches are to be demarcated and clearly marked. <p><u>Lighting</u></p> <ul style="list-style-type: none"> Lighting on site is to be set out to provide maximum security and to allow ease policing of the site. Lighting of the site may not create a visual nuisance to the neighbouring residents. <p><u>Risks Associated with Construction Materials on Site</u></p> <ul style="list-style-type: none"> Material stockpiles or stacked such as pipes, etc. must be stable and well secured to avoid them collapsing and possibly causing injuries to site workers. Flammable materials should be stored as far away as possible with access restricted to personnel who are qualified and allowed to handle such materials. Firefighting equipment should be present on site at all times and in good working order. Obstructions to driver's line of site due to stockpiles and stacked materials must be avoided especially at intersections. No materials are to be stockpiled in unstable or high risk areas. All interested and affected parties (IAPs) must be notified in advance of any known potential risks associated with the construction site and the nature of the risk. All employees should be trained on the procedure to be followed in the case of an emergence. All employees should be provided with suitable PPE and wearing of such PPE should be enforced. 		
Storm Water Management			
<ul style="list-style-type: none"> Risk of hazardous waste entering natural watercourses. Poor stormwater management could lead to erosion. 	<ul style="list-style-type: none"> Earth, stone and building rubble is to be properly disposed of so as not to obstruct natural water pathways over the site, i.e. these materials may not be placed in storm water channels or drainage lines. The site's drainage water system should be checked periodically to ensure that there are no blockages to the water flow. During the construction un-channeled flow of water should be controlled to avoid soil erosion. Mixing and/or decanting of all chemicals and hazardous substances must take place either on a tray or an impermeable surface. Waste from these should then be disposed of, to a suitable waste site. Every effort should be made to ensure that any chemicals or hazardous substances do not contaminate the soil or groundwater. Care must be taken to ensure that run-off water from the vehicles or plant wash does not contaminate the soil or groundwater on site. 	Throughout the construction period	SM

Potential Impacts	Mitigation Measures	Timing	Party
Dust and Air Pollution			
<ul style="list-style-type: none"> Exhaust emissions from construction vehicles. Dust emission from construction activities. Smoke from poorly maintained vehicles and equipment 	<ul style="list-style-type: none"> All construction vehicles should adhere to the set speed limit. Trucks delivering building construction materials (sand, bricks, cement, aggregates, steel products, roof sheeting, etc.) should adhere to the minimum speed limit. Materials excavated for foundations should be stockpiled aside should be dampened periodically to avoid excessive dust. If open fire is allowed, such fire places must be located away from flammable materials. 	Throughout the construction period	SM
Waste Management			
	<p><u>On-Site Waste Management</u></p> <ul style="list-style-type: none"> Refuse must be placed in designated skips/bins which must be regular emptied. These should remain within demarcated areas and should be of a design that prevents refuse from being blown out by the wind. In addition to the waste facilities within the construction camp, provision must be made for waste receptacles to be placed along the work front. Littering on site is forbidden and the site shall be cleared of litter at the end of each working day. <p><u>Waste Disposal</u></p> <ul style="list-style-type: none"> All non-hazardous waste should be placed in skips and placed/stored in designated areas and must be removed from the site and transported to the nearest approved landfill site. Construction rubble must be disposed of at the nearest approved landfill area. No waste may be buried on site or disposed of in natural water pathways. All waste generated from the project site should be disposed of in a manner which does not cause pollution to surface or underground water or health hazards. 	Throughout the construction period	SM
Social Impacts			
	<p><u>Communication with stakeholders</u></p> <ul style="list-style-type: none"> The contact of the construction personnel when dealing with members of the public, interested or affected parties should be in a manner which is polite and courteous at all times. Keep disruptions of access by the local residents to the minimum. Any complaints received from any stakeholder must be recorded, investigated and corrective action taken. <p><u>Visual Impacts</u></p> <ul style="list-style-type: none"> Lighting from the construction site should be pointed downwards and away from B1 and D2404 roads. 	Throughout the construction period	SM

Potential Impacts	Mitigation Measures	Timing	Party
	<ul style="list-style-type: none"> The general appearance of the site must be kept clean and tidy to minimize the visual impact of the site If screening is being used this must be moved and re-erected as the work front progresses. <p><u>COVID-19 Safety Measures</u></p> <ul style="list-style-type: none"> Wash your hands regularly Social distance Avoiding large gathering Wear safety mask Get vaccinated Respect regulation measures as announced by GRN from time to time. <p><u>Cultural Heritage Environment</u></p> <ul style="list-style-type: none"> Any items of historical or archeological value unearthed during the construction period should be reported to NHC. Work should be stopped immediately where any archeological items have been unearthed and should only be continued on the instruction of the officials from NHC. Archaeological items unearthed during the construction may not be disturbed or moved unless permission has been granted by the NHC. 		
Biodiversity Impacts			
<ul style="list-style-type: none"> Habitat destruction Injuries to livestock Illegal hunting Poaching Accidents – collision with construction vehicles Loss of grazing Loss of habitat Unauthorised wood harvesting 	<p><u>Livestock & Wildlife</u></p> <ul style="list-style-type: none"> Ensure that the project sites is fenced in to prevent access by livestock and wildlife which could result in unnecessary injuries and harm. Waste products such as cement bags and plastics may not be given to livestock as feed. No wildlife trapping devices may be used to catch game and other wild species. Illegal hunting (poaching) of killing of livestock and wildlife is a criminal offence. Areas with any special habitats <p><u>Flora:</u></p> <ul style="list-style-type: none"> Siting of new buildings should be done in a manner that results in minimal destruction to plants and trees. Efforts should be made to conserve large trees within the project site. Gathering of firewood is forbidden unless permission is granted by the landlord. Where harvesting of firewood is allowed, only dead trees may be used. Any birds Gathering of firewood is forbidden except with the permission of the landowner. Any birds nestling on trees should not be disturbed 	Throughout the construction phase	SM

Potential Impacts	Mitigation Measures	Timing	Party
Archaeological and Cultural Aspects			
<ul style="list-style-type: none"> • Destruction of items of cultural nature. • Loss of items of cultural heritage 	<p>In the event that any archaeological items or objects were encountered (bones, coins, weapons, ancient cutlery, graves, etc.) during the excavation activities, such items should be safeguarded and protected until such time that NHC gives directives.</p> <p>A 'Chance Find Procedure' should be followed by the Contractor. All work in the vicinity must be stopped and the site barricaded. GPS coordinates should be taken and provided to NHC.</p> <p>If remains are of a human, the Namibia Police must be called to the site. Human remains must be handled by NamPol in conjunction with NHC.</p> <p>No items of cultural or archaeological nature must be removed from the site until such time that NHC has been contacted and provided directives on what to do.</p>	During the construction period	SM
Rehabilitation post construction			
Same impacts as from dust, air pollution, etc.	<ul style="list-style-type: none"> • All erected structures comprising of the construction camp are to be removed from the construction site. • The area must be checked for any spills of substances such as oil, paint and fuel which should be cleaned up. • All hardened surfaces within the construction site should be ripped, all imported materials removed and the area top-soiled and re-vegetated. • All surfaces hardened due to construction activities are to be ripped up and imported materials thereon removed. • All building rubble is to be removed from the site and transported to an offside approved location. • Burying of any rubble on site or anywhere outside the premises is prohibited. • The site is to be cleared of all litters and building rubbles. • Fences, barriers and demarcations associated with the construction phase are to be removed from the site unless agreed otherwise with the promoter. • All residual stockpiles are to be removed from the site and transported to an approved landfill site. • All leftover building materials (sand, aggregate, bricks, paving, steel, corrugated iron sheet, cement, etc.) must be removed from the site. • The contractor must repair any damage caused to any neighbouring properties. 	Throughout the construction period	SM/TM

TABLE 4: EMP OF OPERATIONAL INDUCED IMPACTS

Potential Impacts	Mitigation Measures	Timing	Party
Social and Economic Impacts			
<p>These are positive impacts:</p> <ul style="list-style-type: none"> • Combating of unemployment • Acquiring of new skills and knowledge 	<p><u>Hiring of Employees:</u></p> <ul style="list-style-type: none"> • All recruitments should be done in line with the labour laws of Namibia. • Offer employment opportunities without prejudice, giving preference to women, people with disabilities and those from the marginalized communities, e.g. Sun people • Develop a policy on employees' well-being, educating them on the dangers of social-ills such as alcohol abuse, use of drugs and HIV infections as result of unsafe sex practices and COVID-19 pandemic. <p><u>Training of Employees</u></p> <ul style="list-style-type: none"> • Employees should receive basic induction training on the EMP. • Translation should be made for the benefit of those employees who are not fluent in the official language. • No alcohol or drugs are allowed on the premises or on duty. • No firearms on the premises of the company (unless used by a security personnel) • Fighting and foul language are not allowed. <p><u>Economic Benefits</u></p> <ul style="list-style-type: none"> • Source and procure goods and services (e.g. stationery, PPE, etc.) from local businesses. • Hire and use local transport companies to transport your goods as well as other professional service providers, i.e. security companies to guard the premises and collect money for banking. • Provide business opportunities to local companies and others so as to contribute to the socio-economic stability of the district and the region. 	<p>Upon recruitment</p> <p>Throughout the project lifespan</p>	<p>TM</p>

Potential Impacts	Mitigation Measures	Timing	Party
Waste Management			
Poor waste management could lead: <ul style="list-style-type: none"> • Odour • Unsightly, Eyesore • Healthy issues • Nuisance 	<ul style="list-style-type: none"> • Develop a waste handling plan for the truckport which promotes the separation of different types of waste. • Provide different waste bins for • Under no circumstances should waste be buried on site. Small quantities of dry waste such as papers maybe burned in a responsible manner on site. • Any waste contaminated with fuel/oil must be stored in separate leak-proof containers and disposed of at an approved site at either Okahandja or Otjiwarongo. • Food item waste may not be fed to wild animals and or birds. • No wastewater must be disposed of in any natural watercourses around the property. • Maintain a high standard of housekeeping which starts with proper training and education of employees on waste handling. • The onsite sewage system must be inspected regularly and kept in a functional state at all times. 	Throughout the lifespan of the facility	TM
Noise Impacts			
<ul style="list-style-type: none"> • Hearing impairment • Nuisance • Irritation 	<ul style="list-style-type: none"> • Noise levels at the truckport should be kept to the minimum. • Compressors, standby generators and air conditioner motors should be placed in protected/enclosed areas and maintenance should be carried out on a regular basis. • A noise control policy can be introduced and enforced to control the level of noise at the truckport, e.g. long idling should be avoided, no hooting, no revving and no playing of sound systems especially at night. • Management should check noise levels regularly. • No delivery or loading of charcoal should be allowed at the truckport after sunset. • Any complaints related to noise should be recorded, investigated and corrective measures taken. 	Throughout the lifespan of the truckport	TM
Pollution of Air Quality			
Pollution of air quality could lead: <ul style="list-style-type: none"> • Health hazards • Breathing problems • Nose Irritation • Lung irritation • Nuisance 	<ul style="list-style-type: none"> • All USTs ventilation points must be positioned away from any building inlet of the truckport and filling station buildings. • Vent pipes must be fitted such that they face away from any areas where people are staying such as where trucks are parked. • Charcoal handled at the truckport or stored for loading on to trucks must be packed in bags and no handling of loose unpacked charcoal is allowed. • Charcoal falling out of broken bags must be placed into clean bags and any spill dust cleaned up. • Farmers delivering charcoal to the facility should ensure that their trucks and or tractors are roadworthy and regularly serviced to reduce gaseous emissions. 	Throughout the project lifespan	TM

Potential Impacts	Mitigation Measures	Timing	Party
	<ul style="list-style-type: none"> Charcoal delivery to the truckport should be done during the day light hours. No offloading and or loading of charcoal is allowed at the facility after sunset. All tank breather pipes must be fitted with standard vents to minimize the loss of vapour. 		
Visual Impacts			
<ul style="list-style-type: none"> Landscape distortion Visual disharmony Loss of senses of place 	<ul style="list-style-type: none"> Lighting on the facility should be sufficient for safety and security purposes only, and should not be disturbing to the general public using the B1 highway. Outside lights are to be inward and downward shining and preferably of low voltage. Sufficient refuse bins must be provided on site and littering and illegal dumping discouraged. Litter and waste should be effectively managed to avoid visual problems in the area. Buildings and all structures on the premises should receive on-going maintenance to avoid visual decay. Signs must conform to the national standards for outdoor advertising. Any complaints received with respect to visual impacts should be inspected and corrective action taken. 	Throughout the project lifespan	TM
Occupational Health and Safety			
<ul style="list-style-type: none"> Sickness Injuries Disabilities Death Loss of asset/property 	<ul style="list-style-type: none"> The design and management of the truckport must conform to all industry applicable safety measures. Ensure that all underground storage tanks (USTs) are certified to SANS/SABS standards/codes. No smoking must be allowed in the vicinity of flammable substances and the relevant signage must be displayed. The condition of the USTs, pipes and dispensing pumps should be checked on an annual basis using approved methodologies and the required maintenance activities undertaken. The USTs filling procedure must be monitored by an authorized employee to ensure that no procedural as well as health and safety requirements are neglected by the fuel supplier/contractor. Firefighting equipment must be available at all times, in a functional state and serviced regularly. Ensure that a First Aid Kit is permanently available on site and fully stocked with all used items replenished. Employees should be trained on how to provide First Aid in the event of an accident occurring on site. Operational staff must receive training on the correct operation of storage tanks, as well as maintenance and repair procedures when leaks are detected. An emergency response plan must be available on site and employees must be familiar with the plan. Employees should be provided with suitable PPE and wearing thereof enforced. No cell phones may be used during the dispensing of fuel. Overfill and spillage during the tanker refueling and fuel dispensing should be prevented by the installation of automatic cut off devices. Encourage safety talks with each day having its 'toolbox talk topic' discussed by the staff at the beginning of each shift. Decent ablution facilities should be provided for both genders and should be kept tidy and clean at all times. 	Throughout the project lifespan	TM

Potential Impacts	Mitigation Measures	Timing	Party
Contamination of Surface and Underground Water			
<ul style="list-style-type: none"> Underground water contamination. Disruption to the ecosystem 	<ul style="list-style-type: none"> The forecourt should be concrete paved to prevent infiltration of fuel into the subsurface soils with surface runoff designed to flow towards a centralized collection point which is connected to an on-site oil/water separator (trap). Underground storage tanks shall be fitted with an overflow protection system or device. The critical level shall be such that a space remains in the tank to accommodate the delivery hose volume. Monitoring wells (piezometers) must be installed around the USTs for early detection of leaks. These should be checked on a regular (quarterly) basis for the presence of hydrocarbons using a hydrocarbon interface probe. The installation of USTs must follow SANS and SABS specifications. A HDPE sheet must be installed in the excavation under the tank to direct any flow from a leak towards the monitoring wells Monthly visual inspections must be conducted of all above-ground fuel dispensing equipment on the site to check for wear and damage. Visual and olfactory checks for possible product leaks should also be carried out across the site. Conduct regular inspections of all pipes, tanks and other associated infrastructures. Accidental spills that occur outside of the bunded area must be contained and prevented from entering the stormwater system Where necessary, spills absorbent must be removed by a certified hazardous waste removal company Any significant spills or leak incidents must be reported USTs must be fitted with automatic leak detectors that alert management to a leak Fuel dispenser pumps must be located on a hardened surface to contain spillages The accumulated contents of the oil/waste separator must be removed by an accredited company The oil/water separator must be inspected regularly to ensure that it is functional at all times Water discharged from the oil/water separator must be monitored to ensure it meets the required standard. Overflow and spillages during tanker refueling and fuel dispensing should be prevented by the installation of automatic cut-off devices. Tanker delivery drivers must be present during the delivery of fuel with the emergency cut off switch. In the event of a pump dispenser or the hoses being knocked or ripped off, the fuel supply must be cut off by shear-off valves. All forecourt staff must undergo appropriate training which must include training to prevent spillages during fuel dispensing. The USTs, pipelines and other associated infrastructure must be inspected regularly for leaks and ensure structural integrity. 	Throughout the truckport lifespan	TM

Potential Impacts	Mitigation Measures	Timing	Party
	<ul style="list-style-type: none"> • A closed coupling must be used when fuel is being transferred from the bulk delivery vehicle to the USTs. • An emergency response plan must be in place for the site, and this must clearly describe emergency procedures including emergency contact numbers. • If contamination of leaks is detected, the fuel supplier's Emergency response Plan must be followed. • Following a leak or accident spill, a remediation plan must be compiled and executed. 		
Cumulative Impacts			
<p>Lack of effective waste handling and management could lead to:</p> <ul style="list-style-type: none"> • Odour • An unsightly site • Eyesore 	<p>These impacts are likely to be encountered several years into the operational phase, because they are accumulation of other impacts. Possible management measures should include the following:</p> <ul style="list-style-type: none"> • Place vent pipes in a way that prevents impact on potential receptors. • Ensure regular checks are done. • Eliminate all possible fire ignition points. • No waste must be buried on site. • Vehicle movements must be restricted to demarcated internal routes that are well maintained and kept litter-free. • Waste both hazardous and non-hazardous should be disposed of from the site. • Maintain a high standard of housekeeping. • Adequate water with sufficient pressure must be available in the event of a fire outbreak. 	Throughout the lifespan of the truckport	TM
Covid-19 Protocols			
<ul style="list-style-type: none"> • Sickness • Death • Infectious 	<p>Covid-19 is an infectious disease caused by CORONA virus. The following measures have been put in place by GRN aimed at preventing infections and transmission of COVID-19. The guidelines should be implemented by each one: employees, employers and the general public who may be visiting the facility:</p> <ul style="list-style-type: none"> • Wash your hands regularly with soap and water or clean them with alcohol-based hand rub • Maintain a distance of at least 2 meters between you and people coughing or sneezing • Avoid touching your mouth, nose and face • Wear a mask when visiting shops or places where more people are congregated • Cover your mouth and nose when coughing • Avoid hand shake. • Stay at home when feeling unwell • Refrain from smoking, drinking of alcohol and all other activities that weaken the lungs • Practice social distance by avoiding unnecessary travel and staying away from large groups of people such as sport, churches, weddings and funerals. • If you have a fever, cough and difficulty breathing, seek medical attention by visiting a public health facility closest to you. • Comply with the guidelines and regulations for the lockdown measures including all instructions given by the law enforcement agents. • Heed the call of Government and get vaccinated as it helps to reduce the impact when exposed to the virus. 	As long as the pandemic persists	TM

TABLE 5: EMP OF IMPACTS INDUCED BY DECOMMISSIONING

Description of Impacts	Management Measures/Mitigation	Timing	Party
Notices			
	Adequate notices of decommissioning should be given to the relevant authority timeously	Prior to appointment of contractor	TM
Training			
Positive impacts <ul style="list-style-type: none"> • New skills • New experience 	It is important that the personnel assigned to dismantle the structural facility is provided with a copy of the EMP and made aware of the provisions related to decommissioning and what is expected from them during the decommissioning and dismantling process.	Training before dismantling starts	TM or appointed contractor
Waste Management			
<ul style="list-style-type: none"> • Building rubble, • Obsolete equipment, • Residual products are produced during the decommissioning process of a filling station. 	<ul style="list-style-type: none"> • Items that can be re-used such as pipes, pumps, corrugated sheets, tanks, valves and other equipment must set aside and sold to third parties or re-used elsewhere by the owner. • All metal items that cannot be re-used must be removed and sold to scrap dealers. It is against the law to sell fuel storage tanks to third parties for re-use. Used fuel tanks may only be sold to approved recycle companies. • Waste from building demolition such as concrete, broken bricks, rubble, etc. should be disposed of at an approved offsite landfill. 	During the dismantling and post dismantling	Contractor or TM
Dust Impact			
<ul style="list-style-type: none"> • Health hazard • Lung/throat infections • Eye irritation • Sneezing • Coughing, etc. 	<ul style="list-style-type: none"> • Personnel involved in the decommissioning process should be provided with suitable PPE (dust masks, etc.) to prevent dust inhalation which could have healthy implications. • It is proposed that dust suppression measures be used during the decommissioning period. 	Prior to dismantling and during the process	Contractor or TM
Noise Management			
The equipment used in the decommissioning will generate noise	Ensure that the neighbours are informed of the noise that will be produced and the possible duration of decommissioning. Decommissioning work must be done during day light hours (08h00 to 17h00)	Prior to dismantling, during and post dismantling	Contractor or TM
Surface Water, Underground Water & Soil Contamination			
Neglect to monitor the tanks and all the piping network around the filling station could lead to leakages which, if undetected for a long	<ul style="list-style-type: none"> • Ensure that any fuel contaminated soils and or materials are removed from the site and disposed of at an offsite approved site and not left to enter the natural water system and ultimately the ecosystem. 	Prior to dismantling, during and post dismantling	Contractor or TM

Description of Impacts	Management Measures/Mitigation	Timing	Party
<p>period can enter and threaten the ecosystem.</p>	<ul style="list-style-type: none"> Leakages from vehicles especially those being serviced in the adjacent workshop should be removed and disposed of. Groundwater could spread pollutants to neighbouring receptors and may create an impact on underground utilities such as fresh water supply. Pollutants in the soil and building rubble should be transported away from the site to an approved classified waste disposal site. All tanks must be completely emptied of all fuel before they are dislodged and removed from their dugouts. Wastewater used to clean any structure being dismantled should not be 		
Ecological Aspects			
<p>More often new habitat (nests, bat colonies, hibernaculum, bee hives, etc.) would establish in structural facilities.</p>	<p>Before any structural facility is broken down or dismantled, ensure that a thorough inspection is done to determine any habitat that might have established in and around structural structure.</p> <p>Any habitat found must be safeguarded and protected and not destroyed during the dismantling process.</p> <p>Where any new habitats have been created and providing shelter to fauna or flora, the advice of an expert should be enlisted to determine the conservation standing of such species or habitats.</p> <p>In the event that the species has a special conversation status or listed as a being vulnerable to extinction, officials of MEFT must be contacted to provide guidance on relocation protocols of such species or habitat.</p>	<p>Prior to dismantling, during and post dismantling</p>	<p>Contractor or TM</p>
Health and Safety Aspects			
<p>There are risks involved in the dismantling process of a filling station such as objects falling, fire erupting from residual amounts of fuel in broken pipes, etc.</p>	<p>There is a strong possibility for occupational exposure normally associated with dermal contact with fuel and inhalation of fuel vapour during the decommissioning of a fuel station. Hence, it is critically important that measures are put in place to safeguard the safety and health of the personnel involved in the dismantling. Mitigation measures to consider include:</p> <ul style="list-style-type: none"> Provide suitable PPE to personnel First aid kits – well stocked and trained capable staff Emergency treatment Proper training of all possible scenarios Prevention of inhalation of fumes, dust, etc. <p>If tanks have to be inspected prior to removal, ensure that there is adequate clearance and space to carry out such inspections.</p>	<p>Prior to dismantling, during and post dismantling</p>	<p>Contractor or TM</p>
Fire and Explosion Hazards			
<p>The possibility of residual hydrocarbons present and causing fire and or explosion is an inherent risk associated with any dismantling</p>	<p>It is important that a decommissioning plan of the filling station structure is drawn up prior to moving on the site to start with the actual dismantling. The plan should list what inspection has to be carried out and to what extent such inspection must be done. All flammable materials including rubbish, dry vegetation and any fuel soaked soil must be removed</p>	<p>Prior to dismantling, during and post dismantling</p>	<p>Contractor or TM</p>

Description of Impacts	Management Measures/Mitigation	Timing	Party
<p>process of a filling station.</p>	<p>from the facility and disposed of at an approved offsite landfill site.</p> <p>It is important that the personnel carrying out the decommissioning are adequately trained and sensitized about the possibilities of fire protection measures and good housekeeping.</p> <p>Prior to dismantling, all firefighting equipment must be inspected and tested for functionality and not removed from the site until the dismantling has been completed.</p>		

5.0 ENVIRONMENTAL MONITORING

Compliance monitoring with the EMP is an integral part of management functions and should be carried out regularly. Key aspects to be monitored are given in Table 6, which should be used as guidelines as the management of the truckport has the flexibility to formulate additional measures as well as to delegate specific tasks as may be required for efficient running of the facility. The responsible party is the Truckport Manager or the Management of the facility.

TABLE 6: ENVIRONMENTAL PERFORMANCE PARAMETERS

Aspect to be Monitored	What to Check/Monitor	Frequency
Solid Waste	Onsite waste storage: Inspection of onsite waste storage area before removal	Weekly
	Truckport section: Cleaning and picking up of waste	Daily
	Filling station section: Cleaning and picking up of waste	Daily
	Waste bins: Inspection of all solid waste bins on the premises.	Weekly
Hazardous Waste	Hydrocarbon waste containers: Inspection and cleaning	Daily
	Emptying: Hydrocarbon waste containers	Weekly
	Cleaning: All hydrocarbon waste containers on the premises	Daily
	Oil filtration systems : Inspection and cleaning	Monthly
	Kitchen fat trap : Inspection and cleaning of filters	Weekly
Water	Usage: Compare water usage at the truckport over a period of time and obtain average usage.	Monthly
	Inspection: Where huge discrepancies in usage are recorded, check any leaks from the tanks and pipes.	Monthly
	Water installation: Check and inspect all steel structures for stability and integrity.	Quarterly
	Maintenance: Water installation system, tanks & piping	Yearly
	Taps: Inspection and maintenance	Monthly
	Borehole: Check and inspect pumping system of any visible leaks.	Monthly
	Water quality: Test water from the borehole for quality and fitness for human consumption	Yearly
	Gutters & downpipes: Clean rainwater gutters and downpipes of leaves before the wet season.	Yearly
Sewage System	Septic tank system: Check and inspect for functionality and cleanliness.	Half yearly
	Septic tank system: Check and inspect chambers including inlets and outlets.	Quarterly
	Scum: Check, measure the scum layer and baffles above scum	Once yearly
	Drainfield: Check and inspect the drainfield of the septic tank and the perforated pipes.	Yearly
	Odour: Check for any bad smell (odour) and any damp areas	Quarterly
	Leaks: Check for any unintended leaks from the system	Quarterly
Hydrocarbon waste	Leaks: Check for any leaks around the truckport section and clean out any leaks detected.	Daily
	Driveways: Check for any oil leaks around the driveway to the truckport	Daily
	Premises: Check for any hazardous waste in and around the truckport premises (used filters, cans, oil containers, etc.)	Weekly
	Dispensing: Check for any leaks and drips around the fuel dispensing section and clean up.	Daily
	Spills: Cleaning of any oil spill	Immediately
Safety Measures	Fire extinguisher - check and inspect all fire extinguishers around the truckport and record state of functionality	Monthly
	Hose Reels: Check and inspect hose reel and its functionality.	Monthly
	Fire Hydrant : If fitted check that it is kept clean	Monthly
	Absorbents: Check that adequate quantity of absorbent is kept at the facility including sand for mopping up any spills.	Weekly

Aspect to be Monitored	What to Check/Monitor	Frequency
	Water Pressure: Check that the water installation system has sufficient pressure	Quarterly
Infrastructure	Walkways: Check and inspect the condition of the walkways	Weekly
	Driveways: Check and inspect the driveways	Weekly
	Premises: Check and inspect boundary fence of the property	Monthly
	Fuel pumps: Check and inspect functionally including calibration	Quarterly
	Fencing: Check and inspect that the gates, hinges, latches, etc. are free from rot	Yearly
	Building walls: Clean outside and apply a new coat of paint when necessary	Bi-annually
	Building Roofs: Inspect and fix any leaks	Annually

6.0 ENVIRONMENTAL EMERGENCY PROCEDURES

6.1 Emergency Response Plan

It is imperative that a site-specific emergency response plan is developed by management in conjunction with the fuel franchisor and implemented. The objective of an emergency response plan is to raise alarms in the event of eminent risk so as to prevent escalation and damage to buildings and equipment as well as injury or even death to individuals. In the context of a truckport integrated with a filling station, the following are examples of what constitutes an emergency response plan.

- fire or ignition;
- explosion;
- large flammable liquid spill;
- injuries;
- threat of violence, and
- robberies

The following are recommended:

- There must be on-site emergency equipment such as mobile and fixed fire-fighting equipment.
- The emergency equipment must be easily accessible and in functional conditions.
- Employees must know where to find such emergency equipment.
- Employees must be trained on how to use such equipment.
- On-site emergency response facilities must be indicated, for example:
 - safety devices
 - emergency shutdown for flammable fuel sources
 - fireman's switch
 - water or foam equipment
 - pump shutdowns, and
 - emergency routes and exits
- Employees should be trained on the emergency procedure response.
- The emergency response plan must be understood by all employees.
- There must a map clearly demarcating where fire extinguishers are located, fire assemble point and escape routes during an emergency or fire.

6.2 Sewage or Waste water

In the event that leaks in the sewerage or waste water system is detected, the following actions are recommended:

- The spillage must be contained immediately and, where possible, the source turned off.
- Depending on the amount of spillage involved, attempts must be made to remedy in situ, and in the case where the spillage is large, the contained spill must be removed from site.
- The reason for the spillage must be ascertained and remedial measures taken to avoid reoccurrence in future.

6.3 Hydrocarbon Spills

The objective is to contain and remediate spillage of hydrocarbons (petrol, diesel, oil, lubricants and or chemicals (housekeeping chemicals, etc.)). The following are recommended:

- Management must be contacted immediately.
- The spillage must be contained and, where possible, the source must be turned off.
- If the spill is large, cleaning must be handled by a specialised company.
- The spilled area must be demarcated and marked off with yellow masking tapes.
- The spill kit must be moved to the spill area.
- The spilled substance must be scooped out with the contaminated soil or any absorbent materials using the spill kit shovel.
- Place the scooped up substances in plastics bags or leak-free containers.

- The waste bags or leak-free containers must be marked as hazardous waste and disposed as hazardous waste.
- The leakage must be stopped and causes for the spill investigated and corrective action taken to prevent reoccurrence.

7.0 CONCLUSION

This EMP has presented management measures that have to be implemented in order to prevent or to mitigate negative environmental impacts and to enhance positive impacts that are associated with the construction and operational phases of the truckport and related services promoted by Omuramba.

The EMP is a legal document that commits Omuramba Roadhouse Service Station CC to comply with all management measures, monitoring and other measures presented in therein.

8.0 RECOMMENDATION

If Omuramba complies with the measures presented in this EMP, the environmental impacts associated with its development can be minimised to acceptable levels, if not completely eliminated.

It is recommended that an ECC be granted to Omuramba Roadhouse Service Station to commence with its development.