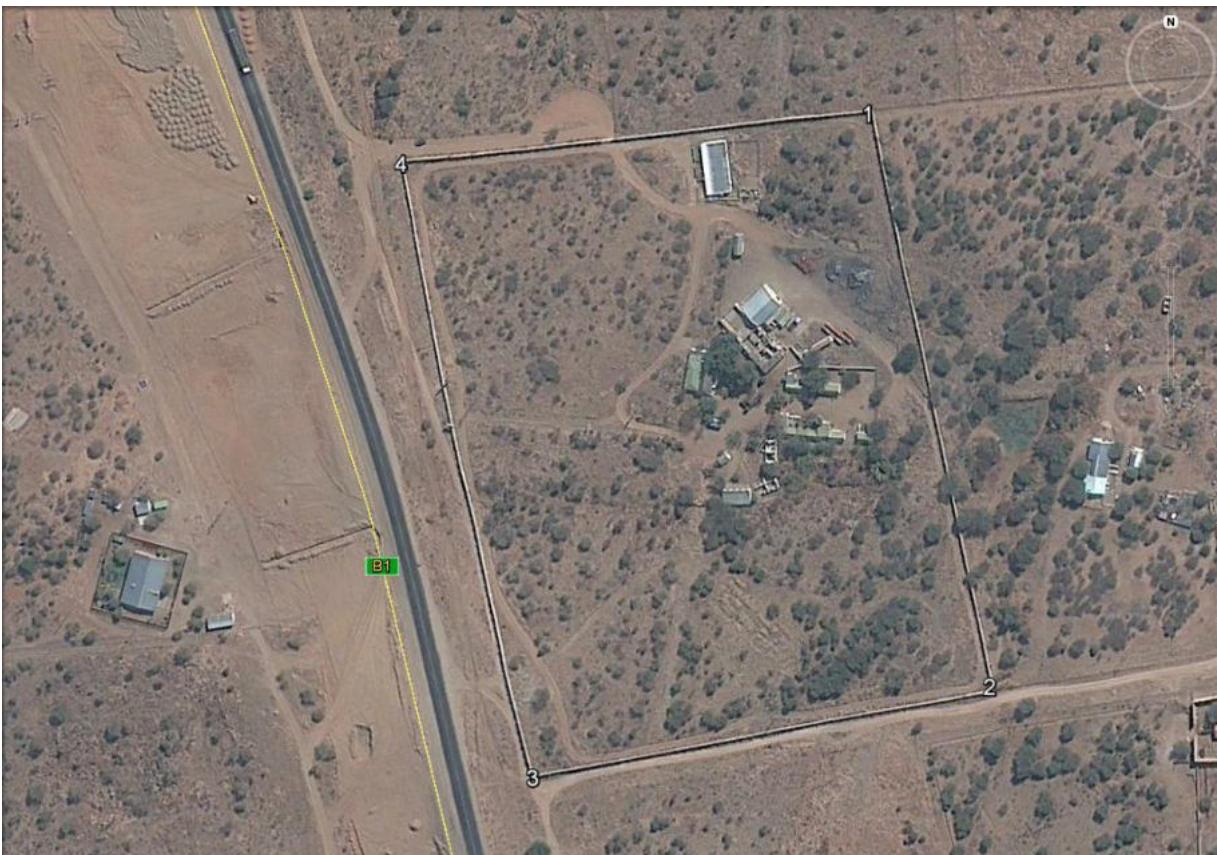


NAMICA SUPERMARKET

ENVIRONMENTAL MANAGEMENT PLAN

PROPOSED NEW FULL FLEDGED TRUCK PORT AT BRAKWATER, KHOMAS REGION



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1. INTRODUCTION AND BACKGROUND

This Environmental Management Plan (EMP) provides guidance for managing the construction, operation and decommissioning of a new fully fledged truck port at Brakwater, Khomas Region. The EMP is a working document which consists of a set of mitigation measures that will be implemented to eliminate, offset or reduce adverse environmental impacts to acceptable levels during the various phases (i.e. construction, operations and decommissioning).

The construction, operation and decommissioning involve:

- The installation of the new fuel storage facilities.
- Installation of fuel reticulation pipelines and associated dispensing points.
- Construction of the septic tank
- Transport of fuel with road transport tanker trucks.
- Dispensing and reticulation of fuel.
- Removal of tanks, pipelines and dispensing equipment.
- Removal of associated buildings and other infrastructure.

The truck port will be supplied with fuel by Total via road transport tanker trucks.

This environmental management plan (EMP) aims to take a pro-active route by addressing potential problems before they occur. This should limit the corrective measures needed, although additional mitigating measures might be included if necessary.

All Contractors and sub-Contractors taking part in any of the phases should be made aware of the contents of the EMP and of the Environmental Impact Assessment (EIA), so as to plan their activities accordingly in an environmental sound manner.

1.1. ADMINISTRATIVE, LEGAL AND POLICY REQUIREMENTS

The Environmental Management Plan (EMP) is the tool that can provide the assurance that the proponent has made suitable provisions for mitigation. The EMP describes the methods and procedures for mitigation and monitoring the impacts identified in the EIA report. The aim of the EMP is to:

- Ensure that the project complies with the goals of the Namibian Environmental Management Act 2007, (No. 7 of 2007), and;
- Provide a framework for implementing the management actions recommended in the EIA for construction, operational and decommissioning phases of the activities associated with the development of the proposed fuel retail facility.

The following legislation governs the EIA/EMP process in Namibia, pertaining to the proposed development.

1.2. The Namibian Constitution

Article 95 of Namibia's constitution provides that:

“The State shall actively promote and maintain the welfare of the people by adopting, inter alia, policies aimed at the following:

(l) management of ecosystems, essential ecological processes and biological diversity of Namibia and utilization of living natural resources on a sustainable basis for the benefit of all Namibians, both present and future; in particular the Government shall provide measures against the dumping or recycling of foreign nuclear and toxic waste on Namibian territory.”

This article recommends that a relatively high level of environmental protection is called for in respect of pollution control and waste management.

1.3. Environmental Management Act of Namibia (2007)

The Act provides a broad definition to the term “environment” - land, water and air; all organic and inorganic matter and living organisms as well as biological diversity; the interacting natural systems that include components referred to in sub-paragraphs, the human environment insofar as it represents archaeological, aesthetic, cultural, historic, economic, palaeontological or social values. NOTE: this definition of “environment” was used throughout this report.

This Act provides a list of projects requiring an EIA. The proposed development is also listed as a project requiring an EIA under this Bill.

1.4. National Heritage Act No. 27 of 2004

The Heritage Act of 2004 makes provision for the developer to identify and assess any archaeological and historical sites of significance. The existence of any such sites should be reported to the Monuments Council as soon as possible. The Council may serve notice that prohibits any activities as prescribed within a specified distance of an identified heritage/archaeology site.

1.5. Water Resource Management Act of Namibia (2004)

The Water Resources Management Act, No.24 of 2004 provides for the management, development, protection, conservation, and use of water resources; to establish the Water advisory Council, the Water Regulatory Board and the Water Tribunal; and to provide for incidental matters.

Section 25 imposes an obligation on the Minister responsible for health to ensure that the water supply is healthy and safe.

1.6. Environmental Assessment Policy of Namibia

The Environmental Assessment Policy of Namibia requires that all projects, policies, programmes, and plans that have detrimental effect on the environment must be accompanied by an EIA. It further provides a guideline list of all activities requiring an impact assessment. The proposed development is listed as a project requiring an impact assessment as per the following points in the policy:

- Transportation of hazardous substances & radioactive waste.
- Storage facilities for chemical products.
- Industrial installation for bulk storage of fuels.

The policy provides a definition to the term “environment” - broadly interpreted to include biophysical, social, economic, cultural, historical and political components and provides reference to the inclusion of alternatives in all projects, policies, programmes and plans. Cumulative impacts associated with proposed developments must be included as well as public consultation. The

policy further requires all major industries and mines to prepare waste management plans and present these to the local authorities for approval.

Apart from the requirements of the Draft Environmental Assessment Policy, the following sustainability principles need to be taken into consideration, particularly to achieve proper waste management and pollution control.

1.6.1. Cradle to Grave Responsibility

This principle provides that those who manufacture potentially harmful products should be liable for their safe production, use and disposal and that those who initiate potentially polluting activities should be liable for their commissioning, operation and decommissioning.

1.6.2. Precautionary Principle

There are numerous versions of the precautionary principle. At its simplest it provides that if there is any doubt about the effects of a potentially polluting activity, a cautious approach should be adopted.

1.6.3. The Polluter Pays Principle

A person who generates waste or causes pollution should, in theory, pay the full costs of its treatment or of the harm, which it causes to the environment.

1.6.4. Public Participation and Access to Information

In the context of environmental management, citizens should have access to information and the right to participate in decisions making.

1.7 Petroleum Products and Energy Act of Namibia (Act No. 13 of 1990)

The Petroleum product and energy act of 1990 is an act which applies only to fuel, unless stated otherwise. The Act stipulated that no person shall operate a retail outlet or conduct the business of wholesaler unless authorized to do so under a retail license or a wholesale license. This act was amended in 2000 to petroleum product and energy act of 2000, to grant more comprehensive powers to the Minister of Mines and Energy to make regulations, more particularly relating to the import, supply, storage, possession and sale of petroleum products, the licensing of and conducting of business by wholesalers, resellers and consumer installation operators, the application of health, hygiene,

safety and environmental standards and requirements, and minimum specifications as regards standards of facilities, structures and equipment and restrictions on the sale and use of petroleum products; to provide for reasonable and just contractual rules and principles in the petroleum industry; to provide for increased penalties for contravention in certain cases of the regulations and the Act; and to provide for incidental matters.. Under section 7 (1), a holder of the retail license is obliged to:

- comply with the Act and Regulations and all other applicable laws, including laws relating to labour, safety, hazardous substances, security, health and environment;
- Inform the Minister as soon as practicable of any dangerous situation arising from the conduct of activities authorized under the retail license, including the steps taken or proposed to be taken by the license-holder to rectify such situation or to eliminate or minimize the danger arising from such situation.
- Keep such records and shall submit such information to the Minister as required by or under these Regulations;
- Comply with all provisions of the Regulations relating to petroleum product spills;
- Not abandon the licensed premises other than in accordance with the Regulations;
- To sell petroleum products to consumers which comply with approved specifications made applicable by or under the Regulations;
- At all times hold such permits, licenses and certificates relating to the sale of petroleum products and other services provided at the retail outlet, as may be required by any other law; and
- Not to obtain fuel by means of wholesale sale for purposes of retail sale from any person other than a wholesale licensee holder.

The truck port will use a retail license to trade fuel under bulk quantity sale which is under *section 8 (1) (2) in chapter 2* of the petroleum product regulation of 2000, A retail license holder may only sell fuel in bulk quantities by dispensing it directly into

- A container, other than the tank of a vehicle, used for the storage of fuel;
or
- The tank of a vehicle with a mass of 3500 kilograms or more for purposes of propelling such vehicles.

1.8 Pollution Control and Waste Management Bill (guideline only)

The proposed development of truck port at Brakwater in reference to the above, only applies to Parts 2, 7 and 8 respectively.

Part 2 states that no person shall discharge or cause to be discharged any pollutant to the air from a process except under and in accordance with the provisions of an air pollution licence issued under section 23. And also further provides for procedures to be followed in licence application, fees to be paid and required terms of conditions for air pollution licences.

Part 7 stipulate that any person who sells, stores, transports or uses any hazardous substances or products containing hazardous substances shall notify the competent authority, in accordance with sub-section (2), of the presence and quantity of those substances.

The competent authority for the purposes of section 74 shall maintain a register of substances notified in accordance with that section and the register shall be maintained in accordance with the provisions.

Part 8 provides for emergency preparedness by the person handling hazardous substances, through emergency response strategies.

1.9 Atmospheric Pollution Prevention Ordinance of Namibia (No. 11 of 1976)

Part 2 of the Ordinance governs the control of noxious or offensive gases. The Ordinance prohibits anyone from carrying on a scheduled process without a registration certificate in a controlled area. The registration certificate must be issued if it can be demonstrated that the best practical means are being adopted for preventing or reducing the escape into the atmosphere of noxious or offensive gases produced by the scheduled process.

Regulated by the Ministry of Health and Social Services.

1.10 Hazardous Substances Ordinance (No. 14 of 1974)

The Ordinance applies to the manufacture, sale, use, disposal and dumping of hazardous substances, as well as their import and export and is administered by the Minister of Health and Social Welfare. Its primary purpose is to prevent hazardous substances from causing injury, ill-health or the death of human beings.

Regulated by the Ministry of Health and Social Services.

1.11 Windhoek Municipality: Waste Management Regulations, Local Authority Act (No. 16 of 1993)

The City of Windhoek developed a Solid Waste Management Policy and Regulations with the main objective of providing framework in which waste shall be governed in Windhoek, irrespective of the nature, toxicity and quantity. The policy with its regulations is also set to ensure that the management of waste is done in such a manner that the risk of impacts of waste on the residents and the environment are minimized. The policy focuses mainly on waste minimization in terms of prevention and increase re-use and recycling.

During construction, the waste produced is classified as builder's waste and will be mitigated in accordance to part 3 of chapter 3 in the regulation.

Business, recyclable and hazardous waste are some of the waste that will/can be produced during operation and/or decommissioning phase. This waste will be mitigated in accordance to part 4 and 5 of chapter 3 in the waste management regulations respectively.

1.12 Water supply and sanitation policy (2008).

The first Water Supply and Sanitation Policy (WASP) was adopted in 1993. Several developments then necessitated a review since. This Water Supply and Sanitation Policy (WSASP) of 2008 replaces the policy of 1993. The policy has principles that are in line with Integrated Water Resources Management including a strong focus on Water Demand Management (WDM). The policy aims on improving the provision of water supply in order to:

- Contribute to improved public health ;
- Reduce the burden of collecting water;
- Promote community based social development taking the role of women into account;

- Support basic water needs;
- Stimulate economic development; and
- Promote water conservation.

The policy also has operative strategies which would be to guarantee safe and affordable sanitation, encouraging decentralized sanitation systems where appropriate. The policy aims on improving the provision of sanitation services in order to:

- Contribute towards improved health and quality of life;
- Ensure an hygienic environment;
- Protect water sources from pollution;
- Protect conservations of water; and
- Stimulate economic development.

The Policy is regulated by the Ministry of Agriculture, Water and Forestry.

2 Roles and Responsibilities

This section describes the roles and responsibilities of the key stakeholders involved in the development, implementation and review of the EMP. The contractor in this report refers to Total and its appointed contractors.

2.1 Competent Authority

The Department of Environmental Affairs: Ministry of Environment and Tourism is responsible for the review of the EMP documents.

2.2 The applicant (Namica supermarket)

The role of the applicant is as follows:

- Review report, implement the EMP and make payments to the Contractor if the EMP is being implemented in a satisfactory manner.
- Give warnings and imposes fines and penalties to the Contractor if the Contractor neglect to implement the EMP satisfactorily.

2.3 Namica Supermarket (Project Manager)

The Applicant will appoint the Project Engineer. The role of the project manager will be:

- Liaising directly with the relevant authorities with respect to the preparation and implementation of the EMP and meeting the conditions documented in the environmental clearance certificate.
- Bear the overall responsibility for managing the project contractors and for ensuring that the environmental management requirements are met.
- Inform the contractors of the EMP and Environmental clearance certificate obligations.
- Approve all decisions regarding environmental procedures and protocols that must be followed.
- Have the authority to stop any construction in contravention with the EMP and RoD.

- In consultation with the Environmental Control Officer (ECO) has the authority to issue fines for transgressions of basic conduct rules and/or contravention of the EMP.
- Maintain open and direct lines of communication between the proponent, Contractor and Interested and Affected Parties (I&APs) with regards to environmental matters.
- Attend regular site meetings and inspections where required.

2.4 Namica Supermarket (Environmental Control Officer)

An Environmental Control Officer (ECO) should be employed by the Contractor. This person should be available for the duration of the construction period and should have appropriate training and experience in the implementation of the EMP and overseeing construction process. This ECO will implement EMP at all levels and sections (sub-contractors) during the construction of the HCRW. During operation of the HCRW the City's Environmental Management Division will take over the role of ECO. The responsibilities of the ECO include the following:

- Assist the Project Manager and Contractor in finding environmentally responsible solutions to challenges that may arise.
- Conduct environmental monitoring as per EMP requirements.
- Monitor performance of the contractors and ensuring compliance with the EMP and associated method statements.
- Maintenance, update and review of the EMP.
- Liaison between the contractors, authorities and other key stakeholders on all environmental concerns.
- Validating regular site inspection reports which are prepared by the Contractor's Environmental Officer (EO).
- Checking the EO's record of environmental incidents as well as corrective and preventative actions taken.
- Checking the EO's public complaints register in which all complaints are registered and actions taken thereof.

- Issuing site instructions to the contractors ECO for corrective actions required.
- Assisting with the resolution of conflict.
- Communicating all amendments of the EMP to the relevant stakeholders.
- Conducting monthly audits to ensure that the system for implementing the EMP is effective.

2.5 Contractor's Safety Officer

- Implement the recommendations in the EIA and satisfy the conditions in the RoD.
- Ensure that safety is practiced for all activities on site.
- Prepare and implement safety procedures
- Communicate all safety related issues.

2.6 Contractors

The contractor should appoint the Contractor's representative who is suitably qualified to implement the EMP. The responsibilities of the Contractor include:

- Compliance with the relevant legislation and the EMP.
- Preparation and submission to the proponent through Project Manager the following Management Plans prior to commencing work:
 - Environmental Awareness Training and Inductions;
 - Emergency Preparedness and Response;
 - Waste Management; and
 - Health and Safety.
- Environmental awareness presentations (inductions) to be given to all site personnel prior to work commencement; the ECO is to provide the course content and the following topics, at least but not limited to, should be covered:
 - The importance of complying with the relevant Namibian, International and Best Practice Legislation.

- Roles and Responsibilities, including emergency preparedness.
- Basic Rules of Conduct (Do's and Don'ts).
- EMP: aspects, impacts and mitigation;
- Fines for Failure to Adhere to the EMP;
- Health and Safety Requirements.
- Record keeping of all environmental awareness training and induction presentations; and
- Attend regular site meetings and environmental inspections.

3 ENVIRONMENTAL MANAGEMENT PLAN

In this EMP, distinction is made between the construction, operational and the decommissioning phases. The contractor in this report refers to Namica Supermarket and its appointed contractors.

Before commencement of any construction work, the Contractor shall brief his or her staff on the content of the EMP and the EIA. The Contractor has the responsibility for implementing the EMP and ensuring their staff complies with the guidelines. Daily audits must be carried out; and corrective action implemented when needed. Namica Supermarket should promote the implementation of this EMP.

3.1 Protection of flora, fauna and natural features

The Contractor is responsible for ensuring that the impacts on the environment around the truck port are minimised. The Contractor shall not deface, paint, damage or mark any natural features (e.g. endangered plant species) situated in or around the new truck port facility. Land disturbance should be minimised.

No flora shall be removed, damaged or disturbed outside the designated working areas. Removal, damage or disturbance to flora in the designated working areas is to be minimised. Sensitive, protected and endangered plant species is to be avoided during the removal of vegetation.

Washing of vehicles, machinery, clothes or any hydrocarbon polluted items within 20m of any surface water body is strictly prohibited.

In order to protect the environment and achieve sustainable development of the environment, it is necessary to incorporate sound environmental management objectives and targets for the designated fuel retail facility.

According to the Namibian legislation, all projects, plans, programmes and policies deemed to have adverse impacts on the environment require an EIA. The following legislations govern the process of EIA in the country pertaining to the proposed development:

3.2 Access routes and work sites

Road transport tanker trucks will transport fuel via the existing B1 road from Windhoek to Okahandja. A small stretch of road, a turn off from the main B1 highway will be applied for from Roads Authority, these will be done to allow easier excess for the trucks and tanker trucks.

3.3 Site Management

Areas outside this designated working zone shall be considered “no go” areas. The truck port must be demarcated when offloading fuel to enhance safety around the proposed development.

3.4 Fire management

Hydrocarbons are volatile under certain conditions and their vapours in specific concentrations are flammable. If precautions are not taken to prevent their ignition, fire and subsequent safety risks may arise.

No fire, whether for cooking or any other purpose, is to be made at the site during any of the three phases (construction, operational and decommissioning). The Contractor shall take all reasonable measures and active steps to avoid increasing the risk of fire through activities on site and prevent the accidental occurrence or spread of fire; and shall ensure that there is sufficient fire-fighting equipment on site at all times. This equipment shall include fire extinguishers and a 10 000 L tank of water on standby for any fire emergencies that might erupt on site. The Contractor should be prepared for such events.

3.5 Fuel and oil management

The Contractor shall take all reasonable measures to prevent the contamination of surface or groundwater from the release of oils and fuels.

Sufficient space should be left in fuel storage tanks to allow for fuel expansion and to prevent leakage of fuel from the fuel outlet.

The tanks should also be installed with telemetric detectors to detect any leakages.

If any spillage occurs, contaminated soil shall be collected in a holding container or drum for later disposal at a licensed hazardous waste site. Any spillage of

more than 200 litres must be reported to the Ministry of Mines and Energy as per the Petroleum Products Act.

3.6 Staff management

The Contractor must ensure that their employees have suitable personal protective equipment, are properly trained and that a fire fighting and a first aid officer is onsite.

3.7 Waste management

No on-site burning, burial or dumping of any waste materials, vegetation, litter or refuse shall occur at the fuel retail outlet.

The developer shall remove all waste off-site to designated licensed disposal sites. The Contractor must provide sufficient bins or containers on-site to store any solid or liquid waste produced. The bins and containers should be weatherproof and scavenger-proof.

A septic tank should be constructed on site to cater for any sewage produced. The sewage should be handled as per sewage and drainage regulations of City of Windhoek. An agreement should be in place with the proponent and the City's municipality on waste collection.

4 MANAGEMENT OF ENVIRONMENTAL ASPECTS

4.1 Construction / Decommissioning Phase

This section details mitigation measures proposed for the implementation during the construction phase.

4.1.1 Dust

Identified Impact	Description	Mitigation	Monitoring	Responsible body
Dust	Dust may be generated during the construction/decommission phase and might be aggravated when strong winds occur. These are expected to be site specific and will potentially pose a nuisance to the neighbouring properties. The construction of the proposed facility should have minimal impact on the surrounding air quality.	It is recommended that regular dust suppression be included in the construction phase, when dust becomes an issue.	Regular visual inspection	Namica Supermarket

4.1.2 Noise

Identified Impact	Description	Mitigation	Monitoring	Responsible body
Noise	Noise pollution due to construction equipment and machinery on site	Ensure engines are fitted with mufflers. Equipment and machinery operators should be equipped with ear protection equipment	Strict operational times. Regular inspection.	Namica Supermarket

4.1.3 Safety and Security

Identified Impact	Description	Mitigation	Monitoring	Responsible Body
Safety and Security	During the construction and decommissioning phase, earthmoving equipment will be used on site. This increases the possibility of injuries. Presence of	The responsible contractor must ensure that all staff members are briefed about the potential risks of injuries onsite. The contractor is further	Security System monitoring. Safety Procedures. First aid	Namica Supermarket

	equipments may encourage criminal activities	advised to ensure that adequate emergency facilities including first aid kit are available on site.	Training	
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4.1.4 Traffic

Identified impact	Description	mitigation	Monitoring	Responsible Body
Traffic	Construction/decommissioning related activities are expected to have a minor impact on the movement of traffic on the B1 road. Diversion of traffic or closure of roads will not be required.	It is recommended that the responsible contractor lease with the Local Traffic Authority to ensure that traffic flow along the affected route is accordingly channelled or diverted if the need arises .	Observations of the traffic flow.	Namica Supermarket

4.1.5 Nuisance Pollution

Identified Impact	Description	Mitigation	Monitoring	Responsible Body
Nuisance pollution	Aesthetics and inconvenience caused to persons trying to access/exit immediate neighbouring buildings and/or destinations.	Take cognition when parking vehicles and placing equipments and infrastructure.	Regular visual inspection	Namica Supermarket

4.1.6 Surface water Contamination

Identified Impact	Description	Mitigation	Monitoring	Responsible Body
Groundwater contamination	Leakage might occur during removal of tanks, dispensing points and associated reticulation pipelines in the decommissioning phase. Minimal surface water contamination can be caused by leakages of fuel from machinery and heavy-duty vehicles during construction and decommissioning phase.	Drain tanks and pipelines prior to removal. Prevent spillages of any chemical.	Regular visual inspection	Namica Supermarket

4.1.7 Generation of Waste

Identified Impact	Description	Mitigation	Monitoring	Responsible body
Generation of waste	This can be in a form of contaminated soil and building rubble. Excavated soil from the installation of the underground tank.	Ensure that no excavated soil, refuse or building rubble generated on site are placed or dumped on surrounding properties or land. This includes road reserves e.t.c. Clear dumping area with the Windhoek Municipality	Housekeeping procedure monitoring, Observation of site appearance by the facility manager.	Namica Supermarket

4.2 Operational Phase

This section details mitigation measures proposed for the implementation during the operational phase. Main responsible party in this section is

4.2.1 Hydrocarbon Spillage

Identified Impact	Description	Mitigation	Monitoring	Responsible Body
Hydrocarbon Spillage	Spillages might occur during delivery to the tanks	Risk of impact from this can be lowered through proper training of staff and installation of suitable containment structures	Regular visual inspection.	Namica Supermarket

4.2.2 Overfilling of Tanks

Identified impact	Description	Mitigation	Monitoring	Responsible Body
Overfilling of tanks	Overfilling of the tanks may take place.	Proper monitoring of the product levels in the tanks must take place to eliminate overfilling	Regular visual inspection	Namica Supermarket

4.2.3 Overfilling of trucks

Identified impact	Description	Mitigation	Monitoring	Responsible Body
Overfilling of trucks	Overfilling of trucks	This impact can be reduced by the installation of spill containment areas around the pumps and through proper training of the operator	Regular visual inspection.	Namica Supermarket

4.2.4 Fire and Explosion Hazard

Identified Impact	Description	Mitigation	Monitoring	Responsible Body
Fire and Explosion Hazard	Hydrocarbons are volatiles under certain conditions and their vapours in specific concentrations are flammable. If precautions are not taken to prevent their ignition, fire and subsequent safety risks may arise	It must be assured that sufficient water is available for fire fighting purposes. Ensure that all fire fighting devices are in good working order. In addition to this , all personnel have to be sensitised about responsible fire protection measures and good housekeeping such as the removal of flammable materials	Regular inspections should be carried out to inspect and test fire fighting equipments and pollution control materials at the fuel facility.	Namica Supermarket

4.2.5 Damage to Pipelines

Identified Impact	Description	Mitigation	Monitoring	Responsible Body
Damage to pipelines	Damages to pipelines and tanks may occur due to vehicle movements and excavations. Leakage of the damaged structure is most likely to follow.	This can be mitigated through careful designs, warning signs and sensible operations in the area.	Flow meters to be installed on either sides of an underground pipeline to monitor the input and output through the pipe. If input does not equal the output then leakage can be assumed.	Namica Supermarket

4.2.6 Surface water Contamination

Identified Impact	Description	Mitigation	Monitoring	Responsible Body
Surface water contamination	Spillages might occur during delivery from road transport tanker trucks and overfilling of trucks. Leakages of underground pipelines may take place.	All operational surfaces at the fuel retail outlet must be installed with spill containment areas as per relevant SANS standards or better	The risk can be lowered further through proper training of staff and the installation of suitable containment materials. Procedural inspection should be followed.	Namica Supermarket

4.2.7 Noise

Identified Impact	Description	Mitigation	Monitoring	Responsible Body
Noise	Noise pollution already exists around the site in the form of vehicles frequenting the highway	Delivery of fuel by heavy- duty tankers should be limited to normal working hours (07h00 to 19h00). Volume of public address systems should be kept low and no loud music should be allowed.	Strict fuel delivery times observation of on-site noise levels by the Site Officer. A complaints register regarding noise should be kept and acted on it if it becomes an issue.	Namica Supermarket

4.2.8 Air Quality

Identified Impact	Description	Mitigation	Monitoring	Responsible Body
Air Quality	In terms of air quality, hydrocarbon vapours will normally be released during delivery as liquid displaces the gaseous mixtures in the tanks.	All venting systems and procedures have to be designed according to the SANS standard and placed in a sensible manner.	A complaints register regarding vapour smells should be kept and acted on it if it becomes a regular complaint.	Namica Supermarket

4.2.9 Health and Safety

Identified Impact	Description	Mitigation	Monitoring	Responsible Body
Health and safety	The operations of fuel retail outlet can cause serious health and safety risks to workers on site. Occupational exposures are normally related to the dermal contact with fuels and inhalation of fuel vapours during handling of such products.	Adequate measures must be brought in place to ensure safety of staff on site, and includes <ol style="list-style-type: none"> 1) Proper training of operators 2) First aid treatment 3) Medical assistance 4) Emergency treatment 5) Prevention of inhalation of fumes 6) Protective clothing 	Monitoring should be carried out on a regular basis, including accident reports.	Namica Supermarket

4.2.10 Generation of waste

Identified Impact	Description	Mitigation	Monitoring	Responsible Body
Generation of waste	Waste in the form of contaminated soil due to spillage might occur, but should be prevented through the use of containment areas as provided	Waste minimization policy. Bioremediation of contaminated soil. Regular cleaning of oil/ water separator. Removal of sand and other material from containment areas	Regular monitoring of the oil water separator outflow is required. Containment area inspections, inspections for soap in oil/water separator is also required.	Namica Supermarket

4.2.11 Ecological Impacts

Identified Impact	Description	Mitigation	Monitoring	Responsible Body
Ecological Impacts	No conservation worthy vegetation and fauna exists at the site	Some vegetation should be planted at the site to minimize surface run-off.	Visual inspection	Namica Supermarket

4.2.12 Economic Impacts

Identified Impact	Description	Mitigation	Monitoring	Responsible Body
Economic Impacts	The number of jobs that might be created	Locals should be highly considered when hiring for temporary or permanent jobs	Regular inspections	Namica Super Market

4.2.13 Sewage

Identified Impact	Description	Mitigation	Monitoring	Responsible Body
Sewage	The sewage produced on site during operational phase will need to be regulated by the proponent as there are no sewage lines in the area.	A septic tank will be constructed on site to cater for any sewage produced during the operational phase. The city of Windhoek's municipality will be responsible with the emptying of the septic tank through an agreement that will be set between the city and the proponent.	Visual inspection	Namica Supermarket

5 CONCLUSIONS

The above Environmental Management Plan, if properly implemented, will help to minimise adverse impacts on the environment. Where impacts occur, immediate action must be taken to reduce the escalation of effects associated with these impacts. To ensure the relevance of this document to the specific stage of project, it needs to be reviewed throughout all phases.

The Environmental Management Plan should be used as an on-site reference document during all phases of the proposed project, and auditing should take place in order to determine compliance with the EMP for the proposed site, and Parties responsible for transgression of the EMP should be held responsible for any rehabilitation that may need to be undertaken.