ENVIRONMENTAL MANAGEMENT PLAN (EMP) FOR THE PROPOSED HANDLING AND TEMPORARY STORAGE OF GENERAL AND HAZARDOUS WASTE AT 3373, ENERGY STREET, WALVIS BAY

PROPONENT

Eco Waste Technologies cc

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DOCUMENT DESCRIPTION

PROJECT NAME:	**Handling and temporary storage of general and Hazardous waste at Erf 3373, Energy Street, Walvis Bay, Erongo region.**
DOCUMENT:	**ENVIRONMENTAL MANAGEMENT PLAN (EMP)**
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LIST OF ACRONYMS

DEA:	Directorate of Environmental Affairs
EAP:	Environmental Assessment Policy
EIA:	Environmental Impact Assessments
EMA:	Environmental Management Act
EMP:	Environmental Management Plan
EMS:	Environmental Management System
HSEQ:	Health, Safety & Environment Quality System
I&APs:	Interested and Affected Parties
IBC:	Intermediate Bulk Container
ISO:	International Standards Organisation
MEFT:	Ministry of Environment, Forestry and Tourism
MSDS:	Material Safety Data Sheet
PPE:	Personal Protective Equipment
SABS:	South Africa Building Standards
SANS:	South African National Standards
SWM:	Solid Waste Management

1. INTRODUCTION AND BACKGROUND

1.1 Introduction

Eco Waste Technologies cc, hereinafter referred to as the “Proponent” is a waste management company incorporated in terms of the Close Corporation Act of 1988 and registered with the Business and Intellectual Property Authority (BIPA), Namibia. The company specializes in waste management, recycling, harmful substance removal, and spill clean-ups.

Through its coastal branch based in the Port city of Walvis Bay, the company offers holistic waste management services to the maritime industry such as cleaning of drill rigs, supply ships, and cargos. Different types of waste, which will include general and hazardous waste, are often generated from these services.

The proponent has been operating a temporary handling and storage facility at Erf 3373, Energy Street (Industrial area) Walvis Bay. The main activities at the facility include the segregation, sorting, and temporary storage of different types of waste for disposal at the Walvis Bay landfill site.

In terms of the Environmental Management Act, 07 of 2007, all waste management, treatment, handling, and disposal activities may not be carried out without an Environmental Clearance Certificate (ECC) being obtained. The first ECC was issued in 2022-08-18 and expired on 2025-08-18. Green Gain Consultants cc has been appointed to update the Environmental Management Plan (EMP) and apply for the renewal of the ECC.

1.2 Purpose of the EMP

The EMP is an environmental tool that is used to ensure that undue or reasonably avoidable adverse caused by the proposed project are minimized or prevented and the positive benefits of the project are enhanced. An EMP is therefore important in ensuring that the management actions arising from Environmental Impact Assessment (EIA) processes are clearly defined and implemented through all phases of the project life cycle. All personnel taking part in the establishment and operations of the fuel storage facility should be made aware of the contents of the EMP, so as to plan the relevant activities that the project will include accordingly and in an environmentally sound manner.

The objectives of an EMP are:

- Ensuring compliance with regulatory stipulations and guidelines which may be local, provincial, national/international.
- Define details of who, what, where and when environmental management and mitigation measures are to be implemented.
- Formulate measures which will mitigate adverse impacts on various environmental components, protect environmental resources where possible, and enhance the value of environmental components where possible; and
- Providing feedback for continual improvement in environmental performance.

1.3 EMP Methodology

The stipulated environmental impact assessment procedure in terms of the Environmental Impact Assessment Regulations: Environmental Management Act, 2007 was followed. The following key activities and tasks have been undertaken as part of the EIA and EMP development process, namely to:

- Solicited initial input from main stakeholders. This is essential toward the development of a sound plan. Since no resource sits in isolation, an environmental management plan can affect a number of other parties. For the best adherence and acceptance of a plan, input is needed to address concerns early in the planning process.
- Identify the problems and or questions associated with the facility. Clearly defined objectives were identified in order to remain centered on a management plan. Only in this way can the success of this environmental management plan be gauged.
- Made a list of applicable criteria, standards and principles for construction as required by legislation, regulation, policies and etc. As standards include criteria to fit various types of projects, much of the information is often irrelevant to any particular one. Went through any standards or reference guides to be complied with and marked all requirements applicable to each situation.
- Established the extent of the management plan and what the client must do on its own. It is easy for a management plan to end up in someone's hands and never be executed. Inform the client that creating the plan is an iterative process requiring routine correspondence to tailor it to Project Contractor's specific needs.

2. ABOUT THE PROJECT

2.1 Locality

The proposed development site (Erf 3373) is located in the Walvis Bay industrial area and is accessible via Energy Street. The site is located on the following coordinates -22.943189" S; 14.514422" E.

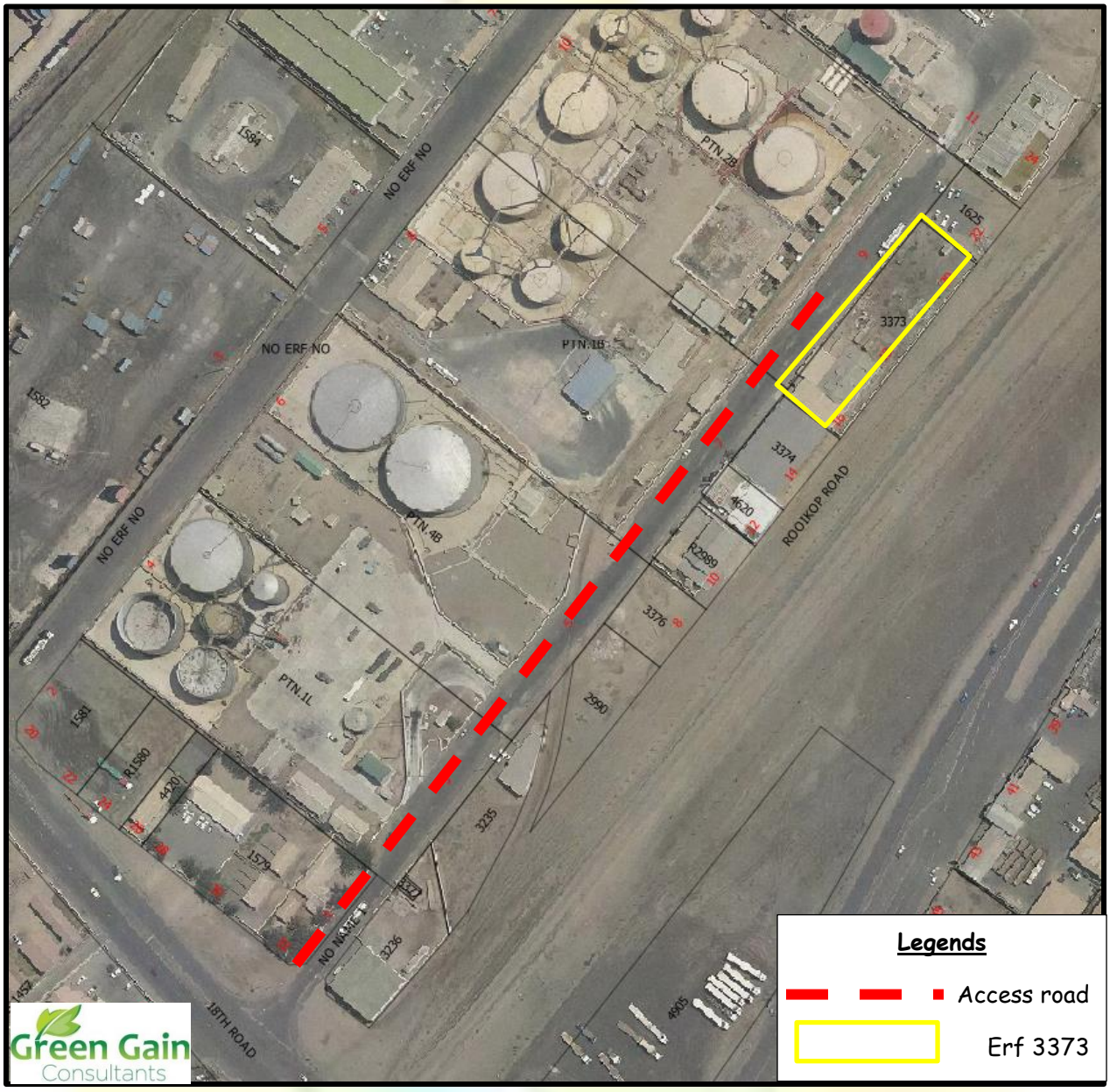

Figure 1: Locality

2.2 Site Description

The site measures about 2892 m^2 in extent and is zoned “Industrial in terms of the Walvis Bay Town Planning Scheme No. 35. The site is located in a busy industrial area consisting mainly of fuel depots of Puma and Engine. It is east by the main railway line. The site is also adjacent to the Eagle Upholstering facility on Erf 3374.

The site (Erf 3373) is enclosed with a boundary wall with two lockable entrances. The following facilities already exist on-site to complement the waste oil storage facility.

- Bund wall for oil storage tanks
- Wash bay – washing of vehicles
- Warehouse -storage purposes
- Above ground Storage tanks with a capacity of 23m^3 each, a fire detection system, oil trap,
- Garage
- Security room and accommodation unit.

The same site will be utilized for temporary storage of waste oil to be stored in the above ground storage steel tanks fitted on a bund wall. The open yard will then be utilized for handling and sorting waste. Waste will be stored in separate containers i.e., skips, drums.

2.3 Operational procedures

2.3.1 Source and types of waste

Eco Waste Technologies is involved offers holistic waste management services to the maritime industry such as cleaning of cargos, drill rigs supply ships, and cargos and maintenance of dry and floating docks. As such different types of which include general and hazardous waste originating from these services will be collected and transported to the site for sorting and temporary handling. The types of waste to be handled at the site are as follows.

i). General waste

- Waste metal and wood
- Waste from ship maintenance activities
- Sweepings from hatches and engine rooms
- Spilt cargo
- General domestic waste
- Spilt and waste cargo
- Lading storage tanks

ii). Hazardous waste

- Paint and shot grit
- Oil contaminated mechanical parts
- Health Care Risk Waste (HCRW)/medical waste
- Galley waste
- Slops from holds and tanks
- Spent batteries
- Ballast water
- Paint, solvents, and waste detergents
- Spent oil and lubricants

2.3.2 Waste handling procedure

a) Collection, transportation and receiving of waste

Solid waste will be collected from sources by means of pick-up trucks or skip loaders, depending on the quantity of waste. Open vehicles transporting waste will be covered with a tarpaulin to prevent waste from being blown away by wind.

Figure 2: Waste collection vehicles

b). Sorting and handling

The collected waste will be segregated/sorted and stored separately depending on their nature, and type i.e., infectious, recyclables etc. Different types of waste handling containers will be used, such as skips containers, wheelie bins oil drums. Each container will be cleared marked according to the types of waste to be stored.

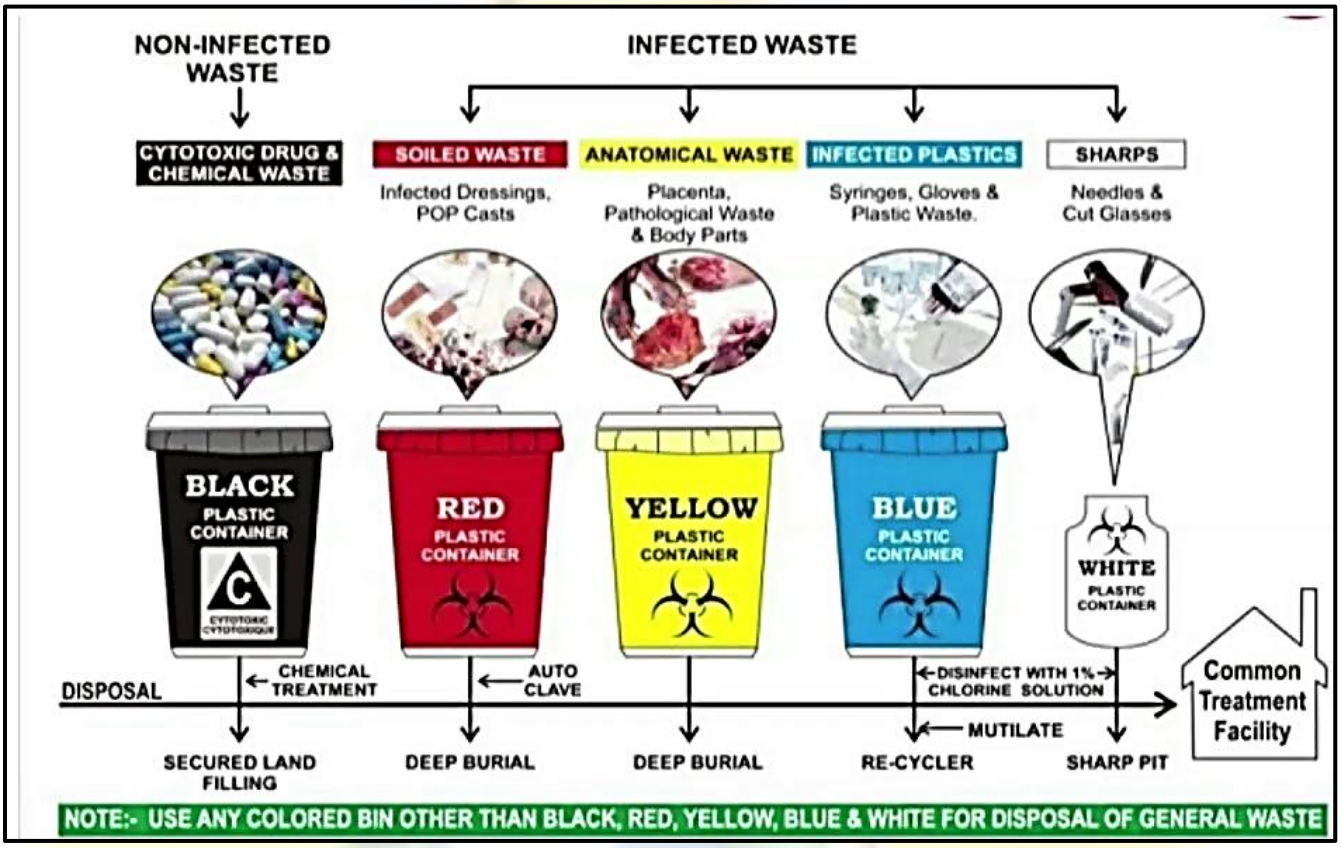

Figure 3; Example of waste segregation

In order to ensure quality service and prevent occupation health safety risks during the waste collection, transportation, handling, sorting, storage and disposal, the following measures will be ensured.

- All drivers and waste picking team will receive training on handling of different types of waste to prevent and on first aid treatment
- Employees will be provided with appropriate Personal Protective Equipment (PPE)
- Waste will be transported in designated vehicles and all waste collection vehicles will be sealed i.e., covered with tarpaulin
- Vehicle transporting waste will labelled accordingly
- Waste will be kept for a short period and in the appropriate waste collection bins
- General waste will be kept separate from hazardous waste
- Pre-arrangement will be done with the Municipal Landfill officials for disposal well advance

c). Recycling, treatment, and disposal

After sorting, recyclable waste such as paper, plastics, metals, batteries, glass, e-waste, will be taken to local recycling companies i.e., Scrap Salvage, Rent-A-drum etc., while waste oil will be handed over to Oil Technologies cc (operating at the same site). General waste and hazardous waste will be transported to the Walvis Bay landfill site in the appropriate manner. The proponent will be liable to pay disposal fees at the landfill site.

3. ROLES AND RESPONSIBILITIES

3.1 Project involvement

The proposed project requires a multitude of administration of various role players to ensure that the proposed infrastructure is planned & designed, constructed, operated, and maintained in an environmentally sound manner.

Table 1: Project Involvement

NO.	SPECIFIC PROJECT ROLE	ADDRESS AND CONTACTS
1.	Proponent	**Eco Waste Technologies cc** **Mr. J. J Jordaan** Tel: +264 (081) 4991080 Email: walvis@oiltech.com.na Krumhuk Portion 26 Aris Industrial, Aris Windhoek Namibia
3.	Environmental Assessment Practitioner	**Green Gain Consultants cc** Mr. Joseph Amushila Cell: +264811422927 Email: info@greengain.com.na
4.	Local Authority	**Municipality of Walvis Bay** Civic Center **Nangolo Mbumba Drive** **P/Bag 5017** Tel: +264 (061) 201 3111
5	Competent Authority	**Ministry of Mines and Energy** **Department: Petroleum** **Tel:** +264 (061) 284 2746

3.2 Responsibilities

It is the core responsibility of the proponent to ensure the successful implementation of this EMP and any condition to be imposed by the Ministry of Environment and Tourism. The implementation of the ESMP also requires the involvement of authorities, each with specific responsibilities to ensure that the development is operated in an environmentally sensitive manner.

3.2.1 The Proponent: Eco Waste Technologies cc

Responsibilities

a) Implement the final EMP after approval by DEA and ensure the project comply with the conditions therein.
b) Ensure environmental training and awareness of the EMP to all contractors, sub-contractors and employees
c) Notify MEFT and authorities of any proposed changes to the proposed project
d) Ensure that appropriate compliance monitoring is executed
e) Handle grievances in the prescribed manners as outlined in Section 9.
f) Appoint an Environmental Control Officer (ECO)

3.2.2 Environmental Control Officer (ECO)

The proponent should appoint an Environmental Control Officer to oversee the implementation of the EMP during site establishment, operation and possible decommissioning project phase. The ECO can be an employee of the proponent or an outside/independent EAP. The ECO should be responsible for the following tasks.

- Ensure that all contractor and sub-contractors are complying with the content of this ESMP.
- Keep record of incidences during and take corrective actions i.e., issuing of penalties in case of transgressions etc. during project implementation.
- That all environmental impacts are managed according to the environmental principles of avoiding, minimizing, mitigating, and rehabilitation as contained in this EMP.
- Conduct monitoring and review of the on-site environmental management and implementation of the EMP by the Contractor and sub-contractors.
- Audit the implementation of the EMP on a regular basis
- Compile and submit an Environmental Reports (annually) to the Authority

3.2.3 The Contractor and Sub-contractors

It is expected that various contractors and sub-contractors will be appointed at various stages and for various tasks during different phases of this project. All appointed contractors and sub-contractors involved in the project shall ensure to comply with the EMP and its conditions, thus the proponent must ensure that a copy of the EMP is given to all contractors involved. The contractor upon receiving this ESMP should ensure:

- To undertake their activities in an environmentally sensitive manner and within the context of this EMP.
- To undertake good housekeeping practices during duration of their activities; and
- To ensure that adequate environmental awareness training takes place in the language of their employees.

3.2.4 Authorities

a). Local Authority: Walvis Bay Municipality

Provide authorization for the proposed activities by

- Issuing Consents for the ECC application
- Approve Building Plan and site layout
- Issue Fitness Certification in terms of the Local Authorities Act of 1190
- Conduct monitoring during site establishment and operation phase
- Ensure the operation of the activities are within the Walvis Bay Town Planning Scheme No.35
- Notify the proponent of nay changes to land uses thereof and address dispute that may arise between the proponent (occupier) and adjacent properties owners.

b) Competent Authority: Ministry of Mines and Energy

Provide authorization through certifications and issuing permits and renewals thereof, required in terms of the Petroleum Products and Energy Act No. 13 of 1990 and its Regulations.

4. ENVIRONMENTAL MANAGEMENT REQUIREMENTS

The successful implementation of this EMP is depends on various factors, training and awareness, a good record keeping, enforcements and monthly reporting.

4.1 Environmental awareness training

All employees, contractors and sub-contractors involved in any work at the project should be briefed on their obligation towards environmental protection and methodologies in terms of the EMP prior to work commencing. The briefing should be done by the proponent prior to any work in the form of an onsite talk. Record of such trainings should be kept.

4.2 Record keeping

There should be an up-to-date filing system for the project whereby method statements, environmental incidents report, training records, audit reports and public complaints register are kept. It is advised that photographs of the site should be taken as a visual reference. These records should be kept for a minimum of **two (2) years**.

4.3 Enforcements: Non-compliance and penalties

This EMP upon approval by MET shall be considered a legally bidding. In cases of transgressions and non-compliance to the EMP, the transgressor should be liable to a penalty fine. Transgressions should be recorded in a dedicated register and be filed. The Proponent shall issue the penalties in terms of the severity of the environmental damages.

Adherence to this EMP during the operation of the project will ensure that the environmental impacts associated with the project will be mitigated to a greater extent thus promoting sustainable development. The commitment and co-operation of the identified responsible person(s) will ensure effective implementation of the EMP.

4.4 Environmental Reports

The proponent shall, in the project completion report, indicate the environmental performance and matter of incidental. The EAP shall conduct regular monitor of project activities during all project phases and keep records. These records may be required by the competent authority when deemed necessary.

5. LEGAL REQUIREMENTS

As part of implementation of this EMP, the proponent must comply with the requirements of various national legislations and municipal by-laws as outlined in the Scoping Report and also briefly presented here below.

Table 2: Applicable National Laws

LEGISLATION	PROVISION AND REQUIREMENTS
Constitution of the Republic of Namibia (1990)	National objectives -Guarding against overutilization of biological natural resources, - Limiting over-exploitation of non-renewable resources, - Ensuring ecosystem functionality, - Maintain biological diversity.
Local Authorities Act, No. 23 of 1992 as amended	Provide for the determination, for purposes of local government, of local authority councils; the establishment of such local authority councils; and to define the powers, duties and functions of local authority councils; and to provide for incidental matters. **According to Section 94 of the Act, the collection and disposal of waste is the responsibility of local and regional authorities. The Act also gives power to the Local Authorities to establish by-laws.**
Pollution Control and Waste Management Bill, 2003	This Bill serves to regulate and prevent the discharge of pollutants to air and water as well as providing for general waste management. **The bill provide framework for a multitude administration on pollution control and waste management in the country. Each authority identified by the bill shall play its respective roles.**
Environmental Management Act, No.07 of 2007	Ensuring that the significant effects of activities on the environment are considered carefully and in time. To promote the sustainable management of the environment and the use of natural resources by establishing principles for decision making on matters affecting the environment. **The proponent shall inform the competent authority of any changes to the proposed school facilities, to see if an EIA is required or not.**
Public Health and Environmental Act, 2015	The objectives of the PHE Act are to; • Promote public health and wellbeing • Prevent injuries, diseases and disabilities • Protect individuals and communities from public health risks • Encourage community participation in order to create a healthy environment • Provide for early detection of diseases and public health risks **Section 2 requires that a). "Every local authority must take necessary reasonably and applicably measures to maintain its local authority area at all times in a hygienic and clean condition" b). Prevent occurrence of a health nuisance, unhygienic condition, an offensive condition or any condition which could be**

	harmful or dangerous to the health of a person within its local authority or the local authority area of another local authority"
Labour Act (No 11 of 2007)	To establish a comprehensive labour law for all employers and employees; to entrench fundamental labour rights and protections. Regulate basic terms and conditions of employment; ensure the health, safety and welfare of employees; to protect employees from unfair labour practices; to regulate the registration of trade unions and employers' organisations; to regulate collective labour relations; to provide or the systematic prevention and resolution of labour disputes; **Any employment provided whether by the proponent or by contractor at this site i.e. Security Services must be in accordance with the Labour Act**.
Employment Service Act, 8 of 2011	To provide for the establishment of the National Employment Service; to impose reporting and other obligations on certain employers and institutions; to provide for the licensure and regulation of private employment agencies; and to deal with matters incidental thereto. **Any employment provided whether by the proponent or by contractor at this site must be in accordance with the Labour Act**.
Water Resources Management Act 2004	This Act provides provision for the control, conservation and use of water for domestic, agricultural, urban and industrial purposes. In addition the Act clearly gives provision that pertain with license or permit that required abstracting and using water as well as for discharge of effluent. **The effluent of human waste under this framework is the main focus; the use of mobile toilets during construction phase should be properly positioned. Permanent ablution facilities for the school should be connected to the septic tank and a Wastewater discharge permit should be obtained from MAWF. No discharge of raw wastewater in the open environment is allowed**
Atmospheric Pollution Prevention Ordinance, no. 11 of 1976	To provide for the prevention of the pollution of the atmosphere, and for matters incidental thereto. The Ordinance deals with administrative appointments and their functions; the control of noxious or offensive gases; atmospheric pollution by smoke, dust control, motor vehicle emissions; and general provisions. **According to the Ordinance, the Local Authority shall control and prevent atmospheric air pollution or emission of noxious or offensive gases by smoke.**
Hazardous Substance Ordinance of 1974	This Ordinance provides for the control of toxic substance and thus also relevant for pollution control. It covers for the manufacturing, sale, use, disposal, dumping, importing and exporting of hazardous waste. Any use of hazardous substance must be in compliance with this ordinance

This is not the exhaust list. Provision of the relevant legislations listed in the Scoping report should be complied with.

6. IMPLEMENTING THE EMP: ROLES AND RESPONSILITIES

The proponent should play a pivotal role in implementing this ESMP. This section provides a manner in which the ESMP is to be implemented and also outlining responsibilities of all parties involved perform their respective roles in accordance with this ESMP.

Table 3: Proposed Mitigation Measures: Operation

RISK	OBJECTIVE	RECOMMENDED MITIGATION MEASURES	RESPONSIBILITY
1 General Waste Management			
1.1 Littering -Wind-blown waste can easily pollute the surrounding area.	Reduce pollution	• Encourage recycling of papers, plastics at sources to reduce amount going to the disposal site. • Litter that can be blown by wind must be covered with sand or building rubble to prevent it from being blown away. Control burning should be used to contain this waste. • Erect and maintain fence around the site • Assign a team to collect all wind-blown waste around the disposal site on regular basis. • Organise regular clean-up campaigns around town and encourage residents to take part. • Discourage use of plastic in town through campaigns and awareness	ECO
1.2 Danger of expired food -Expired food may attract scavengers at the site. This may pose serious public health risks.	Ensure Public safety	• All expired food items must be condemned at the disposal site as soon as possible. This should be done in the presence of the Municipal Health Official. If such official is not available on site, any other authorized qualified council official must assist.	ECO

1.3 Risks of fire from burning of waste which could spread to nearby residents or vegetation.	Ensure public safety and prevent damage to properties	• Only authorized burning by the municipal official or authorized person • Do not leave active fires unattended • Avoid burning when its windy • Waste should be burned in the trench/excavation • Provide fire cuts around the disposal site	ECO
1.4 Dust and fumes from vehicle may generate noise, dust, vibration which mighty be a nuisance to the residents.	Ensure public safety and health	• Avoid hauling of waste stream when its windy • Provide dust suppression when it's necessary • All persons operating at the dumpsite must be provided with appropriate Personal Protective Equipment (PPE)	ECO
2 Public Health and Safety Risks			
2.1 Smoke -Burning of waste could generate smoke which is associated with several public health risk such as: a) Respiratory abnormalities b) Abdominal problems c) Ear infection d) Central nervous system e) Blood disorder -These can occur because of inhalation of smoke, ingestion of contaminated items or absorption through skin cells. -Smoke can also cause health problems to animals and other living organisms in the area	Ensure public safety and health	• Burning of waste should not be allowed onsite • Employees must be always provided with PPE.	ECO

-Smoke in the surrounding may obstruct traffic flow within the surrounding area. **2.2** **2.3** **2.4** **2.5** **2.6** **2.7 Gy8643w643w2wSmell/odours.** -Biodegradable organic material emits obnoxious odors that cause illness to people living in and around them. Since they ferment, they could create favorable conditions for survival and growth of microbial pathogen. **2.8 Disease transmission** -Unattended wastes lying around attract flies, rats, and other animals that in return spread diseases. -Disposal sites areas are mostly feeding places for dogs and cats. These pets,		• Large volume of organic waste should be buried or covered with sand. • Dead animals must be burned or buried. • Apply chemicals to avoid infestation of flies and rodents (when required). • All organic wastes that could attract pets must be discarded • Ensure proper maintenance of fence to keep animal away • Expired food which may attract scavengers should be destroyed immediately	ECO ECO

together with rodents, carry diseases to nearby homesteads. **2.9 Contamination and infections** -The disposal site may become the children's source of contamination due to the incubation and proliferation of flies, mosquitoes, and rodents. -Due to poor waste segregation, some medical waste maybe found mixed up with domestic waste and end up at the site. This poses a serious risk of infection with different diseases. **2.10 Occupational health risks** -Direct handling of solid waste can result in various types of infectious and chronic diseases with the waste workers and rag pickers being the most vulnerable. These include skin or blood, eye and respiratory and intestinal infections as well as cancer resulting from exposure to dust or hazardous compounds.		• No unauthorized entries • Apply chemicals to avoid infestation of flies and rodents (when required). • Infectious medical waste should not be disposed of on site • Ensure waste proper segregation at the sources • Provide training to the waste collection team especially those collecting waste from health centres. • Hospital and other health centres employees must also be well informed about segregation of waste domestic and medical waste.	ECO ECO

-Direct exposure to municipal waste can lead to diseases through chemical exposure as the release of chemical waste into the environment leads to chemical poisoning and radioactive hazard. Many studies have established that there is a strong connection between exposure to waste and diseases. -Employees/workers can also be at risk of injuries from sharp objects at the dumpsite if they are not properly protected. -Employees are also at risk of accidents during waste handling, i.e., muscle disorders from lifting heavy containers, infectious wounds from contact with sharp objects or poisoning and chemical burns from chemical waste mixed with general waste.		• All persons involved in waste management should be equipped with PPE (See above)	
3 Soil contamination			
3.1 Contamination of soil with heavy metals from tins, cans etc.	Prevent soil contamination	• Promote and encourage recycling of tins, cans	ECO

		• Avoid burying waste that contains lead i.e. tins, cans scrap metals. • Waste such as tins, cans which contains heavy metals should be collected as recyclables and sent to scrap yards.	
3.2 Oil leakage from vehicle, machinery could contaminate the soil	Prevent contamination of soil and groundwater	• Clean up the contaminated soil and dispose of in an environmentally friendly manner. • Ensure proper and frequent servicing of vehicle and equipment used at the site • Waste oil should be collected and sent to recycling companies	ECO
3.3 Soil erosion from disturbed areas during waste disposal	Ensure soil conservation	• No excavation will be done; hence an area landfill method is recommended. • Do not extract soil from slope areas. • Provide erosion barrier to prevent soil from carrying away. • Building rubble should be used as cover material	ECO
4 Groundwater and freshwater contamination			
4.1 Dumping of waste may pose serious risks of groundwater contamination by leachate.	Prevent groundwater contamination	• No hazardous waste allowed to be disposed on site • Waste containing heavy metals may not be buried, unless a linear system is provided • No burying of waste next to drainage line • Flows which contain leachate should be contained and disposed of as hazardous waste	ECO
4.2 Contamination of nearby watercourse	Prevent contamination of freshwater	• The area receives limited rainfall • There is no major watercourse in the proximity of the site	ECO

		• However, in case if rainfall, storm water that is mixed with waste must be contained and disposed of as hazardous waste • Water flows which is mixed with waste stream should be contained and disposed of as hazardous waste	
5 Operational management and maintenance			
5.1 Inadequate management if site operator is ill/on leave/resigns	Ensure effective and efficient management of the plant	• At least two site operators must be fully trained in the operation of the site, so that one can stand in for the other in case of illness, leave, etc. • Ensure regular training of the operators • The Town Council may seek a service of a landfill site operate to operate the dumpsite on its behalf • The landfill operator should also be training on waste management and Environmental requirements as outlined in this EMP.	ECO
5.2 Lack of skills on the part of the site operator	Ensure effective and efficient management of the site.	• The existing system requires only a moderate level of skill and technical expertise. • Drivers and site operators must have appropriate skilled and experienced for the task at hand • Site operators must receive continuous training in all aspects of daily management of the site (technical or administrative) • Technical support must be available to the site operator	ECO
5.3 Lack of proper and timely maintenance of vehicles, plant,	Ensure smooth operation	• The fence and other site structures must be maintained regularly by replacing key components, when required.	ECO

structures may compromise the functionality of the site		• A maintenance plan must be in place to ensure that planning, such as budget allocation or procurement of service providers, can be put into motion sufficiently ahead of time.	
5.4 Document control and access to information	Readily available of records and information about the site	• Ensure that all reports are available and easily accessible	ECO
6 Legislation requirement			
6.1 Lack of compliance with relevant legislations may cause transgression or conflicts with the law	Operating within the requirements of the law	• This EMP must be reviewed every three years, concurrent with the renewal of the ECC • Compile Biannual report on the operation and management of the dumpsite • Any upgrading of the disposal site should be done in accordance with relevant legislations as outlined in this document.	ECO

7. DECOMMISSIONING PHASE

Decommissioning is not foreseen during the validity of the environmental clearance certificate. In this case decommissioning will entail the complete removal of all infrastructure, expect buildings and support facilities i.e., toilets. In case the proposed project stalled, and proponent decide to decommission several measures should be implemented.

- All equipment and fixtures should be dismantled and removed from the site.
- Contaminated items should be disposed as hazardous waste and not general recyclables
- Waste should be collected and disposed of accordingly
- Any pollution present on the site must be remediated
- Contaminated sand/soil should be collected and disposed of as hazardous waste
- No vehicles or machinery or equipment to be abandoned onsite
- Once all the waste resulting from demolition and dismantling works is removed from the site, the open earth sites will be restored through replenishment of the topsoil

The impacts associated with this phase include noise and waste production as structures are dismantled. Noise must be kept within safety standards and waste should be contained and disposed of at an appropriately classified and approved waste facility and not dumped in the surrounding areas.

Furthermore, the EMP for the facility will have to be reviewed at the time of decommissioning to cater for changes made to the site and implement guidelines and mitigation measures. The proponent should thus consult with the relevant authority, in this case the Walvis Bay Municipality prior to any proposed demolition and removal of site infrastructure in order to best mitigate any potential impacts.

8. ENVIRONMENTAL MANAGEMENT SYTEM (EMS)

The Environmental Management System (EMS) is an internationally recognized and certified management system for the organization's environmental programs in a comprehensive, systematic, planned and documented manner. The proponent should develop and implement an EMS for the operations of the fuel retail facility. An EMS ensures ongoing incorporation of environmental constraints. With the aim of improving the environmental performance with resulting increases in operational efficiency, financial savings and reduction in environmental, health and safety risks.

The key elements of an effective EMS are:

- The development of an Environmental Policy, which is a statement of a company's commitment to the environment and can be used as a framework for planning and action.
- An assessment of corporate activities, products, processes and services that might affect the environment.
- Details of environmental regulations and legislation that apply to the business and how to comply with these.
- Written procedures to control and document activities that could have a significant environmental impact.
- An environmental improvement programme, including policies and procedures to manage waste and resources.
- Defined environmental roles and responsibilities for staff.
- A formal and recorded staff training and environmental awareness programme;
- Systems for internal and external communications on environmental management issues.
- A record of environmental performance against set targets.
- Systems to identify and correct problems and prevent their recurrence.
- Emergency procedures to follow in the event of an environmental incident.
- Periodic audit to verify that the EMS is operating as intended; and
- Formal review by senior management with a view to adapting and improving the EMS as necessary.

9. COMPLIANCE MONITORING

To ensure continual improvement in environmental performance and reduce adversity of potential negative impacts, it is advisable to keep monitoring the identified environmental receptors. Monitoring all activities during the construction period will be under the responsibility of the Contractor, whose environmental performance will be controlled by the ECO.

Table 5: Monitoring during operation phase

The issue to be monitored	Monitoring Objectives	What needs to be monitored	Frequency and means of Monitoring
Spills and leaks	Prevent environmental pollution	-Overflows, leakages, pipe bursts, etc.	Daily inspections and meter reading
Public Health risks	Operate the project in an environmentally friendly and socially acceptable manner.	Reeds and overgrown vegetation Presence of mosquitoes, snakes, rodents, etc.	Monthly inspections and physical observation.
Occupational health risks	Ensure health and safe working condition	Chemical exposure and presence of health hazards	Daily physical observations.
Waste management	Prevent environmental pollution and contamination.	Litter chemical storage & handling, cleanliness, Chemical composition of sludge.	Daily inspections and physical observation. -quarterly chemical testing
Implementation of the EMP	Ensure compliance to this EMP and adherence to the regulative measures during the operation, maintenance, and decommissioning phase	Implementation of specified measures and compliance to the EMP and other relevant legal requirements.	Biannual environmental report to MEFT.

10. EMERGENCY RESPONSE PLAN

Emergencies can occur at any time or place either during the construction and operation of the proposed facility. Some of the emergencies which are associated with the proposed project are as follows.

- Substance spillage i.e., oil, concrete, chemicals, etc.
- Fire outbreak
- Accidents

Table 3: Emergency response plan

NO.	Type of Emergency	Response actions	Responsible
1.	**Substance spill** i.e., concrete, oil, chemicals, etc.	• Stop and control the spill at the source first. • Contain the spill/leakage with appropriate containers i.e., drip trays, sumps, etc., and in an approved manner to the satisfaction of the RE. • Clean the affected area with water or an approved cleaning product. • The contaminated soil should be removed and disposed of at the Walvis Bay landfill site. • Repair vehicle or machinery with leakage. • If it cannot be repaired, such vehicle or machinery should not be used until it is safe to do so. • Report the incident to the RE and record it in the logbook.	• Contractor
2.	**Fire outbreak**	• Follow the holistic Fire Approach as presented in Annexure 3	• Site Guard
3.	**Accident** i.e., injury to a person	• The priority after a construction accident should be to get medical attention for an injured person. • Assess the injured person's situation by checking breath, pulse. • Notify the First Aid Person • Assist the First Aid Personnel • Record in the incident report form. • Report incident to the Scheme Superintendent	• Contractor/ECO

11. CONCLUSION

The proponent should play a pivotal role in the implementation of this EMP and should ensure proper coordination with other stakeholder and provide training to all employees, contractors, and sub-contractors. The proponent should also ensure to avail necessary resources (i.e., human, financial etc.) and synergies to enable the implementation of this EMP.

Upon approval by the authorities, this EMP shall be considered legally bidding and any deviation or transgression is punishable by law as per the Environmental Management Act, No. 07 of 2007. The preparation of this EMP is based on the current information provided, any changes or deviation from the initial plan of this project shall trigger changes to this EMP.

Lastly, this EMP is valid until the project has been successfully implemented. A copy of this EMP shall be kept onsite. The competent authority is mandated to conduct regular monitoring and inspections on this project and to provide regular (annually) reports on this project or as required by the authority.

11. ANNEXURES

Annexure A: Environmental Compliance Monitoring Checklist

PART 1: ADMINISTRATIVE INFORMATION

Project Title:		Date:
Project location:	Reporting period	Individual Preparing Checklist:
Region:		Department:
Scheme Superintended:		Phone No.:

PART 2: ENVIRONMENTAL ASPECTS

	ENVIRONMENTAL COMPLIANCE (AS PER EMP REQUIREMENT?)		
ENVIRONMENTAL ASPECT/IMPACT	***YES***	***NO***	***Remarks*** *(specify the location, a good practice observed, causes of non-conformity, and proposed action)*

PART 3: RECOMMENDATION

FOR EACH ITEM CHECKED IN PART 2, DESCRIBE THE CORRESPONDING CONTROLS TO BE IMPLEMENTED TO REDUCE POTENTIAL ENVIRONMENTAL IMPACTS (e.g., spill prevention, erosion controls, air emission controls including dust suppression, selection of materials, etc.). Provide details of the activities and impacts for each box and the proposed mitigations. Include attachments where appropriate. Use the same number system for your input.

ECO: Signature: _____ Date: _____

Line Manager Signature: _____ Date: _____

Annexure B: Fire response Plan