

ENVIRONMENTAL IMPACT ASSESSMENT (EIA) FOR THE PROPOSED HANDLING AND TEMPORARY STORAGE FACILITY FOR GENERAL AND HAZARDOUS WASTE AT ERF 3373, ENERGY STREET, WALVIS BAY

ENVIRONMENTAL SCOPING REPORT



Prepared for:

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DOCUMENT DESCRIPTION

PROJECT: Handling and temporary storage of general and hazardous waste at Erf 3373, Energy Street, Walvis Bay, Erongo region.

CLIENT: Eco Waste Technologies cc

EAP: Green Gain Environmental Consultants cc
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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
SWM:	Solid Waste Management

EXECUTIVE SUMMARY

Eco Waste Technologies cc specializes in waste management, recycling, harmful substance removal, and spill clean-ups. The company also 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 intends to operate a temporary handling and storage facility at Erf 3373, Energy Street (Industrial area) Walvis Bay. The main purpose of the facility is for 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. Green Gain Consultants cc has been appointed to carry out the required Environmental Impact Assessment (EIA) study and apply for the ECC. The EIA is conducted to determine all environmental, safety, health and socio-economic impacts associated with the construction, operation and decommissioning of the proposed development. Relevant environmental data has been compiled by making use of secondary data and from site visits. Potential environmental impacts and associated social impacts are identified and addressed in this report.

The environmental management plan should be used as an onsite reference document during all phases (planning, construction (care and maintenance), operations and decommissioning) of the facility. National regulations and guidelines must be adhered to and monitored regularly as outlined in the environmental management plan. All monitoring and records kept should be included in a report to ensure compliance with the environmental management plan. Parties responsible for transgression of the environmental management plan should be held responsible for any rehabilitation that may need to be undertaken. HSEQ training for the fuel facility's staff should be provided regularly in keeping with relevant International Standards of Operation or equivalent, for HSEQ 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.

As such, the proponent intends to operate a temporary handling and storage facility at Erf 3373, Energy Street (Industrial area) Walvis Bay. The main purpose of the facility is for 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. Green Gain Consultants cc has been appointed to carry out the required Environmental Impact Assessment (EIA) study and apply for the ECC.

The main objective of the EIA is to ensure adequate identification of potentially negative effects, propose mitigation measures and develop an Environmental Management Plan (EMP) for the operation of a waste handling and temporary storage facility.

1.2 Scope and objectives of the EIA

The scope of the EIA is to determine the potential environment impacts emanating from the construction, operation and potential decommissioning of the facility. Relevant environmental data has been compiled by making use both primary and secondary data, from site visits, relevant stakeholders and Interested and Affected Parties (I&APs) consultations and review of relevant literature and legal instruments. Potential environmental impacts and associated social impacts will be identified and addressed in this report. Appended to this report is also an EMP which upon approval by the authorities will be considered a legal bidding document to guide the planning & design, construction and operation of the proposed development.

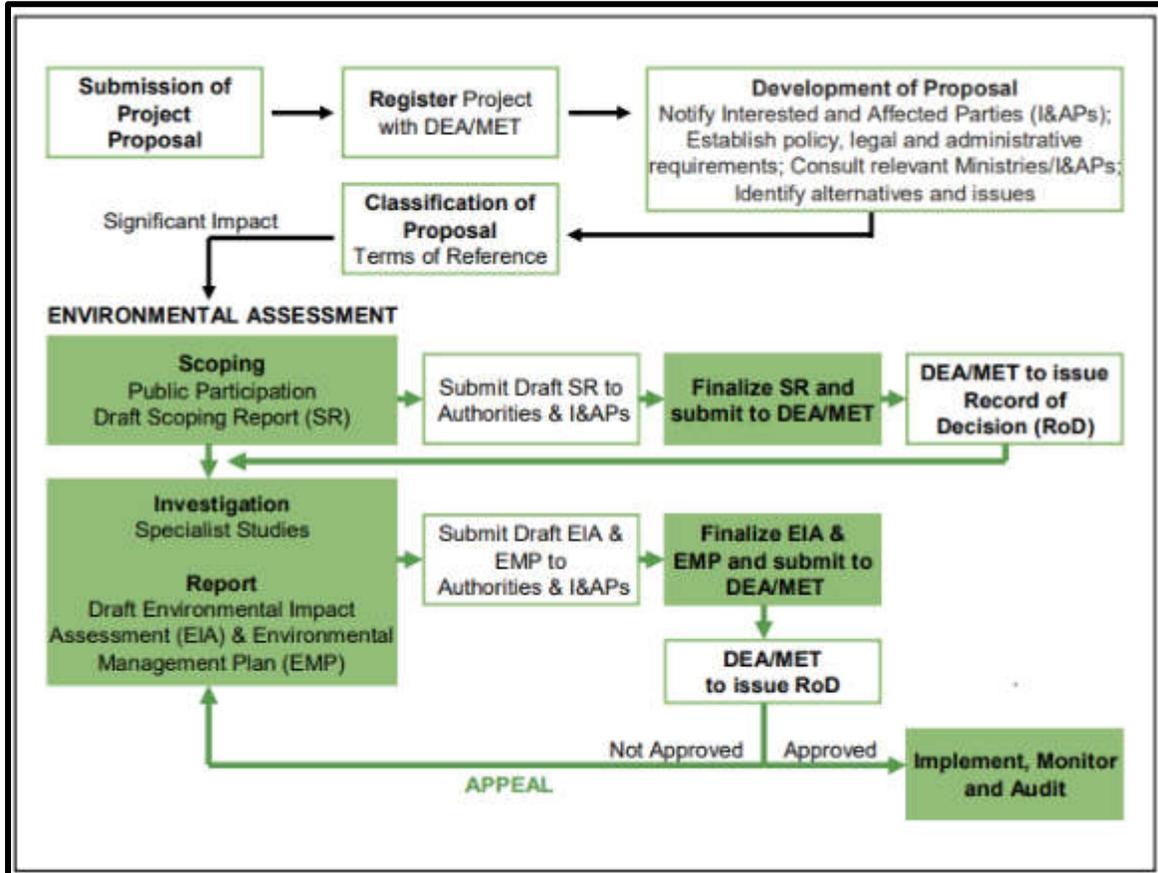
The EIA was conducted to determine all environmental, safety, health and socio-economic impacts associated with the operations of the proposed facility. A priority objective is to comply with regulations imposed by the Waste Management Regulations and the Environmental Management Act 07 of 2007. This will enable decision makers to make an informed decision regarding The Facility from an environmental perspective.

The aims and objectives of this EIA report are to:

- Evaluate the suitability of the proposed development against the biophysical and socio-economic of the area.
- To investigate any environmental and socio-economic impacts associated with this project's activities.
- Provide sufficient information to determine whether the proposed construction and operations will result in significant adverse impacts.
- Identify a range of management actions which could mitigate the potential adverse impacts to acceptable levels.
- To consult potential Interested and Affected Parties (I&APs) and relevant stakeholders and to also ensure that their needs and concerns are taken into account.
- Comply with the Environmental Management Act (No.07 of 2007); and
- Provide sufficient information to the Ministry of Environment & Tourism and the Ministry of Mines and Energy, to make an informed decision regarding the proposed Facility.

2. APPROACH AND METHODOLOGY

The environmental impact assessment study was conducted in line with Namibia's Environmental Management Act of 2007 and its Regulations (GN No. 30 February 2012).



The following methods were used to investigate the potential impacts on the social and natural environment due to the construction and operations of the fuel retail facility:

- Baseline information about the site and its surroundings was obtained from existing secondary information as well as from site visits.
- Legal and policy review.
- Gleaning over existing information pertaining to similar developments and issues; and
- As part of the scoping process to determine potential environmental impacts, Interested and Affected Parties (I&APs) are usually consulted concerning their views, comments and opinions and these are included in this report.

3. LEGAL FRAMEWORK

This section provides a review of applicable and relevant Namibian legislation, policies and guidelines regarding the environment which was considered while conducting the EIA for the proposed project.

3.1 Environmental requirements

The establishment and operation of the proposed handling and temporary handling facility will trigger the listed activities as follows.

Table 1: Listed activity

Proposed project activities	Activities triggered	
	Category	Specific activity
<ul style="list-style-type: none"> • General and hazardous waste collection, handling, temporary storage and transportation 	2. Waste Management, Treatment, Handling and Disposal	2.1 The construction of facilities for waste site, treatment of waste and disposal of waste 2.2 The import, processing, use, and recycling, temporary storage, transit, or export of waste
	9. Hazardous substance treatment, handling, and storage	9.4 The storage and handling of a dangerous goods, including petrol, diesel, liquid petroleum gas, paraffin, in containers with a combined capacity of more than 30 cubic meters at any one location
		9.5 Construction of filling stations or any other facility for the underground and aboveground storage of dangerous goods, including petrol, diesel, liquid, petroleum, gas or paraffin.

3.2 Applicable legislations

Table 2: Applicable legislations

LEGISLATION	PROVISION	PROJECT IMPLICATION
<p>Constitution of the Republic of Namibia (1990)</p>	<p>Articles 91 (c) commands the state to actively promote and sustain the environmental welfare of the nation by formulating and institutionalizing policies to accomplish the sustainable objectives which include:</p> <ul style="list-style-type: none"> • Guarding against overutilization of biological natural resources, • Limiting over-exploitation of non-renewable resources, • Ensuring ecosystem functionality, • Protecting Namibia's sense of place and character. • Maintain biological diversity. • Pursuing sustainable natural resource use. <p>Article 95(i) recites: "The State shall actively promote... maintenance 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".</p> <p>Furthermore, Artic 95 (i) ensures that workers are paid a living wage adequate for the maintenance of a decent standard of living and the enjoyment of social and cultural opportunities.</p>	<p>Through implementation of the environment management plan, the proponent shall be advocating for sound environmental management as set out in the Constitution.</p>
<p>Environmental Management Act No. 07 of 2007 and its Regulations (2012)</p>	<p>The purpose of this Act is 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; to provide for a process of assessment and control of projects which may have significant effects on the environment; and to provide for incidental matters. The Act gives legislative effect to the</p>	<p>An Environmental Impact Assessment is compulsory for listed activities.</p> <p>"The manufacturing, storage, handling or processing of a hazardous substance defined in the Hazardous Substances Ordinance, 1974."</p> <p>"The storage and handling of a dangerous goods, including petrol, diesel, liquid petroleum</p>

	<p>Environmental Impact Assessment Policy. Moreover, the act also provides procedure for adequate public participation during the environmental assessment process for the interested and affected parties to voice and register their opinions and concern about the proposed project.</p>	<p>gas or paraffin, in containers with a combined capacity of more than 30 cubic meters at any one location.” “Construction of filling stations or any other facility for the underground and aboveground storage of dangerous goods, including petrol, diesel, liquid, petroleum, gas or paraffin.”</p>
<p>Water Act 54 of 1956</p>	<p>The Water Resources Management Act 11 of 2013 is presently without regulations; therefore, the Water Act No 54 of 1956 is still in force:</p> <ul style="list-style-type: none"> • Prohibits the pollution of water and implements the principle that a person disposing of effluent or waste has a duty of care to prevent pollution (S3 (k)). • Provides for control and protection of groundwater (S66 (1), (d (ii)). <p>Liability of clean-up costs after closure/abandonment of an activity (S3 (l)).</p> <p>Furthermore, the 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.</p>	<p>The protection of ground and surface water resources should be a priority. The main threats will most likely be concrete and hydrocarbon spills during construction and hydrocarbon spills during operation and maintenance.</p> <p>The wastewater from the site should be channeled into the municipal sewage system. No discharge of wastewater into the open environment.</p>
<p>Pollution Control and Waste Management Bill</p>	<p>This Bill serves to regulate and prevent the discharge of pollutants to air and water as well as providing for general waste management. This Bill will</p>	<p>All activities shall be conducted within the framework of this Bill</p>

	license discharge into watercourses and emissions into the air.	
Stockholm Convention on Persistent Organic Pollutants	<p>The convention was adopted in 2001 and entered into force on May 17, 2004. It emphasizes the restriction and elimination of persistent organic pollutants especially the disposal of industrial and medical chemicals. It also provides information for future establishments to re-use, reduce and recycle waste with environmentally friendly technologies e.g., autoclaving.</p> <p>The chemicals targeted by the Stockholm Convention are listed in the annexes A-C of the convention text.</p>	
Atomic Energy and Radiation Protection Act, 5 of 2005.	<p>To provide for adequate protection of the environment and of people in current and future generations against the harmful effects of radiation by controlling and regulating the production, processing, handling, use, holding, storage, transport and disposal of radiation sources and radioactive materials, and controlling and regulating prescribed non-ionising radiation sources; to establish an Atomic Energy Board and to provide for its composition and functions; to establish a National Radiation Protection Authority; to amend the Hazardous Substances Ordinance, 1974 (Ordinance No. 14 of 1974); and to provide for related matters.</p> <p>Of relevance is the Radiation Protection and Waste Disposal Regulations</p>	License is required for the disposal of the radiation source or nuclear material Amended under hazardous substances ordinance Radioactive waste is presently transported across the borders as there is no disposal facility in Namibia.
Basel and Rotterdam Convention, Framework Convention on Climate Change	<p>Agreed to ensure environmentally sound management of hazardous waste and other wastes through the reduction of their movements, to reduce their impacts on human health and the environment.</p> <p>The Basel Convention makes specific reference to control of special waste: sharps, pathological infectious waste,</p>	

	<p>hazardous chemical waste, and pharmaceutical waste and includes the following waste categories:</p> <ul style="list-style-type: none"> • Clinical wastes from hospitals, health centres, and clinics. • Wastes from the production and preparation of pharmaceutical products. • Pharmaceutical waste. • Waste from the production, formulation, and use of biocides and Phyto-pharmaceuticals. <p>Namibia has accepted the principle that the only legitimate transboundary shipments of hazardous waste are exported, where the country lacks the facilities or expertise to dispose of the waste categories. This applies to the transportation of radioactive waste from Namibia to South Africa. Because suitable facilities are not available in Namibia, provided that the radioactive waste is labelled, temporarily stored, and transported according to the United Nations recommended standards.</p>	
<p>Petroleum Products and Energy Act No. 13 of 1990 and its Regulations</p>	<p>Under this Act “petroleum product” is defined as any petroleum fuel and any lubricant, whether used or unused, and includes any other substance which may be used for a purpose for which petroleum fuel or any lubricant may be used;</p> <p>The Act aims to: provide measures for the saving of petroleum products and an economy in the cost of the distribution thereof, and for the maintenance of a price therefor; for control of the furnishing of certain information regarding petroleum products; and for the rendering of services of a particular kind, or services of a particular standard, in connection with motor vehicles; for the establishment of the National Energy</p>	

	<p>Fund and for the utilization thereof; for the establishment of the National Energy Council and the functions thereof; for the imposition of levies on fuel; and to provide for matters incidental thereto.</p>	
<p>Hazardous Substances Ordinance (No. 14 of 1974)</p>	<p>To provide for the control of substances which may cause injury or ill-health to or death of human beings by reason of their toxic, corrosive, irritant, strongly sensitizing or flammable nature or the generation of pressure thereby in certain circumstances; to provide for the division of such substances into groups in relation to the degree of danger; to provide for the prohibition and control of the importation, manufacture, sale, use, operation, application, modification, disposal or dumping of such substances; and to provide for matters connected therewith.</p> <p>3. (1) The Minister may, subject to the provisions of subsections (2) and (3), by notice in the Gazette, declare any substance or mixture of substances which, in the course of customary or reasonable handling or use, including ingestion, might, by reason of its toxic, corrosive, irritant, strongly sensitizing or flammable nature or because it generates pressure through decomposition, heat or other means, cause injury, ill-health or death to human beings, to be a Group I or a Group II hazardous substance</p> <p>In some countries, oil or mixtures that would qualify as hazardous waste are products that are off specification typically contain arsenic (5 ppm), cadmium (2 ppm), chromium (10 ppm) and lead (100 ppm), as well as have a minimum flash point of 100 degrees F</p>	

	and total halogens of more than 4,000 ppm.	
Soil Conservation Act 76 of 1969	Prevention and combating of soil erosion, conservation, improvement and manner of use of soil and vegetation, and protection of water sources.	Removal of vegetation cover is to be avoided and minimized at all costs.
National Heritage Act 27 of 2004	The Act provide for the protection and conservation of places and objects of heritage significance and the registration of such places and objects; to establish a National Heritage Council; to establish a National Heritage Register; and to provide for incidental matters.	Any material of cultural, heritage or archaeological importance shall be reported in accordance with this Act
Labour Act (No 11 of 2007)	135 (f): "the steps to be taken by the owners of premises used or intended for use as factories or places where machinery is used, or by occupiers of such premises or by users of machinery in connection with the structure of such buildings of otherwise in order to prevent or extinguish fires, and to ensure the safety in the event of fire, of persons in such building;" (Ministry of Labour and Employment Creation)	Contractors, Sub-contractor shall be guided by this Act when recruiting or handling employment related issues
	Noise Control Regulations It is essential to ensure that before any development project is approved and undertaken, an assessment or evaluation of expected noise level is done.	Noise generation should be minimized to the satisfactory of neighboring residents
Urban and Regional Planning Act No. 5 of 2018	The Act and Regulations combine the Townships Board and Namibia Planning Advisory Board (NAMPAB) into one to be known as the Urban and Regional Planning Board and delegate the decisions on town planning applications to Local Authorities. However, an LA can only make decisions after the MURD has declared a Local Authority as an Authorised Planning Authority (APA).	A Consent Letter from the Municipality will be obtained
Public and Environmental Health, 2015	Provides a framework for a structured more uniform public and environmental	The Proponent and all its employees should ensure

	<p>health system, and for incidental matters</p> <p>Deals with Integrated Waste Management including waste collection disposal and recycling; waste generation and storage; and sanitation.</p>	<p>compliance with the provisions of these legal instruments.</p>
<p>Atmospheric Pollution Prevention Ordinance No. 11 of 1976</p>	<p>Governs the control of noxious or offensive gases.</p> <p>Prohibits scheduled process without a registration certificate in a controlled area.</p> <p>Requires best practical means for preventing or reducing the escape into the atmosphere of noxious or offensive gases produced by the scheduled process.</p>	<p>According to the Ordinance, the Local Authority shall control and prevent atmospheric air pollution or emission of noxious or offensive gases by smoke.</p>
<p>South African National Standards (SANS)</p>	<p>The Petroleum Products and Energy Act prescribes SANS standards for the construction, operations and decommissioning of petroleum facilities.</p> <p>SANS 10089-3:2010 is specifically aimed at storage and distribution of petroleum products at fuel retail facilities and related structures. Provide requirements for spill control Infrastructure amongst other specifications.</p>	<p>The Proponent should adhere to the SANS throughout the phases of the retail fuel facility.</p>
<p>Walvis Bay Town Planning Scheme No.35</p>	<p>Identifies different land use categories, zoning, uses, and consent use.</p>	<p>The proposed activities are to take place at an Erf zoned Industrial which is similar with the primary use of the land.</p>
<p>Integrated Environmental Policy of Walvis Bay (Agenda 21 Project)</p>	<p>Indicates the directions that the Municipality of Walvis Bay will move towards in the forthcoming years to fulfil its responsibilities to manage the environment of Walvis Bay together with the town's residents and institutions. Strong focus on conservation and protection of environment.</p>	<p>The proposed activities will assist in effective waste management in line with waste management hierarchy (Recycling).</p>

4. PUBLIC PARTICIPATION PROCESS

Consultation with the public forms an integral component of an environmental assessment investigation and enables Interested and Affected Parties (I&APs) to comment on the potential environmental impacts associated with the proposed development and to identify additional issues which they feel should be addressed.

The identified I&APs includes adjacent property owners, local authority officials, local businesses, and the residents. Refer to Appendix B for proof of the public participation processes and registered I&APs.

4.1 Public notifications

The scoping and EIA process of the project was advertised in two separate local newspapers; Namib Times and Confidante for 04 and 08 February 2022. Public notices were also displayed at the Municipality offices and at the development site. Public advertisements provided brief information about the proposed project and the EIA process, as well as an invitation for registration and also an invitation to the public meeting.

4.2 Background Information Document (BID)

The background information document was compiled in English and distributed to all registered I&APs and stakeholders. The BID provided a brief introduction of the proposed project, the assessment process and the public consultation process to be followed.

4.3 Public meeting

The need for a public meeting was to be determined after the consultation period (28 February 2022). However, the need for such a meeting was not required by the registered I&APs nor by the relevant stakeholders.

4.4 Summary of inputs received

There were no specific issues or objections raised during the consultation period that required a detailed assessment of further consultations. All issues raised were already covered in the assessment and were incorporated in this Scoping report.

5. PROJECT DESCRIPTION

5.1 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

5.2 Land use zone

The site measures about 2892 m² in extent and is zoned “Industrial in terms of the Walvis Bay Town Planning Scheme No. 35.



Figure 2: Land use zoning map (Walvis Bay Town Planning Scheme, 2015)

5.3 Surrounding land uses

The site is located in the busy industrial area consisting mainly of fuel depots of Puma and Engine. It is boarded on the east by the main railway line. The site is also adjacent to the Eagle Upholstering facility on Erf 3374.



Figure 3; Site surrounding

5.4 Existing infrastructure

The site (Erf 3373) is enclosed in a boundary wall with two lockable entrances. The following facilities already exist on-site to complement the waste handling and temporary storage process.

- Bund wall for oil storage tanks
- Wash bay – washing of vehicles
- Warehouse -storage purposes



Figure 4: Site facilities

The site has also been earmarked for the operation of a temporary handling and storage facility for general and hazardous waste by a sister company, Eco Waste Technologies cc Namibia. The site is sufficient enough to accommodate the waste handling facility as well as the proposed general and hazardous waste temporary handling and storage facility.

5.5 Proposed site layout

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, sorting of waste. Waste will be stored in separate containers i.e., skips, drums.

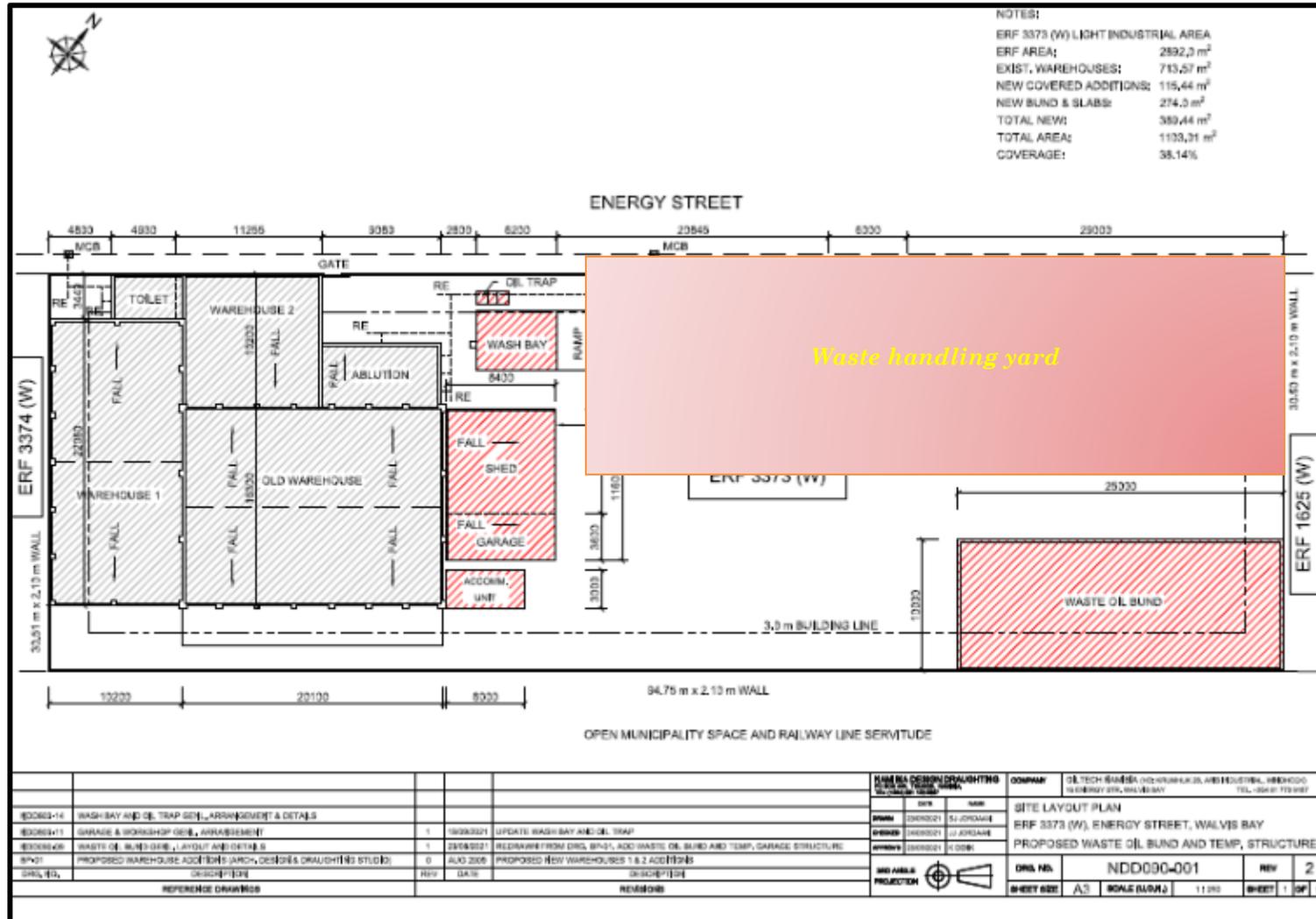


Figure 5: Proposed layout

5.6 Waste handling procedures

5.6.1 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 follow.

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

5.6.2 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 6: 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 clearly marked according to the types of waste to be stored.

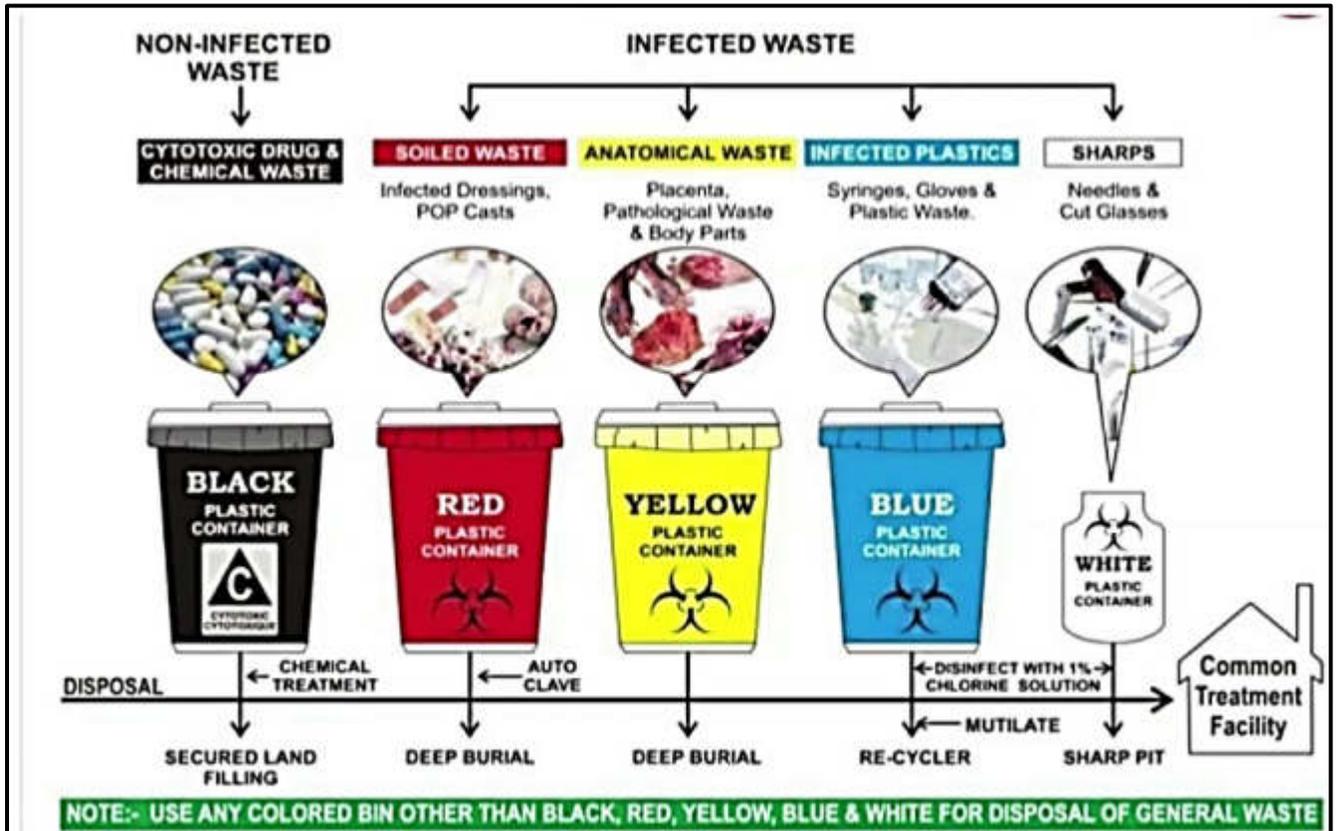


Figure 7; Example of waste segregation

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.



Figure 8: Walvis Bay landfill site sign

5.7 Quality assurance

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

5.8 Need and Desirability of the project

The “need” and “desirability” for the proposed project are based on the following aspects.

The “Need”.

- The proposed facility will ensure that different types of marine waste will be correctly dealt with and disposed of in an environmentally friendly and professional manner.
- The facility will increase waste recycling opportunities, thereby reducing the volume of waste going to the landfill site.
- Provision for income generation to the Municipality of Walvis Bay from disposal fees
- The proposed project will create employment opportunities for the local people i.e., drivers, waste pickers/handler/sorters, security, cleaners, etc.

The “Desirability”

- The proposed development is consistent with the land use zoning of the site “Industrial” as per the Walvis Bay Town Planning Scheme and also compatible with the surrounding land uses, hence the approval of this application would not compromise the integrity of the Draft Integrated Urban Spatial Development Framework of 2014.
- The proposed development is desirable given the fact that basic municipal services such as electricity supply, water, a sewer system, and a road network are already in existence.
- The proposed development site is located a few distances from the waste sources (Port and Syncrolift).
- The proposed development site is large enough for the envisaged activities

6. DESCRIPTION OF THE RECEIVING ENVIRONMENT

6.1 Socio-economic settings of Walvis Bay

a). Demography

At local level Walvis Bay has an urban population size of 62,096 (Namibia Statistics Agency, 2014) although the current estimate is around 90,000 to 100,000. Walvis Bay is the principal port of Namibia and is an import/export facility for processed fish, mining products and beef. The area is linked to Namibia's air, rail and road network, making its port well situated to service Zambia, Zimbabwe, Botswana, Southern Angola and South Africa.



Figure 9: Overview of Walvis Bay

b). Economic situation

The economic activities of Walvis Bay rest on four pillars, namely fishing, tourism, manufacturing, and the harbour. For the purpose of this report, only the fishing industry will be discussed, since the proposed activities under investigation take place in the marine environment some distance from Walvis Bay.

c). Land uses

Land utilisation and planning in Walvis Bay are guided by the Integrated Urban Spatial Development Framework (2014). Of particular interest to this EIA study is the land allocated to industrial activities. In terms of the Walvis Bay Town Planning Scheme No. 35, the industrial land uses in Walvis Bay are divided into parts namely, Light industrial and Heavy industrial as listed here below.

Zone	Map reference	Purposes for which the land maybe used and building maybe erected and used	Purposes for which the land maybe used and building maybe erected and used with Consent of Council
Light Industrial		<ul style="list-style-type: none"> . Light Industry . Service Industry . Service Station . Warehouse . Storage Premises . Building Yard . Office Premises 	<ul style="list-style-type: none"> . Panel Beating . Scrap Yard . Business Premises . Retail . Caretaker Unit . Place of Instruction . Place of Amusement . Funeral Parlour . Restaurant
Industrial		<ul style="list-style-type: none"> . Industrial Building . Panel Beating . Scrap Yard . Light Industry . Service Industry . Service Station . Warehouse . Storage Premises . Building Yard 	<ul style="list-style-type: none"> . Noxious Industry . Office Premises . Truck Port . Business Premises . Retail . Caretaker Unit . Place of Instruction . Place of Amusement

The proposed development site is located in the heavy industrial area. The primary use includes industrial building, panel beating, scrap yard, light industrial, service station, warehouse, storage premises and building yard. The proposed activities (waste oil handling and storage) are comparable to the service station listed under primary use, hence there is no need for Consent of Council in terms of the Town Planning Scheme.

6.2 Biophysical settings

According to Mendelsohn, et al., (2002), the climate of the Erongo Region and Walvis Bay in particular can be described as semi-arid. Annual temperatures range between less than 16-20 °C with the maximum temperatures ranging between less than 20- 28 °C and the minimum temperatures between 8-12 °C. The coastal belt temperatures are usually above 10 °C due to the coastal winds.

Rainfall is recorded to fall mostly in the summer months of January, February and March with the average annual rainfall recorded to be between 100 mm to 150 mm for the subject area (Mendelsohn, et al., 2002).

The geology underlying the Namib Desert consists of a Precambrian basement with granite, gneiss and shale. The oldest Tertiary rocks are part of the Tsondab-Sandstone-Formation, which underlies most of the central Namib south of the Kuiseb. North of the Kuiseb a flat gravel plain on a crystalline basement is found. The underlying rocks consist of calcareous and gypsum metamorphic bedrock or granite.

In the Erongo Region the land rises steadily from sea level to about 1000 meters across the breadth of the Namib. Namibia's highest mountain, Brandberg (2,579 m), lies in the far northern part of the Erongo Region. The Namib plain is incised by a few main ephemeral rivers that run seawards from wetter parts of their catchments further inland. The four main rivers in the Erongo Region include the Swakop, Omaruru, Kuiseb and Ugab rivers (Geological Survey of Namibia, 2012).

6.3 Waste disposal facility

According to the Walvis Bay Municipality, 2018, the Walvis Bay landfill site or Walvis Bay Solid Waste Disposal Facility (WBSWDF) consists of three main components as follows.

- Entrance and access control
- General Waste Landfill Component
- Hazardous Waste Disposal Component

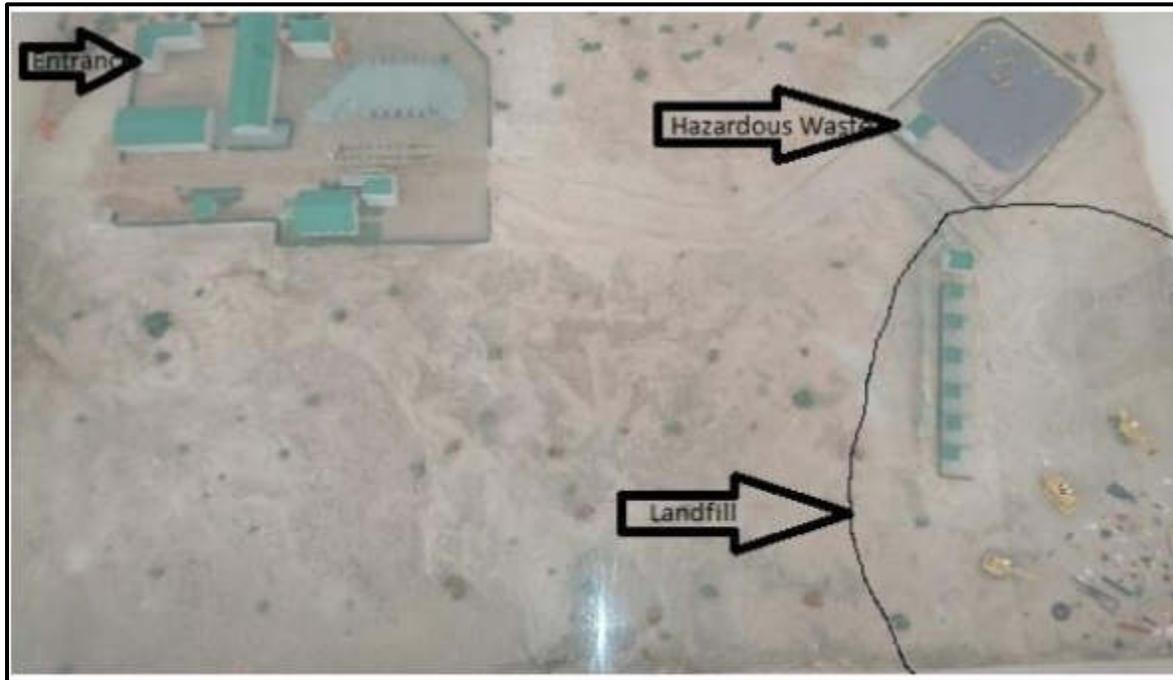


Figure 10 Walvis landfill site (Walvis Bay Municipality)

a). Entrance and access control

The Walvis Bay landfill site is one of the user-friendly facilities across the country fitted with access control building, a weigh bridge, graded access road, public disposal unit. Access of vehicles and people is ensured at the entrance to allow for the directing of vehicles to the appropriate disposal units. A concrete stairway is erected to the gate house to enable the gate guard to inspect the loads inside certain vehicles if deemed necessary.

Waste transported in small vehicles such as sedans, Light Delivery Vehicles (LDVs) and trailers (1 tonne or 5 m³ maximum) can be dropped off at the public disposal unit located few distance from the entrance. The public disposal unit is open at all times (including public holidays) to facilitate disposals of smaller waste quantities and thus minimizing the illegal dumping of waste elsewhere in the town.

- **b). General Waste Landfill Component**

This Landfill Component is a standard facility and classified as a G:M:B General Waste Site in terms of the 2nd Edition of the South African Minimum Requirements for the Handling and Disposal of Hazardous Waste. The general waste disposal component has the following facilities

- The dune landfill cells.
- An ablution block.
- A site operator storage and network building, and work area;
- Six recycling stalls, each with a small lean-to and a fenced in area, and
- Fencing against windblown litter.

- **c). Hazardous waste disposal**

Hazardous Waste cell is designed almost along the line of a mono-disposal and based on the 2nd Edition of the South African Minimum Requirements for the Handling and Disposal of Hazardous Waste and is classified as a H:H Hazardous Waste site. Based on current year-to-date quantities of the hazardous waste stream the hazardous waste unit still has sufficient capacity of operations.

The hazardous waste unit is located on clean dune sand with a depth of approximately 10 m to the northeast of the General Landfill Component. The entire component is secured by means of a 1.8 m high precast concrete wall with lockable vehicle access gates at the entrance and comprises of a lined hazardous waste cell, a lined leachate pond and a hazardous waste reception building where the waste can be temporarily stored whilst being prepared for disposal in the cell. The evaporation/monitoring pond is adjacent to the hazardous waste storage cell and the hazardous waste reception/storage building. No ablution facilities are provided, but a safety shower and hand washbasin are provided inside the reception building.

The single pond Hazardous waste cell comprises of a lined bunded area of 3 800 m² with an average initial depth of 2 m. The liner system extends up the sides of the bund walls and is anchored in a trench on top of the walls. The base of the cell is sloped from the middle outwards leachate collecting drainage at the foot of the cell bunds. The geonet drainage layer between the primary and secondary lines represents a leakage detection system should the primary liner fail in any way.

Operating hours for the hazardous waste unit is from 07:00 to 18:00 Mondays to Fridays and as mutually agreed upon between the waste generator and the Hazardous Waste Inspector and displayed on the information notice board at the Administration Building. After hours activities at the facility are limited to preparations of the site and maintenance to equipment. Access to this entire component is only allowed to the Hazardous Waste Inspector after hours.

7. ANALYSIS OF PROJECTALTERNATIVES

The EIA Regulations stipulates that the Scoping process should investigate alternative development options to any proposed development. Alternatives to the project, including the no action alternative will be presented in this section, as well as the historical use of the overall area in which the project site is located. These alternatives will be discussed from environmental and socio-economic perspectives.

7.1 No Action

The No Action Alternative in respect to the proposed project implies that the status quo is maintained. In this case, there is no reason or whatsoever to consider this option given the need for such a project in the town. This option will involve several losses both to the project proponent, the community at large and the Municipality as the property will remain under-utilized or neglected. The No project option is the not a preferred from the socio-economic and partly environmental perspective since if the project is not done: -

7.2 Alternative site

This option entails relocating the proposed project to a different site. This means that the proponent has to look for the land if relocation is proposed. Looking for the land to accommodate the scale and size of the project and completing official transaction/lease agreements on it may take a long period. It's also worth noting that the proponent has already reached lease agreement with the property owner. The project design and planning before the stage of implementation would call for cost; already incurred in the proposed development i.e. whatever has been done and paid to date would be counted as a loss to the proponent.

Also considering the fact that the proposed activities "waste management" are similar in nature to the primary land use activities "Scrap yard" on Industrial zone, listed under the Town Planning Scheme No. 35, there is no need for an alternative site. The site extent is big enough for the envisaged activities. Thus, no alternative site is required.

8. ASSESSMENT OF IPOTENTIAL IMPACTS

8.1 Risk Assessment and Rating

The scoping process has identified potential project impacts during its planning and operation phase and examined each of these issues. In assessing the impact of the proposed development, four rating scales were considered. Each issue identified was evaluated in terms of the most important parameter applicable to environmental management. These include the **extent, intensity, probability and significance** of the possible impact on the environment. The rating scales used are as follows:

Table 3: Significance rating

CRITERIA	DESCRIPTION			
EXTENT	National (4) The whole country	Regional (3) Erongo region and neighbouring regions	Local (2) Within a radius of 2 km of the proposed site	Site (1) Within the proposed site
DURATION	Permanent (4) Mitigation either by man or natural process will not occur in such a way or in such a time span that the impact can be considered transient	Long-term (3) The impact will continue/last for the entire operational life of the development, but will be mitigated by direct human action or by natural processes thereafter.	Medium-term (2) The impact will last for the period of the construction phase, where after it will be entirely negated	Short-term (1) The impact will either disappear with mitigation or will be mitigated through natural process in a span shorter than the construction phase
INTENSITY	Very High (4) Natural, cultural and social functions and processes are altered to extent that they permanently cease	High (3) Natural, cultural and social functions and processes are altered to extent that they temporarily cease	Moderate (2) Affected environment is altered, but natural, cultural and social functions and processes continue albeit in a modified way	Low (1) Impact affects the environment in such a way that natural, cultural and social functions and processes are not affected
PROBABILITY	Definite (4) Impact will certainly occur	Highly Probable (3) Most likely that the impact will occur	Possible (2) The impact may occur	Improbable (1) Likelihood of the impact materialising is very low
SIGNIFICANCE	Is determined through a synthesis of impact characteristics. Significance is also an indication of the importance of the impact in terms of both physical extent and time scale, and therefore indicates the level of mitigation required. The total number of points scored for each impact indicates the level of significance of the impact.			

Table 4: Risk Assessment

Low impact	A low impact has no permanent impact of significance. Mitigation measures are feasible and are readily instituted as part of a standing design, construction or operating procedure.
Medium impact	Mitigation is possible with additional design and construction inputs.
High impact	The design of the site may be affected. Mitigation and possible remediation are needed during the construction and/or operational phases. The effects of the impact may affect the broader environment.
Very high impact	Permanent and important impacts. The design of the site may be affected. Intensive remediation is needed during construction and/or operational phases. Any activity which results in a “very high impact” is likely to be a fatal flaw.
Status	Denotes the perceived effect of the impact on the affected area.
Positive (+)	Beneficial impact
Negative (-)	Deleterious or adverse impact.
Neutral (/)	Impact is neither beneficial nor adverse
It is important to note that the status of an impact is assigned based on the status quo – i.e. should the project not proceed. Therefore not all negative impacts are equally significant.	

8.2 Establishment/development Phase

Table 5: Potential impacts during establishment/development phase

ASPECT	POTENTIAL IMPACTS	SIGNIFICANCE RATING (BEFORE MITIGATION)				SIGNIFICANCE (WITH MEASURES)	MEASURES
		Extent	Duration	Intensity	Probability		
1. BIOPHYSICAL	Soil contamination from spills and leaks from vehicles and machineries.	1	1	1	1	4	<ul style="list-style-type: none"> ✓ Soil contamination during site establishment is expected to be minimal given the limited number of vehicles to operate onsite. ✓ In case of spill, contaminated sand must be cleaned up and disposed of at the Walvis Bay landfill site.
	Air pollution resulting from fumes from vehicles and machineries	1	1	1	1	4	<ul style="list-style-type: none"> ✓ This impact is expected to be minimal given the limited number of vehicles to operate onsite.
	Waste generation	2	1	1	1	5	<ul style="list-style-type: none"> ✓ General household waste should be disposed of in the municipal refuse bins for disposal. ✓ All empty disinfectants containers should be sent to the local recycling companies or properly cleaned before re-use.

							<ul style="list-style-type: none"> ✓ Hazardous waste such as used oil, paints, unused chemicals, etc., should be collected separately and sent to the Walvis Bay landfill site.
2. SOCIO-ECONOMIC	Land-use effects Disturbances from traffic movement.	1	1	1	1	4	<ul style="list-style-type: none"> ✓ The impact is expected to be minimal given the limited number of vehicles to operate onsite. ✓ The site is located within a busy heavy industrial area, hence the proposed activities is similar to the surrounding activities.
	Generation of noise and vibration	1	1	1	1	4	<ul style="list-style-type: none"> ✓ The impact is expected to be minimal given the scale (small) of the project.
	Safety, security, and health hazards.	1	1	1	1	4	<ul style="list-style-type: none"> ✓ Employees should be equipped with appropriate PPE. ✓ Uncovered trenches must be barricaded with a danger tape.
	Visual impacts	1	1	1	1	4	<ul style="list-style-type: none"> ✓ Remove all waste generated and disposed of regularly.

8.3 Potential impacts during operational phase

Table 6: Risk Assessment Operational Phase

ASPECT	POTENTIAL IMPACTS	SIGNIFICANCE RATING (BEFORE MITIGATION)				SIGNIFICANCE (WITH MEASURES)	MEASURES
		Extent	Duration	Intensity	Probability		
1. BIOPHYSICAL	Contamination of soil from spills and leaks or accidents	1	1	1	1	4	<ul style="list-style-type: none"> ✓ The surface area will be covered with impervious materials (paving and mats). ✓ All spills and leaks should be contained, and contaminated sand should be collected and disposed of at Walvis Bay landfill site. ✓ Drivers should be trained on how to handle accidents and spills. ✓ Waste oil and other petroleum products should be transported and stored in approved containers.
	Littering from windblown waste	1	1	1	1	4	<ul style="list-style-type: none"> ✓ Vehicle transporting waste should be covered with tarpaulin. ✓ All windblown waste should be stored in closed containers.
	Certain waste might be poisonous to animals like birds	1	1	1	1	4	<ul style="list-style-type: none"> ✓ Waste be stored in closed containers.

2. SOCIO-ECONOMIC	Occupational health and Safety risks -Direct handling of waste can result in various types of infectious and chronic diseases. These include skin or blood, eye and respiratory and intestinal infections as well as cancer resulting from exposure to dust or hazardous compounds. -Injuries can occur due to incorrect lifting of heavy equipment and materials, falling from heights, -Close contacts may also occur through moving parts of machines, vehicles, and exposure to hot temperatures. The risk of exposure can be aggravated by factors such as lack of awareness, lack of protection, etc.	2	1	1	2	6	<ul style="list-style-type: none"> ✓ Employees will be trained on the nature of their work and on how to handle dangerous goods. ✓ Employees will be equipped with appropriate Personal Protective Equipment (PPE). ✓ The health and safety standards specified in the Health and Safety Regulations of the National Labour Act 11 of 1992 should be complied with. ✓ All petroleum products should be stored in approved containers i.e., IBC, stainless steel etc. ✓ Ensure collect labelling of waste handling facilities.
	Bad odors and smell -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	1	1	1	5	<ul style="list-style-type: none"> ✓ Organic waste should be stored in closed containers and disposed of within a short period of time. ✓ Employees should be provide with appropriate PPE at all times.

8.4 Project positive impacts

ASPECT	POTENTIAL IMPACTS	SIGNIFICANCE RATING (BEFORE MITIGATION)			
		Extent	Duration	Intensity	Probability
1.	Environmental benefits The proposed project will benefit the environment in a long term due to waste recycling	2	2	2	6
	Provision of employment Creation of job opportunities	2	2	2	6
	Provision of waste recycling opportunities Waste produced from various businesses will be handled properly and in an environmentally friendly manner. .	2	2	2	6
	Economic contribution Generation of income both waste recycling	2	2	2	6
	Support to other businesses The facility will provide support to other businesses to recycle waste.	2	2	2	6

8.5 Decommissioning and Rehabilitation

Decommissioning is not foreseen during the validity of the environmental clearance certificate. In this case decommissioning will entail the complete removal of all infrastructure, except buildings and supporting 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.

9. CONCLUSION AND RECOMMENDATIONS

9.1 Conclusion

The objective of the Scoping phase of the EIA study was to define the range of the impact assessment and determine the need to conduct any specialist study. It is believed that this objective has been achieved and adequately documented in the Scoping Report. All possible environment aspects have been adequately assessed and necessary control measures have been formulated to meet statutory requirements thus implementing this project will have little appreciable negative impacts. The following conclusions can be drawn from the study.

- The proposed activities (waste handling) are permissible at the proposed site in terms of the Town Planning Scheme.
- The identified negative impacts can successfully be mitigated by following the proposed measures outlined in this Scoping report and in the EMP.
- It is assumed that all information provided by the I&APs, Stakeholders as well as by the EAP and its sources is deemed valid and correct at the time it was provided. Since there were no objections received, the project is well received by the potential IAPs, considering their inputs are incorporated in this report.
- The proponent will adhere to the recommendations and mitigations measures contained in this report and in the EMP here attached.

9.2 EAP Recommendations

It is recommended that the proponent.

- Apply mitigations measures to mitigate identified negative impacts as outlined in the EMP.
- Appoint an Environmental Control Officer or EAP to conduct monitoring and prepare quarterly reports and submit to MEFT
- Ensure that all legal requirements (permits, certificate etc.) are up to date

It is therefore recommended that this Scoping Report be accepted and that the Environmental Commissioner.

- a) Consider the findings and recommendations of this scoping process with mitigation measures.
- b) Subsequently, consider issuing an Environmental Clearance Certificate to authorize the; **Establishment and operation of the proposed handling and temporary storage of general and hazardous waste at Erf 3373, Energy Street Walvis Bay.**

10. REFERENCES

- Digital Atlas of Namibia Unpublished Report. Ministry of Environment & Tourism
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- Geological Survey of Namibia. 2012. Strategic Environmental Assessment of the Central Namib Uranium Rush.
- Ministry of Agriculture Water and Rural Development. 2011. Groundwater in Namibia an explanation to the Hydrogeological Map

11. APPENDICES

Appendix A: Proof of Consultation

Appendix B: BID

Appendix C: Consent from Walvis Bay Municipality

Appendix D: EMP