

# ENVIRONMENTAL IMPACT ASSESSMENT (EIA) FOR THE ESTABLISHMENT AND OPERATION OF A HANDLING AND TEMPORARY STORAGE FACILITY OF WASTE OIL AT ERF 3373, ENERGY STREET, WALVIS BAY

## ENVIRONMENTAL SCOPING REPORT



**Prepared for:**

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## DOCUMENT DESCRIPTION

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**PROJECT:** Establishment and operation of a handling and temporary storage facility of waste oil at Erf 3373, Energy Street, Walvis Bay, Erongo region.

**CLIENT:** Oil Technology Namibia cc

**EAP:** Green Gain Environmental Consultants cc  
J. K Amushila

**REPORT TYPE:** Final Scoping Report

**APPLICATION:** APP003568

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## LIST OF ACRONYMS

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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

## EXECUTIVE SUMMARY

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Oil Technology Namibia cc is a company that specializes in waste oil collection and recycling with its head office in Windhoek and collection depots in the north and south of Namibia and a processing facility in Windhoek. The proponent intends to establish and operate a waste oil temporary handling and storage facility on Erf 3373 located in Walvis Bay's heavy industrial area. Bulk waste oil collected will be transported to the Windhoek processing facility for refining.

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. All infrastructure associated with the storage and dispensing of fuel will adhere to SANS 10089 standards in order to comply with the relevant legislation governing the fuel industry in Namibia.

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

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### 1.1 About the proponent

Oil Technology Namibia cc hereinafter referred to as the proponent is a waste management company, established in 2012 and fully incorporated in terms of the Close Corporation Act of 1988. The company specializes in waste oil collection and recycling with its head office in Windhoek and collection depots in the north and south of Namibia and a processing facility in Windhoek.



The company collects waste oil from various sources throughout Namibia. The company provides high-quality service and products in line with ISO 9001:2015 requirements and aims to further align with ISO 14001:2015, and ISO 45001:2018 requirements by 2021.

### 1.2 Proposed activities

The proponent intends to establish and operate a waste oil temporary handling and storage facility on Erf 3373 located in Walvis Bay's heavy industrial area. Bulk waste oil collected will be transported to the Windhoek processing facility for refining. There will be NO treatment, refining, or sale to take place on Erf 3373, Walvis Bay.

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.



### **1.3 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.

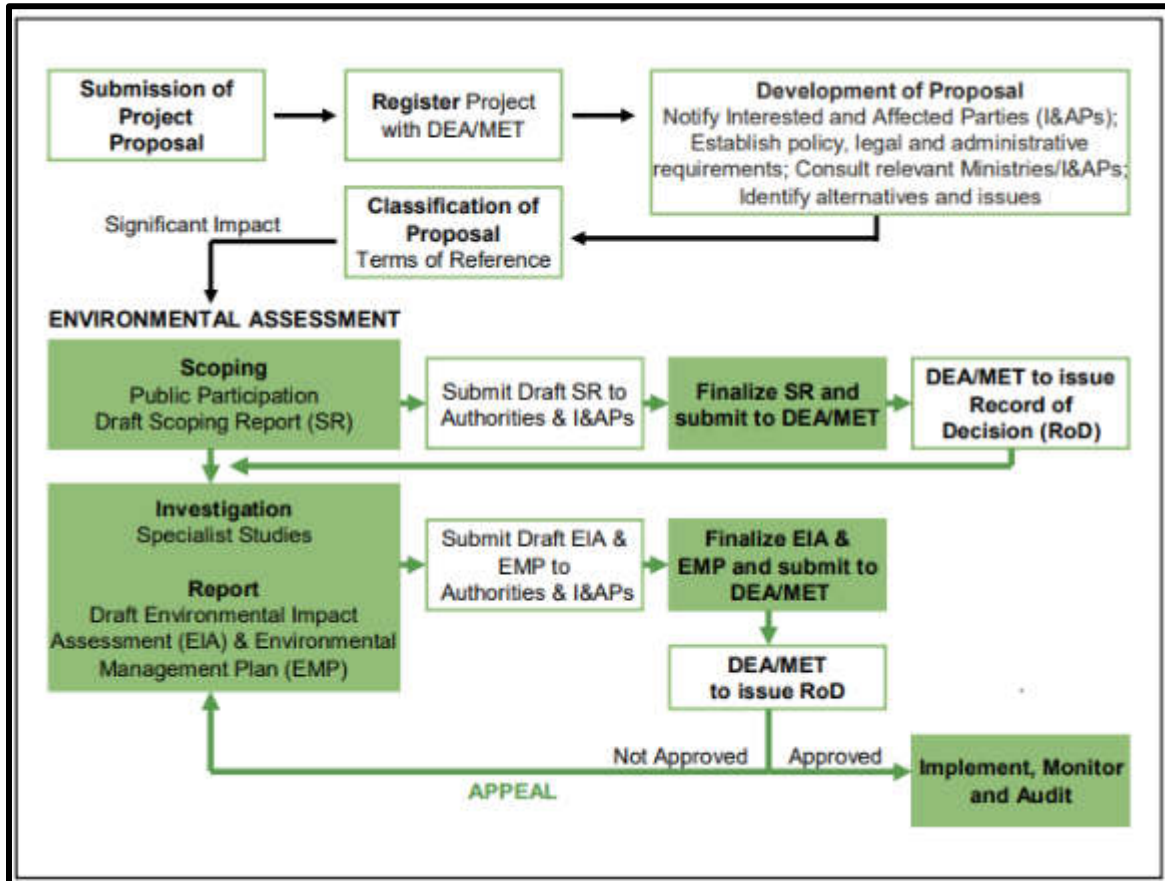
The EIA was conducted to determine all environmental, safety, health and socio-economic impacts associated with the operations of the proposed facility. A priority objective is to comply with regulations imposed by the Petroleum Products and Energy Act No. 13 of 1990 and its Regulations to safely collect, handle and recycle waste oil in line with the best practice environmental standards. 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"> <li>Waste oil collection, handling, temporary storage and transportation</li> </ul>	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 Legal requirements

To ensure legal compliance and environmental due diligence, the proponent should obtain certain legal authorizations listed in Table 2.

Table 2: Legal authorization

Aspects	Requirements	Authority
<b>Environmental Management</b>	-ECC	MEFT
<b>Municipal Services</b>	-Business Fitness Certificate -Approved Building Plan	Walvis Bay Municipality
<b>Petroleum products</b>	-Used Oil Permit (obtained)  The proponent is already certified operator.	Ministry of Mines and Energy

### 3.3 Applicable legislations

Table 3: Applicable legislations

LEGISLATION	PROVISION	PROJECT IMPLICATION
<p><b>Constitution of the Republic of Namibia (1990)</b></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"> <li>• Guarding against overutilization of biological natural resources,</li> <li>• Limiting over-exploitation of non-renewable resources,</li> <li>• Ensuring ecosystem functionality,</li> <li>• Protecting Namibia’s sense of place and character.</li> <li>• Maintain biological diversity.</li> <li>• Pursuing sustainable natural resource use.</li> </ul> <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><b>Environmental Management Act No. 07 of 2007 and its Regulations (2012)</b></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 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>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 gas or paraffin, in containers with a combined capacity of more than 30 cubic meters at any one location.”</p> <p>“Construction of filling stations or any other facility for the</p>

		underground and aboveground storage of dangerous goods, including petrol, diesel, liquid, petroleum, gas or paraffin.”
<b>Water Act 54 of 1956</b>	<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"> <li>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)).</li> <li>Provides for control and protection of groundwater (S66 (1), (d (ii)).</li> </ul> <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>
<b>Pollution Control and Waste Management Bill</b>	<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 license discharge into watercourses and emissions into the air.</p>	<p>All activities shall be conducted within the framework of this Bill</p>
<b>Stockholm Convention on Persistent Organic Pollutants</b>	<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>	

	The chemicals targeted by the Stockholm Convention are listed in the annexes A-C of the convention text.	
<b>Atomic Energy and Radiation Protection Act, 5 of 2005.</b>	<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.
<b>Basel and Rotterdam Convention, Framework Convention on Climate Change</b>	<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, hazardous chemical waste, and pharmaceutical waste and includes the following waste categories:</p> <ul style="list-style-type: none"> <li>• Clinical wastes from hospitals, health centres, and clinics.</li> <li>• Wastes from the production and preparation of pharmaceutical products.</li> <li>• Pharmaceutical waste.</li> <li>• Waste from the production, formulation, and use of biocides and Phyto-pharmaceuticals.</li> </ul> <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</p>	

	<p>Namibia, provided that the radioactive waste is labelled, temporarily stored, and transported according to the United Nations recommended standards.</p>	
<p><b>Petroleum Products and Energy Act No. 13 of 1990 and its Regulations</b></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 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><b>Hazardous Substances Ordinance (No. 14 of 1974)</b></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</p>	



	<p>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 and total halogens of more than 4,000 ppm.</p>	
<b>Soil Conservation Act 76 of 1969</b>	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.
<b>National Heritage Act 27 of 2004</b>	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
<b>Labour Act (No 11 of 2007)</b>	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
	<p>Noise Control Regulations</p> <p>It is essential to ensure that before any development project is approved and undertaken, an assessment or evaluation of expected noise level is done.</p>	Noise generation should be minimized to the satisfactory of neighboring residents
<b>Urban and Regional Planning Act No. 5 of 2018</b>	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

<p><b>Public and Environmental Health, 2015</b></p>	<p>Provides a framework for a structured more uniform public and environmental 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>The Proponent and all its employees should ensure compliance with the provisions of these legal instruments.</p>
<p><b>Atmospheric Pollution Prevention Ordinance No. 11 of 1976</b></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><b>South African National Standards (SANS)</b></p>	<p>The Petroleum Products and Energy Act prescribes SANS standards for the construction, operations and decommissioning of petroleum facilities.</p> <p><b>SANS 10089-3:2010</b> 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><b>Walvis Bay Town Planning Scheme No.35</b></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><b>Integrated Environmental Policy of Walvis Bay (Agenda 21 Project)</b></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**

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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 01 and 08 October 2021. 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 public meeting was held on the 09 October 2021 at the development site. During the meeting the EAP introduced the project to the I&APs and gave them opportunity to ask questions and make comments. The meeting was attended by mostly by the proponent, EAP, official from the Ministry of Health and Social Services and I&APs.

#### 4.4 Summary of issues from public participation

The following concerns and comments were raised during the public consultations phase.

a) **Concerns/Questions/Comments**

- *From where are you obtaining the products (waste oil)?*

Countrywide, we have sources from across the country

- *Can also sell my waste oil to you?*

Yes, if you don't have a container, we will give you and we can collect from you, or you can bring to us.

- *How will you make sure no waste oil enters the system?*

There will be oil trap to intercept the wastewater from the site before entering the municipal system

- *What will you do with the waste oil?*

The waste oil in bulk quantity will be transported to Windhoek for processing and refining into usable products

**Comments:**

- *This is really a good business idea, and it will provide opportunity to the residents*

Noted. Local residents are welcome to sell their waste oil to us. All what they need to do is call us and we give you containers for waste oil and we will collect ourselves.

- *Make sure the fire detection system is automated*

Noted

- *Employment opportunities must be given to local people*

Noted

The inputs above have been incorporated in this Scoping report and in the EMP.

## 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 m<sup>2</sup> in extent and is zoned “Industrial in terms of the Walvis Bay Town Planning Scheme No. 35.

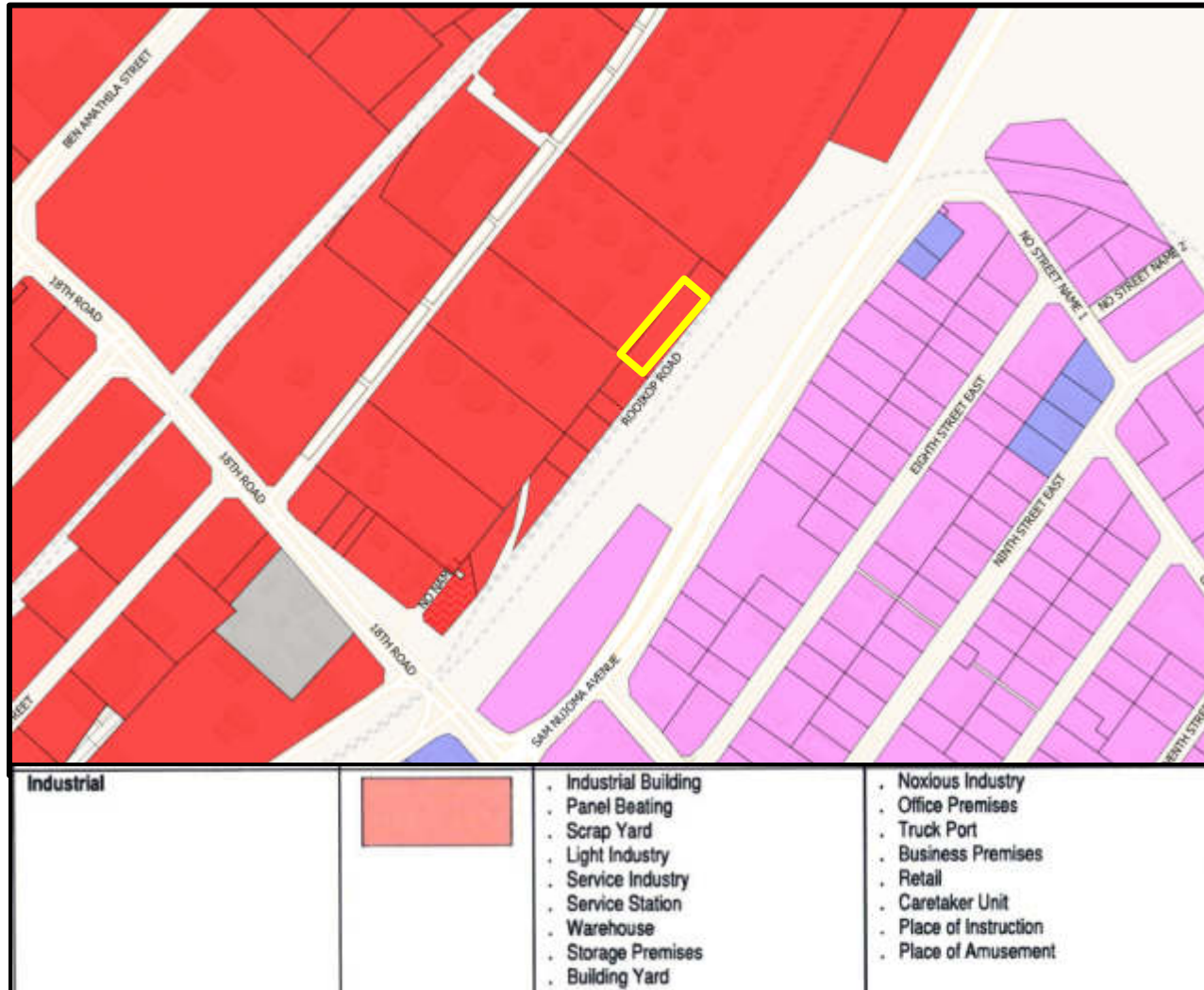


Figure 2: Land use zoning map (Walvis Bay Town Planning Scheme, 2015)

### 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 oil storage facility.

- 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.





### 5.6 Proposed new infrastructure

In addition to the existing infrastructure, the proponent will install new infrastructure on site which include seven storage tanks with a capacity of 23m<sup>3</sup> each, a fire detection system, oil trap, garage and accommodation unit.

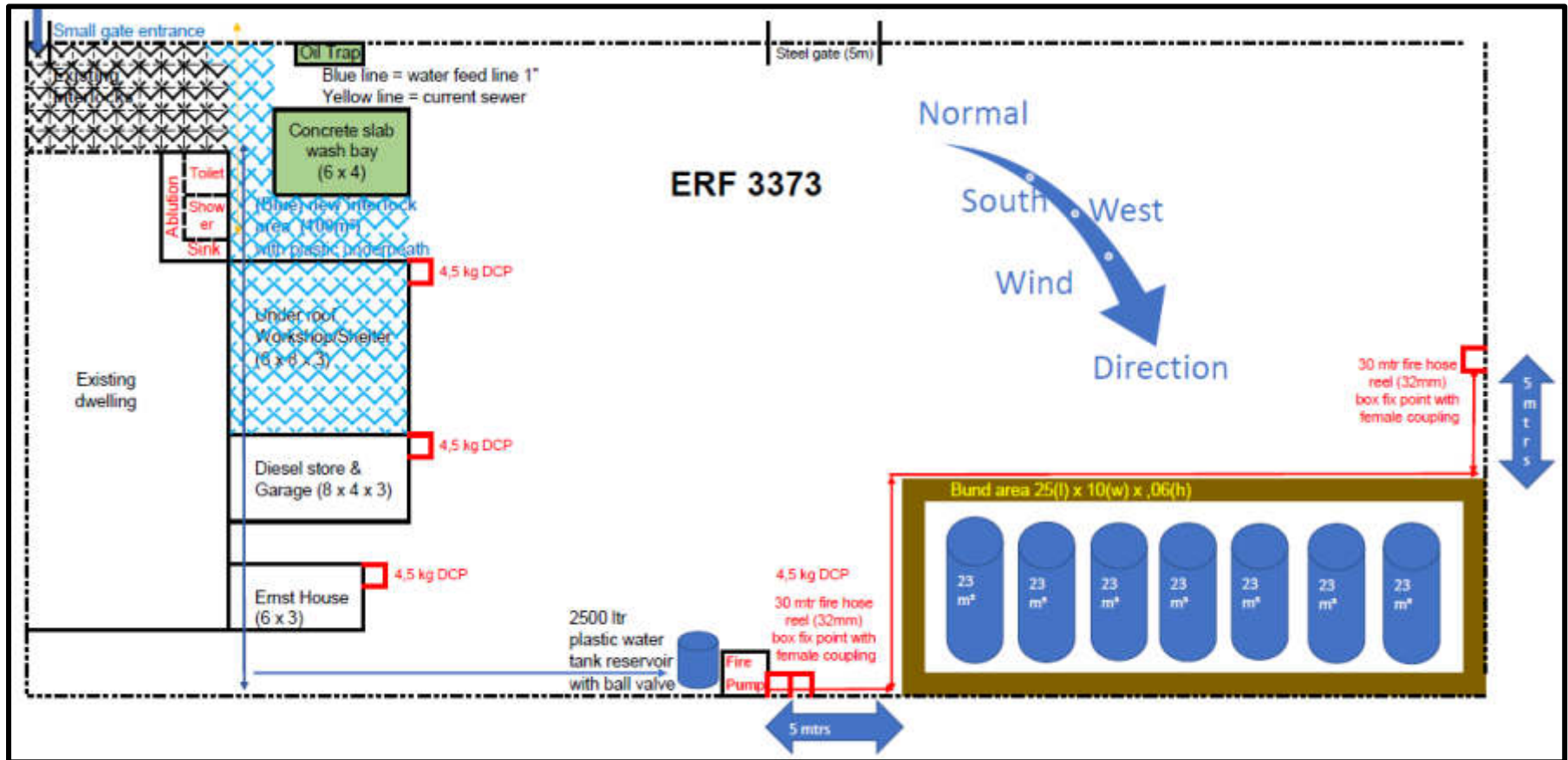


Figure 6: Proposed infrastructure

## **5.7 Construction standards**

In order to operate the proposed facility in line with the legal framework in Section 5 and industry's good standards and best practices, the following standards will be ensured during the site establishment/development.

### *i). Placement of infrastructure*

The proposed site layout and building plan have been approved by the Walvis Bay Municipality. The site layouts which dictate the placement of site infrastructure has been drawn up in line with the SANS.

### *ii). Fire detection system*

As depicted in Figure 6, there will be a fire detection system as part of the emergency response plan for the site. The fire detection system will be semi-automated and semi-manual operated to enable quick reaction to fire incidents.

### *iii). Oil trap system*

There will be oil trap installed on site to intercept the wastewater from the site drainage system as well as from the wash bay. The oil trap will be able to reduce the quantity of oil contaminant in the wastewater before discharged into the municipal sewage system. Currently, the Walvis Bay Municipality does not provide specific limits as to allowable discharges into the sewerage system.

### *iv). Construction Materials and Technology*

The building will be constructed as per the respective structural engineer's detail as provided for in the site plan. Basically, the building structure will consist of concrete appropriately reinforced with metal (steel and iron). The technology used in the design and the construction of the waste oil storage tank is based on Regulations 46 (2) of the Petroleum Product Regulations, 2000 on storage tank specifications and also ascribed to the South Africa Building Standards (SBS).

The site will be provided with facilities for drainage of storm water from the roof and wash bay through peripheral drainage systems into the municipal sewage system. Lastly, the constructions will incorporate environmental protection and occupational health and safety measures.

## 5.8 Description of the operation phase

### i) Source and types of waste oil

The waste oil products will be collected from various sources such as industrial oil-water separators, workshops, mines, fuel tank cleaning processes, and diesel tank/petrol tank cleaning and products from spill clean-ups. Below is a list of types of waste oil to be handled and temporary stored on the premises.

- Marine diesel slops
- Oily waste that originates from vessels (oily bilge water, oily residues and slops)
- Separator oil/sludge
- Oily water slops
- Old diesel
- Waste oil from car, heavy vehicle and vessel workshops
- Waste oil from machinery or engines from industries and mines
- Waste oil from other refinery and blending tank operations, and petroleum depots
- Waste oil from off-shore operations
- Waste oil from power stations
- Disposed HFO/LFO
- Contaminated water (MTBE water, mud water & any type of oily contamination)

### ii). Collection methods

Generators of waste oil products are served with Intermediate Bulk Container (IBC) of various sizes (e.g., 800, 1000-liter etc). Once full, these containers are collected by means of small trucks (Figure 6) and delivered to the site and loaded into above-ground storage tanks.



Figure 7: Collection vehicle

## ii). Facility operation procedures

The operation of the proposed facility will entail the following process

- Receiving of waste oil collected country wide
- Sorting, handling of waste oil
- Temporary storage of waste oil in tanks
- Transportation of waste oil to Windhoek



Figure 8: Bulk transportation of waste oil

## iii). Waste management

Various activities such as use of sanitary facilities, servicing area and operation of the station in general, will result in the production of a lot of solid and liquid waste. Solid waste (general and hazardous i.e., spills, contaminated items, etc.) will be handed over to Eco West Technologies cc, the sister company operating at the site.

Liquid waste will be generated mainly from the Wash Bay, Ablution facility and accommodation facility. All wastewater generated from the site will be discharged into the municipal sewage system (already available onsite). However, before discharge into the sewage system, wastewater from the wash bay will be intercepted by the oil tap to aid the removal of oil and grease.

## v). Emergency response

Provision has been made for an accommodation unit to house a site security office. This will enable a twenty-four-hour security service of the site. All emergency situations i.e., fire, spills, etc., will be handled in line with the emergency response plan outlined in the EMP.

## 5.9 Decommissioning phase

In case the project stalled, and proponent decide to decommission it a decommissioning and rehabilitation plan should be prepared. All equipment and fixtures including form wood will be dismantled and removed from the site. The contractor will ensure safe dismantling of the scaffolding, form wood used for reinforced concrete beams and columns, temporary store and site office.

Waste from construction of the proposed development will be carted away and disposed of at the approved sites. Waste found at the site will include the remainder of non-re-usable construction materials from:

- Masonry works/building works, (cement bags, broken building blocks, etc.)
- Painting, (paint cans, reject paints, masking tapes, etc.)
- Carpentry and joinery work (timber, nails, glue, etc.)
- Plumbing (pipe fittings and off cuts, etc.)
- Electrical works (residual cables and connectors, damaged electrical fittings, etc.)
- Wastes generated from dismantling of fixtures and construction equipment.
- Wastes generated from wrappers and packaging material

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 and re-vegetation using indigenous plant species.

## 5.10 Need and Desirability of the project

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

The “Need”.

- The ultimate benefit of the proposed project is that waste oil from various sources will be correctly dealt with and disposed of in an environmentally friendly and professional manner.
- Walvis Bay as an industrialized city and one of the large ports in Southern Africa, produces a million liters of waste oil. However, there are few established waste oil recycling plants in the town.
- The proposed project will create much-needed employment opportunities for the local people i.e., drivers, waste pickers/handler/sorters, security, cleaners, etc.

The “Desirability”

- The proposed development site is 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 proponent is an experienced operator and expert in waste oil recycling
- The proposed development site is large enough for the envisaged activities



## 6. DESCRIPTION OF THE RECEIVING ENVIRONMENT

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### 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
<b>Light Industrial</b>		<ul style="list-style-type: none"> <li>. Light Industry</li> <li>. Service Industry</li> <li>. Service Station</li> <li>. Warehouse</li> <li>. Storage Premises</li> <li>. Building Yard</li> <li>. Office Premises</li> </ul>	<ul style="list-style-type: none"> <li>. Panel Beating</li> <li>. Scrap Yard</li> <li>. Business Premises</li> <li>. Retail</li> <li>. Caretaker Unit</li> <li>. Place of Instruction</li> <li>. Place of Amusement</li> <li>. Funeral Parlour</li> <li>. Restaurant</li> </ul>
<b>Industrial</b>		<ul style="list-style-type: none"> <li>. Industrial Building</li> <li>. Panel Beating</li> <li>. Scrap Yard</li> <li>. Light Industry</li> <li>. Service Industry</li> <li>. Service Station</li> <li>. Warehouse</li> <li>. Storage Premises</li> <li>. Building Yard</li> </ul>	<ul style="list-style-type: none"> <li>. Noxious Industry</li> <li>. Office Premises</li> <li>. Truck Port</li> <li>. Business Premises</li> <li>. Retail</li> <li>. Caretaker Unit</li> <li>. Place of Instruction</li> <li>. Place of Amusement</li> </ul>

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).

## **7. ANALYSIS OF PROJECTALTERNATIVES**

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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 4: Significance rating**

CRITERIA	DESCRIPTION			
<b>EXTENT</b>	<b>National (4)</b> The whole country	<b>Regional (3)</b> Erongo region and neighbouring regions	<b>Local (2)</b> Within a radius of 2 km of the proposed site	<b>Site (1)</b> Within the proposed site
<b>DURATION</b>	<b>Permanent (4)</b> 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	<b>Long-term (3)</b> 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.	<b>Medium-term (2)</b> The impact will last for the period of the construction phase, where after it will be entirely negated	<b>Short-term (1)</b> The impact will either disappear with mitigation or will be mitigated through natural process in a span shorter than the construction phase
<b>INTENSITY</b>	<b>Very High (4)</b> Natural, cultural and social functions and processes are altered to extent that they permanently cease	<b>High (3)</b> Natural, cultural and social functions and processes are altered to extent that they temporarily cease	<b>Moderate (2)</b> Affected environment is altered, but natural, cultural and social functions and processes continue albeit in a modified way	<b>Low (1)</b> Impact affects the environment in such a way that natural, cultural and social functions and processes are not affected
<b>PROBABILITY</b>	<b>Definite (4)</b> Impact will certainly occur	<b>Highly Probable (3)</b> Most likely that the impact will occur	<b>Possible (2)</b> The impact may occur	<b>Improbable (1)</b> Likelihood of the impact materialising is very low
<b>SIGNIFICANCE</b>	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 5: Risk Assessment**

<b>Low impact</b>	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.
<b>Medium impact</b>	Mitigation is possible with additional design and construction inputs.
<b>High impact</b>	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.
<b>Very high impact</b>	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.
<b>Status</b>	Denotes the perceived effect of the impact on the affected area.
<b>Positive (+)</b>	Beneficial impact
<b>Negative (-)</b>	Deleterious or adverse impact.
<b>Neutral (/)</b>	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 6: 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"> <li>✓ Soil contamination during site establishment is expected to be minimal given the limited number of vehicles to operate onsite.</li> <li>✓ In case of spill, contaminated sand must be cleaned up and disposed of at the Walvis Bay landfill site.</li> </ul>
	Air pollution resulting from fumes from vehicles and machineries	1	1	1	1	4	<ul style="list-style-type: none"> <li>✓ This impact is expected to be minimal given the limited number of vehicles to operate onsite.</li> </ul>
	Waste generation	2	1	1	1	5	<ul style="list-style-type: none"> <li>✓ General household waste should be disposed of in the municipal refuse bins for disposal.</li> <li>✓ All empty disinfectants containers should be</li> </ul>



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

	<b>Visual impacts</b>	1	1	1	1	4	✓ Remove all waste generated and disposed of regularly.
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### 8.3 Potential impacts during operational phase

Table 7: 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"> <li>✓ The surface area will be covered with impervious materials (paving and mats).</li> <li>✓ All spills and leaks should be contained, and contaminated sand should be collected and disposed of at Walvis Bay landfill site.</li> <li>✓ Drivers should be trained on how to handle accidents and spills.</li> <li>✓ Waste oil and other petroleum products should be transported and stored in approved containers.</li> </ul>
	Waste oil may find its way into the municipal sewage system from washing of vehicles and surrounding or through stormwater drainage after rainfall.	1	1	1	1	4	<ul style="list-style-type: none"> <li>✓ An oil trap will be installed to intercept wastewater.</li> <li>✓ No intentional discharge of waste oil the sewage system.</li> </ul>
	Waste oil is <b>poisonous</b> to animals, birds etc.	1	1	1	1	4	<ul style="list-style-type: none"> <li>✓ Waste oil will be stored in closed containers.</li> </ul>

2. SOCIO-ECONOMIC	<b>Occupational health and Safety risks</b>  -Waste oil is a Hydrocarbons product, and it contains impurities that are carcinogenic and highly dangerous to human health. This can occur through inhalation, consumption, or dermal exposure/contact.  -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"> <li>✓ Inhalation of fumes should be prevented.</li> <li>✓ Employees will be trained on the nature of their work and on how to handle dangerous goods.</li> <li>✓ Employees will be equipped with appropriate Personal Protective Equipment (PPE).</li> <li>✓ The health and safety standards specified in the Health and Safety Regulations of the National Labour Act 11 of 1992 should be complied with.</li> <li>✓ All petroleum products should be stored in approved containers i.e., IBC, stainless steel etc.</li> </ul>
	<b>Risk of fire</b> (Waste oil and Petroleum products i.e., Diesel products are highly flammable materials, hence the possibility of fire outbreak.	2	1	1	1	5	<ul style="list-style-type: none"> <li>✓ Waste oil must be heated it ignited, hence there is a lower chance of fire outbreak.</li> <li>✓ A fire detection system will be installed.</li> <li>✓ All Employees will be trained on fire and other emergency responses</li> </ul>

## 8.4 Project positive impacts

ASPECT	POTENTIAL IMPACTS	SIGNIFICANCE RATING (BEFORE MITIGATION)			
		Extent	Duration	Intensity	Probability
1.	<b>Environmental benefits</b> The proposed project will benefit the environment in a long term due to waste oil recycling	2	2	2	6
	<b>Provision of employment</b> Creation of job opportunities	2	2	2	6
	<b>Provision of waste oil recycling opportunities</b> Waste oil recycler both local and those from across the country will have opportunity to sell their waste oil at this facility.	2	2	2	6
	<b>Economic contribution</b> Generation of income both waste oil seller and for the proponent	2	2	2	6
	<b>Support to other businesses</b> The facility will provide support to other businesses to recycle waste oil	2	2	2	6

### **8.5 Decommissioning and Rehabilitation**

Decommissioning is not foreseen during the validity of the environmental clearance certificate. Should decommissioning occur at any stage, rehabilitation of the area may be required. Decommissioning will entail the complete removal of all infrastructure including buildings and underground infrastructure. Any pollution present on the site must be remediated. 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.

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

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### 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 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.
- The identified negative impacts can successfully be mitigated by following the proposed measures as well as by ascribing to the SANS standards relating to the petroleum industry.
- 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 Section 8 and in the EMP.
- Appoint an Environmental Control Officer or EAP to conduct monitoring and prepare quarterly SHEQ report 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 Waste oil handling and temporary storage facility at Erf 3373, Energy Street Walvis Bay.**

## 10. REFERENCES

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- Digital Atlas of Namibia Unpublished Report. Ministry of Environment & Tourism
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- Namibia Statistic Agency, 2001, Population and Housing Sensus [Report]. Windhoek , 2003.
- 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

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**Appendix A: Approved Building Plan**

**Appendix B: Proof of Consultation**

**Appendix C: BID**

**Appendix D: Consent from LA**

**Appendix E: EMP**