



***RENEWAL OF THE ENVIRONMENTAL  
CLEARANCE FOR THE OPERATION OF FA-  
CILITIES AND STORAGE AND HANDLING OF  
PETROLEUM PRODUCTS ON ERF 3447,  
WALVIS BAY, ERONGO REGION***

***August 2024***

**APP - 240809004537**

|                              |   |
|------------------------------|---|
| <p><b>Project Name:</b></p>  | <p><b>RENEWAL OF THE ENVIRONMENTAL CLEARANCE FOR THE OPERATION OF FACILITIES AND STORAGE AND HANDLING OF PETROLEUM PRODUCTS ON ERF 3447, WALVIS BAY, ERONGO REGION</b></p>  |
| <p><b>The Proponent:</b></p> | <p style="text-align: center;"> <br/> <b>BHL Group</b><br/> <b>(Bulk Haulage Logistics PTY (LTD))</b><br/> <b>PO Box 5158</b><br/> <b>WALVIS BAY</b> </p>   |
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| <p><b>Release Date:</b></p>  | <p style="text-align: center;"><b>August 2024</b></p>   |
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## EXECUTIVE SUMMARY

**Green Earth Environmental Consultants** have been appointed by BHL Group (the Proponent) to attend to and complete an Environmental Impact Assessment (EIA) and Environmental Management Plan (EMP) **to renew the Environmental Clearance (EC)** for the operation of facilities and storage and handling of petroleum products on Erf 3447, Walvis Bay as per the requirements of the Environmental Management Act (No. 7 of 2007) and the Environmental Impact Assessment Regulations (GN 30 in GG 4878 of 6 February 2012).

An ECC for the activity was issued on 8 June 2021. The site (Erf 3447, Walvis Bay) has been operated by the BHL Group for the past 3 years. Since purchasing the site, the previous fuel storage and handling facility was decommissioned and relocated to an alternative position on the site to optimize the utilization of the site as well as improve the flow of traffic and parking of vehicles on the site.

A new ECC, to be issued to BHL Group, is required to continue to use Erf 3447, Walvis Bay for the fuel storage and handling facility.

The operation of the proposed facility involves the following activities:

| <b>Operational activities:</b>   |
|--|
| Handling (receiving and dispensing) of petroleum products  |
| Storage of petroleum products  |
| Filling of trucks and vehicles, loading and offloading of commodities transported for customers, parking, and servicing of vehicles. |
| Administrative activities  |
| Safety and security activities   |
| Support services for tanker berth  |

The land within the immediate vicinity of the proposed project site is predominately characterised by business and industrial activities.

The key characteristics/environmental impacts of the proposed project are as follows:

| <b>Impact on environment:</b>  | <b>Nature of impact:</b>  |
|--|---|
| Creation of employment and transfer of skills  | Positive as employment was created during construction and operations which will also result in the transfer of skills which is important in the current economic climate |
| More efficient use of Erf 3447, Walvis Bay, improvement of vehicle movement and parking on site and improvement in site safety   | Positive as the harbour facilities were recently upgraded to increase its capacity to handle imports and exports  |
| Improved access to new fuel storage locality for vehicles delivering fuel, vehicles filling up as well as for fire brigade in case of a fire or to observe and contain spillages | Positive for the transport industry but negative due to additional pressure on Namibia's roads and rail infrastructure as well as road safety                             |

|  |   |
|--|---|
| Impact on utilization of municipal and other infrastructure and facilities | Positive due to the better utilization of existing municipal infrastructure   |
| Fire hazards associated with storage and handling of products              | The unlikely event of a fire from operations or products stored onsite will have a serious negative impact on neighbouring properties   |
| Dust   | All access roads and parking areas will be paved or tarred to mitigate dust emissions   |
| Impact on traffic  | Limited as the site is surrounded by streets on all sides   |
| Noise  | Low and on par with the noise levels associated with the uses of an industrial area during operation  |
| Cultural/Heritage  | No items of archeologic value or graves were observed during the site visit which means the impact will be low, if however, any such items or graves are found during construction the impact will be high and irreversible |
| Visual impact  | Low as the facility is in an existing industrial area   |
| Impact on groundwater, surface water and soil                              | The impact will be negative in case of spilling of petroleum products during handling and storage, the risk should be mitigated through the installation of spilling control infrastructure and equipment                   |
| Health and safety  | Low if mitigated during operations  |

The environmental impacts during the operational phase of the proposed project:

| <b>IMPACTS DURING OPERATIONAL PHASE</b> |                    |  |  |
|---|--------------------|--|--|
| <b>Aspect</b>                           | <b>Impact Type</b> | <b>Significance of impacts Unmitigated</b> | <b>Significance of impacts Mitigated</b> |
| Ecology Impacts                         | -                  | L  | L  |
| Dust and Air Quality                    | -                  | M  | L  |
| Groundwater Contamination               | -                  | L  | L  |
| Waste Generation                        | -                  | M  | L  |
| Failure of Reticulation Pipeline        | -                  | L  | L  |
| Fires and Explosions                    | -                  | L  | L  |
| Safety and Security                     | -                  | M  | L  |

| <b>IMPACT EVALUATION CRITERION (DEAT 2006):</b> |                          |                             |
|---|--------------------------|-----------------------------|
| <b>Criteria</b>                                 | <b>Rating (Severity)</b> |                             |
| <b>Impact Type</b>                              | +                        | Positive                    |
|   | O                        | No Impact                   |
|   | -                        | Negative                    |
| <b>Significance of impacts</b>                  | L                        | Low (Little or no impact)   |
|   | M                        | Medium (Manageable impacts) |
|   | H                        | High (Adverse impact)       |

The type of activities that is carried out on the site does not negatively affect the amenity of the locality and the activities do not adversely affect the environmental quality of the area as it is located in an existing industrial area. None of the potential impacts identified are regarded as having a significant impact to the extent that the proposed project should not be allowed. However, the operational activities further on need to be controlled and monitored by the assigned managers and the Proponent (BHL Group).

The Environmental Impact Assessment Renewal which follows upon this paragraph was conducted in accordance with the guidelines and stipulations of the Environmental Management Act (No 7 of 2007) meaning that all possible impacts have been considered and the details are presented in the report.

Based upon the conclusions and recommendations of the Environmental Impact Assessment Report and Environmental Management Plan following this paragraph, the Environmental Commissioner of the Ministry of Environment, Forestry and Tourism is herewith requested to:

1. Accept the Environmental Impact Assessment Renewal Report.
2. Approve the Environmental Management Plan.
3. Issue a Renewed Environmental Clearance Certificate for the operation of facilities and storage and handling of petroleum products on Erf 3447, Walvis Bay for BHL Group and for the following "listed activities":

***ENERGY GENERATION, TRANSMISSION AND STORAGE ACTIVITIES***

- *The construction of facilities for the refining of gas, oil and petroleum products.*

***HAZARDOUS SUBSTANCE TREATMENT, HANDLING AND STORAGE***

- *The storage and handling of 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.*
- *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.*

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## **LIST OF ABBREVIATIONS**

|       |   |
|-------|---|
| ADO   | Automotive Diesel Oil                         |
| DCM   | Deputy Chief of Mission                       |
| EC    | Environmental Clearance                       |
| ECO   | Environment Control Officer                   |
| EIA   | Environmental Impact Assessment               |
| EMP   | Environmental Management Plan                 |
| I&APs | Interested and Affected Parties               |
| MEFT  | Ministry of Environment, Forestry and Tourism |
| SQM   | Square Meters                                 |
| TIA   | Transport Impact Assessment                   |
| ULP   | Unleaded Petrol                               |

## **LIST OF APPENDIXES**

APPENDIX A: CURRICULUM VITAE OF CHARLIE DU TOIT

APPENDIX B: CURRICULUM VITAE OF CARIEN VAN DER WALT

APPENDIX C: ENVIRONMENTAL MANAGEMENT PLAN

## 1. INTRODUCTION

**Green Earth Environmental Consultants** have been appointed by BHL Group (the Proponent) to attend to and complete an Environmental Impact Assessment (EIA) and Environmental Management Plan (EMP) **to renew the Environmental Clearance Certificate (ECC)** for the operation of facilities and storage and handling of petroleum products on Erf 3447, Walvis Bay as per the requirements of the Environmental Management Act (No. 7 of 2007) and the Environmental Impact Assessment Regulations (GN 30 in GG 4878 of 6 February 2012).

An ECC for the activity was issued on 8 June 2021. The site (Erf 3447, Walvis Bay) has been operated by the BHL Group for the past 3 years. Since purchasing the site, the previous fuel storage and handling facility was decommissioned and relocated to an alternative position on the site to optimize the utilization of the site as well as improve the flow of traffic and parking of vehicles on the site.

It is now required to renew the Environmental Clearance Certificate (ECC), to allow the proponent to continue with the operations of storage and handling of petroleum products (mainly diesel) on the site.

The Environmental Management Act (No 7 of 2007) requires that an Environmental Impact Assessment Renewal be conducted to request a Clearance Certificate Renewal for the following “listed activities”:

### ***ENERGY GENERATION, TRANSMISSION AND STORAGE ACTIVITIES***

- *The construction of facilities for the refining of gas, oil and petroleum products.*

### ***HAZARDOUS SUBSTANCE TREATMENT, HANDLING AND STORAGE***

- *The storage and handling of 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.*
- *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.*

The Environmental Impact Assessment Renewal below contains information on the proposed project and the surrounding areas, the proposed operations and activities, the applicable legislation to the study conducted, the methodology that was followed, the public consultation that was conducted, and the receiving environment’s sensitivity, any potential ecological, environmental and social impacts.

## 2. TERMS OF REFERENCE

To be able to continue with the operations of the project, the Environmental Clearance must be renewed. For this environmental impact exercise, Green Earth Environmental Consultants followed the terms of reference as stipulated under the Environmental Management Act.

The aim of the environmental impact assessment was:

- To comply with Namibia's Environmental Management Act (2007) and its regulations (2012);
- To ascertain existing environmental conditions on the site and to determine its environmental sensitivity;
- To inform I&APs and relevant authorities of the details of the proposed development and to provide them with an opportunity to raise issues and concerns;
- To assess the significance of issues and concerns raised;
- To compile a report detailing all identified issues and possible impacts, stipulating the way forward and identify specialist investigations required;
- To outline management guidelines in an Environmental Management Plan (EMP) to minimize and/or mitigate potentially negative impacts.

The tasks that were undertaken for the Environmental Impact Assessment included the evaluation of the following: climate, water (hydrology), vegetation, geology, soils, social, cultural heritage, groundwater, sedimentation, erosion, biodiversity, sense of place, socio-economic environment, health, safety and traffic.

The renewed EIA and EMP from the assessment will be submitted to the Environmental Commissioner for consideration. Environmental Clearance Renewal will only be obtained (from the DEA) once the new EIA and EMP has been examined and approved for the listed activity.

The methods that were used to assess the environmental issues and alternatives included the collection of data on the project site and area from the proponent, Municipality and identified stakeholders. Consequences of impacts were determined in five categories: nature of project, expected duration of impact, geographical extent of the event, probability of occurring and the expected intensity.

All other permits, licenses or certificates that are further on required for the operation of the proposed project still needs to be applied for by the proponent.

### 3. NEED AND DESIRABILITY

BHL was registered in Zambia December 2004, specializing in the Transport of various commodities with value added services and facilities within Zambia and sub-Saharan Africa with business currently conducted in but not limited to Zambia, DRC, and Namibia. They transport various commodities to and from Walvis Bay acting as an overland link between the Port of Walvis Bay and their clients in sub-Saharan Africa.



Figure 1: Transportation Trucks

Need - Walvis Bay provides the shortest route for landlocked countries in southern Africa with regards to imports and exports. Hence, trucks contribute to a high percentage of the traffic flow in and out of the town. The Proponent operates from Erf 3447, Walvis Bay which is their basis for operations in and out of Walvis Bay. Their Erf is used for the parking of vehicles, loading and offloading of commodities and minor repairs of vehicles. Diesel is also stored and handled onsite for the refilling of the vehicles. To create sufficient storage and handling capacity to be able to refill their vehicles, the Proponent installed 2 x 65 000l above ground tanks with supporting dispensing equipment. The tanks are containerised and self-bunded.

Desirability – Erf 3447, Walvis Bay is 30 786 m<sup>2</sup> in extent and zoned light industrial. The Erf is flat, walled in and large enough to accommodate the proposed activities. The site is surrounded by streets on all sides which allows good and safe access to the vehicles entering or exiting the site. The site is also surrounded by other industrial and business uses and thus suited for the proposed activity.

It can be concluded that this site is needed for the operations of the Proponent and that it is desirable to accommodate the activities.

### 4. PROJECT DESCRIPTION

#### 4.1. PROJECT LOCATION AND ERF INFORMATION

The fuel storage and handling facility is located on Erf 3447, Walvis Bay along Gobabeb Avenue and Hidipo Hamutenya Drive in the industrial area of Walvis Bay. The erf is 30 786 m<sup>2</sup> in extent and zoned light industrial. See *Plans* below for the locality of Erf 3447:

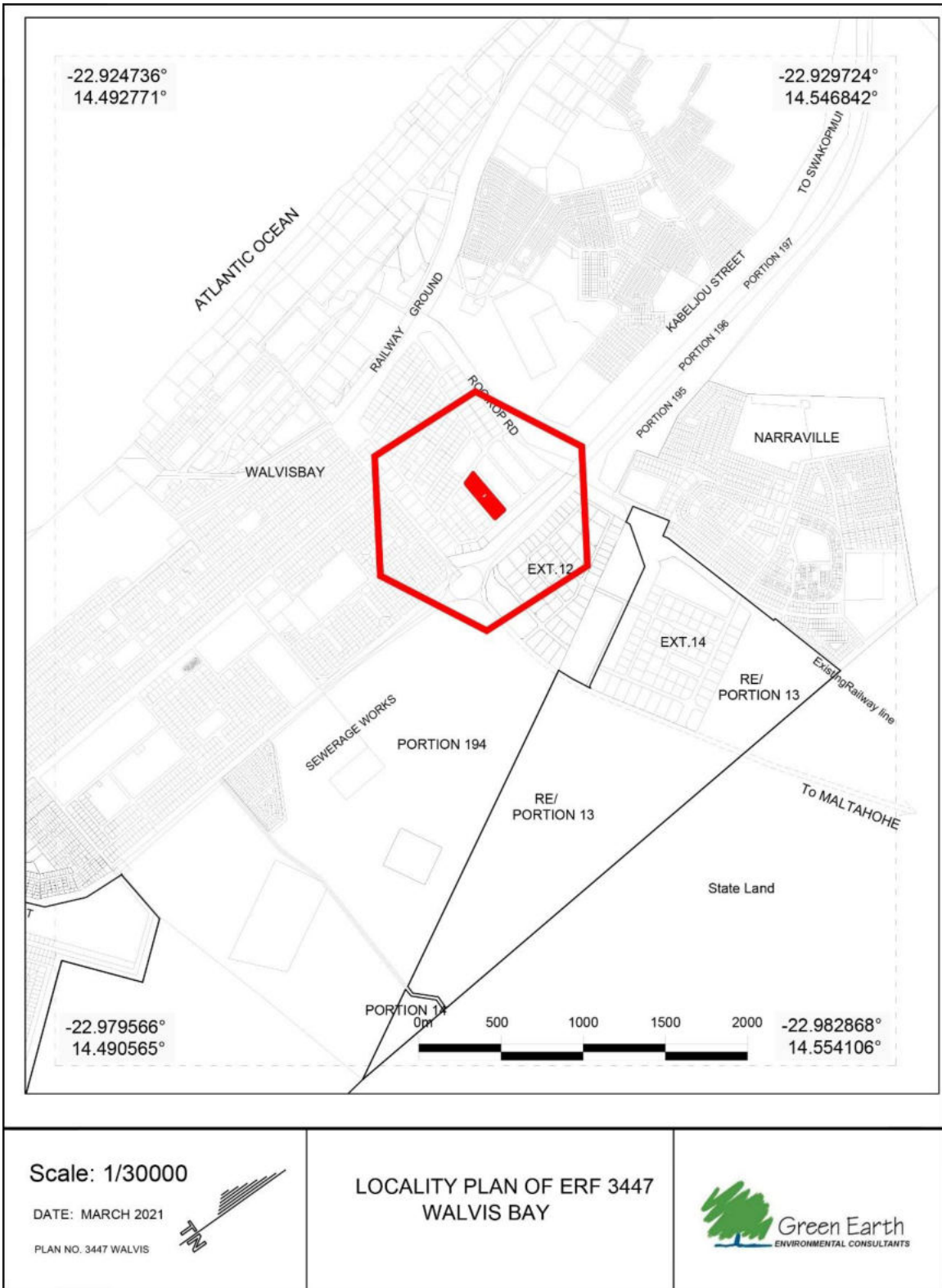
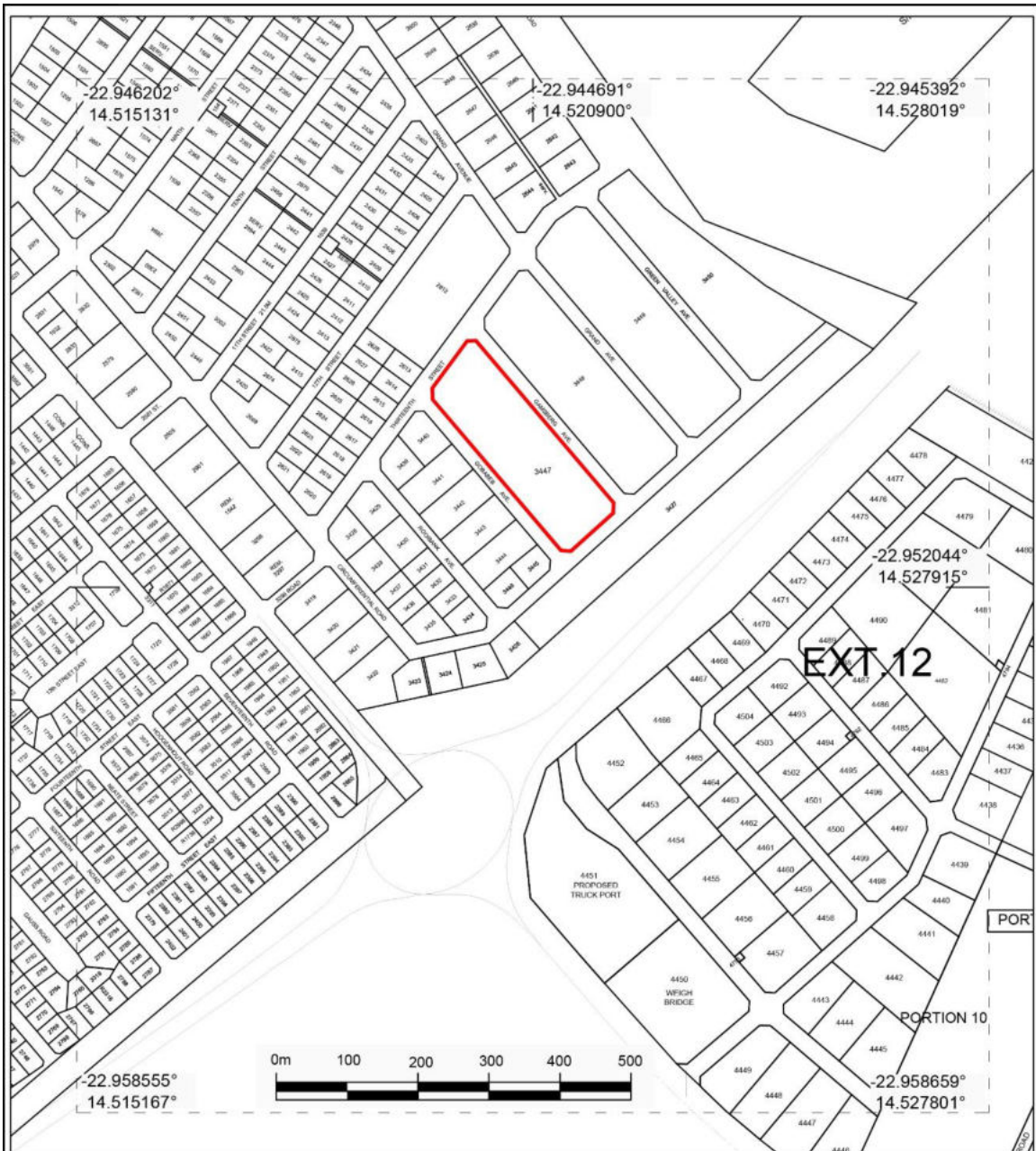


Figure 2: Locality Plan of Erf 3447, Walvis Bay





|   |   |   |
|---|---|---|
| <p>DATE: MARCH 2021</p> <p>PLAN NO. 3447 WALVIS</p>  | <p>LOCALITY PLAN OF ERF 3447<br/>WALVIS BAY</p> |  |
|---|---|---|

Figure 3: Erf 3447, Walvis Bay



Figure 4: Erf 3447, Walvis Bay Plan with Image

The Erf is surrounded by streets on four (4) sides and is currently taking access from three (3) sides. All the streets are tarred or paved. The erf is located in the industrial area of Walvis Bay and the surrounding areas has a character of mix uses including industrial, warehousing and business uses. The erf is flat, cleared of all vegetation and walled in by a concrete wall.



## 4.2. OPERATIONS AND FACILITIES ON THE SITE

The proponent (BHL Group) established and operates a fuel storage, transport and logistics facility on the site. The site is currently used for:

- The parking of trucks (mainly large interlinks), servicing, loading, and offloading of trucks
- The storage and handling of containers and goods
- The parking of supporting vehicles (light commercial vehicles and forklifts)
- Admin offices, canteen facilities and ablution facilities
- The storage and handling of diesel for the filling of the vehicles
- Workshop
- Security offices for access control

See *Plan* below for the site layout and utilization:

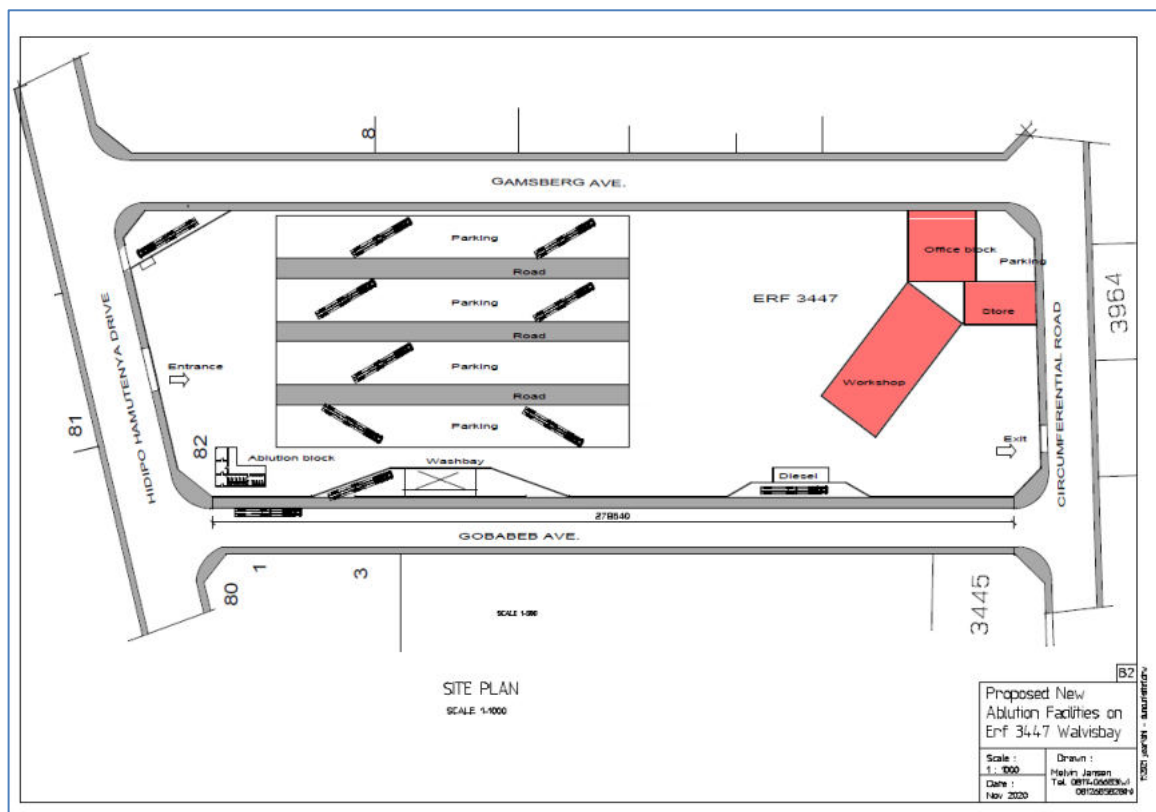


Figure 5: Layout and utilization

Vehicles visiting the site to load or offload goods, for parking purposes or to be attended to at the workshop take access from Hidipo Hamutenya Drive and exit at Circumferential Road. Customers visiting the office have a separate parking and access to keep the trucks and office visitors apart.

The *Photo* below shows the current activities on the site:



Figure 6: Current Activities on site

Current activities on Project Site:





Figure 7: Current infrastructure on Project Site

The following activities forms part of the site layout and utilization:

There is a wash bay to wash vehicles and equipment. The wash bay area includes paved washing bays to prevent wash water from seeping into the soil and from draining to neighbouring areas. It is advised that equipment be installed for efficient use and the recycling of water. Wash water must be contained, stored, cleaned to be recycled in accordance with Municipal requirements.

The diesel storage and handling facility comprises of 2 x 65 000l above ground self-bunded tanks with the necessary safety features as required by the MME. The tanks are refilled with fuel by road tankers, operated by duly licensed and specialized transport companies, which will discharge via filler points. Filling of the tanks are carried out on an “as and when required” basis, but it is envisaged that tanks require filling on average once every two weeks.

The fuel facility consists of the following:

- Facilities for the storage and handling Diesel 50ppm;
- The total tank capacity proposed for the site is 130000 L;
- 2 X aboveground tanks with the capacity of 65000 L each;
- Two (2) dispensing points;
- The facility only operates during normal business hours;
- The site is under 24-hour security, walled in and gated with access control on a 24-hour basis;
- Double wall tanks in accordance with EN12285 standards;
- Spill containment infrastructure, with an oil/water to protect against spillages in accordance with the Ministry of Mines and Energy’s Requirements;
- Bund walls and floors with traps to contain spillages which might happen during the handling of diesel;
- The tanks are linked via underground pipes to the relevant fuel dispenser points (curb side pump);
- The curb side pump is installed over a spill slab with a trap to prevent any spilled diesel from leaching into the soil. The trap sump is linked to a 3-chamber separator which collect any spilled diesel for proper disposal;
- The driveway areas are paved;

- A concrete slab was constructed around the island, under the canopy (around pumps);
- The refuelling area is covered by an overhead canopy;
- The entire driveway area, the area surrounding the dispensing points and area below the canopy is raised by land infill and sloped and landscaped and provided with proper drainage in order not to be subject to storm water damage/flooding.

Below is a summary of the typical operational activities undertaken on the site:

- Movement of pump attendants
- Filling of vehicles with fuel (both light and heavy-duty vehicles)
- Filling of fuel into the aboveground tanks by direct closed transfer
- Administrative activities related to the facility

## **5. BULK SERVICES AND INFRASTRUCTURE**

### **5.1. ACCESS AND INTERNAL ROADS**

Access to the proposed project site is obtained from Hidipo Hamutenya Drive and Circumferential Road.

### **5.2. WATER SUPPLY**

Water is supplied directly from the municipality's water reticulation system.

### **5.3. ELECTRICITY RETICULATION**

Electricity is supplied by Erongo Red through their electrical distribution network.

### **5.4. SEWAGE TREATMENT AND DISPOSAL**

The sewage is connected to the sewer system of the municipality.

### **5.5. SOLID WASTE DISPOSAL/REFUSE REMOVAL**

Solid waste disposal is handled in accordance with the regulations of the municipality.

### **5.6. STORMWATER MANAGEMENT**

The stormwater management system is accommodated in the building plans.

### **5.7. FIRE PROTECTION**

The Proponent has the necessary fire protection infrastructure / extinguishers as per the requirements. A Fire Protection Specialist was contracted to introduce a proper fire protection plan with the required infrastructure and to oversee the annual auditing and

maintenance of the infrastructure. The site operates under the fire control measures as per the Walvis Bay Fire Regulations.

## 6. MINISTRY OF ENVIRONMENT, FORESTRY AND TOURISM APPROVAL

The current Environmental Clearance Certificate was issued by the Ministry of Environment, Forestry and Tourism on 8 June 2021 which expired on 8 June 2024. See below a copy of the current Certificate:

ECC – 001395 Serial: tBIHYJ1395



**REPUBLIC OF NAMIBIA**  
**MINISTRY OF ENVIRONMENT, FORESTRY AND TOURISM**  
OFFICE OF THE ENVIRONMENTAL COMMISSIONER

**ENVIRONMENTAL CLEARANCE CERTIFICATE**  
ISSUED

In accordance with Section 37(2) of the Environmental Management Act (Act No. 7 of 2007)

TO

**BHL Group**  
PO Box 15158 WALVIS BAY

TO UNDERTAKE THE FOLLOWING LISTED ACTIVITY

**CONSTRUCTION AND OPERATION OF STORAGE FACILITIES AND HANDLING OF PETROLEUM PRODUCTS ON ERF 3447, WALVIS BAY**

Issued on the date: **2021-06-08**  
Expires on this date: **2024-06-08**

*(See conditions printed over leaf)*



09 JUN 2021  
MINISTRY OF ENVIRONMENT, FORESTRY AND TOURISM  
Private Bag 13306  
WINDHOEK, NAMIBIA

ENVIRONMENTAL COMMISSIONER

Reduce  
Reuse  
Recycle



NAMIBIA'S TRASH BIN  
RIGHT THING


This certificate is printed without erasures or alterations

Figure 8: Clearance Certificate

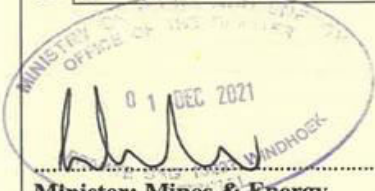
The purpose of this submission is to renew the Environmental Clearance.

## 7. MINISTRY OF MINES AND ENERGY APPROVAL

The following Consumer Installation Certificate was obtained from the Ministry of Mines and Energy:



**MINISTRY OF MINES AND ENERGY**  
**PETROLEUM PRODUCTS AND ENERGY ACT, 1990**  
**PETROLEUM PRODUCTS REGULATIONS (2000)**  
**CONSUMER INSTALLATION CERTIFICATE**  
*[Regulation 19 (5)]*

|   |   |   |                         |
|---|---|---|-------------------------|
| <b>CONSUMER INSTALLATION<br/>CERTIFICATE</b>  | <b>PERMANENT*</b>                                 | <b>PETROL*</b>                          | <b>Certificate No.</b>  |
|   | X   |   | CI/2815/2021            |
|   | <b>TEMPORARY*</b>                                 | <b>DIESEL*</b>                          |                         |
|   |   | X                                       |                         |
| <b>Name of certificate-holder</b>   |   | <b>Bulk Haulage Logistics (Pty) Ltd</b> |                         |
| <b>Address of certificate-holder</b>  | <b>Physical Address</b>                           | <b>Postal Address</b>                   |                         |
|   | 103 Circumferential Road<br>Walvis Bay<br>Namibia | P.O Box 5158<br>Windhoek<br>Namibia     |                         |
| <b>Nature of activity to which certificate relates*</b>   | <b>Commercial / Industrial Undertaking</b>        | <b>Farming Operation</b>                | <b>Mining Operation</b> |
|   | X   |   |                         |
| <b>If Storage tank is to be permanently installed, location of site</b>   |   | Erf 3447<br>Walvis Bay<br>Namibia       |                         |
| <b>Conditions applicable to Certificate</b><br><i>See overleaf for general and special conditions applicable to license</i>       |   |   |                         |
| <b>Date of Issue of certificate</b>   | 01 December 2021                                  |   |                         |
| <b>In the case of temporary license, period of validity</b>   | N/A   |   |                         |
| <b>Issued by the Minister of Mines and Energy in terms of regulations 18(5),</b><br>on <u>01 December 2021</u> at <u>Windhoek</u> |   |   |                         |
| <br><b>Minister: Mines &amp; Energy</b>        |   |   |                         |

\*Mark the appropriate item

Namprint: 061-220095

## 8. REGISTRATION CERTIFICATE FROM MUNICIPALITY

The following Registration Certificate was obtained from the Municipality of Walvis Bay:

|  |  |                            |
|--|--|----------------------------|
|   |  |                            |
| <b>Municipality</b>  | <b>Walvis Bay</b>                        |                            |
| <b><u>REGISTRATION CERTIFICATE NO. 2016/0624</u></b>   |  |                            |
| <b>BULK HAULAGE LOGISTICS (PTY) LTD</b>  |  |                            |
| is registered to carry on business as a  |  |                            |
| <b>TRANSPORT</b>   |  |                            |
| in accordance with the Local Authorities Act 1992 (Act 23 of 1992) and the General Health Regulations 1969 (GN121 of 1969)<br>Under the following conditions   |  |                            |
| Name of Owner:   | BUKS JANSEN VAN RENSBURG                 |                            |
| Name of Manager:   | DUNCAN DUKHIE                            |                            |
| Business Address:  | P O BOX 5158, WALVIS BAY, NAMIBIA, 13013 |                            |
| Street Address:  | 103, CIRCUMFERENTIAL, WALVIS BAY         |                            |
| Erf No:  | W3447                                    |                            |
| Receipt No.:<br>EFT  | Date of Registration:<br>2024/04/15      | Expiry Date:<br>2025/04/14 |
| <b>MUNICIPALITY OF WALVIS BAY</b><br><b>BUSINESS REGISTRATION OFFICE</b><br><i>J. HAASES</i><br><b>16 APR 2024</b><br><b>REGISTRATION OFFICER</b><br><b>ENVIRONMENTAL HEALTH SECTION</b>   |  |                            |
| <small>Please note: This certificate does not exempt the holder of obtaining a permit or any other document which may be required by other ministries. Any alteration of this certificate without the approval of the Registration Authority constitutes a criminal offence.</small> |  |                            |
| <b>PRIVATE</b>   |  |                            |



## **9. APPROACH TO THE STUDY**

The assessment included the following activities:

### a) Desktop sensitivity assessment

Literature, legislation and guidance documents related to the natural environment and land use activities available on the site and area in general were reviewed to determine potential environmental issues and concerns.

### b) Site assessment (site visit)

The project site and the immediate neighbourhood and surrounding area were assessed through a site visit to investigate the environmental parameters on site to enable further understanding of the potential impacts. Consultation took place with Ernest Van Deventer, the SHEQ officer on the site, to obtain specific information regarding the site and operations.

### c) Scoping

Based on the desk top study, and site visit, the environmental impacts were determined in five categories: nature of project, expected duration of impact, geographical extent of the event, probability of occurring and the expected intensity. The findings of the scoping have been incorporated in the environmental impact assessment report below.

### d) Environmental Management Plan (EMP)

To minimize the impact on the environment, mitigation measures have been identified to be implemented during planning, construction and implementation. These measures have been included in the Environmental Management Plan to guide the planning, construction and operation of the project which can also be used by the relevant authorities to ensure that the project is planned, developed and operated with the minimum impact on the environment.

## **10. ASSUMPTIONS AND LIMITATIONS**

It is assumed that the information provided by the proponent (BHL Group), and other relevant parties are accurate. Alternative sites were not evaluated as the proposed site is the site owned by the proponent and already in operation since 2021. The site was visited several times and any happenings after this are not mentioned in this report. (The assessment was based on the prevailing environmental conditions and not on future happenings on the site.) However, it is assumed that there will be no significant changes to the proposed project, and the environment will not adversely be affected between the compilation of the assessment and the implementation of the proposed activities.

## 11. ADMINISTRATIVE, LEGAL AND POLICY REQUIREMENTS

To protect the environment and achieve sustainable development, all projects, plans, programs and policies deemed to have adverse impacts on the environment require an EIA according to Namibian legislation. The administrative, legal and policy requirements to be considered during the Renewal of the Environmental Assessment for the project are the following:

- The Namibian Constitution
- The Environmental Management Act (No. 7 of 2007) and Regulations (2012)
- The Walvis Bay Town Planning Scheme
- Other Laws, Acts, Regulations and Policies

### THE NAMIBIAN CONSTITUTION

Article 95 of Namibia's constitution provides that: "The State shall actively promote and maintain the welfare of the people by adopting, inter alia, policies aimed at the following: Management of ecosystems, essential ecological processes and biological diversity of Namibia and utilization of living natural resources on a sustainable basis for the benefit of all Namibians, both present and future; in particular, the Government shall ensure that the natural resources and features like rivers, plants, trees as well as water resources are protected and sustained by providing measures against destroying the environment and the natural resources. This article recommends that a relatively high level of environmental protection is called for in respect of activities which might impact on these natural resources. Article 144 of the Namibian Constitution deals with environmental law and it states:

"Unless otherwise provided by this Constitution or Act of Parliament, the general rules of public international agreements binding upon Namibia under this Constitution shall form part of the law of Namibia". This article incorporates international law, if it conforms to the Constitution, automatically as "law of the land". These include international agreements, conventions, protocols, covenants, charters, statutes, acts, declarations, concords, exchanges of notes, agreed minutes, memoranda of understanding, and agreements (Ruppel & Ruppel-Schlichting, 2013). It is therefore important that the international agreements and conventions are considered (see section 4.9).

In considering the environmental rights, the proponent, BHL Group, should consider the following in devising an action plan in response to these articles:

- Implement a "zero-harm" policy, which would guide decisions and operations.
- Ensure that no management practice or decision result in the degradation of future natural resources.
- Take a decision on how this part of the Constitution will be implemented as part of the Environmental Control System (ECS).

## **ENVIRONMENTAL MANAGEMENT ACT (NO. 7 OF 2007) AND REGULATIONS (2012)**

The Environmental Impact Assessment Regulations (GN 30 in GG 4878 of 6 February 2012) of the Environmental Management Act (No. 7 of 2007) that came into effect in 2012 requires/recommends that a Renewed Environmental Impact Assessment and an Environmental Management Plan (EMP) be conducted for the following listed activities to obtain an Environmental Clearance Certificate:

### ***ENERGY GENERATION, TRANSMISSION AND STORAGE ACTIVITIES***

- *The construction of facilities for the refining of gas, oil and petroleum products.*

### ***HAZARDOUS SUBSTANCE TREATMENT, HANDLING AND STORAGE***

- *The storage and handling of 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.*
- *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.*

Cumulative impacts associated with the project must be included as well as the public consultation. The Act further requires all major industries and developers to prepare waste management plans and present these to the local authorities for approval.

The Act, Regulations, Procedures and Guidelines have integrated the following sustainability principles. They need to be given due consideration, particularly to achieve proper waste management and pollution control:

### **Cradle to Grave Responsibility**

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

### **Precautionary Principle**

It provides that if there is any doubt about the effects of a potentially polluting activity, a cautious approach must be adopted.

### **The Polluter Pays Principle**

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

### **Public Participation and Access to Information**

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

The proposed project and land use will not have a negative impact on the public as the surrounding uses are also characterised by industrial and business activities.

## THE WALVIS BAY TOWN PLANNING SCHEME

Walvis Bay Town Planning Amendment Scheme No. 35 (7 December 2015) applies to the area as indicated on the scheme maps and corresponds with the Townlands Diagram for Walvis Bay Town and Townlands. Erf 3447, Walvis Bay falls within the area of the Scheme.

The general purpose of this Scheme is the coordinated and harmonious development of the area of Walvis Bay (including, where necessary, the reconstruction and redevelopment of any part which has already been subdivided whether there are buildings on it or not) in such a way as will most effectively tend to promote health, safety, order, amenity, convenience and general welfare as well as efficiency and economy in the process of development and improvement of communications, and where it is expedient in order to promote proper planning or development, may provide for the suspending the operation of any provision of law or any bylaw or regulation made under such law, in so far as such provision is similar to or inconsistent with any of the provisions so the Scheme.

According to the Town Planning Scheme, Erf 3447 is zoned 'light industrial'. Clause 20 of the Town Planning Scheme allows the primary uses as stipulated below on an erf which is zoned 'heavy industrial':


| COLUMN (1)<br>Zone | COLUMN (2)<br>Map Reference   | COLUMN (3)<br>Purposes for which the land may be used and buildings may be erected and used  | COLUMN (4)<br>Purposes for which land may be used and buildings may be erected and used with the Consent of Council   |
|--------------------|---|--|---|
| Light Industrial   |  | <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> |

Figure 9: Town Planning Scheme

### CONCLUSION AND IMPACT

The Town Planning Scheme confirms that Erf 3447, Walvis Bay may be used for a service station, warehousing, and storage purposes as it is included as a 'primary use' as per Clause 20.1 of the Scheme.

## OTHER LAWS, ACTS, REGULATIONS AND POLICIES

Table 1: Laws, Acts, Regulations and Policies

| <b>Laws, Acts, Regulations &amp; Policies consulted:</b>            |  |
|---|--|
| <b>Petroleum Products and Energy Act of Namibia (No 13 of 1990)</b> | The <b>Petroleum Products and Energy Act of Namibia (No 13 of 1990)</b> makes provision for impact assessments for new proposed fuel facilities and petroleum products known to have detrimental effects on the environment. It specifies that petroleum facilities must comply with relevant SANS specifications. The specific important Petroleum Products Regulations promulgated in terms of the Petroleum Products and Energy Act 13 of 1990 (3 July 2000) that should be referred to are: Regulation 3, 16, 20, 21, 24, 27, 29, 32, 40(2), 49 & 50.  |
| <b>Pollution Control and Waste Management Bill (guideline only)</b> | The <b>Pollution Control and Waste Management Bill</b> is currently in preparation and is therefore included as a guideline only. Of particular reference to the development, Parts 2, 7 and 8 apply. Part 2 provides that no person shall discharge or cause to be discharged, any pollutant to the air from a process except under and in accordance with the provisions of an air pollution license issued under section 23. Part 2 also further provides for procedures to be followed in license application, fees to be paid and required terms of conditions for air pollution licenses. Part 7 states that any person who sells, stores, transports or uses any hazardous substances or products containing hazardous substances shall notify the competent authority, in accordance with sub-section (2), of the presence and quantity of those substances. The competent authority for the purposes of section 74 shall maintain a register of substances notified in accordance with that section and the register shall be maintained in accordance with the provisions. Part 8 provides for emergency preparedness by the person handling hazardous substances, through emergency response plans. |
| <b>Water Resources Management Act</b>                               | The <b>Water Resources Management Act</b> as promulgated (GG No 8187 dated 29 August 2023) stipulates conditions that ensure effluent that is produced to be of a certain standard. There should also be controls on the disposal of sewage, the purification of effluent, measures should be taken to ensure the prevention of surface and groundwater pollution and water resources should be used in a sustainable manner.  |
| <b>Hazardous Substances Ordinance (No 14 of 1974)</b>               | The <b>Ordinance</b> applies to the manufacture, sale, use, disposal and dumping of hazardous substances, as well as their import and export and is administered by the Minister of Health and Social Welfare. Its primary purpose is to prevent hazardous substances from causing injury, ill-health or the death of human beings.  |
| <b>The Local Authorities Act (No 23 of 1992)</b>                    | The purpose of the <b>Local Authorities Act</b> is to provide for the determination, for purposes of local government, of local authority councils; the establishment of such local authority councils; and to define the powers, duties and functions of local authority councils; and to provide for incidental matters.   |

|  |  |
|--|--|
| <b>Atmospheric Pollution Prevention Ordinance of Namibia (No 11 of 1976)</b> | Part 2 of the <b>Ordinance</b> governs the control of noxious or offensive gases. The Ordinance prohibits anyone from carrying on a scheduled process without a registration certificate in a controlled area. The registration certificate must be issued if it can be demonstrated that the best practical means are being adopted for preventing or reducing the escape into the atmosphere of noxious or offensive gases produced by the scheduled process.  |
| <b>Nature Conservation Ordinance</b>   | The <b>Nature Conservation Ordinance (No 4 of 1975)</b> covers game parks and nature reserves, the hunting and protection of wild animals, problem animals, fish and indigenous plant species. The Ministry of Environment, Forestry and Tourism (MEFT) administer it and provides for the establishment of the Nature Conservation Board.   |
| <b>Forestry Act</b>  | The <b>Forestry Act (No 12 of 2001)</b> specifies that there be a general protection of the receiving and surrounding environment. The protection of natural vegetation is of great importance, the Forestry Act especially stipulates that no living tree, bush, shrub or indigenous plants within 100m from any river, stream or watercourse, may be removed without the necessary license.  |
| <b>Soil Conservation Act</b>   | The <b>Soil Conservation Act (No 76 of 1969)</b> stipulates that the combating and preventing of soil erosion should take place; the soil should also be conserved, protected and improved, vegetation and water sources and resources should also be preserved and maintained. When proper mitigation measures are followed along the construction and implementation phase of the project, the natural characteristic of the property is expected to have a moderate to low impact on the environment.   |
| <b>Labour Act</b>  | The <b>Labour Act of 2007 (No 11)</b> contains regulations relating to the Health, Safety and Welfare of employees at work. These regulations are prescribed for among others safety relating to hazardous substances, exposure limits and physical hazards. Regulations relating to the Health and Safety of Employees at Work promulgated in terms of the Labour Act 6 of 1992 (GN156, GG1617 of 1 August 1997):<br><br><b>Regulation 178(2) (d), 180</b> refers to Chemical safety data sheets (CSDS) for all hazardous chemical substances must be prepared by the manufacturer or supplier thereof. These must be provided to every employer using such substances. The CSDS must contain essential health and safety information.<br><br><b>Regulation 178(2)(d), 182</b> refers to hazardous substances must at any time be stored in such a manner that they do not create a risk to the health and safety of employees or other persons, nor any risk of contamination of the environment, due to seeping, leaking, fire or accidental release. |

|  |  |
|--|--|
|  | <b>Regulation 183</b> states amongst other things that hazardous waste and deposits must be removed at intervals and by methods appropriate to the type of hazard which they constitute.   |
| <b>Integrated Urban and Spatial Development Framework for Walvis Bay</b> | To transform Walvis Bay to be the primary industrial city in Namibia. The Framework aims to ensure that appropriate levels of environmental management is enforced for all developments in Walvis Bay.   |
| <b>Walvis Bay Integrated Environmental Policy</b>                        | The Municipality of Walvis Bay intends to move towards its responsibility to manage the environment of Walvis Bay together with the town's residents and institutions. Focus will be placed on the conservation and protection of the environment. |

**CONCLUSION AND IMPACT**

Green Earth Environmental Consultants believe the above administrative, legal and policy requirements which specifically guides and governs the project at the proposed site will be followed and complied with in the assessment of the activity.

## 12. AFFECTED RECEIVING ENVIRONMENT

### 12.1. CLIMATE

A summary of climate conditions is presented below:

*Table 2: Climate Data*

|                                   |  |
|-----------------------------------|--|
| Classification of climate         | Desert   |
| Precipitation                     | 0-50   |
| Variation in annual rainfall (%)  | <100   |
| Average annual evaporation (mm/a) | 2400-2600  |
| Water deficit (mm/a)              | 1701-1900  |
| Fog                               | Approximately 900 hours of fog per year  |
| Temperature                       | Average maximum: Between 24°C in March/April and 19.3°C in September<br>Average minimum: Between 16.5°C in February and 9°C in August Average annual >16°C |

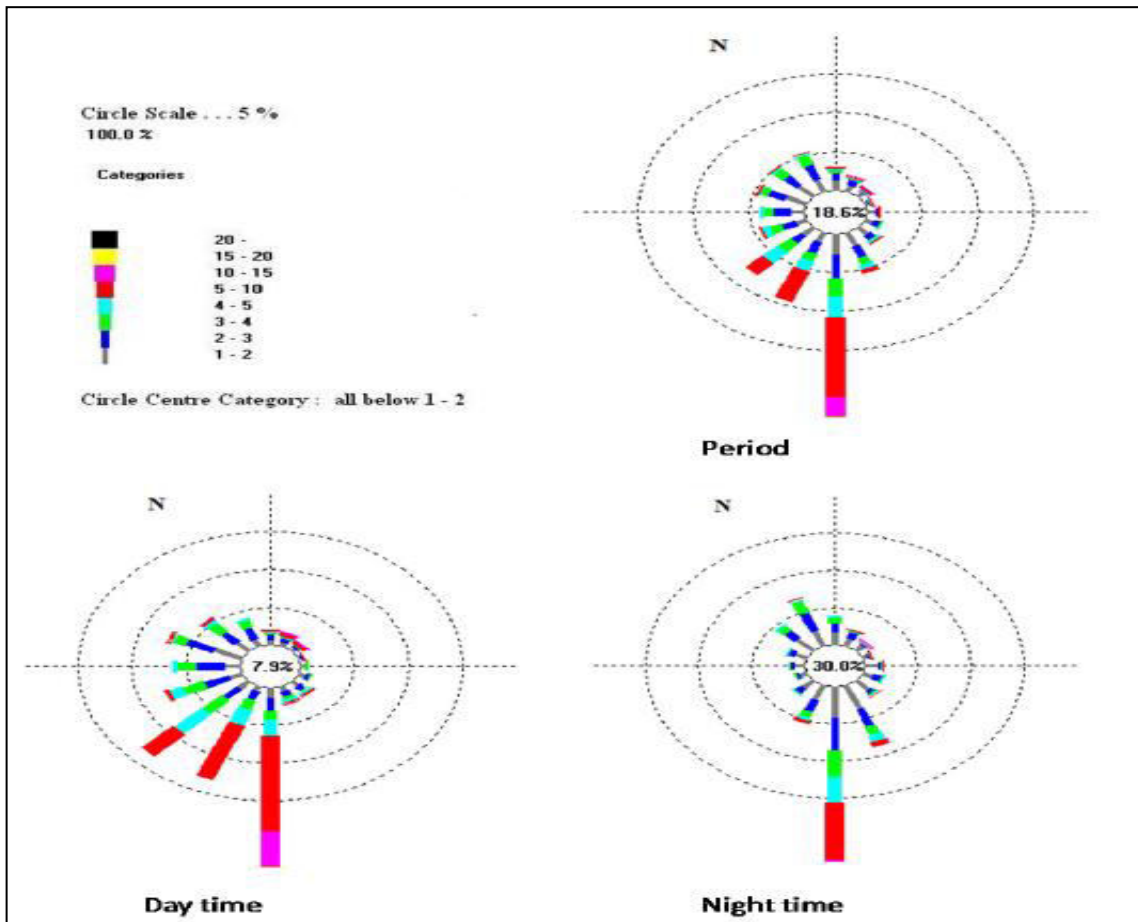


Figure 10: Wind summary graph

Strong winds in the coastal areas may aggravate dust impacts during the construction phase. The fuel storage and handling facilities as well as the supporting structures to be constructed must meet all prescribed Municipal requirements and therefore should not pose any environmental threat due to Walvis Bay's climatic conditions.



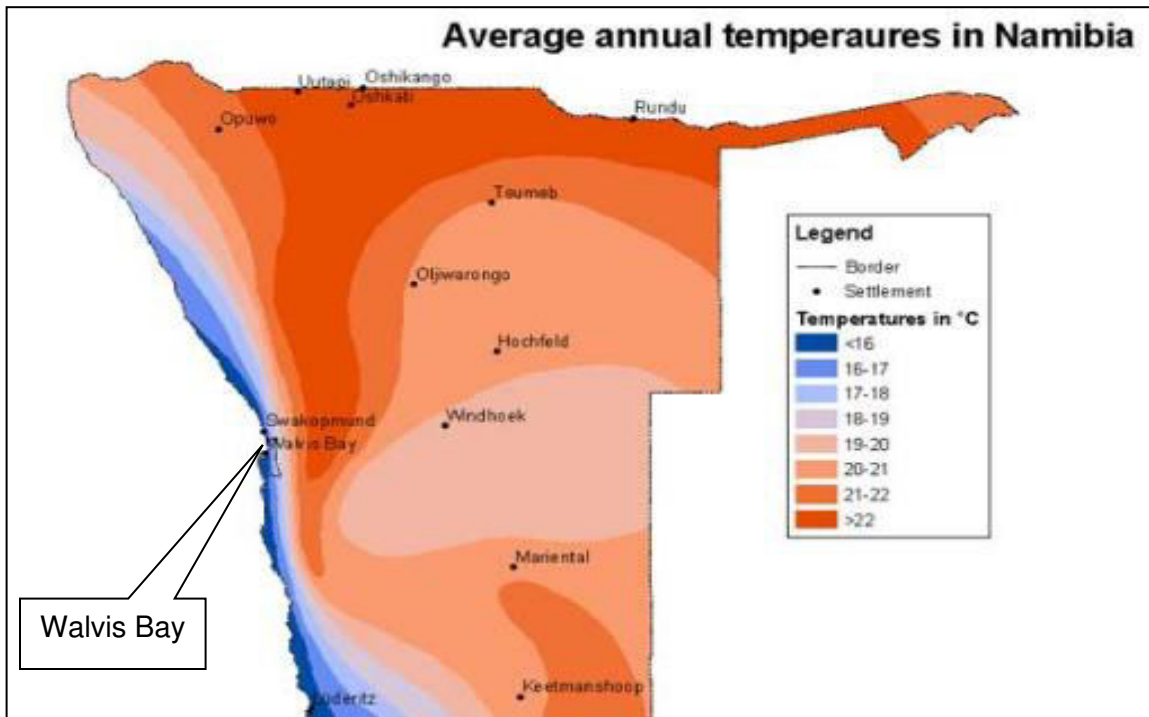


Figure 11: Average temperatures (Atlas of Namibia)

## 12.2. GEOLOGY, SOILS AND GEOHYDROLOGY

Groundwater is not abstracted for human consumption in Walvis Bay. The Municipality of Walvis Bay currently purchases fresh/potable water from NamWater, which source water from the Kuiseb Water Supply Scheme.

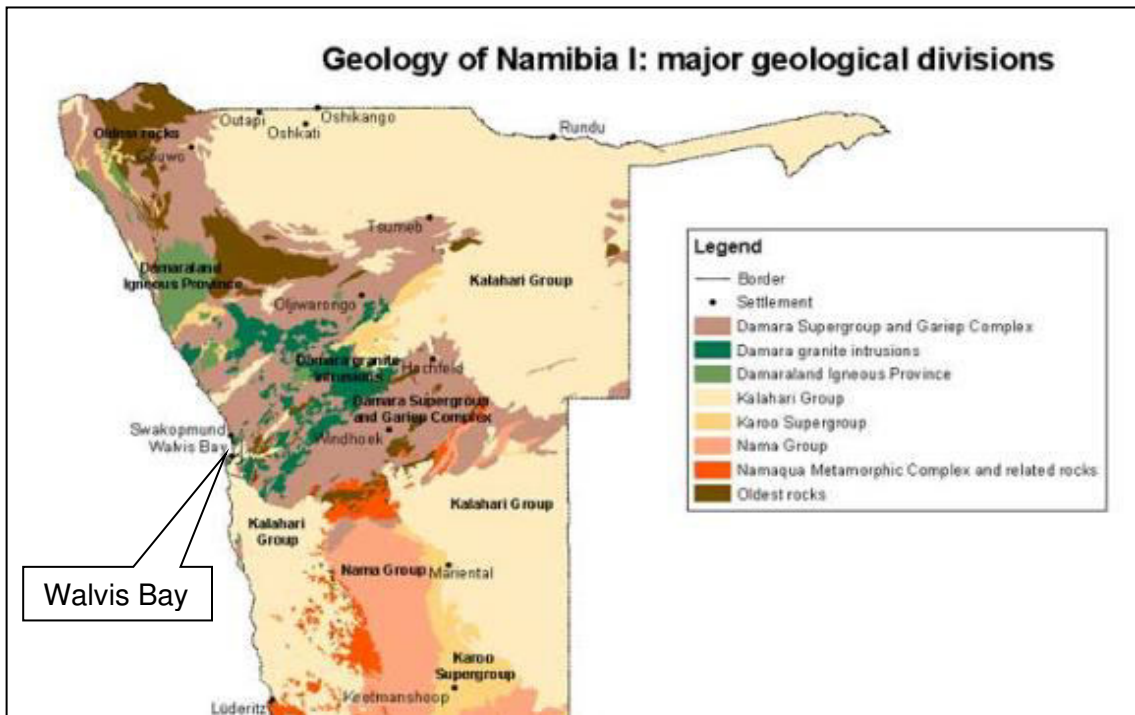


Figure 12: Geological Divisions (Atlas of Namibia)

## 12.3. BIODIVERSITY AND VEGETATION

Erf 3447, Walvis Bay is located within the already established industrial area. The habitat for fauna is therefore fragmented. There is no noteworthy fauna or flora present at the site.

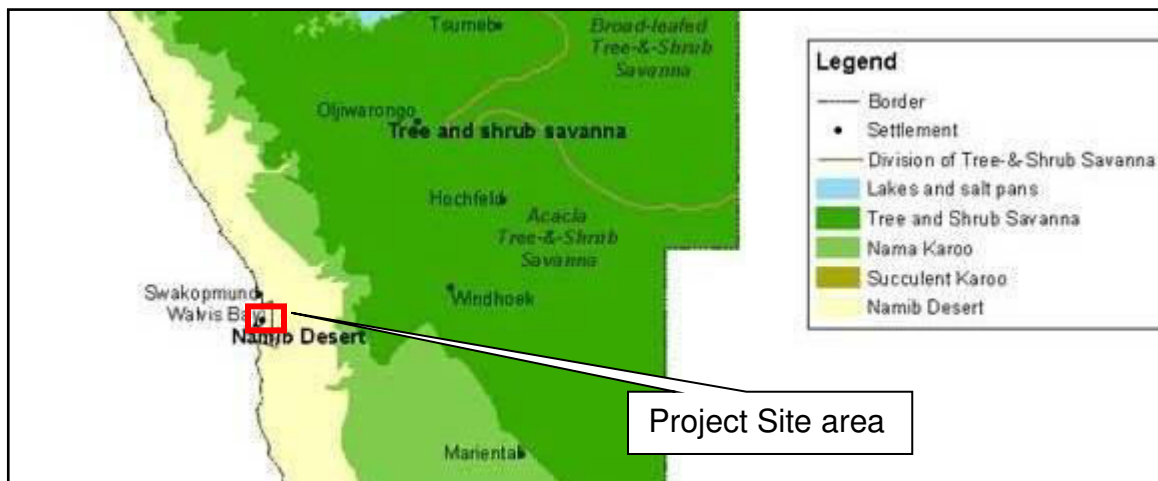


Figure 13: Biomes of Namibia (Atlas of Namibia)

The proposed service station is in an area where limited fauna or flora has been observed. No lichen fields were observed in the area. The project site has already been levelled and used as a fuel depot for some time. No impact on local fauna and flora is expected and the proposed location of the service station development is located far enough from the Ramsar site (Wetland of International Importance) not to have an impact on it.

The project site is in a transformed state showing evidence of human interference. The site was previously cleared. No protected plant species or protected vegetation was observed on the site. Topographically there are no special features to be taken into account with the development.

## 12.4. WALVIS BAY'S WATER RESOURCES

From figures provided by the Municipality, it is projected that the population will grow from the current 79 500 (2014) to 180 000 by 2030. The population will thus more than double in 16 years' time. The Municipality of Walvis Bay currently purchases fresh/potable water from NamWater, which source water from the Kuiseb Water Supply Scheme. This area does not fall within a Water Control Area, but groundwater remains the property of the Government of Namibia. The development of Erf 3447, Walvis Bay poses no threat to the potable water supply as it is not located close to the Kuiseb Water Supply Scheme.

## 12.5. CORROSION

Since the project site is located in Walvis Bay, which is known for extensive corrosion, it is believed that the equipment constructed and used on site will be exposed to corrosion to a large degree. The corrosion is due to the salty nature of the soil and nearby ocean

where fog and winds distribute it. Corrosion causes equipment (especially metal such as pipelines and concrete buildings) to deteriorate over time.

## **12.6. SOCIAL-ECONOMIC COMPONENT**

The proposed development falls within the Erongo Region with a population of 150,400 and a density of 2.4 people/km<sup>2</sup> (*National Planning Commission, 2012*). The Erongo Region shows promise in terms of socio-economic factors. It has one of the lowest unemployment rates of all regions in Namibia (22.6%), and only 5.1% of households in the Erongo Region are considered poor. Furthermore, 97% of the population is considered literate and 72%, the highest for any Namibian region, has some form of education at secondary level.

From figures provided by the Municipality, it is projected that the population of Walvis Bay will grow from the current 79 500 (2014) to 180 000 by 2030. The population will thus more than double in 16 years' time. The current growth rate is 4.7%.

The largest part of Walvis Bay's population resides in the Kuisebmond area (±33 790) and secondly in Narraville (±6668) (2012 figures). This high growth is anticipated to expected high influx of people due to the expansion of port, establishment of many industries etc.

The National unemployment rate is 34% although the Erongo Region has an unemployment rate of 23%. The fishing industry is the major employer of low skilled workers on a permanent and seasonal basis. The total employment of this sector is estimated at 2.2% of the total Namibian workforce (*Namibia Statistics Agency, 2009/2010*). The major constraints of industrial development are the lack of sufficient water supply, the lack of a large enough local market and the excessive focus on the fishing industry. Most industries that exist at the coast are either secondary or tertiary suppliers to the fishing industry or linked to port-related activities.

HIV/AIDS has a strong and adverse socio-economic impact on livelihoods of people in Namibia and the region. The incidence of HIV/AIDS in Namibia displays a declining trend. It is important that the proponent and subcontractors educate and inform the workforce on the risk, impact as well as consequence of contracting HIV.

Walvis Bay will benefit from more employment opportunities, skills and technology transfer during construction and operations of the development. The spending power of locals is likely to increase because of employment during the construction and operational phase.

The site where Erf 3447 is located is surrounded by land that is zoned for 'business' and 'industrial' uses. This area has already been developed and is fully serviced with municipal bulk services. The buildings erected in this area are mainly used for warehousing, bulk storage of fuel, manufacturing and retail purposes. The current operations will not have a negative impact on the social environment as it is in line with the current uses in this area. It thus has a positive impact on the social environment. The socio-economic characteristics of the area are continuously changing as more economic activities are established within the area.



Figure 14: Project site location



Figure 15: Neighbouring activities

## 12.7. SENSE OF PLACE

Erf 3447, Walvis Bay is situated in reaching distance to bulk infrastructural networks consisting of roads and electricity. The proposed activities will not have a large/negative impact on the sense of place in the area. An untidy or badly managed site can detract from the ecological well-being and individuality of the area. Unnecessary disturbance to the surroundings could be caused by poorly planned or poorly managed operational activities. The project site should be kept neat and clean where possible. Noise and dust should be limited because of the neighbouring activities.

## 12.8. CULTURAL HERITAGE

The proposed project site is not known to have any historical significance prior to or after Independence in 1990. The specific area does not have any National Monuments and the specific site has no record of any cultural or historical importance or on-site resemblance of any nature. No graveyard or related article was found on the site.

## 12.9. HEALTH

The safety, security and health of the labour force, employees and neighbours are of great importance, workers should be orientated with the maintenance of safety and health procedures and they should be provided with PPE (Personal Protective Equipment). A health and safety officer are employed to manage, coordinate and monitor risk and hazard and report all health and safety related issues in the workplace. The introduction of external workers into the area is sometimes accompanied with criminal activities posing security risks for neighbours. However, the proponent will take certain measures to prevent any activity of this sort. The welfare and quality of life of the neighbours and workforce needs to be considered for the project to be a success on its environmental performance. Conversely, the process should not affect the overall health of persons related to the project including the neighbours.

## 13. IMPACT ASSESSMENT AND EVALUATION

The Environmental Impact Assessment sets out potential positive and negative environmental impacts associated with the proposed project. The following assessment methodology will be used to examine each impact identified, see *Table* below:

*Table 3: Impact Evaluation Criterion (DEAT 2006)*

| Criteria    | Rating (Severity) |                           |
|-------------|-------------------|---------------------------|
| Impact Type | +                 | Positive                  |
|             | O                 | No Impact                 |
|             | -                 | Negative                  |
|             | L                 | Low (Little or no impact) |

|                                     |   |                             |
|-------------------------------------|---|-----------------------------|
| Significance of impact being either | M | Medium (Manageable impacts) |
|                                     | H | High (Adverse impact)       |

|                         |                                |
|-------------------------|--------------------------------|
| <b>Probability:</b>     | <b>Duration:</b>               |
| 5 – Definite/don't know | 5 - Permanent                  |
| 4 – Highly probable     | 4 – Long-term (impact ceases)  |
| 3 – Medium probability  | 3 – Medium term (5 – 15 years) |
| 2 – Low probability     | 2 – Short-term (0 – 5 years)   |
| 1 – Improbable          | 1 - Immediate                  |
| 0 - None                |                                |
| <b>Scale:</b>           | <b>Magnitude:</b>              |
| 5 – International       | 10 – Very high/don't know      |
| 4 – National            | 8 - High                       |
| 3 – Regional            | 6 - Moderate                   |
| 2 – Local               | 4 - Low                        |
| 1 – Site only           | 2 - Minor                      |
|                         | 0 - None                       |

The impacts on the receiving environment are discussed in the paragraphs below.

## **13.1. KEY ENVIRONMENTAL ISSUES**

The key environmental issues identified are the risk of surface and ground water pollution, the impact on access, traffic and safety and the current capacity of the Walvis Bay sewer system.

### **13.1.1. POTENTIAL SURFACE AND GROUNDWATER POLLUTION**

Prevention of potential leakages that could lead to surface water and groundwater pollution is crucial. Proper containment mechanisms must be installed to contain any release that might take place from spillages during loading/offloading of vehicles. These mechanisms include the following:

- All loading and offloading should be done on surfaces with adequate spillage control.

- Spillage control procedures must be in place according to SANS 10089 (1) standards.
- These include bunding around the loading areas with appropriate slopes (1:100), as well as the construction of bund walls and floors that are liquid tight and that are not prone to deterioration under the effects of any petroleum product.
- Because of the shallow water table in the area, the bunded areas must be sealed using industry approved methods (SANS).
- The procedures followed to prevent environmental damage during service and maintenance, and compliance with these procedures, including the correct use of sumps and regular reporting of spillages, must be audited and corrections made where necessary.
- The condition of the fuel reticulation system, both existing and new, will have to be checked regularly and repaired, if necessary, to prevent leakages.
- Proper training of operators must be conducted on a regular basis.
- Any spillage of more than 200l must be reported to the relevant authorities and remediation implemented.
- Spill clean-up equipment must be available on site.

### **13.1.2. ACCESS, TRAFFIC AND SAFETY**

Access to Erf 3447 is from Gobabeb Ave, Hidipo Hamutenya Drive and Circumferential Road which forms the boundary of the Erf.

The fuel depot will be mainly used for the refuelling of large interlinks (35m long) of which some of them will overnight at the site. The flow of traffic through the site should be designed as such as not to allow the parking of trucks in the streets nearby even if it is temporarily while awaiting their turn to be filled up. Enough parking was created on site for trucks using the overnight facilities to prevent the blocking of traffic in the streets which will cause congestion of the street, have an impact on traffic flow and endanger the safety of other street users.

### **13.1.3. SEWER SYSTEM**

The Walvis Bay Municipality does not provide specific limits for allowable discharges into the sewerage system. Since no separate industrial sewage treatment plant exists, the guidelines of the Local Authorities Act (No 23 of 1992) and Drainage and Plumbing By-Law of 1958 (updated in 1982) is followed. The Walvis Bay Municipality is in the process of updating the Drainage and Plumbing By-Law and this should be promulgated in the near future. It is the Applicant's responsibility to familiarize themselves with the details once promulgated and to adhere to any regulations applicable to the development in Walvis Bay.

## 13.2. IMPACTS DURING OPERATIONAL PHASE

### 13.2.1. ECOLOGICAL IMPACTS

Staff and visitors should only make use of walkways and existing roads to minimise the impact on the environment. Minimise the area of disturbance by restricting movement to the designated working areas during maintenance.

#### Impact Evaluation

| Aspect          | Impact Type | Scale | Duration | Magnitude | Probability | Significance |           |
|-----------------|-------------|-------|----------|-----------|-------------|--------------|-----------|
|                 |             |       |          |           |             | Unmitigated  | Mitigated |
| Ecology Impacts | -           | 1     | 2        | 4         | 2           | L            | L         |

### 13.2.2. DUST POLLUTION AND AIR QUALITY

Vehicles transporting goods and staff will contribute to the release of hydrocarbon vapours, carbon monoxide and sulphur oxides into the air. Possible release of sewer odour, due to sewer system failure or maintenance might also occur. All maintenance of bulk services and infrastructure at the project site must be designed to enable environmental protection.

#### Impact Evaluation

| Aspect             | Impact Type | Scale | Duration | Magnitude | Probability | Significance |           |
|--------------------|-------------|-------|----------|-----------|-------------|--------------|-----------|
|                    |             |       |          |           |             | Unmitigated  | Mitigated |
| Dust & Air Quality | -           | 2     | 2        | 4         | 4           | M            | L         |

### 13.2.3. CONTAMINATION OF GROUNDWATER

Spillages might also occur during maintenance of the sewer system. This could have impacts on groundwater especially in cases of large sewer spills. Proper containment should be used in cases of sewerage system maintenance to avoid any possible leakages. Oil and chemical spillages may have a health impact on groundwater users. Potential impact on the natural environment from possible polluted groundwater also exists.

#### Impact Evaluation

| Aspect                    | Impact Type | Scale | Duration | Magnitude | Probability | Significance |           |
|---------------------------|-------------|-------|----------|-----------|-------------|--------------|-----------|
|                           |             |       |          |           |             | Unmitigated  | Mitigated |
| Groundwater contamination | -           | 2     | 2        | 4         | 2           | L            | L         |



### 13.2.4. GENERATION OF WASTE

Household waste from the activities at the project site and from the staff working at the site will be generated. This waste will be collected, sorted to be recycled and stored in on site for transportation and disposal at an approved landfill site.

#### Impact Evaluation

| Aspect           | Impact Type | Scale | Duration | Magnitude | Probability | Significance |           |
|------------------|-------------|-------|----------|-----------|-------------|--------------|-----------|
|                  |             |       |          |           |             | Unmitigated  | Mitigated |
| Waste Generation | -           | 1     | 2        | 2         | 2           | M            | L         |

### 13.2.5. FAILURE IN RETICULATION PIPELINES

There may be a potential release of sewage, storm-water or water into the environment due to pipeline/system failure. As a result, the spillage could be released into the environment and could potentially be health hazard to surface and groundwater. Proper reticulation pipelines and drainage systems should be installed. Regular bulk services infrastructure and system inspection should be conducted.

#### Impact Evaluation

| Aspect                           | Impact Type | Scale | Duration | Magnitude | Probability | Significance |           |
|----------------------------------|-------------|-------|----------|-----------|-------------|--------------|-----------|
|                                  |             |       |          |           |             | Unmitigated  | Mitigated |
| Failure of Reticulation Pipeline | -           | 1     | 1        | 4         | 2           | M            | L         |

### 13.2.6. FIRES AND EXPLOSIONS

There should be enough water available for firefighting purposes. Ensure that all firefighting devices are in good working order and are serviced. All personnel must be trained about responsible fire protection measures and good housekeeping such as the removal of flammable materials on site. Regular inspections should be carried out to inspect and test firefighting equipment by the contractor.

#### Impact Evaluation

| Aspect               | Impact Type | Scale | Duration | Magnitude | Probability | Significance |           |
|----------------------|-------------|-------|----------|-----------|-------------|--------------|-----------|
|                      |             |       |          |           |             | Unmitigated  | Mitigated |
| Fires and Explosions | -           | 2     | 1        | 4         | 2           | M            | L         |

### 13.2.7. HEALTH, SAFETY AND SECURITY

The safety, security and health of the labour force, employees and neighbours are of great importance, workers should be orientated with the maintenance of safety and health procedures and they should be provided with PPE (Personal Protective Equipment).

No open flames, smoking or any potential sources of ignition should be allowed at the project location. Signs such as 'NO SMOKING' must be prominently displayed in parts where inflammable materials are stored on the premises.

#### Impact Evaluation

| Aspect            | Impact Type | Scale | Duration | Magnitude | Probability | Significance |           |
|-------------------|-------------|-------|----------|-----------|-------------|--------------|-----------|
|                   |             |       |          |           |             | Unmitigated  | Mitigated |
| Safety & Security | -           | 1     | 3        | 4         | 2           | M            | L         |

### 13.3. CUMULATIVE IMPACTS

These are impacts on the environment, which results from the incremental impacts of the construction and operation of the proposed project when added to other past, present, and reasonably foreseeable future actions regardless of what person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period. In relation to an activity, it means the impact of an activity that in it may not become significant when added to the existing and potential impacts resulting from similar or diverse activities or undertakings in the area.

Possible cumulative impacts associated with the proposed project includes sewer damages/maintenance, vegetation and animal disturbance, uncontrolled traffic and destruction of the natural environment. These impacts could become significant especially if it is not properly supervised and controlled. This could collectively impact on the environmental conditions in the area. Cumulative impacts could occur in both the construction and operational phase.

#### Impact Evaluation

| Aspect             | Impact Type | Scale | Duration | Magnitude | Probability | Significance |           |
|--------------------|-------------|-------|----------|-----------|-------------|--------------|-----------|
|                    |             |       |          |           |             | Unmitigated  | Mitigated |
| Cumulative Impacts | -           | 1     | 3        | 4         | 3           | L            | L         |

### 14. INCOMPLETE OR UNAVAILABLE INFORMATION

The exact amount of people that will be employed will depend on the type and scope of the activities and the number of individuals needed at each phase of the operations. The Environmental Management Plan (EMP) therefore include all the possible negative effects

of the project in general that could be operated on the site in order to prevent any pollution or harmful impacts whether to neighbours or the environment.

## 15. CONCLUSION

In line with the Environmental Management Act (No 7 of 2007), *Green Earth Environmental Consultants* have been appointed to conduct an Environmental Impact Assessment (EIA) and prepare an Environmental Management Plan (EMP) for the Environmental Clearance Renewal for the operation of facilities and storage and handling of petroleum products on Erf 3447, Walvis Bay for BHL Group.

The specific site has the full potential to be used for the proposed activities. It is believed that the activities will not have a severe negative effect on the environment. It is also believed that this project can largely benefit the economic and employment needs of the area.

The negative environmental impacts that may be visible in the operational phase of the project include increases in solid waste generation and wastewater generation, can result in an increase in traffic on the nearby roads and there can be an impact on the occupational health and safety of workers. As a result of the above-mentioned possible negative impacts on the receiving and surrounding environment, an Environmental Management Plan (EMP) is required to eliminate and guide the operational phase of the project. The operations of BHL Group are believed to be an asset to the residents of Walvis Bay and the Namibian citizens because employment is made available and petroleum products for which there is a need.

After assessing all information available on this project, *Green Earth Environmental Consultants* are of the opinion that the project of BHL Group will not have a large impact on the environment. The accompanying EMP will focus on mitigation measures that will remediate or eradicate the negative or adverse impacts.

## 16. RECOMMENDATION

It is therefore recommended that the Ministry of Environment, Forestry and Tourism through the Environmental Commissioner support and approve the Environmental Clearance Renewal for the operation of facilities and storage and handling of petroleum products on Erf 3447, Walvis Bay for BHL Group and to issue a Renewed Environmental Clearance for the following 'Listed Activities':

### ***ENERGY GENERATION, TRANSMISSION AND STORAGE ACTIVITIES***

- *The construction of facilities for the refining of gas, oil and petroleum products.*

### ***HAZARDOUS SUBSTANCE TREATMENT, HANDLING AND STORAGE***

- *The storage and handling of 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.*

- *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.*

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## APPENDIX A: CURRICULUM VITAE OF CHARLIE DU TOIT

1. **Position:** Environmental Practitioner
2. **Name/Surname:** Charl du Toit
3. **Date of Birth:** 29 October 1960
4. **Nationality:** Namibian
  
5. **Education:**

|                      |  |  |  |
|----------------------|--|--|--|
| Name of Institution  | University of Stellenbosch, South Africa                 |  |  |
| Degree/Qualification | Hons B (B + A) in Business Administration and Management |  |  |
| Date Obtained        | 1985-1987  |  |  |
| Name of Institution  | University of Stellenbosch, South Africa                 |  |  |
| Degree/Qualification | BSc Agric Hons (Chemistry, Agronomy and Soil Science)    |  |  |
| Date Obtained        | 1979-1982  |  |  |
| Name of Institution  | Boland Agricultural High School, Paarl, South Africa     |  |  |
| Degree/Qualification | Grade 12   |  |  |
| Date Obtained        | 1974-1978  |  |  |
  
6. **Membership of Professional Association:** EAPAN Member (Membership Number: 112)
  
7. **Languages:**

|           | <u>Speaking</u> | <u>Reading</u> | <u>Writing</u> |
|-----------|-----------------|----------------|----------------|
| English   | Good            | Good           | Good           |
| Afrikaans | Good            | Good           | Good           |
  
8. **Employment Record:**

| <u>From</u> | <u>To</u> | <u>Employer</u>  | <u>Position(s) held</u>                                      |
|-------------|-----------|--|--|
| 2009        | Present   | Green Earth Environmental Consultants                      | Environmental Practitioner                                   |
| 2005        | 2008      | Elmarie Du Toit Town Planning Consultants                  | Manager  |
| 2003        | 2005      | Pupkewitz Mega-build                                       | General Manager  |
| 1995        | 2003      | Agra Cooperative Limited                                   | Manager Trade  |
| 1989        | 1995      | Namibia Development Corporation<br>Ministry of Agriculture | Chief Agricultural Consultant<br><br>Agricultural Researcher |
| 1985        | 1988      |  |  |

### Certification:

I, the undersigned, certify that to the best of my knowledge and belief, this CV correctly describes myself, my qualifications, and my experience. I understand that any willful misstatement described herein may lead to my disqualification or dismissal, if engaged.



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**Charl du Toit**

## APPENDIX B: CURRICULUM VITAE OF CARIEN VAN DER WALT

1. **Position:** Environmental Consultant
2. **Name/Surname:** Carien van der Walt
3. **Date of Birth:** 6 August 1990
4. **Nationality:** Namibian

5. **Education:**

| Institution                | Degree/Diploma                            | Years        |
|----------------------------|---|--------------|
| University of Stellenbosch | B.A. (Degree) Environment and Development | 2009 to 2011 |
| University of South Africa | B.A. (Honours) Environmental Management   | 2012 to 2013 |

6. **Membership of Professional Associations:**

EAPAN Member (Membership Number: 113)

7. **Languages:**

| Language  | Speaking | Reading | Writing |
|-----------|----------|---------|---------|
| English   | Good     | Good    | Good    |
| Afrikaans | Good     | Good    | Good    |

8. **Employment Record:**

| From    | To      | Employer                              | Positions Held           |
|---------|---------|---------------------------------------|--------------------------|
| 07/2013 | Present | Green Earth Environmental Consultants | Environmental Consultant |
| 06/2012 | 03/2013 | Enviro Management Consultants Namibia | Environmental Consultant |
| 12/2011 | 05/2012 | Green Earth Environmental Consultants | Environmental Consultant |

9. **Detailed Tasks Assigned:**

Conducting the Environmental Impact Assessment, Environmental Management Plan, Public Participation, Environmental Compliance and Environmental Control Officer

**Certification:**

I, the undersigned, certify that to the best of my knowledge and belief, this CV correctly describes myself, my qualifications, and my experience. I understand that any wilful misstatement described herein may lead to my disqualification or dismissal, if engage.

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Carien van der Walt



## **APPENDIX C: ENVIRONMENTAL MANAGEMENT PLAN**