

APP 004520

**ENVIRONMENTAL SCOPING ASSESSMENT AND ENVIRONMENTAL
MANAGEMENT PLAN FOR THE STORAGE AND HANDLING OF INDUSTRIAL
CARGO AND CHEMICALS ON ERF 5244, CIRCUMFERENTIAL ROAD IN THE
LIGHT INDUSTRIAL AREA, WALVIS BAY**

ENVIRONMENTAL ASSESSMENT SCOPING REPORT




Assessed by:



Assessed for:

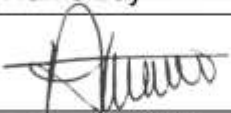


August 2024

Project:	Environmental Scoping Assessment and Environmental Management Plan for the Storage and Handling of Industrial Cargo and Chemicals on Erf 5244, Circumferential Road in the Light Industrial Area, Walvis Bay	
Report: Version/Date:	Final August 2024	
Prepared for: (Proponent)	Pindulo Logistics (Pty) Ltd P O Box 81588 Windhoek	
Lead Consultant	Geo Pollution Technologies CC PO Box 11073 Windhoek Namibia	TEL.: (+264-61) 257411 FAX.: (+264) 88626368
Main Project Team:	André Faul (B.Sc. Zoology/Biochemistry); (B.Sc. (Hons) Zoology); (M.Sc. Conservation Ecology); (Ph.D. Medical Bioscience) Ernest Pelsler (B.Sc. Zoology/Microbiology); (B.Sc. (Hons) Environmental Science); (M.Sc. Environmental Science)	
Cite this document as:	Faul A; Pelsler E. 2024 August; Storage and Handling of Industrial Cargo and Chemicals on Erf 5244, Circumferential Road in the Light Industrial Area, Walvis Bay, Erongo Region: Environmental Assessment Scoping Report	
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Report Approval	 André Faul Conservation Ecologist	

I Armand Eksteen acting as the Proponent's representative (Pindulo Logistics (Pty) Ltd), hereby approve this report and confirm that the project description contained in herein is a true reflection of the information which the Proponent has provided to Geo Pollution Technologies. All material information in the possession of the Proponent that reasonably has or may have the potential of influencing any decision or the objectivity of this assessment is fairly represented in this report.

Signed at Walvis Bay on the 13th day of August 2024.



Pindulo Logistics (Pty) Ltd

2018/2853
Company Registration

EXECUTIVE SUMMARY

Pindulo Logistics (Pty) Ltd (the Proponent) requested Geo Pollution Technologies (Pty) Ltd to conduct an environmental scoping assessment for their proposed operations on erf 5244 Circumferential Road, located in the Light Industrial Area of Walvis Bay. The Proponent plans to conduct back of port operations on this site, including the storage, handling and transport of various goods for clients. The facility will receive and handle cargo such as copper (including copper concentrates and cathodes), manganese, nickel, lithium, chrome, zinc, as well as cobalt. Additionally, it will handle industrial chemicals such as sulphur, sodium and magnesium oxide. For the purposes of this assessment, these products are collectively referred to as "metals and industrial cargo."

This assessment examines the necessary upgrades to the property, the storage and handling processes for the metal and industrial cargo, and the overall day-to-day operational activities. The study aims to identify and assess all environmental, safety, health and socio-economic impacts associated with the development and operations of the facility. Relevant environmental data has been collected through secondary sources and a reconnaissance site visit, allowing the identification of potential environmental and social impacts, which are addressed in this report.

Given the nature of the proposed operations, various impacts on the surrounding environment are anticipated. These impacts can be both positive and negative. Consequently, it is recommended that environmental performance be regularly monitored to enhance positive impacts and prevent or mitigate negative ones, ensuring regulatory compliance and implementing corrective measures as necessary.

The facility's operations will play a crucial role in the export of metals from the Southern African Development Community (SADC) and the import of industrial cargo for various mines and industries within SADC. This will bring significant economic benefits to Walvis Bay and Namibia at large. Various permits and levies associated with the transport of metal ores and industrial cargo will be paid. The trucking industry will support multiple service centres, purchase tyres and fuel, and truck drivers will patronise local businesses for food and goods. Additionally, the facility will create jobs, boosting the local workforce's spending power. The Port of Walvis Bay will benefit, with stevedores contracted for loading vessels. The proposed warehouse operations will likely attract further investments and business opportunities in the town. Various subcontractors will be engaged to supply specific services and goods to the facility.

The primary concerns related to the facility's operations include health impacts from metals and industrial cargo dust, increased traffic and noise, fire hazards, and visual impacts from dust discolouring the environment and structures. However, these issues can be mitigated through preventative measures and adherence to international best practice standards and guidelines relevant to the facility. Storing and handling all products in an enclosed warehouse will prevent potential dust impacts. Dust suppression systems can be installed if needed, although it is unlikely to be required as no dust bearing cargo will be received, stored or dispatched as bulk cargo. Additionally, all loads entering and leaving the warehouse should be adequately covered if not contained in containers or bulk bags. Noise levels should comply with health and safety regulations outlined in the Labour Act and/or World Health Organization standards for community noise. By employing local contractors and workers and implementing educational programs, the positive socio-economic impacts can be maximised while mitigating negative ones.

The environmental management plan (EMP) included in section 10 of this document should be used as a reference during all phases of the facility's operations. All monitoring and records should be documented in a report to ensure compliance with the EMP. Parties responsible for any transgressions of the EMP should be held accountable for any necessary rehabilitation. A health, safety, environment, and quality policy, or a similar document, should be used alongside the EMP. Operators and responsible personnel must be trained on the contents of these documents. Municipal or national regulations and guidelines must be adhered to and monitored regularly as outlined in the EMP.

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LIST OF ABBREVIATIONS

AIDS	Acquired Immune Deficiency Syndrome
DWA	Department of Water Affairs
EIA	Environmental Impact Assessment
EMA	Environmental Management Act No 7 of 2007
EMP	Environmental Management Plan
EMS	Environmental Management System
GPT	Geo Pollution Technologies
HIV	Human Immunodeficiency Virus
IAPs	Interested and Affected Parties
IBL	Internal Boundary Layer
IUCN	International Union for Conservation of Nature
m/s	Meter per second
MABL	Marine Atmospheric Boundary Layer
mbs	Meters below surface
MEFT	Ministry of Environment, Forestry and Tourism
mm/a	Millimetres per annum
mm/a	Millimetres per annum
MSDS	Material Safety Data Sheet
NaCl	Sodium chloride
NIOSH	National Institute for Occupational Safety and Health
OSHA	Occupational Safety and Health Administration
PBL	Planetary Boundary Layer
PEL	Permissible Exposure Level
PM	Particle matter
PPE	Personal Protective Equipment
ppm	Parts per million
REL	Recommended Exposure Level
SADC	Southern African Development Community
SAH	South Atlantic High
SANS	South African National Standards
SO₂	Sulfur dioxide
SOLAS	Safety of Life at Sea
TIBL	Thermal Internal Boundary Layer
TWA	Time weighted averages
WHO	World Health Organization

GLOSSARY OF TERMS

Alternatives - A possible course of action, in place of another, that would meet the same purpose and need but which would avoid or minimize negative impacts or enhance project benefits. These can include alternative locations/sites, routes, layouts, processes, designs, schedules and/or inputs. The “no-go” alternative constitutes the ‘without project’ option and provides a benchmark against which to evaluate changes; development should result in net benefit to society and should avoid undesirable negative impacts.

Assessment - The process of collecting, organising, analysing, interpreting and communicating information relevant to decision making.

Competent Authority - means a body or person empowered under the local authorities act or Environmental Management Act to enforce the rule of law.

Construction - means the building, erection or modification of a facility, structure or infrastructure that is necessary for the undertaking of an activity, including the modification, alteration, upgrading or decommissioning of such facility, structure or infrastructure.

Cumulative Impacts - in relation to an activity, means the impact of an activity that in itself may not be significant but may become significant when added to the existing and potential impacts eventuating from similar or diverse activities or undertakings in the area.

Environment - As defined in the Environmental Assessment Policy and Environmental Management Act - “land, water and air; all organic and inorganic matter and living organisms as well as biological diversity; the interacting natural systems that include components referred to in sub-paragraphs, the human environment insofar as it represents archaeological, aesthetic, cultural, historic, economic, palaeontological or social values”.

Environmental Impact Assessment (EIA) - process of assessment of the effects of a development on the environment.

Environmental Management Plan (EMP) - A working document on environmental and socio-economic mitigation measures, which must be implemented by several responsible parties during all the phases of the proposed project.

Environmental Management System (EMS) - An Environment Management System, or EMS, is a comprehensive approach to managing environmental issues, integrating environment-oriented thinking into every aspect of business management. An EMS ensures environmental considerations are a priority, along with other concerns such as costs, product quality, investments, PR productivity and strategic planning. An EMS generally makes a positive impact on a company’s bottom line. It increases efficiency and focuses on customer needs and marketplace conditions, improving both the company’s financial and environmental performance. By using an EMS to convert environmental problems into commercial opportunities, companies usually become more competitive.

Evaluation – means the process of ascertaining the relative importance or significance of information, the light of people’s values, preference and judgements in order to make a decision.

Gangue Material – unwanted material that surrounds, or is closely mixed with, a wanted mineral in an ore deposit or minded ore.

Hazard - Anything that has the potential to cause damage to life, property and/or the environment. The hazard of a particular material or installation is constant; that is, it would present the same hazard wherever it was present.

Interested and Affected Party (IAP) - any person, group of persons or organisation interested in, or affected by an activity; and any organ of state that may have jurisdiction over any aspect of the activity.

Metal Ore – For purposes of this document “metal ore” refers to any one or combination of copper, manganese, nickel, lithium, chrome and zinc, as well as cobalt hydroxide. Copper can also include copper concentrates and cathodes.

Mitigate - The implementation of practical measures to reduce adverse impacts.

Proponent (Applicant) - Any person who has submitted or intends to submit an application for an authorisation, as legislated by the Environmental Management Act no. 7 of 2007, to undertake an activity or activities identified as a listed activity or listed activities; or in any other notice published by the Minister or Ministry of Environment, Forestry & Tourism.

Public - Citizens who have diverse cultural, educational, political and socio-economic characteristics. The public is not a homogeneous and unified group of people with a set of agreed common interests and aims. There is no single public. There are a number of publics, some of whom may emerge at any time during the process depending on their particular concerns and the issues involved.

Scoping Process - process of identifying: issues that will be relevant for consideration of the application; the potential environmental impacts of the proposed activity; and alternatives to the proposed activity that are feasible and reasonable.

Significant Effect/Impact - means an impact that by its magnitude, duration, intensity or probability of occurrence may have a notable effect on one or more aspects of the environment.

Stakeholder Engagement - The process of engagement between stakeholders (the Proponent, authorities and IAPs) during the planning, assessment, implementation and/or management of proposals or activities. The level of stakeholder engagement varies depending on the nature of the proposal or activity as well as the level of commitment by stakeholders to the process. Stakeholder engagement can therefore be described by a spectrum or continuum of increasing levels of engagement in the decision-making process. The term is considered to be more appropriate than the term “public participation”.

Stakeholders - A sub-group of the public whose interests may be positively or negatively affected by a proposal or activity and/or who are concerned with a proposal or activity and its consequences. The term therefore includes the Proponent, authorities (both the lead authority and other authorities) and all interested and affected parties (IAPs). The principle that environmental consultants and stakeholder engagement practitioners should be independent and unbiased excludes these groups from being considered stakeholders.

Sustainable Development - “Development that meets the needs of the current generation without compromising the ability of future generations to meet their own needs and aspirations” – the definition of the World Commission on Environment and Development (1987). “Improving the quality of human life while living within the carrying capacity of supporting ecosystems” – the definition given in a publication called “Caring for the Earth: A Strategy for Sustainable Living” by the International Union for Conservation of Nature (IUCN), the United Nations Environment Programme and the World Wide Fund for Nature (1991).

1 BACKGROUND AND INTRODUCTION

Geo Pollution Technologies (Pty) Ltd was appointed by Pindulo Logistics (Pty) Ltd (referred to as the Proponent) to prepare an environmental scoping assessment (EIA) and environmental management plan (EMP) for proposed industrial cargo and chemical storage and handling operations on erf 5244, 160 Circumferential Road, in the light industrial area of Walvis Bay (Figure 1-1). The Proponent plans to utilise the property for storage and handling of metals and metal ores, industrial cargo and chemicals. A complete commodities list can be seen in Table 9-1.

General project components considered for the EIA will comprise of construction (upgrades and maintenance), operations and potential decommissioning. Typical operational activities will include receipt, storage and distribution of cargo that is bagged / bundled or containerised (shipping containers or liquids, such as acids, stored in intermediate bulk containers (IBC)). No decanting or repackaging of cargo will be performed at the facility. Maintenance and general housekeeping activities also form part of daily activities.

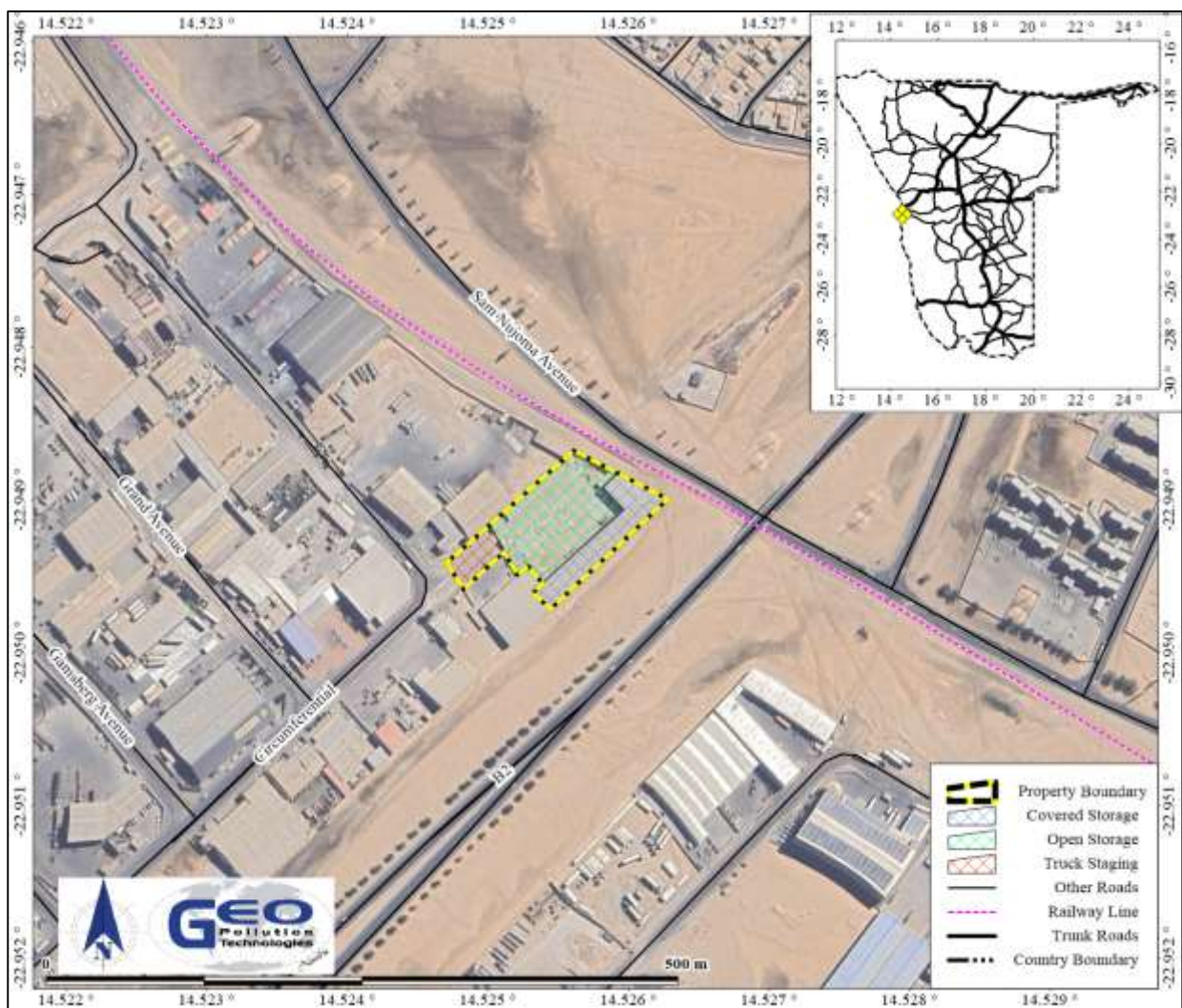


Figure 1-1 Project location

A risk assessment was undertaken to determine the potential impacts of the construction, operational and possible decommissioning phases associated with the project on the environment. The environment being defined in the Environmental Assessment Policy and Environmental Management Act as “land, water and air; all organic and inorganic matter and living organisms as well as biological diversity; the interacting natural systems that include components referred to in sub-paragraphs, the human environment insofar as it represents archaeological, aesthetic, cultural, historic, economic, paleontological or social values”.

The environmental assessment was conducted to apply for an environmental clearance certificate in compliance with Namibia's Environmental Management Act (Act No 7 of 2007) (EMA).

Project Justification – The Port of Walvis Bay has established itself as one of the most reliable and efficient ports of call in southern Africa. It is thus in a favourable position to serve not only Namibia, but also landlocked countries like Botswana, Zimbabwe, Zambia and the Democratic Republic of the Congo. Recent years have seen tremendous growth in the demand for port services for the export and import of, among others, metal ores and industrial cargo, mainly associated with the mining industry. Pindulo Logistics currently manages over 40,000 m² of warehouse space. By expanding their storage capacity to erf 5224, they can increase the supply of cargo to the local and regional mining industries. This aligns with the Walvis Bay Corridor Group's aims of developing and promoting Namibia as the leading trade route for the Southern African Development Community (SADC). This will be achieved through established corridor routes connecting the Port of Walvis Bay with the Namibian interior and its neighbours and beyond. The main benefits of the project include:

- ◆ Revenue generation for Walvis Bay and Namibia as a whole;
- ◆ Reliable export of mining products from mining sectors of Namibian and SADC countries;
- ◆ Reliable import of industrial cargo into Namibia and SADC countries for mainly the mining sector;
- ◆ Employment, education and skills transfer;
- ◆ Diversification of economic activity;
- ◆ Potential inducement of additional investments and business opportunities.

2 SCOPE

The scope of the environmental assessment is to:

1. Determine the potential environmental impacts emanating from the proposed activities.
2. Identify a range of management actions which could mitigate the potential adverse impacts to acceptable levels.
3. Comply with Namibia's Environmental Management Act (2007).
4. Provide sufficient information to the Ministry of Environment, Forestry and Tourism (MEFT) and related authorities to make an informed decision regarding the proposed operations, construction activities and possible decommissioning of the facility.

3 METHODOLOGY

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

1. Baseline information about the site and its surroundings was obtained from existing secondary information as well as from primary information obtained during a reconnaissance site visit.
2. As part of the scoping process to determine potential environmental impacts, interested and affected parties (IAPs) were consulted about their views, comments and opinions and these are put forward in this report.
3. Based on gathered information and public and stakeholder consultation, an assessment of potential impacts was conducted and a management plan prepared.

4 FACILITY OPERATIONS AND RELATED ACTIVITIES

The Proponent's planned operations on erf 5244 are focused on the storage and handling of metals and industrial cargo on a 7,500 m² property of which 5,000 m² is an open space (Photo 4-7 and Photo 4-8) and 2,500 m² is separated into four individual warehouses. The following sections provide details on existing infrastructure and future planned operations on the site.

4.1 EXISTING INFRASTRUCTURE

The main, existing infrastructure components of the erf are indicated on Figure 4-1 and include four warehouses, an under roof storage area, security office and ablution facilities. The warehouses have a combined area of 2,500 m². The four warehouses will be used as separate

storage areas, depending on the compatibility of products stored and / or on the terms specified by their client. Warehouse A has an area of 420 m² (Photo 4-9 and Photo 4-10), warehouse B is located in the north-eastern corner of the property and has an area of 580 m² (Photo 4-11 and Photo 4-12), warehouse C has an area of 1,150 m² (Photo 4-13 and Photo 4-14) and warehouse D has an area of 350 m² (Photo 4-15 and Photo 4-16). are currently combined to form a single large warehouse with two entrances. The areas of warehouse C and D respectively are and respectively. Despite this, the warehouses will still be identified as two separate entities, as they can be segmented according to client and storage requirements.

The open storage portion of the property has an area of 5,000 m². Included on this area is a under roof section, that will be demolished to create additional space for ease of access to the trucks and movement of products. Only products that are resistant to the elements, or that will not be stored for an extended period of time, will be stored on the open storage area.



Photo 4-1 Outside view of warehouse A, B and C from the centre of the yard



Photo 4-2 A view of the northern boundary and roof that is to be demolished



Photo 4-3 Outside view of warehouse D from the centre of the yard



Photo 4-4 Main entrance with security office



Photo 4-5 Back corner of the property with the ablution facilities



Photo 4-6 Current parking area that will become the truck staging area



Photo 4-7 View towards the entrance gate from the warehouses



Photo 4-8 View towards the northern corner from the warehouses



Photo 4-9 Interior of warehouse A



Photo 4-10 Interior of warehouse A



Photo 4-11 Interior of warehouse B



Photo 4-12 Interior of warehouse B



Photo 4-13 Interior of warehouse C and D



Photo 4-14 Interior of warehouse C and D



Photo 4-15 Interior of warehouse C and D towards warehouse D's entrance



Photo 4-16 Interior of warehouse C and D from warehouse D's entrance



Figure 4-1 Existing site layout

4.2 INFRASTRUCTURE UPGRADES

Some infrastructure upgrades will be required to get the facility ready for the planned operations. The following is a list of some of the main infrastructure upgrades to be performed:

- ◆ A wall / will be constructed in the current parking area (Photo 4-6) to separate the truck staging area from the parking lot used by customers of the building in front of the property.
- ◆ The planned open storage area will be paved.
- ◆ The roof area along the northern border (Photo 4-2) will be demolished.

4.3 OPERATIONAL ACTIVITIES

The warehouse will function as a receipt, storage and handling facility for import and export metals, chemicals, acids and industrial cargo. The following is a short description of the proposed operations.

4.3.1 Cargo Types

The products listed in Table 9-1 are planned to be stored and handled on erf 5244. It is possible that handling and storage of only some of the products will ultimately realise, but provision is made in this assessment for all products mentioned.

4.3.2 Handling and Storage

This facility, designated for back-of-port operations, will exclusively handle bagged, bundled or containerised materials; bulk cargo will not be managed here. All cargo received will be

stored in its bagged, bundled or containerised state. For export purposes, empty containers will be placed for stuffing (packing), and the bagged or bundled commodities will be loaded into these containers in the same condition as received and stored in the warehouse. Conversely, for import containers, the process may be reversed. Containers with bagged or bundled commodities will be de-stuffed, and the commodities will be stored in the same condition in the warehouse, before being dispatched on trucks. Some containers, of which the entire content is destined for one client, may be temporarily stored in the yard and dispatched without de-stuffing. All loading, unloading operations will be by means of forklifts or reach stackers.

All operations will adhere to the Proponent's standard operational procedures, including compliance with industry standards for shipping goods, such as the Safety of Life at Sea (SOLAS) standards for stuffing of containers for export purposes.

4.3.3 Maintenance and Upgrades

Throughout operations, regular inspections and maintenance of the infrastructure on site will be performed. This may include regular cleaning and painting of structures. Some infrastructure may be replaced or upgraded when required. During such maintenance and upgrade activities some waste may be produced that will require disposal.

4.3.4 General

The workforce present on site will be between 10 and 20 workers consisting of forklift operators, tally clerks and general workers. In addition, site supervisors and managers will be present on site. Security personnel will also be on site as part of security measures to be implemented.

Existing utilities such as water, sewers and electricity are already installed and will be used for the proposed warehouse operations. Disposal of domestic waste will continue to be performed at the waste disposal site of the Municipality of Walvis Bay. Third party contractors may be used to safely dispose of hazardous waste or contaminated products where such wastes are present on site. This includes torn bulk bags or bulk bags that have reached the end of its useable life.

5 ALTERNATIVES TO THE PROPOSED FACILITY

The Proponent entered into a rental agreement for the property, in a designated industrial area, and existing warehouses are present, thus no site alternatives were considered. Cargo will be stored in the designated warehouses and on the open storage area. Storage of cargo in the warehouses is the best method to prevent generation of dust, however certain products that are resistant to degradation could be stored outside the warehouse. No alternatives to the storage method and location are thus considered. The Proponent can investigate and install photovoltaic panels as an alternative power source which will aid in alleviating pressure on the electricity supply network. Such possibility will add to the benefits of the project, should it be realised. The practice of reduce, re-use, recycle should be adopted as an alternative to simply disposing of all waste at a landfill. The no-go option will negate all benefits, risks and possible impacts of the proposed project, should it be considered.

6 ADMINISTRATIVE, LEGAL AND POLICY REQUIREMENTS

To protect the environment and achieve sustainable development, all projects, plans, programmes and policies deemed to have adverse impacts on the environment require an environmental assessment, as per the Namibian legislation. The legislation and standards provided Table 6-1 to Table 6-4 govern the environmental assessment process in Namibia and/or are relevant to the facility.

Table 6-1 Namibian law applicable to the facility and related operations

Law	Key Aspects
The Namibian Constitution	<ul style="list-style-type: none"> ◆ Promote the welfare of people ◆ Incorporates a high level of environmental protection ◆ Incorporates international agreements as part of Namibian law
Environmental Management Act Act No. 7 of 2007, Government Notice No. 232 of 2007	<ul style="list-style-type: none"> ◆ Defines the environment ◆ Promote sustainable management of the environment and the use of natural resources ◆ Provide a process of assessment and control of activities with possible significant effects on the environment
Environmental Management Act Regulations Government Notice No. 28-30 of 2012	<ul style="list-style-type: none"> ◆ Commencement of the Environmental Management Act ◆ List activities that requires an environmental clearance certificate ◆ Provide Environmental Impact Assessment Regulations
Local Authorities Act Act No. 23 of 1992, Government Notice No. 116 of 1992	<ul style="list-style-type: none"> ◆ Define the powers, duties and functions of local authority councils ◆ Regulates discharges into sewers
Public and Environmental Health Act Act No. 1 of 2015, Government Notice No. 86 of 2015	<ul style="list-style-type: none"> ◆ Provides a framework for a structured more uniform public and environmental health system, and for incidental matters ◆ Deals with Integrated Waste Management including waste collection disposal and recycling; waste generation and storage; and sanitation
Petroleum Products and Energy Act Act No. 13 of 1990, Government Notice No. 45 of 1990	<ul style="list-style-type: none"> ◆ Regulates petroleum industry ◆ Makes provision for impact assessment ◆ Petroleum Products Regulations (Government Notice No. 155 of 2000) ◆ Prescribes South African National Standards (SANS) or equivalents for construction, operation and decommissioning of petroleum facilities (refer to Government Notice No. 21 of 2002)
Labour Act Act No 11 of 2007, Government Notice No. 236 of 2007	<ul style="list-style-type: none"> ◆ Provides for Labour Law and the protection and safety of employees ◆ Labour Act, 1992: Regulations relating to the health and safety of employees at work (Government Notice No. 156 of 1997)
Atmospheric Pollution Prevention Ordinance Ordinance No. 11 of 1976	<ul style="list-style-type: none"> ◆ Governs the control of noxious or offensive gases ◆ Prohibits scheduled process without a registration certificate in a controlled area ◆ Requires best practical means for preventing or reducing the escape into the atmosphere of noxious or offensive gases produced by the scheduled process

Law	Key Aspects
Hazardous Substances Ordinance Ordinance No. 14 of 1974	<ul style="list-style-type: none"> ◆ Applies to the manufacture, sale, use, disposal and dumping of hazardous substances as well as their import and export ◆ Aims to prevent hazardous substances from causing injury, ill-health or the death of human beings
Pollution Control and Waste Management Bill (draft document)	<ul style="list-style-type: none"> ◆ Not in force yet ◆ Provides for prevention and control of pollution and waste ◆ Provides for procedures to be followed for licence applications
Road Traffic and Transport Act Act No. 52 of 1999 Government Notice No. 282 of 1999	<ul style="list-style-type: none"> ◆ Provides for the control of traffic on public roads and the regulations pertaining to road transport
Road Traffic and Transport Regulations Government Notice No 53 of 2001	<ul style="list-style-type: none"> ◆ Prohibits the transport of goods which are not safely contained within the body of the vehicle; or securely fastened to that vehicle, and which are not properly protected from being dislodged or spilled from that vehicle
Foreign Investment Act 27 of 1990 (as amended by Foreign Investment Amendment Act 24 of 1993)	<ul style="list-style-type: none"> ◆ Provides for the promotion of foreign investment in Namibia ◆ Considers environmental impacts associated with foreign investments.

Table 6-2 Municipal by-laws, guidelines and regulations

Municipal By-laws, Guidelines or Regulations	Key Aspects
Integrated Urban Spatial Development Framework for Walvis Bay	<ul style="list-style-type: none"> ◆ Overall vision to transform Walvis Bay to being the primary industrial city in Namibia ◆ Aims to ensure that appropriate levels of environmental management is enforced for all developments in Walvis Bay
Integrated Environmental Policy of Walvis Bay (Agenda 21 Project)	<ul style="list-style-type: none"> ◆ 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
Municipal By-law 19 and 20 on Effluents Entering Sewers	<ul style="list-style-type: none"> ◆ Regulates the discharge of effluent into sewers and prohibits the introduction of certain wastes or products including steam into the sewers system.
Town Planning Scheme No. 35	<ul style="list-style-type: none"> ◆ Manages and regulates development related to land use ◆ Proposes and identifies areas for specific future land use

Table 6-3 Relevant multilateral environmental agreements

Agreement	Key Aspects
Stockholm Declaration on the Human Environment, Stockholm 1972	<ul style="list-style-type: none"> ◆ Recognizes the need for a common outlook and common principles to inspire and guide the people of the world in the preservation and enhancement of the human environment
1985 Vienna Convention for the Protection of the Ozone Layer	<ul style="list-style-type: none"> ◆ Aims to protect human health and the environment against adverse effects from modification of the Ozone Layer are considered ◆ Adopted to regulate levels of greenhouse gas concentration in the atmosphere
United Nations Framework Convention on Climate Change (UNFCCC)	<ul style="list-style-type: none"> ◆ The Convention recognises that developing countries should be accorded appropriate assistance to enable them to fulfil the terms of the Convention

Table 6-4 Standards or codes of practise

Standard or Code of practise	Key Aspects
International Dangerous Goods Code (IMDG Version 10 of 2010)	<ul style="list-style-type: none"> ◆ For handling and storage of dangerous cargo
Various Seafaring Codes and Standards	<ul style="list-style-type: none"> ◆ The transport of cargo at sea is regulated by numerous codes and standards. Key to the Proponent are those pertaining to the loading and transport of cargo like the International Convention for the Safety of Life at Sea (SOLAS), 1974 which has the regulations: <ul style="list-style-type: none"> ○ Chapter VI - Carriage of cargoes ○ Chapter VII - Carriage of dangerous goods

The project is listed as an activity requiring an environmental clearance certificate as per the following points from:

Section 9 of Government Notice No. 29 of 2012: Hazardous Substance Treatment, Handling and Storage

- ◆ 9.1 “The manufacturing, storage, handling or processing of a hazardous substance defined in the Hazardous Substances Ordinance, 1974.”

7 ENVIRONMENTAL CHARACTERISTICS

This section lists pertinent environmental characteristics of the study area and provides a statement on the potential environmental impacts on each.

7.1 LOCALITY AND SURROUNDING LAND USE

The facility is located on erf 5244, at 160 Circumferential Road, within the light industrial area of Walvis Bay (22.9495 S, 14.5255 E). The erf is zoned for light industrial use with the primary use including “warehouse” and “storage premises”. The property is on a corner lot and is surrounded by neighbours whose activities are of an industrial nature. The area to the north and east of the property comprise road reserves (Figure 7-1).



Figure 7-1 Site and surrounding property zoning

Implications and Impacts

The site itself is situated in an area intended for light industrial use. Activities surrounding the site is of similar nature. However, consent use will be applied for from the local municipality. All storage and handling activities will take place within the property boundary to ensure impacts on neighbours are minimised. Operations may increase traffic within the area.

7.2 CLIMATE

Namibia’s climate is dominated by dry conditions for most of the year and particularly so in the west. The location of Namibia with respect to the Intertropical Convergence Zone, Subtropical High Pressure Zone and Temperate Zone is what determines the climate, with the Subtropical High Pressure Zone being the major contributor to the dry conditions (Atlas of Namibia Project, 2002; Bryant, 2010), see Figure 7-2.

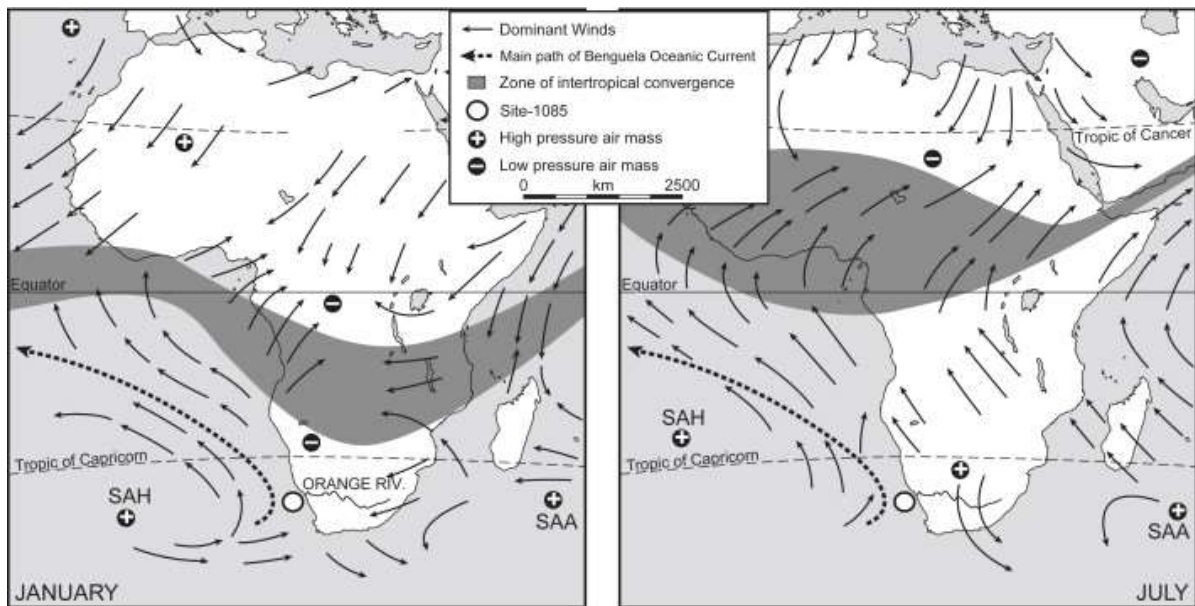


Figure 7-2 Map indicating the Intertropical Convergence Zone, Subtropical High Pressure Zone (SAH+), Benguela Current and Temperate Zone south of Tropic of Capricorn (not indicated) (from: <http://www.meteoweb.eu>)

Precipitation over Namibia is mainly controlled by the South Atlantic High (SAH), a high pressure cell (anticyclone) situated west of Namibia in the Subtropical High Pressure Zone. The SAH shifts during the year and is at higher latitudes in winter and lower latitudes in summer. In winter, as a result of being situated more north, the high pressure cell pushes any moisture originating from the Intertropical Convergence Zone northwards, preventing rain over Namibia. In summer, because the high pressure cell moves further south, and has less of an effect on the Intertropical Convergence Zone, moist air reaches Namibia, resulting in summer rains.

Studies indicate the presence of a thermal inversion layer at Walvis Bay. Originally this was thought to be at approximately 500 mamsl (Taljaard and Schumann 1940), but recent studies indicate it as low as 200 mamsl (Patricola and Chang, 2017; Corbett, 2018). A marine atmospheric boundary layer (MBL) exists offshore of the coastline that thins from more than 500 mamsl to 200 mamsl as it nears the coast (Figure 7-3). The MBL is a layer of cool, well-mixed, stable air that is capped by a thermal inversion (Patricola and Chang, 2016; Corbett 2018). This thermal layer or inversion layer will prevent the escape of pollutants such as smoke higher into the atmosphere. The MBL however contribute to high velocity wind speeds by funnelling the winds created by the SAH, resulting in what is referred to as the Benguela Low-Level Coastal Jet (Figure 7-3). Since the MBL overlap partially with the coastal plain, the wind generated by the Benguela Low-Level Coastal Jet also reaches inland, but diminishes relatively quickly further inland.

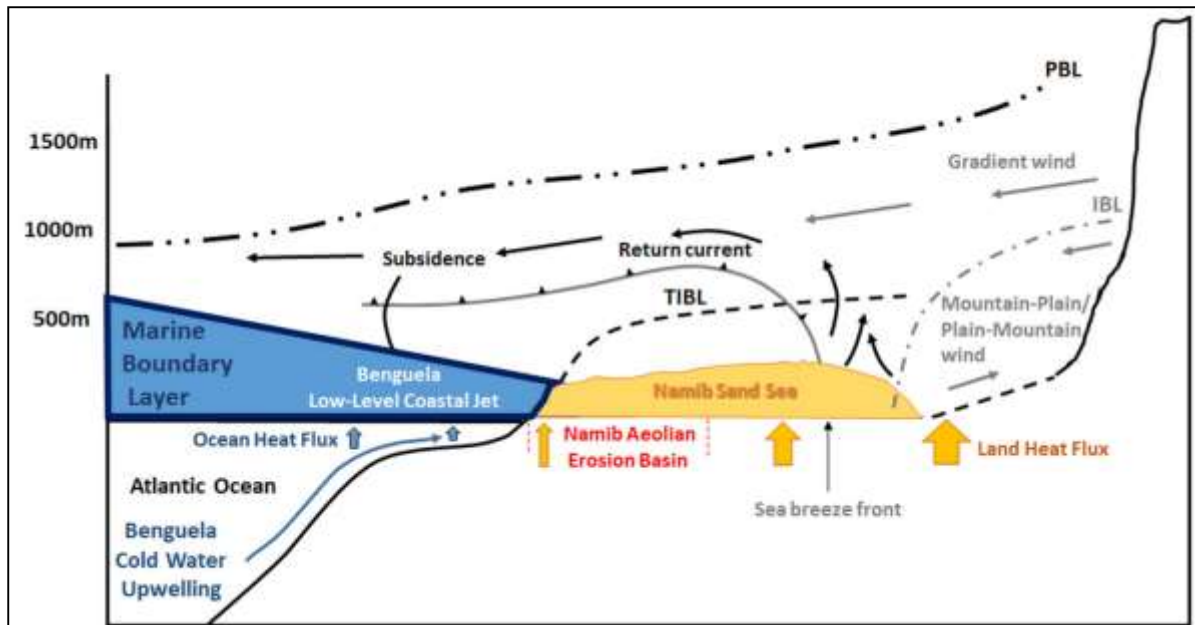


Figure 7-3 Marine atmospheric boundary layer (from: Corbett, 2018)

On a more localised scale, the climatic conditions on the central Namibian coast, and inland thereof (coastal plains), are strongly influenced by the cold Benguela Current, the SAH and the relatively flat coastal plains that are separated from the central highlands by a steep escarpment.

The anticlockwise circulation of the high pressure SAH and the action of the earth's Coriolis force results in strong southerly (longshore) winds blowing northwards up the coastline of Namibia (Bryant, 2010; Corbett, 2018). This longshore wind is responsible for upwelling of the cold, deep waters of the Benguela Current. As a result of the temperature difference between the cold surface water of the Benguela Current and the warm coastal plains, the southerly wind is diverted to a south south-westerly to south-westerly wind along the coast. At Walvis Bay the temperature gradient that forms over the warmer darker sands south of the Kuiseb River, compared with the cooler, lighter coloured gravel plain to the north of the river, leads to the formation of cyclonic circulation (localised low-pressure systems) centred over the dune area, due to warm air that rises over the dune area. This, together with topographical changes and land-use, causes a local deflection of wind flow over the Walvis Bay area, from south to southwest in Walvis Bay (Figure 7-4), to more southwest to westerly further inland, as well as reduced wind speeds. The more low speed, westerly winds are for example experienced at the Walvis Bay Airport (Rooikop).

The winds are strongest in early to mid-summer (September to January) when the SAH is at its strongest and most persistent, and the temperature difference between the sea and the desert plains are at its greatest. Wind speeds then occasionally exceed 32 km/hr and usually peaks late morning to early afternoon. In winter, the SAH loses strength and the southerly to south-westerly winds are at their weakest. Winter winds do not have enough strength to reach far inland. Autumn to winter conditions do however promote the formation of east wind conditions (berg winds) that can reach speeds of more than 50 km/hr and transport a lot of sand. East winds occur when the inland plateau is cold with a localised high pressure cell, while a low pressure system is present at the coast. The high pressure cell forces air off the escarpment and as the air descends, it warms adiabatically as well as create a low pressure system due to the vertical expansion of the air column. The warm air flows toward the coastal low and as it passes over the Namib plains, it heats up even further. The wind manifests itself as very strong, warm and dry wind during the mornings to early afternoon, but dissipate in the late afternoon.

Throughout the year the prevailing night time regional wind is a weak easterly wind. This results when the mainland cools to below the temperature of the coastal water. This results in a coastal low versus an onshore high pressure system with first no wind in the early evening, when

temperatures between water and land is similar, and then weak easterly winds as the temperature difference increase. Wind within the MBL remains dominated by the Benguela Low-Level Coastal Jet, causing a localised southerly wind over Walvis Bay, see Figure 7-4.

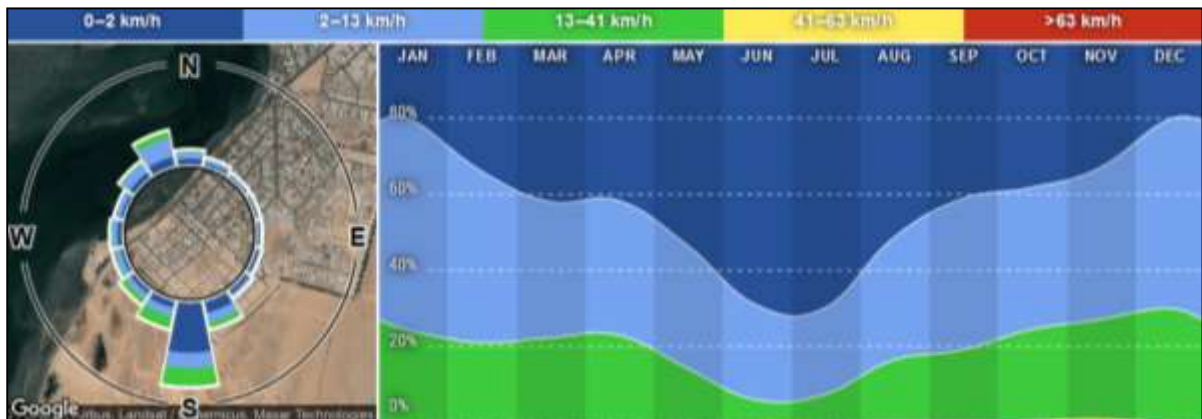


Figure 7-4 Wind direction and strength at the Walvis Bay Lagoon as measured between 2013 and 2020 (from: www.windfinder.com/windstatistics/walvis_bay_airport)

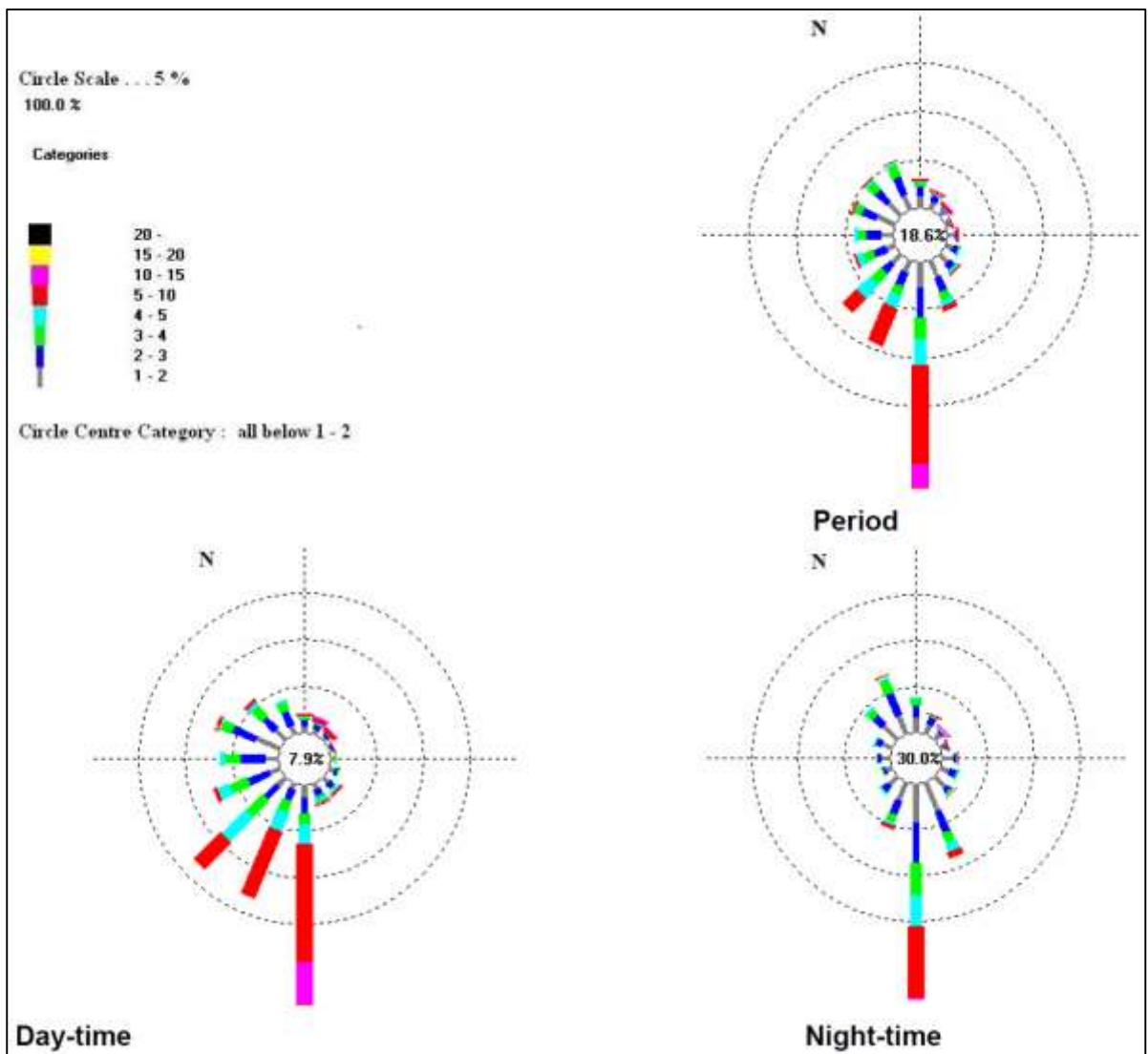


Figure 7-5 Period, daytime and night-time wind roses for Walvis Bay town for the period 2006 (Petzer, G. & von Gruenewaldt, R., 2008)

Temperature at Walvis Bay is strongly regulated by the cold Benguela current. As a result, there is typically limited variation between diurnal and seasonal temperatures. Average annual temperatures are approximately 18 °C to 19 °C with the maximum temperature seldom above 30 °C and minimums rarely below 5 °C (Figure 7-6). The only real temperature extremes are experienced during east wind conditions in the autumn to early winter months when temperatures can reach the upper thirties or even low forties. This results in these months having an average maximum temperature ranging from 30 °C to 35 °C. As one moves inland from Walvis Bay, daytime temperatures increase rather quickly while night time temperatures can get significantly colder in the desert environment.

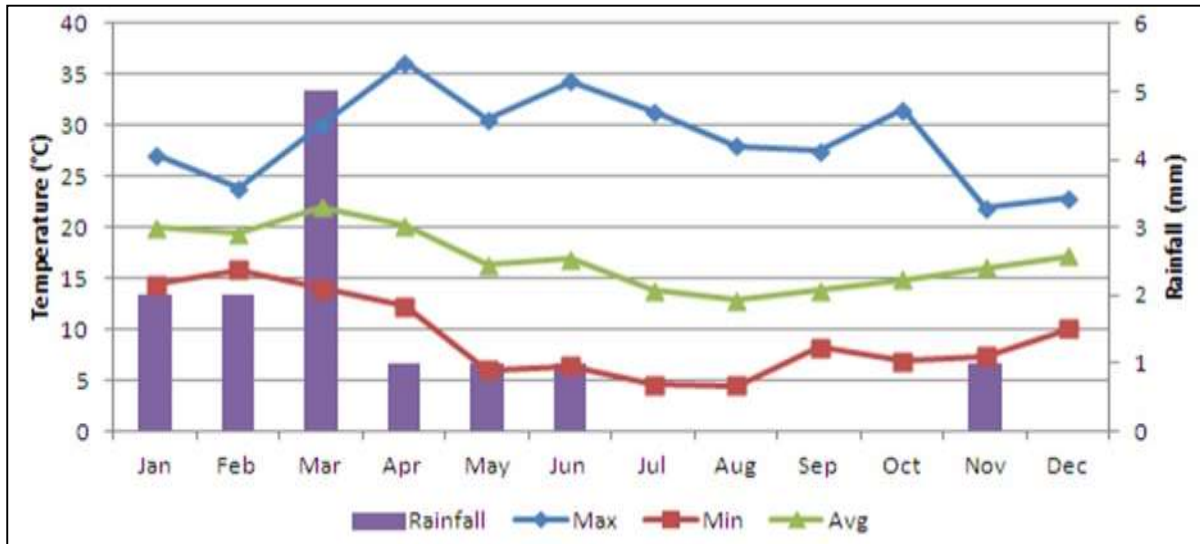


Figure 7-6 Temperature and rainfall at Walvis Bay (from: uMoya-NILU, 2020)

As explained above, the SAH severely limits the amount of rainfall over Namibia and especially at the coast and over the Namib Desert. As such, the average annual rainfall in Walvis Bay is below 50 mm (Figure 7-6), with 100% variation in annual rainfall. Infrequent, heavy rainfall does occur and typically results in rather chaotic conditions as Walvis Bay, and other coastal towns, has not been developed to cater for large volumes of storm water. Fog plays a very significant role as source of water for many plants and animals along Namibia's coast and the Namib Desert. Walvis Bay has up to 900 hours of fog per year and it results from the cold Benguela water cooling the humid air above it to such a temperature that the water vapour condenses to form fog and low level clouds (Mendelsohn et al., 2002).

Implications and Impacts

The strong westerly to south-westerly winds in Walvis Bay will carry any dust on site for great distances. Dust plumes may have potential health impacts (humans and animals) as well as cause damage to infrastructure and create a negative visual impact. Prevailing winds are away from any residential areas.

Heavy rainfall does not occur frequently but in such an event, metal ore dusts and other potential pollutants such as spilled hydrocarbons, may be washed off site and enter the environment. Infrastructure damage can also occur.

Strong winds on site can cause damage to infrastructure not constructed or anchored to withstand them.

7.3 CORROSIVE ENVIRONMENT

Walvis Bay is located in a very corrosive environment, which may be attributed to the frequent salt-laden fog, periodic winds and abundance of aggressive salts (dominantly NaCl and sulphates) in the soil. The periodic release of hydrogen sulphide (H₂S) from the ocean is expected to contribute to corrosion. See Figure 7-7 for corrosion comparison data with other centres.

The combination of high moisture and salt content of the surface soil can lead to rapid deterioration of subsurface metal (e.g. pipelines) and concrete structures. Chemical weathering of concrete structures due to the abundant salts in the soil is a concern.

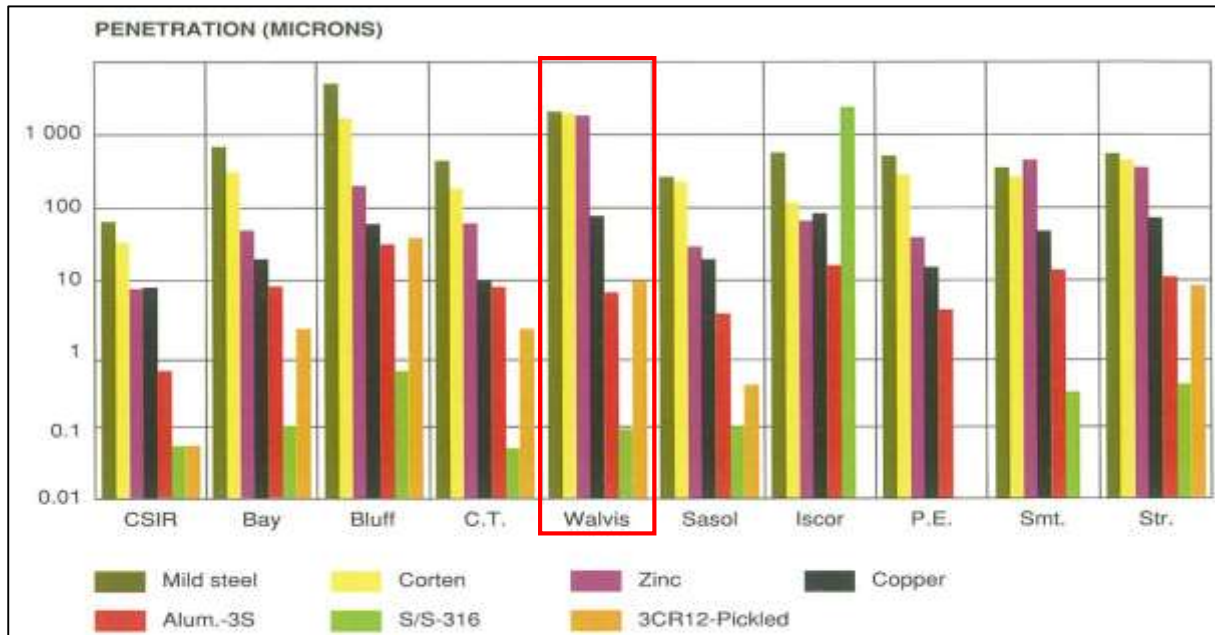


Figure 7-7 Twenty year corrosion exposure results in southern African towns (Callaghan 1991)

Implications and Impacts

Corrosion levels may be high and must be kept in mind when planning the construction and maintenance of the facility and related infrastructure. Goods will not remain on site for prolonged periods of time, thereby reducing their risk to corrode on site.

7.4 TOPOGRAPHY AND DRAINAGE

Walvis Bay is located in the Central Western Plain of Namibia. The Kuiseb River forms the southern boundary of this landscape group, with the Namib Dune Field being present south of the Kuiseb River. A bay is formed by a peninsula commonly known as Pelican Point. On the southern part of the bay is a lagoon which used to be the mouth of the Kuiseb River. Dune migration however forced the flow of the Kuiseb River to the north. This flow was stopped through the construction of a flood control wall to prevent flooding of the town of Walvis Bay, thus forcing the flood waters to move through the dune area to the lagoon. The Kuiseb River now rarely reaches the lagoon.

The topography on site and surroundings have been levelled in order to support development. Surface flow is thus highly influenced by anthropogenic activity. In general, drainage in the Walvis Bay area is poorly developed due to the lack of rainfall <50 mm/annum received. A dune field is present southeast of Walvis Bay and also further to the northeast. These dunes generally migrate in a northerly direction. Further inland is the gravel plains of the central areas of the Namib Naukluft Park. Surface water around Walvis Bay is limited to the marine salt pans, lagoon and ocean as well as a man-made wetland formed as a result of the sewage treatment works.

Implications and Impacts

Any pollutants that are not contained and are transported via surface water flow may be transported out of the site to the surrounding environment. Therefore, the storage of hazardous substances must be strictly controlled according to industry best practise requirements.

7.5 GEOLOGY AND HYDROGEOLOGY

Walvis Bay is located in the Central Western Plain of Namibia. The Kuiseb River forms the southern boundary of this landscape group, with the Namib Dune Field being present south of the Kuiseb River. Northerly dune migration is forcing the Kuiseb River in a northerly direction, with Kuiseb River paleochannels being present as far south as Sandwich Harbour.

Following the breakup of West-Gondwana during the early Cretaceous (130 – 135 Ma ago), continental uplift took place, enhancing erosional cutback and the formation of the Namibian Escarpment. A narrow pediplain formed, mainly over Damara Age rocks. The South Central started filling in over the pediplain, with marine conditions established around 80 Ma ago. Towards the end of the Cretaceous (70 – 65 Ma ago) a relative level surface was created, on which later deposition of sediments took place. Marine deposition took place in the parts covered by the newly formed South Central Ocean, while terrestrial deposits took place on land. Further continental uplift moved the shoreline to its present position.

Northwards migration of sand covered parts of the exposed marine deposits, with Kuiseb floods also depositing material over the marine sediments. Depth to bedrock in Walvis Bay is expected to be deeper than 40 m below surface. Based on previous work conducted in the area, it is expected that the sediments under the project area would consist of medium to coarse grain sand with thin lenses of more clayey material and layers of shell material.

Groundwater in the area is expected less than 2 m below surface and most probably related to seawater intrusion. Shallow freshwater lenses might be present. The origin of these freshwater lenses would mostly be freshwater leakages from the water supply reticulation as well as from the semi purified ponds present near the effluent treatment works.

Implications and Impacts

Groundwater is not utilised in the area. Pollution of the groundwater is however still prohibited. Adherence to Namibian law or better in relation to correct handling and storage of hazardous substances, and spill control structures installed and maintained where hazardous substances are stored and handled will successfully prevent pollution of groundwater, surface water or soil. Shallow groundwater may lead to rapid lateral spreading of contaminants. This may further have potential impact on underground utilities and may cause impacts on neighbouring properties.

7.6 PUBLIC WATER SUPPLY

Public water supply to Walvis Bay and the surrounding developments is provided by NamWater from the NamWater Kuiseb Water Supply Scheme.

Implications and Impacts

Groundwater is saline and not used as potable water source. No potential contamination impact on water supply is thus expected. Water usage by the facility will be mainly for domestic use and possibly for dust suppression, but is not expected to have a negative impact on public water supply.

7.7 FAUNA AND FLORA

The site is located within an industrial area which has previously been cleared of all vegetation. Of note nearby (4.5 km west to southwest) is the Walvis Bay Lagoon, the salt works and the southern part of the bay west of the lagoon, which are the key components of the 12,600 ha Ramsar site (Wetland of International Importance). It is important both as an over-wintering area for Palaearctic migrant wader species as well as for African species such as Greater and Lesser Flamingos, Great White Pelican and Chestnut-Banded Plovers.

The sewerage ponds, situated about 1.5 km south of the facility, are regarded as sensitive manmade wetlands. Although a manmade fresh water source, they are an attraction for pelicans and flamingos. These wetlands also support 53% of the duck and geese population in the area. The wetland is formed by the constant inflow of semi-purified water and supports extensive

stands of reeds. There is also a flight path for birds between the sewerage ponds, the lagoon and the offshore bird breeding platform (Ghwano Island) 7.9 km north of the site. The site is near the flight paths for the three major habitats (lagoon, sewage ponds and Ghwano Island).

Implications and Impacts

The facility is located within an already disturbed industrial area. Thus no immediate threat to biodiversity in the area is expected, however, uncontrolled pollution may and can cause damage to any biodiversity surrounding the site. Bright lighting may also negatively affects birds flying at night and may cause disorientation and collisions.

7.8 DEMOGRAPHIC AND ECONOMIC CHARACTERISTICS

At local level Walvis Bay has an urban population size of 51,618 (Namibia Statistics Agency, 2023). 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.

Table 7-1 Demographic characteristics of Walvis Bay, the Erongo Region and Nationally (Namibia Statistics Agency, 2023)

	Walvis Bay Urban	Walvis Bay Rural	Erongo Region	Namibia
Population (Males)	26,212	25,828	122,322	1,474,224
Population (Females)	25,406	25,669	117,884	1,548,177
Population (Total)	51,618	51,497	240,206	3,022,401
Population Density (persons/km ²)	2,730.8		3.8	3.7

Implications and Impacts

The facility will provide additional employment to people from the area. Some skills development and training will benefit employees during the operational phase. Operations may have further stimulate economic growth of the area and region which may result in more job opportunities.

7.9 HERITAGE, CULTURAL AND ARCHAEOLOGICAL ASPECTS

There are no church, mosques or related buildings in close proximity to the site. No known archaeological resources have been noted in the vicinity since the urbanisation of the area. No other structures, sites or spheres of heritage of cultural significance was determined to be in close proximity to the site.

8 PUBLIC CONSULTATION

Consultation with the public forms an integral component of an environmental assessment investigation and enables interested and affected parties (IAPs) e.g. neighbouring landowners, local authorities, environmental groups, civic associations and communities, to comment on the potential environmental impacts associated with projects and to identify additional issues which they feel should be addressed in the environmental assessment.

Public participation notices were advertised twice for two weeks in the national papers: Republikein and Namibian Sun on 22 and 29 July 2024. A site notice was placed at erf 5244. Interested and affected parties were identified and notified of the project. Notification letters were hand delivered to available neighbours as well as the Municipality of Walvis Bay. See Appendix A for proof of the public participation processes. No one registered as IAP for the project and no concerns regarding the project were raised during the public consultation phase.

9 MAJOR IDENTIFIED IMPACTS

During the scoping exercise a number of potential environmental impacts have been identified. The following section provides a brief description of the most important of these impacts.

9.1 SOCIO-ECONOMIC IMPACTS

Operations of the Proponent will sustain and provide employment opportunities to residents of Walvis Bay. The operational phase will create additional permanent employment opportunities and some training and skills development will take place. Successful implementation of the project is hinged on continued employment of labourers. Continued employment of individuals increases their economic stability which in turn increases their economic resilience.

Additional revenue will be generated by the proposed operations and contributions will be made to the local, regional and national economy. The optimisation in the use of the land will change the revenue produced and paid to the national treasury. Additional revenue will be generated through employment, exporting of goods and use of services.

9.2 ENVIRONMENTAL CONTAMINATION

During the storage and handling of metal ores and industrial cargo at the site, as well as during transportation thereof, contamination of the environment may occur if product containment fails. For major spills, or as a result of long term contamination by windblown dust, the environment can negatively be impacted. Discoloration of soil and infrastructure can also occur where cargo is not contained. The risk of this impact occurring is mainly associated with aspects such as bulk bag failure, bulk bag damage during handling (e.g. by the forklift), trucks overturning, etc. These risks could however be mitigated and prevented by strict adherence to all international best practise standards or guidelines.

9.3 NOISE IMPACTS

Noise pollution will exist due to heavy vehicles accessing the site to deliver and collect product, as well as the use of forklifts, frontend loaders, reach stackers and related machinery that may make use of audible warning sounds. However, the majority of operations will be within the warehouse which will act as a noise barrier. The facility is also situated in an industrial area which, within reasonable limits, allows for noisy activities.

9.4 AIR QUALITY RELATED HEALTH IMPACTS

Hazard and health impact information of pure or near pure elements and compounds are relatively freely available. On the other hand, determining the potential dangers of metal ores to health and the environment is difficult as the ore is a mixture of the main metal of interest and a variety of gangue material. Ultimately, there will be a number of factors that will determine the level of exposure. These include:

- ◆ Workers vs. neighbours/passers-by: Workers within the warehouse may potentially be exposed to dust at all times of offloading and loading. Neighbours and passers-by will only be exposed to dust should accidental product loss occur outside the warehouse (e.g. torn bag during lifting with forklift).
- ◆ The volume and particle size of the wind dispersible dust present in the product.
- ◆ The concentration of actual hazardous/dangerous material in the dust.
- ◆ The strength and direction of the wind.

Table 9-1 provides an overview of the key characteristics of the different cargo types planned to be handled on site. It should be noted that the table is not meant to be an exhaustive list of all the potential hazards, incompatibilities, etc., but only to act as a rough guide. Some major hazards or incompatibilities are however highlighted. For all products, their respective MSDS documentation should at minimum be adhered to. Where a MSDS is not available for specifically the metal ores, the mine from where the ore originates should be able to provide guidance on handling and storage of the ore according to their standard operating procedures and EMP. Although the Health and Safety Regulations of the Namibia Labour Act provides exposure limits,

based on the Occupational Safety and Health Administration (OSHA) permissible exposure limits (PEL), for some of the chemicals/elements, they are likely outdated and above accepted or recommended international levels. Therefore the National Institute for Occupational Safety & Health (NIOSH) recommended exposure limits (REL) are instead provided.

Table 9-1 Cargo to be stored and handled on erf 5244

Cargo Type	Health Impacts	Environmental Hazard	Incompatibility	Flammability	Exposure Limits*
Copper Concentrate	Toxic if ingested or inhaled, causes skin and eye irritation.	Toxic to aquatic life with long-lasting effects.	Strong oxidizing agents, acids.	Not flammable	NIOSH REL 1 mg/m ³ (as copper)
Copper metals (cathodes, blisters, anodes)	Toxic if ingested or inhaled, causes skin and eye irritation.	Toxic to aquatic life with long-lasting effects.	Strong oxidizing agents, acids.	Not flammable	NIOSH REL 1 mg/m ³ (as copper)
Iron Ore	May cause mechanical irritation to the skin and eyes.	Not considered toxic to the environment.	None identified.	Not flammable	No specific limit
Cobalt	Very toxic, especially if inhaled; carcinogenic.	Very toxic to aquatic life.	Keep away from acids, bases, oxidizing agents.	Fine dusts may ignite spontaneously.	NIOSH REL 0.05 mg/m ³
Zinc	May cause respiratory tract irritation.	Not considered toxic but can affect aquatic environments.	Strong acids and alkalis.	Not flammable	NIOSH REL 5 mg/m ³ (as zinc oxide)
Lithium	Causes skin and eye irritation, respiratory tract irritation.	No specific hazard identified.	Strong oxidizing agents.	Not flammable	OSHA PEL 5 mg/m ³
Nickel	Potential carcinogen, may cause skin and respiratory irritation.	Harmful to aquatic life with long-lasting effects.	Strong acids and oxidizing agents.	Not flammable	NIOSH REL 0.015 mg/m ³
Chrome	Toxic if inhaled, causes skin and eye irritation.	Harmful to aquatic life.	Strong oxidizing agents.	Not flammable	NIOSH REL 0.5 mg/m ³
Coal	May cause respiratory irritation, carcinogenic potential.	Can affect aquatic life.	Keep away from strong oxidizers.	Combustible under certain conditions.	No specific limit
Anthracite	May cause respiratory irritation, carcinogenic potential.	Can affect aquatic life.	Keep away from strong oxidizers.	Combustible under certain conditions.	No specific limit
Coking coal	May cause respiratory irritation, carcinogenic potential.	Can affect aquatic life.	Keep away from strong oxidizers.	Combustible under certain conditions.	No specific limit

Cargo Type	Health Impacts	Environmental Hazard	Incompatibility	Flammability	Exposure Limits*
PetCoke (petroleum coke)	May cause respiratory irritation.	Can affect aquatic life.	Strong oxidizing agents.	Combustible under certain conditions.	No specific limit
Manganese	Toxic if inhaled or ingested, potential neurotoxin.	Harmful to aquatic life.	Strong oxidizing agents, acids.	Flammable solid.	NIOSH REL 1 mg/m ³
Tin	May cause respiratory irritation.	Not considered toxic to the environment.	Strong acids and alkalis.	Not flammable	No specific limit
Cement	Causes skin and eye irritation, may cause respiratory irritation.	Not considered toxic to the environment.	Keep away from acids.	Not flammable	No specific limit
Polymers	Typically can cause skin and eye irritation, may cause respiratory irritation.	No specific hazard identified.	Strong oxidizing agents.	Not flammable	No specific limit
Polyethylene HDPE / LDPE	Causes skin and eye irritation, may cause respiratory irritation.	No specific hazard identified.	Strong oxidizing agents.	Not flammable	No specific limit
Polypropylene	Causes skin and eye irritation, may cause respiratory irritation.	No specific hazard identified.	Strong oxidizing agents.	Not flammable, but dust may form combustible mixtures.	No specific limit
PVC Resins	Causes skin and eye irritation, may cause respiratory irritation.	No specific hazard identified.	Strong oxidizing agents.	Not flammable	No specific limit
Ammonium phosphate MAP & DAP (fertilizer) / PotAsh	Causes skin and eye irritation, may cause respiratory irritation.	Harmful to aquatic life.	Strong acids and bases.	Not flammable	No specific limit
Ammonium sulphate (salt)	Causes skin and eye irritation, may cause respiratory irritation.	Harmful to aquatic life.	Strong acids and bases.	Not flammable	No specific limit
Caustic Soda	Causes severe skin burns and eye damage.	Harmful to aquatic life.	Strong acids.	Not flammable	NIOSH REL 2 mg/m ³
Flocculant	Causes skin and eye irritation, may cause respiratory irritation.	No specific hazard identified.	Strong acids and oxidizing agents.	Not flammable	No specific limit

Cargo Type	Health Impacts	Environmental Hazard	Incompatibility	Flammability	Exposure Limits*
Sulphur	Causes skin and eye irritation, may cause respiratory irritation.	Toxic to aquatic life with long-lasting effects.	Strong oxidizing agents, chlorates, nitrates.	Flammable and explosive if significant quantities of dust are airborne.	NIOSH REL 15 mg/m ³ (hydrogen sulphide, 10 minutes)
Soda Ash	Causes skin and eye irritation, may cause respiratory irritation.	Harmful to aquatic life.	Strong acids.	Not flammable	No specific limit
Sodium Bicarbonate	May cause skin and eye irritation.	No specific hazard identified.	Strong acids.	Not flammable	No specific limit
Calcium Carbonate	Causes eye irritation, may cause respiratory irritation.	Not considered toxic to the environment.	Strong acids.	Not flammable	Namibian 10 mg/m ³ (as a fume)
Calcium Chloride	Causes skin and eye irritation, may cause respiratory irritation.	Harmful to aquatic life.	Strong acids.	Not flammable	No specific limit
Magnesium Chloride	Causes skin and eye irritation, may cause respiratory irritation.	Harmful to aquatic life.	Strong acids.	Not flammable	No specific limit
Hematite	May cause mechanical irritation to the skin and eyes.	Not considered toxic to the environment.	None identified.	Not flammable	No specific limit
Barite	May cause mechanical irritation to the skin and eyes.	Not considered toxic to the environment.	None identified.	Not flammable	No specific limit
Hydrochloric Acid	Causes severe skin burns and eye damage, respiratory irritation.	Harmful to aquatic life.	Strong bases, oxidizing agents.	Not flammable	NIOSH REL 5 ppm
Creosote	Causes skin and eye irritation, may cause respiratory irritation; potential carcinogen.	Harmful to aquatic life.	Strong acids and oxidizing agents.	Combustible under certain conditions.	NIOSH REL 0.2 mg/m ³ (as benzene-soluble aerosol)
Heavy Furnace Oil	Causes skin and eye irritation, may cause respiratory irritation.	Harmful to aquatic life.	Strong acids and oxidizing agents.	Combustible under certain conditions.	No specific limit

Cargo Type	Health Impacts	Environmental Hazard	Incompatibility	Flammability	Exposure Limits*
Lime	Causes severe eye irritation.	Not considered toxic to the environment.	Strong acids.	Not flammable	No specific limit
Nitric Acid	Causes severe skin burns and eye damage, respiratory irritation.	Harmful to aquatic life.	Organic materials, reducing agents.	Not flammable	NIOSH REL 2 ppm
Sulphuric Acid	Causes severe skin burns and eye damage, respiratory irritation.	Harmful to aquatic life.	Organic materials, reducing agents.	Not flammable	NIOSH REL 1 mg/m ³

*For metal ores and cobalt hydroxide, the NIOSH REL for the elemental form of the metal are provided as no REL (or other exposure limits) for the ores are available. All values are time weighted averages (TWA) which is exposure over an eight hour period, except where stated otherwise. Where no NIOSH REL is available, the Namibian limit or OSHA permissible exposure limit (PEL) for respirable particulates (dust) are provided.

In addition to possible ore dust impacts, exhaust gases of trucks may also deteriorate air quality in town. Exhaust gases typically contain nitrogen (67%), carbon dioxide (12%), water (11%), oxygen (9%) and pollutant emissions (1%) that include carbon monoxide, hydrocarbons, nitrogen oxides, sulphur dioxide and particulate matter (Resitoglu and Altinisik 2015). While carbon dioxide contributes to the greenhouse effect and climate change, it is the 1% pollutant emissions that are typically a health concern. Due to the frequent winds of Walvis Bay, these gases and particulate matter are expected to disperse quickly, but may accumulate during periods of no or very calm winds.

Apart from the metals in the ore dusts, the dust itself in respirable size (PM10) and thoracic size (PM2.5), as well as potential silicates and asbestos in the dust, can also impact on the health of workers and residents, should it not be successfully contained. Both silicates and asbestos are very carcinogenic, thus, even more so the need for zero dust emissions and compulsory wearing of respirators by employees working in close proximity to potential dust prone environments (e.g. inside warehouse).

9.5 TRAFFIC IMPACTS

The site is located within the industrial area of Walvis Bay. During existing operations cargo is transported to and from the warehouse with trucks. Proposed future operations are expected to result in increased traffic along Circumferential Road which is already a high traffic area. Impacts relate to increased accidents, damaged road surfaces and pavements, congestion, and obstruction of entrances and exits of nearby properties. The nearby rail level crossing also presents potential traffic related impacts and increases the chances of accidents. The transport of goods throughout the country leads to additional traffic impacts in the town, the region and nationally.

9.6 FIRE

Potentially flammable substances are stored on site. By adhering to municipal and MSDS requirement and ensuring sufficient firefighting and preventative measures are in place, these impacts can be prevented. Metal ore dust is not flammable per se, but significant concentrations of very fine airborne dust can ignite. The likelihood of this occurring is low. Sulphur is however flammable and even explosive if fine dust is present. It reacts violently if exposed to an oxidiser. Dry sulphur is a static electricity accumulator which can cause ignition. Extinguishing a sulphur fire is difficult and it produces toxic hydrogen sulphide gas.

10 ASSESSMENT AND MANAGEMENT OF IMPACTS

The purpose of this section is to assess and identify the most pertinent environmental impacts that are expected from the operational, construction (also upgrades, maintenance, etc. – see glossary for “construction”) and potential decommissioning activities of the facility. An EMP based on these identified impacts are also incorporated into this section.

For each impact an Environmental Classification was determined based on an adapted version of the Rapid Impact Assessment Method (Pastakia, 1998). Impacts are assessed according to the following categories: Importance of condition (A1); Magnitude of Change (A2); Permanence (B1); Reversibility (B2); and Cumulative Nature (B3) (see Table 10-1).

Ranking formulas are then calculated as follow:

Environmental Classification = $A1 \times A2 \times (B1 + B2 + B3)$.

The environmental classification of impacts is provided in Table 10-2.

The probability ranking refers to the probability that a specific impact will happen following a risk event. These can be improbable (low likelihood); probable (distinct possibility); highly probable (most likely); and definite (impact will occur regardless of prevention measures).

Table 10-1 Assessment criteria

Criteria	Score
Importance of condition (A1) – assessed against the spatial boundaries of human interest it will affect	
Importance to national/international interest	4
Important to regional/national interest	3
Important to areas immediately outside the local condition	2
Important only to the local condition	1
No importance	0
Magnitude of change/effect (A2) – measure of scale in terms of benefit / disbenefit of an impact or condition	
Major positive benefit	3
Significant improvement in status quo	2
Improvement in status quo	1
No change in status quo	0
Negative change in status quo	-1
Significant negative disbenefit or change	-2
Major disbenefit or change	-3
Permanence (B1) – defines whether the condition is permanent or temporary	
No change/Not applicable	1
Temporary	2
Permanent	3
Reversibility (B2) – defines whether the condition can be changed and is a measure of the control over the condition	
No change/Not applicable	1
Reversible	2
Irreversible	3
Cumulative (B3) – reflects whether the effect will be a single direct impact or will include cumulative impacts over time, or synergistic effect with other conditions. It is a means of judging the sustainability of the condition – not to be confused with the permanence criterion.	
Light or No Cumulative Character/Not applicable	1
Moderate Cumulative Character	2
Strong Cumulative Character	3

Table 10-2 Environmental classification (Pastakia 1998)

Environmental Classification	Class Value	Description of Class
72 to 108	5	Extremely positive impact
36 to 71	4	Significantly positive impact
19 to 35	3	Moderately positive impact
10 to 18	2	Less positive impact
1 to 9	1	Reduced positive impact
0	-0	No alteration
-1 to -9	-1	Reduced negative impact
-10 to -18	-2	Less negative impact
-19 to -35	-3	Moderately negative impact
-36 to -71	-4	Significantly negative impact
-72 to -108	-5	Extremely Negative Impact

10.1 RISK ASSESSMENT AND ENVIRONMENTAL MANAGEMENT PLAN

The EMP provides management options to ensure impacts of the facility is minimised. An EMP is a tool used to take pro-active action by addressing potential problems before they occur. This should limit the corrective measures needed, although additional mitigation measures might be included if necessary. The environmental management measures are provided in the tables and descriptions below. These management measures should be adhered to during the various phases of the operation of the facility. This section of the report can act as a stand-alone document. All personnel taking part in the operations of the facility should be made aware of the contents in this section, so as to plan the operations accordingly and in an environmentally sound manner.

The objectives of the EMP are:

- ◆ to include all components of construction activities (upgrades, maintenance, etc.) and operations of the facility;
- ◆ to prescribe the best practicable control methods to lessen the environmental impacts associated with the project;
- ◆ to monitor and audit the performance of operational personnel in applying such controls; and
- ◆ to ensure that appropriate environmental training is provided to responsible operational personnel.

Various potential and definite impacts will emanate from the operations, construction and decommissioning phases. The majority of these impacts can be mitigated or prevented. The impacts, risk rating of impacts as well as prevention and mitigation measures are listed below.

As depicted in the tables below, impacts related to the operational phase are expected to mostly be of low to medium significance and can mostly be mitigated to have a low significance. The extent of impacts are mostly site specific to local and are not of a permanent nature. Due to the nature of the surrounding areas, cumulative impacts are possible and include noise pollution and traffic impacts.

10.1.1 Planning

During the phases of planning for construction, operations and decommissioning of the facility, it is the responsibility of Proponent to ensure they are and remain compliant with all legal requirements. The Proponent must also ensure that all required management measures are in place prior to and during all phases, to ensure potential impacts and risks are minimised. The following actions are recommended for the planning phase and should continue during various other phases of the project:

- ◆ Ensure that all necessary permits from the various ministries, local authorities and any other bodies that governs the construction (maintenance) and operations of the facility are in place and valid.
- ◆ Ensure all appointed contractors and employees enter into an agreement which includes the EMP. Ensure that the contents of the EMP are understood by the contractors, sub-contractors, employees and all personnel present or who will be present on site.
- ◆ Make provisions to have a Health, Safety and Environmental Coordinator to implement the EMP and oversee occupational health and safety as well as general environmental related compliance at the site.
- ◆ Make provisions to have a community liaison officer on site who will handle complaints and community input, and through whom, where reasonable, monitoring data can be requested. Communicate the contact details of the community liaison officer to interested and affected parties when the project is initiated.
- ◆ Have the following emergency plans, equipment and personnel on site where reasonable to deal with all potential emergencies:
 - Risk management / mitigation / EMP/ Emergency Response Plan and HSE Manuals;
 - Adequate protection and indemnity insurance cover for incidents;
 - Comply with the provisions of all relevant safety standards;
 - Procedures, equipment and materials required for emergencies.

- If one has not already been established, establish and maintain a fund for future ecological restoration of the project site should project activities cease and the site is decommissioned and environmental restoration or pollution remediation is required.
- Establish and / or maintain a reporting system to report on aspects of construction activities, operations and decommissioning as outlined in the EMP.
- Prepare and submit environmental monitoring reports as per the conditions of the environmental clearance certificate.
- Appoint a specialist environmental consultant to update the EIA and EMP and apply for renewal of the environmental clearance certificate prior to expiry.

10.1.2 Employment

An increase of skilled and professional labour will result from the operations of the project. Employment will be sourced locally as far as practically possible while ore transport companies / drivers may be contracted from other regions. Development of the existing facility into the proposed operations will increase the sustainability of the current employment.

Project Activity / Resource	Nature (Status)	(A1) Importance	(A2) Magnitude	(B1) Permanence	(B2) Reversibility	(B3) Cumulative	Environmental Classification	Class Value	Probability
Construction	Employment and contribution to local economy	2	1	2	2	2	12	2	Probable
Daily Operations	Employment contribution to local economy; project revenue generation	3	1	3	2	2	21	3	Definite
Indirect Impacts	Decrease in unemployment, increase in revenue generated	3	2	3	2	2	42	4	Definite

Desired Outcome: Provision of employment to local Namibians.

Actions

Mitigation:

- The Proponent must employ local Namibians where possible. If the skills exist locally, employees must first be sourced from the town, then the region and then nationally.

Responsible Body:

- Proponent

Data Sources and Monitoring:

- Bi-annual summary report based on employee records.

10.1.3 Skills, Technology and Development

During various phases of construction and operations, training will be provided to a portion of the workforce. Skills are transferred to an unskilled workforce for general tasks. The technology required for the development of the facility is often new to the local industry, aiding in operational efficiency. Development of people and technology are key to economic development.

Project Activity / Resource	Nature (Status)	(A1) Importance	(A2) Magnitude	(B1) Permanence	(B2) Reversibility	(B3) Cumulative	Environmental Classification	Class Value	Probability
Construction	Technological development and transfer of skills	2	1	2	3	1	12	2	Probable
Daily Operations	Technological development and transfer of skills	3	1	3	2	2	21	3	Definite
Indirect Impacts	Economic development	3	1	3	2	2	21	3	Definite

Desired Outcome: To see an increase in skills of local Namibians, as well as development and technology advancements in associated industries.

Actions

Enhancement:

- If the skills exist locally, contractors must first be sourced from the town, then the region and then nationally. Deviations from this practise must be justified.
- Skills development and improvement programs to be made available as identified during performance assessments.

Responsible Body:

- Proponent
- Contractors

Data Sources and Monitoring:

- Record should be kept of training provided.
- Ensure that all training is certified or managerial reference provided (proof provided to the employees) inclusive of training attendance, completion and implementation.
- Bi-annual summary report based on records kept.

10.1.4 Revenue Generation

The project will change the way revenue is generated and paid to the national treasury. An increase of skilled and professional labour will result from the operations of the project and related wages and salaries will be paid. Employment at the warehouse will be sourced locally as far as practically possible while transport companies / drivers may be contracted from other regions in order to transport cargo to and from Walvis Bay. Revenue will be generated through the provision of port and related services such as stevedore operations.

Project Activity / Resource	Nature (Status)	(A1) Importance	(A2) Magnitude	(B1) Permanence	(B2) Reversibility	(B3) Cumulative	Environmental Classification	Class Value	Probability
Construction	Contribution to local economy	2	1	2	2	2	12	2	Probable
Daily Operations	Contribution to local and national economy	3	2	3	2	2	42	4	Definite
Indirect Impacts	Increase in revenue generated	3	1	3	2	2	21	3	Definite

Desired Outcome: Contribution to the local and national economy. Contribution to national treasury.

Actions

Enhancement:

- The Proponent must employ local Namibians and source Namibian contractors, goods and services as far as is practically possible. Deviations from this practise must be justified.

Responsible Body:

- Proponent

Data Sources and Monitoring:

- Bi-annual summary report based on employee records.

10.1.5 Demographic Profile and Community Health

The project is reliant on labour during the construction and operational phases. Local construction teams in Walvis Bay will be used for all general maintenance and upgrade activities. The scale of the construction portion of the project is limited and it is not expected to create a change in the demographic profile of the local community. Where possible, existing labour, already employed by the Proponent will be used or new labourers will be sourced from the town. Community health may be exposed to factors such as communicable disease like HIV/AIDS and alcoholism/drug abuse, associated with the trucking industry (transport of goods to and from Walvis Bay) and increased spending power of the labour force. Trucks delivering products to the warehouse will not stay for extended periods of time at the site, however, may reside over-night in Walvis Bay. Foreign persons in the area may increase the cumulative risk of communicable disease (such as HIV/ AIDS) in Walvis Bay.

Positive impacts will related to employees and contractors' increased economic resilience and improved livelihoods.

Project Activity / Resource	Nature (Status)	(A1) Importance	(A2) Magnitude	(B1) Permanence	(B2) Reversibility	(B3) Cumulative	Environmental Classification	Class Value	Probability
Daily Operations	Social ills related to unemployment and cross country transport	2	-1	3	2	2	-14	-2	Probable
Daily Operations and Construction	Increased economic resilience and improved livelihoods	2	2	3	2	2	28	3	Probable
Indirect Impacts	The spread of diseases	3	-1	3	2	2	-21	-3	Probable

Desired Outcome: To prevent the in-migration and growth in informal settlements, prevent the spread of communicable disease and prevent / discourage socially deviant behaviour.

Actions:

Prevention:

- Employ local people from the area where possible, deviations from this practise should be justified appropriately.
- Adhere to all municipal by-laws relating to environmental health which includes, but is not limited to, sanitation requirements for workers on site.
- Appointment of reputable contractors.

Mitigation:

- Educational programmes for employees (especially truck drivers) on HIV/AIDS and general upliftment of employees' social status.

Responsible Body:

- Proponent

Data Sources and Monitoring:

- Facility inspection sheet for all areas which may present environmental health risks, kept on file.
- Bi-annual summary report based on educational programmes and training conducted.
- Bi-annual report and review of employee demographics.

10.1.6 Health, Safety and Security

Some chemicals handled and stored on site are hazardous with inherent health risks to personnel on site when inhalation, accidental ingestion, eye or skin contact occurs. Some chemicals may in itself not be particularly dangerous, but may become dangerous when in contact or mixed with incompatible materials. This may happen when for example incompatible materials are stored with each other, during containment failure (e.g. ruptured bags), or when different spilled products are cleaned and stored in the same container. If not contained, windblown ore dust may further pose health risk to nearby receptors.

Injuries can occur due to incorrect lifting of heavy equipment and materials, falling from heights, stacked chemicals tipping over, and accidents involving forklifts and vehicles.

Security risks are related to unauthorized entry, theft and sabotage. Security risks are increased as a result of high value commodities, e.g. copper cathodes, stored and handled at the site.

Project Activity / Resource	Nature (Status)	(A1) Importance	(A2) Magnitude	(B1) Permanence	(B2) Reversibility	(B3) Cumulative	Environmental Classification	Class Value	Probability
Construction	Physical injuries, exposure to chemicals and criminal activities	1	-2	2	2	1	-10	-2	Improbable
Daily Operations	Physical injuries, exposure to chemicals and criminal activities	2	-2	3	2	2	-28	-3	Improbable

Desired Outcome: To prevent injury, health impacts and theft.

Actions

Prevention:

- Implement and maintain an integrated health and safety management system, to act as a monitoring and mitigating tool, which includes: operational, safe work and medical procedures, permits to work, emergency response plans, housekeeping rules, MSDS's and signage requirements (personal protective equipment (PPE), flammable etc.).
- Develop emergency response plans for all possible health, safety and security impacts and appoint responsible personnel in key positions to activate and oversee such plans when required.
- Clearly label dangerous and restricted areas as well as dangerous equipment and products.
- Provide all employees with required and adequate PPE which include coveralls, respirators and protective eyewear.
- Ensure that all personnel who will work in the warehouse receive adequate training on:
 - operation of equipment (mainly the forklift).
 - reading and understanding of MSDS instructions (take note that MSDS documents are not always 100% adequate and that some extra information for hazardous chemicals may be required).
 - handling of hazardous substances.
 - containment of hazardous substance spills.
 - correct application of neutralising agents, absorbents, etc. which may be used for spilled products (knowledge of incompatibilities is key).
 - identification of incompatible chemicals and the need to separate them during storage (segregation).
 - identification of potential hazardous conditions or events.
 - first aid and actions to be taken for specific highly dangerous chemicals should contact, inhalation or ingestion occur.
 - firefighting and compatible firefighting media for specific chemicals (see section 10.1.10).

- A MSDS file in which a particular MSDS can quickly be found, must be available in the warehouse.
- For specific highly dangerous chemicals (e.g. highly reactive with other chemicals and substances, highly flammable, highly corrosive or poisonous), abridged emergency procedures can be prepared that summarise they key do's and don'ts for each of these chemicals.
- The contact details of all emergency services must be readily available.
- An emergency shower, eyewash station and water bath must present and inspected daily to ensure it is in working order and ready for use in an emergency.
- Ideally, a worker should not be allowed to enter the warehouse alone when chemicals will be handled. Should an emergency situation result where a worker is injured to such an extent that he/she can't call for help (e.g. inhalation of noxious/corrosive fumes), aid and medical treatment may come too late to prevent serious injury or even fatalities. Safety measures must be implemented and these can include being accompanied by the security guard on site or using a panic button that can be worn by the warehouse employee which sounds an alarm in the offices.
- Security procedures and proper security measures must be in place to protect workers and clients.
- Equipment on site must be locked away or placed in a way that does not encourage criminal activities (e.g. theft).

Mitigation:

- For all emergency situations, the appropriate emergency response plan must be implemented as soon as possible in order to minimize the magnitude of impacts or prevent such impacts from developing into more severe impacts.

Responsible Body:

- Proponent
- Contractors

Data Sources and Monitoring:

- Receive chemical composition analysis results of various ores to be handled from the mines and scrutinize the results for any carcinogenic (or other hazardous) gangue material like asbestos. Should any such material be present, additional safety measures must be implemented to ensure that no workers or nearby receptors are exposed to dust.
- If regular complaints are received regarding dust, air quality monitoring must be conducted on and around the site to monitor ore dust fallout. Monitoring to be conducted by an independent specialist who must advise on the monitoring protocol to be followed.
- Any incidents must be recorded with action taken to prevent future occurrences.
- A bi-annual report should be compiled of all incidents reported. The report should contain dates when training were conducted and when safety equipment and structures were inspected and maintained.

10.1.7 Traffic

The volume of trucks on the national road networks will increase. The warehouse is within an area zoned for industrial use and operations will result in an increase in traffic along Circumferential Road. Heavy motor vehicles turning in these roads may result in an increased, cumulative impact on the road surface of the area. Trucks may block neighbouring business' entrances and increase the likelihood of accidents and incidents. Development of existing operations will not see a significant in an increase of traffic, however an altered flow patten with a dedicated entrance and exit will decrease possible collision risk at the access points.

Project Activity / Resource	Nature (Status)	(A1) Importance	(A2) Magnitude	(B1) Permanence	(B2) Reversibility	(B3) Cumulative	Environmental Classification	Class Value	Probability
Construction	Delivery of equipment and building supplies	1	-1	2	2	2	-6	-1	Probable
Daily Operations	Increase traffic, road wear and tear and accidents	2	-2	3	2	2	-14	-2	Definite

Desired Outcome: Minimum impact on traffic and no transport or traffic related incidents.

Actions

Mitigation:

- Trucks delivering or collecting goods should not be allowed to obstruct any traffic in surrounding areas and the town.
- Trucks associated with the facility should not be allowed to park or overnight in Circumferential Road, and may only overnight at areas designated for this purpose.
- Adhere to The Road Traffic and Transport Regulations, 2001 and all other applicable legislation related to road transport and maximum axle loads.
- If any traffic impacts are expected, traffic management should be performed to prevent these.
- The placement of signs to warn and direct traffic will mitigate traffic impacts.
- Identify vehicles on which hazardous substances are to be transported and handle all dangerous or hazardous goods according to MSDS instructions and under supervision of trained staff. Ensure the correct documentation (e.g. dangerous goods declaration, TREM card, etc.) is provided in the vehicle. Verify that the driver of the vehicle has undergone appropriate training.

Responsible Body:

- Proponent

Data Sources and Monitoring:

- The Road Traffic and Transport Regulations, 2001.
- Any complaints received regarding traffic issues should be recorded together with action taken to prevent impacts from repeating itself.
- A bi-annual report should be compiled of all incidents reported, complaints received, and action taken.

10.1.8 Air Quality Related Impacts

Reduced air quality as a result of exhaust gases (greenhouse gases) of trucks visiting the property and the port during construction and operations. This may have localised health impacts, but are expected to disperse relatively quickly due to the prevailing south-westerly winds in Walvis Bay. It will however still contribute to greenhouse gas emissions that in turn contribute to climate change. In terms of greenhouse gas emissions from trucks, it is the project in its entirety that should be considered. It is thus the responsibility of all stakeholders to implement strategies and measures to curb the release of greenhouse gases. The Proponent's contribution to greenhouse gas emissions will be minimal.

Air quality as a result of windblown dust can cause health effects, especially through chronic inhalation of such dust, in the nearby communities. The risk is not only related to the metals in the ores per se, but also to the potentially harmful gangue materials that comprise the bulk of the ore, as well as respirable fractions (PM10) and thoracic fraction (PM2.5) of the dust. Since the gangue materials present are not necessarily known, but could potentially include for example asbestos, it is crucial that the inhalation / ingestion of dust is prevented at all times. Sources of such dust can originate from the warehouse when, for example, bulk bags tear.

Project Activity / Resource	Nature (Status)	(A1) Importance	(A2) Magnitude	(B1) Permanence	(B2) Reversibility	(B3) Cumulative	Environmental Classification	Class Value	Probability
Daily Operations	Exposure to metal ore dust and its subsequent inhalation and/or ingestion and inhalation of exhaust gases. Damage to buildings as a result of exhaust gases resulting in acid deposition, ozone and soot build-up.	2	-2	3	2	2	-28	-3	Probable

Desired Outcome: To prevent health impacts and to reduce greenhouse gas emissions.

Actions

Prevention:

- All cargo must be secured on trucks to prevent cargo from falling off and subsequent damage to containment,
- Appoint reputable contractors for transporting of ore who prioritise a “zero dust policy”.

Mitigation:

- Dust suppression in the warehouse if ever required.
- All trucks must be serviced regularly and make use of technology to reduce emissions. This include selective catalytic reduction, diesel particulate filters and diesel oxidation catalysts.

Responsible Body:

- Proponent
- Contractors

Data Sources and Monitoring:

- Receive chemical composition analysis results of various ores to be handled from the mines and scrutinize the results for any carcinogenic (or other hazardous) gangue material like asbestos. Should any such material be present, additional safety measures must be implemented to ensure that no workers or nearby receptors are exposed to dust.

- If regular complaints are received regarding dust, air quality monitoring must be conducted on and around the site to monitor ore dust fallout. Monitoring to be conducted by an independent specialist who must advise on the monitoring protocol to be followed.
- Any incidents must be recorded with action taken to prevent future occurrences.
- A bi-annual report should be compiled of all incidents reported and monitoring performed. The report should contain dates when safety equipment and structures were inspected and maintained.

10.1.10 Fire

Construction and operational activities may increase the risk of the occurrence of fires if proper maintenance and housekeeping are not conducted. Of the cargo to be handled, specifically, sulphur is flammable and should be segregated from any oxidisers or heat or ignition sources. Ore dust (fines) suspended in the air can become flammable in excessive quantities. Some chemicals stored are flammable in nature and can even become explosive when exposed to incompatible materials (e.g. oxidisers when mixed with a fuel source like hydrocarbons). Uncontrolled fires and explosions can cause extensive damage to surrounding properties and can lead to casualties.

Project Activity / Resource	Nature (Status)	(A1) Importance	(A2) Magnitude	(B1) Permanence	(B2) Reversibility	(B3) Cumulative	Environmental Classification	Class Value	Probability
Construction	Fire and explosion risk	2	-2	2	2	1	-20	-3	Improbable
Daily Operations	Fire and explosion risk	2	-2	3	2	2	-28	-3	Improbable

Desired Outcome: To prevent property damage, possible injury and impacts caused by uncontrolled fires.

Actions:

Prevention:

- A holistic fire protection and prevention plan must be developed for the site and it should specifically take into account flammable products stored on site. This plan must include an emergency response plan, firefighting plan and a spill recovery plan and should have dedicated assigned personnel to oversee their development and implementation.
- Install smoke detectors in the warehouses.
- Firefighting equipment must be maintained and regularly serviced.
- Regular personnel training (firefighting, fire prevention and responsible housekeeping practices).
- Ensure all chemicals are stored strictly according to MSDS instructions. This include segregation of incompatible products.
- Ensure sufficiently trained warehouse employees who knows which fire extinguishing media (e.g. water, powder, foam) are incompatible with which chemicals (e.g. water on concentrated acid can result in a seriously violent reaction).
- Maintain regular site, mechanical and electrical inspections and perform regular maintenance.
- Clean all spills/leaks without delay and dispose of any contaminated material according to their MSDS requirements and at suitable locations to prevent the accumulation of flammable or explosive products on site.

Mitigation:

- For any fire related emergency situation, the appropriate emergency response plan must be implemented as soon as possible in order to minimize the magnitude of impacts or prevent such impacts from developing into more severe impacts.

Responsible Body:

- Proponent
- Contractors

Data Sources and Monitoring:

- A register of all incidents must be maintained on a daily basis. This should include measures taken to ensure that such incidents do not repeat themselves.

- A bi-annual report should be compiled of all incidents reported. The report should contain dates when fire drills were conducted and when fire equipment was tested and training given.

10.1.11 Noise

Noise pollution will exist due to heavy motor vehicles accessing the site to load and offload cargo as well as from the stacking and moving of bags and containers and other large equipment. As the site is situated in an industrial area, noise impacts on surrounding properties will be minimal. Construction (maintenance and upgrade) may generate excessive noise for short periods of time.

Project Activity / Resource	Nature (Status)	(A1) Importance	(A2) Magnitude	(B1) Permanence	(B2) Reversibility	(B3) Cumulative	Environmental Classification	Class Value	Probability
Construction	Excessive noise generated from construction activities – nuisance and hearing loss	2	-1	2	2	1	-10	-2	Probable
Daily Operations	Noise generated from the operational activities – nuisance and hearing loss	2	-1	3	2	2	-14	-2	Probable

Desired Outcome: To prevent any nuisance and hearing loss due to noise generated.

Actions

Prevention:

- The Health and Safety Regulations of the Labour Act and World Health Organization (WHO) guideline on maximum noise levels (Guidelines for Community Noise, 1999) to prevent hearing impairment for workers on site should be followed during the construction and operational phases.
- Confine noise generating operational activities to daytime hours as far as possible.
- At night, the nuisance created by audible warning signals on trucks and forklifts can be prevented by switching to a flashing light or ‘broadband white noise’ system.

Mitigation:

- Hearing protectors as standard PPE for workers in situations with elevated noise levels.
- Maintain noise generating activities to within the warehouse as far as possible.
- All machinery must be regularly serviced to ensure minimal noise production.

Responsible Body:

- Proponent
- Contractors

Data Sources and Monitoring:

- Health and Safety Regulations of the Labour Act and WHO Guidelines.
- Maintain a complaints register.
- Bi-annual report on complaints and actions taken to address complaints and prevent future occurrences.

10.1.12 Waste production

Various waste streams will result from the operational phase and development of the facility. Waste may include hazardous waste associated with the handling of hazardous products and contaminated packaging material. Domestic waste will be generated by the facility and related operations. Waste presents a contamination risk and when not removed regularly may become a fire hazard. Construction waste may include building rubble and discarded equipment. Contaminated soil and water is considered as a hazardous waste.

Project Activity / Resource	Nature (Status)	(A1) Importance	(A2) Magnitude	(B1) Permanence	(B2) Reversibility	(B3) Cumulative	Environmental Classification	Class Value	Probability
Construction	Excessive waste production, littering, illegal dumping, contaminated materials	1	-2	2	2	2	-12	-2	Definite
Daily Operations	Excessive waste production, littering, contaminated materials	1	-2	3	2	2	-14	-2	Definite

Desired Outcome: To reduce the amount of waste produced, and prevent pollution and littering.

Actions

Prevention:

- Waste reduction measures should be implemented and all waste that can be re-used / recycled must be kept separate.
- Ensure adequate temporary waste storage facilities are available.
- Ensure waste cannot be blown away by wind.
- Prevent scavenging (human and non-human) of waste.
- All drains leading directly into sewers must be closed off, and locked where possible, to prevent any unwanted products from entering sewers should an accidental spill occur. Where drains are present to drain wash water, these should only be opened during times of washing.

Mitigation:

- Waste should be disposed of regularly and at appropriately classified disposal facilities, this includes hazardous material (empty chemical containers, contaminated rugs, paper water and soil).
- See the material safety data sheets available from suppliers for disposal of contaminated products and empty containers.
- Liaise with the municipality regarding waste and handling of hazardous waste.
- Due to the nature of some hazardous materials they, or the containers they are packed in, should be disposed of in an appropriate way at an appropriately classified waste disposal facility. See the material safety data sheets available from suppliers for disposal methods.

Responsible Body:

- Proponent
- Contractors

Data Sources and Monitoring:

- A register of hazardous waste disposal should be kept. This should include type of waste, volume as well as disposal method/facility.
- Any complaints received regarding waste should be recorded with notes on action taken.
- All information and reporting to be included in a bi-annual report.

10.1.13 Ecosystem and Biodiversity Impact

The nature of the operational activities is such that the probability of creating a habitat for flora and fauna to establish is low. No significant impact on the biodiversity of the area is predicted as this is an existing operation and the site is void of natural fauna and flora. Excessive lighting used at night and especially those that are directed upwards may blind birds like flamingos that fly at night. This may result in disorientation of birds and collisions with structures. Further impacts will mostly be related to pollution of the environment.

Project Activity / Resource	Nature (Status)	(A1) Importance	(A2) Magnitude	(B1) Permanence	(B2) Reversibility	(B3) Cumulative	Environmental Classification	Class Value	Probability
Construction	Impact on fauna and flora. Loss of biodiversity	1	-1	2	2	2	-6	-1	Improbable
Daily Operations	Impact on fauna and flora. Loss of biodiversity	2	-1	3	2	2	-14	-2	Improbable

Desired Outcome: To avoid pollution of and impacts on the ecological environment.

Actions.

Mitigation:

- Report any extraordinary ecological sightings to the Ministry of Environment, Forestry and Tourism.
- Mitigation measures related to waste handling and the prevention of groundwater, surface water and soil contamination should limit ecosystem and biodiversity impacts.
- Prevent scavenging of waste by fauna.
- The establishment of habitats and nesting sites at the facility should be prevented where possible.
- Lights used at night should be kept to a minimum and should be directed downwards to the working surfaces.

Responsible Body:

- Proponent

Data Sources and Monitoring:

- All information of extraordinary ecological sightings to be included in a bi-annual report.

10.1.14 Groundwater, Surface Water and Soil Contamination

Ore dust or chemicals that are not contained in the warehouse or trucks can contaminate the environment. The entire property will be paved and pollution of soil and groundwater is not expected. There is no surface water present nearby. Dust that is not contained can however reach sensitive receptors during times of strong wind. Oil, hydraulic fluid and fuel leaks from vehicles may also present a pollution risk.

Project Activity / Resource	Nature (Status)	(A1) Importance	(A2) Magnitude	(B1) Permanence	(B2) Reversibility	(B3) Cumulative	Environmental Classification	Class Value	Probability
Construction	Contamination from hazardous material spillages and hydrocarbon leakages	2	-1	2	2	1	-10	-2	Probable
Daily Operations	Contamination from hazardous material spillages	2	-1	3	2	1	-12	-2	Probable

Desired Outcome: To prevent the contamination of water and soil.

Actions

Prevention:

- Proper training of operators must be conducted on a regular basis (e.g. forklift operators).
- Channel water from the roofs out of the yard to minimize runoff on the paving which may potentially be contaminated by some metal ore and chemical dust.

Mitigation:

- Clean-up action must be taken immediately for all instances where ore dust is not contained (e.g. spillages and torn bags).

Responsible Body:

- Proponent
- Contractors

Data Sources and Monitoring:

- The procedures followed to prevent environmental damage during service and maintenance, and compliance with these procedures, must be audited and corrections made where necessary.
- A report should be compiled bi-annually of all spills. The report should contain the following information: date and duration of spill, product spilled, volume of spill, remedial action taken, etc.

10.1.15 Visual Impact

This is an impact that not only affects the aesthetic appearance, but also the integrity of the facility. The site is within an area zoned for industrial use. The development of the site is in line with the urban character.

Operations will be kept tidy and neat which will promote effectiveness and pollution prevention while being aesthetically pleasing.

Project Activity / Resource	Nature (Status)	(A1) Importance	(A2) Magnitude	(B1) Permanence	(B2) Reversibility	(B3) Cumulative	Environmental Classification	Class Value	Probability
Construction	Aesthetic appearance and integrity of the site	1	-1	2	2	2	-6	-1	Probable
Daily Operations	Aesthetic appearance and integrity of the site	1	1	3	2	2	7	1	Definite

Desired Outcome: To minimise aesthetic impacts associated with the facility.

Actions

Mitigation:

- Regular waste disposal, good housekeeping and routine maintenance on infrastructure will ensure that the longevity of structures are maximised and a low visual impact is maintained.
- All structures and infrastructures constructed on site should be in line with the visual character of the landscape as far as practically possible.

Responsible Body:

- Proponent
- Contractors

Data Sources and Monitoring:

- A bi-annual report should be compiled of all complaints received and actions taken.

10.1.16 Cumulative Impact

The main cumulative impact associated with the operational phase is an increase in traffic frequenting the site. This will have a cumulative impact on traffic flow on surrounding streets.

The increase of traffic and other noise generating activities in the area may further increase the noise impacts on nearby receptors, the facility is however situated in an industrial area. The cumulative effect of lighting on birds due to various industrial related developments may also increase the risk of collisions and interference with bird flight paths at night.

Project Activity / Resource	Nature (Status)	(A1) Importance	(A2) Magnitude	(B1) Permanence	(B2) Reversibility	(B3) Cumulative	Environmental Classification	Class Value	Probability
Daily Operations	The build-up of minor impacts to become more significant	2	-1	3	2	2	-14	-2	Definite

Desired Outcome: To minimise all cumulative impacts associated with the facility.

Actions

Mitigation:

- Addressing each of the individual impacts as discussed and recommended in the EMP would reduce the cumulative impact.
- Reviewing biannual and annual reports for any new or re-occurring impacts or problems would aid in identifying cumulative impacts and help in planning if the existing mitigations are insufficient.

Responsible Body:

- Proponent

Data Sources and Monitoring:

- Review bi-annual summary reports based on all other impacts to gain an overall assessment of the impact of the operational phase.

10.2 DECOMMISSIONING AND REHABILITATION

Decommissioning is not foreseen during the validity of the environmental clearance certificate. Decommissioning was however assessed as construction activities include modification and decommissioning. 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 not forming part of post decommissioning use. 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 Health and Safety Regulations of the Labour Act and WHO standards and waste should be contained and disposed of at an appropriately classified and approved waste facility and not dumped in the surrounding areas. Future land use after decommissioning should be assessed prior to decommissioning and rehabilitation initiated if the land would not be used for future purposes. 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.

10.3 ENVIRONMENTAL MANAGEMENT SYSTEM

The Proponent could implement an Environmental Management System (EMS) for their operations. An EMS is an internationally recognized and certified management system that will ensure ongoing incorporation of environmental constraints. At the heart of an EMS is the concept of continual improvement of environmental performance with resulting increases in operational efficiency, financial savings and reduction in environmental, health and safety risks. An effective EMS would need to include the following elements:

- ◆ A stated environmental policy which sets the desired level of environmental performance;
- ◆ An environmental legal register;
- ◆ An institutional structure which sets out the responsibility, authority, lines of communication and resources needed to implement the EMS;
- ◆ Identification of environmental, safety and health training needs;
- ◆ An environmental program(s) stipulating environmental objectives and targets to be met, and work instructions and controls to be applied in order to achieve compliance with the environmental policy;
- ◆ Periodic (internal and external) audits and reviews of environmental performance and the effectiveness of the EMS; and
- ◆ The EMP.

11 CONCLUSION

The operations of the Proponent will see the import and export of metal ores and industrial cargo through the port of Walvis Bay. This will have a positive impact on the economy of Walvis Bay and Namibia as a whole. Employment will be created and sustained at the warehouse and in the transport sector. Training and skills transfer will take place. Various business will be supported along the different transport routes and within Walvis Bay. The Port of Walvis Bay and stevedores will render port services. The entire project will contribute to the national treasury through payment of taxes, levies and permitting fees.

Regulations related to the handling and transport of goods as prescribed by Namibian law, or according to international best practice standards where Namibian law is lacking, must be followed during the planning and operations of the project. The necessary permits and approvals must be obtained from the relevant authorities. All hazardous substances should be handled and stored according to MSDS requirements which include storage on impenetrable surfaces and segregation of incompatible products. Noise pollution should at all times meet the prescribed Health and Safety Regulations of the Labour Act and WHO requirements to prevent hearing loss and minimise nuisance. Fire prevention should be adequate, and health and safety regulations should be adhered to in accordance with the regulations pertaining to relevant laws and internationally accepted standards of operation. Any waste produced must be removed from site and disposed of at an appropriate facility or re-used or recycled where possible. Hazardous waste must be disposed of at an approved hazardous waste disposal site.

The EMP (Section 10) should be used as an on-site reference document for the operations of the facility. Parties responsible for transgressing of the EMP should be held responsible for any rehabilitation that may need to be undertaken. The Proponent could use an in-house Health, Safety, Security and environment management system in conjunction with the EMP. All operational personnel must be taught the contents of these documents.

Should the Directorate of Environmental Affairs (DEA) find that the impacts and related mitigation measures, which have been proposed in this report are acceptable, an environmental clearance certificate may be granted to the Proponent. The environmental clearance certificate issued, based on this document, will render it a legally binding document which should be adhered to. Focus could be placed on Section 10, which includes an EMP for this project. It should be noted that the assessment process's aim is not to stop the activity, or any of its components, but to rather determine its impact and guide sustainable and responsible development as per the spirit of the EMA.

12 REFERENCES

- Atlas of Namibia Project. 2002. Directorate of Environmental Affairs, Ministry of Environment and Tourism (www.met.gov.na). [Accessed from http://www.unikoeln.de/sfb389/e/e1/download/atlas_namibia/index_e.htm]
- Bryant R. 2010. Characterising the Wind Regime of Sand Seas: Data Sources and Scaling Issues. Global Sand Seas: Past Present and Future. Working Group Conference: Royal Geographical Society in London.
- Callaghan B. 1991. Atmospheric corrosion testing in Southern Africa – results of a twenty-year national programme. Nickel Development Institute. http://www.nickelinstitute.org/~Media/Files/TechnicalLiterature/StainlessSteelsinABC_GuidelinesforCorrosionPrevention_11024_.pdf Accessed 08/05/2013
- Corbett I. 2018. The Influence of the Benguela Low-Level Coastal Jet on the Architecture and Dynamics of Aeolian Transport Corridors in the Sperrgebiet, Namibia. Unpublished Report. https://pdfs.semanticscholar.org/a036/eb86ca35ceee1f19198d2735c93d36f9ac35.pdf?_ga=2.153498104.1710554377.1586180758-213198396.1586180758 Accessed on 7 April 2020
- <http://www.meteoweb.eu/2012/11/litcz-scivola-a-sud-dellequatore-nellafrica-australe-prende-vita-la-stazione-delle-piogge-levoluzione-per-i-prossimi-mesi/166037/> accessed 8 April 2020
- https://www.windfinder.com/windstatistics/walvis_bay_airport accessed 8 April 2020
- Mendelsohn J, Jarvis A, Roberts C, Robertson T. 2002. Atlas of Namibia: A Portrait of the Land and its People. David Philip Publishers, Cape Town.
- Namibia Statistics Agency. Namibia household Income and Expenditure Survey 2023.
- Namibia Statistics Agency. Namibia 2023 Population and Housing Census Main Report.
- Pastakia, C.M.R.; 1998; The Rapid Impact Assessment Matrix (RIAM) – A new tool for Environmental Impact Assessment.
- Patricola C, Chang P. 2017. Structure and dynamics of the Benguela low-level coastal jet. *Climate Dynamics* 49: 2765–2788.
- Petzer, G. & von Gruenewaldt, R., 2009/2008. Air Quality Specialist Assessment for the Proposed Paratus Power Plant Extension in Walvis Bay, Midrand: Airshed Planning Professionals.

- Resitoglu, I.A., Altinisik, A.K. 2015. The pollutant emissions from diesel-engine vehicles and exhaust after treatment systems. *Clean Technologies and Environmental Policy* 17: 15-27.Ja
- Taljaard JJ and Schumann TEW. 1940. Upper air temperatures and humidities at Walvis Bay, South West Africa. *Bulletin of the American Meteorological Society* 21: 293 – 296.
- uMoya-NILU. 2020. Air Quality Specialist Study for the EIA and Clearance for the NamPower Firm Power Project in Walvis Bay, Namibia, Report No. uMN059-2020, 17 March 2020.
- WHO. 2003. Manganese in drinking-water. Background document for preparation of WHO Guidelines for drinking-water quality. Geneva, World Health Organization(WHO/SDE/WSH/03.04/104) https://www.who.int/water_sanitation_health/dwq/chemicals/manganesesum.pdf Accessed 2019-01-14

Appendix A: Proof of Public Consultation

Notified IAPs

Name	Position	Organisation
David Uushona	Manager: Solid Waste and Environmental Management	Municipality of Walvis Bay
Nangula Amutenya	Environmental Coordinator	Municipality of Walvis Bay
Lovisa Hailaula	Environmental Officer	Municipality of Walvis Bay
Ephraim Nambahu	Town Planning Officer	Municipality of Walvis Bay
DeWet van Niekerk	Manager	BUCO
Flip de Beer	Manager	Scandinavian Truck Parts
Elifas Hangula	Operations Manager	Unitrans Walvisbay
Clive Appollis	Owner	C.A Engineering and Renovations

Municipal Notification



TEL.: (+264-61) 257411 ♦ FAX.: (+264) 88626368
CELL.: (+264-81) 1220082
PO BOX 11073 ♦ WINDHOEK ♦ NAMIBIA
E-MAIL: gpt@thenamib.com

To: **Manager: Solid Waste and Environmental Management**
Municipality of Walvis Bay
Rikumbi Kandanga Road, Walvis Bay

22 July 2024

Dear Mr Uushona

Re: **ENVIRONMENTAL SCOPING ASSESSMENT AND ENVIRONMENTAL MANAGEMENT PLAN FOR THE STORAGE AND HANDLING OF INDUSTRIAL CARGO AND CHEMICALS ON ERF 5244, CIRCUMFERENTIAL ROAD IN THE LIGHT INDUSTRIAL AREA, WALVIS BAY**

Geo Pollution Technologies (Pty) Ltd (GPT) was appointed by Pindulo Logistics (Pty) Ltd (the Proponent) to undertake an environmental assessment for the proposed storage and handling of industrial cargo and chemicals on erf 5244, 160 Circumferential Road in the Extension 1 light industrial area, Walvis Bay, Erongo Region. The Proponent intends to use the warehouses and the open area as a handling and storage facility for industrial cargo and chemicals for various clients (see location map on page 2). The assessment will be conducted according to the Environmental Management Act of 2007 and its regulations as published in 2012.

Project: Storage and Handling of Industrial Cargo and Chemicals on 160 Circumferential Road in the Light Industrial Area, Walvis Bay

Proponent: Pindulo Logistics (Pty) Ltd

Environmental Assessment Practitioner: Geo Pollution Technologies (Pty) Ltd

The Proponent intends to utilise the current warehouses and the open area on the property to receive and temporarily store industrial cargo and chemicals for various clients within southern Africa as well as for export from southern Africa to international clients. The main cargo which will be handled and stored are bulk bags of soda ash, fertiliser, cement, various metals and acids. Storage will mainly take place inside the warehouses, but cargo that will not be affected by moisture or the sun may also be stored uncovered in the yard. No bulk cargo will be received and handled and all cargo will be bagged, bundled or in containers. All cargo will be imported or exported via the Port of Walvis Bay and supplied as per customer demands (local and export). Firefighting equipment and procedures will be in place according to accepted standards. Administrative tasks, site security and cleaning of the premises will continue on a daily basis to ensure the effective and clean operations of the facility. Environmental compliance monitoring and public liaison will continue throughout operations.

Interested and affected parties or neighbours are invited to register with the environmental consultant to receive further documentation and communication regarding the project. Please register at:

Fax: 088-62-6368 or **E-Mail:** pindulo@thenamib.com.

Should you require any additional information please contact Geo Pollution Technologies at telephone 061-257411.

Registration and comments should reach us by the 05 August 2024.

Sincerely,
Geo Pollution Technologies

André Faul

Page 1 of 2

Directors:

P. Botha (B.Sc. Hons. Hydrogeology) (Managing)



NEWS IN SHORT

Man accused of raping, robbing woman

A 46-year-old woman from Okafitu Kasiya village in the Outapi constituency has reported being raped and robbed at around 03:00 on Tuesday. Commissioner Ismael Basson, the Omasari Police regional commander, said the suspect allegedly broke into the complainant's bedroom, physically attacked and then raped her. "It is alleged that he further punched and slapped the complainant on the head and (stole NS200)," Basson said. The suspect then fled the scene. Basson said the suspect is known to the police but has yet to be arrested. - TUYEMO HAIDJALA

Trans-Kalahari/Mamuno one-stop border post set to open next month

The opening of a one-stop border post at the Trans-Kalahari-Mamuno border post is scheduled for August this year, according to the spokesperson of the home affairs and immigration ministry, Margaret Kalo, Namibia and Botswana will enhance regional trade with the inauguration of the one-stop border post. The benefits of the one-stop border post will include faster clearance times, improved travel experiences, increased efficiency, enhanced security, compliance and reduced costs, Kalo said. - AUGUSTO GILIAS

Prison officials visit Zimbabwean counterparts

Namibia Correctional Service (NCS) Commissioner-General Raphael Hamutyeza paid a visit recently to his counterparts in Zimbabwe, the Zimbabwe Prisons and Correctional Services (ZPCS). Hamutyeza was accompanied by Deputy Commissioner-General Mariana Martin, Commissioner Michael Mulisa, Assistant Commissioner Dorthea Hamutyeza and Senior Superintendent Lucas Amutyeza. The visit focused on cooperation in rehabilitation, food production, training, security and the improvement of correctional systems. During the visit, the delegation laid a wreath for the late Commissioner-General of ZPCS, Paradzai Willings Zimondi. Zimondi passed away in January 2021 and was regarded as a hero of Zimbabwe's independence struggle. He later achieved the rank of Major General in the Zimbabwean army and, after retiring from the military, served as the Commissioner-General of the ZPCS for 25 years. - CHRISTEN KRUGER

ECN denies siding with Kavekatora amid RDP dispute

• ELECTORAL BODY REFUTES ALLEGATIONS

The ECN has underlined that it does not interfere with or become involved in the internal affairs of political parties.

MARILIO NGULA
WINDHOEK

The Electoral Commission of Namibia (ECN) has refuted allegations by the Rally for Democracy and Progress

(RDP) that they assisted former parliamentarian Mike Kavekatora in taking charge of the party.

Responding to questions from this publication about the matter, ECN spokesperson De We Siluka said: "ECN is not siding with Kavekatora. In our view, he was duly nominated as the presidential candidate of the RDP in 2019 by the party's authorised representative, in conformity with the provisions of the Electoral Act 5 of 2014, as amended." The RDP recently filed

criminal charges against Kavekatora, alleging "the false representation of RDP with intent to commit fraud."

Responding to this, Kavekatora said: "Kandy Nehovva, who claims to be RDP's president, and Amanda Titus, who has never been a part of RDP leadership, have no mandate to speak on behalf of the party."

On the record Meanwhile, Siluka said no relationship exists between ECN and Kavekatora. He said the only connection



NO INVOLVEMENT: ECN spokesperson De We Siluka. PHOTO: ECN

is their records, which lie Kavekatora as the president of RDP, "a political party duly registered in terms of Section 137 of the Electoral Act, 5 of 2014, as amended."

Siluka added that it is important to note that the ECN does not deal with factions within political parties.

"Should such factions arise within a party, the best course of action will be for the contesting faction to seek redress from the Electoral Court to provide clarity. The ECN does not interfere in the internal affair of any political party."

MORE THAN 1 MILLION CATTLE VACCINATED IN NCAS



LIVESAVER: More than one million cattle this year in the northern communal areas. PHOTO: FILE

ELLARIE SMIT
WINDHOEK

More than 1.28 million cattle have been vaccinated during a critical animal health vaccination campaign across Namibia's northern communal areas (NCAs).

This campaign was carried out with the Food and Agriculture Organisation (FAO), which provided support to the Directorate of Veterinary Services (DVS) within the agriculture ministry.

The vaccination drive targeted common and potentially devastating animal health diseases affecting Namibian livestock, the FAO said, including contagious bovine pleuropneumonia (CBPP), foot-and-mouth disease (FMD), and anthrax, among others.

"This initiative, bolstered by FAO's support, represents a significant stride towards a healthier livestock sector in Namibia," the

statement issued by FAO said. Eugene Kungutjivi, FAO national project coordinator, said the campaign is vital for safeguarding Namibia's livestock population and protecting farmers' livelihoods.

Crucial support

The FAO said its support was delivered through a project titled 'Emergency Technical Support to Control the Spread of Contagious Bovine Pleuropneumonia (CBPP) in Namibia'.

FAO provided critical resources to enhance DVS's capacity to reach remote areas and effectively implement the campaign.

This includes, among others, the provision of a vehicle to improve DVS's mobility, vaccination and camping equipment to guarantee efficient and safe vaccine administration for livestock and ear tags essential for animal identification and data collection through the National Animal Identification and Traceability System

(NAMLITS), a crucial tool for disease surveillance and control.

FAO said its officials visited Musu in the Ntarenkuru constituency in the Kavango West Region earlier this year, where they witnessed first-hand the vaccination of livestock brought by farmers from Musu and surrounding areas.

"The vaccination in Musu, a rural area, exemplified the campaign's extensive reach across all NCAs above the veterinary control fence."

'Peace of mind'

The organisation said the vaccination campaign prioritises protecting livestock in the NCAs, a vital source of income, food security and livelihoods for many Namibian communities.

Farmers like Hansiku Hamatavi from Musu noted the importance of this initiative, saying that vaccinating his cattle gives him peace of mind.

"Losing livestock to disease is a hardship I wouldn't

want to experience again. This campaign is a lifesaver for farmers like me."

The FAO said the campaign's success relies heavily on collaboration between FAO and DVS. Dr Paul Set, a state veterinarian at DVS, echoed this sentiment and said the generous support from FAO, particularly the vehicle and vaccination equipment, has significantly boosted their capacity to reach more farmers and animals in remote areas.

"This collaborative vaccination campaign is essential for controlling major diseases and strengthening Namibia's animal health system."

PUBLIC PARTICIPATION NOTICE ENVIRONMENTAL ASSESSMENT: STORAGE AND HANDLING OF INDUSTRIAL CARGO AND CHEMICALS ON ERF 5244, CIRCUMFERENTIAL ROAD IN WALVIS BAY INDUSTRIAL AREA, WALVIS BAY

Geo Pollution Technologies (Pty) Ltd was appointed by Pindilo Logistics (Pty) Ltd (the Proponent), to undertake an environmental assessment (EA) for the storage and handling of industrial cargo and chemicals located on Erf 5244, Circumferential Road in Walvis Bay. Existing warehouses will be used to store and handle industrial cargo and chemicals imported or exported for clients as required. Cargo will include bulk bags or containers of soda ash, fertilizer, cement, various metals and acids. Additional and location information pertaining to the property location and proposed operations can be obtained at:

<http://www.thenamib.com/projects/projects.html>

The environmental assessment will be conducted according to the Environmental Management Act of 2007 and its regulations as published in 2012.

Interested and affected parties are invited to register with the environmental consultant to be provided with the opportunity to share comments, issues or concerns related to the project, for consideration in the EA. Requests for additional information and comments and concerns should be submitted to Geo Pollution Technologies by 05 August 2024.

André Fend
Geo Pollution Technologies
Tel: +264-61-257411
Fax: +264-88626168
E-Mail: pindilo@thenamib.com



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• SECOND #NAMIBIADECIDES PANEL DISCUSSION

'Create your own jobs' fundamentally misguided - Katjimune

The rhetoric that the youth should create their own jobs is just an excuse by a government that **has failed to make the necessary jobs available, the PDM parliamentarian said.**

MARJUD NGILLA
WINDHOEK

Popular Democratic Movement (PDM) parliamentarian Maximilian Katjimune recently shot down the famous phrase by late president Hage Geingob, urg-

ing the Namibian youth to "create their own jobs".
"['Create your own jobs'] is a fundamentally misguided proposition, as it is only correct in principle but premised wrongly," he noted.

Speaking about a motion to support small

and medium enterprises (SMEs) he introduced in parliament earlier this year, Katjimune indicated that roughly 70% of the country's SMEs fail before they commence operations.

"We found that this is because there is no financial backing and support from the government towards SMEs. Then one puts a question in this rhetoric that we must create our own jobs and must not be job-seekers. Which jobs are going to be cre-

ated by 70% of SMEs that fail almost one year after they commence operation?" he wanted to know.

The parliamentarian made the remarks during the #NamibiaDecides panel discussion, hosted by Namibian Sun editor Tolvo Ndjebela last week on the theme "Resolving youth unemployment before the November election." It also featured legal expert and social affairs commentator Fillemont Wise Immanuel and academic and independent

political analyst Rui Ty-tende.

'Just an excuse'

Katjimune went on to add that SMEs - which are urged to provide jobs for young people - are not supported. "This rhetoric that has been postured by our ministers of sport [Agnes Tjongarero] and finance [Ipumbu Shimi] that the youth should create their own jobs is just an excuse and cover for the fact that the government has failed to make the necessary jobs available. The youth's businesses are not functional because they do not receive any support from the government," he said.

Meanwhile, Immanuel, a member of the ruling party, acknowledged that youth unemployment is exceedingly high, but highlighted that being an election year, it is the right time to reflect in order to



better handle the status quo going forward.

"To resolve unemployment is not only a responsibility of the president of the country and parliament. Institutions, [which often] are headed by non-Swapo members, can also come on board and help battle unemployment," he said.

He added: "Of course, the buck stops with the president. However, if you paid attention to the Swapo presidential candidate Netumbo Nandi-Ndaitwah, you would have heard her commitment to addressing various economic challenges, [including youth unemployment]. She has also been explicit about her plan to revive the dormant green schemes."

Youth participation
Speaking on the youth's participation in the up-



PDM parliamentarian Maximilian Katjimune.
PHOTO: NAMIBIAN PARLIAMENT

coming elections, Ty-tende said he fears there is still a large number of young people not interested in registering to vote, as most manifestos are not up to entice young people to vote.

"When registration for voting ends, you will have a few young people going to vote because most could not get around registering," he said.

The voter registration period will draw to close on Thursday, 1 August.

Namibia 4th best African country to visit with children

LLANE SMIT
WINDHOEK

Namibia has been named the fourth best African country to visit with children, while South Africa fared slightly better and came third.

Tour operator Go2Africa con-

ducted the poll.

The Seychelles is the most child-friendly country in Africa and the world. It boasts the most family-friendly hotels, attractions and restaurants, making it the preferred travel destination for parents. Morocco is second in Africa and Madagascar fifth.

According to Go2Africa, families have a lot more to think about when they choose a vacation destination.

"They need to make sure that the area offers a good selection of family-friendly hotels, plenty of activities to keep their kids entertained, and a variety of restau-

rants that cater to picky eaters."

'Something for everyone'

Go2Africa said to help families find the perfect location for their next adventure, it analysed almost 4 000 hotels, attractions and restaurants around the globe to discover the perfect spot to visit.

To conduct the study, the tour operator first compiled a comprehensive list of all the countries around the world.

"We then gathered data on the number of family-friendly and four- to five-star-rated hotels, attractions and restaurants from TripAdvisor. By calculating the percentage of family-friendly places relative to the total number of establishments,



CHILD-FRIENDLY: The Etosha National Park is one of the many places families can visit in Namibia.
PHOTO: ILL

we determined the best destinations to visit with kids."

It added that Africa boasts some of the most incredible environments and activities for families

to explore with children. "From expansive national parks that see young ones encounter exotic wildlife for the first time to pristine beaches that are unlike any other in the world, there's something for everyone."

Ideal for family travel

According to Go2Africa, coming in fourth, Namibia is an excellent destination for families seeking adventure and unique experiences.

"Families can experience a thrilling Namibia safari in the Etosha National Park, home to rare wildlife including elephants, lions and giraffes or explore the abundant wetlands of the [Zambezi Region]."

It added that many accommodations in Namibia offer child-friendly programmes, swimming pools, numerous activities and interactive conservation experiences.

"The country is safe and most regions are malaria-free, making it ideal for family travel."

According to the tourist statistical report for 2023, 6.4% of tourist arrivals to Namibia were under 19 years old.

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Geo Pollution Technologies (Pty) Ltd was appointed by Pindolo Logistics (Pty) Ltd (the Proponent), to undertake an environmental assessment (EA) for the storage and handling of industrial cargo and chemicals located on Erf 5244, Circumferential Road in Walvis Bay. Existing warehouses will be used to store and handle industrial cargo and chemicals imported or exported for clients as required. Cargo will include bulk bags or containers of soda ash, fertilizer, cement, various metals and acids. Additional and accurate information pertaining to the property location and proposed operations can be obtained at <http://www.thenamib.com/projects/projects.html>

The environmental assessment will be conducted according to the Environmental Management Act of 2007 and its regulations as published in 2012.

Interested and affected parties are invited to register with the environmental consultant to be provided with the opportunity to share comments, issues or concerns related to the project, for consideration in the EIA. Requests for additional information and concerns should be submitted to Geo Pollution Technologies by 05 August 2024.

André Faul
Geo Pollution Technologies
Tel: +264-61-257411
Fax: +264-69826968
E-Mail: pindolo@thenamib.com

2 NUUS
Republiek
Maandag 22 Julie 2024

KONTAKPERSONE

NUUSREDAKTOUR
Henriette Lamprecht
061 350 3801 /
061 297 2000
henriette@republiek.
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Ouers

VAN BL. 1 SKOOL

Die skool se hoof van administrasie het 'n verslag ingedien wat al die laer geen afknouery of skade teen die kind gepleeg word nie.

"Duits is die kind se tweede taal en sal natuurlik baie harder moet werk, as byvoorbeeld 'n kind waar Duits sy eerste taal is. Solank as wat die kind met Duits en geskiedenis sukkel, sal hy negatiewe subjektiewe gevoelens en persepsies oor hardie vakke hê, ongemak wie die onderwyser is."

KIND VOEL GEBOEIE

Die ouers het gevoel dat die verhouding tussen hul kind en die onderwyser tot so 'n mate versleg het dat die teemwoordigheid van hom in haar klas sy emosionele en psigoïese welstand nadelig beïnvloed.

Hulle het die kind na 'n sielkundige geneem wat bevind het dat by aansienlike vrees en frustrasie met Duits en geskiedenis ervaar.

"Hierdie vakke word deur 'n onderwyser aangebied wat die kind voel nie van hom hou nie. Dit laat hom angstig en magtelos voel oor sy akademiese prestasies in hierdie vakke.

"Hy vertrou nie meer hierdie onderwyser nie en voel godsdienskrimineer en geboelie deur haar," lui die sielkundige se verslag.

Hy het verder bevind selfs al word die kind nie werklik geboelie nie dit steeds tot sy subjektiewe ervaring bydra wat sy werklikheid oorheers.

"Emosionele ervarings word gekonstrueer deur interpretasie en kognitiewe assesserings van situasies," het die sielkundige gesê.

Hy het aanbeveel dat dit noodsaaklik is om kontak tussen die kind en die onderwyser te beperk om te verseker dat hy sy skoolloopbaan suksesvol kan voltooi en om sy optimale welstand te handhaaf.

UITSpraak

Rakow het in haar uitspraak daarop gewys dat die verhouding tussen die kind en sy ouers met die onderwyser tot so 'n mate versleg het dat dit waarskynlik nie maklik herstelbaar is nie.

"Die hof is tevrede dat die applikant (ouers) nderdaad 'n saak vir tussentydse regshulp uitgemaak het deurdat hulle duidelik getoon het dat hulle 'n prima facie-arg het wat moontlik kan lei tot onherstelbare skade indien die tussentydse regshulp nie toegestaan word nie."

Met betrekking tot die onherstelbare skade het die kind se ouers aangevoer dat hul kind alle emosionele en sielkundige gevoelens van afknouery toon.

"Hy is in 'n kritieke stadium van sy akademiese loopbaan. Dit is redelik om te begryp dat voortgesette emosionele nood as gevolg van die versuim om die goëntifikasieprobleem te tackel, onherstelbare skade sal aanrig."

- kritiek@netwerk-hub.com.na

Padwerke op Eneas Peter Nanyembaweg amper voltooi

FOTO ONOUDALLEY

Aggett Graig

A lhoewel daar moontlik nie sigbare masjinerie op die terrein is nie, is uitgebreide padwerke aan die gang om Eneas Peter Nanyembaweg - voorheen Monte Christostraat - in 'n dubbelbaan te omskep.

Volgens Stad Windhoek (CoW) wat in samewerking met die Padowerheid dié projek bestuur, sal 'n gedeelte van die pad na verwagting dié week oopgemaak word. Die omliggende gedeeltes sal egter in verwagting teen 9 Augustus eers voltooi word. Intussen kan motoriste voortgaan om die Brakwater- en Katutura-wissel laar op die B1-hoofweg en interne boord pane te gebruik.

"Ons vra dat padgebruikers geduld is terwyl die nodige werk voltooi word. Ons verstaan die ongemak en ons doen ons bes om die werk so vinnig en doeltreffend as moontlik af te handel," sê CoW se woordvoerder, Lydia Amutengwa.

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VAN BL. 1

Die werknemers waardeur die goeie kommunikasie, volgens Barnard, veral danksy besoeke aan elke departement, waar insette en voorstelle ook ingesamel word en later geïmplementeer word.

Met betrekking tot eksplorasie by die Antelope-gouddeposito, het B2Gold verlede maand sy hulpbronskattings vir die

Eric Barnard
DITANKO SE MYNBESTUURDER

"Ons is bewus dat dit mense se lewensbestaan beïnvloed..."

Springbok-some amptelik bekend gemaak.

VOORLOPIGE BEOORDELING

Sowat 3 km suid van vas vyf van die oopgroefmyne glo die maatskappy dat kan moontlik nog 394 000 onse goud binn 1,75 miljoen ton erts tees 6,91 gram per ton ondergronds wees.

"'n Voorlopige ekonomiese beoordeling is vas stapel gestuur, wat met 'n positiewe resultaat kan beteken dat ondergrondse mynbou daar teen 2028 goudproduksie kan lewes. Dit beteken dat goudproduksie 100 000 onse per jaar vanaf 2026 tot 2031 kan oorskry.

Otjikoto sal na verwagting vanjaar tussen 180 000 en 200 000 onse goud lewer, met die eerste kwartaal wat reeds 45 416 onse tot einde Maart gelewer het.

- aggett@netwerk-hub.com.na

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Andre Paul
Geo Pollution Technologies
Tel: +264-61-257411
Fax: +264-89626368
E-Mail: peshko@thesamib.com



Mbumba - 'Katrina' n vrou van oortuiging

Junina Beukes

Katrina Hanse-Himarwa, wat n buitengewone lewe geleel het, is Saterdag op noukeurige en georganiseerde wyse op haar tuisdorp Mariental begrawe waar as n vrou van inbors beskryf het. Die voormalige minister van onderwys, kuns en kultuur is vroeër vandeemaand aan kanker dood.

Hanse-Himarwa, n voormalige goewerneur van Hardap en n lid van Swago se sentrale komitee, is deur baie van haar geliefdes gebulldag as n vrou wat n buitengewone lewe geleel het, toegewyd was tot elke saak waartoe sy naarself verbind het, maar die mees belangrike n toegewyde ma.

Eerwaarde Abraham (Kheibeh het ydens n gedenkdies op Mariental gesê Hanse-Himarwa is gokasty

omdat sy n vrou van oortuiging was en vir die waarheid opgestaan het. "Solank jy iets goed doen of met mense saamstem, dan is jy n goeie persoon. Maar die oomblik wanneer jy 'nee' sê, kan dit nie so wees nie en dan word jy berispe. Die pad wat sy gestap het om hierdie land met haar eie lewe te bevry. Sy het probeer om die nasie op te hef en haar lewe op die spel te plaas vir hierdie vry land van ons. Maar dank God Katrina het nooit opgegee nie, sy het gedoen wat sy moet al is sy deur die wêreld berispe. Dié wat naby haar is kan daarvan getuig. Dank God dat wanneer ons vir mekaar gif in n koppie sit, haal Hy dit uit en sit goedheid in daardie koppie," het hy gesê.

Hy het bygevoeg dat vroue mekaar moet ondersteun en aanmoedig en nie teen mekaar draai nie.

"Insteede daarvan om mekaar aan



President Nangolo Mbumba saluer vir outlaas sy 'jonger suster en vriend' Katrina Hanse-Himarwa. FOTO: JUNINA BEUKES

te val, vat hande om die land vorentoe te neem. Daar is n neiging da vrou eerder vir mans sal stem en o vrou sal trap, Katrina het vasgehou aan die liefde van God, sy het die moeilike tyd gegaan," het hy gesê.

President Nangolo Mbumba, wa die voormalige minister as sy jonger suster en vriend beskryf het, he gesê hoewel die glimster in haar o nie moer daar is nie, sy eindeloos herinneringe agtergelaat het.

"Sy was n vrou van karakter. Sy was n vrou van oortuiging. Sy was n vrou van eer. n Vrou van geloof n Vrou van humor, warmte en empatie. Sy het nie net n lewe gele wat goed geleef is nie, maar een wa wonderlik geleef was. Sy het n lewe geleel wat toegewyd was aan ander n lewe wat verbind was daartoe om Namibië n beter plek te maak. Sy was n kampioen vir geregtigheid, gelykheid en eenheid. Sy was inder daad n model patriot en toegewyd leier," het Mbumba gesê.

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Ernstige voedselonsekerheid staar sowat 800 000 Namibiërs in die gesig

Hardnekkige tendens

Met nuwe voedselprysdata en metodologiese verbeterings kon meer as 2,8 miljard mense in 2022 nie n gesonde dieet bekostig nie.

Elaine Smit

Ongeveer 800 000 Namibiërs het in 2023 ernstige voedselonsekerheid ervaar, terwyl 600 000 ondervoed was.

Die inligting is vervat uit die ongsste verslag van die Verenigde Nasies (VN) wat fokus op die toestand van voedselsekuriteit in voeding in die wêreld. Volgens die verslag kan ongeveer 60% van Namibiërs nie n gesonde dieet bekostig wat ongeveer US\$3,65 (ongeveer N\$77) per persoon per dag kos nie.

In Afrika het een uit elke vyf mense in 2023 honger gety, vergelyk met een uit 11 mense wêreldwyd.

Ten spyte van n mate van

verdering op spesifieke gebiede soos vertraagde groei en eksklusiewe borstvoeding, het n kommerwekkende aantal mense steeds voedselonsekerheid en wanvoeding ervaar te midde van hongervlakke wat wêreldwyd vir drie agtereenvolgende jare gestabiliseer het. Tussen 713 en 757 miljoen mense was as gevolg hiervan in 2023 ondervoed - dit is ongeveer 152 miljoen meer as in 2019 as die gemiddeld van 733 miljoen in ag geneem word.

Die bevolking wat honger ly in Afrika het toegeneem tot 20,4%. Volgens die verslag sal ongeveer 582 miljoen mense in 2030 chronies ondervoed wees, son huidige tendense voortduur. Die helfte van die miljoene sal naverwagting Afrikaanse wees.

In 2025 het ongeveer 2,33 miljard mense wêreldwyd maklike of ernstige voedselonsekerheid ervaar, n getal wat geensins noemenswaardig verander het sedert die skerp toename in 2020 tydens die Covid-19-pandemie nie.

Onder hulle het meer as 864 miljoen mense ernstige voedselonsekerheid ervaar en was sonder kos vir n hele dag of langer. Dié getal het sedert 2020



hardnekkig hoog gebly, veral in Afrika waar 58% van die bevolking matige of ernstige voedselonsekerheid ervaar. Die gebrek aan ekonomiese toegang tot gesonde diëte bly ook n kritieke kwessie, wat meer as n derde van die wêreldbevolking raak.

Met nuwe voedselprysdata en metodologiese verbeterings kon meer as 2,8 miljard mense in 2022 nie n gesonde dieet bekostig nie. Hierdie gaping is die mees algemeen in lae-inkomstelande, waar 71,5% van die bevolking nie n gesonde dieet kan bekostig nie, in vergelyking met 6,3% in hoë-inkomstelande. Opmerklik is dat die getal onder die vlakke van voor die pandemie in Asië

en in Noord-Amerika en Europa gedaal het, terwyl dit aansienlik in Afrika toegeneem het.

Die verslag dui daarop dat voedselonsekerheid en wanvoeding versterk as gevolg van n kombinasie van faktore, insluitend aanhoudende voedselprysinflasie wat voortgaan om ekonomiese winsste vir baie mense in baie lande uit te wis. Die grootste dryfvere soos konflik, klimaatverandering en ekonomiese terugslae neem toe. Dié kwessies, tesame met onderliggende faktore soos onbekostigbare gesonde diëte, ongesonde voedselomgewings en aanhoudende ongelikheid, val nou gelyktydig saam en wat hul individuele uitwerking versterk.

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André Faal
 Geo Pollution Technologies
 Tel: +264-61-257411
 Fax: +264-68826308
 E-Mail: pindalo@thesandb.com

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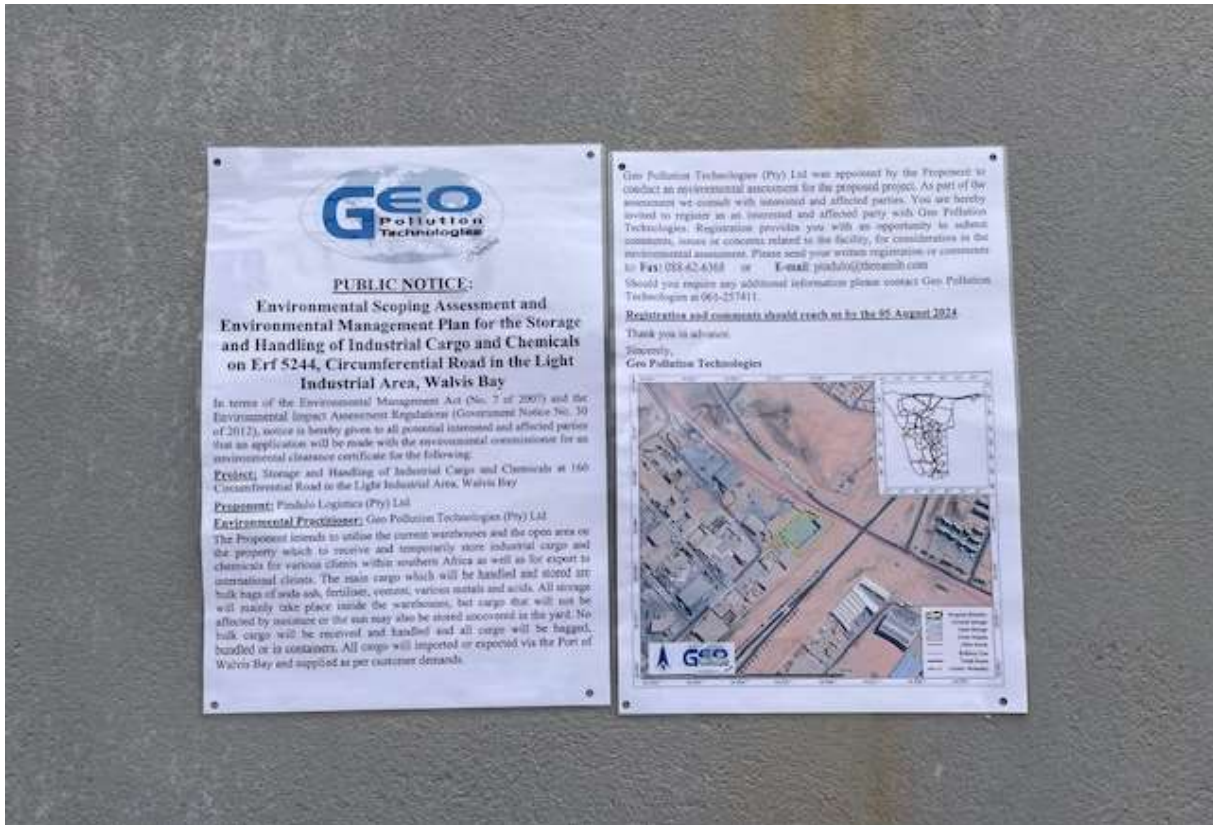
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Appendix B: Consultant's Curriculum Vitae

ENVIRONMENTAL SCIENTIST

André Faul

André entered the environmental assessment profession at the beginning of 2013 and since then has worked on more than 230 Environmental Impact Assessments including assessments of the petroleum industry, harbour expansions, irrigation schemes, township establishment and power generation and transmission. André's post graduate studies focussed on zoological and ecological sciences and he holds a M.Sc. in Conservation Ecology and a Ph.D. in Medical Bioscience. His expertise is in ecotoxicological related studies focussing specifically on endocrine disrupting chemicals. His Ph.D. thesis title was The Assessment of Namibian Water Resources for Endocrine Disruptors. Before joining the environmental assessment profession he worked for 12 years in the Environmental Section of the Department of Biological Sciences at the University of Namibia, first as laboratory technician and then as lecturer in biological and ecological sciences.

CURRICULUM VITAE ANDRÉ FAUL

Name of Firm : Geo Pollution Technologies CC.
Name of Staff : ANDRÉ FAUL
Profession : Environmental Scientist
Years' Experience : 23
Nationality : Namibian
Position : Environmental Scientist
Specialisation : Environmental Toxicology
Languages : Afrikaans – speaking, reading, writing – excellent
English – speaking, reading, writing – excellent

EDUCATION AND PROFESSIONAL STATUS:

B.Sc. Zoology/Biochemistry : University of Stellenbosch, 1999
B.Sc. (Hons.) Zoology : University of Stellenbosch, 2000
M.Sc. (Conservation Ecology): University of Stellenbosch, 2005
Ph.D. (Medical Bioscience) : University of the Western Cape, 2018

First Aid Class A EMTSS, 2017, OSH-Med 2022
Basic Fire Fighting EMTSS, 2017, OSH-Med 2022

PROFESSIONAL SOCIETY AFFILIATION:

Environmental Assessment Professionals of Namibia (Practitioner)

AREAS OF EXPERTISE:

Knowledge and expertise in:

- ◆ Water Sampling, Extractions and Analysis
- ◆ Biomonitoring and Bioassays
- ◆ Biodiversity Assessment
- ◆ Toxicology
- ◆ Restoration Ecology

EMPLOYMENT:

2013-Date : Geo Pollution Technologies – Environmental Scientist
2005-2012 : Lecturer, University of Namibia
2001-2004 : Laboratory Technician, University of Namibia

PUBLICATIONS:

Publications: 5
Contract Reports +230
Research Reports & Manuals: 5
Conference Presentations: 1