Project Name:	***ENVIRONMENTAL MANAGEMENT PLAN FOR THE TRANSPORTATION OF HAZARDOUS GOODS IN NAMIBIA FOR BULK HAULAGE LOGISTICS (PTY) LTD***
Application Number:	**251204006779**
The Proponent:	**BHL Group** **PO Box 15158** **WALVIS BAY**
Prepared by:	Green Earth ENVIRONMENTAL CONSULTANTS 1st floor Bridgeview Offices & Apartments, No. 4 Dr Kwame Nkrumah Avenue, Klein Windhoek, Namibia PO Box 6871, Ausspannplatz, Windhoek
Release Date:	February 2026
Consultant:	C. Du Toit C. Van Der Walt Cell: 081 127 3145 Email: charlie@greenearthnamibia.com

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1. INTRODUCTION

Bulk Haulage Logistics (Pty) Ltd (BHL), the Proponent, is a dynamic logistics entity specializing in the transport of various commodities, including hazardous goods, across sub-Saharan Africa. With a fleet exceeding 225 flatbed trailers, 30 tri-axle trailers (30–33 tons), and 195 link trailers (34–36 tons), BHL operates extensively along the Zambia–Namibia corridor. The company maintains a 24-hour control room equipped with satellite tracking and AI video technology, ensuring real-time monitoring and security of its fleet. The Proponent specializes in the transportation of various commodities with value added services and facilities within Zambia and sub-Saharan Africa with business currently conducted in but not limited to Zambia, DRC, Botswana South Africa and Namibia. The proponent operates a fleet of approximately 25 trucks used in the receipt, handling and transportation of hazardous goods (Fuel Calcium Nitrate and Ammonium Nitrate and other fertilizers). BHL are doing approximately 2000-4000MT ammonium nitrate (either UN 1942 or UN 2067) every month to second month. The Ammonium Nitrate is loaded directly from vessels at the Port of Walvis Bay (NAMPORT), and/or at the premises of Native Storage Facility at Farm 38, Walvis Bay.

Figure 1: Transportation Trucks

BHL Group holds ISO 9001 (Quality), ISO 14001 (Environmental), ISO 45001 (Occupational Health & Safety), and RTMS (Road Transport Management System) certifications, reflecting its adherence to international best practices in quality, safety, and environmental management. BHL has a full-time Safety, Health, Environment, and Quality Officer (SHEQ) with a supporting team based at their Walvis Bay premises. The SHEQ Officer is a professional responsible for creating and implementing programs that ensure compliance with safety regulations, promote worker health, protect the environment, and maintain quality standards within an organization.

In accordance with Environmental Management Act (No. 7 of 2007) and the Environmental Impact Assessment Regulations (GN 30 in GG 4878 of 6 February 2012) Hazardous Substance Handling and Storage activities may not be carried out without obtaining an Environmental Clearance Certificate (ECC) as the following listed activities are triggered:

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.

9.2 Any process or activity which requires a permit, licence or other form of authorisation, or the modification of or changes to existing facilities for any process or activity which requires an amendment of an existing permit, licence or authorisation or which requires a new permit, licence or authorisation in terms of a law governing the generation or release of emissions, pollution, effluent or waste.

9.3 The bulk transportation of dangerous goods using pipelines, funiculars or conveyors with a throughout capacity of 50 tons or 50 cubic meters or more per day.

9.4 The storage and handling of a dangerous goods, including petrol, diesel, liquid petroleum gas or paraffin, in containers with a combined capacity of more than 30 cubic meters at any one location.

The Proponent appointed Green Earth Environmental Consultants to attend to the process of application for an ECC, in terms of the Environmental Management Act (No. 7 of 2007) and the Environmental Impact Assessment Regulations (GN 30 in GG 4878 of 6 February 2012).

The transportation of hazardous goods across international borders presents a complex array of environmental, safety, and regulatory challenges. For the BHL Group moving hazardous cargo such as ammonium nitrate, mining reagents, fuels, and chemicals from the Port of Walvis Bay in Namibia to destinations in neighbouring countries requires a robust Environmental Management Plan (EMP). This plan must address the full spectrum of environmental risks, mitigation strategies, regulatory compliance, emergency response procedures, and monitoring protocols, all tailored to the specific sensitivities of the Walvis Bay–Neighbouring Countries corridor.

This report provides a comprehensive EMP for BHL Group's hazardous goods transport operations, integrating Namibian and Zambian legislation, international best practices, and route-specific environmental considerations. It draws on recent environmental assessments, regulatory frameworks, and operational case studies to ensure that all aspects of risk management, compliance, and stakeholder engagement are addressed in detail.

2. BHL GROUP - APPROVALS OBTAINED FOR TRANSPORTATION OF HAZARDOUS GOODS

The BHL Group, when required, obtain a Transport Permit from the Namibian Police Force for the transportation of hazardous goods. See below a permit recently obtained for the transportation of explosives to Husab Mine in the Erongo Region:

POL 611

NAMIBIAN POLICE FORCE

Explosives Control Division, Private Bag 12024, Ausspannplatz 9000

Ref. No. 19/2/23/1(352) No.1595

TRANSPORT PERMIT

(Issued under Chapter 6, Regulation 6.1.1 of the Regulations framed under the Explosives Act, 1956)

ISSUED FREE OF CHARGE

Permission is hereby granted to : **BULK HAULAGE LOGISTICS (PTY) LTD**

of : **P.O. BOX 5158, WALVIS BAY**

to purchase/obtain from : **AUXIN HOLDINGS (HONG KONG) LIMITED , UST-LUGA, RUSSIA VIA THE PORT OF WALVIS BAY**

the under-mentioned quantities of explosives and to transport them to: **HUSAB MINE, BEIFANG MINING TECHNOLOGY, IN ERONGO REGION : PER ROAD : NOT MORE THAN:-**

1815 TONS X LOW DENSITY AMMONIUM NITRATE (LDAN) AND 200 TONS HIGH DENSITY AMMONIUM NITRATE (HDAN) **(CLASS 5.1)** **(UN NO.1942)**

Method of conveyance by road: Vehicle licensed in terms of regulations 6.38.1 or : **BULK HAULAGE LOGISTICS (PT) LTD NAMIBIAN VEHICLES AS PER ATTACHED VEHICLES LISTS APPROVED ON 28/07/2025**

This permit expires on 2025-10-30 and must accompany the consignment to its final destination

Date :

.....DEP. COMM.
T. H. NGHIYOONANYE
CHIEF INSPECTOR OF EXPLOSIVES

This portion must be completed by the purchaser immediately the explosives reach their destination and the permit must then be forwarded to the office of issue.

I received the consignment on .....

.....
Signature of purchaser

Fleet Number	Horse	Trailer	Trailer
3300	N28456WB	N26754WB	N26539WB
3306	N28462WB	N26868WB	N26871WB
3307	N28463WB	N26756WB	N26766WB
3308	N28465WB	N22263WB	N22315WB
3310	N12122WB	N26749WB	N26753WB
3312	N23343WB	N16229WB	N20813WB
3316	N14631WB	N26751WB	N26459WB
3317	N12865WB	N12786WB	N26763WB
3318	N8985WB	N27292WB	N27293WB
3321	N28955WB	N20478WB	N20548WB
3322	N25888WB	N20161WB	N18637WB
3324	N26022WB	N26760WB	N26764WB

The BHL Group is also licenced to convey hazardous goods including explosives with the Namibian Police Force. See below proof of their registration as ‘consumer of explosives’ issued by the Namibian Police Force.

POL 700

Republic of Namibia

Department of Police

MINISTRY OF HOME AFFAIRS, IMMIGRATION, SAFETY AND SECURITY

Tel . No. : 061-209-4213 / 4250 (081-2461740)
Fax No. : 061-301514

Enquiries : Dep. Comm. T.H. Nghiyoonanye / C/Insp. R. Uulenga

Ref. : 19/2/23/1 (352)

OFFICE OF THE
HEAD OF DIVISION
EXPLOSIVES CONTROL DIVISION
PRIVATE BAG 12024
AUSSPANNPLATZ

26 MAY 2021

Bulk Haulage Logistics (Pty) Ltd
P. O. BOX 5158
WALVISBAY

REGISTRATION AS A CONSUMER OF EXPLOSIVES

1. Your letter dated 1st of October 2020, refer.

2. Kindly be informed that Bulk Haulage Logistics (Pty) Ltd is registered as Consumer of Explosives at this office as per reference no. **19/2/23/1 (352).**

3. Granting this permission does not in any case, currently or future hold the Ministry of Home Affairs, Immigration, Safety and Security or Department of the Namibian Police Force liable of any adverse or effects that may result from the application of any explosives instead that fully liability, responsibility and accountability lies directly with Bulk Haulage Logistics (Pty) Ltd and its associates.

4. **Take note that in terms of Section 30(1)(e)(g) of Explosives Act, 1956 (Act 26 of 1956) as amended, the Minister may suspend or cancel any permit granted in this Act.**

Yours Sincerely

NAMIBIAN POLICE FORCE
EXPLOSIVES CONTROL
2021 -05- 26
Chief Inspector of Explosives
Private Bag 12024, Ausspannplatz

..... DEP. COMM.
T.H. NGHIYOONANYE
f/CHIEF INSPECTOR OF EXPLOSIVES

Obtaining further licences and permits for the handling and transportation of hazardous goods will be subject to obtaining an environmental clearance for the activity.

3. PROJECT DESCRIPTION

Ammonium Nitrate and other hazardous goods normally enter Namibia through the Port of Walvis Bay. The Ammonium Nitrate is normally shipped in large, one-ton bulk waterproofed bags, similar to how bulk sugar is transported. These bags are hoisted from vessels at the Port of Walvis Bay using cranes and then loaded directly onto trucks. The bags are placed on a stable truck platform to prevent shifting and compaction. Due to safety and compatibility, loading and unloading must occur in designated areas away from public access and ignition sources. It is also prohibited to transport incompatible materials like fuels, organic materials, and strong acids on the same truck as the ammonium nitrate.

The Ammonium Nitrate and other hazardous goods are then either temporarily stored in approved warehouses or directly transported to the destination of use. Storage facilities must comply with regulations from the Office of the Inspector General of the Namibian Police and have permission to store specific quantities. All transport and handling must adhere to both international safety standards like the IMDG (International Maritime Dangerous Goods) and Namibian local hazardous-goods legislation.

The IMDG (International Maritime Dangerous Goods) Code is a set of international regulations for the safe maritime transport of dangerous goods.

See below examples of the bulk bags being loaded / unloaded:

Figure 2: Bags being loaded / unloaded

The transportation of hazardous goods has the following three (3) distinct phases:

- Operations in the Port (Walvis Bay)
- The road transportation (through Namibia)
- Border crossing and final delivery (Namibia and neighbouring destinations)

The *Tables* below summarize the activities under each phase, describe the phases and indicate the relevant role players.

Table 1: Phase 1: Port Operations & Customs Clearance (Walvis Bay)

Activity	Description of the activity	Role players
Receipt & Documentation	Receive shipping documents and verify against Bill of Landing.	- Shipping agent - Port officials - Namibian Police - Customs - SHEQ Officer and driver
Port Handling	Coordinate with port authorities for the safe off-loading of ammonium nitrate from the vessel to a secure, designated staging area within the port.	- Port officials - SHEQ Officer and driver
Customs Clearance	Manage all import/transit customs formalities with Namibian Revenue Authority (NAMRA).	- Customs - Namibian Police - SHEQ Officer and driver
Pre-loading Inspection	Conduct thorough inspection of trucks and trailers for suitability and compliance before loading.	- Namibian Police - SHEQ Officer and driver
Secure Loading	Supervise the loading of bulk ammonium nitrate onto certified and dedicated flatbed trailers or bulk tankers.	- Port Officials - SHEQ Officer and driver

Table 2: Phase 2: Road Transportation (Walvis Bay to Zambia/Botswana/RSA Border)

Activity	Description of the activity	Role players
Fleet allocation & Deployment	Trucks trailer combinations are selected and allocated that comply with and are certified with a well-maintained trailer.	- BHL operations manager
Route Planning	Pending on the destination, the safest and most effective route is defined and planned.	- SHEQ Officer and driver
In-Transit Monitoring & Tracking	Each vehicle is fitted with: • Real-time GPS tracking with geofencing. • Immobilizer systems. • Direct communication link with a 24/7 control room.	- BHL operations manager - SHEQ Officer

Driver allocation & Standards	All drivers are highly experienced, specially trained in hazardous goods transport (including emergency response), and vetted for security.	- BHL Operations manager - SHEQ Officer and driver

Table 3: Phase 3: Border Crossing & Final Delivery in Neighbouring Countries

Activity	Description of the activity	Role players
Border administration	Presentation and completion of documents to facilitate border crossing process.	- Customs - Namibian Police - Driver
Border inspection and customs clearance	Inspection of documents, driver, vehicle and cargo for roadworthiness, fitness and compliance.	- Customs - Namibian Police - Driver

Table 4: Border control actions

Cross-Border Regulations and Border Post Procedures
Wenela (Katima Mulilo) Border Post:
• **24-Hour Operations:** Both the border post and weighbridge now operate 24/7, reducing congestion and delays.
• **Pre-Clearance:** Documentary pre-clearance is required to expedite processing.
• **Customs and Immigration:** Full declaration of goods, permits, and driver documentation is mandatory.
• **Weighbridge Compliance:** All trucks are weighed to ensure legal axle loads; overweight vehicles are denied entry.
• **One-Stop Border Post (OSBP):** Plans are underway to implement a joint Namibia–Zambia OSBP, streamlining customs and inspection procedures.
Cross-Border Permits and Documentation:
• **Cross-Border Road Transport Permits:** Issued by Namibian and Zambian authorities for each vehicle and consignment.
• **Dangerous Goods Declarations:** Must accompany all hazardous cargo, with details on UN numbers, hazard classes, and emergency contacts.
• **Insurance and Financial Guarantees:** Proof of insurance and financial assurance for environmental remediation is required.

4. ROUTES TO BE FOLLOWED THROUGH NAMIBIA

BHL makes use of the following three main routes from Walvis Bay to deliver hazardous goods to customers in neighbouring Countries:

Walvis Bay to Zambia, Zimbabwe and Boswana

Walvis Bay → Swakopmund → Usakos → Otavi → Rundu → Kongola → Katima Mulilo → Wenela Border Post → Sesheke (Zambia) → onward to Zambian destinations (e.g., Kitwe, Solwezi).

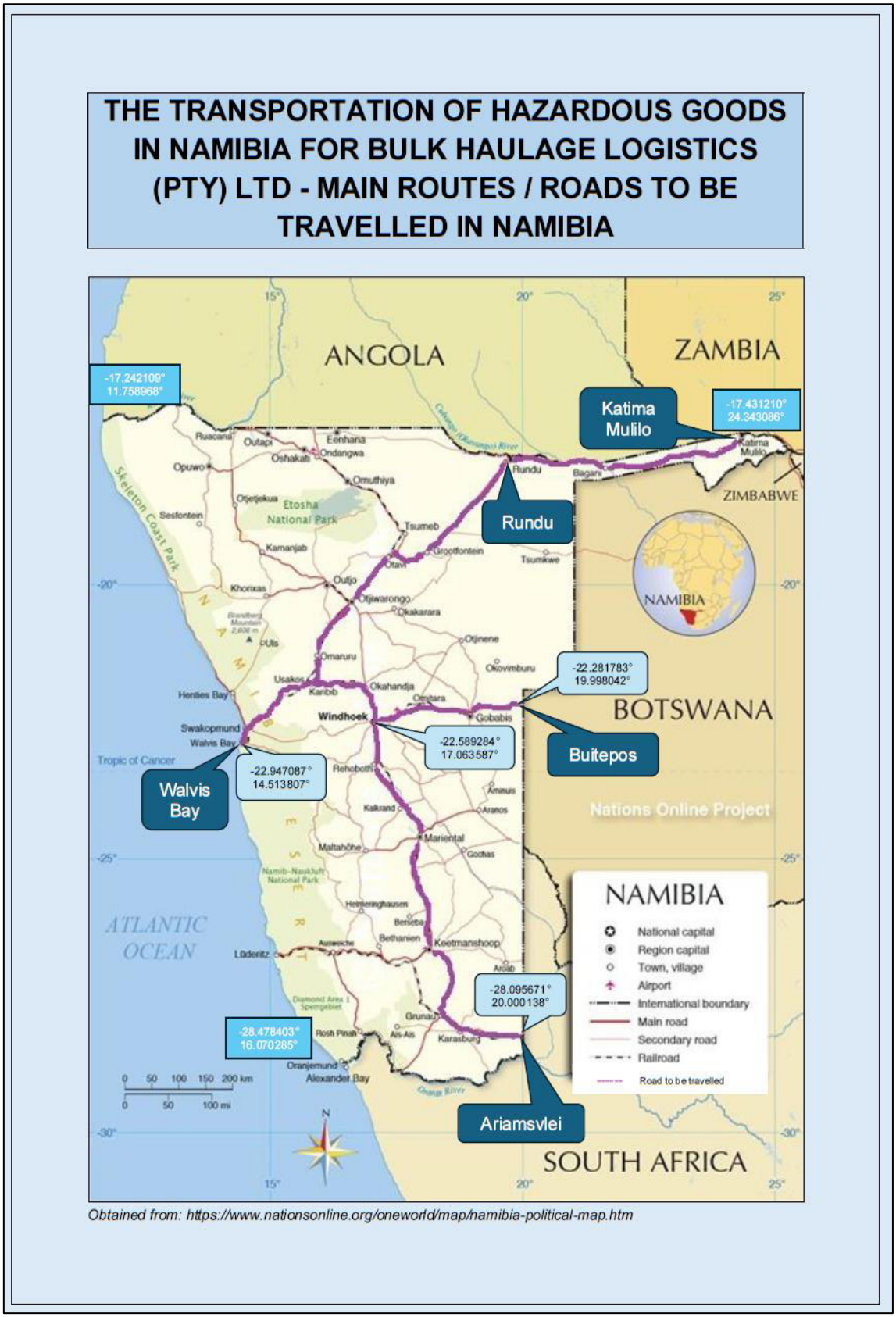
Walvis Bay to Botswana

Walvis Bay → Swakopmund → Usakos → Okahandja → Windhoek → Gobabis → Buitepos → Maun → Gaborone.

Walvis Bay to South Africa

Walvis Bay → Swakopmund → Usakos → Okahandja → Windhoek → Mariental → Keetmashoop → Grunau → Karasburg → Ariamsvlei → Upington.

The *Map* below indicates the main roads used by BHL for the transportation of Hazardous Goods through Namibia to neighbouring countries:



Obtained from: https://www.nationsonline.org/oneworld/map/namibia-political-map.htm

Figure 3: Main roads used by BHL

5. ENVIRONMENTAL SENSITIVITIES ALONG THE ROUTE

Table 5: Environmental sensitive areas along the route

Coastal and Wetland Areas
• **Walvis Bay Lagoon and Ramsar Site:** A globally significant wetland for migratory birds; strict controls are required to prevent contamination.
• **Coastal Dunes:** Highly sensitive to disturbance and erosion; off-road driving is prohibited.
Inland Ecosystems
• **Kavango and Zambezi Regions:** The route passes near or through Bwabwata National Park and other protected areas, home to elephants, buffalo, and other wildlife. No stopping or parking is allowed in these zones to prevent wildlife disturbance and poaching risks.
• **Water Bodies:** Numerous rivers (e.g., Okavango, Zambezi) and floodplains are vulnerable to spills and runoff.
Human Settlements and Infrastructure
• **Roadside Villages and Schools:** Speed limits and noise controls are enforced in populated areas.
• **Road Hazards:** Narrow bridges, construction zones, and pedestrian crossings require heightened vigilance.
Dry River Bed and Water Collecting Pits
• **Southern Namibia (Gobabis & Buitepos): The ephemeral Black Nossob River:** Riverbeds should be avoided as far as possible.
• **Old borrow pits that collect water:** Old borrow pits can be a danger to humans and vehicles, care must be taken to stay away from pits.
• **Omuramba (dry riverbed) located east of Witvlei:** This area should be avoided.
• **Culturally sensitive historical sites:** Sites near Gobabis are culturally significant due to their connection to the Herero-German conflict, and some are considered sensitive historical battlegrounds.
Ephemeral Drainage Lines and Escarpment Areas
• **Southern Namibia (Ariamsvlei):** The region is characterized by rocky terrain with ephemeral (short-lived) drainage lines. Escarpment areas and hills have been specifically identified in environmental assessments as having potentially high biodiversity.
• **Unique Flora:** While much of the area is moderately impacted by human activities, certain plant species are considered important and sensitive, including: - *Vachellia erioloba* (Camel thorn tree) - *Aloe dichotoma* (Quiver tree) - *Schotia afra* (Karoo boer-bean) - *Pappea capensis* (Jacket-plum) Individual and/or patches of these species are considered significant and require protection during operational activities.

6. RISK ASSESSMENT AND MITIGATION

The environmental risks associated with the handling and transportation of hazardous goods with special reference to ammonium nitrate are summarised in *Table* below:

Table 6: Risks associated with the transportation of hazardous goods

Environmental Risk	Type of risk	Impact of risk on receiving environment
Spill and Leak Scenarios	Chemical Spills	Accidental release of hazardous chemicals (e.g., ammonium nitrate, cyanide, petroleum products) during loading, transit, or unloading can contaminate soil, water, and air, with acute and chronic impacts on ecosystems and human health.
	Fire and Explosion	Flammable or reactive substances pose fire and explosion risks, especially in the event of vehicle collisions or improper handling.
	Air Emissions	Emissions from vehicles and accidental releases can degrade air quality, affecting both workers and nearby communities.
Accident Scenarios	Traffic Accidents	Collisions involving hazardous goods vehicles can result in spills, fires, and fatalities. Contributing factors include road condition, weather, driver fatigue, and wildlife crossings.
	Security Incidents	Theft, sabotage, or civil unrest can increase the risk of hazardous material release.
Cumulative and Indirect Impacts	Ecosystem Degradation	Repeated small spills or chronic emissions can lead to long-term soil and water contamination, biodiversity loss, and disruption of ecosystem services.
	Community Health	Exposure to hazardous substances can cause acute poisoning, respiratory issues, and long-term health effects.

The environmental risks associated with the transportation of hazardous goods can be mitigated through the measures listed in *Table 7* below:

Table 7: Summary of Risk Types and Mitigation Measures

Risk type	Mitigation Measures
Spills/leaks	• Use certified, well-maintained vehicles and containers. • Provide all vehicles with spill kits and Personal Protective Equipment (PPE). • Undertake immediate containment and clean up procedures. • Plan the route to avoid sensitive areas where possible.
Fire/explosion	• Segregate incompatible materials - fuels, organic materials, and strong acids not to be transported on the same truck as the ammonium nitrate. • Fit the vehicle with fire extinguishers and train the driver on how to respond to fires. • Enforce a no-smoking policy. • Introducing an emergency response plan. • Avoid congested roads. • Driver must overnight at parking spots outside of town boundaries.

Accidents	• Driver training and fatigue and wellness management.
	• Introducing and enforcing speed limits.
	• Fit vehicles with:
	  ○ Real-time GPS tracking with geofencing.
	  ○ Immobilizer systems.
	  ○ Direct communication link with a 24/7 control room.

Air emissions	• Regular vehicle maintenance and services. • Replace old vehicles with vehicles with lower emission levels where feasible. • Monitoring of air quality near loading /unloading zones.
Security	• Only park or stop at secure parking and rest stops. • Coordinate with the police and border authorities. • Introducing communication protocols for incident reporting.
Cumulative effect	• The regular monitoring and reporting of incidents. • Review incident logs to identify trends. • Adapt the EIA to reduce incidents.

7. ASSUMPTIONS AND LIMITATIONS

It is assumed that the information provided by the proponent (Bulk Haulage Logistics (Pty) Ltd (BHL) and other relevant parties is accurate. This EMP has been drafted based on the review of information obtained from the Proponent, relevant legislation and policies, case studies and best practices. Green Earth Environmental Consultants

will not be responsible for the potential consequences that may result from any alterations to the initial concept and operational description.

8. ADMINISTRATIVE, LEGAL AND POLICY REQUIREMENTS

The key administrative, legal and policy requirements that have relevance to various aspects of the transportation of hazardous goods are:

- The Namibian Constitution
- The Environmental Management Act (No. 7 of 2007) and Regulations (2012)
- The Hazardous Substances Ordinance (No. 14 of 1974)
- The Road Traffic and Transport Act (No. 22 of 1999) and Regulations
- Other Laws, Acts, Regulations and Policies

THE NAMIBIAN CONSTITUTION

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

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

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

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

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

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

> ***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.*
> *9.2 Any process or activity which requires a permit, licence or other form of authorisation, or the modification of or changes to existing facilities for any process or activity which requires an amendment of an existing permit, licence or authorisation or which requires a new permit, licence or authorisation in terms of a law governing the generation or release of emissions, pollution, effluent or waste.*
> *9.3 The bulk transportation of dangerous goods using pipelines, funiculars or conveyors with a throughout capacity of 50 tons or 50 cubic meters or more per day.*
> *9.4 The storage and handling of a dangerous goods, including petrol, diesel, liquid petroleum gas or paraffin, in containers with a combined capacity of more than 30 cubic meters at any one location.*

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

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

Cradle to Grave Responsibility

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

Precautionary Principle

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

The Polluter Pays Principle

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

Public Participation and Access to Information

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

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

CONCLUSION AND IMPACT

The proposed activity has been assessed in terms of the Environmental Management Act (No. 7 of 2007) and the Regulations (2012). From the assessment, it can be concluded that the activities will have impacts on the prevailing environment but that the negative impacts can be sufficiently mitigated and managed by following the Environmental Management Plan which is part of this document.

THE HAZARDOUS SUBSTANCES ORDINANCE NO. 14 OF 1974

This ordinance regulates the import, storage, handling, transportation, and disposal of hazardous substances. It requires licensing, prescribed packaging and labelling standards, and empowers inspectors to enforce compliance, including the detention and destruction of non-compliant shipments.

CONCLUSION AND IMPACT

The EMP include actions to be undertaken to ensure compliance with the stipulations of the Ordinance.

ROAD TRAFFIC AND TRANSPORT ACT (No. 22 OF 1999) AND REGULATIONS

Namibia's road transport regulations incorporate national standards (NAMS/SANS) for the design, construction, testing, and operation of vehicles transporting dangerous goods. Key standards include:

- NAMS/SANS 1518:2018 – Vehicle and tank design
- NAMS/SANS 10231:2018 – Operational requirements
- NAMS/SANS 10228:2018 – Classification of dangerous goods
- NAMS/SANS 10229:2018 – Packaging requirements

CONCLUSION AND IMPACT

BHL Group complies with the key standards listed above and holds ISO 9001 (Quality), ISO 14001 (Environmental), ISO 45001 (Occupational Health & Safety), and RTMS (Road Transport Management System) certifications, confirming their adherence to international best practices in quality, safety, and environmental management.

OTHER LAWS, ACTS, REGULATIONS AND POLICIES

Table 8: Laws, Acts, Regulations and Policies

Laws, Acts, Regulations & Policies consulted:		
Legislation	**Summary**	**Applicability**
Petroleum Products and Energy Act of Namibia (No 13 of 1990)	The **Petroleum Products and Energy Act of Namibia (No 13 of 1990)** make provision for impact assessments for new proposed fuel facilities and petroleum products known to have detrimental effects on the environment. It specifies that petroleum facilities must comply with relevant SANS specifications. The specific important Petroleum Products Regulations promulgated in terms of the Petroleum Products and Energy Act 13 of 1990 (3 July 2000) that should be referred to are: Regulation 3, 16, 20, 21, 24, 27, 29, 32, 40(2), 49 & 50.	Safe handling of hydrocarbons.
Pollution Control and Waste Management Bill (guideline only)	The **Pollution Control and Waste Management Bill** are currently in preparation and is therefore included as a guideline only. Of reference to the development, Parts 2, 7 and 8 apply. Part 2 provides that no person shall discharge or cause to be discharged, any pollutant to the air from a process except under and in accordance with the provisions	Waste management and any pollutant because of the operations.

	of an air pollution license issued under section 23. Part 2 also further provides for procedures to be followed in license application, fees to be paid and required terms of conditions for air pollution licenses. Part 7 states that any person who sells, stores, transports or uses any hazardous substances or products containing hazardous substances shall notify the competent authority, in accordance with sub-section (2), of the presence and quantity of those substances. The competent authority for the purposes of section 74 shall maintain a register of substances notified in accordance with that section and the register shall be maintained in accordance with the provisions. Part 8 provides for emergency preparedness by the person handling hazardous substances, through emergency response plans.	
Water Resources Management Act	The **Water Resources Management Act** as promulgated (GG No 8187 dated 29 August 2023) stipulates conditions that ensure effluent that is produced to be of a certain standard. There should also be controls on the disposal of sewage, the purification of effluent, measures should be taken to ensure the prevention of surface and groundwater pollution and water resources should be used in a sustainable manner.	Water resources should be protected from pollution. Numerous rivers crossed on route through Namibia (e.g., Okavango, Zambezi, Oranje) and floodplains are vulnerable to spills and runoff.

Hazardous Substances Ordinance (No 14 of 1974)	The **Ordinance** applies to the manufacture, sale, use, disposal and dumping of hazardous substances, as well as their import and export and is administered by the Minister of Health and Social Welfare. Its primary purpose is to prevent hazardous substances from causing injury, ill-health or the death of human beings.	Handling of fuel, ammonium nitrate emulsion (ANE), and explosion risks.
The Local Authorities Act (No 23 of 1992)	The purpose of the **Local Authorities Act** is to provide for the determination, for purposes of local government, of local authority councils; the establishment of such local authority councils; and to define the powers, duties and functions of local authority councils; and to provide for incidental matters.	Route planning will be guided by the road collector and arterial road system through and around towns.
Atmospheric Pollution Prevention Ordinance of Namibia (No 11 of 1976)	Part 2 of the **Ordinance** governs the control of noxious or offensive gases. The Ordinance prohibits anyone from carrying on a scheduled process without a registration certificate in a controlled area. The registration certificate must be issued if it can be demonstrated that the best practical means are being adopted for preventing or reducing the escape into the atmosphere of noxious or offensive gases produced by the scheduled process.	To prevent the generation of excessive noxious or offensive gasses.
Nature Conservation Ordinance	The **Nature Conservation Ordinance (No 4 of 1975)** covers game parks and nature reserves, the hunting and protection of wild animals, problem animals, fish and indigenous plant species. The Ministry of Environment, Forestry and Tourism (MEFT)	Avoid driving at night. Road signs and markings as well as warnings of the crossing of animals to be observed and speed to be adapted according to conditions.

	administer it and provides for the establishment of the Nature Conservation Board.	The route passes near or through Bwabwata National Park and other protected areas, home to elephants, buffalo, and other wildlife. No stopping or parking is allowed in these zones to prevent wildlife disturbance and poaching risks. Maintain safe distances from watercourses, settlements, and protected areas during transit and in the event of an incident.
Soil Conservation Act No. 76 of 1969	This act promotes the conservation of soil and prevention of soil erosion.	Avoid actions that can cause soil degradation and erosion.
National Heritage Act No. 27 of 2004	The Act makes provision for the protection and conservation of places and objects of heritage significance and the registration of such places and objects. Part V Section 46 of the Act prohibits removal, damage, alteration or excavation of heritage sites or remains, while Section 48 sets out the procedure for application and granting of permits.	Always report discovery of potential heritage resources to the authorities.
Labour Act	The **Labour Act of 2007 (No 11)** contains regulations relating to the Health, Safety and Welfare of employees at work. These regulations are prescribed for among others safety relating to hazardous substances, exposure limits and physical hazards. Regulations relating to the Health and Safety of Employees at Work promulgated in terms of the Labour Act 6 of 1992 (GN156, GG1617 of 1 August 1997):	No employer shall require or permit an employee to work in an environment that is deemed unfit without protective measures in place. Driver welfare to be monitored and supported.

	Regulation 178(2) (d), 180 refers to Chemical safety data sheets (CSDS) for all hazardous chemical substances must be prepared by the manufacturer or supplier thereof. These must be provided to every employer using such substances. The CSDS must contain essential health and safety information. **Regulation 178(2)(d), 182** refers to hazardous substances must at any time be stored in such a manner that they do not create a risk to the health and safety of employees or other persons, nor any risk of contamination of the environment, due to seeping, leaking, fire or accidental release. **Regulation 183** states amongst other things that hazardous waste and deposits must be removed at intervals and by methods appropriate to the type of hazard which they constitute.	

CONCLUSION AND IMPACT

Green Earth Environmental Consultants believe the above administrative, legal and policy requirements which specifically guides and governs the handling and transportation activities of hazardous goods will be followed and complied during handling and transportation.

9. ENVIRONMENTAL MANAGEMENT PLAN (EMP)

9.1. THE PURPOSE, SCOPE AND OBJECTIVES OF THE EMP

An Environmental Management Plan (EMP) is a structured framework that identifies potential environmental impacts of a project or operation and prescribes mitigation, monitoring, and management actions to minimize those impacts. In the context of hazardous goods transport, an EMP is not only a regulatory requirement but also a critical operational tool for ensuring environmental protection, public safety, and business continuity.

Purpose of the EMP

To ensure safe, compliant, and environmentally responsible transportation of hazardous goods from the Port of Walvis Bay through Namibia by road to the destination.

Scope of the EMP

To cover all stages of transit from the loading of the goods at Walvis Bay, the road transport through Namibia, the border crossings to neighbouring countries and the delivery to the destination.

Objectives of the EMP

- Identifying and assessing environmental risks associated with the storage, handling, and movement of dangerous goods.
- Prescribing mitigation measures to prevent or minimize pollution, spills, fires, and other incidents.
- Ensuring compliance with national, regional, and international regulations.
- Establishing emergency response and contingency procedures for accidents and incidents.
- Defining monitoring protocols to track environmental performance and compliance.
- Facilitating stakeholder engagement and transparent communication with authorities and affected communities.

9.2. MANAGEMENT'S ACTIONS/RESPONSIBILITIES

Bulk Haulage Logistics (Pty) Ltd (BHL), the Proponent, takes the ultimate responsibility for the implementation and compliance with the EMP, from the planning and implementation phase to the operational and monitoring phase. The Proponent may delegate this responsibility for implementation, enforcement and monitoring. The delegated responsibility for the effective implementation, enforcement and monitoring of the EMP will rest on the following key individuals:

- The Proponent's Representative.
- The SHEQ / Environmental Control Officer
- The drivers of the vehicles / contractors

9.3. THE PROPONENT'S REPRESENTATIVE

The Proponent must assign the responsibility of managing all aspects of this EMP (implementation, enforcement and monitoring) for all phases (including all contracts for work outsourced) to a designated member of staff, referred to in this EMP as the Proponent's Representative (PR). The PR's responsibilities are listed in the *Table* below as follows:

Table 9: The PR's responsibilities

Responsibility	Project Phase
Making sure that the provisions of the EMP are implemented, enforced, adhered to and monitored.	Throughout the lifecycle of the activity.
Making sure that the relevant provisions included in the EMP are always adhered to.	Planning, operation and maintenance.
Suspending/evicting individuals and/or equipment not complying with the EMP.	Planning, operation and maintenance.
Issuing fines for contravening EMP provisions.	Planning, operation and maintenance.

9.3.1. THE SHEQ / ENVIRONMENTAL CONTROL OFFICER

The PR should assign the responsibility of overseeing the implementation of the whole EMP on the ground during the operation and maintenance phases to a designated member of staff, referred to in this EMP as the SHEQ/Environmental Control Officer (ECO). During the operation phase, the Developer may outsource the monitoring and evaluation of the EMP to an independent Environmental Consultant. The ECO will have the following responsibilities during the operation and maintenance phases of this activity:

- Management and facilitation of communication between the Proponent, PR, the contractors, and Interested and Affected Parties (I&APs) regarding this EMP.
- Conducting monitoring inspections (recommended minimum frequency is once every second month) of all operational areas with respect to the implementation of this EMP (monitor and audit the implementation of the EMP).
- Assisting the Contractor in finding solutions with respect to matters pertaining to the implementation of this EMP.
- Advising the PR on the removal of person(s) and/or equipment not complying with the provisions of this EMP.
- Making recommendations to the PR with respect to the issuing of fines for contraventions of the EMP.

- Undertaking an annual review of the EMP and recommending additions and/or changes to this document.

9.3.2. THE DRIVERS OF THE VEHICLES /SUBCONTRACTORS

Drivers and Contractors appointed by the Proponent are automatically responsible for implementing all provisions contained within the relevant chapters of this EMP. Contractors will be responsible for the implementation of this EMP applicable to any work outsourced to subcontractors. To ensure effective environmental management, the provisions of the EMP must be included in the applicable contracts for outsourced handling, transportation and maintenance work.

Currently the Driver and Vehicle Checklist below is used by BHL for the allocation of drivers, vehicle selection and inspection of vehicles and for the transportation of hazardous goods.

BHL Driver and Vehicle Checklist

Draft to be updated and aligned with EMP

Item	Horse	Trailer
Fire extinguishers	1in cab and 9Kg outside of cab	9kg right side of each trailer
Signage	Orange diamond	5 x 1942 placcarding
Orange box	inside of cab	
Chains		No fixed chains on trailers
Conditions	Truck cleaned before inspection No cracks or tears in seats	No cracks or rust on trailer decks, cleaned before inspections No fuel tank and/or charcoal on trailer alowed.
Orange rotating light	2x on cab	
Drivers	Must have chapter 6 Must have valid DGP Must have route plan Must have TEC card Full PPE	
Permits	Must have valid CIE permits per truck and trailer	
Cut of switch	Left side of battery box	
Spare wheel		Trailers must have a spare wheel

This checklist will be updated and aligned with the EMP.

10. THE ENVIRONMENTAL MANAGEMENT PLAN (EMP)

The following tables provide the management actions recommended to mitigate and manage the potential impacts from the handling and transportation of hazardous goods. These management actions have been listed according to the planning, operations and maintenance phases: The responsible persons at the Proponent's team must assess these actions in detail and commit to the specific management actions.

EMP Component	Key Action / Control measure	Responsibility	Frequency/Timing
Legal Compliance	Register with and obtain all necessary permits from MEFT, Namibia Port Authority and other relevant authorities.	SHEQ / HSE Officer / Management	Before operations commence
	Maintain an up-to-date register of all applicable laws and standards.	SHEQ / HSE Officer	Bi-annual review
	Appoint an Environmental Practitioner to monitor the implementation of the EMP and recommend any changes to this document when necessary.	Management	Bi-annually
	Bi-annual reports are to be submitted to the Environmental Commissioner.	Environmental Consultant / Management	Bi-annually
	Ensure timely application for renewal of ECC upon expiry.	SHEQ / HSE Officer / Management	Prior to expiry of ECC
Staff Induction	Ensure that the recruitment of all staff is formalised with written contracts, stating nature of employment, duration	Management	Before and during employment.

	and remuneration to protect both parties and avoid labour disputes later on.		
	Induction of all staff / employees on the provisions of the EMP before work commencement, covering but not limited to environmental awareness, emergency response, reporting of incidents, HIV/AIDS awareness, alcohol and substance abuse, and Safety, Health and Environment (SHE) measures.	Management	At the beginning of employment
	The drivers of vehicles must be adequately trained and sensitized to any potential hazards associated with their tasks.	SHEQ / HSE Officer / Management	Before and during employment
	Conduct quarterly induction reviews.	SHEQ / HSE Officer / Management	Quarterly
	Ensure that a copy of the EMP is accessible to all employees.	SHEQ /HSE Officer / Management	At the start and during employment
	Introduce and adopt a disciplinary system to discipline staff for noncompliance, such as littering, speeding, safety risk both to themselves and to others, etc.	SHEQ / HSE Officer / Management	During employment
Communication	Introduce a communication strategy.	Management	During operations

	The EMP must be Integrated into Organizational Culture - Management must prioritize safety and environmental protection, fostering a culture of continuous improvement.	Management	During operations
	Encourage open reporting of safety concerns and near-misses, with no retaliation.	SHEQ / HSE Officer / Management	During operations
	All correspondence should be written and signed off by witnesses (e.g., manager and team leaders).	Management	During operations
	The contact numbers for the Manager and Team Leaders must be available in case of emergencies.	Management	During operations
	Hold toolbox talks on specific environmental topics	SHEQ / HSE Officer / Management	During operations
Packaging and Labelling	Materials to be handled and transported must be packaged and labelled according to UN Model Regulations and IMDG Code, with clear hazard identification and emergency instructions.	SHEQ / HSE Officer / Management	During operations
Permitting and Documentation	All necessary permits, customs documents, and emergency response information must accompany each shipment.	SHEQ / HSE Officer / Management	During operations
Vehicle & Equipment Integrity	All vehicles and containers must comply with NAMS/SANS and ADR	SHEQ / HSE Officer / Management	During operations

	standards (the European Agreement concerning the International Carriage of Dangerous Goods by Road) for hazardous goods, including design, construction, and maintenance requirements.		
	Conduct daily pre-trip inspection (tires, brakes, seals, fire equipment).	Driver	Before each trip
	Perform comprehensive mechanical and safety inspection.	Maintenance Manager	Monthly & before major trips
	Ensure all vehicles are ADR-certified and fit for purpose.	Transport Manager	Before transportation of hazardous goods
	All vehicles and equipment shall be kept in good working condition and serviced regularly (in accordance with the servicing frequency of the specific machinery), in order to prevent leakages and emissions	Maintenance Manager	Respective service intervals and during operations
Driver Training, competency and wellness	Drivers and staff must be trained and certified in hazardous goods handling, emergency response, and use of PPE.	Transport Manager SHEQ / HSE Officer	At appointment and during employment
	Provide specialized driver training (safe handling, defensive driving, emergency response).	Transport Manager SHEQ / HSE Officer	At appointment and during employment
	All drivers and staff involved in hazardous goods transport	Transport Manager SHEQ / HSE Officer	At appointment and during employment

	must complete accredited training programs covering: - Hazard identification and classification. - Safe handling and transport procedures. - Emergency response and spill management. - Use of PPE and first aid.		
	Drivers must hold valid professional authorizations (category “D” for dangerous goods) and medical certificates.	Transport Manager SHEQ / HSE Officer	At appointment and during employment
	Regular refresher training and competency assessments must be conducted, with records maintained for verification.	Transport Manager SHEQ / HSE Officer	At appointment and during employment
	A wellness program should be initiated to raise awareness on health issues, especially the impact of sexually transmitted diseases and Covid-19	Transport Manager SHEQ / HSE Officer	At appointment and during employment
	Provide access to free condoms for the workforce.	SHEQ / HSE Officer Management	At appointment and during employment
	Facilitate access to antiretroviral medication for personnel.	SHEQ / HSE Officer Management	At appointment and during employment
	Conform to the stipulated protocols related to Covid-19.	SHEQ / HSE Officer Management	At appointment and during employment
	Tabletop Exercises: Simulate spill and accident scenarios to test	Transport Manager SHEQ / HSE Officer	At appointment and during employment

	response plans and clarify roles and responsibilities.		
	Field Drills: Conduct practical exercises in spill containment, fire response, and evacuation.	Transport Manager SHEQ / HSE Officer	At appointment and during employment
	Competency Verification: Assess staff performance during drills and real incidents, providing feedback and additional training as needed.	Transport Manager SHEQ / HSE Officer	At appointment and during employment
	Use licensed hazardous waste carriers for off-site transport, with proper documentation and permits for cross-border movement.	Transport Manager SHEQ / HSE Officer	At appointment and during employment
	Obtain prior informed consent and movement documents for transboundary shipment of hazardous waste, ensuring environmentally sound management at the destination.	Transport Manager SHEQ / HSE Officer	At appointment and during employment
	Comply with Namibian and Zambian hazardous waste regulations, including reporting and record-keeping.	Transport Manager SHEQ / HSE Officer	At appointment and during employment
	Training and Capacity Building: Driver and Staff Competency: Mandatory Training: All drivers and staff involved in hazardous goods transport must complete accredited training programs covering: - Hazard identification and classification.	Transport Manager SHEQ / HSE Officer	At appointment and during employment

	- Safe handling and transport procedures. - Emergency response and spill management. - Use of PPE and first aid. - Regulatory compliance (Namibian, Zambian, and international standards). Certification: Drivers must hold valid professional authorizations (category "D" for dangerous goods) and medical certificates. Refresher Courses: Regular refresher training and competency assessments must be conducted, with records maintained for verification.		
Journey Management Route & Driver Management	Detailed journey plans, including designated routes, rest stops, and emergency contacts, must be prepared for each consignment.	Transport Manager	At appointment and during employment
	Pre-plan and risk-assess all routes, especially cross border.	Transport Manager SHEQ / HSE Officer	Bi-Annually
	Confirm acceptable transport route with the Local Traffic Departments and adhere to it.	Transport Manager SHEQ / HSE Officer	Bi- Annually
	Ensure drivers overnighting in Walvis Bay and other towns have proper facilities to do so.	Transport Manager	During employment

	Drivers to comply to local traffic rules.	Transport Manager	During employment
	Ensure drivers are endorsed to operate trucks and vehicles, with hazardous substances.	Transport Manager SHEQ / HSE Officer	At appointment and during employment
	Ensure that road junctions have good sightlines.	Transport Manager SHEQ / HSE Officer	Bi- annually
	Limit the type of vehicles to use the internal roads e.g. heavy trucks.	Transport Manager SHEQ / HSE Officer	During employment
	Implement traffic control measures where necessary.	Transport Manager SHEQ / HSE Officer	During the transportation of the hazardous goods
	In cooperation with the local authority, erect clear signage regarding restricted areas and roads, access and exit points to the port, speed limits, traffic rules, rail level crossings, etc.	Transport Manager SHEQ / HSE Officer	Bi- annually
	Trucks should not be allowed to obstruct any traffic or access points to any other businesses and facilities on the routes through Walvis Bay and other towns.	Transport Manager SHEQ / HSE Officer	During the transportation of the hazardous goods
	If any extraordinary traffic impacts are expected, traffic management should be performed in conjunction with the local traffic department.	Transport Manager SHEQ / HSE Officer	Before and during the transportation of the hazardous goods

	If hazardous cargo is transported in the port area, cognisance should be taken of Namport's operating procedures for Handling and Storage of Dangerous Cargo. This will involve planning the route as well as arrangements with the Municipality and the Ministry of Safety and Security.	Transport Manager SHEQ / HSE Officer	Before and during the transportation of the hazardous goods
	Enforce speed limits and regulated driving hours using telematics. Provide Personal Protective Equipment for all staff.	Transport Manager SHEQ / HSE Officer	During the transportation of the hazardous goods
	Avoid transport during peak wildlife movement periods and at night where possible.	Transport Manager SHEQ / HSE Officer	Ongoing / every day During operations
	Only qualified personnel must be allowed to operate special machines/instruments.	Transport Manager SHEQ / HSE Officer	Ongoing / every day During operations
	All vehicles must be switched off when not operational.	Transport Manager SHEQ / HSE Officer	Ongoing / every day During operations
	Ensure availability of a first aid kit.	Transport Manager SHEQ / HSE Officer	Ongoing / every day
	Drivers to report any incidents immediately.	Drivers	Ongoing / every day During operations
	A report should be compiled every 6 months of all incidents reported and monitoring	Transport Manager SHEQ / HSE Officer	Bi-annually

	performed. The report should contain dates when safety equipment and structures were inspected and maintained.		
	Training and Competency: Drivers and staff must be trained and certified in hazardous goods handling, emergency response, and use of PPE.	Transport Manager SHEQ / HSE Officer Drivers	At appointment and during employment
	Monitoring and Auditing: Regular inspections, audits, and compliance checks must be conducted, with corrective actions taken as needed.	Transport Manager SHEQ / HSE Officer Drivers	Ongoing / every day During operations
	Ensure that personnel handling the bags and storage equipment are made aware of the risk associated with the various commodities so that they know the potential impact on them.	SHEQ / HSE Officer	Ongoing / every day During operations
Spill Prevention & Control	Use bunded, impermeable areas for loading/unloading.	SHEQ / HSE Officer	Ongoing / every day During operations
	Equip all vehicles with spill kits (absorbents, shovels, containers).	SHEQ / HSE Officer	Ongoing / every day During operations
	Train staff on correct procedures and use of spill kits.	SHEQ / HSE Officer	Ongoing / every day During operations
	Check all bulk bags prior to loading to ensure they are not damaged.	SHEQ / HSE Officer	Ongoing / every day During operations

	Use dust suppressant technologies to manage dispersal and pollution.	SHEQ / HSE Officer	During operations
	All truck loads must be suitably covered to prevent the escape of dust from the load bin. This includes empty trucks that may still contain some dust.	SHEQ / HSE Officer	During operations
	Minimise the duration of stockpiles.	SHEQ / HSE Officer	Ongoing / every day During operations
	Segregate Ammonium Nitrate (AN) storage from fuels and other incompatible materials.	SHEQ / HSE Officer	Ongoing / every day During the course of operations
Fire & Explosion Prevention	Staff must be properly trained on how to react and handle a fire.	SHEQ / HSE Officer	At appointment and during employment
	Ensure vehicles are spark-proofed and carry Class D fire extinguishers.	SHEQ / HSE Officer	Ongoing / every day During operations
	Enforce strict no smoking, hot work, and no-open-flame policy.	SHEQ / HSE Officer	Ongoing / every day During operations
	Identifying the sources of noise, the resulting impacts on humans, the environment, and infrastructure, and the mitigation strategies and regulations in place to manage them.	SHEQ / HSE Officer	Ongoing / every day During operations
Noise	Refer to Material Safety Data Sheets (MSDS) from suppliers for guidance on disposing of contaminated products and empty containers.	SHEQ / HSE Officer	Ongoing / every day During operations

Waste Management	Separate hazardous and non-hazardous waste at source, using appropriate containers and labelling.	SHEQ / HSE Officer	Always and during operations
	Use spill kits and absorbents to contain and collect residues from spills or leaks.	SHEQ / HSE Officer	Always and during operations
	Store hazardous waste in secure, designated areas pending disposal, with secondary containment to prevent leaks.	SHEQ / HSE Officer	Always and during operations
	Handling and Disposal of Waste: Segregation: Separate hazardous and non-hazardous waste at source, using appropriate containers and labelling.	SHEQ / HSE Officer General staff / personnel	Always and during operations
	Containment: Use spill kits and absorbents to contain and collect residues from spills or leaks.	SHEQ / HSE Officer General staff / personnel	Always and during operations
	Temporary Storage: Store hazardous waste in secure, designated areas pending disposal, with secondary containment to prevent leaks.	SHEQ / HSE Officer General staff / personnel	Always and during operations
	Transport: Use licensed hazardous waste carriers for off-site transport, with proper documentation and permits for cross-border movement.	SHEQ / HSE Officer General staff / personnel Drivers	Always and during operations
	Designate trained personnel (Emergency Coordinator, HSE Manager, First Aider, Security, Fire Response Team) for each operation segment.	PR/SHEQ / HSE Officer	At appointment and during operations

Emergency Preparedness	Ensure all vehicles carry spill kits, fire extinguishers, first aid kits, and emergency contact lists.	SHEQ / HSE Officer	Ongoing / every day During operations
	Conduct regular emergency drills, including spill containment, evacuation, and communication protocols.	SHEQ / HSE Officer	Every 2 months and during employment
	Response Procedures: Immediate Actions: In the event of a spill or accident: - Alert authorities and emergency services. - Secure and isolate the area. - Contain the spill using absorbents, booms, or dikes. - Evacuate non-essential personnel and the public if necessary. Initiate clean-up and remediation according to MSDS and regulatory requirements.	SHEQ / HSE Officer	Always and during operations
	Incident Command: Implement an Incident Management System (IMS) with clear roles for planning, operations, logistics, and finance. - Notification: Promptly notify relevant authorities (police, fire, environmental agencies, port authorities), neighbouring countries (for transboundary	PR/SHEQ / HSE Officer	Ongoing / every day During operations

	incidents), and affected communities.		
	Communication Protocols: Notification Chains: Establish clear lines of communication for incident reporting, escalation, and coordination with authorities and stakeholders. Situation Reports: Provide regular updates (SITREPs) to authorities and stakeholders during an incident. Public Information: Designate a spokesperson to communicate with the media and public, ensuring transparency and accuracy.	PR/SHEQ / HSE Officer	Ongoing / every day During operations
	Post-Incident Actions: Investigation: Conduct a thorough investigation to determine the cause, assess environmental and health impacts, and identify corrective actions. Remediation: Implement soil, water, and habitat remediation as required by law and best practice. Reporting: Submit incident reports to regulatory authorities and update the EMP as needed.	PR/SHEQ / HSE Officer	Per incident During operations
	Exercises, Drills, and Competency Verification: Tabletop Exercises: Simulate spill and accident scenarios to test	PR/SHEQ / HSE Officer	At employment for new staff and bi-annually for all staff

	response plans and clarify roles and responsibilities. Field Drills: Conduct practical exercises in spill containment, fire response, and evacuation. Competency Verification: Assess staff performance during drills and real incidents, providing feedback and additional training as needed.		
	Where possible employ people from the local community. Compile policies and plans to accommodate workers with labour related problems and strategies how to mitigate impacts on the communities and on the broader society.	PR/SHEQ / HSE Officer	Ongoing / every day During operations
	Management must prioritize safety and environmental protection, fostering a culture of continuous improvement.	Management / PR SHEQ / HSE Officer	Ongoing / every day During the course of operations
Social	Encourage open reporting of safety concerns and near-misses, with no retaliation.	Management /PR SHEQ / HSE Officer	Ongoing / every day During the course of operations
Monitoring & Auditing • **Leadership commitment**	The EMP must be reviewed and updated annually, or after significant incidents, to incorporate lessons learned, regulatory changes, and stakeholder feedback.	Management /PR Environmental Practitioner SHEQ / HSE Officer	Annually

• **Communication**	Conduct periodic internal and external audits to assess EMP effectiveness and identify areas for improvement.	Management /PR Environmental Practitioner SHEQ / HSE Officer	Bi-Annually
Documentation & Review • **EMP Review** • **Auditing** • **Adaptive Management**	Adjust mitigation measures and operational practices based on monitoring results and emerging risks.	Management /PR Environmental Practitioner SHEQ / HSE Officer	Ongoing / every day During the course of operations
	Wildlife and Community Protection: Avoid transport during peak wildlife movement periods where possible; engage communities in spill response planning. Buffer Zones: Maintain safe distances from watercourses, settlements, and protected areas during transit and in the event of an incident.	Manager SHEQ / HSE Officer	Ongoing / every day During operations
	Environmental and Health Impacts: Emissions (air pollution, greenhouse gases) and noise pollution from transport activities have significant human health impacts on nearby communities. Managing these negative externalities is a key social responsibility to sustainable transport.	Manager SHEQ / HSE Officer	Ongoing / every day During operations

11. CONCLUSION

The safe and environmentally responsible transport of hazardous goods by the BHL Group from the Port of Walvis Bay through Namibia to local and neighbouring destinations requires a multi-layered approach, integrating legal compliance, risk assessment, operational controls, emergency preparedness, stakeholder engagement, and continuous monitoring.

By adhering to the regulatory frameworks of Namibia, neighbouring countries, and international conventions, and by implementing the mitigation and response measures outlined in this EMP, BHL Group can minimize environmental risks, protect communities and ecosystems, and ensure the sustainability of this vital regional trade corridor. Ongoing collaboration with authorities, communities, and conservation organizations, coupled with a commitment to transparency and continuous improvement, will be essential for the long-term success and credibility of hazardous goods transport operations in the region.

12. CONTINGENCY PLAN / EMERGENCY PREPAREDNESS & RESPONSE PROCEDURE

	NAME OF PROCEDURE: BHL GROUP EMERGENCY PREPAREDNESS.			
	DOC. REF. NR	0.1_01_BHLEC_01	EFFECTIVE DATE	15-11-22
	VERSION	1.0	NEXT REVIEW	15-11-23

ENVIRONMENTAL SPILLAGE EMERGENCY PREPAREDNESS AND RESPONSE PROCEDURE

VERSION: 0.0
LAST REVISION DATE: 2022-12-06

FIRST IMPLEMENTATION DATE: 2022-12-06

REFERENCE NUMBER: BHL-EMP-ENV_PRO-0001

	NAME	POSITION	SIGNATURE	DATE
AUTHOR:	Etwell Moyo	Group SHERQ Manager		
REVIEWED BY:	Doreen Nsebuka	SNR SHERQ Officer		
RECOMMENDED BY:	Etwell Moyo	Group SHERQ Manager		
APPROVED BY:	Pieter Van Rensburg	C.O. O		

	NAME OF PROCEDURE: BHL GROUP EMERGENCY PREPAREDNESS.			
	DOC. REF. NR	0.1_01_BHLEC_01	EFFECTIVE DATE	15-11-22
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Contents

	NAME OF PROCEDURE: BHL GROUP EMERGENCY PREPAREDNESS.			
	DOC. REF. NR	0.1_01_BHLEC_01	EFFECTIVE DATE	15-11-22
	VERSION	1.0	NEXT REVIEW	15-11-23

1 AIM

BHLGroup has an Environmental procedure to identify potential for and response to environmental accidents and emergency situations, and for preventing and mitigating the impacts that may be associated with them.

2. SCOPE

This procedure applies to all potential and actual environmental emergency situations at BHL Group as identified in the BM Plan

3. Definitions

Term	Definition
Emergency situation/incident	Environmental catastrophe that requires an emergency response
Emergency Response:	Actions taken by responsible personnel to address an Environmental emergency incident.

4. Abbreviations

Abbreviation	Explanation
AEW	Anglo Environment Way
BCM	Business Continuity Management
EMS	Environmental Management System
EMA	Environmental Management Act or Agency (depending on context)
EC	Environmental Coordinator
SHE	Safety Health & Environment

5. Responsible for Review

General Manager

SHE Manager

Emergency Response Site Leaders

6. Responsible for Implementation

Environmental Coordinator

Emergency Response Coordinators/Teams

EMS Champions

SHE Practitioners

General

7.1 Contravention

Breach of this Procedure may lead to disciplinary / legal action.

7.2 Distribution

#	Distributed to	Physical Copy	Electronic Copy
1	Heads of Departments	Departments	Public Folder SHEQ File
2	EMS Champions		
3	All employees		Public Folder

7.3 Additional Information

None

8. Safety Requirements for this Procedure

When responding to Environmental Emergencies, prioritise and observe applicable Health and Safety requirements before environmental response

9. Procedure

1. Identification of Potential Environmental Emergencies

9.1.1 Identify the potential environmental emergency situations by;

- Looking at The Company environmental risk profile

- Identifying and Analyzing Company's Environmental risks (Threat Analysis) using the 5 x5 standard Risk Matrix.

- Looking at Environmental Incidents and accidents, which occurred internally at BHL, within BMS and other similar operations.

2. Document results in the register of potential environmental emergencies and input into the BMS

2. Response

Draft appropriate responses to each potential Environmental emergency where there is none and have them agreed by senior management and communicated to all personnel using procedure on Communication.
9.2.2 Include the following in the response plan:

a. Notification of appropriate company personnel using the notification and escalation process.
b. Notification of interested and affected outside parties.
c. Roles and responsibilities for each individual.
d. Evacuation procedures and response strategy
e. Pollution clean-up (where applicable).

9.2.3 Compile specific procedures to be followed in line with response plan and document them

3. Emergency Information Flow

Immediately report all Emergency situations/catastrophes to Portal Control using contact details as provided on the Emergency Contact Details

- Control shall conduct Emergency Response Team (through the Emergency Response Site Leader) HOD of the concerned department, the SHERQ Manager and the Environmental Coordinator or SHERQ Official on standby.
- The Site Leader shall organize team members and resources depending on the nature of the catastrophe.
- The Site Leader & Emergency Coordinator shall direct the team in carrying out response operations and shall decide whether external assistance is required.

4. Communication and Training

- Communicate (internal and external) on all emergency situations plans and procedures using procedures on environmental communication.
- Train employees and contractors in emergency preparedness and response plans and procedures using Environmental Training, Awareness and Competence Procedure and conduct refresher courses on emergency plans and procedures if need arises.

5. Testing of Emergency Preparedness

- Test the effectiveness of the Emergency Preparedness and Response procedure using mock drills at least twice a year
- In carrying out or planning for mock drills take care not to cause an actual environmental accident
- During an actual emergency occurrence, emergency preparedness is also tested
- Observe and measure actual response to the drill/actual emergency against the documented response in the procedure
- Use results of comparison above to review adequacy and effectiveness of the procedure
- Formulate, implement and review action plans to address the gaps identified

6. Review of Emergency Plans and Procedures.

- Review emergency preparedness plans and procedures.
- After the occurrence of environmental accidents and / or emergency situations as well as Mock Drills
- Every time there are changes in company policies and management programs.
- Following an audit (if a Non-conformities) are raised around Emergency Preparedness.
- During Annual Management Review meetings.

10. History of Changes

Reason for Change - Index	
A. As a result of incidents	B. As a result of audit findings
C. New / changes in governance documents	D. Changes in legislation
E Changes in technology	F. Changes in machinery/equipment
G Results of risk assessments	H. Change in training requirements
I. New document format	J. Change due to spelling or grammatical error
K. To integrate a special instruction into the document control system	L. Other Requirements

Date of change	Revised Item (Paragraph number)	Changes Made	Reason Code	Name of reviewer
14.04.11	Cover Page	REVISED REFERENCE SYSTEM	C	E. MOYO
14.04.11	9.6.2	REVIEW OF PROCEDURE FOLLOWING ACTUAL OR MOCK ENVIRONMENTAL EMERGENCY	A	E. MOYO
01.06.12	Appendix	Updated Environmental External Emergency Contact details	A	E. MOYO
15.04.13	Cover Page	Inserted the first implementation date	B	E. MOYO

11. Record Control

Records to be maintained in accordance with this Procedure (refer to the Anglo American Platinum Record retention schedules for retention periods and disposal methods):

Identification	Reference number	Responsible for filing	Responsible for maintenance	Location of storage area	Retention period	Method of disposal

Emergency Preparedness & Response	BHL-Group-ENV-PRO-007	EC	EC	EC Office & SHE Public Folder on the Server	2 years	Archiving & Shredding
Mock Drill Reports	Refer to SHE Central	SHE Central	SHE Central	SHE Central & SHE Public Folder on the Server	2 years	Archiving & Shredding
Reports of Actual Environmental Emergency Situations	BHL-Group-ENV-PROR-007a	EC	EC	EC Office & SHE Public Folder on the Server	10 years	Archiving & Shredding

12. References

Reference	Applicable Standard/ Rule/ Regulation	Short Description	Ref. in this doc
Version 2: New_ 2022	/ Vol 1: 2009	Environment Way: EMS Standard	Page 18
ISO 14001		Emergency Preparedness & Response	Clause 4.4.7
BHL-MIN-ENV-PRO-009		conformity & Incident Control Procedure	9.3
Namibian Environmental Agency		SI requirements.	

13. Appendices

1. List of Identified Environmental Emergencies (REF TO BMS for Response Strategies)

No.	Potential Environmental Emergency	Place of Potential Occurrence
1	Flooding	Throughout site
2	Veldt Fires	Throughout site & may start in the local community
3	Sewerage Treatment Plant Failure	Sewerage Truck Deport #1 & #2
4	Truck accidents	Along the hauling routes.
5	Tailings Pipe Burst	Along the Tailings line
6	Emergency Spillage	During transportation of chemicals and explosives.
7	Pollution Control Failure	Depots and boarder exit points
8	Bulk Diesel/Fuel Spillage	Along the Road during Transportation, During Diesel delivery at The Diesel Storage Facility, Within the Stores Oil Storage Yard
9	Bulk Process Reagents Spillage	Along the Road during Transportation, At the Reagents Storage area during offloading
10		

2. Register of Emergency Contact Details

For internal Contact details, refer to the current Internal Directory

External Environmental Emergency Contacts				
ZEMA Zambia			District Environmental Officer	
Zambia Police			Officer In Charge	