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REPORT:

PRELIMINARY EMP FOR THE PROPOSED CONSTRUCTION OF AN AMMONIA TERMINAL AT THE WALVIS BAY PORT AREA, ERONGO REGION, NAMIBIA

PROJECT NUMBER: ECC-145-453-REP-25-C

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ABBREVIATIONS

Abbreviation	Description
ASTM	American Society for Testing and Materials
CE	Control efficiency
CEO	Chief Executive Officer
CFC	chlorofluorocarbon
Cleanergy Solutions	Cleanergy Solutions Namibia (Pty) Ltd
dBa	decibels
E	Electrical/electronic
ECC	Environmental Compliance Consultancy (Pty) Ltd
e.g.	example
EIA	environmental impact assessment
EM	Environmental Manager
EMP	environmental management plan
EMS	Environmental Management Systems
ESF	environmental and social framework
ESG	environmental, social and governance
ESIA	environmental and social impact assessment
ESMP	environmental and social management plan
etc.	et cetera
GIS	geographic information system
HR	Human Resources
HSE	Health, Safety and Environment
i.e.	that is
IEC	International Electrotechnical Commission
IFC	International Finance Corporation
km/h	kilometre per hour
L	Litre
Ltd.	Limited
m	metre
MEFT	Ministry of Environment, Forestry and Tourism
MME	Ministry of Mines and Energy
MSDS	Material Safety Data Sheets
NHC	National Heritage Council
NSR	noise-sensitive receptor
O&L	Ohlthaver & List Group
OEM	Original equipment manual
OHSE	operational health, safety and environment
PE	programmable electronic
PM	particulate matter

Abbreviation	Description
PPE	personnel protective equipment
Pty	Proprietary
SDS	Safety Data Sheets
SOP	standard operating procedure
ToR	terms of reference

1 INTRODUCTION

1.1 PROJECT BACKGROUND

Environmental Compliance Consultancy (Pty) Ltd (ECC) has been appointed by Cleanergy Solutions Namibia (Pty) Ltd (hereinafter referred to as the Proponent or Cleanergy Solutions) to conduct an environmental and impact assessment (EIA) and compile a preliminary environmental management plan (EMP) for the proposed construction of the ammonia terminal at the Walvis Bay port area, in the Erongo Region, Namibia.

Cleanergy Solutions Namibia (Pty) Ltd is a joint venture between Ohlthaver & List (O&L) Group and CMB.TECH, The Ohlthaver & List (O&L) Group is the largest privately owned consortium in Namibia, with an operational track record spanning over a century and covering a diverse number of industries. CMB.TECH, a Belgium company specialising in the design, construction and operations of large marine and industrial modes of transportation that utilise hydrogen and ammonia. It forms an integral part of Compagnie Maritime Belge which is a family-owned shipping group, founded in 1895.

Cleanergy Solutions established the first green hydrogen production plant outside of Walvis Bay, which is completely solar powered and is set to supply fuel for local trucks, port machinery and railway equipment. An ammonia production plant is proposed to be developed on Farm 58, and green ammonia will be supplied to various marine and industrial applications and promote sustainable energy practices in Namibia. The Proponent proposes that the liquid ammonia be transported from the ammonia production plant via the ammonia pipeline to the terminal for storage and exporting purposes.

The location of the proposed site is shown in Figure 1.

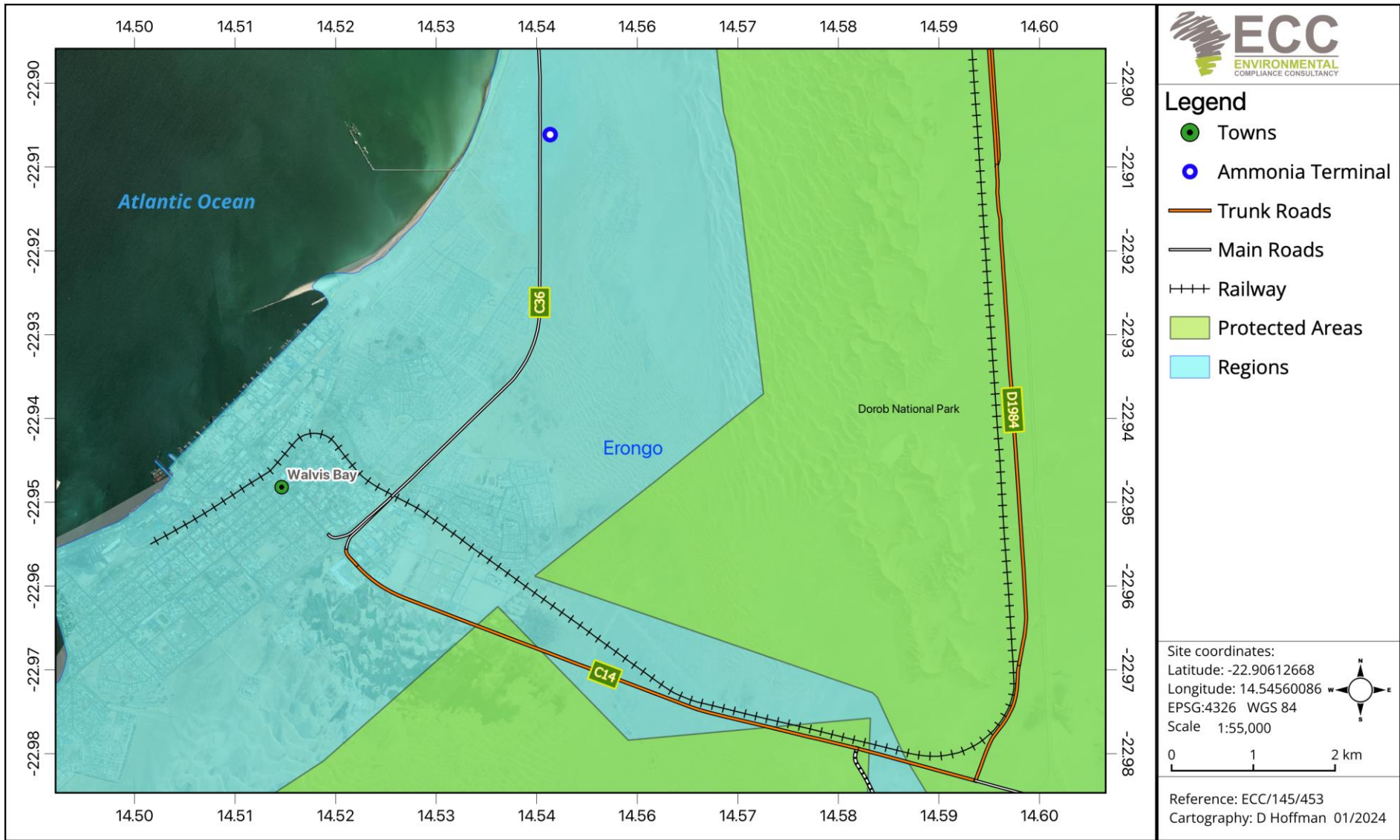


Figure 1: Locality map of the proposed project

1.2 ENVIRONMENTAL REGULATORY REQUIREMENTS

The proposed project triggers listed activities as stipulated in the Environmental Management Act, No. 7 of 2007 and its Regulations, promulgated in 2012. An environmental scoping report, environmental impact assessment (EIA) and preliminary environmental management plan (EMP) are required to be submitted as part of the application to support the decision-making process for issuing an environmental clearance certificate.

This report presents the EMP and has been undertaken in terms of the requirements of the Environmental Management Act, 2007 and its Regulations.

1.3 PURPOSE AND SCOPE OF THIS REPORT

The environmental management plan (EMP) provides a logical framework, mitigation measures and management strategies for the activities associated with the proposed project. In this way ensuring that the potential environmental impacts are curbed and minimised as far as practically possible and that statutory and other legal obligations are adhered to and fulfilled. Outlined in the EMP are the protocols, procedures and roles and responsibilities to ensure the management arrangements are effectively and appropriately implemented.

The EMP forms an appendix to the environmental scoping report and is based on the findings of the assessment. The environmental scoping report should be referred to for further information on the proposed project, assessment methodology and applicable legislation, and assessment findings.

This preliminary EMP is a live document and shall be reviewed at predetermined intervals, and or updated during the EIA process when or if the scope of work alters, or when further data or information is added. All personnel working on the project will be legally required to comply with the requirements set out in the final EMP that is approved by the competent authorities and Ministry of Environment, Forestry and Tourism (MEFT).

1.4 MANAGEMENT OF THIS EMP

The proponent, will hold the environmental clearance certificate for the proposed project and will be responsible for the implementation and management of this preliminary EMP. The implementation and management of this preliminary EMP, and thus the monitoring of compliance, will be undertaken through daily duties and activities, as well as monthly inspections.

1.5 LIMITATIONS, UNCERTAINTIES, AND ASSUMPTIONS RELATED TO THIS EMP

This preliminary EMP does not include measures for compliance with statutory occupational health and safety requirements. This will be provided in the safety management plan to be developed by the Proponent.

Where there is any conflict between the provisions of this EMP and any contractor's obligations under their respective contracts, including statutory requirements (such as licences, project approval conditions, permits, standards, guidelines, and relevant laws), the contract should be amended, and statutory requirements are to take precedence.

The information contained in this preliminary EMP is based on the project description as provided in the environmental scoping report. Where the design or operation method is different, this preliminary EMP may require updating and potential further assessment may be undertaken.

2 ENVIRONMENTAL MANAGEMENT FRAMEWORK

This EMP provides measures, guidelines, and procedures for managing and mitigating potential environmental impacts. The EMP also indicates monitoring and reporting guidelines and sets responsibilities for those carrying out management and mitigation measures.

2.1 OBJECTIVES AND TARGETS

Environmental objectives and targets have been developed so that construction activities can minimise potential impacts on the environment, as far as reasonably practicable.

Environmental objectives for the project are as follows:

- Zero pollution incidents.
- Minimal vegetation clearing and earthworks.
- Minimal impact on air quality and noise receptors.
- Protect fauna and flora, and
- Use natural resources effectively and efficiently.

2.2 ORGANISATIONAL STRUCTURE, ROLES, AND RESPONSIBILITIES

The Proponent shall be responsible for:

- Ensuring all members of the project team, including contractors, comply with the procedures set out in this EMP
- Ensuring that all persons are provided with sufficient training, supervision, and instruction to fulfil this requirement
- Ensuring that any persons allocated specific environmental responsibilities are notified of their appointment and confirm that their responsibilities are clearly understood
- Contractors shall be responsible for ensuring and demonstrating that all personnel employed by them are compliant with this EMP, and meet the responsibilities listed above.

Table 1 lists the roles and responsibilities allocated to different management levels in the company and specific personnel.

Table 1 – Roles and responsibilities

Role	Responsibilities and duties
Proponent	<ul style="list-style-type: none"> - Responsible for the overall management and implementation of the EMP. - Ensure environmental policies are drafted/updated and communicated to all personnel throughout the company. - Responsible for providing the resources required to effectively run operations and comply with the EMP. - Appoint all managers needed to ensure effective running of operations; and - Ensure systems for proper induction and training of personnel and contractors are in place.
Project manager	<ul style="list-style-type: none"> - Responsible for ensuring compliance with this EMP including overseeing the construction work, day to day activities during operations, and routine and non-routine maintenance work during operations, as well as the decommissioning of the transformer platforms. - Ensure all personnel are aware of the commitments made in the EMP and any other relevant regulatory requirements applicable to the project - Responsible for the management, maintenance and revision of the EMP - Ensure adequate resources are made available for implementation of this EMP - Maintain the community issues and concern register, and keep records of complaints - Ensure all employees and contractors participate in a site induction process before commencing work on the project and maintain an up-to-date register - Provisioning of environmental awareness/management training and inductions for all employees, including impacts of the powerline on avian fatalities - Ensure that the best environmental practice is undertaken throughout the project, and - Report any non-compliance or accidents to the regulatory authority.
Site manager	<ul style="list-style-type: none"> - Appointed to manage the performance of the construction and operational maintenance activities, - Responsible for implementation and compliance of this EMP - Managing the preparation and implementation of method statements for certain activities, and ensuring the environmental

Role	Responsibilities and duties
	<p>manager reviews all method statements and the relevant environmental protocols are incorporated</p> <ul style="list-style-type: none"> - Reporting any non-compliance or accidents to the project manager and environmental manager; - Ensuring that all staff have attended a site induction session before the commencement of any work on-site and that they are adequately informed of the requirements of this management plan - Ensuring that all contract workers, sub-contractors and visitors to the site are conversant with the requirements of this EMP, relevant to their roles on site and adhere to this EMP at all times, and - Receiving, responding to and recording complaints.
<p>Employees/contractor employees</p>	<ul style="list-style-type: none"> - Responsible for being compliant with this EMP throughout the construction work, in addition to: - Ensuring they have undertaken a site induction and are conversant with the requirements of this EMP, - Ensuring appropriate briefings for certain activities have been provided and fully understood - Adherence to this EMP at all times, and - Reporting of any operations and conditions that deviate from the EMP or any non-compliant issues or accidents to the environment manager and site manager/contractor.
<p>Safety officer</p>	<ul style="list-style-type: none"> - A safety officer for the project will be available, as required, throughout the construction of the project. - Implement all relevant measures to target zero injuries incurred onsite. - Assessing risks on the construction site - Ensuring a safe working environment - Carrying out inductions to employees and or contractors for construction and operations activities.

2.3 CONTRACTORS

Any contractors hired during the construction work or maintenance activities in the operational phase shall be compliant with this EMP and shall be responsible for the following:

- Undertaking activities in accordance with this EMP as well as relevant policies, procedures, management plans, statutory requirements, and contract requirements.
- Implementing appropriate environmental and safety management measures.
- Reporting of environmental issues, including actual or potential environmental incidents and hazards, to the site manager.

- Ensuring appropriate corrective or remedial action is taken to address all environmental hazards and incidents reported by employees and subcontractors.

2.4 EMPLOYMENT

The Proponent and all contractors shall comply with the requirements of the Republic of Namibia's regulations for Labour, Health and Safety, and any amendments to these regulations. The following shall be complied with:

- In liaison with local government and community authorities, the Proponent shall ensure that local people have access to information about job opportunities and, where they have the prerequisite skills and experience, are considered first for construction/maintenance contract employment positions.
- The number of job opportunities shall be made known together with the associated skills and qualifications.
- The maximum length of time the job is likely to last for shall be indicated.
- Should foreign workers be hired, the proponent shall ensure that they have a valid work permit at all times.
- Every effort shall be made to recruit from the group of unemployed workers living in the surrounding area for positions that entail unskilled work.

2.5 REGISTER OF ENVIRONMENTAL RISKS AND ISSUES

An environmental review of the project has been completed to identify all the commitments and agreements made. A list of environmental commitments and risks has been produced, which details including measures identified for the prevention of pollution or damage to the environment during the construction and operational phase.

Table 2 provides a list of environmental risks and issues, as well as associated mitigation (as derived from the EIA) and monitoring measures, and the roles responsible for compliance. It will be subject to regular review by the project manager and updated when necessary. The project manager and site manager will use this register to undertake monthly inspections (see next section) to ensure the project is compliant with this EMP.

Table 2 – A list of environmental risks and issues, as well as associated mitigation and monitoring measures

Receptors	Potential impacts	Management/mitigation measures	Monitoring requirements	Responsibility
Terrestrial environment and ecology	Loss of biodiversity and habitat	<ul style="list-style-type: none"> - Use existing roads for access to avoid new tracks and create cut lines, with due regard for the existing ecosystem functions in the area. - Identify rare, endangered, threatened, and protected species. - During toolbox talks and induction, highlight to workers so that the removal of significant plants is avoided. - Where possible rescue and relocate plants of significance with the appropriate permits in place beforehand. 	<ul style="list-style-type: none"> - Daily - Weekly - Annually 	<ul style="list-style-type: none"> - Project manager - Site manager - Employees
	Increase in invasive species in cleared areas	<ul style="list-style-type: none"> - All project equipment arriving on site from an area outside of the Project or coming from an area of known weed infestations (not present on the project site) should have an internal weed and seed inspection completed prior to equipment being used; - Ensure the potential introduction and spread of alien plants is prevented, and - Ensure the correct removal of alien invasive vegetation and prevent the establishment and spread of alien invasive plants. - Eradicate weeds and alien species as soon as they appear. - Make workers aware about alien species and weeds. 		

Receptors	Potential impacts	Management/mitigation measures	Monitoring requirements	Responsibility
	Residing, nesting and slow-moving organisms can be disturbed, injured or killed by movement of vehicles and equipment	<ul style="list-style-type: none"> - Restrict movements to areas of activities only; - Use existing tracks and routes as far as possible and develop new accesses in line with remaining EMP controls; - Identify rare, endangered, threatened and protected species in advance; - Route new tracks around protected species and sensitive areas. Avoid, or relocate if avoidance is not possible; - Minimize movements to daytime hours or only use vehicles equipped with suitable night driving lights; - Training and raise awareness to sensitize employees and notify them on avoiding some areas; - No driving off designated access routes (into the bush) / off-road driving; - No firearms on site; and - No animals or birds may be collected, caught, consumed or removed from site. 	-	-
Safety and emergency	Accidental and uncontrolled fire	<ul style="list-style-type: none"> - Equipment to be well maintained and serviced regularly and documented proof kept; - Restrict movements of people to areas of activities only; - Train people and raise awareness about veld fires and firefighting and documented proof kept; - No open fire outside designated areas; - No cigarette buds are discarded but contained and disposed of at an appropriate facility; 	<ul style="list-style-type: none"> - Daily - Weekly - Annually 	<ul style="list-style-type: none"> - Project manager - Site manager - Employees

Receptors	Potential impacts	Management/mitigation measures	Monitoring requirements	Responsibility
		<ul style="list-style-type: none"> - Proper fire hazard identification signage to be placed in areas that store flammable material (i.e. hydrocarbons and gas bottles); - Control and reduce the potential risk of fire by segregating and safe storage of materials; - Avoid potential sources of ignition by prohibiting smoking in and around facilities and - Firefighting equipment and fire breaks should always be at designated areas and should be maintained regularly. 		
	Risk of spillage of hydrocarbons, chemicals or other dangerous goods/material	<ul style="list-style-type: none"> - Chemical and hydrocarbon spillages or leaks will be cleaned up timeously in order to prevent contamination. - Fuel and chemicals are handled with care; - Spill kits to be at designated areas across the site or available for use during refuelling, fuel/chemical delivery or use. Absorption material should be available and at hand. Where sawdust is used it should be cleaned up immediately and not left for long periods as this poses a fire hazard; - Equipment to be well maintained and serviced regularly and documented proof kept and - A funnel should be available and used to avoid spillage. 	-	-
Groundwater and surface water	Groundwater and surface water contamination/pollution from wastewater of oil spills	<ul style="list-style-type: none"> - Storm water management design or plan to form part of the infrastructure; - Good housekeeping; - Training through toolbox talks and induction; 	- Daily	<ul style="list-style-type: none"> - Project manager - Site manager

Receptors	Potential impacts	Management/mitigation measures	Monitoring requirements	Responsibility
		<ul style="list-style-type: none"> - Accidental spills and leaks (including absorption material) to be collected and cleaned as soon as possible; - No wastewater to be discharged in the open environment; - Hazardous waste and contaminated water must be disposed of appropriately in a disposal facility; - Emergency response plans and spill contingency plans must be in place and include all fuels, chemicals or hazardous substances being handled. 		
Soil	Soil quality contamination/pollution from potential wastewater or chemicals	<ul style="list-style-type: none"> - Accidental spills and leaks (including absorption material) to be collected and cleaned as soon as possible. - In the event of spills and leaks, polluted soil must be collected and disposed of at an approved site. - Limit the possibility to mix mineral waste with topsoil. - Bioremediation of contaminated soil following possible accidental spills should be conducted. 	<ul style="list-style-type: none"> - Daily - Weekly - Annually 	<ul style="list-style-type: none"> - Project manager - Site manager
	Soil trampling and possible erosion	<ul style="list-style-type: none"> - Limit the possibility of compaction and creating of a hard subsurface; - Limit the possibility of trampling; and - Topsoil should be stockpiled separately, and re-spread during rehabilitation. 		
Wastewater management	Waste pollution	<ul style="list-style-type: none"> - Training and toolbox talks. - Good housekeeping. 	<ul style="list-style-type: none"> - Daily - Weekly 	<ul style="list-style-type: none"> - Project manager - Site manager - Employees

Receptors	Potential impacts	Management/mitigation measures	Monitoring requirements	Responsibility
		<ul style="list-style-type: none"> - Remove construction waste including general waste daily - Marked bins should be provided across the site, if necessary, and - Littering by the construction workers will not be allowed. - Hazardous material shall be managed in a safe and responsible manner to prevent contamination of soils, pollution of water and/or harm to people or animals as a result of the use of these materials. - Hazardous and non-hazardous waste shall be stored separately at all times. 		
Air quality	Possible dust emissions from construction vehicles and equipment	<ul style="list-style-type: none"> - Apply dust suppression where possible. - Specific activities that may generate dust and impact nearby residents must be minimised as far as possible. - Dust generating activities should be avoided during strong wind events. - All vehicles and machinery / equipment to be shut down or throttled back between periods of use. 	<ul style="list-style-type: none"> - Daily - Weekly - Annually 	<ul style="list-style-type: none"> - Project manager - Site manager - Employees
Visual	Visual disturbance	<ul style="list-style-type: none"> - Engage with the surrounding residents about the construction activities. - Good housekeeping. - Apply dust suppression where possible; - Maintain continuous communication with I&APs to identify concerns and mitigation measures - Restrict speed of vehicles (<30 km/h), during offroad trips 	<ul style="list-style-type: none"> - Daily 	<ul style="list-style-type: none"> - Project manager - Site Manager - Employees

Receptors	Potential impacts	Management/mitigation measures	Monitoring requirements	Responsibility
		<ul style="list-style-type: none"> - Specific activities that may generate dust and impact on residents shall be avoided during high wind events. - All vehicles and machinery / equipment to be shut down or throttled back between periods of use. 		
Noise	Possible noise during construction	<ul style="list-style-type: none"> - Noise should be minimised during construction work. The following measures should apply: - Outside working hours, the noise levels should be limited to the International Financial Corporation residential noise levels (55 dBA- during the day and 45 dBA- at night). - Regular maintenance of equipment - All equipment to be shut down or throttled back between periods of use, and - Hearing protection should be provided to employees operating equipment which produces excessive noise. 	<ul style="list-style-type: none"> - Daily 	<ul style="list-style-type: none"> - Project manager - Employees
Heritage sites	Loss or damage to heritage sites	<ul style="list-style-type: none"> - Chance finds to be reported to the environmental department in line with the chance finds procedure; and - No authorized removal or damage to artefacts is allowed. 	<ul style="list-style-type: none"> - Environmental audits and inspections - Archaeological monitoring programme 	<ul style="list-style-type: none"> - Site manager - Environmental manager
Resource use	Inefficient use of water resources	<ul style="list-style-type: none"> - Use water effectively and efficiently by following the reduce-recycle-reuse approach; and - Record volumes of abstraction and supply. 	<ul style="list-style-type: none"> - Daily observations 	<ul style="list-style-type: none"> - Site manager - Environmental manager; and - Employees

Receptors	Potential impacts	Management/mitigation measures	Monitoring requirements	Responsibility
Road safety	Road incidences	<ul style="list-style-type: none"> - Internal roads to be demarcated clearly. - Off-road driving not allowed. - All vehicles that transport materials to and from the construction site should be road-worthy. - Drivers that transport materials should have a valid driver's license and should adhere to all traffic rules. - The maximum speed on internal roads should be 40 km/h. - Loads upon vehicles should be properly secured to avoid items falling off the vehicle. 	<ul style="list-style-type: none"> - Environmental audits and inspection 	<ul style="list-style-type: none"> - Site manager
Community	Construction of the ammonia terminal may increase the probability of complaints/ social discomfort or anxiety	<ul style="list-style-type: none"> - Engage with the surrounding communities and/ or all stakeholders about the construction activities. 	<ul style="list-style-type: none"> - Daily - Weekly - Annually 	<ul style="list-style-type: none"> - Project manager - Site manager
Employee health and safety	Occupational health and safety of construction workers	<ul style="list-style-type: none"> - Use the appropriate PPE, - Complying with SOP - Complying with all applicable national regulations and laws to minimise risks at the workplace - Comply with all applicable supervision of activities - Proper use and storage of material and equipment - Any accidents or incidents should immediately be reported to the project manager, and - All incidents should be recorded in an incidental register 	<ul style="list-style-type: none"> - Daily - Weekly - Annually 	<ul style="list-style-type: none"> - Project manager - Site manager - Employees - Safety Officer
Training and awareness	Lack of environmental knowledge on ESMP	<ul style="list-style-type: none"> - Environmental department to provide weekly information regarding environmental issues of concern; 	<ul style="list-style-type: none"> - EM to request attendance 	<ul style="list-style-type: none"> - Site manager

Receptors	Potential impacts	Management/mitigation measures	Monitoring requirements	Responsibility
	requirements leads to environmental incidents	<ul style="list-style-type: none"> - Line management to discuss topics with teams; - HSE staff will be employed by contractor staff to brief staff on their company she topics and those of the proponent; - Awareness will be distributed by various channels as deemed appropriate; - Daily site inspections to ensure HSE requirements are adhered to; <ul style="list-style-type: none"> o HSE files to be maintained per shift; and o Incident reports covering HSE to be included, including lessons learned and corrective actions. - All construction personnel should undergo environmental induction (training), which should include as a minimum the following: <ul style="list-style-type: none"> o Explanation of the importance of complying with the ESMP. o Discussion of the potential environmental impacts of the construction activities. o Employees' roles and responsibilities, including emergency preparedness. o Explanation of the mitigation measures that must be implemented when particular work groups carry out their respective activities. o Explanation of the specific mitigation measures within this ESMP especially unfamiliar provisions. 	<ul style="list-style-type: none"> registers be completed by all personnel and contractors' construction crew attending induction training sessions - Environmental audits and inspections 	<ul style="list-style-type: none"> - Environmental manager

Receptors	Potential impacts	Management/mitigation measures	Monitoring requirements	Responsibility
		<ul style="list-style-type: none"> – Improve awareness of ambient air quality and consideration regarding wind speed and direction when undertaking dust generating activities. 		
Socio-economic	Creation of jobs during project construction/development	<ul style="list-style-type: none"> – Ensure that local residents get first opportunity to apply for positions were applicable. 	<ul style="list-style-type: none"> – HR recruitment policies 	<ul style="list-style-type: none"> – HR manager

3 ENVIRONMENTAL MANAGEMENT PRINCIPLES

3.1 CONTINUAL IMPROVEMENT

The Proponent’s management team is responsible for reviewing and updating this EMP, which will be supported by the regular reports on the various areas of the site. As part of this review process, the regular reports will be reviewed, identifying any trends or significant areas of concern, as well as measures implemented to manage / resolve environmental or social issues. Compliance and legislative changes will be reviewed, and lessons learnt will be captured. The EMP will be amended as required and follow up training, awareness or updates will be provided.

Ongoing hazard identification through the review of the EMP and supporting management plans and SOPs will ensure environmental impacts are avoided or minimised to as low as reasonably practicable as part of the continuous improvement of the EMS.

3.2 BEST PRACTICE

The best practice management measures that will be complied with in accordance with the international best practice codes and standards, during project activities, are listed in summary in **Error! Reference source not found..**

Table 3 - A list of environmental best practice measures to be implemented

ENVIRONMENTAL ASPECT	BEST PRACTICE REQUIREMENT
Pollution prevention control	<ul style="list-style-type: none"> – IEC 60079 Hazardous Area Classification Standard to be applied and maintained – IEC 61508 Functional Safety of electrical, electronic and programmable electronic (E/E/PE) safety-related systems to be applied and maintained – Employees to be trained on relevant SOPs; – Plant and equipment to be maintained and serviced regularly; – Refueling at designated locations, where possible; – Ammonia neutralizing spill kits and various spill kits available where the risk of loss of containment is identified; – Bunds to be at least 110% of the largest container therein; and – Good housekeeping.
Solid waste management	<ul style="list-style-type: none"> – Good housekeeping (no littering); – Designated waste collection areas around site and one central location;

ENVIRONMENTAL ASPECT	BEST PRACTICE REQUIREMENT
	<ul style="list-style-type: none"> - Bins labelled; - Waste to be separated and kept clean and tidy; and - Waste bins emptied on regular basis.
Ground contamination	<ul style="list-style-type: none"> - Spill kits should be available, i.e., ammonia neutralising spill kits; - Chemical and hydrocarbon management enforced on site; and - Good housekeeping.
Storage of fuels, oils, chemicals and other hazardous liquids	<ul style="list-style-type: none"> - Storage tanks will be suitable and labelled for the liquid being stored; - Bunds to be at least 110% of the container; and - Daily inspections of tanks.
Air quality	<ul style="list-style-type: none"> - Turn off equipment when not in use; and equipment to be maintained and serviced regularly. - Use environmentally friendly substitutes for CFCs where feasible.
Noise	<ul style="list-style-type: none"> - Turn off plant and equipment when not in use; and equipment to be maintained and serviced regularly. - Construction power tools are only to be used during normal working hours. - Outside working hours, the noise levels should be limited to the International Financial Corporation residential noise levels (55 dBA- during the day and 45 dBA- at night).

3.3 ENVIRONMENTAL MONITORING

A monitoring and evaluation program will be used in line with internal OHSE standards to evaluate environmental performance and promote continual improvement. Monitoring also supports environmental management on-site to evaluate how effective the environmental management has been, over an extended period of time. An environmental monitoring schedule will be put in place for the construction and operations based on the recommendations of relevant experts and results of the specialist environmental studies completed as part of this assessment process.

The monitoring program will comprise inter alia:

- Noise monitoring (e.g. effect on mammals and residents nearby);
- Biodiversity monitoring (flora and fauna);
- Air quality monitoring (e.g. dust generation during construction); and
- Carbon footprint monitoring.

4 COMMUNICATION AND TRAINING

To ensure potential risks and impacts are minimised it is vital that personnel are appropriately informed and trained on how to properly implement the EMP. It is also important that regular communications are maintained with stakeholders (if applicable) and made aware of potential impacts and how to minimise or avoid them. This section sets out the framework for communication and training in relation to the EMP.

4.1 COMMUNICATIONS

During construction, the project manager and site manager shall communicate site-wide environmental issues to the project team through the following means (as and when required):

- Site induction
- Audits and site inspections
- Toolbox talks, including instruction on incident response procedure, and
- Briefings on key project-specific environmental issues, like feedback on complaints.

This EMP shall be distributed to the construction team including any contractors and to ensure that the environmental requirements are adequately communicated. Key activities and environmentally sensitive operations will be highlighted to workers and contractors.

During the construction phase, communications between the management team shall include discussing any complaints received and actions to resolve them, - any inspections, audits, or non-conformance with this EMP, and any objectives or target achievements.

4.2 ENVIRONMENTAL EMERGENCY AND RESPONSE

An emergency is any abnormal event, which demands immediate attention. It is any unplanned event, which results in the temporary loss of management control at site, but where functional resources can manage the response. An emergency response plan document will be put in place that manages the response in relation to emergencies including environmental emergencies. Table 4 contains a list of numbers to be contacted in case of an emergency.

Table 4 - Emergency contact details

Town	Ambulance	Police	Fire Department
Walvis Bay	+264 85955 / +264 811 245999	+264 64 21 9048	+264 64 20 6425

4.3 COMPLAINTS HANDLING AND RECORDING

Any complaints received verbally by any personnel on the project site shall be recorded by the receiver including:

- The name of the complainant
- The contact details of the complainant
- Date and time of the complaint
- The nature of the complaint

The information shall be given to the project manager who is overall responsible for the management of complaints. The project manager shall do the following:

- Inform the site manager of issues, concerns, or complaints.
- Maintain a complaint register that requires details of the complaint.
- Provide a written response to the complainant of the results of the investigation and action to be taken to rectify or address the matter(s). Where no action is taken, the reasons why are to be recorded in the register.

The workforce shall be informed about the complaints register, its location and the person responsible, to refer residents or the public who wish to lodge a complaint. The complaints register shall be kept for the duration of the Project and will be available for government or public review upon request.

4.4 TRAINING AND AWARENESS

All personnel working on the project shall be competent to perform tasks that have the potential to cause an environmental impact. Competence is defined in terms of appropriate education, training, and experience.

4.5 SITE INDUCTION

All personnel involved in the project shall be inducted to the site with specific environmental and social awareness training, and health and safety issues. The environmental and social awareness training shall ensure that personnel are familiar with the principles of this EMP, and the environmental impacts associated with their activities, the procedures in place to control these impacts and the consequences of departure from these procedures. The project manager shall ensure a register of completed training is maintained.

The site induction should include, but is not limited to the following:

A general site-specific induction that outlines:

- What is meant by "environment" and "social" in the EMP?
- Why the environment needs to be protected and conserved?
- How can construction activities impact the environment?
- What can be done to mitigate against impacts?

The inductee's role and responsibilities concerning implementing the EMP:

- The site's environmental rules
- Details of how to deal with, and who to contact should any environmental problems occur.
- The potential consequences of non-compliance with this EMP and relevant statutory requirements, and
- The role of responsible people working on the project.

5 INCIDENT REPORTING

The Proponent and appointed contractors must have an accident and incident reporting system. The section below sets out the minimum requirements for incident reporting and should be used as a basis for incident reporting.

5.1 MINOR INCIDENT OR “NEAR MISS”

Any incident or “near miss” involving the Proponent, a nominated representative, any contractor, or its subcontractors or any third party’s personnel, property, plant or equipment must be:

- 1) Orally reported to the supervisor or the supervisor’s nominated representative:
 - a. Immediately and without delay.
 - b. Regardless of whether or not injury to personnel has occurred.
 - c. Property or equipment has been damaged.
- 2) Written up and handed to the supervisor or the supervisors nominated representative by the end of the shift. The written report should:
 - a. State all known facts and conditions at the time of the incident and
 - b. includes a preliminary assessment of the most likely potential consequences of the incident under the current circumstances.

5.2 SERIOUS INCIDENTS

For any serious incident involving a fatality, or permanent disability, the incident scene must be left untouched until witnessed by a representative of the Namibian police. This requirement does not preclude immediate first aid being administered and the location being made safe.

5.3 INCIDENT REPORT AND CLOSE OUT

The assigned supervisor or manager must investigate the cause of all work accidents and significant incidents and must provide the results of the investigation and recommendations on how to prevent a recurrence of such incidents. A formal root-cause investigation process should be followed.

6 REPORTING, COMPLIANCE AND ENFORCEMENT

6.1 ENVIRONMENTAL PERFORMANCE MANAGEMENT

The current summary of a register of environmental risks and issues identifies mitigation and monitoring measures, as well as the roles responsible for execution. The project manager and site manager will use this register to undertake monthly inspections to ensure the project is compliant with this EMP.

6.2 CONSTRUCTION: ENVIRONMENTAL INSPECTION & COMPLIANCE MONITORING

6.2.1 DAILY COMPLIANCE MONITORING

A copy of this EMP will be on-site throughout the construction work and will be available upon request. It is the responsibility of the project manager and site manager to ensure this EMP is complied with through their daily roles. Daily inspections will be undertaken by the site manager (or nominated site supervisor). Any environmental problems or risks identified will be reported to the project manager and actioned as soon as is reasonably practicable.

6.2.2 MONTHLY COMPLIANCE MONITORING

Monthly inspections will be undertaken by the site manager to check that the standards and procedures set out in this EMP are being complied with and environmental control measures are in place and working correctly. Any non-conformance will be recorded, including the following details: a brief description of non-conformance; the reason for the non-conformance; the responsible party; the result (consequence); and the corrective action taken and any necessary follow up measures required.

6.3 OPERATIONS: ENVIRONMENTAL INSPECTIONS AND COMPLIANCE MONITORING

Annual inspections of the associated infrastructure will be managed and undertaken by the project manager. All infrastructure will be inspected to ensure that the equipment is operating as per specification, no damage has been caused, and no leaks or spills or rust have occurred. Any non-conformance will be recorded, including the following details: a brief description of non-conformance; the reason for the non-conformance; the responsible party; the result (consequence); and the corrective action taken and any necessary follow up measures required.

6.4 REPORTING

There will be a requirement to ensure that any incident or non-compliance, including any environmental issue, failure of equipment or accident, is reported to the project manager.

6.5 NON-COMPLIANCE

Where it has been identified that works are not compliant with this EMP, the project manager will implement corrective action to the extent that the works return to being compliant as soon as possible. In instances where the requirements of the EMP are not upheld, a non-conformance and corrective action notice will be produced. The notice will be generated during the inspections and the project manager will be responsible for ensuring a corrective action plan is established and implemented to address the identified shortcoming.

7 BIODIVERSITY MANAGEMENT PROGRAMME

7.1 INTRODUCTION

Construction, operations on the proposed terminal site will potentially include the minimal removal of flora and disturbance of habitat, ecosystems and ecological function. It is therefore vital to ensure that all management, monitoring and mitigation actions are adhered to in order to manage and minimise environmental impacts and any potential pollution that could further impact the receiving environment.

7.2 OBJECTIVES

The ESMP objectives are to minimise negative direct effects of the construction and operations on the receiving environment. These objectives are:

- Mitigation and monitoring;
- Avoid compromising future exploitation of resources by managing impacts and mitigating or minimising these impacts;
- Establish and maintain an information base that will assist in evaluating the cumulative impacts of the operations and establish recovery rates of biodiversity impacted during operations;
- Ensure the conservation of biodiversity where possible; and
- Offsetting as a last resort.

7.3 RESPONSIBILITIES

Workforce and all contractors

Required to take all reasonable measures to prevent the damage of flora and fauna and release of pollutants from the site into the receiving environment. Report any damage to fauna or flora to the HSE/ESG coordinator.

HSE/ESG coordinator

Will ensure that the objectives listed above are being met and provide performance feedback to the HSE/ESF and Project/General managers, in monthly and compliance reports.

7.4 BIODIVERSITY MANAGEMENT MEASURES

The biodiversity management plan measures are designed to minimise the damage to biodiversity on site. This will be updated once the findings of the ESIA biodiversity assessment are complete. Operations activities that could potentially damage protected and endangered species include:

- Chemical spills;
- Refueling;
- Stockpiling;
- Traffic activities; and

Clearing land.

Table 5 below shows the environmental aspects and impacts, and mitigation and monitoring measures for biodiversity aspects.

Table 5 - Biodiversity aspects

Responsibility	HSE/ESG Manager
Potential issues or impacts	<ul style="list-style-type: none"> – Possible injury or death of animals; – Poaching; – Habitat fragmentation from clearing vegetation – Flora disturbance; and – Loss of protected/vulnerable species.
Mitigation measures	
General	<ul style="list-style-type: none"> – Ensure internal land clearing permits are applied for prior to land clearing and through this process the environmental team have the opportunity to recover or rescue plants of significance or plants that can be used for progressive rehabilitation; – Permits to be obtained from Directorate of Forestry; – Limit the development to actual sites for construction and avoid affecting adjacent areas; – Avoid development and associated infrastructure in sensitive areas in the immediate area. This would minimise the negative effect on the local environment, especially unique features serving as habitat to various vertebrate fauna species; – Minimise areas cleared by ensuring that an early works construction plan or a construction management plan is in place and conveyed to contractors; – All workers on-site are to be notified to avoid any excluded areas or species; – Identify rare, endemic, endangered, threatened and protected species and demarcate them and trampling them or removing them, where possible; – Remove (e.g., capture) unique fauna and sensitive fauna, as well as slow moving species such as the Palmatogecko and Namaqua chameleon, before commencing with the development activities, as well as during the operational phase, and or species serendipitously located during this period and relocate to a less sensitive/ disturbed sites in the immediate area; – Remove unique, sensitive flora and protected plant species before commencing with the development activities and where possible relocating to less sensitive/disturbed sites in the immediate area if disturbance cannot be avoided;

Responsibility	HSE/ESG Manager
	<ul style="list-style-type: none"> – Prevent and stop the setting of snares (poaching), illegal collecting of veld foods (e.g., tortoises, etc.), and indiscriminate killing of perceived dangerous species (e.g., snakes, etc.); – Ensure site has adequate fire breaks; – Prevent the planting of potentially invasive alien plant species for ornamental purposes or as part of the landscaping. Alien species often “escape” and become invasive causing further ecological damage as is evident from previous human habitation in the area; – Make an effort to eradicate/destroy invasive alien plants encountered on site. This would ensure that the spread is limited and show environmental commitment; – Incorporate indigenous vegetation, especially protected species, into the overall landscaping. Indigenous species require less water and overall maintenance; – Initiate a suitable waste removal system as waste often attracts wildlife, which may result in human-wildlife conflict issues; – Educate/inform contractors and staff on protected species to avoid and the consequences of illegal collection of such species; – No animals or birds may be collected, caught, consumed or removed from the site by any contractor or personnel on site; – No poaching; – Rehabilitation of the disturbed areas, i.e., initial access route “scars” and associated tracks should be rehabilitated as soon as their use is complete, otherwise access needs to be restricted. Such rehabilitation would not only confirm the company’s environmental integrity, but also show true local commitment to the environment; and – Investigate the idea of employing an Environmental Officer during the construction phase(s) to ensure compliance and minimise the overall impact on the flora and the environment.
<p>Tracks</p>	<ul style="list-style-type: none"> – Other than designed and approved works, avoid placing access routes (roads and tracks) through sensitive areas, e.g., well vegetated Khan/Swakop/Tumas Rivers; ephemeral drainage lines; rocky outcrops (especially white geology areas), small drainage lines with <i>Welwitschia mirabilis</i> plants; lapped-faced vulture nesting sites; rocky outcrops; etc. This will minimise the effect on localised potentially sensitive flora and habitats in the area; – Route new tracks around established and protected trees, and clumps of vegetation, where possible; – In undisturbed areas, especially offsite, avoid driving randomly through the area (i.e., “track discipline”), but rather stick to permanently placed roads/tracks – especially during the construction phase. This will

Responsibility	HSE/ESG Manager
	<p>minimise the effect on localised potentially sensitive flora and habitats in the area;</p> <ul style="list-style-type: none"> - Avoid having to create new tracks for ongoing maintenance and inspections; - Stick to speed limits that are established to result in fewer faunal road mortalities as well as less dust pollution; - Implement erosion control; and - Avoid construction within 100 m of the main drainage line(s) (ephemeral streams) to minimise erosion problems as well as preserving the riparian associated flora and fauna.
Access route	<ul style="list-style-type: none"> - Revegetate access routes upon completion of installation of associated infrastructure where possible.
Monitoring requirements	
<ul style="list-style-type: none"> - Daily visual inspection during construction of new access tracks/widening, land clearing areas; - Daily visual inspection for fauna that may have become entrapped; - Clearing fire breaks on a regular basis, especially prior to the windier months; - Regular checking of rehabilitation areas to ensure that the vegetation is flourishing and not dying; - Biodiversity monitoring should be undertaken in line with monitoring programme requirements. This program will include, but is not limited to, monitoring of the condition of habitats, ecosystems, topsoil stockpiles, species inventory and alien vegetation control; and - Vegetation clearing permits are valid and on file. 	

8 SURFACE AND GROUNDWATER MANAGEMENT PROGRAMME

8.1 INTRODUCTION

Chemical/hydrocarbon and waste spills (solid/liquid) must be contained, so as not to contaminate the soil or groundwater. Any contact with groundwater must be treated with exceptional care and reported immediately to minimise the potential for contamination of an aquifer. It is important to limit the potential for wastewater seepage to groundwater.

This groundwater management plan outlines appropriate surface and groundwater water management measures, monitoring programmes and reporting procedures to be implemented.

8.2 OBJECTIVES

This surface and groundwater management plan has been prepared to minimise potential impacts on surface and groundwater resulting from construction and operational activities. It is important to report any contact with, or contamination of, groundwater to the HSE/ESG coordinator or relevant department line manager as soon as possible.

8.3 ROLES AND RESPONSIBILITIES

Workforce and all contractors

Required to take all reasonable measures to prevent the discharge of sediments and pollutants from the site towards surface and groundwater sources. Report any contact with groundwater to the HSE/ESG coordinator.

HSE/ESG coordinator

Will ensure that the objectives listed above are being met and provide performance feedback to the HSE/ESG manager.

8.4 GROUNDWATER MANAGEMENT MEASURES

The surface and groundwater management plan (Table 6) measures are designed to minimise the runoff of sediment-laden or polluted water/effluent into the surrounding environment. Construction and operational activities that could potentially alter natural groundwater quality include:

- Chemical leaks and related system breaches, leaks and spills;
- Seepage of wastewater into groundwater;
- Overflowing and/or leaking bunded area;
- Refuelling activities and
- Poor resource stewardship practices.

The following requirements are to be met to ensure that groundwater is not contaminated:

- Fuel/oil and chemicals must be safely stored; and
- Any contact with surface or groundwater must be treated with exceptional care and reported immediately, to minimise the potential for contamination of an aquifer.

Table 6 - Water quality mitigation measures

Responsibility	<ul style="list-style-type: none"> - Project/General manager - Processing manager - Maintenance manager - Employees
Potential issues or impacts	<ul style="list-style-type: none"> - Groundwater contamination due to incidental hydrocarbon spills; - Change in the water table and quality; and - Water contamination due to leaks or effluent.
Mitigation measures	
Protection of ground water	<ul style="list-style-type: none"> - Where the water table is potentially penetrated, a furrow needs to be dug that diverts the water to vegetation. This can only be done for clean (non-contact) water; and - Water saving measures shall be applicable at all times. No taps or pipes left to run, leaks to be detected immediately. Light duty vehicles to be washed in designate wash bays with water recycle systems, as well as silt traps and oil/water separators.
Sewage and grey water from temporary toilets on site	<ul style="list-style-type: none"> - Use of the portable chemical toilets instead of the veld must be strictly adhered to; and - If grey water can be collected from washing facilities, such as sinks and showers, not including toilets, once tested, it should be recycled and: <ul style="list-style-type: none"> o Used for dust suppression. o Used to clean equipment
Lowering of the groundwater table	<ul style="list-style-type: none"> - To maximise the re-use of water during the construction and operational phases to minimise the use of clean water, no matter the source. - Water shall be used purposefully during construction and operations, making use of reclaimed runoff, and recirculated process waters to the maximum extent possible, with supplemental use of external water sources; - Use water effectively and efficiently by following the reduce-recycle-reuse approach; and - A site wide water balance will be kept and updated on a regular basis by the Processing manager.
Inefficient use of water resources	<ul style="list-style-type: none"> - To ensure compliance with all legal obligations;

	<ul style="list-style-type: none"> – Terminal infrastructure to be designed and constructed according to national standards and applicable legislative requirements, to prevent surface water and groundwater contamination; – Ensure erosion control and prevention measures are in place; – Ensure laydown areas or maintenance workshops are located outside of stormwater catchment areas; – Refueling shall be undertaken in a designated area, where possible; – All vehicles and machinery must have drip trays to collect leakages of lubricants and oil during any field repairs or emergency maintenance; – In the event of pollution, polluted material must be collected and disposed of at an approved site; and – A ‘good housekeeping’ policy shall be adopted across the site area.
<p>Any hazardous fluid or lubricating chemicals used could enter the aquifer or surface water environment causing pollution</p>	<ul style="list-style-type: none"> – Hazardous waste disposal facilities need to be approved by the MEFT prior to construction and / or meet industry standards to prevent pollution events from occurring; – Temporary waste disposal facilities will be provided for the collection of waste, which will be removed regularly to the permitted waste disposal site; – Chemical and hydrocarbon spillages from vehicles, the storage terminal and pipelines will be cleaned up timeously to prevent contamination; – The contractors’ laydown and maintenance workshops areas will drain to a sump with silt traps and hydrocarbon collectors; – All chemicals, bulk fuels, oils and grease and any other hazardous substance, will be stored and handled as per all applicable legislation and national standards; – Portable chemical toilets will be provided during the project phases. They will be routinely cleaned, and sewage disposed of at a licensed sewage treatment plant with the safe disposal certificate to be provided; – Silt traps will be constructed upslope of the pollution control ponds and return water pond; – The pollution control facilities (pollution control ponds, silt traps and return water pond) will be placed on planned maintenance, routine inspections will be implemented, and they will be de-silted periodically to ensure effective performance; – Silt will be tested and disposed, if of a good quality;
<p>Monitoring requirements</p>	
<ul style="list-style-type: none"> – Report on trends on a monthly basis; and – Monitor the use of water and keep records of requirements. 	

9 WASTE MANAGEMENT PROGRAMME

9.1 INTRODUCTION

The construction and operational activities will generate both solid and liquid waste. The types of waste generated at the facility are classified as mineral and non-mineralised waste. All non-mineralised waste, if no onsite approved facility/landfill is in place, will be removed from the construction site and will either be disposed of at the local landfill site (non-hazardous waste e.g., household or garden waste), recycling facility (e.g., Rent-a-Drum) or the Walvis Bay hazardous waste disposal site.

9.2 OBJECTIVES

This waste management programme has been prepared to ensure the proper storage, transport, treatment and disposal of waste and where possible will follow the waste hierarchy, which encourages waste avoidance and waste reduction followed by reuse, recycling and reclamation, before waste treatment and waste disposal.

9.3 ROLES AND RESPONSIBILITIES

Workforce, contractors, suppliers and visitors

- Required to ensure that all waste generated during project activities is handled appropriately, removed and disposed of accordingly including providing evidence in the form of waste transfer receipts for the waste moved off-site.
- Ensure no windblown rubbish pollutes the environment.
- Remove waste on a regular basis to prevent vermin.
- Try to minimize the amount of waste produced as far as possible.

Department line managers and HSE/ESG coordinator

- Required to inspect receipts and evidence of correct waste handling.
- Review waste management practices regularly during the construction and operational phase.

9.4 SOLID AND LIQUID NON-MINERAL WASTE

Where possible the Proponent will implement measures to reduce, reuse and recycle waste generated as part of the construction and operations on site. To achieve this a temporary waste storage facility will be required.

Waste will be controlled through prevention and mitigation measures as follows:

- Reduce, reuse and recycle where possible;
- Storage of domestic waste on site may result in the attraction of unwanted scavengers and should be disposed of at a licensed site as soon as is feasible:

- Hydrocarbon and chemical contaminated solids have the potential to cause contamination to the soil, groundwater and/or surface water, thus correct storage and disposal methods are required. Some of these materials can be recycled or used by other facilities; and
- Contract if required, an onsite licensed waste management contractor.

Table 7 below provides waste mitigation measures and monitoring for waste.

Table 7 - Waste mitigate measures

Responsibility	<ul style="list-style-type: none"> - Project/General manager - Contractor site manager - OHSE appointed person /Environmental manager - Employees - Contractors
Potential issues or impacts	<ul style="list-style-type: none"> - Soil, surface water and groundwater contamination due to spillage; - Land and water pollution; - Loss of biodiversity; and - Infectious diseases.
Mitigation measures	
Waste Management Plan	<ul style="list-style-type: none"> - The Proponent should compile a Waste management plan that should address as a minimum the mitigation measures included below.
Hazardous waste	<ul style="list-style-type: none"> - Hazardous waste will be removed and managed by an approved service provided. - All construction and operational vehicles (4x4 vehicles and trucks) and equipment on site should be provided with a drip tray/or oil spill kit: <ul style="list-style-type: none"> o Drip trays and sealable containers are to be transported with vehicles wherever they go o Drip trays should be cleaned after use, and spillage handled, stored, and disposed of as hazardous waste o Contractor vehicles and support equipment should be authorised for use onsite prior to accessing the site. The vehicle either must have a drip tray or must be inspected as part of the authorization and prior to its entry on site each time; - All vehicles should be maintained regularly to prevent oil leakages; - Maintenance of vehicles must be completed within designated workshops and is not permitted to occur on site or in the field as far as reasonably possible. In instances when emergency field maintenance is required, measures need to be put in place to avoid hydrocarbon spillages;

	<ul style="list-style-type: none"> - Maintenance and washing of vehicles should be conducted at a suitable site/facility which adhere to the following: <ul style="list-style-type: none"> o The work area/facility should be lined to be impermeable; o The work area/facility should have an oil-water separator (oil trap) to collect any run-off from the washing and or maintenance activities or be equipped with an oil and water separation system; - Spilled oil or fuel should be treated as hazardous waste, disposed of as it occurs in the appropriate hazardous waste containers (sealable drums) on site, and removed off site regularly, or as required depending on volumes, to the closest licensed hazardous waste disposal site in the vicinity; - All such waste should be provided to specialists in the handling and treatment of such materials; and - All hazardous substances (e.g., fuel, grease, oil etc.) or chemicals should be stored in a specific location on an impermeable surface which is bunded and facilities should be leads that can seal.
<p>General waste</p>	<ul style="list-style-type: none"> - The site areas should be kept tidy at all times. - All domestic and general waste produced daily should be contained: - No waste may be buried or burned without a permit to do so or unless done so at a designated waste disposal site; - No waste dumping should be allowed on or around the construction site. - No waste is to be left uncontained, in suitable containers, overnight; - Waste containers (bins) should be emptied regularly and removed from site to the nearest official licensed waste disposal site, or to onsite approved landfill, if sought by the Proponent and approved by MEFT; - All recyclable waste needs to be taken to the nearest recycling depot if available; - Enough separate waste containers (bins) for hazardous and domestic/general waste must be provided on site. These should be clearly marked; and - Personnel should be sensitized to dispose of waste in a responsible manner and not to litter.

<p>Littering and environmental contamination from waste</p>	<ul style="list-style-type: none"> - No littering by workers shall be allowed. - All litter on and around the site must be picked up and placed in the bins provided. - The site should be always kept tidy and free of litter. All domestic and general waste produced daily should be cleaned and contained daily. - No waste shall be burned unless permitted to do so. - Waste shall be collected and shall be removed regularly to avoid bad odours. - Hazardous and non-hazardous waste shall be always stored separately.
<p>Environmental contamination from liquid waste</p>	<ul style="list-style-type: none"> - Hydrocarbon and chemical liquid waste must be stored correctly and disposed of by registered companies; - Safe disposal certificates must be kept and provided to the HSE/ESG manager on request.
<p>Monitoring requirements</p>	
<ul style="list-style-type: none"> - Monitor whether the provisions set out in this EMP concerning waste management, is being applied as per instructions. - Maintain waste record book for all discharges of wastes and incinerations. - All non-compliances should be recorded and discussed at weekly site meetings and timeous remedial actions taken. - All guilty parties that are in contravention of the provisions set out for managing waste should be warned and penalised, and in the event of repeat offenses dismissed, according to the severity of the impact appropriate steps taken. 	

9.5 WASTE DISPOSAL MONITORING

Certificates providing details of the safe disposal of waste from a permitted hazardous waste disposal site must be provided to the department line manager or HSE/ESG manager upon request.

10 HAZARDOUS SUBSTANCE SPILL MANAGEMENT PROGRAMME

10.1 INTRODUCTION

The uncontrolled release of ammonia, fuel and other hydrocarbons and chemicals has the potential to result in the contamination of soil, groundwater, the intertidal environment and ocean, which may lead to serious environmental and marine harm. Spills can impact on fauna and flora in the surrounding area and degrade or destroy habitat, ecosystems and ecological function. Additionally uncontrolled release of large amounts of ammonia into the atmosphere can impact the respiratory system of people in proximity. On this basis, the storage handling and use of ammonia, fuels or other hydrocarbons and chemicals must be managed to minimise the risk of a release, and measures must be in place to promptly prevent and minimise potential impacts should a release occur.

10.2 OBJECTIVES

This spill management plan has been prepared to minimise the potential for the uncontrolled release of ammonia, fuels, oils and other hydrocarbons and chemicals. Preventative measures to minimise the potential for a spill are listed. Should a spill occur, this plan provides guidance for the Proponent on the appropriate spill response measures.

10.3 ROLES AND RESPONSIBILITIES

Workforce and all contractors

Required to implement the spill prevention and response measures listed below.

Department line managers/HSE/ESG coordinators

Required to ensure that appropriate spill prevention measures (listed below) are implemented and that any spills have been appropriately managed and reported.

10.4 SPILL PREVENTION MEASURES

The following management measures are to be implemented by the Proponent:

- Spill kits (including ammonia neutralising kits) are to be made available throughout the site. The kits are to include, as a minimum, the following items:
 - o Absorbent materials/salts;
 - o Shovels;
 - o Heavy-duty plastic bags; and
 - o Protective clothing (e.g., gloves and overalls).

- Major servicing of equipment shall be undertaken in appropriately equipped workshops,

- Provision of adequate and frequent training on spill management, spill response and refuelling must be provided to all onsite staff and contractors;
- The Ammonia terminal is to have a double wall full containment ammonia storage tank;
- Fuels, lubricants and other chemicals are to be stored within appropriately sized, impermeable bunds or trays with a capacity not less than 110% of the total volume of products stored;
- All fuel and chemical storage and handling equipment (including transfer hoses, etc.) shall be well maintained;
- Storage and handling of fuels and chemicals shall follow relevant legislation and regulations;
- No refuelling is to take place within 50 metres of groundwater boreholes, surface water or streams; and
- Material Safety Data Sheets (MSDS(s)) and Safety Data Sheets (SDSs) are to be kept for each chemical used on site. These must be easily accessible to all personnel.

10.5 SPILL RESPONSE MEASURES

The primary concern, in the event of any spill, is the health and safety of any residents/ employees and contractors in the vicinity. Of highly significant importance, is the protection of water sources, ecosystems, fauna, soil and vegetation.

The following points therefore apply to all areas on the site:

- Assess the situation for potential hazards;
- Do not come into contact with the spilled substance until it has been identified and characterised and necessary personal protective equipment (PPE) is provided;
- Isolate the area as required; and
- Notify the HSE/ESG manager or HSE/ESG coordinator.

The following measures are to be implemented in response to a spill:

- Spills are to be stopped at source as soon as possible (e.g., close valve or upright drum);
- Spilt material is to be contained to the smallest area possible using a combination of absorbent material, earthen bunds or other containment methods;
- Spilt material is to be recovered as soon as possible using appropriate equipment. In most cases, it will be necessary to excavate the underlying soils until clean soils are encountered;
- All contaminated materials recovered after a spill, including soils, absorbent pads and sawdust, are to be disposed to appropriately licensed facilities.
- Soils may be rehabilitated in an approved manner, such as *in situ* or at an onsite approved and effective bioremediation site;

- The department line manager or HSE/ESG coordinator are to be informed as soon as possible in the event of a spill; and
- A written incident report must be submitted to the department line manager.

Table 8 shows the spill mitigation measures.

Table 8 - Spill mitigation measures

Responsibility	<ul style="list-style-type: none"> - Department line managers - Project manager - Contractor site manager - Employees
Potential issues or impacts	<ul style="list-style-type: none"> - Soil, surface water and ground water contamination due to spillage; - Ammonia and chemical handling and storage can cause spillages that lead to groundwater contamination and soil contamination; and - loss of biodiversity.
Mitigation measures	
Stored hazardous chemicals	<ul style="list-style-type: none"> - The Ammonia terminal will have a double wall full containment ammonia storage tank - Double walled: outer steel tank containing the ammonia liquid in case of a failure of the inner steel tank. - Other hazardous chemicals/hydrocarbons are to be stored in bunded areas, that are impermeable and can contain 110% of the largest volume contained therein; - Hydrocarbons (such as fuels) are to be handled over areas provided with impervious surfaces; - Spills of hazardous chemicals/hydrocarbons are to be contained and cleaned-up to ensure protection of the environment; and - All the necessary PPE required for the safe handling and use of petrochemicals, hydrocarbons and chemical materials.
Machinery and equipment maintenance	<ul style="list-style-type: none"> - Major servicing of equipment shall occur in appropriately equipped workshops when possible; - Ensure spill kits are available where machinery have to be serviced on site. - Vehicles and machinery are to be regularly serviced to minimise oil and fuel leaks; and - All the necessary PPE required for maintenance activities must be issued to staff whose duty it is to manage and maintain the machinery and equipment.

<p>Safe delivery and handling</p>	<ul style="list-style-type: none"> - Training employees and toolbox talks; - Good housekeeping across the site; - Fuel and chemicals/hydrocarbons are handled with care; - Spill kits (including ammonia neutraliser kits) to be at designated areas across the site or available for use during refuelling, fuel/chemical delivery, or use. Absorption material should be available and at hand. Where sawdust is used it should be cleaned up immediately and not left for long periods as this poses a fire hazard; - Any major spill is reported once containment has been achieved; and - Plant and equipment to be well maintained and serviced regularly.
<p>Storage</p>	<ul style="list-style-type: none"> - All tanks to be stored on a non-porous floor and within a bunded area; - Bund to be capable of storing at least 110% of the volume of the largest tank; - All containers to be suitable for use and not damaged; - Tanks are locked at all times; - Spill kits (including ammonia neutraliser kits) available at storage locations and around the site at suitable locations; - Relevant permits to be in place for storage of ammonia; and - Relevant permits to be in place for storage of fuel (diesel and petrol).
<p>Refuelling</p>	<ul style="list-style-type: none"> - Drip tray to be used during refuelling of vehicles when not on an impermeable surface; and - Decanting is prohibited.
<p>Rehabilitation</p>	<ul style="list-style-type: none"> - Contaminated materials should be removed and disposed of at an authorised hazardous waste disposal facility (Walvis Bay). Contaminated sorbents and materials other than soils must be disposed of at an authorised hazardous waste site; and - Large spills can first be treated <i>in situ</i>, where required.
<p>Monitoring requirements</p>	
<ul style="list-style-type: none"> - Daily observations when ammonia liquid is handled - Daily observations when fuels/chemicals are delivered and handled - Competent operator to operate refuelling equipment - Supervision during refuelling - Weekly observations monitor containment and storage - Monitor the level of hydrocarbons in contaminated soils after a year of rehabilitation - Monitor each year until the soils are ready for re-use in revegetation Projects 	

For large-scale fuel spills (≥ 200 L), and other significant environmental incidents, the fire services should be contacted as required and the office of the Ministry of Mines and Energy,

Ministry of Agriculture, Water and Land Reform and the Ministry of Environment, Forestry and Tourism (MEFT) informed of the incident immediately. Formal reports to be issued within 24 – 48 hours of the incident occurring all correspondence with authorities should be undertaken by the Project/General manager in consultation with the CEO or their designate.

For the clean-up of smaller spills, the relevant MSDS or SDSs should be consulted to determine the appropriate clean-up procedure. Basic spill response training will be provided as part of the site environmental induction, spill response equipment, including relevant MSDS copies, will be provided in areas where potentially environmentally hazardous chemicals may be used.

10.6 SPILL REPORTING

Any major ammonia liquid spills (> 200 L) should be reported to the competent authority- Ministry of Mines and Energy (MME)

All major petroleum product spills (200 L) should be reported to MME on Form PP/11 titled "Reporting of major petroleum product spill", issued by the ministry.

10.7 REHABILITATION OF CONTAMINATED SOILS

All soils that are contaminated with chemicals (ammonia) and/or hydrocarbons should be taken to the rehabilitation area or treated in situ, if the site has an authorised storage/disposal (Project permitted for onsite bioremediation) area or removed to an authorised waste disposal facility. A procedural manual for rehabilitating contaminated soils on site should be developed. As noted, if rehabilitation is not permitted to be conducted on site, then the contaminated materials are to be removed off site to the licensed Walvis Bay hazardous waste facility.

11 AIR QUALITY MANAGEMENT PROGRAMME

11.1 INTRODUCTION

This air quality management plan describes the strategies and procedures that will be implemented to ensure that the health and comfort of employees, contractors, suppliers, visitors and nearby sensitive receptors (namely nearby residents and businesses) are protected from elevated concentrations of airborne dust and other gaseous emissions (e.g., oxides of nitrogen; nitrogen dioxide, particulate matter; sulphur dioxide and carbon monoxide). In cases where generators and other machinery are used, there will be some release of exhaust fumes, that will impact the immediate vicinity but will be of short duration.

11.2 OBJECTIVES

This air quality management plan has been prepared to prevent deterioration of air quality and to minimise the potential for emitted dust and airborne pollutants. Preventative measures are listed below.

11.3 ROLES AND RESPONSIBILITIES

Workforce and all contractors

To implement the necessary management practices and meet the objectives and requirements listed within this ESMP.

Department line managers/ HSE/ESG coordinator

To ensure that the objectives listed above are being met and to provide performance feedback to the project manager.

11.4 AIR QUALITY MANAGEMENT PROCEDURES

Activities or areas that may potentially emit dust and airborne pollutants during construction and operations include the following:

- Earth moving equipment and vehicle movements;
- Unpaved road;
- Material handling points;
- Stockpiles;
- Concrete batching facilities; and
- Machinery operations.

The ammonia terminal project construction and activities can contribute to ambient noise and vibration, affecting neighbours.

11.5 AIR QUALITY MONITORING

Visual monitoring of construction activities can ensure the minimum discharge of airborne dust and other emissions according to the air quality management programme.

The Proponent will minimise the potential for dust generation and the emission of airborne pollutants by undertaking the following management measures (Table 9), as required:

- Construction activities that are likely to result in dust generation will not take place on excessively windy days;
- Vehicle movements will be restricted to sealed/paved roads where possible;
- Appropriate speed limits will be set and enforced;
- Ground disturbance will be minimised as far as practical; and
- Vehicles and machinery will be maintained to limit exhaust fume emissions.

Table 9 - Air quality mitigation measures

Responsibility	<ul style="list-style-type: none"> - Department line managers - Contractor site manager
Potential issues or impacts	<ul style="list-style-type: none"> - Impaired visibility for drivers on the B2 road - Impaired visibility of employees; - Respiratory related health issues; and - Potential release of a high concentration of ammonia to the atmosphere may cause an array of health-related hazards.
Mitigation measures	
Dust and fumes	<ul style="list-style-type: none"> - Dust suppression measures must be implemented to reduce dust; - Vehicles must adhere to speed limits to avoid producing excessive dust; and - Vehicles and machinery are to be regularly serviced according to the manufacturers' specifications and kept in good working order to minimise exhaust emissions.
Dust generation can negatively impact occupational health and visibility	Construction and closure phases
	<ul style="list-style-type: none"> - Air quality impacts during construction would be reduced through basic control measures such as limiting the speed of haul trucks; limit unnecessary travelling of vehicles on untreated roads; and applying dust suppressants on regularly travelled, unpaved sections; - When haul trucks need to use public roads, the vehicles need to be cleaned of all mud and the material transported must be covered to minimise windblown dust; and - The access road to the Project site also needs to be kept clean to minimise carry-through of mud on to public roads.
	Operational phases

	<ul style="list-style-type: none"> - For the control of vehicle entrained dust a control efficiency (CE) target of as high as 90% on unpaved surface roads through the application of chemical surfactants is recommended, with water sprays on the in-pit haul roads to ensure a 50% CE.
Emissions control and reporting	<ul style="list-style-type: none"> - Emissions control and related protective systems require regular inspection, testing and maintenance, by competent persons as per manufacturer specifications; and - Regular reporting of the performance of the inspection, testing, maintenance, and monitoring systems is required monthly. The report shall include the performance of the management system as well as the performance of the emission systems.
Monitoring requirements	
	<ul style="list-style-type: none"> - Daily observations; and - Air quality monitoring: <ul style="list-style-type: none"> o A depositional dust fallout monitoring network will be increased based on the results of the existing baseline network of eight (8) dust fall units. The eventual construction and operations network will be maintained, and the monthly dust fall results used as indicators to track the effectiveness of the applied mitigation measures during construction. Dust fallout collection should follow the ASTM method o PM_{2.5} and PM₁₀ as well as passive gas monitoring will also be conducted.

11.6 ODOURS AND NOISE IMPACTS

The sensitive receptors within proximity to the area are commuting traffic, residents, tourists and businesses. Activities related to the project construction have the potential to generate nuisance odours and noise that can impact the quality of life for neighbouring residents and tourism activities. However, this potential impact is minimal due to the duration of the of the construction phase, mitigation measures are presented in Table 10.

Table 10 - Noise mitigation measures

Responsibility	<ul style="list-style-type: none"> - Department line managers - Construction site manager
Potential issues or impacts	<ul style="list-style-type: none"> - Environmental noise evaluation criteria for residential, educational, and institutional receptors may potentially exceed at nearby receptors due to the proposed Project construction.
Mitigations measures	
Excessive noise close to sensitive receptors	<ul style="list-style-type: none"> - Whenever possible, work hours for non-production heavy equipment should be restricted to between dawn and dusk where involving the use of heavy equipment, power tools, and the movement of heavy vehicles is within 500 m from sensitive receptors. Reversing, and the associated reverse alert, should be minimised at all times, but especially at night and by non-production equipment within 500 m

	<p>from sensitive receptors. Affected stakeholders should be updated on the mitigation efforts during regular engagement meetings and updates;</p> <ul style="list-style-type: none"> – All diesel-powered equipment and vehicles should be kept at a high level of maintenance. This should particularly include the regular inspection and, if necessary, replacement of intake and exhaust silencers. Any change in the noise emission characteristics of equipment should serve as trigger for withdrawing it for maintenance; – In managing noise specifically related to vehicle traffic, efforts should be directed at: <ul style="list-style-type: none"> ○ Minimising individual vehicle engine, transmission, and body noise/vibration. This is achieved through the implementation of an equipment maintenance program to maintain road surfaces and regularly to repair potholes, etc. ○ Keep all roads well maintained ○ Avoid unnecessary equipment idling ○ All equipment and vehicles to be maintained as per the original equipment manual (OEM) ○ Minimising noise levels to International Finance Corporation noise levels for residential areas (i.e. 55 dBA during the day and 45 dBA at night); – A noise complaints register must be kept; – As the site or activity is near noise-sensitive receptors (NSR), equipment and methods to be employed should be reviewed to ensure the quietest available technology is used. Equipment with lower sound power levels must be selected in such instances and vendors/contractors should be required to guarantee optimised equipment design noise levels; – As far as is practically possible, sources of significant noise should be enclosed. The extent of enclosure will depend on the nature of the machine and their ventilation requirements; – It should be noted that the effectiveness of partial enclosures and screens can be reduced if used incorrectly, e.g., noise should be directed into a partial enclosure and not out of it, there should not be any reflecting surfaces such as parked vehicles opposite the open end of noise reduction walls/padding/berms; – Equipment should be sited as far away from NSRs as possible. Also: <ul style="list-style-type: none"> ○ Machines used intermittently should be shut down between work periods or throttled down to a minimum and not left running unnecessarily. This will reduce noise and conserve energy
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	<ul style="list-style-type: none"> ○ Equipment from which noise generated is known to be particularly directional, should be orientated so that the noise is directed away from NSRs ○ Acoustic covers of engines should be kept closed when in use or idling ○ Doors to pump houses should always be kept closed ○ Construction materials such as beams should be lowered and not dropped <ul style="list-style-type: none"> – Regular and effective maintenance of equipment are essential to noise control. Increases in equipment noise are often indicative of imminent mechanical failure. Also, sound reducing equipment/materials can lose effectiveness before failure and can be identified by visual inspection; – Noise generated by vibrating machinery and equipment with vibrating parts can be reduced using vibration isolation mountings or proper balancing. Noise generated by friction in conveyor rollers, etc. can be reduced by sufficient lubrication; – To the extent possible, high noise-level activities shall be minimised or avoided to reduce the noise levels reaching NSRs. Alternatively, and to the extent possible, the distance between source and receiver will be increased, or noise reduction screens, barriers or earthen berms shall be installed (as close to the noise source as possible); – When mobile equipment and activities are used, increasing the distance between source and receiver is often the most effective method of controlling noise since, for a typical point source at ground level, a 6-dB decrease can be achieved with every doubling in distance. It is however conceded that it might not always be possible, although should be employed at the design and planning stage of operations; – If noise control at the source and the use of distance between source and receiver is not possible, screening methods should be used. The effectiveness of a noise barrier is dependent on its length, effective height, and position relative to the source and receiver as well as material of construction. To optimise the effect of screening, screens should be located close to the source of the noise; – The careful placement of barriers such as screens or berms can significantly reduce noise impacts but may result in additional visual impacts. Although vegetation such as shrubs or trees may improve the visual impact of construction sites, it will not significantly reduce noise impacts and should not be considered as a control measure; and – Earth berms can be built to provide screening for large scale earth moving operations and can be landscaped to become permanent features once construction is completed. Care should be taken when
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	constructing earth berms since it may become a significant source of dust.
Monitoring requirements	
<ul style="list-style-type: none"> - Sources of excessive noise will be investigated, and recommendations made for mitigation; - Keep complaints register; - Noise monitoring at sites where noise is an issue or may become an issue is essential, especially during construction activities. During operations, annual noise sampling over a period of 10 to 30 minutes for day- and night-time at NSRs surrounding the Ammonia Terminal Project should be incorporated in a bi-annual environmental noise monitoring programme; and - If noise related complaints are received, short term ambient noise measurements should be conducted as part of investigating the complaints. The results of the measurements should be used to inform any follow up interventions. The investigation of complaints should include an investigation into equipment or machinery that likely result or resulted in noise levels annoying to the community. This could be achieved with source noise measurements. 	

Notwithstanding the above point, the Proponent should continue to ensure potential odours and noise sources are mitigated through measures such as:

- Eliminate sources of noise and do not operate heavy equipment, whenever possible. Ensure appropriate measures are put in place to rectify odours and noise complaints, should they occur;
- Procedures for receiving complaints from nearby residents and businesses to be in place and mitigation measures to be implemented should construction generate excessive odours and noise, which is unexpected; and
- All activities to be restricted to daytime hours, where possible.

Occupational noises are managed through the health and safety management plan.

12 TRAFFIC MANAGEMENT PROGRAMME

Table 11 below shows the environmental aspects and impacts, and mitigation and monitoring measures for traffic aspects.

Table 11 - Traffic mitigation measures

Responsibility	– General manager
Potential issues or impacts	<ul style="list-style-type: none"> – Increased traffic volumes on existing roads; – Wear and tear of existing road surfaces; and – Road safety.
Mitigations measures	
Increased Traffic on road and vehicular accidents	<ul style="list-style-type: none"> – Designs of the intersection layouts of the project access road must address design standards and elements such as alignment, sign distances, cross-sections and provisions for other road users including pedestrians, and must be legally compliant; – Inspect light duty site vehicles that travel offsite regularly, contractors' vehicles weekly for clean and operational taillights, indicators, reflective signage and reverse horns/beepers to ensure visibility of vehicles, especially at night; – The needs of pedestrians should be taken into consideration in the planning and design of the access to the proposed site, as well as the design of the road infrastructure; – All employees and contractors must adhere to the speed limits and other road safety procedures, both on site, and on public roads. Include speed limits in the induction and enforce the speed limits; – Provide large visible road signage, indicating the presence of heavy vehicle traffic at least 500 m before, on either side of the site access road intersection along the road; and – Road safety issues must be included as part of the overall on-site safety training and at induction.
Monitoring requirements	
	<ul style="list-style-type: none"> – Daily observations; and – Weekly checks.

13 HERITAGE MANAGEMENT PROGRAMME

13.1 INTRODUCTION

Areas of proposed development activity are subject to heritage survey and assessment at the planning stage. These surveys are based on surface indications alone, and it is therefore possible that sites or items of heritage significance will be found during development work. The procedure set out here covers the reporting and management of such finds.

Scope: The “chance finds” procedure covers the actions to be taken from the discovery of a heritage site or item to its investigation and assessment by a trained archaeologist or other appropriately qualified person.

Compliance: The “chance finds” procedure is intended to ensure compliance with relevant provisions of the National Heritage Act, No. 27 of 2004), especially Section 55 (4): “a person who discovers any archaeological object must as soon as practicable report the discovery to the Council”. The procedure of reporting set out below must be observed so that heritage remains reported to the NHC are correctly identified in the field. Table 12 shows the archaeological and heritage mitigation measures for the Project.

Table 12 - Archaeological and heritage mitigation measures

Responsibility	<ul style="list-style-type: none"> – Project manager – Site manager
Potential issues or impacts	<ul style="list-style-type: none"> – Impact on heritage features
Mitigations measures	
Destruction of heritage sites and artifacts	<p>In the unlikely event of a heritage site or archaeological site to be uncovered or discovered during either construction or operational phases of the Project, a “chance find” procedure should be applied in the order they appear below:</p> <ul style="list-style-type: none"> – If operating machinery or equipment, stop work; – Demarcate the site with danger tape; – Determine GPS position if possible; – Report findings to foreman; – Report findings, site location and actions taken to superintendent; – Cease any works in immediate vicinity; – Visit the site and consult with any potentially affected community to determine whether work can proceed without damage to findings; – Determine and demarcate the exclusion boundary; – Site location and details to be added to the Project’s geographic information system (GIS) for field confirmation by an archaeologist;

	<ul style="list-style-type: none"> - Inspect site and confirm addition to Project GIS; - Advise the National Heritage Council (NHC) and request written permission to remove findings from work area; and - Contact a certified professional to recover, package and label findings for transfer to the National Museum.
Monitoring requirements	
	<ul style="list-style-type: none"> - Ensure workers are aware of and can make use of the chance find procedure.

13.2 ROLES AND RESPONSIBILITIES

Operator - to exercise due caution if archaeological remains are found.

Foreman - To secure site and advise management timeously.

Superintendent - To determine safe working boundary and request inspections.

Third party archaeologist - To inspect, identify, advise management, and recover remains.

13.3 PROCEDURE

Action by person identifying archaeological or heritage material:

- a) If operating machinery or equipment stop work,
- b) Identify the site with danger tape,
- c) Determine GPS position if possible, and
- d) Report findings to foreman.

Action by foreman:

- a) Report findings, site location and actions taken to superintendent, and
- b) Cease any works in immediate vicinity.

Action by superintendent:

- a) Visit site and determine whether work can proceed without damage to findings,
- b) Determine and mark exclusion boundary, and
- c) Site location and details to be added to Project GIS for field confirmation by archaeologist.

Action by archaeologist:

- a) Inspect site and confirm addition to Project GIS,
- b) Advise NHC and request written permission to remove findings from work area, and
- c) Recovery, packaging and labelling of findings for transfer to National Museum.

In the event of discovering human remains:

- a) Actions as above,
- b) Field inspection by archaeologist to confirm that remains are human,
- c) Advise and liaise with NHC and Police, and
- d) Recovery of remains and removal to National Museum or National Forensic Laboratory, as directed.

14 IMPLEMENTATION OF THE EMP

This environmental management plan:

- A. Has been prepared according to a contract with the proponent
- B. Has been prepared based on information provided to ECC up to May 2024
- C. Is for the sole use of the proponent, for the sole purpose of an EMP
- D. Must not be used (1) by any person other than the proponent or (2) for any purpose other than an EMP
- E. Must not be copied without the prior written permission of ECC.