

**APP-006439**

**OPERATIONAL ACTIVITIES OF SEANAM FISHING'S FISHMEAL FACTORY,  
WALVIS BAY**

**UPDATED ENVIRONMENTAL MANAGEMENT PLAN**



**Prepared by:**




**Prepared for:**




**September 2025**



<b>Project:</b>	<b>Operational Activities of the Seanam Fishing's Fishmeal Factory, Walvis Bay: Updated Environmental Management Plan</b>	
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<b>Prepared for:</b>	Seanam Fishing CC P.O. Box 741 Walvis Bay Namibia	
<b>Application No:</b>	250917006439	
<b>Lead Consultant</b>	Geo Pollution Technologies (Pty) Ltd PO Box 11073 Windhoek, Namibia	TEL.: (+264-61) 257411 FAX.: (+264) 88626368
<b>Main Project Team</b>	<b>André Faul</b> (B.Sc. Zoology, Biochemistry); (B.Sc. (Hons) Zoology); (M.Sc. Conservation Ecology); (Ph.D. Medical Bioscience) <b>Ernest Pelsner</b> (B.Sc. Zoology/Microbiology); (B.Sc. (Hons) Environmental Sciences); (M.Sc. Environmental Sciences)	
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<b>Report Approval</b>	 <b>André Faul</b> Conservation Ecologist	

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

Signed at WALVIS BAY on the 18 day of SEPTEMBER 2025

  
Seanam Fishing CC

Registration No. \_\_\_\_\_



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# 1 BACKGROUND AND INTRODUCTION

Seanam Fishing CC (the Proponent) requested Geo Pollution Technologies (Pty) Ltd to update their environmental management plan (EMP) for the continued operations of their fishmeal plant in Walvis Bay. The updated EMP is required to renew the facility's existing environmental clearance certificate (ECC-0085) with the Ministry of Environment, Forestry and Tourism (MEFT). The ECC is a legal requirement for the continued operations of the fishmeal processing plant on Erf 2591 in Mulderene Road in the industrial area of Walvis Bay (Figure 1-1).

The existing EMP is based on an environmental assessment conducted for the Proponent in 2016 (Faul *et al.* 2016). The objectives of the updated EMP are, in consideration of the definite and potential impacts identified during the environmental assessment, to:

- ◆ Provide an updated summarised legal framework within which the Proponent operates.
- ◆ Update and identify new measures to prevent, and where not preventable, mitigate negative impacts associated with all care and maintenance, operational and potential future decommissioning activities of the facility.
- ◆ Update and identify new measures to enhance or optimise beneficial (positive) impacts.
- ◆ Guide the Proponent on implementation of a monitoring programme aimed at monitoring and auditing compliance to the EMP.
- ◆ Ensure that appropriate environmental training is provided to responsible personnel and contractors.

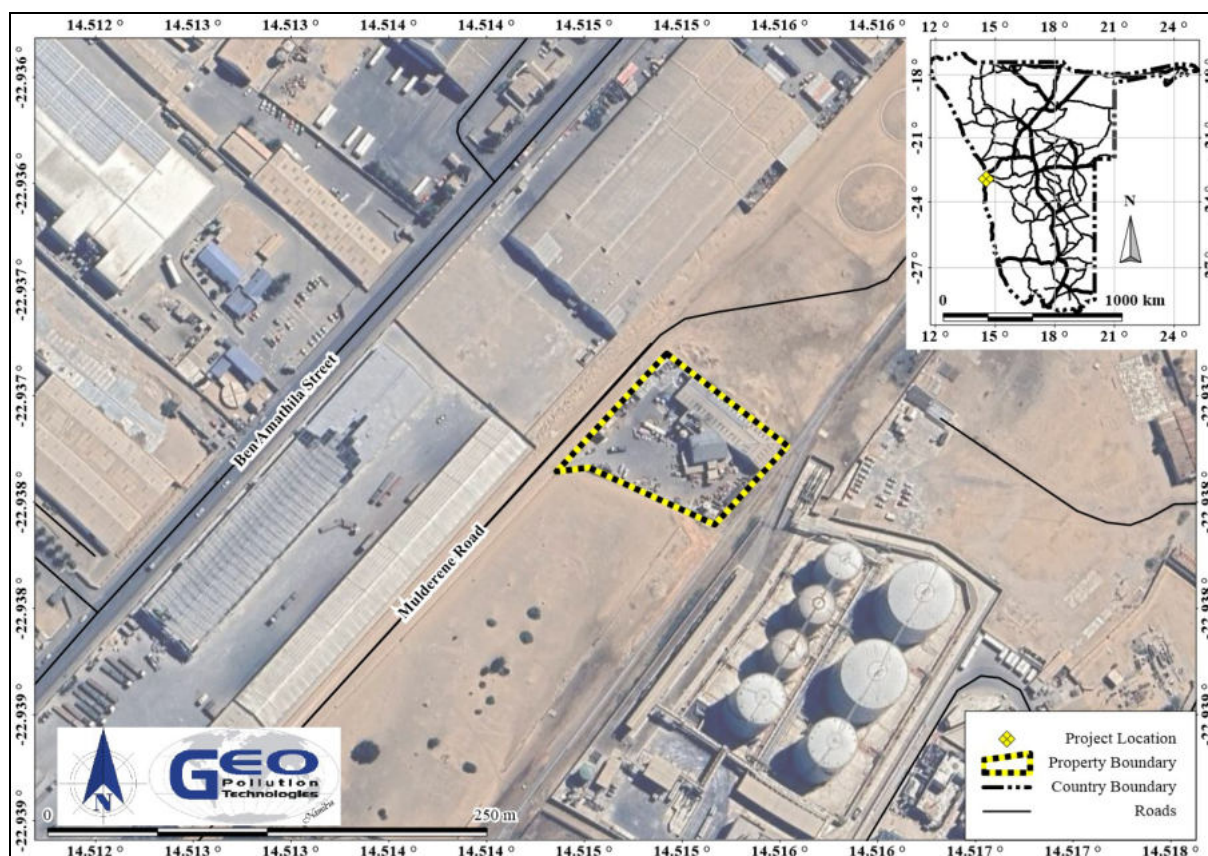


Figure 1-1 Project location

## 2 PROJECT DESCRIPTION

General operations of the fishmeal processing facility involve collecting hake offal (heads, tails, guts, skin and bones) from fish factories. The offal is transported in sealed skips using 5-ton pick-up trucks and discharged into holding pits. Offal is typically kept in the pits for less than 24 hours, with a maximum of 72 hours during plant breakdowns. From the pits, it is conveyed to the main rotary disc dryer, which operates at 105 °C initially before being reduced to a minimum of 95 °C and rotated twice. Around 700 tons of raw product are processed monthly, yielding about 140 tons of final product.

Once dried, ethoxyquin, a quinolone-based antioxidant, is added at 250 ppm. The dried fish is then milled in a hammer mill to produce fishmeal, which is packaged under strict quality control. Dispatch only occurs once all statutory requirements are met and a health certificate has been issued.

The steam fishmeal plant uses air-cooled condensers for odour control, condensing steam and capturing over 90% of aromatic compounds. As the condensers consume significant electricity, they are operated only when air quality deteriorates, depending on wind conditions and offal quality. The plant also recycles up to 90% of its water, with total usage averaging about 50 m<sup>3</sup> per week.

The boilers are fuelled by wood chip gasification burners, which replaced the heavy fuel oil system. Wood chips are delivered to the facility on a regular basis and fed into the burners, where they undergo gasification (a controlled process that converts the woodchips into a combustible gas). This gas provides a stable and efficient heat source for steam generation in the fishmeal plant. Combustion produces only dry ash as residue, eliminating risks of spills or liquid waste and significantly reducing environmental impacts compared with heavy fuel oil.

## 3 ADMINISTRATIVE, LEGAL AND POLICY REQUIREMENTS

The legislation and standards provided in Table 3-1 to Table 3-3 govern the environmental assessment process in Namibia and/or are relevant to the facility.

**Table 3-1 Namibian law applicable to the factory and related operations**

Law	Key Aspects
<b>The Namibian Constitution</b>	<ul style="list-style-type: none"> <li>◆ Promotes the welfare of people</li> <li>◆ Incorporates a high level of environmental protection</li> <li>◆ Incorporates international agreements as part of Namibian law</li> </ul>
<b>Environmental Management Act</b> Act No. 7 of 2007, Government Notice No. 232 of 2007	<ul style="list-style-type: none"> <li>◆ Defines the environment</li> <li>◆ Promotes sustainable management of the environment and the use of natural resources</li> <li>◆ Provides a process of assessment and control of activities with possible significant effects on the environment</li> </ul>
<b>Environmental Management Act Regulations</b> Government Notice No. 28-30 of 2012	<ul style="list-style-type: none"> <li>◆ Commencement of the Environmental Management Act</li> <li>◆ Lists activities that require an environmental clearance certificate</li> <li>◆ Provides Environmental Impact Assessment Regulations</li> <li>◆ Lists the “polluter pays principle” as one of the principles of environmental management</li> </ul>



<b>Law</b>	<b>Key Aspects</b>
<b>Water Resources Management Act</b> Act No. 11 of 2013	<ul style="list-style-type: none"> <li>◆ Provides for management, protection, development, use and conservation of water resources.</li> <li>◆ Provides for licencing and permitting of abstraction sea water and disposal of effluent.</li> <li>◆ Prevention of water pollution and assignment of liability.</li> </ul>
<b>Public and Environmental Health Act</b> Act No. 1 of 2015, Government Notice No. 86 of 2015	<ul style="list-style-type: none"> <li>◆ Provides a framework for a structured more uniform public and environmental health system, and for incidental matters</li> <li>◆ Deals with Integrated Waste Management including waste collection disposal and recycling; waste generation and storage; and sanitation</li> </ul>
<b>Labour Act</b> Act No 11 of 2007, Government Notice No. 236 of 2007	<ul style="list-style-type: none"> <li>◆ Provides for Labour Law and the protection and safety of employees</li> <li>◆ Labour Act, 1992: Regulations relating to the health and safety of employees at work (Government Notice No. 156 of 1997)</li> </ul>
<b>Atmospheric Pollution Prevention Ordinance</b> Ordinance No. 11 of 1976	<ul style="list-style-type: none"> <li>◆ Governs the control of noxious or offensive gases</li> <li>◆ Prohibits scheduled process without a registration certificate in a controlled area</li> <li>◆ Requires best practical means for preventing or reducing the escape into the atmosphere of noxious or offensive gases produced by the scheduled process</li> </ul>
<b>Hazardous Substances Ordinance</b> Ordinance No. 14 of 1974	<ul style="list-style-type: none"> <li>◆ Applies to the manufacture, sale, use, disposal and dumping of hazardous substances as well as their import and export</li> <li>◆ Aims to prevent hazardous substances from causing injury, ill-health or the death of human beings</li> </ul>
<b>Pollution Control and Waste Management Bill (draft document)</b>	<ul style="list-style-type: none"> <li>◆ Not in force yet</li> <li>◆ Provides for prevention and control of pollution and waste</li> <li>◆ Provides for procedures to be followed for licence applications</li> </ul>
<b>Draft Wetland Policy of 2003</b>	<ul style="list-style-type: none"> <li>◆ Considering the Walvis Bay Lagoon, the Wetland Policy of 2003 is of importance and includes:               <ul style="list-style-type: none"> <li>○ Protection and conservation of wetlands and ecosystems</li> <li>○ As well as, including fulfilling Namibia's International obligations to the Ramsar Convention and the SADC Protocol on Shared Water Systems</li> </ul> </li> </ul>
<b>Road Traffic and Transport Act</b> Act No. 52 of 1999 Government Notice No 282 of 1999	<ul style="list-style-type: none"> <li>◆ Provides for the control of traffic on public roads and the regulations pertaining to road transport</li> </ul>
<b>Road Traffic and Transport Regulations</b> Government Notice No 53 of 2001	<ul style="list-style-type: none"> <li>◆ Prohibits the transport of goods which are not safely contained within the body of the vehicle; or securely fastened to that vehicle, and which are not properly protected from being dislodged or spilled from that vehicle</li> </ul>

**Table 3-2 Municipal by-laws, guidelines and regulations**

<b>Municipal By-laws, Guidelines or Regulations</b>	<b>Key Aspects</b>
<b>Integrated Urban Spatial Development Framework for Walvis Bay</b>	<ul style="list-style-type: none"> <li>Completed during 2014 and in the final stages of acceptance</li> <li>Overall vision to transform Walvis Bay to being the primary industrial city in Namibia</li> <li>Aims to ensure that appropriate levels of environmental management is enforced for all developments in Walvis Bay.</li> </ul>
<b>Integrated Environmental Policy of Walvis Bay (Agenda 21 Project)</b>	<ul style="list-style-type: none"> <li>Indicates the directions that the Municipality of Walvis Bay will move towards in the forthcoming years to fulfil its responsibilities to manage the environment of Walvis Bay together with the town's residents and institutions</li> <li>Strong focus on conservation and protection of environment</li> </ul>
<b>Drainage and Plumbing By-Law of 1958 (updated in 1982)</b>	<ul style="list-style-type: none"> <li>Regulations regarding discharges into sewers specific to Walvis Bay</li> </ul>

**Table 3-3 Relevant multilateral environmental agreements for Namibia and the development**

<b>Agreement</b>	<b>Key Aspects</b>
<b>Convention on Biological Diversity</b>	<ul style="list-style-type: none"> <li>Primary goal is the conservation of biodiversity</li> <li>Prescribes the precautionary principle</li> <li>Parties to the convention are obliged to:</li> <li>Establish a network of protected areas</li> <li>Create buffer areas adjacent to these protected areas using environmentally sound and sustainable development practices, and</li> <li>Rehabilitate degraded habitats and populations of species</li> </ul>
<b>The Convention on Wetlands of International Importance especially as Waterfowl Habitat (referred as the Ramsar Convention)</b>	<ul style="list-style-type: none"> <li>It is a framework for international cooperation in the conservation and wise use of wetlands and their resources</li> <li>Recognises the Walvis Bay Nature Reserve – a tidal lagoon consisting of Pelican Point, adjacent intertidal areas, sandbars serving as roosting sites and mudflats exposed during low tide (12,600 ha) as a Wetland of International Importance</li> </ul>
<b>UN Convention for the Prevention of Marine Pollution from Land-based Sources</b>	<ul style="list-style-type: none"> <li>Concerns itself with the protection of marine fauna and flora by preventing marine pollution from land-based sources</li> <li>Contracted parties, are committed to take all possible steps to prevent pollution of the sea as well as the direct or indirect introduction of substances or energy by humans into the marine environment resulting in such adverse effects as harm to living resources and to marine ecosystems, hazards to human health, damage to services/facilities or interference with other legitimate uses of the area</li> </ul>
<b>Stockholm Declaration on the Human Environment, Stockholm 1972.</b>	<ul style="list-style-type: none"> <li>Recognises the need for a common outlook and common principles to inspire and guide the people of the world in the preservation and enhancement of the human environment</li> </ul>

## 4 ENVIRONMENTAL MANAGEMENT PLAN

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

The objectives of the EMP are:

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

### 4.1 IMPLEMENTATION OF THE EMP

Various potential and definite impacts will emanate from the operations and decommissioning phases. The majority of these impacts can be mitigated or prevented.

As depicted in Table 4-1 to Table 4-3, impacts related to the operational and potential decommission phases are expected to mostly be of low to medium significance and can mostly be mitigated to have a low significance. The extent of impacts are mostly site specific to local and are not of a permanent nature. Due to the nature of the surrounding areas, cumulative impacts are possible and include noise pollution, air quality and traffic impacts.

**Table 4-1 Planning for operations and future decommissioning of the project**

<b>Activity</b>	<b>Objective</b>	<b>Action</b>	<b>Timing</b>	<b>Proof of Compliance</b>	<b>Responsible Body</b>
<b>Compliance</b>	To comply with all legal requirements for the operations of the facility in Namibia.	Apply for or renew the necessary permits from the various ministries, local authorities, and any other bodies that governs the operations of the proposed activity.  Finalise negotiations and resolve any outstanding issues, if any, over the allocation of user rights and zoning of the property on which the proposed activity will be located.	During normal ongoing operations as well as possible future decommissioning of the facility	All contracts, permits, certificates and other legal documents on file.	Proponent
<b>Appointments</b>	To appoint reputable contractors and operational personnel and establish the EMP, a legal requirement that forms part of the contract with the contractor and employees.	Appoint contractors and employees and enter into an agreement which includes the EMP.  Ensure that the contents of the EMP are understood by the contractor, sub-contractors, employees and all personnel who will be present on site.	During normal ongoing operations as well as possible future decommissioning of the facility	Contracts on file	Proponent; Contractor
<b>Management</b>	Establish a management system to implement and monitor Health, Safety and Environment.	Make provisions to have a Health, Safety and Environmental Coordinator to implement the EMP and oversee occupational health and safety as well as general environmental related compliance at the site.  Have the following emergency plans, equipment and personnel in place to deal with all emergencies:  Risk Management / Mitigation / Environmental Management Plan/ Emergency Response Plan and HSE Manuals  Adequate protection and indemnity insurance cover for incidents;  Comply with the provisions of all relevant	During normal ongoing operations as well as possible future decommissioning of the facility	Documentation on file  Personal Protective Equipment (PPE) on site  Signage related to restricted areas, dangerous areas, and PPE requirements on site  Emergency response material on site	Proponent; Contractor

Activity	Objective	Action	Timing	Proof of Compliance	Responsible Body
		safety standards; Procedures, equipment and materials required for emergencies.			
<b>Restoration Fund/Insurance</b>	To establish a fund/insurance for future environmental restoration or pollution remediation if ever required.	To establish a fund for future ecological restoration of the project site should project activities cease and the site is decommissioned and environmental restoration or pollution remediation is required.	During normal ongoing operations as well as possible future decommissioning of the facility	Financial statements of restoration fund/insurance	Proponent; Independent Specialist Consultant
<b>Reporting</b>	To establish a reporting system to report on monitoring aspects of operations and decommissioning.	Establish a reporting system to report on aspects operations and decommissioning in line with the requirements of the ECC.	During normal ongoing operations as well as possible future decommissioning of the facility	Monitoring Reports	Proponent; Contractor
<b>Environmental Clearance Renewal</b>	To renew the ECC every three years.	Appoint a specialist environmental consultant to update the EMP and apply for renewal of the ECC	Prior to expiry of Environmental Clearance Certificate	Renewed ECC	Proponent; Independent Specialist Consultant

**Table 4-2 Operational phase**

<b>Criteria</b>	<b>Nature</b>	<b>Mitigation</b>	<b>Monitoring</b>	<b>Responsible Body</b>
<b>Skills, Technology &amp; Development</b>	Enhanced skills and technology transfer to the Erongo coastal region and subsequent promotion of economic development.	Training must be provided to Namibians to ultimately employ a predominantly Namibian workforce.	<b>Bi-annual</b> report based on actual training and the enhancement of skills and transfer of technology should be compiled.	Proponent
<b>HIV/AIDS, In-migration, Informal Settlements and Property Prices</b>	Increased spread of HIV/AIDS; Increased influx to Walvis Bay or other areas of the coast; Increased informal settlement and associated problems; Property prices.	Restricted employment for local people only should be practiced. Deviations from this practice should be justified appropriately.  Educational programs on HIV/AIDs.	<b>Bi-annual</b> summary report based on educational programmes and training conducted.  <b>Bi-annual</b> report and review of employee demographics.	Proponent
<b>Employment</b>	The facility plays an important role in providing employment to locals.	If skills exist locally Namibians must be employed. Alternatively training must be provided to Namibians to ultimately employ a predominantly Namibian workforce.	<b>Bi-annual</b> summary report based on employee records.	Proponent
<b>Health &amp; Safety</b>	Risks include work related injuries such as falling from heights accidents involving vehicles or incorrect use of machinery. Screw conveyors and presence of pressurised steam pose a serious risk.	All Health and Safety standards specified in the Labour Act and other applicable legislation should be complied with.  All staff members must be briefed about potential health risks and injuries on site.  All staff must at all times wear personal protective equipment (PPE).  Safe working conditions must be provided when working at heights or in confined spaces.  Selected personnel should be trained in first aid.  The contact details of all emergency services must be readily available.  All equipment and especially the boilers and pressurised steam pipes must be inspected regularly.	Any incidents must be recorded with action taken to prevent future occurrences.  A report should be compiled every <b>6 months</b> of all incidents reported. The report should contain dates when training were conducted and when safety equipment and structures were inspected and maintained.	Proponent
<b>Security</b>	Risks associated with theft and sabotage	Ensure that security measures are in place and that access to the premises is strictly controlled.	A register of all incidents must be maintained. This should include measures	Proponent

Criteria	Nature	Mitigation	Monitoring	Responsible Body
			taken to ensure that such incidences are not repeated.  A report should be compiled every <b>6 months</b> of all incidents reported.	
<b>Noise Pollution</b>	Noise will possibly exist due to machinery used in the fishmeal processing factory, as well as from the constant movement of trucks to and from the facility.	The Health and Safety Regulations of the Labour Act's limits for noise in the work place and World Health Organization (WHO) guidelines on maximum community noise levels (Guidelines for Community Noise, 1999) for industrial, business should be adhered to. This limits noise levels in industrial areas to an average of 70 dB over a 24 hour period with maximum noise levels not exceeding 110 dB during the period.	Any complaints received regarding excessive noise should be recorded with notes on action taken. Any negative effects caused from excessive vibrations should be recorded as well.  All complaints and additional data, if available, to be compiled in a report every <b>6 months</b> .	Proponent
<b>Traffic Impact</b>	Traffic impacts which can occur during delivery of fish offal products and collection of the finished products.	Regulation of traffic during deliveries.  Diversion or management of traffic if needed.  Appropriate signage and warnings.	A report should be compiled every <b>6 months</b> of all incidents and complaints reported.	Proponent
<b>Air Quality</b>	This is an impact that affects the quality of the air in the area. Fishmeal processing factories are known to produce foul odours during operational activities.	Namibia Fishmeal Processors will be making use of air cooled condensers that will reduce odours released into the atmosphere from the operational processes of the plant. Due to high electricity consumption, which may result in negative impacts elsewhere, condensers should only be used when air quality deteriorates significantly and becomes a nuisance to nearby receptors. This will largely depend on wind conditions.  The cooling condensers should be maintained on a regular basis to ensure that they work properly at all times.  Received fish offal should be processed within 24 hours after receipt in order to minimise foul odours.	A record of all complaints should be kept and actions taken to rectify the problem noted.  A register of maintenance checks on equipment should be kept and notes on further action taken to resolve the odour problem recorded.  A report should be compiled every <b>6 months</b> of all incidents, complaints and actions reported.	Proponent
<b>Waste</b>	Any waste produced as a result of the	All waste produced must be collected and sent to the	A register of hazardous waste	Proponent

<b>Criteria</b>	<b>Nature</b>	<b>Mitigation</b>	<b>Monitoring</b>	<b>Responsible Body</b>
<b>Production</b>	operations of the fishmeal plant processes. This may include hazardous waste.	appropriate disposal facility.	disposal should be kept. This should include type of waste, volume as well as disposal method/facility.  Any complaints received regarding waste should be recorded with notes on action taken.  All data to be compiled in a <b>6 month</b> report.	
<b>Groundwater, Surface Water and Soil Contamination</b>	Improper disposal of any waste water from the processing plant.	All waste must be disposed of appropriately and timeously.  Regular inspection and maintenance of all equipment at the facility.	All hydrocarbon spills must be recorded and cleaned.  All data to be compiled in a <b>6 month</b> report.	Proponent
<b>Impact of Lighting on Birds</b>	The impact of bright lights on birds flying at night.	All lights directed downwards to working surfaces.  During operations minimum lighting required must be used at night.  Nesting of birds should be discouraged.	Regular inspection must be performed to monitor for bird impacts. Mitigation measures must be investigated and implemented if required.  All data to be compiled in a <b>6 month</b> report.	Proponent
<b>Visual Impact</b>	This is an impact that affects the aesthetic appearance.	Regular maintenance and general upkeep of the facility will ensure continuous low visual impact.	A report should be compiled every <b>6 months</b> of all complaints reported.	Proponent
<b>Fire Impact</b>	The possibility of a fire due to boiler malfunctions, wood chip storage, dust accumulation, or spontaneous combustion of stored wood chips.	Store wood chips in dry, well-ventilated areas to prevent self-heating.  Implement dust management to reduce explosion risk.  Keep firefighting equipment accessible and staff trained.  Storage and handling of flammable products should be according to their Material Safety Data Sheet (MSDS) instructions.	Supervision of work is required and reports of safe and unsafe practice to be brought to the attention of the HSE.  Any incidents reported must be recorded together with steps taken to mitigate the impacts.	Proponent



Criteria	Nature	Mitigation	Monitoring	Responsible Body
		<p>A holistic fire protection and prevention plan is needed.</p> <p>All fire precautions and fire control at the facility must be up to date.</p> <p>Firefighting measures as per the MSDS of products should be adhered to where relevant.</p>	<p>A report should be compiled every <b>6 months</b> of all incidents reported.</p>	
<b>Cumulative Impact</b>	<p>Possible cumulative impacts associated with the operational phase include increase in noise and traffic due to increased activity from trucks entering the area. Cumulative impact of foul smells in the area as it is an industrial area and the fish processing factories are nearby. Prevailing winds may carry odours to nearby receptors</p> <p>The cumulative effect of lighting on birds due to industrial developments may increase the risk of collisions and interference with bird flight paths at night.</p>	<p>Addressing each of the individual impacts as discussed and recommended in the EMP would reduce the cumulative impact.</p> <p>Directing lighting downwards and minimizing the number of lights used would decrease the potential impact on flying birds.</p> <p>Reviewing biannual reports for any new or re-occurring impacts or problems would aid in identifying cumulative impacts and help in planning if the existing mitigations are insufficient.</p>	<p><b>Bi-annual</b> reports must be created to give an overall assessment of the impact of the Operational Phase.</p>	Proponent

**Table 4-3 Decommissioning Phase**

<b>Criteria</b>	<b>Nature</b>	<b>Mitigation</b>	<b>Monitoring</b>	<b>Responsible Body</b>
<b>Waste Production</b>	Upon decommissioning waste will be produced in the form of building rubble, obsolete equipment and structures, obsolete or residual products and equipment or structures that can be used elsewhere or sold as scrap.	<p>To reduce the amount of waste all re-usable equipment must be removed to another site owned by Namibia Fishmeal Processors or sold.</p> <p>Those items that cannot be used again must be recycled or scrapped in the appropriate manner.</p> <p>Upon demolition of any structures the waste and rubble must be removed from the property and taken to an approved dumpsite designated by the Walvis Bay Municipality.</p> <p>Rehabilitation if necessary are to be done using funds designated for the purpose.</p>	<p>Regular visual inspection.</p> <p>A register of waste produced and disposal methods should be maintained.</p>	Proponent; Contractor
<b>Employment</b>	Decommissioning of the development may lead to retrenchments or re-location of staff no longer required.	<p>Plan in advance for meeting the Labour Acts requirements for retrenching of staff if required.</p> <p>Where possible staff can be relocated to another facility or town where business continues in the same way.</p>	During normal operations of the facility a report must be compiled that includes the appropriate plans for handling of employees should the facility be decommissioned. The report should include budgeting for retrenchments and possible alternative positions elsewhere.	Proponent; Contractor
<b>Noise</b>	Noise pollution will exist due to heavy vehicles accessing the site to collect waste and rubble.	<p>The facility is situated in an industrial area so there is no restriction on the times of operation. The Walvis Bay Municipality does not have any guidelines with respect to noise levels but the Health and Safety Regulations of the Labour Act and the World Health Organization (WHO) guideline on maximum noise levels (Guidelines for Community Noise, 1999) to prevent hearing impairment is followed. This limits noise levels in industrial areas to an average of 70 dB over a 24 hour period with maximum noise levels not exceeding 110 dB during the period.</p> <p>All personnel must be issued with hearing protectors and neighbours must be notified of the time and duration of</p>	A complaints register must be maintained, in which any complaints from the community must be logged. Complaints must be investigated and, if appropriate, acted upon.	Proponent; Contractor

Criteria	Nature	Mitigation	Monitoring	Responsible Body
		decommissioning. Notice of the start of the decommissioning should be given to the local authorities with an invitation to give feedback at any time with regards the noise impact.		
<b>Visual Impact</b>	This is an impact that affects the aesthetic appearance	Visual impact could pose one of the most significant impacts. Visual impacts could be limited through keeping all decommissioned areas clean and orderly at all times. Good housekeeping also reduces the risk of injuries. Notice of the start of the decommissioning should be given to the local authorities with an invitation to give feedback at any time with regards the visual impact.	A complaints register must be maintained, in which any complaints from the community must be logged. Complaints must be investigated and, if appropriate, acted upon.	Proponent; Contractor
<b>Health, Safety and Security</b>	During the decommissioning phase risks to human beings are present.	<p>The decommissioning of the plant can cause health and safety risks to workers on site. Occupational exposures are normally related to physical injury or contact with hazardous substances during handling of such products. Adequate measures must be brought in place to ensure safety of staff on site, and includes: (Provide forms for all end users who monitor)</p> <ul style="list-style-type: none"> <li>◆ Proper training of operators;</li> <li>◆ First aid, emergency treatment and medical assistance;</li> <li>◆ Protective clothing, footwear, gloves and belts; safety goggles and shields;</li> <li>◆ Manuals and training regarding the correct handling of materials should be in place and updated as new or updated MSDS' become available.</li> <li>◆ 24-hour security surveillance.</li> </ul>	A register of all incidents must be maintained. This should include measures taken to ensure that such incidences are not repeated.	Proponent; Contractor

## **5 DECOMMISSIONING AND REHABILITATION**

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Closure and decommissioning of the facility as a whole is not foreseen during the validity of the ECC or in the foreseeable future. However, it is more likely that certain components may be decommissioned or changed. Decommissioning is therefore included for this purpose as well as the fact that construction activities may also include modification and decommissioning. Future land use after decommissioning should be assessed prior to decommissioning and rehabilitation initiated if the land would not be used for future purposes. Should decommissioning occur at any stage, rehabilitation of the area may be required. Decommissioning will entail the complete or partial removal of all infrastructure including buildings and underground infrastructure not required for future land use. Any pollution present on the site must be remediated. The impacts associated with this phase include noise and waste production as structures are dismantled. Noise must be kept within Health and Safety Regulations of the Labour Act and WHO standards and waste should be contained and disposed of at an appropriately classified and approved waste facility and not dumped in the surrounding areas. The EMP will have to be reviewed at the time of decommissioning to cater for changes made to the site and to implement guidelines and mitigation measures.

## **6 CONCLUSION**

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The above EMP, if properly implemented will help minimise adverse impacts on the environment. Where impacts occur, immediate action must be taken to reduce the escalation of effects associated with these impacts. To ensure the relevance of this document to the specific stage of project, it needs to be reviewed throughout all phases.

The EMP should be used as an on-site reference document during all phases of the proposed project, and auditing should take place in order to determine compliance with the EMP for the proposed site, and Parties responsible for transgression of the EMP should be held responsible for any rehabilitation that may need to be undertaken.

Monitoring reports must be kept available for possible submission with future renewal applications for environmental clearance certificates.

## **7 REFERENCES**

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Faul A, Botha P, Brews L. 2016. Environmental Impact Scoping Assessment for Construction and Operations of Namibia Fishmeal Processors' Factory, Walvis Bay