APP-005970

OPERATIONAL ACTIVITIES OF THE HARTLIEF FACTORY IN WINDHOEK

UPDATED ENVIRONMENTAL MANAGEMENT PLAN

Prepared by:

Prepared for:

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Project:	**OPERATIONAL ACTIVITIES OF THE HARTLIEF FACTORY IN WINDHOEK: UPDATED ENVIRONMENTAL MANAGEMENT PLAN**	
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LIST OF ABBREVIATIONS

AIDS	Acquired immunodeficiency syndrome
CLO	Community Liaison Officer
ECC	Environmental Clearance Certificate
EMP	Environmental Management Plan
HIV	Human Immunodeficiency Virus
MEFT	Ministry of Environment, Forestry and Tourism
MSDS	Material Safety Data Sheet
PPE	Personal Protective Equipment
RETOSA	Charter of the Regional Tourism Organisation of Southern Africa
SADC	Southern African Development Community
SANS	South African National Standards
SHE	Safety, Health and Environment
STIs	Sexually Transmitted Infections
UNFCCC	United Nations Framework Convention on Climate Change
WHO	World Health Organization

GLOSSARY OF TERMS

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

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

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

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

Environmental Clearance Certificate (ECC) - certificate (and its associated conditions) issued in terms of the environmental management act, authorising a listed activity to be undertaken.

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

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

Groundwater - Water - (a) occurring naturally below the surface of the ground; or

(b) pumped, diverted or released into a cavity for storage underground.

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

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

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

1 INTRODUCTION

Geo Pollution Technologies (Pty) Ltd was appointed by Hartlief Continental Meat Products (Pty) Ltd (the Proponent), to update their environmental management plan (EMP) in preparation of renewal of their existing environmental clearance certificate (ECC-3362). The updated EMP is required to renew the facilities existing ECC with the Ministry of Environment, Forestry and Tourism (MEFT). The ECC is a legal requirement for the continued operations of Hartlief as per Environmental Management Act of 2007 (refer to Table 3-1). The factory has its origins as a small family butchery established in 1946, but has since grown to one of the leading brands of processed meats in Namibia, also exporting internationally. Manufactured products include matured, dry-aged, smoked, cured, fermented and cooked products while they also stock a range of raw meats such as beef, lamb, pork and game. Hartlief is located on erf 7039 in the Northern Industrial Area of Windhoek.

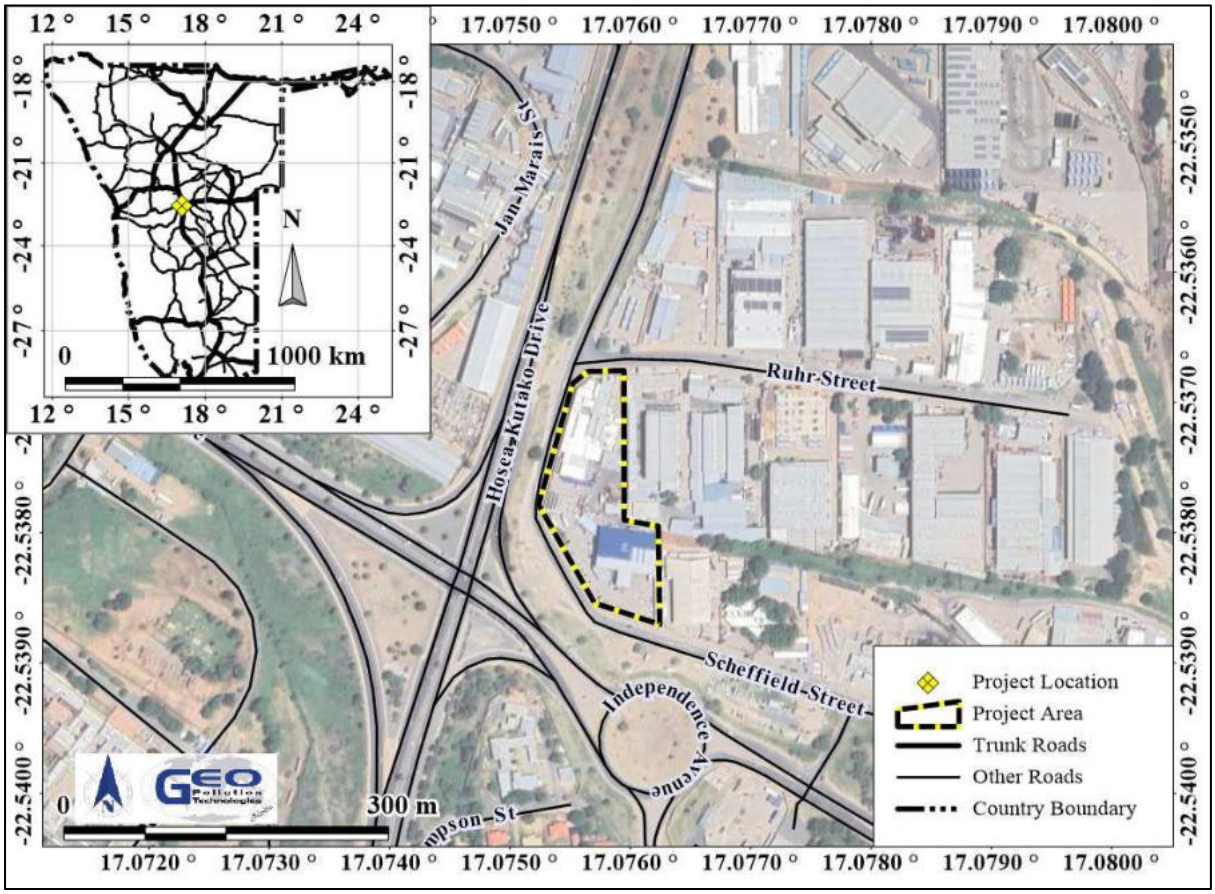

Figure 1-1 Project location

The existing EMP is based on an environmental assessment conducted for Hartlief in 2022 (Faul et al. 2022). As determined during the initial EIA and as reconfirmed by the site visit conducted in May 2025, the objective of the EMP remains as follows:

- Provide an updated summarised legal framework within which Hartlief operates.
- To list the necessary environmental related permits, licences and certificates required for the various components and activities.
- To establish management structures pertaining to health, safety and environment, community liaison and environmental monitoring.
- 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 Hartlief.
- Update and identify new measures to enhance or optimize beneficial (positive) impacts.
- Guide the Proponent on implementation of a monitoring programme aimed at monitoring and auditing compliance to the environmental management plan.

- Ensure that appropriate environmental training is provided to responsible personnel and contractors.

2 BRIEF PROJECT DESCRIPTION

The core activity of Hartlief Factory is the processing of meat. Various types of meat, unprocessed or partially processed, are bought from third party suppliers. Sourced meat products are also fresh or frozen, depending on the type of meat and ultimate purpose thereof. Within the factory are different sections for the production of different products. Among others, cutting, grinding, spicing, and filling of sausages, slicing and packaging all forms part of the processing steps. For various cold cuts, such as salami and bacon, curing, fermentation and/or smoking are performed in special smoking or fermentation cabinets/rooms.

Crucial to the operations of the Proponent is cold storage in the form of freezers or cold rooms. Various freezers/cold rooms are present on site and the cooling mediums used are freon and ammonia. An onsite refrigeration plant are present. From these plants, the coolant is circulated to the various cold rooms/freezers.

Two diesel backup generators are present with a generation capacity of 1,000 kVA (800 kW) for the main factory, and 550 kVA (440 kW) for the Shop & Bistro/Hartlief Fresh, respectively. Both generators are inside dedicated generator rooms and are fuelled from diesel day tanks. The one generator has a day tank located inside a drip tray while the other has a built-in day tank below the generator.

Heavy fuel oil (HFO) of 180 cSt is stored in an aboveground 23 m^3 steel tank. The tank is situated in a concrete bund wall and is used to fuel two boilers in a nearby boiler room. The boilers produce steam for various processes including cleaning at the factory.

An on-site laboratory does regular microbial and chemistry testing. Microbial testing is performed on food products for quality control purposes. Micro testing is performed to ensure optimum composition of ingredients added to processed meats. Regular hand swabs are performed on workers and these are also tested for microbial contamination. All biological waste produced in the laboratory is disposed of together with the condemned wastes.

A small first aid room is present for the treatment of minor injuries. Selected staff are trained in first aid for this purpose. The number of staff trained and the level of training is dependent on the nature of the risks in the different areas of operation, and aligned to regulatory requirements. First aid boxes are also available at strategic locations across the site to ensure efficient response to incidents. A dedicated cold room is used to temporarily store contaminated or “condemned” food products and materials until it can be removed. Effluent from all meat processing and related areas pass through a fat trap which is cleaned once a week.

Effluent is discharged to the Ujams Watse Water Treatment Plant. Waste removal is performed by a third party contractor and for condemned materials safe disposal certificates are issued. Various cleaning processes take place regularly and include a crate washer station, equipment cleaning station, a truck wash bay, and general cleaning of all operational areas. Pest control on site is also managed by a contractor. A staff canteen is available for use by employees. Various administrative offices, a workshop for general repairs of equipment and machinery, and site security are also present on site.

3 ADMINISTRATIVE, LEGAL AND POLICY REQUIREMENTS

To protect the environment and achieve sustainable development, all projects, plans, programmes and policies deemed to have adverse impacts on the environment require an environmental impact assessment, as per the Namibian legislation. The legislation and standards provided in Table 3-1 to Table 3-4 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
The Namibian Constitution	♦ Promotes the welfare of people. ♦ Incorporates a high level of environmental protection. ♦ Incorporates international agreements as part of Namibian law.
Environmental Management Act Act No. 7 of 2007, Government Notice No. 232 of 2007	♦ Defines the environment. ♦ Promotes sustainable management of the environment and the use of natural resources. ♦ Provides a process of assessment and control of activities with possible significant effects on the environment.
Environmental Management Act Regulations Government Notice No. 28-30 of 2012	♦ Commencement of the Environmental Management Act. ♦ Lists activities that requires an environmental clearance certificate. ♦ Provides environmental impact assessment regulations.
General Health Regulations Government Notice 121 of 1969	♦ Lays down minimum requirements and standards for, among others, butcheries and abattoirs.
Petroleum Products and Energy Act Act No. 13 of 1990, Government Notice No. 45 of 1990	♦ Regulates petroleum industry and prescribe licences for fuel installations. ♦ Makes provision for impact assessment for fuel facilities. ♦ Petroleum Products Regulations (Government Notice No. 155 of 2000). ♦ Prescribes South African National Standards (SANS) or equivalents for construction, operation and decommissioning of petroleum facilities (refer to Government Notice No. 21 of 2002).
Local Authorities Act Act No. 23 of 1992, Government Notice No. 116 of 1992	♦ Define the powers, duties and functions of local authority councils.
Public and Environmental Health Act Act No. 1 of 2015, Government Notice No. 86 of 2015	♦ Provides a framework for a structured more uniform public and environmental health system, and for incidental matters. ♦ Deals with Integrated Waste Management including waste collection disposal and recycling; waste generation and storage; and sanitation.
Labour Act Act No 11 of 2007, Government Notice No. 236 of 2007	♦ Provides for Labour Law and the protection and safety of employees. ♦ Labour Act, 1992: Regulations relating to the health and safety of employees at work (Government Notice No. 156 of 1997).
Namibian Food Safety Policy of 2014	♦ Aims to protect consumer health while facilitating trade in food. ♦ Policy ensures that control standards are established and adhered to as regards food production safety, food product hygiene, animal health and welfare, plant health and preventing the risk of contamination from external substances. ♦ Lays down conditions for regulations on appropriate labelling for these foodstuffs and food products.

Law	Key Aspects
Atmospheric Pollution Prevention Ordinance Ordinance No. 11 of 1976	♦ Governs the control of noxious or offensive gases ♦ Prohibits scheduled process without a registration certificate in a controlled area. ♦ Requires best practical means for preventing or reducing the escape into the atmosphere of noxious or offensive gases produced by the scheduled process.
Hazardous Substances Ordinance Ordinance No. 14 of 1974	♦ Applies to the manufacture, sale, use, disposal and dumping of hazardous substances as well as their import and export. ♦ Aims to prevent hazardous substances from causing injury, ill-health or the death of human beings.
Pollution Control and Waste Management Bill	♦ The bill aims to prevent and regulate the discharge of pollutants to air, water, and land. It further aims to promote the establishment of a system of waste management, and enable Namibia to meet its international obligations. Only unrecyclable and unusable materials will be disposed of at a designated disposal site.

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

Municipal By-Laws, Guidelines or Regulations	Key Aspects
Groundwater Protection Regulation	♦ Provides for the protection of groundwater, landscape and vegetation sensitivity. ♦ Requires an EIA and EMP projects that may potentially impact on groundwater. ♦ Identifies three groundwater control zones: medium, high and very high.
Windhoek Environmental Structure Plan and Environmental Policy	♦ Integrates spatial planning decision-making, environmental planning and environmental impact management.
Town Planning Scheme	♦ Enables the comprehensive management plan of all property and related public sector functions across the city. ♦ Provides for the protection of groundwater and the environment.
City of Windhoek guidelines for limits on noise pollution (Council Resolution 215/09/2006).	♦ The facility is situated in an industrial area. Noise should be limited to 70 decibels (limit for industrial properties).

Table 3-3 Guiding documents, directives and standards

Law	Key Aspects
Meat Safety Act of 2000 of South Africa	♦ Provides guidance for the local meat industry where Namibia lacks its own regulations in respect of promotion of meat safety and the safety of animal products; standards, regulations on the importation and exportation of meat.

Law	Key Aspects
South African National Standards (SANS) 10089 & 10131	♦ The Petroleum Products and Energy Act prescribes SANS standards for the construction, operations and demolition of petroleum facilities. ♦ SANS 10089-3:2010 is specifically aimed at storage and distribution of petroleum products at fuel retail facilities and consumer installations. ♦ SANS 10131: 2004 Deals with above-ground storage tanks for petroleum products ♦ Provide requirements for spill control infrastructure
South African National Standards (SANS) 10147	♦ Provides standards for the installation and operations of refrigeration plants (with reference to using ammonia as coolant)

Table 3-4 Relevant multilateral environmental agreements for Namibia and the factory

Agreement	Key Aspects
Stockholm Declaration on the Human Environment, Stockholm 1972.	♦ Recognizes the need for a common outlook and common principles to inspire and guide the people of the world in the preservation and enhancement of the human environment.
1985 Vienna Convention for the Protection of the Ozone Layer	♦ Aims to protect human health and the environment against adverse effects from modification of the Ozone Layer are considered. ♦ Adopted to regulate levels of greenhouse gas concentration in the atmosphere.
United Nations Framework Convention on Climate Change (UNFCCC)	♦ The Convention recognises that developing countries should be accorded appropriate assistance to enable them to fulfil the terms of the Convention.
Convention on Biological Diversity, Rio de Janeiro, 1992	♦ Under article 14 of The Convention, EIAs must be conducted for projects that may negatively affect biological diversity.

Some components of the operations of the Hartlief Factory are listed as activities requiring an environmental clearance certificate as per the following points from Section 9 of Government Notice No. 29 of 2012:

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

- 9.1 "The manufacturing storage, handling or processing of hazardous or processing substance defined in the Hazardous Substance Ordinance, 1974". Fuel (HFO and diesel), freon, ammonia and a limited quantity and volume of chemicals, mostly for cleaning purposes, are stored on site.
- 9.5 "Construction of filling stations or any other facility for the underground and aboveground storage of dangerous goods, including petrol, diesel, liquid petroleum gas or paraffin." Fuel is stored on site.

4 PERMITTING REQUIREMENTS

The Environmental Management Act defines the *environment* as: "*land, water and air; all organic and inorganic matter and living organisms as well as biological diversity; the interacting natural systems that include components referred to in sub-paragraphs, the human environment insofar as it represents archaeological, aesthetic, cultural, historic, economic, paleontological or social values*". Based on this, the following permits related to the environment are required for the operations of the factory.

Table 4-1 Permitting and authorisations

Act	Regulations	Type
Environmental Management Act 7 of 2007	List of activities that may not be undertaken without environmental clearance certificate: Environmental Management Act (Government Notice 29 of 2012)	An **ECC** is required for various aspects related to the facility. The listed activities with applicability are provided in section 3.
Labour Act	No person shall operate a factory which is not registered under these regulations [Labour Act, 1992: Regulations Relating to the Health and Safety of Employees at Work]. (Government Notice 156 of 1997)	Hartlief is per definition of the Labour Act a factory which must be **registered** in terms of the Act.
Water Resources Management Act 11 of 2013	Water Resources Management Regulations (Government Notice No. 269 of 2023)	Application for **licence** to discharge effluent or construct or operate a wastewater treatment facility or waste disposal site.

5 ENVIRONMENTAL MANAGEMENT PLAN

The purpose of this section is to list the most pertinent environmental impacts that are expected from the planning, operational, construction (upgrades, maintenance, etc.) and potential decommissioning activities of the factory.

5.1 OBJECTIVES OF THE EMP

The EMP provides management options to ensure impacts of the factory are minimised. The objectives of the EMP are:

- Provide an updated summarised legal framework within which Hartlief operates.
- To list the necessary environmental related permits, licences and certificates required for the various components and activities.
- To establish management structures pertaining to health, safety and environment, community liaison and environmental monitoring.
- 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 Hartlief.
- Update and identify new measures to enhance or optimize beneficial (positive) impacts.
- Guide the Proponent on implementation of a monitoring programme aimed at monitoring and auditing compliance to the environmental management plan.
  Ensure that appropriate environmental training is provided to responsible personnel and contractors.

5.2 IMPLEMENTATION OF THE EMP

Section 5.4 and section 5.5 outline the management of the environmental elements that may be affected by the different activities. Impacts addressed and mitigation measures proposed are seen as minimum requirements which have to be elaborated on. Delegation of responsibilities pertaining to controls as well as reporting activities should be determined by the Proponent and included in the first bi-annual report to be submitted following renewal.. The EMP is a living document that must be prepared in detail, and regularly updated, by the Proponent as the project progress and evolve.

The EMP and ECC must be communicated to the factory managers. A copy of the ECC and EMP should be kept on site. All monitoring results must be reported on as indicated. Reporting is important for any future renewals of the ECC and must be submitted to the MEFT. Renewal of ECC will require six monthly reports based on the monitoring prescribed in this EMP.

Various potential and definite impacts will emanate from the planning, operations, construction (care and maintenance) and decommissioning phases. The majority of these impacts can be mitigated or prevented. The prevention and mitigation measures are listed below.

5.3 MANAGEMENT AND IMPLEMENTATION OF THE EMP

Successful implementation of an environmental management plan is hinged on appointing key responsibilities and tasks to identified personnel. Members of staff may be assigned more than one position and carry the responsibility of more than one office. Therefore, for example, the environmental co-ordinator may also be the health and safety officer and / or community liaison officer.

Note that each business or project has its own management structure tasked with the management and implementation of an EMP. The above positions may thus be replaced with the related equivalent.

Table 5-1 provides a list of actions which have been assigned to specific personnel as per the related EMP. The table should be completed with the relevant responsible parties by the Proponent.

Table 5-1 Specific identified actions and related responsible party

Responsible Party	Action Intervals	Action	Appointed Person
General Manager/Operations Manager	Ongoing	♦ Accountable and responsible for compliance and approval of any action plans.	
Financial Manager	Once-off	♦ Ensure budgetary allowance and/or insurance for any environmental incidents/damage (e.g. pollution clean-up due to fuel spills) or rehabilitation where infrastructure is removed.	
	Ongoing	♦ Financial provisions for employee development (training): ♦ Examples: o Educational and wellness programs (communicable diseases, alcohol and drug abuse, financial advice, etc.). o Fire protection and prevention training. o Health and safety plan / first aid training. o Communication strategy.	
Procurement Manager	Ongoing	♦ Ensure contractors' awareness and compliance to the Proponent's requirements for contractors on site and to applicable sections of this EMP.	
Maintenance Manager	Ongoing	♦ Draft necessary maintenance programs and information on utilities (location, capacity, etc.)	
Compliance Manager	Ongoing	♦ Drafting and maintenance of permitting, registration and licensing register, etc.	
Human Resources Manger	Ongoing	♦ Keep labour related documentation. ♦ Employment contracts. ♦ Local labour requirement.	

		♦ Unskilled labour requirement. ♦ Logging of work hours. ♦ Identification card. ♦ Provide references to employees.	
Safety Officer	Ongoing	♦ Develop and maintain occupational health and safety risk registers ♦ Develop and maintain occupational health and safety action plan ♦ Health and safety incidents register and related actions. ♦ Health and safety committee meetings. ♦ Legal appointments. ♦ Safety training e.g. toolbox talks. ♦ Recording of environmental incidents. Proof in the form of incidents register and communication to be kept on file.	
Community Liaison Officer	As required	♦ Record communication to community members (of incidents of importance such as environmental incidents). ♦ Record consultation with the local and regional authorities. ♦ Record and respond to complaints from community members.	
Environmental Coordinator	Once-off	♦ Develop an environmental mitigation strategy / plan.	
	Bi-annual report	♦ Record keeping of site inspections. ♦ Record keeping of rehabilitation where required (dated photos of rehabilitated areas).	
	As required	♦ Environmental training of relevant staff on various aspects of environmental management (compliance to, and implementation, of the EMP) to be covered. Proof in the form of attendance registers kept on file.	
	Ongoing	♦ Recording of environmental performance and management. ♦ Recording of environmental incidents. Proof in the form of incidents register and communication to be kept on file.	

Section 5.5 outlines the management of the environmental elements that may be affected by different activities or incidents at the factory. Each impact is provided as a standalone impact for easy reference and distribution to relevant contractors and employees. Impacts are however not always completely independent of each and overlaps between two or more impacts are common. Furthermore, impacts addressed and mitigation measures proposed are seen as minimum requirements which can be elaborated on by the Proponent as the execution of the project progress and evolve. As such, the EMP is a living document that must be prepared in detail, and regularly updated, by the Proponent and/or its consultants.

A copy of the EMP and ECC must be present on site. All monitoring results must be reported on as indicated in section 5.2 and copies of these reports must also be present on site for inspection by officials. Reporting is also important to allow for any future renewals of the ECC and must be submitted to the MEFT. Currently, all ECCs list a bi-annual monitoring frequency as one of the conditions. Should this change, the frequency of monitoring report submission should match that as prescribed.

Since the preventative mitigation and enhancement measures for various impacts are generally the same, regardless of whether it is for the construction, maintenance, operational or decommissioning phases, these phases will be dealt with simultaneously to prevent duplication.

5.4 MANAGEMENT OF IMPACTS: PLANNING PHASE

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

- Ensure that all the necessary permits from the various ministries, local authorities and any other bodies that govern the factory activities, meat processing and related activities are in place and remains valid. Maintain a register of such permits, their requirements/conditions, and their renewals.
- Ensure a contractor management program is in place and that it includes the EMP.
- Employees to adhere to relevant sections of the EMP, as applicable to their scope of work and general operations.
- Make provisions to ensure that responsible and accountable persons are identified and equipped to oversee the implementation and maintenance of the EMP on site,
- Corporate communication processes to be followed in the event of complaints from public entities or incidents with a public impact.
- Have emergency response plans, equipment and personnel on site, as applicable, to deal with all potential emergencies. Implement processes to ensure that personnel remain aware of the steps to take in the event of emergencies.
- Develop and adopt a waste management plan inclusive of a waste minimisation strategy for all aspects of the factory operations.
- Ensure availability of sufficient funds or insurance spill clean-up or pollution remediation if ever required.
- Establish and / or maintain a reporting system to report on aspects of construction activities, operations and decommissioning as outlined in the EMP.
- Submit bi-annual reports to the MEFT to allow for environmental clearance certificate renewal after three years. This is a requirement by MEFT.
- Update the EMP and apply for renewal of the environmental clearance certificate as per the conditions of the ECC.

5.5 MANAGEMENT OF IMPACTS

The following sub sections provide management measures for both the operational phase and the construction activities (maintenance and minor upgrades) related to the factory.

5.5.1 Skills, Technology and Development

Development of people and technology are key to the economic development of Namibia. During factory operations, training is provided to the workforce to be able to conduct certain tasks according to the required standards. Skills are periodically transferred to an unskilled workforce for general tasks. Employees enhance their work experience and capabilities while some individuals may be identified for promotion and additional skills development and training. New technologies are at times introduced and a portion of the workforce trained on its implementation and/or operations.

Desired Outcome: To see an increase in skills of local Namibians, as well as development and technology advancements in the meat processing industry and local community.

Actions

Enhancement:

- As far as is practically possible, employees and contractors must first be sourced of at local level and if not locally available, regional or national options should be considered.
- Employees should have access to relevant skills development and improvement programs based on identified needs.
- Inform employees about parameters and requirements for references upon employment.
- Ensure that all employees who receive formal training receive training certificates.
- Appoint reputable contractors.

Responsible Body:

- Proponent

5.5.3 Revenue Generation and Employment

Skilled and professional labour will continue to be in demand due to the operations of the Hartlief Factory. Employment is sourced locally while skilled labour/contractors may be sourced from other regions. Additional revenue will be generated through not only direct employment, but also purchasing of goods and use of services.

Desired Outcome: Contribution to the national treasury and payment of fees and taxes in accordance with the laws of Namibia.

Actions

Enhancement:

- The Proponent must employ Namibians where possible.
- Deviations from this practice must be justified and the necessary legal processes should be followed for any non-Namibian appointments
- Local business and industries should be supported where reasonably practicable and without compromising the ability of the organisation to export their final products.
- Adhere to the relevant Namibian legislation pertaining to the payment of salaries, taxes, fees, etc.
- Prioritise and set targets for local procurement.

Responsible Body:

- Proponent
- Contractors

5.5.4 Demographic Profile and Community Health

The project is reliant on labour intensive with a significant workforce being required. High levels of unemployment in urban areas generally contribute to an increased in potential social ills and deviant behavior. This includes the spread of communicable diseases such as HIV/AIDS, reliance on intoxicating substances and increased criminal activities.

Desired Outcome: To prevent the spread of communicable diseases and prevent / discourage socially deviant behaviour.

Actions

Prevention:

- Appointment of reputable contractors where applicable.
- Adhere to all local authority by-laws relating to environmental health which includes, but is not limited to, sanitation requirements for employees.
- Provide educational, awareness information for employees on various topics of social behaviour and HIV/AIDs.
- Disciplinary steps, within the legal parameters of Namibia, to be taken for socially deviant behaviour during working hours should be clearly stipulated in employment contracts.

Mitigation:

- Take disciplinary action against employees not adhering to contractual agreements with regard to socially deviant behaviour (e.g. alcohol or drug abuse during working hours).

Responsible Body:

- Proponent

5.5.5 Traffic

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Staff parking is located across from the site, and employees have to cross the busy Ruhr Street to reach the site. Hartlief has therefore engaged with the City of Windhoek for the erection of a safe pedestrian crossing. The arrangement will reduce pedestrian incident risks. Permanent security at the entrance further regulates traffic and parking at the dispatch entrance.

At times, members of the public park in no-parking zones in Ruhr Street. This causes visual obstructions to the entrance and exit of the employee parking area. Hartlief has therefore endeavoured to use temporary traffic structures (traffic cones) to deter illegal parking and reduce collision risks. The permanent security guard also assists pedestrians in crossing as well as vehicles to safely enter and exit the staff parking.

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

Actions

Prevention:

- Erect clear signage regarding access and exit points at the facility as well as speed limits on internal roads.
- All vehicles owned by the Proponent to operate within the Traffic and Transport Act regulation, specifically also in term of roadworthiness.
- Trucks making deliveries or doing pick-ups may not be allowed to park in streets for extended periods or be allowed to obstruct neighbouring properties' entrances.

Mitigation:

- In the unlikely event that any traffic impacts are expected as a result of temporary changes in operations, , traffic management should be performed to minimise the impact.

Responsible Body:

- Proponent
- Contractors

5.5.6 Occupational Health and Safety

Activities associated with the operational phase is reliant on human labour and therefore exposes them to health and safety risks. Activities such as the operation of machinery and handling of hazardous materials, are some of the main risks employees are exposed to.

Desired Outcome: To prevent injury and occupational diseases

Actions

Prevention:

- Implement and maintain an integrated occupational health and safety management system, to act as a monitoring and mitigating tool.
- Comply with all occupational health and safety standards as specified in the Labour Act and related regulations.
- All chemicals must be stored and handled according MSDS instructions. This includes segregation of incompatible products (e.g. acids and reducing agents and alkalis).
- Clearly label dangerous and restricted areas as well as dangerous equipment and products.
- Provide all employees with required and adequate personal protective equipment (PPE) where required.
- Ensure that all relevant personnel receive adequate training on the operational procedures of equipment and machinery and the handling of chemicals and hazardous substances. Ensure that staff understand the importance of segregating incompatible materials even if it is only empty packaging material with residual traces of chemicals. Also ensure that more than one employee is trained on these aspects to ensure an adequately trained and qualified person is always present on site to ensure appropriate handling and storage of chemicals (e.g. in the event of personnel being on leave).
- Train selected personnel in first aid and ensure first aid kits and equipment are available on site and regularly serviced/replaced.
- The contact details of all emergency services must be readily available.
- Employees must be aware of the required response in the event of an emergency
- Implement a maintenance register for all equipment whose malfunction can lead to fire risks, injury or exposure to hazardous substances.
- Apply and adhere to all industry specific health and safety procedures and regulations applicable to the handling of food produce for markets.
- Equipment that will be locked away on site must be placed in a way that does not encourage criminal activities (e.g. theft).
- See section 5.5.9 Air Quality for ammonia leak detection.
- Ensure that all incidents are reported, recorded and investigate in line with the appropriate procedures

Mitigation:

- Seek the appropriate level of medical attention for all work related incidents.

Responsible Body:

- Proponent
- Contractors

5.5.7 Security

Security risks will be related to unauthorized entry onto the premises with the possibility of theft.

Desired Outcome: To prevent security incidents and theft.

Actions

Prevention:

- Security procedures and proper security measures must be in place to protect workers, equipment, materials and products
- Unauthorised entry must be prevented
- Critical control points and equipment should be safeguarded against tampering
- Lock away or store all equipment and goods on site in a manner suitable to discourage criminal activities (e.g. theft).
- Advise personnel to lock away valuables and not to leave valuable items unattended.
- Contractors on site must wear identifiable nametags so that staff can recognise them as being permitted to be on site.

Mitigation:

- In line with the Labour Act and any other relevant legislation and internal policies and procedures, take disciplinary action against staff who are guilty of theft.
- If the need arise, improve security measures to prevent entrance of potentially deviant people onto the premises.

Responsible Body:

- Proponent
- Contractors

5.5.8 Fire

Operational and construction activities may increase the risk of the occurrence of fires. HFO and diesel stored on the premises presents a fire risk. Ammonia, if released from the refrigeration systems, present in a 15% to 28% mixture with air, is explosive. Other flammable chemicals may also be on site in small quantities.

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

Actions

Prevention:

- Prepare a holistic fire protection, prevention and response plan. This plan must include evacuation plans and signage, an emergency response plan and a firefighting plan.
- Employees should be trained on measures to prevent fire and actions to be taken in the event of a fire on site
- Maintain firefighting equipment at approved intervals and keep a maintenance register.
- Ensure good housekeeping to reduce fire risks associated with accumulated waste materials, dry vegetation, etc.
- Ensure all fuel and chemicals, including ammonia, are stored and handled according to MSDS and SANS instructions.
- The ammonia refrigeration plant must have an emergency response plan specific to ammonia related fire risks if leaks or accidental release of ammonia occur. This could include explosive proof lighting, extractor fans, PPE and water hoses with water diffusing nozzles. Water absorbs ammonia vapour if sprayed by a fine mist or droplets of water. Refer to MSDS and SANS 10147.
- Follow MSDS and SANS standard for operation and maintenance of the refrigeration systems containing ammonia.
- See section 5.5.9 for ammonia leak detection.
- Have an electrical installation and equipment preventative maintenance and inspection programme in place

Mitigation:

- Implement the fire response plan in the event of a fire and notify neighbours in case of potential spreading of a fire to nearby farms.
- Quick response time by trained staff will limit the spread and impact of fire.

Responsible Body:

- Proponent
- Contractors

5.5.9 Air Quality

The boilers are the principal emitters and of key concern are the "exhaust" gases: nitrous oxides, sulphureous oxides, hydrocarbons, carbon monoxide, carbon dioxide, and particulate matter, which are all considered to be sources of air pollution. Odorous compounds are released during meat processing (e.g. smoking).

Ammonia leaks from the refrigeration plant will deteriorate air quality in and around the facility if not well ventilated.

Desired Outcome: To prevent any nuisance and reduce emissions.

Actions

Prevention:

- The boiler must use clean fuels free of heavy metals and toxic wastes. Quality checks should be conducted on the HFO used in boiler operations. Good quality HFO will reduce emissions.
- The boiler stack should be high enough to prevent ground level concentrations of pollutants from reaching undesirable levels (refer to International Finance Corporation / World Bank: General Environmental, Health, and Safety Guidelines: Environmental Air Emissions and Ambient Air Quality).
- Scrubbers or ceramic filters should be considered to minimise emissions from boilers.
- The refrigeration plants must have extractors in case ventilation / air flow is insufficient and a leak or accidental ammonia release occurs.
- Maintain installed leak detection system to ensure adequate functioning. .

Responsible Body:

- Proponent
- Contractors

5.5.10 Noise

The site is situated in an industrial area and no limitations on the operating hours exist. Additional noise might be generated during ad hoc events and the risk and impact of noise pollution should be considered in the event specific risk assessment. Due to the industrial nature of operations, the risk to employees should be adequately understood and mitigated.

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

Actions

Prevention:

- Follow the City of Windhoek guidelines for limits on noise pollution (Council Resolution 215/09/2006). The facility is situated in an industrial area.
- All machinery must be regularly serviced to ensure minimal noise production.
- Hearing protectors as standard PPE for workers in situations with elevated noise levels.

Mitigation:

- Follow recommendations from occupational hygiene survey regarding occupational exposures and mitigation which may include noise barriers such as screens around noisy equipment and operations and hearing protectors as standard PPE for workers in situations with elevated noise levels.
- Safety signage indicating PPE requirements for noise.
- Hearing protectors as standard PPE for workers in situations with elevated noise levels.

Responsible Body:

- Proponent
- Contractors

5.5.11 Waste Production

Various waste streams are produced during the operational phase. Waste may include hazardous waste associated with the handling of hydrocarbon products, chemicals, laboratory waste, etc.; recyclable wastes such as glass, metal, paper and plastic; biological waste; domestic waste; and effluent. Waste presents a contamination and nuisance risk and when not removed regularly may become a fire hazard. Construction waste may include building rubble and discarded equipment contaminated by hydrocarbon products. Contaminated soil and water are considered as hazardous wastes.

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

Actions

Prevention:

- Develop and implement a waste management program, this should include waste reduction and recycling initiatives and regular inspection and maintenance of waste storage and disposal areas.
- All employees should be educated on proper waste handling and disposal and importantly on the segregation of waste according to the different waste streams and their appropriate disposal locations.
- Ensure adequate temporary waste storage facilities are available and that waste cannot be blown away by wind.
- Prevent scavenging (human and non-human) of stored waste, especially condemned food.
- All regulations and by-laws relating to environmental health should be adhered to. Waste should be disposed of regularly and at appropriately classified disposal facilities, this includes hazardous material (empty chemical containers, contaminated rugs, paper, water and soil) and condemned materials (contaminated food, biological laboratory waste, etc.)
- All hazardous materials, including chemical container disposal, should be conducted as per their MSDS instructions.
- Should any buildings or structures be decommissioned, all waste and infrastructure should be disposed of at a pre-approved landfill site.
- See the material safety data sheets available from suppliers for disposal of contaminated products and empty containers.
- See the effluent discharge permit for conditions related to the disposal of waste and effluent.
- Liaise with the local authority regarding waste and handling of hazardous waste.

Responsible Body:

- Proponent
- Contractors

5.5.12 Ecosystem and Biodiversity Impact

The property is already developed. No significant impact on the biodiversity of the area is predicted as operations is ongoing on the site. Impacts are mostly related to pollution of the environment.

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

Actions

Mitigation:

- Report any extraordinary animal sightings to MEFT (e.g. the presence of rabid or healthy wildlife, not typically present in town, as occurring in Windhoek relatively frequently).
- Mitigation measures related to waste handling and the prevention of groundwater, surface water and soil contamination should limit ecosystem and biodiversity impacts.
- Avoid scavenging of waste by fauna.
- The establishment of habitats and nesting sites at the facility should be prevented where possible.

Responsible Body:

- Proponent

5.5.13 Groundwater and Surface Water Contamination

Operations entail the storage and handling of hydrocarbons and other hazardous materials which present an environmental contamination risk. Contamination may either result from failing storage facilities, pumps and pipelines, or spills and leaks associated with incorrect handling or human error. Such spills may contaminate surface water, soil and groundwater.

Desired Outcome: To prevent environmental contamination.

Actions

Prevention:

- Emergency Response Plans and Spill Contingency Plans must be in place and include all fuels and chemicals being handled (e.g. diesel, HFO, freon, ammonia).
- Spill control structures and procedures must be in place according to SANS standards or better for all fuel and chemical storage and handling areas. This includes properly sealed spill slabs and spill catchment pits at the consumer fuel installation and HFO storage site.
- Ammonia rich water which may be created if an ammonia leak is present in the refrigeration plant, and water is sprayed to absorb ammonia vapours, must be contained.
- The procedures followed to prevent environmental damage during operations, servicing and maintenance of equipment, and compliance with these procedures, must be audited and corrections made where necessary.
- Proper training of operators must be conducted on a regular basis (e.g. fuel and chemical handling, spill detection, spill control implementation, etc.).
- In areas where hazardous chemicals or fuel are stored, all drains leading directly into sewers must be closed off, and locked where possible, to prevent any unwanted products from entering sewers should an accidental spill, pipe burst, valve malfunction, etc. occur.
- Where drains are present to drain wash water, these should only be opened during times of washing and closed immediately thereafter.
- Ensure tank vents do not become blocked due to the high viscosity of HFO as this can lead to tank failure during filling.
- Effluent discharge must adhere to the City of Windhoek's effluent disposal permit conditions.

Mitigation:

- Spill clean-up means must be readily available on site as per the relevant MSDS for all chemicals and fuels.
- Any fuel spillage of more than 200 litres must be reported to the Ministry of Mines and Energy.
- The fuel storage bund area must be cleaned if any fuel products are present and this waste must be disposed of at a suitably classified hazardous waste disposal facility.
- A hydrocarbon pollution assessment (tank pit survey) must be conducted if the underground diesel tank is removed.
- Any spill must be cleaned up immediately and corrective measures implemented.

Responsible Body:

- Proponent
- Contractors

5.5.14 Visual Impact

This is an impact that not only affects the aesthetic appearance, but also the integrity of the facility and the visual landscape character. The facility is situated within a developed industrial area. The facility is thus similar to the existing surrounding urban character.

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

Actions

Prevention:

- Regular waste disposal and clearing of wastes on the entire premises.
- Earthworks to be conducted in an orderly fashion with clear indications of restricted areas.
- Regular waste disposal, good housekeeping and routine maintenance on infrastructure will ensure that the longevity of structures are maximised and a low visual impact is maintained.

Responsible Body:

- Proponent
- Contractors

5.5.15 Impacts on Utilities and Infrastructure

Damage caused to existing infrastructure and services supply like sewers, water or electricity where present may occur during refurbishment, maintenance and or related activities. Additional demand for electricity and potable water and increased effluent discharges into sewers may add strain on the available services supply of the area.

Desired Outcome: No impact on utilities and infrastructure. No unwanted products entering sewers.

Actions

Prevention:

- Appointing qualified and reputable contractors is essential.
- Contractors must determine exactly where amenities and pipelines are situated before any construction commences (utility clearance e.g. ground penetrating radar surveys).
- Liaise with suppliers of water, electricity and sewers in terms of supply and demand statistics. Timely communication of significant increases in future usage of resources to allow for planning and additional provision.
- Water savings strategies and equipment to be investigated and sensitise employees on responsible water use to reduce water consumption and thus also inputs into the wastewater discharge streams.
- Electricity savings strategies and equipment to be investigated and sensitise employees on responsible energy use.

Mitigation:

- Implement programmes to monitor consumption of water and electricity and programmes to ensure water and energy efficient strategies.
- Emergency procedures available on file.
- Timely planning for temporary measures to supply electricity and water during shortages in their supply.

Responsible Body:

- Proponent
- Contractors

5.5.16 Cumulative Impact

Cumulative impacts are mostly associated with the industrial nature of the Proponent and their neighbors' operations. This relates to traffic, noise, and potential groundwater contamination, but also in terms of positive impacts to job creation and revenue generation.

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

Actions

Mitigation:

- Reviewing biannual and annual reports for any new or re-occurring impacts or problems would aid in identifying cumulative impacts and help in planning if the existing mitigations are insufficient.

Responsible Body:

- Proponent

6 MONITORING REQUIREMENTS

Table 6-1 provides a summary of proposed monitoring requirements and frequencies. All incidents and actions must be recorded as soon as it occurs in order to ensure it is not forgotten at a later stage (continuous monitoring). Summaries of these records should be provided in the bi-annual EMP compliance monitoring report to be submitted to MEFT. Where permit or licence conditions' monitoring requirements differ from the EMP, the permit or licence condition must be adhered to.

Table 6-1 Monitoring requirements

Impact	Monitoring	Purpose	Frequency	Included in Bi-Annual Report
Planning	Proof of permits / licences/ certificates	For the EMP monitoring report to indicate the Proponent's adherence to relevant legislation	Once off or when it is renewed	♦ Copy of permits/licences/certificates
	EMP/Bi-annual monitoring reports	For the EMP monitoring report to indicate the Proponent's adherence to relevant legislation and the ECC	Once off or when updated	♦ Written verification that copies are available for inspection at Hartlief
	Managerial structure with assigned responsibilities	For the EMP monitoring report to indicate the Proponent's adherence to the EMP and ECC	Once off or when changed	♦ Written verification of the structure and assigned responsibilities
Skills, Technology and Development	Records of training and copies of certificates	For the EMP monitoring report to provide an overview of the positive contribution the Proponent makes towards the development of employees	Bi-annual checks and reporting	♦ Type of training and number of people who received said training with attendance registers as proof ♦ One or two copies of certificates or references as examples
Employment Generation and Employment	Employment figures Proof of Social Security contributions	For the EMP monitoring report to provide a quantitative measure of the positive contribution the Proponent makes towards the employment sector	Bi-annual checks and reporting	♦ Number of male vs female employees ♦ Number of Namibian vs foreign employee ♦ Social security good standing certificate
Demographic Profile and Community Health	Records of all educational and social upliftment programmes	For the EMP monitoring report to provide an overview of the positive contribution the Proponent makes towards the social development and wellness of employees	Bi-annual checks and reporting	♦ Type of training and number of people who received said training with attendance registers as proof ♦ Type of site wellness initiatives and nr of employees who benefited from each initiative

Impact	Monitoring	Purpose	Frequency	Included in Bi-Annual Report
	Factory inspection sheet for all areas which may present environmental health risks, kept on file	For the EMP monitoring report to indicate adherence to typical health requirements	Bi-annual checks and reporting	♦ Factory inspection sheets
Traffic	Signage	For the EMP monitoring report to indicate the Proponent's adherence to the EMP	Bi-annual reports but once-off proof of presence of signage thereafter only of any new signage erected	♦ Photographs of signage, warning, delivery area and restricted area signs as proof
	Presence of records of vehicle licenses and driver's license on file and displayed on vehicles	For the EMP monitoring report to indicate the Proponent's adherence to the EMP	Bi-annual reports but once-off and continuous	♦ Records of drivers licenses and photos of vehicle licenses
Food Safety and Quality	Hazard Analysis and Critical Control Points (HACCP) food management system on file	For the EMP monitoring report to indicate Proponent's food safety commitment	Once off with updates as required.	♦ Index/table of contents of food management system as proof
Occupational Health and Safety	Presence of MSDS instructions on file and at applicable locations	For the EMP monitoring report to indicate adherence to typical health requirements	Bi-annual checks and reporting	♦ Copy of MSDS file index/table of contents as proof
	Keep records of health and safety incidents with actions taken	For the EMP monitoring report to indicate Proponent's commitment to ensuring the health of employees	Continuous record keeping with bi-annual summary report	♦ Summary of incidents and actions
	Presence of MSDS instructions on file and at applicable locations	For the EMP monitoring report to indicate adherence to typical safety requirements	Bi-annual checks and reporting.	♦ Copy of MSDS file index/table of contents as proof
	Signage	For the EMP monitoring report to indicate adherence to typical safety requirements	Bi-annual reports but once-off proof of presence of signage thereafter only of any new signage erected	♦ Photographs of safety and restricted area signs as proof

Impact	Monitoring	Purpose	Frequency	Included in Bi-Annual Report
	First aid training events and safety drills	For the EMP monitoring report to indicate Proponent's commitment to ensuring the safety of employees	Bi-annual checks and reporting	♦ Level of training and number of people who received said training with attendance registers as proof ♦ One or two copies of certificates or references as examples ♦ Record of safety drills conducted
Security	Security related incidents with action taken to prevent future occurrences	For the EMP monitoring report to indicate the Proponent's commitment to ensuring the security of employees	Continuous record keeping with bi-annual summary report	♦ Summary of incidents and actions
Fire	Holistic fire protection and prevention plan	For the EMP monitoring report to indicate the Proponent's adherence to the EMP	Once-off proof of presence of such plan	♦ Copy of plan
	Firefighting equipment presence	For the EMP monitoring report to indicate the Proponent's adherence to the fire safety requirements	Once-off proof of presence of such equipment	♦ Photographs of equipment with copy of register of the types and quantity of firefighting equipment
	Servicing of firefighting equipment	For the EMP monitoring report to indicate the Proponent's adherence to the annual service requirements of firefighting equipment	In the bi-annual report corresponding to the date the equipment was serviced	♦ Servicing register with photos of proof or a compliance certificate issued by the service agent.
	Ammonia emergency response plan	For the EMP monitoring report to indicate the Proponent's adherence to the fire safety requirements	Once-off proof of presence of such plan	♦ Copy of plan
	Ammonia leak detection	For the EMP monitoring report to indicate the Proponent's adherence to the fire safety requirements	Once-off proof of presence of such detector	♦ Photograph of detector
	Electrical maintenance / service and inspection plan	For the EMP monitoring report to indicate the Proponent's adherence to the fire safety requirements	Once-off proof of presence of such plan	♦ Copy of plan
	Fire related incidents with action taken to prevent future occurrences	For the EMP monitoring report to indicate the Proponent's adherence to the EMP	Continuous record keeping with bi-annual summary report	♦ Summary of incidents and actions

Impact	Monitoring	Purpose	Frequency	Included in Bi-Annual Report
Air Quality	Complaints register	For the EMP monitoring report to indicate the Proponent's adherence to the EMP	Continuous record keeping with bi-annual summary report	♦ Summary of complaints and actions
Noise	Noise producing machinery inspection and servicing register	For the EMP monitoring report to indicate the Proponent's adherence to the EMP	Continuous record keeping with bi-annual summary report	♦ Register of inspection and servicing
	Complaints with action taken to address the complaint	For the EMP monitoring report to indicate the Proponent's adherence to the EMP	Continuous record keeping with bi-annual summary report	♦ Summary of complaints and actions
Waste Production	Waste reduction and/or recycling plan/initiatives	For the EMP monitoring report to indicate the Proponent's commitment to reduce waste and prevent pollution	Once-off proof of presence of such plan/initiatives and then when changes to such plan/initiatives are made	♦ Copy of plan or brief description of initiatives
	Waste volumes	For the EMP monitoring report to indicate the Proponent's successful implementation of waste reduction measures	Continuous record keeping with bi-annual summary report	♦ Summary of waste volumes for every six month period
	Hazardous waste	For the EMP monitoring report to indicate the Proponent's proper handling of hazardous waste	Continuous record keeping with bi-annual summary report	♦ Type and volume of waste with hazardous waste safe disposal certificates
	Waste containment	For the EMP monitoring report to indicate the Proponent's adherence to the EMP	Bi-annual checks and reporting	♦ Photos of waste storage areas showing successful (or not) containment of waste
Ecosystem and Biodiversity Impact	Presence of MSDS instructions for chemicals on file and at applicable locations	For the EMP monitoring report to indicate adherence to typical pollution prevention requirements	Bi-annual checks and reporting	♦ Copy of MSDS file index/table of contents as proof

Impact	Monitoring	Purpose	Frequency	Included in Bi-Annual Report
	Machinery and vehicle with pollution potential inspection and servicing register	For the EMP monitoring report to indicate the Proponent's adherence to the EMP	Continuous record keeping with bi-annual summary report	♦ Register of inspection and servicing
	Consumer installation certificate	For the EMP monitoring report to indicate the Proponent's adherence to the EMP and Petroleum Products and Energy Act	Once-off	♦ Copy of certificate
	Spills or leakages	For the EMP monitoring report to indicate adherence to the EMP	Continuous record keeping with bi-annual summary report	♦ Summary of incidents and actions ♦
	Spill clean-up equipment	For the EMP monitoring report to indicate the Proponent's adherence to the EMP	Once-off	♦ Photographs and register of equipment
	Spills or leakages	For the EMP monitoring report to indicate adherence to the EMP	Continuous record keeping with bi-annual summary report	♦ Product and estimated volume spilled with date of spill, duration of spill and remedial action taken
	Effluent sampling	For the EMP monitoring report to indicate adherence to the effluent disposal permit conditions	Parameters and frequency as set out by the effluent disposal permit	♦ Summary of effluent analysis results
Groundwater and Surface Water Contamination	Effluent quality analysis	For the EMP monitoring report to indicate the Proponent's adherence to effluent disposal permit conditions	As per effluent disposal permit	♦ Summary of monitoring results
	Spills or leakages	For the EMP monitoring report to indicate adherence to the EMP	For the EMP monitoring report to indicate adherence to the EMP	♦ Summary of incidents and actions ♦
Visual Impact	Complaints received on the visual or aesthetics of the facility	For the EMP monitoring report to indicate adherence to the EMP	For the EMP monitoring report to indicate adherence to the EMP	♦ Summary of complaints received and actions take

Impact	Monitoring	Purpose	Frequency	Included in Bi-Annual Report
Impacts on Utilities and Infrastructure	Incidents such as water and electricity supply interruptions, loss of telecommunications, downtime etc. and actions taken	For the EMP monitoring report to indicate the Proponent's adherence to the EMP	For the EMP monitoring report to indicate the Proponent's adherence to the EMP	♦ Summary of incidents and action taken
Cumulative Impacts	New or re-occurring impacts positive or negative	For the EMP monitoring report to indicate the Proponent's adherence to the EMP	For the EMP monitoring report to indicate the Proponent's adherence to the EMP	♦ Summary of impacts and actions taken to mitigate negative impacts

6.1 DECOMMISSIONING AND REHABILITATION

Decommissioning is not foreseen during the validity of the ECC. Construction activities may however include modification and decommissioning of some onsite structures. Should decommissioning occur at any stage, rehabilitation of the area may be required.

Decommissioning may entail the complete removal of all infrastructure including buildings and underground infrastructure, if any, not forming part of post decommissioning 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 the required limits and waste should be contained and disposed of at an appropriately classified and approved waste facility and not dumped in the surrounding areas. Should operations be decommissioned with no employment or remuneration plan for the employees, a significant social and economic impact will be suffered by the local community. The EMP for the factory will have to be reviewed and updated prior to decommissioning to cater for changes made to the site and implement guidelines and mitigation measures related to social and environmental aspects.

6.2 ENVIRONMENTAL MANAGEMENT SYSTEM

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

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

7 CONCLUSION

Operations of Hartlief has a positive impact on Windhoek and Namibia as a whole. Operations has a significant impact on employment, payment of taxes and fees and income opportunities created for the downstream businesses as a number of indirect jobs are also created through the outsourcing of certain services to contractors. Through international sales of export quality products, Namibia as a brand is promoted and contribution is made to a positive trade balance.

Negative impacts associated with the operations and maintenance / construction activities related to some onsite structures, can successfully be mitigated. Implementing a safety, health, environment and quality (SHEQ) policy will contribute to effective management procedures to prevent and mitigate impacts. All regulations relating to the factory, the meat industry and health and safety legislation should be implemented. Noise pollution should at all times meet the prescribed City of Windhoek guidelines for limits on noise pollution (Council Resolution 215/09/2006). Health and safety regulations should be adhered to in accordance with the regulations pertaining to relevant laws and internationally accepted standards of operation. Any waste produced must be removed from site and disposed of in an appropriate way or re-used or recycled where possible. Hazardous waste must be disposed of at an approved hazardous waste disposal site. Surface water, groundwater and soil contamination is a serious

concern and should be prevented by safe work practices and adherence to SANS requirement for the consumer fuel installation. All permits and licenses should remain up to date and strictly adhered to.

The updated EMP should be used as an on-site reference document for the operations of the factory. Parties responsible for transgressing of the EMP should be held responsible for any rehabilitation that may need to be undertaken. The Proponent could use an in-house environment management system in conjunction with the EMP. All operational personnel must be taught the contents of these documents.

8 REFERENCES

Faul A, Coetzer W, 2022 June, Operational Activities of the Hartlief Factory in Windhoek: Environmental Assessment Scoping Report.