OPERATIONAL ACTIVITIES OF THE HARTLIEF FACTORY IN WINDHOEK

ENVIRONMENTAL ASSESSMENT SCOPING REPORT

Assessed by:

Assessed for:

June 2022

Project:	**OPERATIONAL ACTIVITIES OF THE HARTLIEF FACTORY IN WINDHOEK: ENVIRONMENTAL ASSESSMENT SCOPING REPORT**	
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Prepared for: (Proponent)	Hartlief Continental Meat Products (Pty) Ltd P.O. Box 428 Windhoek Namibia	
Lead Consultant	Geo Pollution Technologies (Pty) Ltd PO Box 11073 Windhoek Namibia	TEL.: (+264-61) 257411 FAX.: (+264) 88626368
Main Project Team:	**André Faul** (B.Sc. Zoology/Biochemistry); (B.Sc. (Hons) Zoology); (M.Sc. Conservation Ecology); (Ph.D. Medical Bioscience) **Wikus Coetzer** (B.Sc. Environmental and Biological Sciences); (B.Sc. (Hons) Environmental Sciences)	
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Report Approval	 **André Faul**	

I Günther Ling acting as the Proponent's representative (Hartlief Continental Meat Products (Pty) Ltd), hereby confirm that the project description contained in this report is a true reflection of the information which the Proponent 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 and the report is hereby approved.

Signed at Windhoek on the 22 day of June 2022.

Hartlief Continental Meat Products (Pty) Ltd

CY/1960/1516
Business Registration/ID No.

EXECUTIVE SUMMARY

Hartlief Continental Meat Products (Pty) Ltd (the Proponent) operates a state-of-the art processed meat factory, the Hartlief Factory, on erf 7039 in the Northern Industrial Area of Windhoek. 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 smoked, fermented and cooked products while they also stock a range of raw meats such as beef, lamb, pork and game. Operational activities generally include receipt and storage of various unprocessed carcasses and meat cuts from suppliers for processing; curing, smoking, fermenting, cooking, drying and packaging of various products; operations of boilers, cold rooms/freezers, ammonia plant and consumer fuel installations; dispatching of products to clients; operations of the shop and bistro; site security; cleaning of the premises; and waste handling and disposal.

The Proponent appointed Geo Pollution Technologies (Pty) Ltd to undertake an environmental assessment for the operations of the Hartlief Factory. This environmental assessment is conducted to determine all environmental, safety, health and socio-economic impacts associated with the operational activities of the facility. Relevant environmental data has been compiled by making use of secondary data and from a reconnaissance site visit. Potential environmental impacts and associated social impacts will be identified and addressed in this report.

The facility is within an industrial area in Windhoek and is surrounded by industrial activities. Due to the nature and location of the development, limited impacts can be expected on the surrounding environment, see summary impacts table below. It is recommended that regular environmental performance monitoring continue and be adapted as the project develops, to ensure environmental compliance and that corrective measures be taken if necessary.

The operations of the Hartlief Factory plays a major role in the food sector in Namibia, contributes to the Namibian economy and provides employment to a large number of people. By exporting locally produced goods, the Proponent contribute towards a positive trade balance for Namibia. By appointing local contractors and employees and implementing educational programs, the positive socio-economic impacts can be maximised while mitigating any negative impacts.

All relevant regulations and accepted best practices should be adhered to, as it pertains to the management of health and safety risks to employees and contractors on site. Noise pollution should at all times meet the minimum requirements of the City of Windhoek to prevent hearing loss and not to cause a nuisance to nearby receptors. Water contaminated by pollutants that can no longer be disposed of in the normal effluent disposal streams, and any other waste products, must be prevented from entering the environment at all costs and should be disposed of appropriately. Any waste produced must be removed from site and disposed of in an appropriate way or re-used or recycled where possible. Hazardous or biological waste must be disposed of by a registered service provider and at an approved hazardous waste disposal site. An emergency response plan must be implemented in the event of major system failures.

The Environmental Management Plan should be used as an on-site reference document during operational activities at the facility. This document and its supporting impact assessment, should be reviewed on a regular basis, in order to ensure that it is still relevant to the activities executed on site. Parties responsible for transgression of the EMP should be held responsible for any rehabilitation that may need to be undertaken. Hartlief Continental Meat Products implements numerous policies and standards to ensure protection of health, safety environment and quality. These include a group environmental management system, various management standards, Hazard Analysis and Critical Control Points (HACCP) 10330 and the International Organization for Standardization (ISO) 22000 Food Safety Management System. These should be used in conjunction with the Environmental Management Plan.

Impact Category	Impact Type	Construction	Operations
	Positive Rating Scale: Maximum Value	5	5
	Negative Rating Scale: Maximum Value	-5	-5
EO	Skills, Technology and Development	2	4
EO	Revenue Generation and Employment	2	3
SC/EO	Demographic Profile and Community Health	-1	-2
EO	Traffic	-1	-1
SC/EO	Health, Safety and Security	-2	-2
EO	Fire	-2	-2
PC	Air Quality	-1	-2
PC	Noise	-2	-2
PC/BE	Waste production	-2	-3
PC/BE	Ecosystem and Biodiversity Impact	-1	-2
PC	Groundwater, Surface Water and Soil Contamination	-2	-3
SC	Visual Impact	-1	-2
EO	Impacts on Utilities and Infrastructure	-3	-2

BE = Biological/Ecological *EO = Economical/Operational* *PC = Physical/Chemical* *SC = Sociological/Cultural*

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LIST OF ABBREVIATIONS

%	Percentage
°C	Degrees Celsius
AIDS	Acquired Immune Deficiency Syndrome
BE	Biological/Ecological
cSt	Centistoke
DEA	Department of Environmental Affairs
DWA	Department of Water Affairs
EA	Environmental Assessment
EIA	Environmental Impact Assessment
EMA	Environmental Management Act No 7 of 2007
EMP	Environmental Management Plan
EMS	Environmental Management System
EO	Economic/Operational
ES	Environmental Classification
GPT	Geo Pollution Technologies
HACCP	Hazard Analysis and Critical Control Points ()
HIV	Human Immunodeficiency Virus
HSEQ	Health, Safety, Environment and Quality
IAPs	Interested and Affected Parties
ISO	International Organization for Standardization
IUCN	International Union for Conservation of Nature
kVA	Kilovolt-ampere
kW	Kilowatt
m/s	Meter per second
m^2	Square meter
m^3	Cubic meter
mbs	Meters below surface
MEFT	Ministry of Environment, Forestry and Tourism
mm/a	Millimetres per annum
MSDS	Material Safety Data Sheet
NH_3	Ammonia
PC	Physical/Chemical
PPE	Personal Protective Equipment
ppm	Parts per million
SANS	South African National Standards
SC	Sociological/Cultural
WHO	World Health Organization

GLOSSARY OF TERMS

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

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

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

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

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

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

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

Environmental Impact Assessment (EIA) - process of assessment of the effects of a development on the environment and can also be considered / defined as an environmental risk assessment.

Environmental Management Plan (EMP) - A working document on environmental and socio-economic mitigation measures, inclusive of health & safety of employees, which must be implemented by several responsible parties during the execution of all activities performed by the proponent.

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

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

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. It can also be referred to as a risk.

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

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 & Tourism.

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

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

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

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

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

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

1 BACKGROUND AND INTRODUCTION

Geo Pollution Technologies (Pty) Ltd was appointed by Hartlief Continental Meat Products (Pty) Ltd (the Proponent) to undertake an environmental scoping impact assessment (EIA) for their processed meat factory and associated operations on erf 7039 in the Northern Industrial Area of Windhoek. As a holistic approach to the assessment, the entire operations of the Hartlief Factory will be included. However, specific focus will be placed on operations posing potential significant risks to the environment. Operational activities are diverse and include office and human resources administration; receipt and storage of various unprocessed carcasses and meat cuts from suppliers for processing; curing, smoking, fermenting, cooking, drying and packaging of various products; operations of boilers, cold rooms/freezers, ammonia plant and consumer fuel installations; dispatching of products to clients; operations of the shop and bistro; site security; cleaning of the premises; and waste handling and disposal.

A risk assessment was undertaken to determine the potential impact of the operational and construction (maintenance, upgrade etc.) phases of the project on the environment. The environment being defined in the Environmental Management Act (Act No 7 of 2007) as “land, water and air; all organic and inorganic matter and living organisms as well as biological diversity; the interacting natural systems that include components referred to in sub-paragraphs, the human environment insofar as it represents archaeological, aesthetic, cultural, historic, economic, paleontological or social values”.

The environmental assessment was conducted to apply for an environmental clearance certificate in compliance with Namibia’s Environmental Management Act.

Project Justification – The Proponent operates a state-of-the art processed meat factory in the Northern Industrial Area of Windhoek. Manufactured products include, among others, smoked, fermented and cooked products while they also stock a range of raw meats such as beef, lamb, pork and game. The factory contributes towards the local economy and contribute towards employment with 348 direct employment opportunities in Namibia as well as an additional 67 employment opportunities in South Africa. Through real value addition in the Namibian meat industry, as well as international exports, the Proponent contributes to a positive trade balance while simultaneously promoting Namibia as a brand through its top quality and very well-known products.

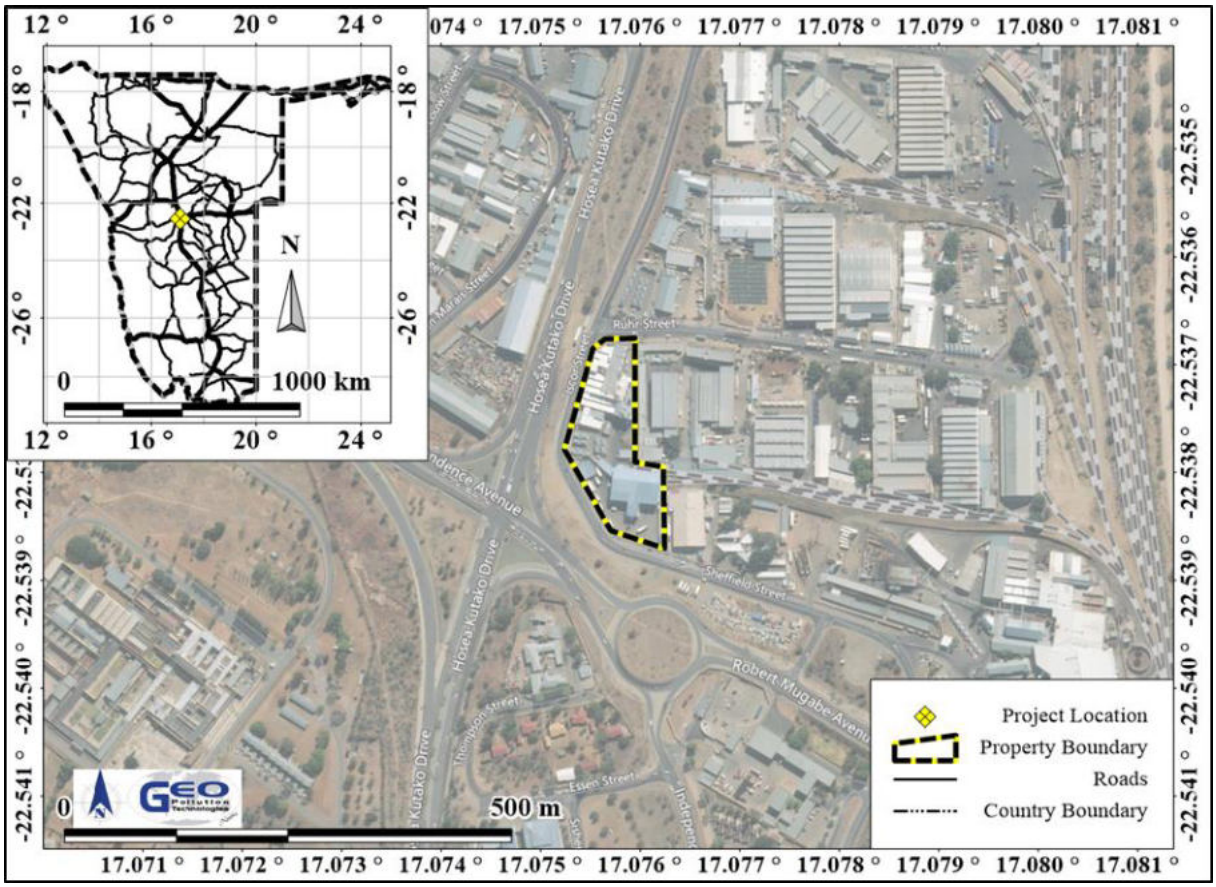

Figure 1-1. Project location

2 SCOPE

The aims and objectives of this report are to:

1. Determine the potential environmental impacts emanating from the operational and construction activities of the facility,
2. Identify a range of controls which could avoid or mitigate the potential adverse impacts to acceptable levels,
3. Provide additional surety to relevant stakeholders that environmental parameters are adequately monitored and managed when applying for operational permits / certificates / licenses,
4. Comply with Namibia's Environmental Management Act (2007),
5. Provide sufficient information to the Ministry of Environment, Forestry and Tourism (MEFT) to make an informed decision regarding all current activities of the facility.

3 METHODOLOGY

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

1. Baseline information about the site and its surroundings was obtained from existing secondary information as well as from a reconnaissance site visit.
2. As part of the scoping process to determine potential environmental impacts, interested and affected parties (IAPs) were consulted about their views, comments and opinions and these are put forward in this report.

4 INFRASTRUCTURE AND RELATED ACTIVITIES

The general layout and location of the Hartlief Factory is presented in Figure 5-1. The following section provides a brief description of the main infrastructure and related operational activities on site.

4.1 MAIN FACTORY

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, 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.

Photo 4-1. Meat and meat products receiving

Photo 4-2. Meat cutting

Photo 4-3. Processed products

Photo 4-4. Processed products

4.2 SHOP AND BISTRO

Hartlief Factory has a shop and bistro where walk-in customers can buy meat as well as the products from the factory. The shop and bistro building has a fully fletched butchery for the processing and packaging of carcasses. It also has a restaurant that prepares meals for customers visiting the bistro or for take-away purposes.

Photo 4-5. Shop and bistro entrance

Photo 4-6. Meat processing for the shop and bistro

Photo 4-7. Kitchen for bistro

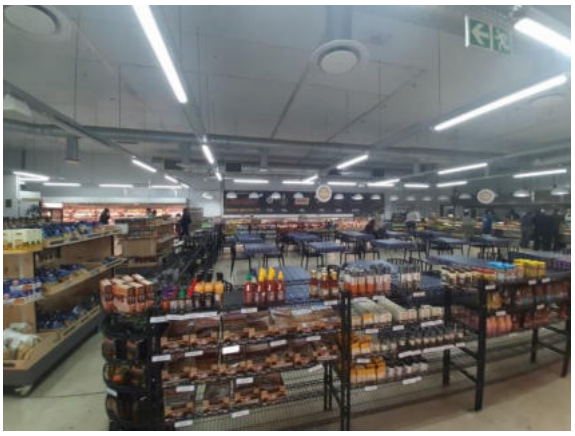

Photo 4-8. Shop

4.3 COLD STORAGE

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 main cooling medium used is ammonia. An onsite compressor and ammonia storage room is present. From this room the ammonia coolant is circulated to the various cold rooms/freezers. A total of 4.059 m^3 of ammonia is stored on site. To supplement the cold rooms/freezers, six mobile reefer containers are also present.

Photo 4-9. Storage

Photo 4-10. Compressor room and ammonia storage

4.4 BACKUP GENERATORS

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 and bistro, 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.

Photo 4-11. Generator room - factory

Photo 4-12. Backup generator

4.5 FUEL STORAGE

An onsite consumer fuel installation for diesel is present. It consist of one 9 m^3 belowground storage tank with one pump. It is filled by tanker trucks when required and is used to potentially supply fleet vehicles with fuel. The Proponent is investigating the removal of the belowground tank and possibly constructing an aboveground consumer fuel installation adhering to SANS standards.

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.

Photo 4-13. Diesel pump

Photo 4-14. HFO tank inside bund area

4.6 BOILER ROOM

A boiler room with two boilers is present. The boilers produce warm water for various processes including cleaning at the factory.

Photo 4-15. Boilers

Photo 4-16. Boiler room

4.7 LABORATORY AND FIRST AID ROOM

An on-site laboratory do regular microbial and chemistry testing (Photo 4-17). 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 (see section 4.8).

A small first aid room is present for the treatment of minor injuries (Photo 4-18). Selected staff are trained in first aid for this purpose.

Photo 4-17. Laboratory

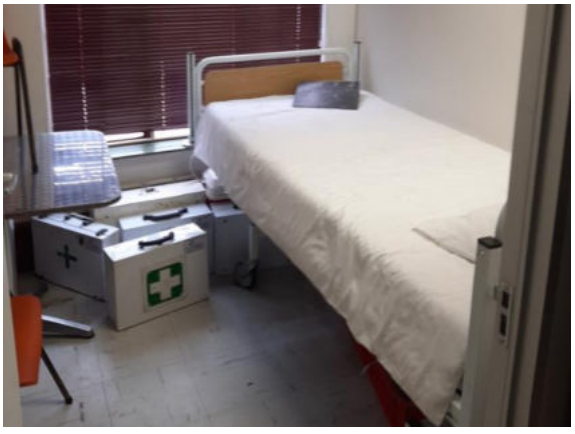

Photo 4-18. First aid room

4.8 GENERAL

All waste from site is regularly removed. 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 in accordance with the Effluent disposal permit as issued by the City of Windhoek (Appendix A). 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.

Photo 4-19. Waste skip

Photo 4-20. Condemned materials cold store

Photo 4-21. Crate washing station

Photo 4-22. Equipment cleaning area

5 ALTERNATIVES TO THE PROJECT

The Hartlief Factory is an existing and long established facility. No location alternative is therefore considered. The Proponent continuously investigate and implement new technologies to maximise operational efficiency and reduce potential negative impacts. The Hartlief brand is a well-known and popular processed meat brand and through their operations employment is offered and revenue generated. As such the no-go alternative should not be considered. It is advised however that waste reduction measures, the use of more environmentally friendly materials (e.g. cleaning chemicals), and energy and water saving devices, equipment and procedures be implemented, to reduce the demand for such resources.

Figure 5-1. Main site components

6 ADMINISTRATIVE, LEGAL AND POLICY REQUIREMENTS

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

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

Law	Key Aspects
The Namibian Constitution	♦ Promote the welfare of people ♦ Incorporates a high level of environmental protection ♦ Incorporates international agreements as part of Namibian law
Environmental Management Act Act No. 7 of 2007, Government Notice No. 232 of 2007	♦ Defines the environment ♦ Promote sustainable management of the environment and the use of natural resources ♦ Provide a process of assessment and control of activities with possible significant effects on the environment.

Law	Key Aspects
Environmental Management Act Regulations Government Notice No. 28-30 of 2012	♦ Commencement of the Environmental Management Act ♦ List activities that requires an environmental clearance certificate ♦ Provide Environmental Impact Assessment Regulations ♦ Lists the "polluter pays principle" as one of the principles of environmental management.
Petroleum Products and Energy Act Act No. 13 of 1990, Government Notice No. 45 of 1990	♦ Regulates petroleum industry ♦ Makes provision for impact assessment ♦ Petroleum Products Regulations (Government Notice No. 155 of 2000) o 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 ♦ Regulates discharges into sewers.
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).
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 (draft document)	♦ Not in force yet ♦ Provides for prevention and control of pollution and waste ♦ Provides for procedures to be followed for licence applications.

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

Municipal By-laws, Guidelines or Regulations	Key Aspects
Groundwater Protection Regulations	♦ Provides for the protection of groundwater, landscape and vegetation sensitivity ♦ Requires an EIA and EMP for 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 of all property and related public sector functions across the city ♦ Provides for the protection of groundwater and the environment.

Table 6-3. Relevant multilateral environmental agreements for Namibia and the development

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.

Table 6-4. Standards or codes of practise

Standard or Code	Key Aspects
South African National Standards (SANS)	♦ The Petroleum Products and Energy Act prescribes SANS standards for the construction, operations and demolition of petroleum facilities ♦ SANS 10089-1:2008 is specifically aimed at storage and distribution of petroleum products in above-ground bulk installations ♦ SANS 10089-3:2010 is specifically aimed at storage and distribution of petroleum products at fuel retail facilities and consumer installations o Provide requirements for spill control infrastructure.

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:

♦ 9.1 "The manufacturing, storage, handling or processing of a hazardous substance defined in the Hazardous Substances Ordinance, 1974." Fuel, ammonia and a limited quantity and volume of chemicals, mostly for cleaning purposes, are stored on site.

- 9.2 “Any process or activity which requires a permit, licence or other form of authorisation, or the modification of or changes to existing facilities for any process or activity which requires an amendment of an existing permit, licence or authorisation or which requires a new permit, licence or authorisation in terms of a law governing the generation or release of emissions, pollution, effluent or waste.” Fuel is stored on site.
- 9.4 “The storage and handling of a dangerous goods, including petrol, diesel, liquid petroleum gas or paraffin, in containers with a combined capacity of more than 30 cubic meters at any one location.” The Proponent has a combined fuel storage (HFO and diesel) capacity of 32 m^3 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.

7 ENVIRONMENTAL CHARACTERISTICS

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

7.1 LOCALITY AND SURROUNDING LAND USE

The Hartlief Factory is located on erf 7039 within the Northern Industrial area of Windhoek (22.5376°S; 17.0757°E). The site is zoned for industrial land use and is surrounded by properties of similar nature (see Figure 7-1 and Figure 7-2). Hartlief is neighboured to the east by Meatco and a property owned by PZN Holdings. To the north is KN Garage & Upholstery. To the west, opposite Hosea Kutako Drive is Marais Motor Spares. The Hartlief Factory and related operations falls under the authority of the City of Windhoek.

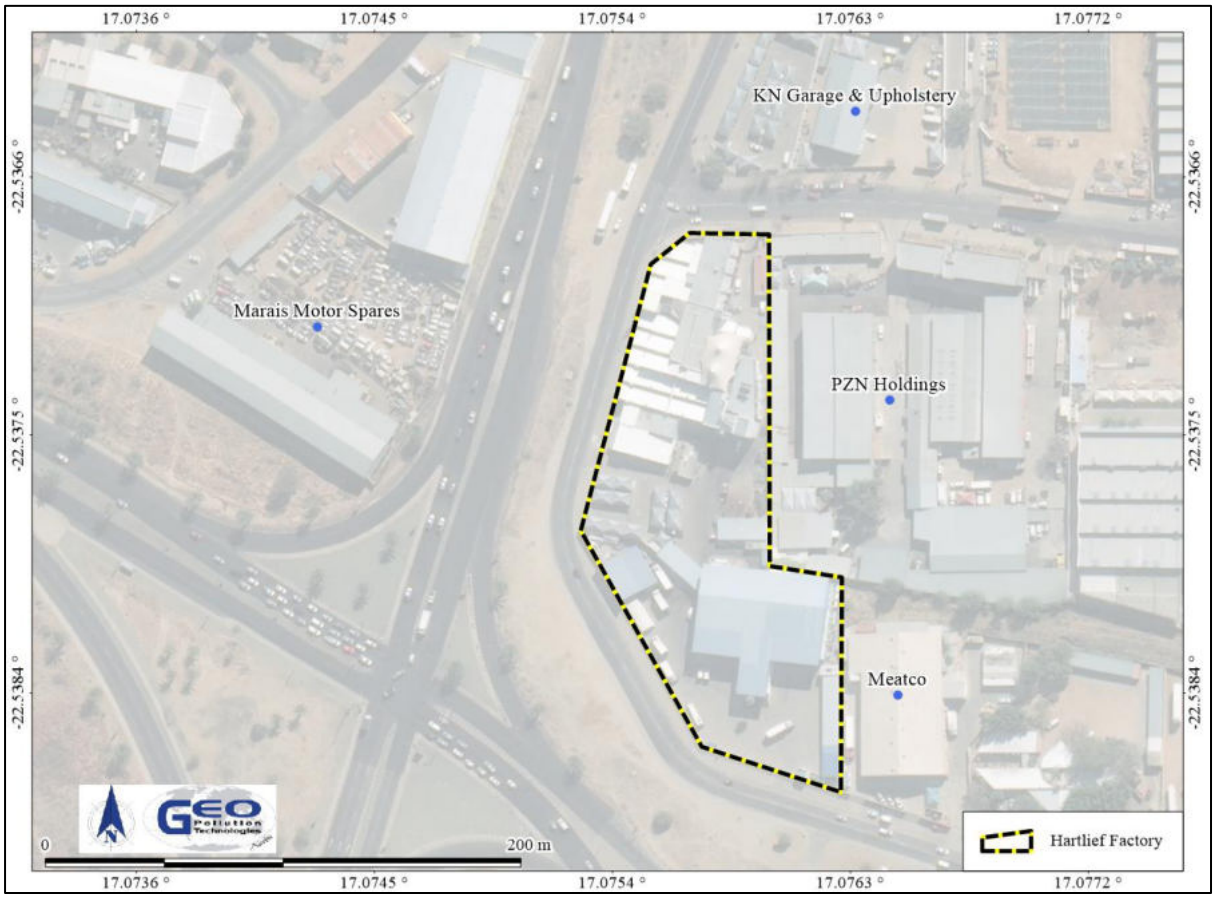

Figure 7-1. Surrounding properties

Photo 7-1. KN Garage

Photo 7-2. Southern PZN Holdings

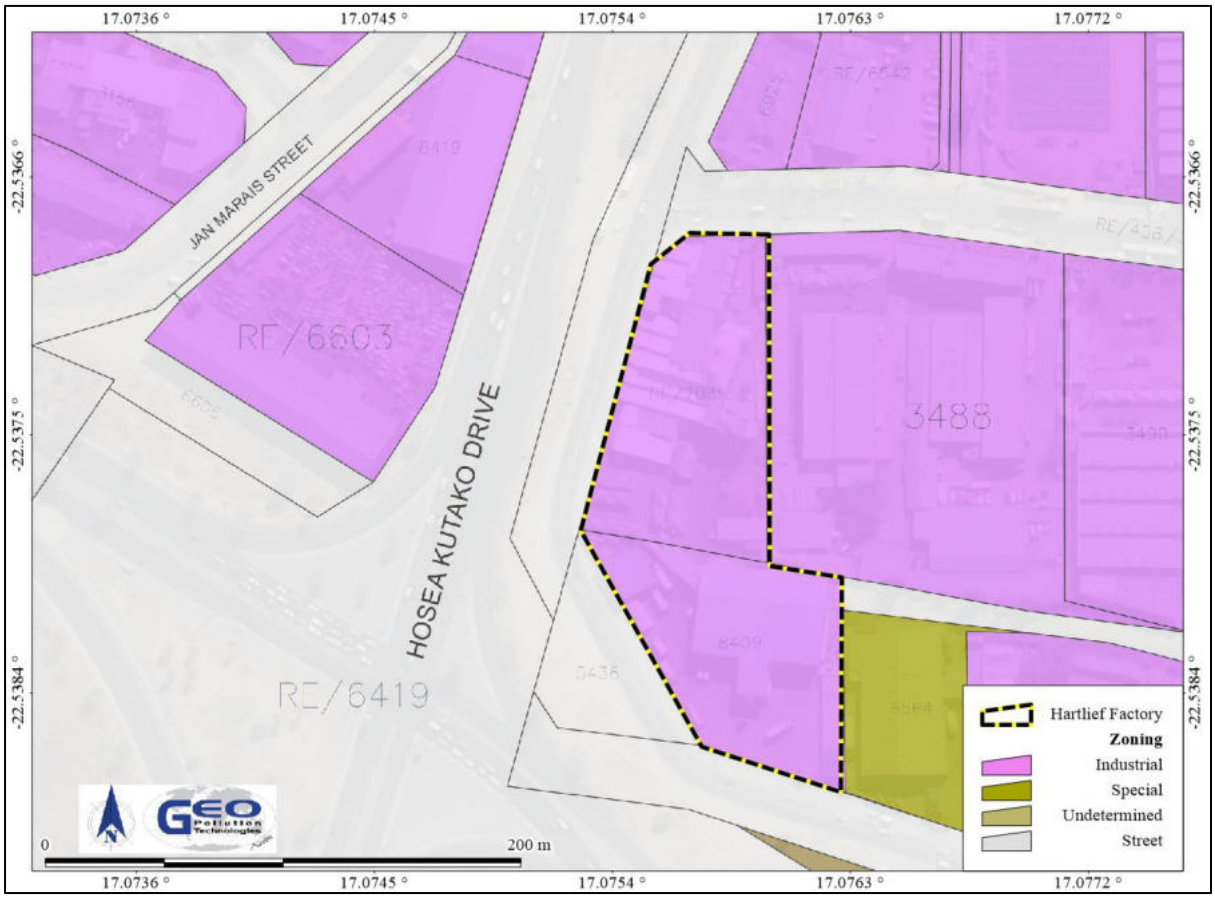

Figure 7-2. Land use

Implications and Impacts

The site is situated in an area zoned for industrial purposes. The operations on the Hartlief premises are in line with the designated zoning of the site. Being a relatively low impact establishment, no significant land use impact is expected on nearby establishments. Boiler and odorous emissions may reduce air quality in the area. Should industrial activities that are incompatible with the Proponent's activities be established nearby, it may have negative impacts on the Proponent's business.

7.2 CLIMATE

The project location is part of a semi-arid highland savannah region. The general lack of functioning weather stations in Namibia limits the availability of long term, true weather data. As a best possible workaround, long term climate data was obtained from Atlas of Namibia Project (2002) and the CHIRPS-2 database (Funk et al., 2015), see Table 7-1, Table 7-2 and Figure 7-3. Atlas of Namibia Project data was compiled from almost 300 rainfall stations across Namibia, the data was contoured in 50 mm intervals prior to 1999 for variable length data sets. The CHIRPS-2 dataset (Climate Hazards Group Infra-Red Precipitation with Station data version 2) consist of long term rainfall data (1981 to near-present) obtained from satellite imagery and, where present, in-situ station data. The resultant dataset provides a reasonably well represented overview of the rainfall conditions of a general area. True values for single, site specific metereological events may however differ to some degree. This is especially true where the dominant rainfall is depended on localized storm cells that causes a high rainfall variability over short distances.

In the project area, days are mostly warm with very hot days during the summer months, while nights are generally cool. The rain season normally starts in October and last until April, peaking in January and February. Heavier rainfall (single day events) occur between October and April, with a single event of 53.3 mm in April (last 40 years data) being the highest.

The average annual rainfall for the last 40 years was calculated as 321 mm/a, with a coefficient of variance of 35% (Table 7-2). This rainfall and coefficient of variance correlates with Atlas of Namibia Project data (Table 7-1). Daily and seasonal rainfall data (Funk et al., 2015) is presented inFigure 7-3. Seasonal (July to June) total rainfall, centred on the average line for the last 40 years, is presented, with the daily total rainfall and the seasonal cumulative rainfall. From the figure it is clear that since 2010 to 2021 only five seasons received above average rainfall, namely 2010-2011, 2011-2012, 2013-2014, 2016-2017 and 202-2021. The rest were all below average with the driest year (last 40 years' data) being 2019 with just over 100 mm recorded (Table 7-2).

Table 7-1. Summary of climate data for Windhoek (Atlas of Namibia Project, 2002)

Average annual rainfall (mm/a)	300 - 350
Variation in annual rainfall (%)	30 – 40
Average annual evaporation (mm/a)	3,000 – 3,200
Water deficit (mm/a)	1,701 – 1,900
Average annual temperatures (°C)	19 - 20

Table 7-2. Rainfall statistics based on CHIRPS-2 data (Funk et al., 2015)

Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Minimum (mm)	12.0	18.5	9.3	7.1	0.0	0.0	0.0	0.0	0.0	0.0	5.3	8.0
Maximum (mm)	264.9	258.7	150.7	133.6	9.0	3.8	0.1	1.3	6.7	39.2	64.4	104.0
Average (mm)	71.4	86.2	57.3	32.7	1.1	0.2	0.0	0.0	1.6	10.4	20.4	32.8
Variability (%)	74.0	61.0	63.0	87.0	212.0	411.0	351.0	466.0	139.0	82.0	69.0	69.0
Daily maximum (mm)	48.6	45.6	43.2	53.3	9.0	3.8	0.1	1.3	5.1	18.1	25.2	24.6
Average rain days	8	9	6	3	0	0	0	0	1	2	4	5
Season July - June average: 321 mm				**Season coefficient of variation: 35 %**								
Data range	1981-Jul-01	to	2021-Jun-30							Lat: 22.5378°S Long: 17.0755°E		

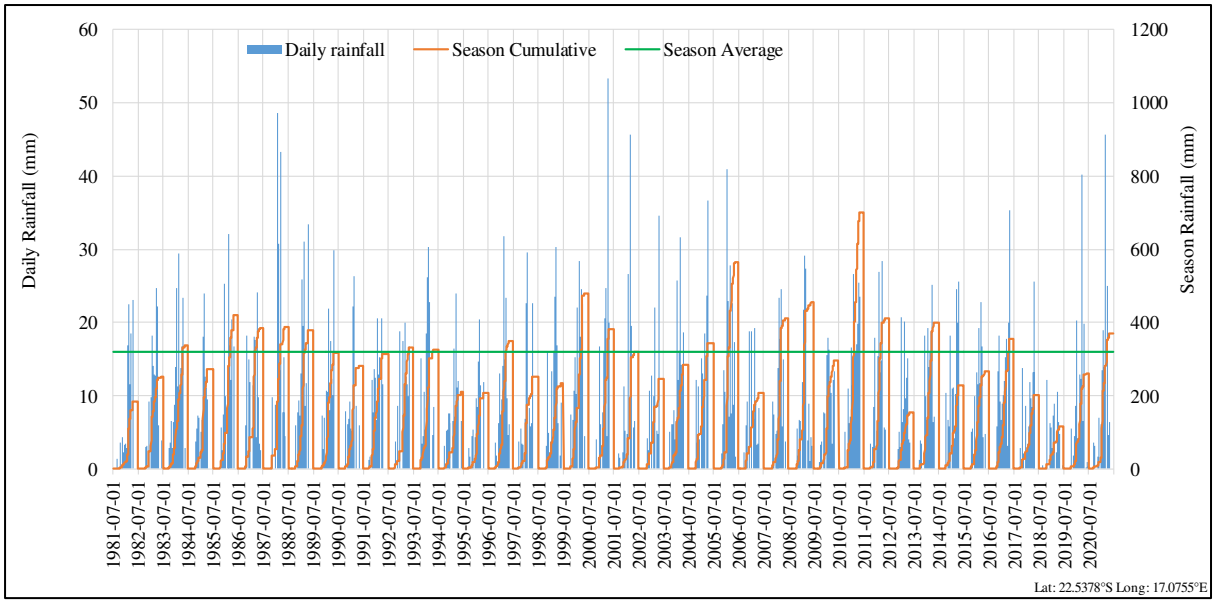

Figure 7-3. Daily and seasonal rainfall from CHIRPS-2 data (Funk et al., 2015)

Implications and Impacts

The Hartlief Factory is not prone to being impacted by normal climatic conditions, but heavy rainfall can wash pollutants, if not cleaned or contained, out of the premises.

7.3 TOPOGRAPHY AND DRAINAGE

The regional topography of the area can be described as a wide graben valley sloping north inside the surrounding hilly terrain. The valley floor is relatively flat compared to the surrounding terrain (Khomas Hochland to the west and Eros Mountains to the east) where moderate to steep slopes are the norm. A very distinct mountain range (Auas Mountains) cuts across the valley south of the city and divides the valley into two parts, with the southern part draining to the south. The topography is strongly related to the historic geological structural activities that took place in the area. These can be summarised as a graben structure striking roughly from north to south and thrusting that is evident along the Auas Mountains.

Regional drainage tend to be in a northern direction. The site is located on the western edge of the catchment of the Klein Windhoek River, a tributary of the Swakop River. The on-site surface drainage is heavily impacted by anthropogenic activities, but is expected to be mainly in an eastern direction from the site (Figure 7-4). The site has a low relief with a slope of < 5°.

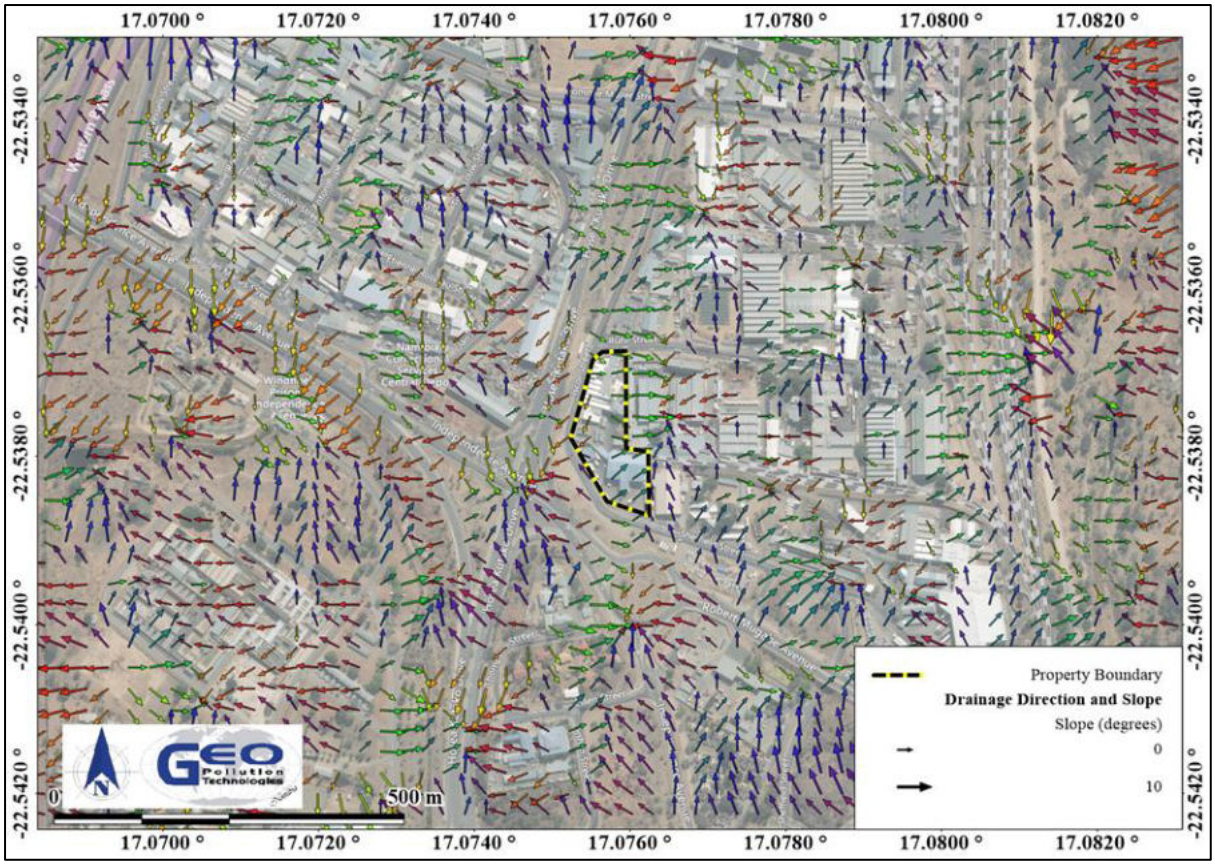

Figure 7-4. Topography and drainage direction of the study area

Implications and Impacts

Any pollutants that are not contained and are transported via surface water flow, will flow out of the site via storm water drainage lines and potentially pollute the natural environment. Cumulative effects may be considered for the Klein Windhoek River and the Swakoppoort Dam.

7.4 GEOLOGY AND HYDROGEOLOGY

Metasedimentary rocks of the Namibian Age constitute the regional geology of the study area, consisting of rocks from the Damara Sequence. The Damara Sequence is locally subdivided into the Swakop Group rocks. The Kuiseb Formation make up the Swakop Group and include amphibolite, schist, micaceous quartzite and quartzite. The project location is situated on an alluvium deposit (sand) and is underlain by the Kuiseb Formation rocks (schist). See Figure 7-5 for the hydrogeological map of the area.

The metamorphic formations of the study area strike in a west-south-westerly direction and dip 15-35° to the north-northwest. The structural geology of the Windhoek area is complex as a result of numerous episodes of folding, faulting, thrusting and rifting. A number of north- to north-westerly striking faults and joints found in Windhoek form the major underground water conduits and therefore determine the conditions of the aquifer. A shallow alluvium basin overlay these formations within the Windhoek Graben Valley. Host rock fracturing along fault planes results in better development of secondary porosity in quartzite compared to schistose terrain, which is prone to plastic deformation rather than brittle fracturing. The quartzite therefore exhibits significantly higher secondary porosity and permeability, compared to the micaceous schist.

The groundwater level in the area is expected to be more than 8 m below surface. Groundwater flow is expected to take place through primary porosity in the surface cover, while it is expected to flow along fractures, faults (secondary porosity) and other geological structures present within the underlying formations (hard rock formations). Groundwater flow from the site can be expected in a northerly direction (Figure 7-7). Local flow patterns may vary due to groundwater

abstraction. Water is utilized in the area, with at least 22 boreholes known of within a 5 km radius. Table 7-3 presents groundwater statistics of boreholes contained in the Department of Groundwater (DWA) database. Note that this database is generally outdated and more boreholes might be present.

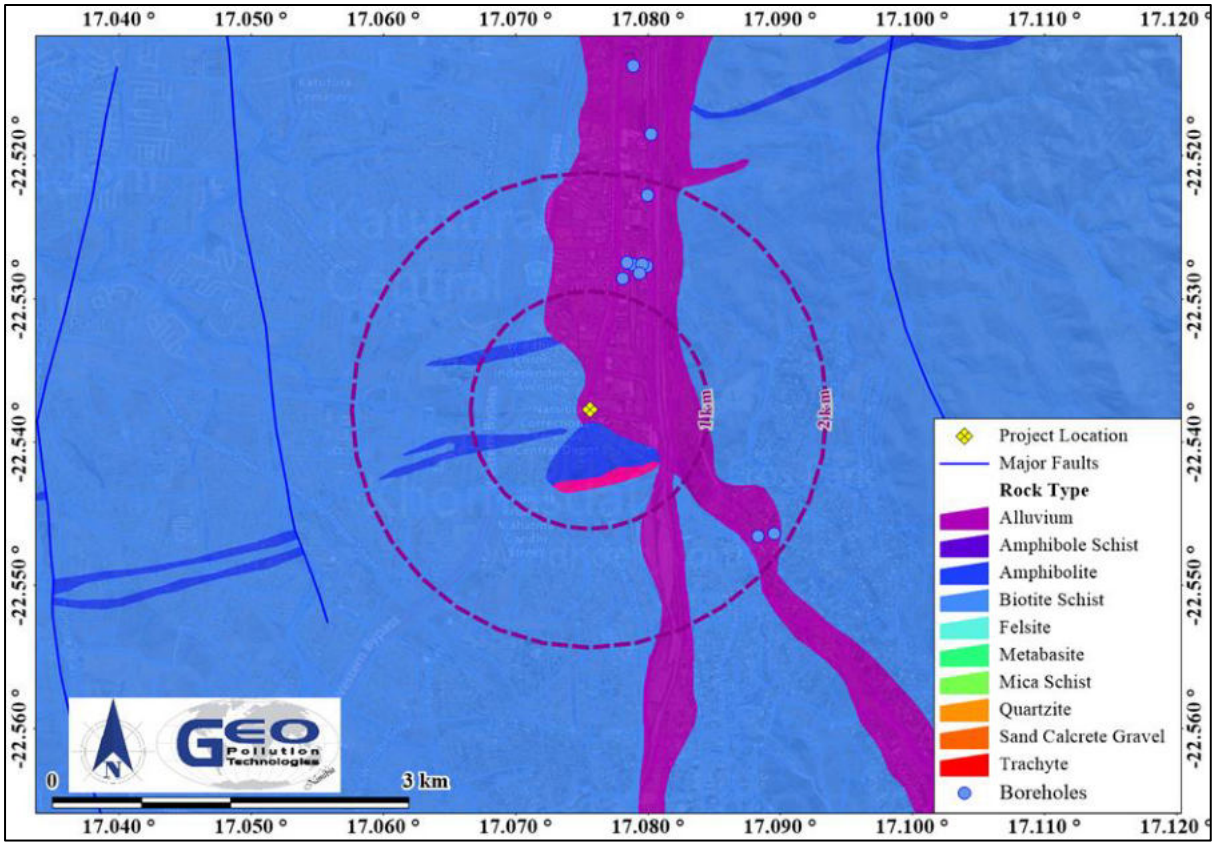

Figure 7-5. Hydrogeology

Table 7-3. Groundwater statistics

Query Centre:	Hartlief; -22.5378°S; 17.0755°E									Query Box Radius: 5.0km	
	NUMBER OF KNOWN BOREHOLES	LATITUDE	LONGITUDE	DEPTH (mbs)	YIELD (m3/h)	WATER LEVEL (mbs)	WATER STRIKE (mbs)	TDS (ppm)	SULPHATE (ppm)	NITRATE (ppm)	FLUORIDE (ppm)
Data points	22			15	15	15	9	17	15	16	16
Minimum		-22.492804	17.026783	38	2	8	18	30	5	0	0
Average				154	36	24	39	731	168	5	1
Maximum		-22.582796	17.124217	524	91	80	64	2567	510	36	4
Group A				13.33%	73.33%	33.33%	0.00%	82.35%	73.33%	81.25%	68.75%
Limit				50	>10	10	10	1000	200	10	1.5
Group B				33.33%	0.00%	60.00%	66.67%	11.76%	26.67%	6.25%	12.50%
Limit				100	>5	50	50	1500	600	20	2.0
Group C				33.33%	26.67%	6.67%	33.33%	0.00%	0.00%	12.50%	0.00%
Limit				200	>0.5	100	100	2000	1200	40	3.0
Group D				20.00%	0.00%	0.00%	0.00%	5.88%	0.00%	0.00%	18.75%
Limit				>200	<0.5	>100	>100	>2000	>1200	>40	>3

Statistical grouping of parameters is for ease of interpretation, except for the grouping used for sulphate, nitrate and fluoride, which follow the Namibian guidelines for the evaluation of drinking-water quality for human consumption, with regard to chemical, physical and bacteriological quality. In this case the groupings has the following meaning:

Group A: Water with an excellent quality; Group B: Water with acceptable quality; Group C: Water with low health risk; Group D: Water with a high health risk, or water unsuitable for human consumption.

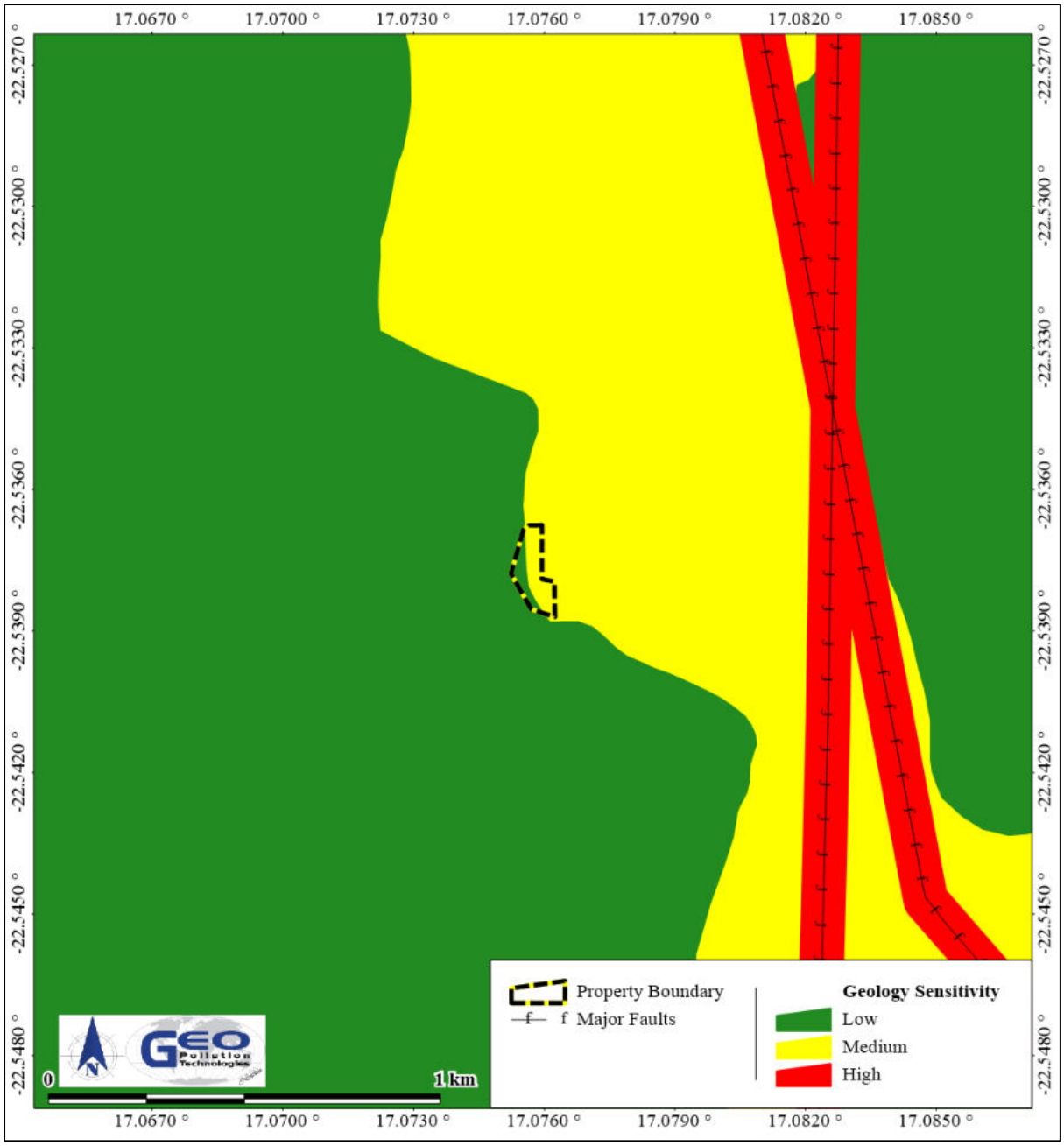

Figure 7-6. Geological sensitivity

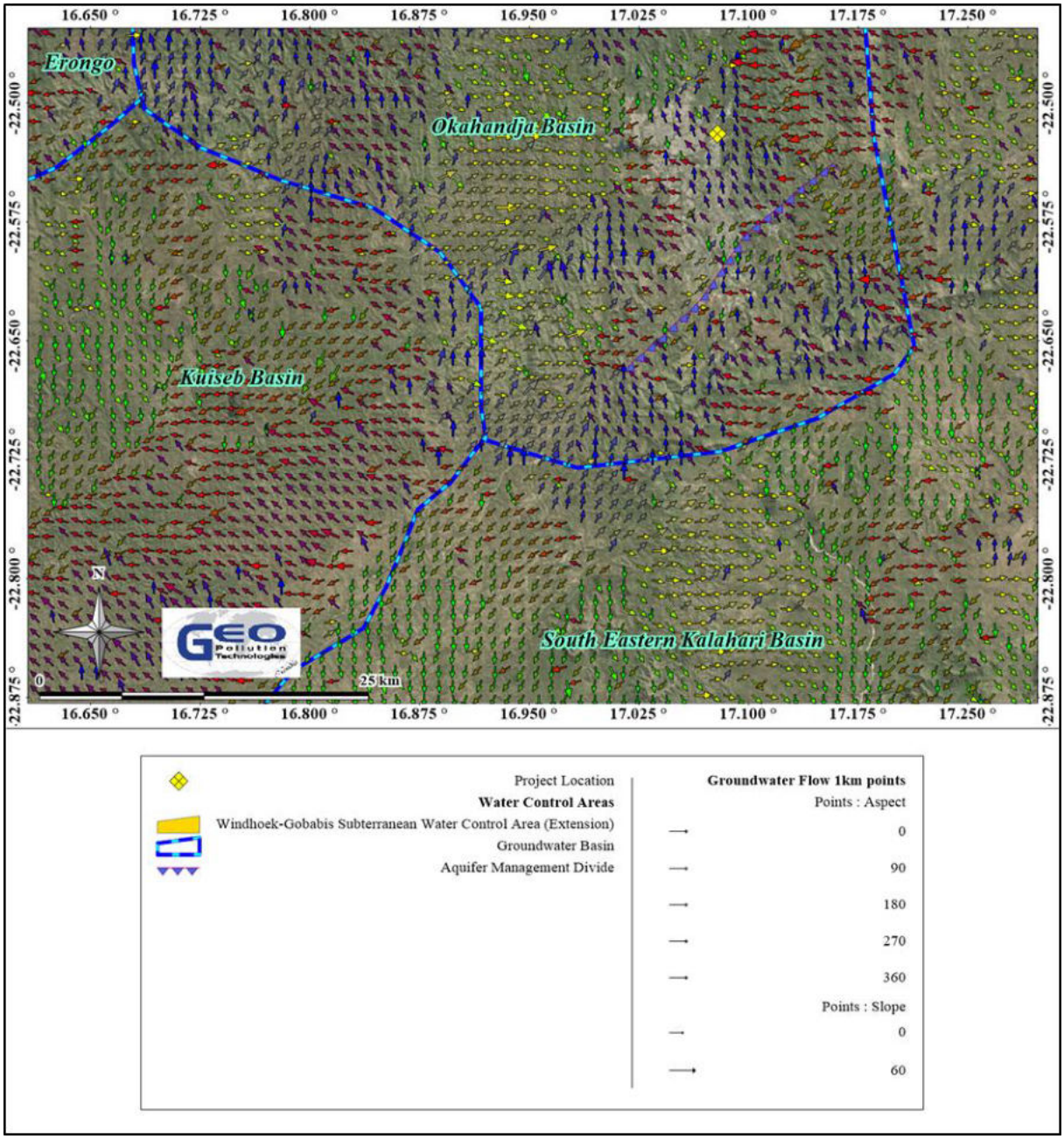

Figure 7-7. Inferred groundwater flow and groundwater basins

Implications and Impacts

A medium risk to groundwater is expected due to the medium geological sensitivity of the area. This is mainly due to the subsurface geology of highly permeable alluvium with less permeable mica schist there under. Chemicals and waste stored on site, have the potential to pollute the groundwater should a major spill occur.

7.5 PUBLIC WATER SUPPLY

Water consumption in Windhoek is well managed by means of water demand management. Nevertheless available water is one of the city's most scarce resources and represents a constraint for sustainable development in future. Consumption will increase with the continued growth in business and industrial activities (economic growth) in Windhoek and the continued influx of people to the city.

Listed in order of resource development, Windhoek receives its water from boreholes in and around town, reclaimed water (New Goreangab Water Reclamation Plant), and a NamWater Scheme that transfers water from the Von Bach Dam, the Swakoppoort Dam, the Omatako Dam and the Grootfontein Karst Area. The city has also started with artificial recharge of the Windhoek aquifer and is planning to extend this scheme through the installation of new recharge boreholes as well as the development of deeper abstraction boreholes, 400 to 500 m deep. This clearly illustrates the value of the aquifer. The boreholes are the second most important water resource of the city and the sustained use of the aquifer needs to be assured.

The project is located within the Swakoppoort Dam catchment which is important in terms of public water supply for the central areas of Namibia. The Swakoppoort Dam forms one of the three dams that supply water to the central areas of Namibia.

Implications and Impacts

Groundwater is a source of potable water and as such public water supply is at risk if a significant hydrocarbon spill occurs on site. The likelihood that the Municipal water supply boreholes are impacted by pollution from this facility is low, but other groundwater users nearby might be at risk.

7.6 FAUNA AND FLORA

The site lies in the Savanna Biome with a thornbush shrubland vegetation type. Trees such as *Acacia hereroensis, Combretum apiculatum, Acacia reficiens, Acacia hebeclada, Ziziphus mucronata, Rhus* species and a variety of other trees are characteristic of this vegetation type. Table 7-4 and Table 7-5 present a summary of the general fauna and flora of the broader area.

The Hartlief Factory site was previously cleared of all vegetation upon establishment of the facility. No significant impacts on the fauna and flora is thus expected from the continued operations of the factory.

Table 7-4. General flora data (Atlas of Namibia Project, 2002)

Biome	Savanna
Vegetation type	Thornbush shrubland
Vegetation structure type	Highland shrubland
Diversity of higher plants	High (Diversity rank = 3 [1 to 7 representing highest to lowest diversity])
Number of plant species	300 - 400
Dwarf shrub height (m)	< 0.5
Percentage grass cover	26-50
Grass height (m)	< 0.5
Dominant plant species	*Acacia hereroensis, Combretum apiculatum, Acacia reficiens, Acacia hebeclada, Ziziphus mucronata, Rhus* species.

Table 7-5. General fauna data (Atlas of Namibia Project, 2002)

Mammal Diversity	61 - 75 Species
Rodent Diversity	20 - 23 Species
Bird Diversity	201 - 230 Species
Reptile Diversity	71 - 80 Species
Snake Diversity	35 - 39 Species
Lizard Diversity	28 - 31 Species
Scorpion Diversity	14 - 15 Species

7.7 DEMOGRAPHIC AND ECONOMIC CHARACTERISTICS

The project area falls within capital city of Namibia, Windhoek, situated within the Khomas Region. Windhoek is the largest and most densely populated town in Namibia and is the main hub of commerce and industry. As a result, a continuous influx of job seekers into Windhoek occur, which in turn increases the size of informal settlements in the area. See Table 7-6 for a summary of the main demographic statistics of Windhoek, the region and nationally. The industrial area has established businesses and industries and plays an important part in the economic sector of Windhoek and Namibia as a whole.

Table 7-6. Demographic characteristics of Windhoek the Khomas Region and Nationally (Namibia Statistics Agency, 2011)

	Windhoek	Khomas Region	Namibia
Population (Males)	159,600*	164,600	1,021,912
Population (Females)	162,800*	167,700	1,091,165
Population (Total)	322,500	332,300	2,113,077
Unemployment (15+ years)	N/A	21.7%	33.8%
Literacy (15+ years)	N/A	95.7%	87.7%
Education at secondary level (15+ years)	N/A	60.4%	51.2%
Households considered poor	N/A	5.8%	19.5%

**Data available from preliminary results only (National Planning Commission, 2012)*

Implications and Impacts

The Proponent sustains employment of people from the area. Some skills development and training also benefit employees during operations of the facility. Incompatible industrial activities in close vicinity to the Proponent's operations may reduce its economic viability.

7.8 CULTURAL, HERITAGE AND ARCHAEOLOGICAL ASPECTS

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

Implications and Impacts

The operations of Hartlief Factory will not impact on any cultural or historically significant areas or buildings.

8 PUBLIC CONSULTATION

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

Public participation notices were advertised twice in two weeks in the national papers The Namibian Sun and Republikein on 10 and 17 January 2022 respectively. A site notice was placed on site and notification letters delivered to neighbours. The City of Windhoek were also notified. See Appendix A for proof of the public participation processes. No written comments or feedback were received.

9 MAJOR IDENTIFIED IMPACTS

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

9.1 HEALTH AND SAFETY IMPACTS

Some health and safety risks are present on site and include moving vehicles and forklifts, exposure to steam or cold temperatures, slipping on wet surfaces, falling objects, injuries while cutting meat on processing lines, etc. Exposure to chemicals can occur in the boiler house, compressor rooms (ammonia leaks) or during cleaning. Ammonia is corrosive and can cause freeze burns.

9.2 FIRE AND EXPLOSION

Diesel and HFO, although not very flammable at ambient temperatures, are stored on site for use in fleet vehicles and boilers. These present a risk of fire. Should an ammonia leak occur in one of the compressor rooms, a mixture of 15% to 28% ammonia in air is explosive if an ignition source exist.

9.3 WASTE PRODUCTION

Waste is produced in the form of biological waste (condemned meat products, laboratory wastes, fat trap contents, etc.) packaging material, waste water, typical office related and domestic waste. Spilled diesel or HFO are hazardous wastes that must be disposed.

9.4 NOISE IMPACTS

Noise impacts are mostly associated with the moving parts of the meat processing equipment such as grinders, saws, packaging equipment, etc. Low frequency droning noise from the compressors of freezers and cold rooms, moving vehicles, and audible warning signals of trucks and forklifts all contribute to noise on site. This is however a typical impact in industrial areas, and is not expected to impact negatively on surrounding properties.

9.5 AIR QUALITY IMPACT

Exhaust gasses from the boiler contributes to air pollution and emission of greenhouse gasses into the environment. Further impacts on air quality are related to odorous compounds emitted during activities such as processed meat production. In the event of an ammonia leak, temporary reduced air quality can occur either in the compressor rooms or immediately outside thereof which may present a health risk to nearby receivers.

9.6 TRAFFIC IMPACTS

Hartlief Factory increase the traffic flow to the site and in Sheffield and Ruhr Streets due to trucks collecting and delivering various products as well as customers visiting the shop and bistro. As specifically Ruhr Street is a street with multiple industrial and commercial operations, traffic is constant. If delivery trucks are parked outside of the facility, it may cause congestion in Ruhr Street.

9.7 GROUNDWATER, SURFACE WATER AND SOIL CONTAMINATION

Groundwater, surface water and soil pollution from chemicals, waste or hydrocarbon products are major issues associated with the storage and handling of such products. All forms of pollution are prohibited in Namibia. Groundwater, surface water and soil contamination may take place when such products are spilled as a result of leaking pipes, incorrect refilling procedures, etc.

9.8 SOCIO-ECONOMIC IMPACTS

Operations of the Hartlief Factory provides direct employment to 348 employees in Namibia and an additional 67 in South Africa. Hartlief thereby significantly contribute to employment and economic development in Windhoek and Namibia. Employees also undergo training and skills development. True value addition and contribution to the Namibian Economy is achieved by processing and packaging locally sourced meat and then transporting the products to both national and international markets.

10 ASSESSMENT AND MANAGEMENT OF IMPACTS

The purpose of this section is to assess and identify the most pertinent environmental impacts that are expected from the operational activities of the Hartlief Factory. An EMP based on these identified impacts are also incorporated into this section. For each impact an Environmental Classification (ES) was determined based on an adapted version of the Rapid Impact Assessment Method (Pastakia, 1998). Impacts are assessed according to the following categories: Importance of condition (A1); Magnitude of Change (A2); Permanence (B1); Reversibility (B2); and Cumulative Nature (B3) (see Table 10-1)

Ranking formulas are then calculated as follow:

Environmental Classification = A1 x A2 x (B1 + B2 + B3)

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

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

Table 10-1. Assessment criteria

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

Table 10-2. Environmental classification (Pastakia 1998)

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

10.1 RISK ASSESSMENT AND ENVIRONMENTAL MANAGEMENT PLAN

The EMP provides management options to ensure possible negative impacts emanating from the activities are minimised. An EMP is a tool used to take pro-active action by addressing potential problems before they occur or to manage an emergency situation once an impact does 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 operations and construction on the premises. This section of the report can act as a stand-alone document. All personnel taking part in the construction operations on the premises 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 facility;
- to monitor and audit the performance of operational personnel in applying such controls; and
- to ensure that appropriate environmental training is provided to responsible operational personnel.

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

As depicted in the tables below, impacts are expected to mostly be of medium to low 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 groundwater contamination and traffic impacts.

10.1.1 Planning

During the phases of planning, construction (care and maintenance), operations and possible decommissioning of the facility, 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 necessary permits from the various ministries, local authorities and any other bodies that governs the construction activities and operations of the facility is obtained and valid.
- As part of the contractor management program, ensure that the relevant sections of the EMP, as applicable to their scope of work, are understood by contractors and sub-contractors.
- Employees to adhere to relevant sections of the EMP, as applicable to their scope of work and general operations.
- Make provisions to have a Health, Safety and Environmental Coordinator or similar to oversee implementation of the EMP and oversee occupational health and safety as well as general environmental related compliance at the site, by both the Hartlief employees and the contractors and their employees.
- Corporate communication processes to be followed in the event of complaints from public entities.
- Have the following emergency plans, equipment and personnel on site where reasonable to deal with all potential emergencies:
    - Risk management / mitigation / EMP/ Emergency Response Plan and HSE Manuals;
    - Adequate protection and indemnity insurance cover for incidents;
    - Comply with the provisions of all relevant safety standards;
    - Procedures, equipment and materials required for emergencies.
- Establish and maintain a fund or insurance for spill clean-up if a spill or pollution occur impacting the environment occur.
- Establish a reporting system to report on aspects of construction activities, operations and decommissioning as outlined in the EMP.
- Keep monitoring reports on file for bi-annual submission to allow for future environmental clearance certificate renewal applications, this is a requirement by the MEFT.
- Update the EIA and EMP and apply for renewal of the environmental clearance certificate prior to expiry.

10.1.2 Skills, Technology and Development

Various components at the facility are highly specialised, state of the art processes and equipment, that require specialised skills for operations. Skills development and training continuously benefit employees. New technologies are continuously invested in. Periodic maintenance, upgrades and repairs benefit local contractors whose employees are also periodically trained.

Project Activity / Resource	Nature (Status)	(A1) Importance	(A2) Magnitude	(B1) Permanence	(B2) Reversibility	(B3) Cumulative	Environmental Classification	Class Value	Probability
Construction	Technological development and transfer of skills	2	1	2	3	1	12	2	Definite
Daily Operations	Technological development and transfer of skills	3	2	2	2	2	36	4	Definite
Indirect Impacts	Enhancement in the efficiency of facilities	3	2	2	2	2	36	4	Definite

Desired outcome: To see an increase in skills of local Namibians, as well as development and technology advancements in the manufacturing industry.

Actions

Enhancement:

- If the skills exist locally, contractors must first be sourced from the town, then the region and then nationally. Deviations from this practice must be justified.
- Employees to be informed about parameters and requirements for references upon employment.

Responsible Body:

- Proponent
- Contractors

Data Sources and Monitoring:

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

10.1.3 Revenue Generation and Employment

The change in land use has led to changes in the way revenue is generated and paid to the national treasury. An increase of skilled and professional labour has and will continue to take place 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 though employment, purchasing of goods and use of services.

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

Desired outcome: Contribution to national treasury and provision of employment to local Namibians.

Actions

Enhancement:

- The Proponent must employ local Namibians where possible.
- If the skills exist locally, employees must first be sourced from the town, then the region and then nationally.
- Deviations from this practice must be justified.
- Local businesses and industries should be supported

Responsible Body:

- Proponent
- Contractors

Data Sources and Monitoring:

- Bi-annual summary report based on employee records.

10.1.4 Demographic Profile and Community Health

The project is reliant on labour with a significant workforce. Impacts related to the demographic profile and community health relate to the influx of people to the city (job-seekers) and the transport industry, and the potential social ills and deviant behaviour that often accompany such events. This includes the spread of communicable diseases such as HIV/AIDS and increased criminal activities. Additional employment opportunities also mean more spending power which can lead to increased misuse of alcohol and drugs. The cumulative impact on the demographic profile, (immigration towards Windhoek) (urbanisation) of people in search of employment. Urbanisation may lead to an increase of informal settlements within which social ills and communicable disease like HIV/AIDS and alcoholism/drug abuse disease may be more prevalent.

Project Activity / Resource	Nature (Status)	(A1) Importance	(A2) Magnitude	(B1) Permanence	(B2) Reversibility	(B3) Cumulative	Environmental Classification	Class Value	Probability
Construction	Social ills related to unemployment and transport	2	-1	1	1	2	-8	-1	Improbable
Daily Operations	Social ills related to unemployment and transport	2	-1	2	2	2	-12	-2	Probable
Indirect Impacts	The spread of disease	2	-1	2	2	2	-12	-2	Improbable

Desired Outcome: To prevent the in-migration and growth in informal settlements, 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

Data Sources and Monitoring:

- Affirmative Action Report
- Factory inspection sheet for all areas which may present environmental health risks, kept on file.

10.1.5 Traffic

Operations of the Hartlief Factory increase the traffic flow to the site due to trucks collecting and delivering various products. An increase in traffic to and from the site may increase congestion and increase the risk of incidents and accidents.

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

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.
- All vehicles owned by the Proponent to operate within the Traffic and Transport Act regulation, specifically also in terms 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:

- If any traffic impacts are expected, traffic management should be performed to prevent these.

Responsible Body:

- Proponent
- Contractors

Data Sources and Monitoring:

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

10.1.6 Health, Safety and Security

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 chemicals, poses the main risks to employees. Security risks are related to unauthorized entry, theft and sabotage.

Project Activity / Resource	Nature (Status)	(A1) Importance	(A2) Magnitude	(B1) Permanence	(B2) Reversibility	(B3) Cumulative	Environmental Classification	Class Value	Probability
Construction	Physical injuries, exposure to chemicals and criminal activities	1	-2	3	3	1	-14	-2	Probable
Daily Operations	Physical injuries, exposure to chemicals and criminal activities	1	-2	3	3	2	-16	-2	Probable

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

Actions

Prevention:

- Implement and maintain an integrated health and safety management system, to act as a monitoring and mitigating tool.
- Comply with all health and safety standards as specified in the Labour Act and related legislation.
- 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.
- 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 10.1.8 Air Quality for ammonia leak detection.

Responsible Body:

- Proponent
- Contractors

Data Sources and Monitoring:

- Any incidents must be recorded with action taken to prevent future occurrences.

- A bi-annual report should be compiled of all incidents reported. The report should contain dates when training were conducted and when safety equipment and structures were inspected and maintained.

10.1.7 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.

Project Activity / Resource	Nature (Status)	(A1) Importance	(A2) Magnitude	(B1) Permanence	(B2) Reversibility	(B3) Cumulative	Environmental Classification	Class Value	Probability
Construction	Uncontrolled fire resulting in property damage, burn wounds or casualties	1	-2	3	3	1	-14	-2	Improbable
Daily Operations	Uncontrolled fire resulting in property damage, burn wounds or casualties	1	-2	3	3	1	-14	-2	Improbable

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

Actions:

Prevention:

- A holistic fire protection and prevention plan is needed. This plan must include an emergency response plan, firefighting plan and spill recovery plan.
- Special note must be taken of the regulations stipulated in sections 47 and 48 of the Petroleum Products and Energy Act, 1990 (Act No. 13 of 1990).
- Maintain firefighting equipment, good housekeeping and personnel training (firefighting, fire prevention and responsible housekeeping practices).
- Ensure all fuel or chemicals are stored according to MSDS instructions.
- Maintain regular site, mechanical and electrical inspections and maintenance.
- Follow SANS standards for operation and maintenance of the consumer fuel installation and HFO tanks.
- Follow MSDS and SANS standard for operation and maintenance of the refrigeration systems containing ammonia.
- The compressors rooms must have emergency response plans specific to ammonia related fire risks if leaks or accidental release of ammonia occur. Refer to MSDS and SANS 10147.

Mitigation:

- Clean all spills / leaks according to MSDS instructions.

Responsible Body:

- Proponent
- Contractors

Data Sources and Monitoring:

- A register of all incidents must be maintained on a daily basis. This should include measures taken to ensure that such incidents do not repeat themselves.
- A bi-annual report should be compiled of all incidents reported. The report should contain dates when fire drills were conducted and when fire equipment was tested and training given.

10.1.8 Air Quality

The boiler is the principal emitters and of key concern are the "exhaust" gases: nitrous oxides, sulphurous 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 will deteriorate air quality in (and around) the compressor room if not well ventilated.

Project Activity / Resource	Nature (Status)	(A1) Importance	(A2) Magnitude	(B1) Permanence	(B2) Reversibility	(B3) Cumulative	Environmental Classification	Class Value	Probability
Construction	Excessive dust generated from maintenance and upgrade activities	1	-1	2	2	2	-6	-1	Probable
Daily Operations	Emission of gasses and odorous compounds	2	-1	2	2	2	-12	-2	Definite

Desired Outcome: To prevent health impacts and minimise the dust generated.

Actions

Prevention:

- Regular maintenance and cleaning of all equipment.

Mitigation:

- Compressor rooms must have extractors in case ventilation / air flow is insufficient and a leak or accidental ammonia release occurs.
- Ammonia has a strong smell and leaks are typically quickly detected by smell only. However, leak detectors should be considered since personnel will not always be present in the compressor rooms.
- Quality checks should be conducted on the HFO used in boiler operations. Good quality HFO will reduce emissions.
- Scrubbers or ceramic filters should be considered to minimise emissions from boilers.

Responsible Body:

- Proponent
- Contractors

Data Sources and Monitoring:

- A complaints register should be kept for any air quality related issues and mitigation steps taken to address complaints where necessary.
- All information and reporting to be included in bi-annual reports.

10.1.9 Noise

The site is situated in an industrial area and no limitations on the operating hours exist. Noise pollution will exist due to heavy vehicles accessing the site for delivery and collection of products, the use of forklifts (audible warning signs), processing machinery, and compressors of freezers and cold rooms. Construction may generate excessive noise.

Project Activity / Resource	Nature (Status)	(A1) Importance	(A2) Magnitude	(B1) Permanence	(B2) Reversibility	(B3) Cumulative	Environmental Classification	Class Value	Probability
Construction	Excessive noise generated from construction activities – nuisance and hearing loss	1	-2	2	2	2	-12	-2	Probable
Daily Operations	Noise generated from the operational activities – nuisance	1	-2	2	2	2	-12	-2	Definite

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

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. Noise should be limited to 70 decibels (limit for industrial properties).
- 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:

- Hearing protectors as standard PPE for workers in situations with elevated noise levels.

Responsible Body:

- Proponent
- Contractors

Data Sources and Monitoring:

- WHO Guidelines.
- Maintain a complaints register.
- Bi-annual report on complaints and actions taken to address complaints and prevent future occurrences.

10.1.10 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 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.

Project Activity / Resource	Nature (Status)	(A1) Importance	(A2) Magnitude	(B1) Permanence	(B2) Reversibility	(B3) Cumulative	Environmental Classification	Class Value	Probability
Construction	Excessive waste production, littering, illegal dumping, contaminated materials	1	-2	2	2	1	-10	-2	Definite
Daily Operations	Excessive waste production, littering, contaminated materials	2	-2	2	2	1	-20	-3	Definite

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

Actions

Prevention:

- Waste reduction measures must continue to be implemented and all waste that can be re-used / recycled must be kept separate.
- 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.)
- See the MSDS 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.

Responsible Body:

- Proponent
- Contractors

Data Sources and Monitoring:

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

10.1.11 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.

Project Activity / Resource	Nature (Status)	(A1) Importance	(A2) Magnitude	(B1) Permanence	(B2) Reversibility	(B3) Cumulative	Environmental Classification	Class Value	Probability
Construction	Impact on fauna and flora. Loss of biodiversity	1	-1	3	2	2	-7	-1	Improbable
Daily Operations	Impact on fauna and flora. Loss of biodiversity	2	-1	2	2	1	-10	-2	Improbable

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

Actions.

Mitigation:

- Report any extraordinary animal sightings to the Ministry of Environment, Forestry and Tourism (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

Data Sources and Monitoring:

- All information and reporting to be included in a bi-annual report.

10.1.12 Groundwater, Surface Water and Soil Contamination

Operations entail the storage and handling of HFO, diesel and ammonia 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.

Project Activity / Resource	Nature (Status)	(A1) Importance	(A2) Magnitude	(B1) Permanence	(B2) Reversibility	(B3) Cumulative	Environmental Classification	Class Value	Probability
Construction	Contamination from hazardous material spillages and hydrocarbon leakages	2	-1	2	2	1	-10	-2	Probable
Daily Operations	Contamination from hazardous material spillages and hydrocarbon leakages	2	-2	2	2	2	-24	-3	Probable

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

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, 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 include properly sealed spill slabs and spill catchment pits at the consumer fuel installation.
- Ammonia rich water which may be created if an ammonia leak is present in the compressor rooms, and water is sprayed to absorb ammonia vapours, must be contained.
- The procedures followed to prevent environmental damage during operations and 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:

- Any fuel spillage of more than 200 litre must be reported to the Ministry of Mines and Energy, Directorate of Petroleum Affairs.
- Regular tank dips and fuel volume reconciliations will assist in timely detection of potential leaks from the underground tank.
- 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

Data Sources and Monitoring:

- Regular inspections and remedial action taken if required.
- Regular effluent streams monitoring as per effluent disposal permit conditions, to ensure that any abnormal increases in organic matter or other chemicals are detected swiftly and remediation measures can be implemented.
- A report should be compiled bi-annually of all spills or leakages reported and monitoring results. The report should contain the following information: date and duration of spill, product spilled, volume of spill, remedial action taken, comparison of pre-exposure baseline data (previous pollution conditions survey results) with post remediation data (e.g. soil/groundwater hydrocarbon concentrations) and a copy of documentation in which any fuel spill was reported to Ministry of Mines and Energy.

10.1.13 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.

Project Activity / Resource	Nature (Status)	(A1) Importance	(A2) Magnitude	(B1) Permanence	(B2) Reversibility	(B3) Cumulative	Environmental Classification	Class Value	Probability
Construction	Aesthetic appearance and integrity of the site	1	-1	2	2	2	-6	-1	Probable
Daily Operations	Contribution to the landscape character, enhanced aesthetic appearance	2	-1	2	2	2	-12	-2	Probable

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

Actions

Mitigation:

- Regular waste disposal, good housekeeping and routine maintenance on infrastructure will ensure that the longevity of structures are maximised and a low visual impact is maintained.

Responsible Body:

- Proponent
- Contractors

Data Sources and Monitoring:

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

10.1.14 Impacts on Utilities and Infrastructure

Any damage caused to existing infrastructure and services supply like sewers, water or electricity where present. Additional demand for electricity and potable water and increased effluent discharges into sewers may add strain on the available services supply of the area.

Project Activity / Resource	Nature (Status)	(A1) Importance	(A2) Magnitude	(B1) Permanence	(B2) Reversibility	(B3) Cumulative	Environmental Classification	Class Value	Probability
Construction Phase	Disruption of services.	2	3	2	2	1	-30	-3	Improbable
Daily Operations	Increased services demand	2	-1	2	2	2	-12	-2	Probable

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). Liaison with the Municipality and suppliers of services is essential.
- 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.

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

Data Sources and Monitoring:

- Utility drawings (municipal)
- Supply and demand statistics for water and electricity.
- A bi-annual report should be compiled of all incidents of water and electricity disruptions reported or incidents of damage to utilities and infrastructure. This should include measures taken to deal with the situation and ensure that such incidents do not repeat themselves.

10.1.15 Cumulative Impact

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

Project Activity / Resource	Nature (Status)	(A1) Importance	(A2) Magnitude	(B1) Permanence	(B2) Reversibility	(B3) Cumulative	Environmental Classification	Class Value	Probability
Construction Phase	The build-up of minor impacts to become more significant	2	-1	2	2	2	-12	-2	Probable
Daily Operations	The build-up of minor impacts to become more significant	2	-2	2	2	2	-24	-3	Probable

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 other cumulative impacts and help in planning if the existing mitigations are insufficient.

Responsible Body:

- Proponent

Data Sources and Monitoring:

- Reviewing bi-annual summary reports of all other impacts to gain understanding of the overall impact of the operational phase.

10.2 DECOMMISSIONING AND REHABILITATION

Decommissioning is not foreseen during the three year validity period of the environmental clearance certificate. Should decommissioning occur at any stage, rehabilitation of the area may be required. Decommissioning will entail the complete removal of all infrastructure including buildings and underground infrastructure. 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 City of Windhoek's prescribed limits and waste should be contained and disposed of at an appropriately classified and approved waste facility and not dumped in the surrounding areas. Future land use after decommissioning should be assessed prior to decommissioning and rehabilitation initiated if the land and infrastructure would not be used for future purposes. The EMP for the facility will have to be reviewed at the time of decommissioning to cater for changes made to the site and implement guidelines and mitigation measures.

10.3 ENVIRONMENTAL MANAGEMENT SYSTEM

The Proponent implements numerous policies and standards to ensure protection of health, safety environment and quality. These include a group environmental management system, various management standards, Hazard Analysis and Critical Control Points (HACCP) 10330 and the International Organization for Standardization (ISO) 22000 Food Safety Management System. The Proponent could consider implementing an environmental management system (EMS). 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 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; and
- Periodic (internal and external) audits and reviews of environmental performance and the effectiveness of the EMS.
- The Environmental Management Plan

11 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.

During the environmental scoping assessment, potential environmental impacts resulting from the activities of the Hartlief Factory were identified. Negative impacts can however successfully be prevented or mitigated while positive impacts can be maximised. 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 should remain up to date and strictly adhered to.

The EMP should be used as an on-site reference document for all the operational activities. Parties responsible for transgression of the EMP should be held responsible for any rehabilitation that may need to be undertaken. Hartlief should use their in-house and international policies and standards to ensure protection of health, safety environment and quality. These include a group environmental management system, various management standards, Hazard Analysis and Critical Control Points (HACCP) 10330 and the International Organization for Standardization (ISO) 22000 Food Safety Management System. in conjunction with the EMP. It is imperative that all construction and operational personnel are taught the contents of these documents to ensure better environmental practises all round.

Based on the information supplied in this EIA, and if all preventative, mitigation and monitoring methods are strictly adhered to, activities of the Proponent should be able to continue while environmental impacts are either completely prevented or mitigated to acceptable levels.

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

Table 11-1. Impact summary class values

Impact Category	Impact Type	Construction	Operations
	Positive Rating Scale: Maximum Value	5	5
	Negative Rating Scale: Maximum Value	-5	-5
EO	Skills, Technology and Development	2	4
EO	Revenue Generation and Employment	2	3
SC/EO	Demographic Profile and Community Health	-1	-2
EO	Traffic	-1	-1
SC/EO	Health, Safety and Security	-2	-2
EO	Fire	-2	-2
PC	Air Quality	-1	-2
PC	Noise	-2	-2
PC/BE	Waste production	-2	-3
PC/BE	Ecosystem and Biodiversity Impact	-1	-2
PC	Groundwater, Surface Water and Soil Contamination	-2	-3
SC	Visual Impact	-1	-2
EO	Impacts on Utilities and Infrastructure	-3	-2

BE = Biological/Ecological EO = Economical/Operational PC = Physical/Chemical SC = Sociological/Cultural

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Appendix A: Effluent Disposal Permit

Effluent Discharge Permit (First Page Only)

Department of Economic Development and Community Services

Health and Environment Services Division

✉ 59
80 Independence Avenue
WINDHOEK, NAMIBIA

Fax: (+264) 61 290 2111 Tel. (+264) 61 290 2911

June 2021

WASTEWATER DISCHARGE PERMIT

COMPANY NAME:	**Hartlief Factory**
NATURE OF INDUSTRY:	Meat Processing Factory
PHYSICAL ADDRESS:	1 Ruhr Street, Northern Industrial Area
REPRESENTATIVE:	Nazeem Madjiet/Otniel Pohamba
CONTACT NUMBER:	**0814815068/0811555304**
ASSESSOR:	LA !Gaoses

Hartlief Factory is hereby authorized to discharge industrial wastewater to the Municipal Council of Windhoek's (Council) sewer system in compliance with the Municipality of Windhoek's Sewerage and Drainage Regulation of 2010, Section 42, and in accordance with industrial effluent limits, monitoring requirements, and other conditions set forth herein.

This permit is granted in accordance with the application filed on **31 May 2021** with the Health & Environmental Services Division (HESD), of the Department of Economic Development and Community Services (EDCS) and in conformity with plans, specifications, and other data submitted to Council in support of the above application.

Effective Date: 1 July 2021 **Expiration Date: 30 June 2022**

PART I: Limitation regarding Activities/Production/Manufacturing

Manufacturing shall be limited to: **Meat Processing,** which is the main business where effluent is generated.
Other by products generated on site: **blood meal, bone meal, beef offal**

Waste generated:
Blood Waste
Fat removed at effluent plant
Meat offcuts
All above waste is disposed of at Kupferberg Landfill
Cartons and plastic – collected by Rent-A-Drum
Treated Effluent – discharged to Ujams Wastewater treatment

29.7.21

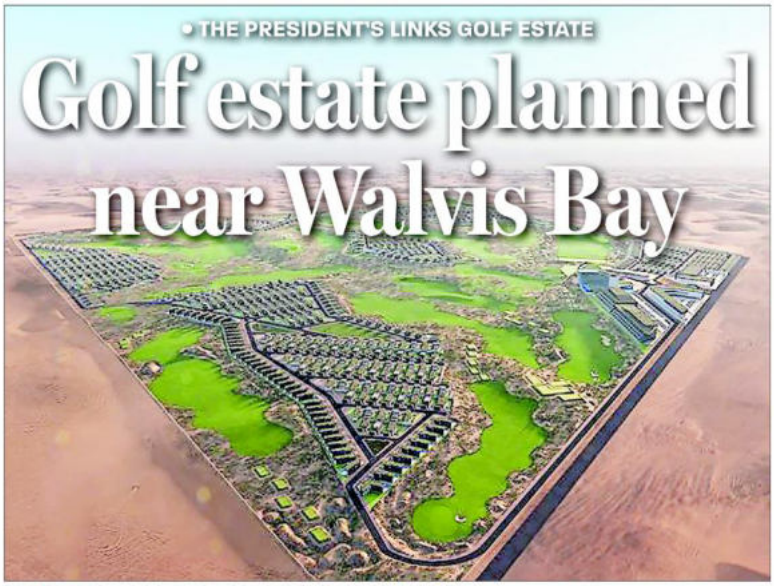
All official correspondence must be addressed to the Chief Executive Officer

Appendix B: Proof of Public Consultation

Advertisements
10 January 2022 – Sun

THE PRESIDENT'S LINKS GOLF ESTATE

Golf estate planned near Walvis Bay



GREEN DESERT: An artist's impression of the planned golf estate. PHOTO: CONTRIBUTED

The planning includes a golf course between the dunes, a retirement village, a sports education centre, restaurants, a gym and a cinema.

KRISTIEN KRUGER
WINDHOEK

Planning for a luxury, 148-hectare golf estate near Walvis Bay is already in an advanced stage and project implementation is scheduled to start this year.

The President's Links Estate will apparently be built next to the Dorob National Park, near Walvis Bay, and will include about 745 luxury residential units.

The golf course will be built among Namibia's distinctive dunes, according to the website. The specific location was chosen by world-renowned golf course designer Peter Matkovich and his partner, renowned golfer and winner of the Open Championship, Louis Oosthuizen.

"We hope that the course and surroundings will attract the Sunshine golf tour back to Namibia and may even attract a European tour event," reads the information on their website.

It will apparently be one of only three other courses in the world located between dunes.

The size of residential units in the estate will range from 184 to 390 square metres and prices range from N$3.9 million to N$8.5 million.

The developers plan to build pet-friendly parks, a sports education centre, restaurants, coffee shops, a clubhouse, gym, bowling alley, swimming pool, tennis courts, running and cycling lanes and a cinema.

RETIREMENT RESORT

Retirement units will also be built in the estate. The 115 m² retirement units will be located on a property of your choice.

The property will have two bedrooms with en-suite bathrooms, a spacious living area and kitchen / scullery, and a single garage, garden and fireplace.

Prices start at N$2.4 million, reads the website. Two larger units are also available that have a double garage and some even have a view of the golf course.]

ECO-FRIENDLY, BUT MODERN

According to the website, the President's Links fully complies with the International Finance Corporation's Edge (Excellence in Design for Greater Efficiencies) certification system."

Edge certification gives owners the assurance that their homes are built to be resource efficient by focusing on energy and water saving initiatives, as well as ensuring the maximum use of raw materials in their most natural state," said the director, Andrew van Schalkwyk.

The President's Links will apparently use electrocoagulation technology to convert effluent water (from the Walvis Bay Municipality) into an odourless source of irrigation water for irrigation of the golf course."

The municipality has granted three million litres of water per day to the estate, which is currently not suitable for human consumption and cannot be purified into potable water.

All water that is not used on the estate will then be sent back to the municipality for use in the surrounding community," said Van Schalkwyk. Investing in this eco-friendly, sustainable, yet modern and sophisticated estate includes a free golf club membership."

Anyone who invests in President's Links will automatically contribute to The Living Desert Fund where 5-7% of every home sold goes into this sustainability fund, which will enable community development initiatives as well as the maintenance of the golf course and clubhouse," Van Schalkwyk said.

kristien@republikein.com.na

Flood warning for Orange River

ELLANIE SMIT
WINDHOEK

A flood warning has been issued by South Africa for all downstream users on the lower Orange River, also in Namibia.

According to the spokesperson of the agriculture ministry, Jona Musheko, with the storage dams in South Africa that have already reached full capacity there will not be much room to absorb more inflow.

"Hence we should expect more spills and releases from upstream."

He said this situation currently requires close monitoring and alertness from both authorities in South Africa and Namibia, for imminent flooding impact to the downstream users on the lower Orange River usually affected by these types of floods.

Road washed out

The Roads Authority (RA) of Namibia on Thursday announced that the Rosh Pinah/ Aussenkehr Road will be temporarily closed until further notice due to flooding.

"This road is currently experiencing flooding, caused by high water levels in the Orange River due to heavy rain in South Africa," it said.

The RA requested the public to make use of the Keetmanshoop/Aus//Rosh Pinah route until the water levels have subsided and the road is safe for motorists. According to a flood report from South Africa, the flow in the lower Orange River at Sendelingsdrif was 1 729 cubic metres per second and rising on Thursday. It further indicated that the Vaal Dam was at 108.6% of its capacity on Thursday, the Bloemhof Dam was at 106.6%, the Gariep Dam was at 107.3 % and the Vanderkloof Dam at 108%.

"The water levels along the entire Orange River downstream of Vanderkloof Dam remain medium high but have peaked and are currently decreasing at Katlani, Prieska, Upington, Neusberg and Blouputs, but are still rising further downstream at Sendelingsdrif," it said.

WARNING: Downstream users on the lower Orange River have been warned of possible flooding. PHOTO: CONTRIBUTED

ellanie@namibiansun.com

PUBLIC PARTICIPATION NOTICE
ENVIRONMENTAL ASSESSMENT AND ENVIRONMENTAL MANAGEMENT PLAN FOR THE OPERATIONS OF HARTLIEF FACTORY IN WINDHOEK

Geo Pollution Technologies (Pty) Ltd was appointed by **Hartlief Continental Meat Products (Pty) Ltd** to undertake an environmental assessment for their processed meat factory in the Northern Industrial Area of Windhoek. Hartlief is one of the leading brands of processed meats in Namibia, also exporting internationally. Their primary activities revolve around the processing, curing, smoking, fermenting, cooking, drying and packaging of various meat products. The environmental assessment will be according to the Environmental Management Act of 2007 and its regulations as published in 2012. More information regarding the project and assessment is available at:

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

All interested and affected parties (IAPs) are invited to register with the environmental consultant. By registering you are provided with the opportunity to share any comments, issues or concerns related to the project, for consideration in the environmental assessment. Please register with, and provide comments to, Geo Pollution Technologies by 24 January 2022.

André Faul
Tel: +264-61-257411
Fax: +264-88626368
E-Mail: hartlief@thenamib.com

SELL YOUR LIVESTOCK, DROUGHT-HIT FARMERS TOLD

TUYEIMO HAIDULA
OSHAKATI

Northern communal farmers have been urged not to hold on to their livestock, in case of another drought year.

The farmers have been advised to work hard to make a plan in case the country does not receive good rains.

This was said by the regional councillor for the Okatyali Constituency in Oshana region, Joseph Mupetami, who said the drought of the past few years led to poor harvests and large livestock losses.

This resulted in massive food insecurity which drove many households to depend on government drought relief.

On top of the drought, communal farmers also suffered livestock losses due to foot-and-mouth disease (FMD), which broke out in several regions last year.

Dry spell

Mupetami said they are worried because the weather does not look promising.

"We are worried that animals are walking long distances in the absence of rain and the extreme heat being experienced lately," he said.

Mupetami said they had not received any reports of animal deaths yet.

In early December last year, the northern regions received some good rains. But this was followed by a dry spell, which led to many floodplains (oshanas) and lakes drying up.

Mupetami advised fellow farmers that they should plan ahead, in case the drought returns.

The Namibia Meteorological Service has indicated that northern areas such as Omuthiya and Eenhana, as well as the Kavango, Zambezi and Otjozondjupa regions, can expect heavy rain this week.

SELL SOME: Northern communal farmers have been advised to destock because of the absence of rain and high temperatures. PHOTO: CONTRIBUTED (USED FOR ILLUSTRATION PURPOSES)

Mupetami furthermore told the farmers that Namibia, especially the far-northern regions, can no longer sustain large herds and they should reduce their herds by selling old animals to buy young stock and farm intensively.

tuyeimo@namibiansun.com

17 January 2022 – Sun

• CASES PEAKED ON 19 DECEMBER 2021

Covid: Deaths increased rapidly during fourth wave

UPDATE: President Hage Geingob.
PHOTO: NAMIBIAN PRESIDENCY

An analysis of Covid-19 statistics indicate that 81% of new infections, **97% of admissions to hospitals, 94% of ICU admissions and 91% of deaths are of unvaccinated individuals.**

ELLANIE SMIT
WINDHOEK

More than 3 700 Namibians have already died from Covid-19, with the number of deaths increasing exponentially during the fourth wave, latest statistics provided by the health ministry indicate.

At the latest Covid-19 briefing last week, health minister Dr Kalumbi Shangula said the fourth wave of Covid-19, driven by the Omicron variant, started on 29 November 2021 in Namibia, and cases peaked on 19 December 2021.

Cases have since started to decline from 26 December 2021, with an average of 450 per day.

"From 16 December 2021 to 11 January, a period of 27 days covering the current dispensations, a total of 68 975 samples were tested, of which 18 586 new cases were confirmed - giving a positive ratio of 27% compared to 11% positivity ratio during the preceding period."

He said these figures indicate that the number of tests conducted increased by 37.2% and number of new cases increased by 69.8%, while the positivity ratio increased by 59.3%.

"Correspondingly, the number of deaths increased exponentially from 13 deaths reported during the preceding 27 days to 181 deaths reported during the period of 27 days during this dispensation, an increment of 92.8%."

The number of inpatients increased to an average of 362 per day as compared to 198 during the preceding 27 days, Shangula said.

As of last Tuesday, Namibia had recorded a total of 153 290 new confirmed Covid-19 cases, out of the 893 635 samples tested.

This translates into an additional 19 846 new confirmed cases since the last briefing on 14 December 2021.

Reinfections a concern

Shangula expressed concern with the increasing number of people who were getting reinfected with the virus.

According to him, a total of 1 876 reinfections have been recorded since 8 December last year.

He further said 140 973 recoveries were reported, translating into a recovery rate of 92%.

"Active cases have also increased threefold to 10 418 compared to 3 392 during the last briefing. Another 183 lives were lost, bringing the number of deaths to 3 761 since the beginning of the pandemic."

By Tuesday, 411 163 people had received their first dose of Covid-19 vaccination nationally, translating to 22.7% of the target population.

Collectively, 348 552 eligible people are fully vaccinated. Shangula added that the daily vaccination uptake increased by 52.7% from 2 112 on 13 December 2021 to 4 466 on 11 January. He added that following the introduction of booster doses, 8 290 people have received an additional dose thus far.

Vaccine hesitancy

President Hage Geingob said vaccine hesitancy persists and as of 11 January, the coverage of fully vaccinated populations remained low in the following regions: Zambezi at 6%, Ohangwena, Omusati and Oshikoto at 9% and Oshana at 10%. The regions with the highest fully vaccinated population coverage are Hardap at 23%, Kavango West and Omaheke at 19%, and Kunene and //Karas at 18% each. Khomas recorded a fully vaccinated population coverage of only 17%.

Shangula said an analysis of the Covid-19 statistics indicate that from 1 to 11 January, 81% of new infections, 97% of admissions to hospitals, 94% of ICU admissions and 91% of deaths are of unvaccinated individuals. Meanwhile, public health measures were also announced and these will run from 16 January to 15 February.

No changes were made to public gatherings, curfew, education or restrictions related to alcohol, business operations, public transport and Covid-19 rapid antigen tests.

Shangula said the number of spectators at sporting events should remain aligned with the regulation on public gatherings, where the limit is 200 persons per event.

He added that fully vaccinated Namibians, permanent residents and truck drivers will no longer be required to present a negative PCR test result upon entry into Namibia. They can enter the country at any time with a valid and authentic vaccination card.

"For all other categories of travellers, including truck drivers who are not fully vaccinated, the validity of a negative PCR Covid-19 test results remains 72 hours."

ellanie@namibiansun.com

DRUNK MAN DROWNS IN KAVANGO RIVER

KENYA KAMBOWE
RUNDU

The lifeless body of a Namibian man was found floating on the Angolan side of the Kavango River last Wednesday afternoon, opposite the Sitopogo village in the Kavango West Region.

It is alleged the deceased was intoxicated prior to the drowning incident.

The deceased, identified as Paulus Kapoke (40), was married to an Angolan woman he lived with in that country.

RIVER OF DEATH: The lifeless body of a 40-year-old man was found floating in the Kavango River last week.
PHOTO: KENYA KAMBOWE

According to a police report, the deceased was reportedly last seen in Angola on Tuesday, when he was drinking kasipembe, a traditional fermented liquor made from mangetti nuts.

He was reported missing in Angola as he allegedly tried to go home and lost his way, as it was night time, the police report said. "His body was then discovered floating in the river in Angola on Wednesday at about 12:00."

The Angolan police notified their Namibian counterparts.

The police report further indicated that the Namibian police have coordinated with those in and the body has already been repatriated back to Namibia.

Crocodile attack

Meanwhile, the police in Kavango West on Wednesday afternoon around 14:00 retrieved the body of man who died after a crocodile attack.

According to the police, the victim's body was intact, but bite marks were visible on the back and abdomen of the deceased.

kenya@namibiansun.com

Murder-accused pastors, wives secure legal aid

KENYA KAMBOWE
KAHENGE

Two self-proclaimed pastors and their customary wives from the Kavango West Region, who stand accused of three murders and an attempted murder, have secured legal aid.

They administered a concoction to their victims, which led to the deaths of three people, last September.

The four - Elia Ihemba (36), Engelberth Hamutenya (25), Corneria Sizura Sikukutu (28) and Maria Vihoma Fernando (20) - last Wednesday appeared before magistrate Barry Mufana in the Kahenge Periodic Court. The matter was remanded to 14 April.

Ihemba and Hamutenya remain in police custody while Sikukutu and Fernando remain out on bail. Police investigations are yet to be finalised.

IN IT TOGETHER: Murder accused Corneria Sizura Sikukutu and Maria Vihoma Fernando. PHOTO: FILE

Sole survivor

Ihemba and Hamutenya allegedly gave four members of their church a concoction of methylated spirits, vinegar, salt and olive oil, which was administered via a pipe put into the victims' rectums.

Three people - Ntamba Evaristus Ndumba (37), Nangombe Robertha Ndumba (45) and Kapango Hilka Simbaranda (21) – died from the mixture.

The sole survivor, Rosa Ndumba (39), spoke out about the incident.

kenya@namibiansun.com

10 January 2022 – Republikein

4 NUUS Republikein Maandag 10 Januarie 2022

» Namibië verloor groot gees in vleisbedryf

Simmentaler-strydros Reini Rusch sterf

Die bekende en geliefde mnr. Reini Rusch van die plaas Lichtenstein het weens hartversaking gesterf.

› Ronelle Rademeyer

Namibië het een van die vaders van die Simmentaler-beesras en 'n man wat oor dekades diep spore in die land se vleisbedryf getrap het, verloor.

Mnr. Reinhard (Reini) Rusch van die plaas Lichtenstein-Wes buite Windhoek is verlede Maandagaand aan hartversaking dood. Hy was 81 jaar oud.

Sy betrokkenheid by die Simmentaler in Namibië as teler, beoordelaar en rasbevorderaar streek oor meer as vyf dekades.

Daarbenewens was hy vanaf Meatco se totstandkoming in die middel-tagtigerjare tot 2001 voorsitter van die direksie. Hy het ook ná onafhanklikwording help skryf aan die Wysigingswet op Lewendehaweverbetering, nr. 25 van 1993.

Verder was hy 'n interras-beoordelaar en het gereeld kursusse aangebied en nuwe beoordelaars opgelei.

Rusch het ook 'n groot bydrae tot die verbetering van prestasietoetsing van stoetvee gelewer.

Verder het hy nege jaar lank in die bestuur van die Namibië Beroepsjagtersvereniging (Napha) gedien en was hy vir sewe jaar die voorsitter van die Natuurbewaringsraad.

"Rusch het buitengewone leiding gegee om Meatco voor, tydens en ná onafhankwording te rig om 'n hoogs mededingende en suksesvolle maatskappy in Afrika te word.

"Dit sluit in die rasionalisering van slagkapasiteit deur die sluiting van die abattoirs op Otavi en Gobabis en die verskuiwing van die fokus na bedrywighede in Windhoek, Okahandja, Oshakati en Katima Mulilo, asook die opgradering van die oorblywende kapasiteit na gelang van die markvereistes," sê mnr. Paul Strydom, uitvoerende bestuurder van die Vleisraad van Namibië.

"Meatco is gestig om in die behoeftes van produsente te voorsien deur fabrieke van regoor die land in een organisasie saam te bring. Een van die kernbeginsels was om elke fasiliteit wat Meatco besit, vir produsente toeganklik te maak," het Rusch by geleentheid by 'n jaarvergadering van Meatco gesê.

Strydom sê hy sal hom onthou vir sy lojaliteit en integriteit. "Hy was 'n uiters goeie strategiese denker en is as sodanig dikwels as klankbord gebruik om antwoorde op moeilike besluite te formuleer," sê hy.

PIONIERFAMILIE

Die Rusche is een van die oudste pionierfamilies in die land.

Rusch se oupa, Ernst Rusch, was een van die 21 Schutztruppe wat in 1889 saam met Curt von Francois by Sandvishawe voet aan wal gesit het om Duitse belange in dié droë land te kom beskerm.

Hy was 'n botanis met 'n intense liefde vir die plant- en natuurlewe en het in 1893 die plaas Lichtenstein gekoop. Dié jaar is die eerste vyf Simmentalers toevallig ook uit Europa na die kolonie ingevoer.

"My oupa het twee jaar later, in 1895, sý eerste beeste uit Europa ingevoer met die doel om die inheemse beeste geneties te verbeter. Van die vier of vyf rasse wat hy ingevoer het, was dit egter die Simmentaler wat die beste aangepas het," het Rusch in 'n vroeëre onderhoud vertel.

In 1964, met 'n landbougraad (Universiteit van Pretoria) in die sak én 'n hoogs leersame studietydperk in Duitsland agter die blad, het hy saam met sy pa, Georg, begin boer.

"Daardie eerste jare in die boerdery was wonderlike tye. Boere het al meer begin wegstuur van 'die bul en die windpomp'-beskouing na 'n meer wetenskaplike benadering.

"Ek het in daardie jare omgesien na 'n stoet bestaande uit nagenoeg 300 koeie. Dit was die grootste Simmentaler-stoet in die land," het Rusch vertel.

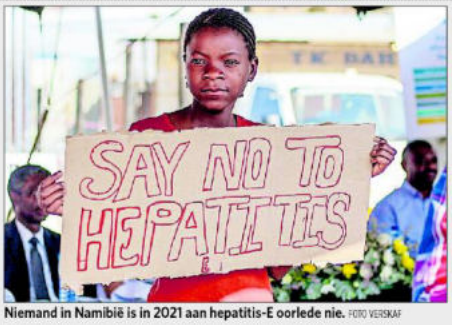
Hy het in sy Lichtenstein Simmentaler-stoet sterk op vrugbaarheid gefokus. Koeie is baie streng geselekteer en geen toegewings is gemaak nie – 'n beginsel wat van hom 'n baie suksesvolle teler gemaak het.

Rusch laat sy vrou, Marlies, sy seun René en sy twee dogters, Bianca Lueesse en Yvonne Schnoor, agter.

Lucesse sê rcëlings vir sy roudiens en begrafnis is nog nie gefinaliseer nie. "Maar ons sal hier op die plaas 'n roudiens vir hom hou."

- ronelle@republikein.com.na

Dié geskiedkundige foto's van Namibië se drie veterane onder die Simmentaler-telers in die land, is verlede jaar by die Gobabis Skou geneem. Van links is mnre. Horsti Riedel, Mike Krafft en Reini Rusch. FOTO VERSKAF



Niemand in Namibië is in 2021 aan hepatitis-E oorlede nie. FOTO VERSKAF

Geen sterftes weens hepatitis-E in 2021

› Jana-Mari Smith

Niemand in Namibië is verlede jaar weens hepatitis-E dood nie – in vergelyking met vier sterftes in 2020 en 23 in 2019.

Tussen September 2017, toe gesondheidswerkers die begin van die uitbreking opgemerk het, tot aan die einde van 2018 het 39 mense weens die siekte gesterf.

In totaal het dus 66 mense weens dié hepatitis-E-uitbreking gesterf, wat veral inwoners in die informele nedersettings hard getref het waar toegang tot skoon water en toilette skaars is.

Van die sterftes was 23 (41%) swanger vroue wat gesterf het kort voor of nadat hulle geboorte geskenk het.

Die nuutste beskikbare situasieverslag oor die uitbreking in Namibië toon dat teen 15 Augustus 2021 'n kumulatiewe totaal van 8 090 gevalle landwyd aangemeld is.

Khomas is die streek wat verreweg die meeste geraak is, met 62% van die land se bevestigde en vermeende gevalle, gevolg deur Erongo.

In Januarie 2021 is 8 030 gevalle landwyd aangemeld, wat 'n toename van net 70 nuwe infeksies gedurende 2021 wys.

In vergelyking was daar tussen Januarie en Mei 2020 meer as 600 nuwe gevalle aangemeld. Tussen September 2018 en 2019 is 3 700 hepatitis-E-infeksies aangemeld en tussen September 2017 en Julie 2018 2 554.

Teen Mei van 2018 het die siekte na bykans elke streek in Namibië versprei. Zambezi was die enigste sonder enige aangemelde geval van hepatitis-E. Die Khomas-streek het naby aan 5 000 gevalle gehad; Erongo 1 800, Omusati 350, Kavango 166 en Ohangwena 161 gevalle. Die ||Kharas- en Kunenestreek het afgesien van Zambezi die minste gevalle aangeteken.

In reaksie op die uitbreking het die ministerie van gesondheid en maatskaplike dienste, met steun van verskeie plaaslike en internasionale vennote, insluitend die Wêreldgesondheidsorganisasie (WHO) en die regering van Japan wat finansiële steun aan die WHO verskaf het, veelsydige benaderings geïmplementeer om die uitbreking te bekamp.

In 2020 het die ministerie en ander kommentators uitgewys dat pogings om sanitasie-infrastruktuur en bewustheid in informele nedersettings te bevorder in reaksie op die Covid-19-pandemie, onbedoeld 'n positiewe uitkringeffek gehad het om die hepatitis-E-uitbreking te help bekamp.

"Hoewel pogings hoofsaaklik teen die Covid-pandemie gedoen is, was daar 'n voordelige oorvloei van die sanitasie- en higiënepraktyke van Covid-ingrypings om hepatitis onder beheer te bring," het die ministerie van gesondheid middel 2020 opgemerk.

EIF waarsku teen bedrogspul met 'belegging'

› Ellanie Smit

Die Omgewingsbeleggingsfonds van Namibië (EIF) waarsku die publiek teen 'n bedrogspul wat veral op die sosialemediaplatform Telegram versprei is.

Volgens die EIF vra die swendelaar 'n belegging van N$1 000 en beloof om N$5 000 binne drie maande terug te betaal.

'n Skakel na die EIF-webwerf word glo met slagoffers gedeel om hulle te oortuig dat die belegging wettig is.

Die EIF het 'n strafsaak geopen en doen 'n beroep op die publiek om hul inligting hieroor met die owerhede te deel.

Diegene wat bedrieg is, word versoek om die saak by die polisie aan te meld.

VALSE VOORWENDSELS

Volgens die EIF doen 'n video op sosiale media die rondte waarin die swendelaar, onder die naam Helen Nicol, die EIF se inligting gebruik om haar slagoffers te bedrieg om geld by haar te belê.

"Dit sluit 'n videogreep in van 'n belegger wat kwansuis wel geld uit hierdie beweerde belegging gekry het.

EIF

"Die EIF veroordeel ten sterkste diegene wat ons naam gebruik om mense van hul geld te bedrieg."

"Die video verskaf dan 'n skakel wat potensiële beleggers kan gebruik om die maatskappy se inligting na te gaan."

Die skakel lei na die EIF-webwerf.

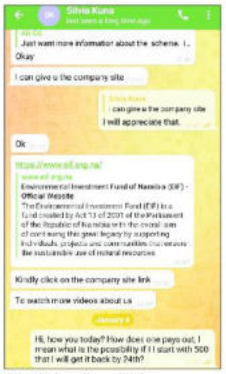
"Die swendelaar se optrede bring die EIF se naam in oneer, aangesien dit 'n invloed op die vertroue van al ons belanghebbendes het en in stryd is met die vooruitgang wat die EIF sedert sy ontstaan gemaak het," lui die EIF se waarskuwing.

Die Omgewingsbeleggingsfonds het beklemtoon dat hy geensins betrokke is by die verkryging van beleggings van die publiek nie en dat nie een van sy werknemers by magte is om geld van die publiek te neem nie.

"Die EIF veroordeel ten sterkste diegene wat ons naam gebruik om mense van hul geld te bedrieg."

Die EIF het die publiek aangemoedig om paraat te wees vir swendelary van hierdie aard en het hulle aangemoedig om die EIF-kantoor te kontak vir inligting oor projekte en programme wat deur die Fonds bestuur word.

- republikein@republikein.com.na



Die EIF het die publiek aangemoedig om paraat te wees vir hierdie tipe swendelary en hulle aangemoedig om die EIF-kantore te kontak vir inligting oor projekte. FOTO NAMIBIAN SUN

17 January 2022 – Republikein

2 NUUS Republikein Maandag 17 Januarie 2022

KONTAKPERSONE

GENL. MURTALA MUHAMMEDRYLAAN. POSBUS 3436, WINDHOEK
TEL: 061 297 2000 | VOLG ONS OP:
ISSN 1560-9448

REDAKTEUR
Dani Booysen
081 129 3781 / 061 297 2038
dani@republikein.com.na

NUUSREDAKTEUR
Ronelle Rademeyer
081 127 8159 / 061 297 2114
ronelle@republikein.com.na

SPORTNUUS
Andrew Poolman
081 247 2837 / 061 297 2011
andrew@republikein.com.na

BEMARKINGSKOÖRDINEERDER
Carmen Stenger
081 239 7664/061 297 2102
carmen@nmh.com.na

ERONGO
Otis Finck 081 299 1211
otis@erongo.com.na
Faks: 064 403 451

STREKE
Rundu: Kenya Kambowe @ 081 724 1044
Keetmanshoop: Elizabeth Joseph @ 081 836 8036
Otjiwarongo: Ester Kamati @ 081 812 0059
Ongwediva: Tuyoimo Haidula @ 081 339 3112

VERKOPE EN AFLEWERING
Ettienne Kotze 081 244 0928
ettienne@nmh.com.na
Tel: 061 297 2171

E-POS: REPUBLIKEIN@REPUBLIKEIN.COM.NA 'n Publikasie van NAMIBIA MEDIA HOLDINGS (Pty)Ltd, gedruk deur NEWSPRINT NAMIBIA (Pty)Ltd.

WEER

WEERWAAK: Wydverspreide donderbuie word in Khomas en Hardap verwag met kitsvloede op plekke. Dit sal Dinsdag na Otjozondjupa uitbrei.
BINNELAND: Gedeeltelik bewolk en baie warm in Erongo en die sentraal-noordelike streke, andersins gedeeltelik bewolk en baie warm met 'n paar donderbuie in die noordooste, Ooste en ||Kharas, met verspreide tot wydverspreide donderbuie in Khomas en Hardap.

KUS: Gedeeltelik bewolk en warm tot baie warm met buie.
GETYE BY WALVISBAAI: H: 03H26 **L:** 09H13
H: 15H27

VOORUITSIGTE

WINDHOEK	18°	30°
RUNDU	21°	32°
OSHAKATI	22°	32°
GOBABIS	22°	35°
MARIENTAL	25°	33°
KEETMANSHOOP	21°	33°

» 'n Knellende N$565 miljoen landswyd aan NamWater geskuld

'Gratis water' kos honderde miljoene

NamWater sukkel "op onvolhoubare wyse" voort sonder die vergoeding vir waterdienste gelewer oor die afgelope twee jare van Covid-19.

Augetto Graig

Voorsiening van gratis water aan kwesbare gemeenskappe in informele nedersettings sedert April 2020 het munisipaliteite, dorpsrade en nedersettings se skuld aan NamWater tot 31 Desember 2021 bykans laat verdubbel.

Inligting verskaf deur NamWater se hoof van strategie en nuwe besigheidsontwikkeling, mc. Kadiva Hamutumwa, dui dat landswye waterskuld in die tydperk met N$275,1 miljoen geklim het. Altesaam skuld plaaslike owerhede die nasionale waterverskaffer-staatsonderneming nou meer as N$564,9 miljoen.

Spesifiek skuld munisipaliteite NamWater nou N$145,5 miljoen – bykans N$100 miljoen meer as op 31 Maart 2020 toe die skuld op N$46,9 miljoen gestaan het. Hamutumwa se syfers dui dat NamWater in 2019 98% van die betrokke skuld kon invorder, in 2020 100% en in 2021, 95%.

Dorpsrade kon in 2020 net 80% van hul waterskuld delg en laas jaar net 50%. Kleiner dorpies vind terugbetaling nog moeiliker met 85% van skuld in 2019 betaal, teenoor 58% in 2020 en net 30% laas jaar. Dorpsrade se gesamentlike skuld het met N$154,2 miljoen aangegroei en staan tans op N$346,8 miljoen, terwyl nedersettings N$22,3 miljoen meer skuld vir water opgebou het en nou altesaam sowat N$72,6 miljoen skuld.

Kinders en kwesbares in informele nedersettings landswyd is afhanklik van gratis watervoorsiening te midde van die Covid-19-pandemie in Namibië.

Nedersettings wat die meeste skuld, is Berseba, Tses en Witvlei; die dorpsrade wat die meeste agterstallig is, sluit Rundu, Katima, Otavi, Rehoboth en Okakarara in. In terme van munisipaliteite is Swakopmund en Keetmanshoop onder die groot debiteure, terwyl die hoofstad Windhoek die grootste skuld by NamWater het.

Windhoek se burgemeester het reeds vroeg vanjaar gesê die hoofstad skuld N$90 miljoen aan NamWater en het aan inwoners die vraag gestel of die munisipaliteit watervoorsiening maar moet afsny tot die skuld gedelg kan word. Dit het gevolg op 'n stadsraadresolusie in hul laaste vergadering van 2021 om sodanige toevoer teen einde Februarie op te skort.

Me. Sade Gawanas se nuutste plasing op sosiale media verlede week lui: "Ek is nie bereid om die burgemeester te wees wat water vir ons mees kwesbares in die samelewing afsny nie. Ek sal betrokke raak totdat ek 'n inskiklike plan het, en die raad raadpleeg. My hart is nie daar nie, ook nie my verstand of gees nie. Daarom gaan ons voort om betrokke te raak en 'n beter situasie vir die waterkwessie te vind."

By navraag oor 'n oplossing het sy gesê: "Die oplossing hier is nie om alle watertoegang summier heeltemal af te sny nie, maar om alle belanghebbendes te raadpleeg en te betrek, sedert die besluit om af te sny verlede jaar geneem is. Ons kan die bestuurskomitee vra om die besluit nie uit te voer nie, totdat alle opsies uitgeput is," het sy geantwoord.

Die ministerie van stedelike en landelike ontwikkeling is die belanghebber na wie almal kyk vir 'n oplossing. Die uitvoerende direkteur mnr. Daniel Nghidinua het vandeesmaand aan *Republikein* bevestig dat die ministerie in 2020 bykans N$12,5 miljoen aan Stad Windhoek betaal het vir die eerste drie maande se gratis watervoorsiening, nadat die minister alle plaaslike owerhede opdrag gegee het om op dié wyse die uitbreking van die Covid-19-pandemie in Namibië te help bekamp.

Ander plaaslike owerhede was op soortgelyke wyse vir die gratis watervoorsiening vergoed, sê hy. "Die sentrale regering waardeer die samewerking en rol gespeel deur plaaslike owerhede, streeksrade en NamWater om toegang tot water te verseker en die ministerie bly verbind om hulpbronne te mobiliseer om die koste daarvoor te delg," het hy gesê.

"Die hang egter af van beskikbaarheid van geld," het hy gesê. Misbruik en vermorsing van die water moet stopgesit word, dring Nghidinua aan.

Sade Gawanas
BURGEMEESTER VAN WINDHOEK

"Die oplossing hier is nie om toevoer heeltemal te sny nie, maar om alle belanghebbendes te raadpleeg en te betrek."

Verder moet dié wat kan vir water betaal, sê hy.

NamWater se Hamutumwa sê die huidige stand van sake is onvolhoubaar en dat infrastruktuurontwikkeling en die vervanging van verouderde infrastruktuur tans nie kan voortgaan tensy betalings vir die water ontvang word nie. Verder word bedryfskoste belemmer en sonder 'n oplossing sal die instansie nie veel langer aan sy mandaat kan voldoen nie, sê sy.

- augetto@republikein.com.na

'Nou dans die boere en die voëltjies sing'

VAN BL. 1

Die Nautedam word gevoed deur die Löwen- en Guruchabriviere. Rolspelers wat geraak kan word wanneer die dam se sluise oopgemaak word, is die Eldahara-besproeiingsprojek, die vakansieoord by Ai-Ais asook gemeenskappe wat stroomaf bly.

Saterdagaand het die Holoogrivier ook kant en wal geloop en moes motoriste noodgedwonge Grünau omry op pad Keetmanshoop toe.

Volgens 'n ingeligte bron by NamWater het tot 90 mm in die Aroab-omgewing geval met dié water wat Saterdagnag na die Nautedam gevloei het. Volgens die bron is die "vloeitempo van ons riviere hoër as wat ons besef".

"Naute reën vir 'n grap vol en die sluise word omtrent elke jaar oopgetrek," het hy gesê. Volgens hom is die Suide se werklike reënseisoen "meer na April se kant toe" en is dié neiging "steeds redelik in plek", met niks abnormaal aan die reënval wat die streek tans ontvang nie.

Die Neckartaldam is tans 93% vol en volgens die bron sal "enige ou reëntjie" dit laat oorloop. Sou dit gebeur en die Naute se sluise is oop, is die kanse volgens hom dat Ai-Ais moontlik weer skade kan kry.

LIGLOOP BY RIVIERKRUISINGS

Gister was die C14-roete in die Suide en die grondpad van Aus en Helmeringhausen tot 35 km voor Maltahöhe nog in 'n goeie toestand. Sowat 35 km voor Maltahöhe het swaar neerslae voorgekom en word klein voertuie en dié wat nie viertrek is nie, aangeraai om eerder om te draai. Inwoners van die dorp sê riviere onderweg na die kus het ook die naweek gevloei.

'n Motor is Saterdag deur 'n vinnig stygende rivier op die pad tussen Keetmanshoop en Aroab meegesleur. 'n Nabygeleë plaaseienaar kon daarin slaag om die bestuurder en passasiers na veiligheid te bring.

In Mariental was inwoners sonder elektrisiteit nadat swaar reën en hewige wind die hoofkraglyn omgewaai en beskadig het.

Toerismebestemmings geleë op die oewers van die Oranjerivier was reeds vroeër aan die ontvangkant van die rivier wat sy walle oorstroom het. By Amanzi Trails River Adventure in Noordoewer is elektriese drade, 'n stoorkamer asook die hele dreineringstelsel deur die water beskadig.

Op die Facebookblad Reën in Namibia is die welkome reën deur een gebruiker opgesom as "nou dans die boere en die voëltjies sing!"

Meterlesings vir Hardap en ||Kharas het Mount D'Urban naby Helmeringhausen (26 mm), Kuibis (52 mm) tot Mariental (39 mm) en Keetmanshoop (30 mm) ingesluit. By Skrapklip op die Aroabpad het dit ook lekker gereën.

In die Noorde is onder meer 27 mm in die Otavi-vallei uit die reënmeter gegooi, meer as 50 mm by die Ludwigshavenplotte noord van Tsumeb, 24 mm naby Ghaub tussen Otavi en Tsumeb en tot 48 mm op die dorp self.

In Windhoek het van Khomasdal (19 mm), Cimbebasia (36 mm), Academia (22 mm), Windhoek-Wes (17 mm) tot Olympia (18 mm) en Suiderhof (15 mm) 'n nat naweek gehad.

Die Namibiese weerkantoor voorspel wydverspreide donderbuie vir vandag vir Khomas en Hardap met die moontlikheid van kitsvloede op plekke. Die voorspelde reën versprei môre na die Otjozondjupastreek. - henriette@republikein.com.

Notification Letter: City of Windhoek

GEO Pollution Technologies

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

28 January 2022

To: **Interested and Affected Parties**

Re: **Environmental Scoping Assessment and Environmental Management Plan for the Operations of Hartlief Factory in Windhoek**

Dear Sir/Madam

In terms of the Environmental Management Act (No 7 of 2007) (EMA) and the Environmental Impact Assessment Regulations (Government Notice No 30 of 2012), notice is hereby given to all potential interested and/or affected parties (IAPs) that an application will be made to the Environmental Commissioner for an environmental clearance certificate (ECC) for the following project:

Project: Environmental Scoping Assessment and Environmental Management Plan for the Operations of Hartlief Factory in Windhoek

Proponent: Hartlief Continental Meat Products (Pty) Ltd

Environmental Assessment Practitioner: Geo Pollution Technologies (Pty) Ltd

Hartlief Continental Meat Products (Pty) Ltd operates a state-of-the art processed meat factory in the Northern Industrial Area of Windhoek. 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 smoked, fermented and cooked products while they also stock a range of raw meats such as beef, lamb, pork and game. Operational activities are diverse, but primary activities include processing, curing, smoking, fermenting, cooking, drying and packaging of various meat products.

Geo Pollution Technologies (Pty) Ltd was requested to conduct an environmental assessment for the project. The assessment is required in terms of the EMA and will be conducted according to the EMA regulations as published in 2012. As part of the assessment we consult with IAPs who are invited to register with the environmental consultant to receive further documentation and communication regarding the project. By registering, IAPs will be given an opportunity to provide input that will be considered in the drafting of the environmental assessment report and its associated management plan.

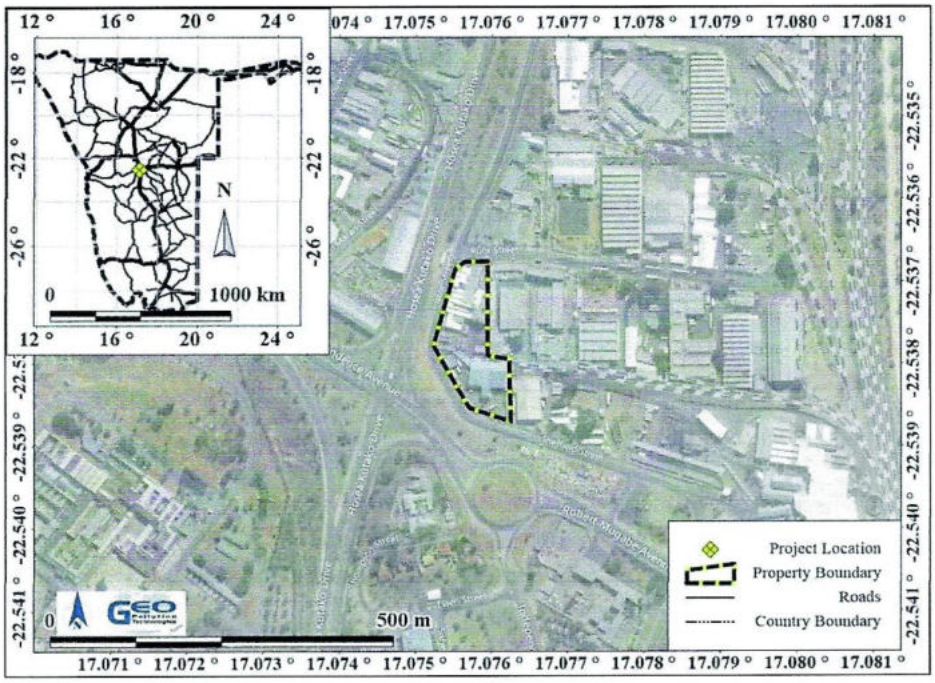
Registration details and comments should reach Geo Pollution Technologies by 08 February 2022.

To register, please contact: Email: **hartlief@thenamib.com** Fax: 088-62-6368
Should you require any additional information please contact Geo Pollution Technologies at telephone 061-257411.

Thank you in advance.

Sincerely,
Geo Pollution Technologies

André Faul
Environmental Scientist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17.081 °
-22.535 °
-22.536 °
-22.537 °
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-22.539 °
-22.540 °
-22.541 °
Project Location
Property Boundary
Roads
Country Boundary
0
500 m

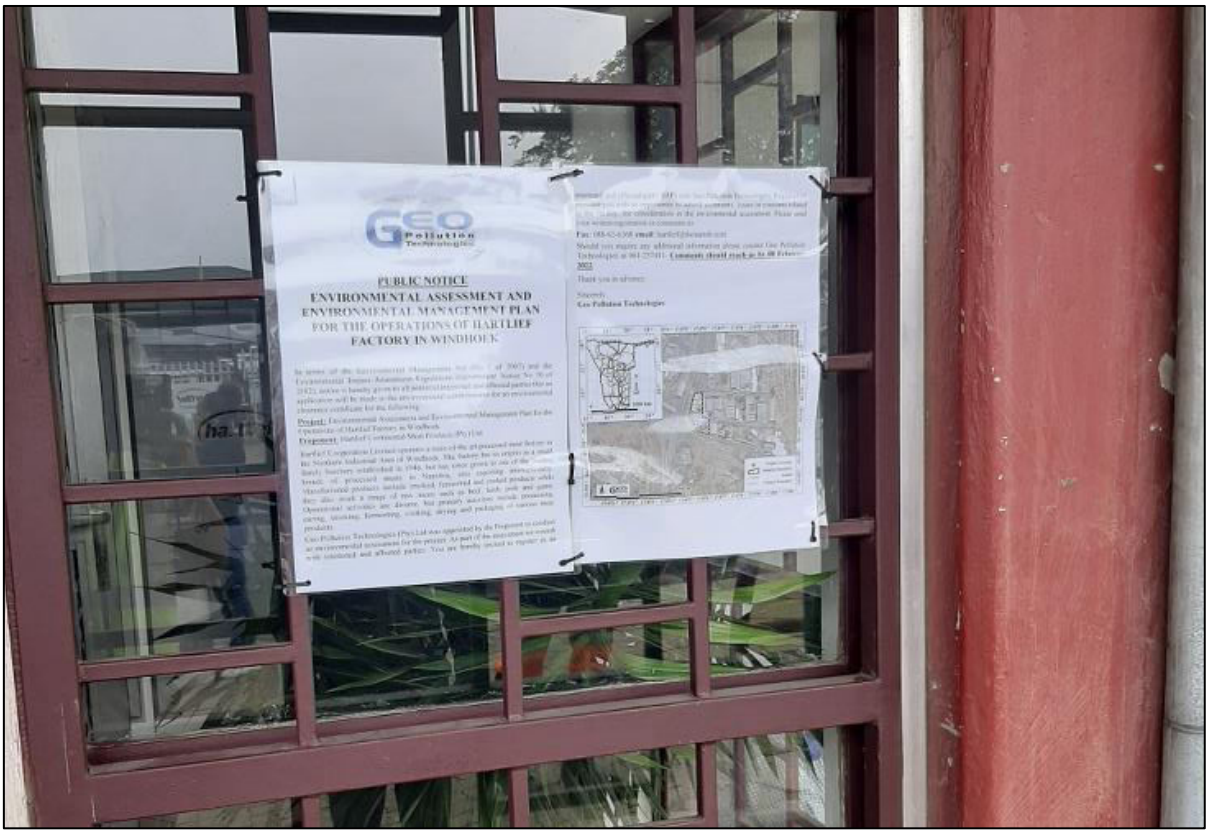
Neighbour Notification Letter Delivery Sheet

Notification of Environmental Assessment – Hartlief, Windhoek

Name & Surname	Organisation/Address	Tel / Mobile	Email	Signature
Kola Nieuwoudt	Ruhr str 12 KN Garage CC	Privacy Block		
Madeline Tobias	Meatco Sheflett Street			
Misadé Olivier	Pzn Panelbeaters cc			
Pieter M. Marais	Marais Motor Spares			

Geo Pollution Technologies
EIA – Hartlief Continental Meat Products, Windhoek
November 2021

Site Notice


Geo
Pollution
Technologies
PUBLIC NOTICE
ENVIRONMENTAL ASSESSMENT AND
ENVIRONMENTAL MANAGEMENT PLAN
FOR THE OPERATIONS OF HARTLIEF
FACTORY IN WINDHOEK

Appendix C: Consultants' Curriculum Vitae

ENVIRONMENTAL SCIENTIST **André Faul**

André entered the environmental assessment profession at the beginning of 2013 and since then has worked on more than 160 environmental impact assessments including assessments of the petroleum industry, harbour expansions, irrigation schemes, township establishment and power generation and transmission. André's post graduate studies focussed on zoological and ecological sciences and he holds a M.Sc. in Conservation Ecology and a Ph.D. in Medical Bioscience. His expertise is in ecotoxicological related studies focussing specifically on endocrine disrupting chemicals. His Ph.D. thesis title was The Assessment of Namibian Water Resources for Endocrine Disruptors. Before joining the environmental assessment profession he worked for 12 years in the Environmental Section of the Department of Biological Sciences at the University of Namibia, first as laboratory technician and then as lecturer in biological and ecological sciences.

CURRICULUM VITAE ANDRÉ FAUL

Name of Firm	:	Geo Pollution Technologies (Pty) Ltd.
Name of Staff	:	ANDRÉ FAUL
Profession	:	Environmental Scientist
Years' Experience	:	21
Nationality	:	Namibian
Position	:	Environmental Scientist
Specialisation	:	Environmental Toxicology
Languages	:	Afrikaans – speaking, reading, writing – excellent
		English – speaking, reading, writing – excellent

EDUCATION AND PROFESSIONAL STATUS:

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

First Aid Class A	EMTSS, 2017
Basic Fire Fighting	EMTSS, 2017

PROFESSIONAL SOCIETY AFFILIATION:
Environmental Assessment Professionals of Namibia (Practitioner)

AREAS OF EXPERTISE:
Knowledge and expertise in:
- Water Sampling, Extractions and Analysis
- Biomonitoring and Bioassays
- Biodiversity Assessment
- Toxicology
- Restoration Ecology

EMPLOYMENT:

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

PUBLICATIONS:

Publications:	5
Contract Reports	+160
Research Reports & Manuals:	5
Conference Presentations:	1