APP-006634

ENVIRONMENTAL SCOPING ASSESSMENT AND ENVIRONMENTAL MANAGEMENT PLAN FOR THE CONSTRUCTION AND OPERATIONS OF A FUEL RETAIL FACILITY AT THE ELISENHEIM LIFESTYLE ESTATE, WINDHOEK

ENVIRONMENTAL ASSESSMENT SCOPING REPORT



Assessed by: Assessed for:





Project:	ENVIRONMENTAL SCOPING ASSESSMENT AND ENVIRONMENTAL		
110ject.	MANAGEMENT PLAN FOR THE CONSTRUCTION AND OPERATIONS OF A		
	FUEL RETAIL FACILITY AT THE ELISENHEIM LIFESTYLE ESTATE,		
	WINDHOEK		
Report:	Final		
Version/Date:	November 2025		
APP No:	APP-006634		
Prepared for:	Petrosol Petroleum Solutions CC		
(Proponent)	P O Box 654		
	Otjiwarongo		
Lead Consultant	Geo Pollution Technologies (Pty) Ltd TEL.: (+264-61) 257411		
	PO Box 11073 FAX.: (+264) 88626368		
	Windhoek		
	Namibia		
Main Project	André Faul		
Team:	(B.Sc. Zoology/Biochemistry); (B.Sc. (Hons) Zoology); (M.Sc. Conservation		
	Ecology); (Ph.D. Medical Bioscience)		
	Ernest Pelser		
	(B.Sc. Zoology/Microbiology); (B.Sc. (Hons) Environmental Science); (M.Sc.		
	Environmental Science)		
	Johann Strauss		
	(BA. Geography/Psychology/Environmental Management)		
Cite this	Faul A; Pelser E; Strauss J. 2025 November; Environmental Scoping		
document as:	Assessment and Environmental Management Plan for the Construction and		
	Operations of a Fuel Retail Facility at the Elisenheim Lifestyle Estate,		
	Windhoek		
Copyright	Copyright on this document is reserved. No part of this document may be		
	utilised without the written permission of Geo Pollution Technologies (Pty)		
	Ltd.		
Report	41.1		
Approval	A CONTRACTOR OF THE PARTY OF TH		
	A 1 (F. 1		
	André Faul		
	Conservation Ecologist		

I Nardus Brits	acting as	the	Proponent's	representati	ve (Petrosol	Petroleum
Solutions CC), hereby approve	this report	t and	confirm that	the project	description c	ontained in
herein is a true reflection of the	information	on wl	hich the Prop	onent has pr	ovided to Ge	o Pollution
Technologies. All material infor	rmation in	the p	ossession of	the Proponer	it that reason	ably has or
may have the potential of influerepresented in this report.	may have the potential of influencing any decision or the objectivity of this assessment is fairly				ent is fairly	
represented in this report.						
0.00			4			
Signed at Otjiwarongo			on the1	day of _	lovember	2025.
18.5						
Drid .					cc/2008/0 ⁻	183
Petrosol Petroleum Solutions Co	7		_	-	Company Res	
Teneser Teneseam Selamons ex	_				sompany ree	51511411011

EXECUTIVE SUMMARY

Petrosol Petroleum Solutions CC (the Proponent) appointed Geo Pollution Technologies (Pty) Ltd (GPT) to undertake an environmental assessment for the construction and operations of a fuel retail facility at Elisenheim Lifestyle Estate, Windhoek. The environmental assessment is required in terms of the Environmental Management Act (EMA) of 2007 and will serve as guidance for the approval or refusal of an environmental clearance certificate (ECC) for its construction and operations. Should an ECC be issued, the proposed facility will require a fuel retail licence from the Ministry of Industries, Mines and Energy prior to commencement of operations. Once established, the facility will aim to ensure a reliable supply of fuel to residents in the surrounding area.

The facility will comprise three underground storage tanks, including two with a capacity of 23 m³ each and one with a capacity of 46 m³. Diesel and unleaded petrol will be dispensed from three pump islands situated beneath an overhead canopy, with provision made for the future addition of a fourth pump island. In addition to the forecourt infrastructure, a convenience store with customer restrooms will be developed on site. All infrastructure will be constructed in accordance with the South African National Standards (SANS) as prescribed by Namibian legislation, ensuring safety and environmental protection throughout the facility. Normal operations associated with the fuel retail facility will include the receipt of fuel from road tankers, storage of fuel in underground storage tanks, and dispensing of fuel to customers' vehicles by pump attendants. Daily activities will include tank dips, fuel reconciliations and cleaning of the site.

The primary concerns related to the facility's operations include potential health impacts from exposure to fuel vapours, groundwater, surface water and soil pollution, increased traffic and associated noise, fire hazards, and visual impacts on the surrounding area. These risks can be mitigated through preventative measures and adherence to Namibian legislation and international best practice standards applicable to fuel retail operations. Proper design and placement of tank vents for underground storage tanks and dispensing infrastructure will minimise vapour emissions. Compliance to SANS standards, and proper training of staff and regular tank dips and fuel reconciliations, will reduce the likelihood of fuel spills or leakages and ensure its early detection. Traffic impacts can be managed by enforcing traffic control measures and scheduling deliveries to avoid peak hours. Noise levels should remain within the limits prescribed by the Labour Act for workers and World Health Organization guidelines for community noise. Fire risks will be managed through strict compliance with SANS standards, appropriate firefighting systems, and employee training. By employing local contractors and employees for construction and operation, as well as providing training and skills development, the positive socioeconomic impacts of the project will be maximised while negative impacts are minimised.

The environmental management plan (EMP) included in section 9 of this document should be used as a reference during all phases of the facility's operations. All monitoring and records should be documented in a report to ensure compliance with the EMP. Parties responsible for any transgressions of the EMP should be held accountable for any necessary rehabilitation. A health, safety, environment, and quality policy, or a similar document, should be used alongside the EMP. Operators and responsible personnel must be trained on the contents of these documents. Municipal or national regulations and guidelines must be adhered to and monitored regularly as outlined in the EMP.

TABLE OF CONTENTS

1	BACKGROUND AND INTRODUCTION	1
2	SCOPE	2
3	METHODOLOGY	2
4	DEVELOPMENT AND RELATED ACTIVITIES	2
-	4.1 Proposed Construction Activities	
	4.2 OPERATIONAL ACTIVITIES	
	4.3 DECOMMISSIONING ACTIVITIES	4
5	ALTERNATIVES	4
	5.1 Location Alternatives	4
	5.2 PROJECT PLANNING AND DESIGN ALTERNATIVES	
	5.3 No Go Alternative	5
6	ADMINISTRATIVE, LEGAL AND POLICY REQUIREMENTS	5
7	ENVIRONMENTAL CHARACTERISTICS	7
	7.1 Locality and Surrounding Land Use	
	7.2 CLIMATE	
	7.3 TOPOGRAPHY AND DRAINAGE	
	7.4 GEOLOGY AND HYDROGEOLOGY	
	7.5 Public Water Supply	
	7.6 FAUNA AND FLORA	
	7.7 DEMOGRAPHIC AND ECONOMIC CHARACTERISTICS	
8	PUBLIC CONSULTATION	
9	ASSESSMENT AND MANAGEMENT OF IMPACTS	
	9.1 RISK ASSESSMENT AND ENVIRONMENTAL MANAGEMENT PLAN	
	9.1.1 Planning	
	9.1.2 Employment	
	9.1.3 Skills, Technology and Development	
	9.1.5 Fuel Supply	
	9.1.6 Demographic Profile and Community Health	
	9.1.7 Health, Safety and Security	
	9.1.8 Traffic	
	9.1.9 Air Quality Related Impacts	
	9.1.11 Fire	
	9.1.13 Waste production	
	9.1.14 Ecosystem and Biodiversity Impact	
	9.1.15 Groundwater, Surface Water and Soil Contamination	
	9.1.16 Visual Impact	
	9.1.17 Cumulative Impact	
	9.3 Environmental Management System	
10		
11	REFERENCES	39
	LICT OF ADDENDICES	
Λт	PPENDIX A: PROOF OF PUBLIC CONSULTATION	40
	PPENDIX A: PROOF OF PUBLIC CONSULTATION	
1 M	TENDER D. CONSULTANT S CONNICOLONI VITAL	.50
	LIST OF FIGURES	
FIG	GURE 1-1 PROJECT LOCATION	1

FIGURE 4-1	GENERAL SITE PLAN
FIGURE 4-2	SITE FOOTPRINT IN THE EXISTING AND FUTURE ELISENHEIM LAYOUT
FIGURE 7-1	DAILY AND SEASONAL PRECIPITATION FROM CHIRPS-2 DATA (FUNK ET AL., 2015)9
FIGURE 7-2	ASPECT, SLOPE AND MAJOR SURFACE DRAINAGE LINES
FIGURE 7-3	SURFACE ELEVATION AND DRAINAGE AT THE PROJECT SITE
FIGURE 7-4	WATER CONTROL AREA AND GROUNDWATER FLOW
FIGURE 7-5	HYDROGEOLOGY MAP
	LIST OF PHOTOS
	ACACIA ERIOLOBA
Рното 7-2	SHRUBS LIKE ACACIA MELLIFERA
	LIST OF TABLES
TABLE 6-1	NAMIBIAN LAW APPLICABLE TO THE FUEL RETAIL FACILITY
Table 6-2	MUNICIPAL BY-LAWS, GUIDELINES AND REGULATIONS
Table 6-3	RELEVANT MULTILATERAL ENVIRONMENTAL AGREEMENTS FOR NAMIBIA AND THE
	DEVELOPMENT6
Table 6-4	STANDARDS OR CODES OF PRACTISE
Table 7-1	PRECIPITATION STATISTICS BASED ON CHIRPS-2 DATA (FUNK ET AL., 2015)9
	TEMPERATURE STATISTICS BASED ON MERRA-2 DATA (GELARO ET AL., 2017)10
	GROUNDWATER STATISTICS
	GENERAL FLORA DATA (ATLAS OF NAMIBIA, 2002)
TABLE 7-5	DEMOGRAPHIC CHARACTERISTICS OF WINDHOEK, THE KHOMAS REGION AND
	NATIONALLY (NAMIBIA STATISTICS AGENCY, 2023; NAMIBIA STATISTICS AGENCY, 2023) 18
	ASSESSMENT CRITERIA
TABLE 9-2	ENVIRONMENTAL CLASSIFICATION (PASTAKIA 1998)

LIST OF ABBREVIATIONS

AIDS Acquired Immune Deficiency Syndrome
BID Background Information Document

CC Close Corporation

DEA Directorate of Environmental Affairs

DWA Department of Water Affairs

EAP Environmental Assessment Practitioner
EIA Environmental Impact Assessment
ECC Environmental Clearance Certificate
EMA Environmental Management Act
EMP Environmental Management Plan
EMS Environmental Management System

GPT Geo Pollution Technologies

HSE Health, Safety and Environment

HIV Human Immunodeficiency Virus

IAP / I&APs Interested and Affected Party / Parties

IUCN International Union for Conservation of Nature

LNAPL Light Non-Aqueous Phase Liquid

MAWFMinistry of Agriculture, Water and ForestryMEFTMinistry of Environment, Forestry and TourismMETMinistry of Environment and Tourism (older title)

MIME Ministry of Industries, Mines and Energy

MSDS Material Safety Data Sheet

m/sMetres per secondMbsMetres below surfacemm/aMillimetres per annum

PPE Personal Protective Equipment
RIAM Rapid Impact Assessment Matrix
SANS South African National Standards

UNFCCC United Nations Framework Convention on Climate Change

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.

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 Impact Assessment (EIA) - process of assessment of the effects of a development on the environment.

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

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

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.

Interested and Affected Party (I&AP) - 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 I&APs) 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 (I&APs). 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

Petrosol Petroleum Solutions CC (the Proponent) appointed Geo Pollution Technologies (Pty) Ltd (GPT) to undertake an environmental impact assessment (EIA) for the construction and operations of the fuel retail facility at the Elisenheim Lifestyle Estate, Windhoek (Figure 1-1). Once established, the facility will aim to ensure a reliable supply of fuel to residents in the surrounding area. The design, construction and operation of the facility will be in accordance with South African National Standards (SANS) as prescribed by Namibian legislation.

General project components considered for the EIA comprise of construction (upgrades and maintenance), operations and potential decommissioning. Typical operational activities include receipt, storage and dispensing of fuel and the operations of a convenience store. Maintenance and general housekeeping activities will also form part of daily activities.



Figure 1-1 Project location

A risk assessment was undertaken to determine the potential impact of the construction, operational and possible decommissioning phases of the project on the environment. The environment being defined in the Environmental Management Act 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 in support of an application for an environmental clearance certificate (ECC) in compliance with Namibia's Environmental Management Act (Act No 7 of 2007).

Project Justification – The proposed Petrosol fuel retail facility will address the growing demand for fuel and related services within the Elisenheim Lifestyle Estate and surrounding areas. By providing a reliable and conveniently located supply of fuel, the facility will reduce the need for residents and commuters to travel long distances into Windhoek for refuelling. The inclusion of a convenience shop with restrooms will further enhance service provision and community convenience. The development of the facility has become necessary due to the culmination of a range of factors, including the following:

- Growing demand for services The rapid development of the Elisenheim Lifestyle Estate has created an increasing need for accessible fuel and retail services within the community.
- ♦ Accessibility and safety Currently, residents and commuters must travel into Windhoek to access fuel, which increases traffic and associated safety risks along major routes.
- Planning provisions The erven earmarked for the facility are specifically designated for commercial purposes as part of the estate's development framework.
- ♦ Provision for future growth The facility design allows for phased expansion, including the future addition of a fourth pump island to accommodate increasing demand.

Benefits of the construction and operations of the fuel retail facility include:

- Sustained and new employment opportunities during both construction and operations,
- Skills development and training of local staff,
- A reliable supply of fuel and convenience services to the local community, businesses, and commuters,
- Contribution to the local, regional and national economy.

2 SCOPE

The aims and objectives of this report are to:

- 1. Determine the potential environmental impacts emanating from the construction, operational and possible decommissioning activities of the facility,
- 2. Identify a range of management actions which could mitigate the potential adverse impacts to acceptable levels,
- 3. Comply with Namibia's Environmental Management Act (2007),
- 4. Provide sufficient information to the Ministry of Environment and Tourism to make an informed decision regarding the construction, operations and possible decommissioning of the plant.

3 METHODOLOGY

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

- 1. Baseline information about the site and its surroundings was obtained from existing secondary information as well as from information obtained during 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.
- 3. Based on gathered information and public and stakeholder consultation, an assessment of potential impacts was conducted and a management plan prepared.

4 DEVELOPMENT AND RELATED ACTIVITIES

It is anticipated that construction of the fuel retail facility will commence once the EIA has been approved by the Ministry of Environment, Forestry and Tourism (MEFT) and the necessary permits and licences have been issued by the relevant authorities. The facility will be developed on two erven within the Elisenheim Lifestyle Estate, covering a combined area of 11,349 m².

At present, the exact layout of the fuel retail facility has not yet been determined, but a preliminary layout is presented in Figure 4-1 and Figure 4-2. Minor deviations from this design may be considered.

4.1 PROPOSED CONSTRUCTION ACTIVITIES

Construction will be undertaken in accordance with applicable South African National Standards (SANS), and will include the installation of spill control infrastructure, firefighting equipment, emergency stops, and leak detection systems. Prior to construction, the site will be cleared and earthworks will be undertaken for the installation of underground tanks, associated reticulation, and foundations. The facility will include three underground, composite storage tanks, comprising

two with a capacity of 23 m³ each and one with a capacity of 46 m³, designed for the storage of unleaded petrol and diesel. The tanks will be vented and the tank pit will have inspection holes to monitor for any leaks. A forecourt with three pump islands will be developed beneath an overhead canopy, with provision for a future fourth pump island if required. The forecourt surface, including the tank filler points and pump islands, will be paved with reinforced concrete slabs and fitted with appropriate drainage to capture accidental spills. All fuel-handling surfaces will be connected to an oil—water separator to prevent contamination of the environment. Firefighting equipment and emergency stops will be placed at strategic locations at the facility.

A convenience store with customer restrooms will be constructed on site, providing added services to patrons.

4.2 OPERATIONAL ACTIVITIES

The main operational activities at the facility will include the receipt of fuel from road tanker trucks, which will be offloaded into the underground storage tanks at filler points. Fuel will then be dispensed to customers' vehicles by pump attendants at the three pump islands located beneath the overhead canopy. Daily operations will include regular tank dips, fuel reconciliations, and routine cleaning of the forecourt area to ensure safety and good housekeeping. These measures will enable the early detection of any potential leaks and help prevent environmental contamination. Fuel retail operations and the convenience store will operate 24 hours a day for seven days a week.



Figure 4-1 General site plan

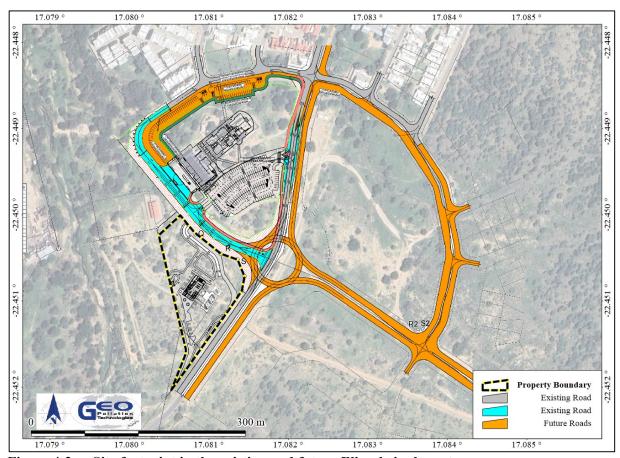


Figure 4-2 Site footprint in the existing and future Elisenheim layout

4.3 DECOMMISSIONING ACTIVITIES

Decommissioning, if ever required, will involve the removal of all infrastructure not required for the future use of the land from the site. Rehabilitation of the land may be required and any pollution of the soil that may have occurred must be remediated.

5 ALTERNATIVES

Various alternatives related to the project are considered and each of these alternatives are discussed. The alternatives can roughly be grouped into three main groups namely:

- **♦** Location alternatives;
- Project planning and design alternatives;
- No go alternative.

5.1 LOCATION ALTERNATIVES

The site for the proposed development is situated at the Elisenheim Lifestyle Estate on land designated for commercial activities. As such, no alternative locations have been identified, and the project will be confined to the erven earmarked for this purpose.

5.2 PROJECT PLANNING AND DESIGN ALTERNATIVES

Namibian legislation pertaining to the petroleum industry dictates that all fuel installations must adhere to SANS standards which aims at designing safe and secure facilities, protecting against environmental pollution, fire, etc. No design alternatives are thus considered in terms of the fuel storage and dispensing infrastructure. The Proponent should however consider the installation of energy and water saving equipment and possibly the installation of renewable energy such as photovoltaic panels.

5.3 No Go Alternative

The proposed facility will provide a strategically located fuel retail service at the Elisenheim Lifestyle Estate, ensuring reliable access to fuel for residents and commuters in the area. The development will create opportunities for local contractors and service providers during the construction phase, while the operational phase will support employment, skills development, and training opportunities. Should the project not receive an environmental clearance certificate, there would be a loss of capital investment, local employment growth, and associated skills transfer. This would negatively impact the spending power of the surrounding community, while also reducing potential revenue generation for Namibia through business activity and taxes.

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 facility.

Table 6-1 Namibian law applicable to the fuel retail facility

Table 6-1 Namibian law applicable to the fuel retail facility 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 		
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 		
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) Prescribes South African National Standards (SANS) or equivalents for construction, operation and decommissioning of petroleum facilities (refer to Government Notice No. 21 of 2002) 		
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. 		
Water Resources Management Act Act No. 11 of 2013, Government Notice No. 269 of 2023	 Provides for management, protection, development, use and conservation of water resources. Provides for licencing and permitting of boreholes, dams and abstraction of groundwater. Prevention of water pollution and assignment of liability. 		

Law	Key Aspects
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.
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 (City of Windhoek)	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.		
Sewerage and Drainage Regulations	Regulates discharges into sewer systems.		
	• Provides standards to which effluents entering a sewer system must adhere.		
	• Regulates storm water run-off.		

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 10089-3:2010 is specifically aimed at storage and distribution of petroleum products at fuel retail facilities and consumer installations.
	 Provide requirements for spill control infrastructure

The fuel retail facility is listed as an activity requiring an environmental clearance certificate as per the following points from Section 9 of Government Notice No. 29 of 2012:

Hazardous Substance Treatment, Handling and Storage

- 9.1 "The manufacturing, storage, handling or processing of a hazardous substance defined in the Hazardous Substances Ordinance, 1974." (The fuel retail facility will store and handle hazardous substances in the form of fuel.)
- 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." (The fuel retail facility will store and handle hazardous substances in the form of fuel which is permitted by the Ministry Industries, Mines and Energy.)
- 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 metres at any one location." (The fuel retail facility will store and handle more than 30 m³ of fuel.)
- 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." (The facility will be a filling station with petrol and diesel.)"

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 proposed facility is located at the corner of Elisenheim and Damaskus Street at the Elisenheim Lifestyle Estate (-22.451393°S, 17.080497°E) (Figure 4-2). The property of the proposed development is situated at the Elisenheim Lifestyle Estate, north of Windhoek, and falls within erven designated for commercial use in the estate's development framework. Access to and from the site will be from Elisenheim and Damaskus Streets, which links directly to the main access routes connecting Elisenheim with Windhoek. The only developed infrastructure around the site is a small shopping complex to the north and a utilities building to the north-northwest.

Implications and Impacts

The site has been designated within the Elisenheim Lifestyle Estate development plans for commercial purposes such as the proposed fuel retail facility. It will be secured and managed in line with planning requirements, ensuring that no significant negative impacts are expected on nearby or adjacent residential and community establishments.

7.2 CLIMATE

A general lack of weather stations in Namibia, especially in rural areas, is problematic when attempting to get accurate climate data and descriptions for specific locations. Most of the weather stations that were operational in the mid to late 1900's have been closed. Climate descriptions are thus based on old measured data, crudely extrapolated for Namibia, and modelled data from satellite imagery. The following is thus a general description of the expected climatic conditions in the project area. Geographical features such as hills, river courses, low and high laying areas can significantly influence localised weather and especially temperatures. Data was extracted from the 2022 Atlas of Namibia unless otherwise specified (Atlas of Namibia Team, 2022).

According to the Köppen-Geiger Climate Classification system the project is located in a hot semi-arid climate (BSh) (http://koeppen-geiger.vu-wien.ac.at/present.htm). This means that the area receives precipitation below potential evapotranspiration, but not as low as a desert climate and has a mean annual temperature of at least 18 °C.

Average rainfall received is between 300 and 350 mm/a, with a variation of 30 to 40%. Monthly rainfall peaks in February. The potential evapotranspiration is 2,500 to 2,600 mm/a. By dividing the mean annual potential evapotranspiration into the mean annual precipitation, an aridity index value for the area was computed as 0.12, which indicates the area to be arid. A comparison of this data can be made with long term precipitation data obtained from the CHIRPS-2 database (Funk et al., 2015). 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 in-situ station data and therefore represents more recent data. Data is averaged over an area of roughly 5 km by 5 km. This averaging effect should be kept in mind during data analyses as high rainfall from single thunderstorm cells would be averaged out, thereby providing a reduced daily maximum rainfall value.

Based on CHIRPS data, precipitation for the last 43 years was calculated as 372 mm/a, with a coefficient of variance of 33%. Heavier precipitation (single day events) occur between Jan and March. The highest single day maximum precipitation of 72 mm was recorded in Apr based on the last 43 years' data. Daily and seasonal precipitation data (Funk et al., 2015) is presented in Table 7-1 and in Figure 7-1. Seasonal (July to June) total precipitation, centred on the average line for the last 43 years, is presented, with the daily total precipitation and the seasonal cumulative precipitation. From the figure it is clear that 7 out of the last 10 seasons were below the average.

Table 7-1 Precipitation 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)	13	19	10	6	0	0	0	0	0	0	6	7
Maximum (mm)	283	264	182	162	11	4	0	1	8	48	73	133
Average (mm)	87	97	72	37	1	0	0	0	1	11	24	41
Variability (%)	65	55	61	97	195	304	374	330	140	106	65	67
Daily maximum (mm)	46	55	46	72	9	4	0	1	5	25	25	25
Average rain days	9	10	7	3	1	0	0	0	1	2	4	5

Season July - June average: 372 mm | Season coefficient of variation: 33 % Date range: 1981-July-1 to 2025-June-30 | Lat: 22.45139°S; Long: 17.08050°E

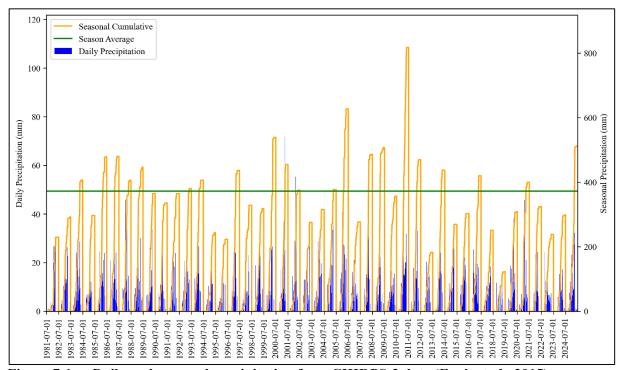


Figure 7-1 Daily and seasonal precipitation from CHIRPS-2 data (Funk et al., 2015)

Atlas data indicates the average annual minimum temperature as between 6 and 8 °C, while the average annual maximum temperature is between 32 and 34 °C, with an average annual temperature range of 24 to 26 °C. An average diurnal temperature (difference between daily minimum and maximum temperature) for this area is ranging from 14 to 16 °C. Direct normal solar irradiance for the area is 7.709 kWh/m²/day.

Similar to precipitation data, monthly temperature data was retrieved from the Modern-Era Retrospective analysis for Research and Applications version 2 (MERRA-2) data set for a height of 2 m above surface (Gelaro et al., 2017). This data set is a NASA atmospheric reanalysis, incorporating satellite data integration and aims at historical climate analyses at 0.5° by 0.625° spatial resolution. Table 7-2 presents statistics of daily data abstracted from the data set for the last 43 years. The lowest temperature recorded over the data period was (-4.21 °C) in July, with on average 2 days in July being below freezing point. A maximum temperature of 38.25 °C was measured in December.

Month Mar May Jun Jul Aug Apr Nov Dec Minimum (°C) -2 -1 -3 Maximum (°C) Average (°C) Diurnal (°C) Average days < 0°C

Table 7-2 Temperature statistics based on Merra-2 data (Gelaro et al., 2017)

Implications and Impacts

Rainfall events are often thunderstorms with heavy rainfall that can occur in short periods of time ("cloud bursts"). High intensity and erratic rainfall events may result in flash floods along the surrounding river courses and make driving conditions dangerous. Pollution that is not contained on site can enter surface runoff and pollute the Klein Windhoek River which ultimately enters the Swakoppoort Dam. It can also infiltrate soil and pollute shallow groundwater in primary aquifers.

7.3 TOPOGRAPHY AND DRAINAGE

The site is located within the south to north Windhoek Graben of the Khomas Hochland Plateau region (Figure 7-2). The western part of the plateau features rolling hills, with numerous nearby summits that reveal remnants of ancient land surfaces. The graben is relatively flat and the site itself is located on a level portion of land east of the Klein Windhoek River, the main drainage line in the area. Surface drainage from the site is towards the west of the site into the Klein Windhoek River, a tributary of the Swakop River (Figure 7-3). East to south-east of the site the elevation increase by about 100 mamsl before decreasing again into the Döbra River Valley. Thereafter the elevation increases sharply to above 2,000 m with the elevation of Haynschlucht at 2033 mamsl. The Windhoek Graben, which strikes in a northern direction, is primarily responsible for forming the broader valley side.

Implications and Impacts

The hill and mountainous terrain east of the site has steep slopes which will cause a greater velocity of storm water runoff during rainfall events. The site itself is not expected to create high velocity storm water. Any pollutants that are not contained on site 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.

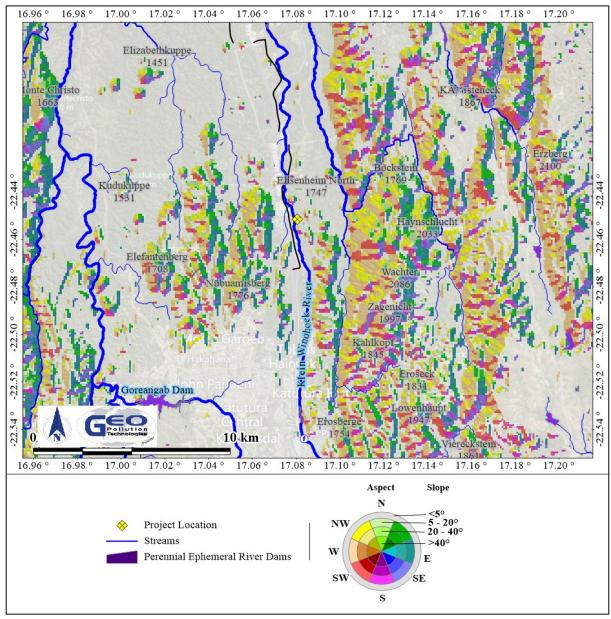


Figure 7-2 Aspect, slope and major surface drainage lines

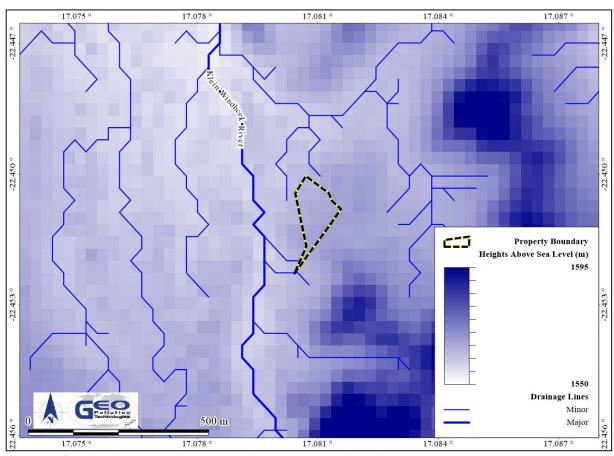


Figure 7-3 Surface elevation and drainage at the project site

7.4 GEOLOGY AND HYDROGEOLOGY

The dominant soil type for the project area is Colluvic Skeletic Leptic Regosol which refers to a young, undeveloped soil type lacking in diagnostic horizons and revealing very little evidence of its exact formation. These soils are common in areas where arid conditions have severely restricted the erosive processes and deposition of sediments. This also has the effect of making regosols on slopes highly erosive. In addition to this, the regosol of this particular area is known for: 1) having, between 25 and 100 cm from the soil surface, continuous hard rock; 2) having, to a depth of 100 cm from the soil surface, between 40 and 90% (by weight) gravel or other coarse fragments; and 3) having formed by sedimentation through human-induced erosion. The composition of soil in this particular area is roughly 65-70% sand, 10-15% silt and 25-30% clay which gives it the characteristics and texture of loam soil.

At the site, the Namibian Age geology comprises of the Kuiseb Formation of the Swakop Group. The Kuiseb Formation is dominated by argillaceous assemblages of mica schist and micaceous quartzite with minor graphitic schist, carbonaceous schist, calc-silicate rocks, metagreywacke, migmatite, marble and amphibolite (NKs) (Killick, 2000). A relative thin surficial soil cover (Qa) (alluvium) of the Quaternary Age is expected west of the site. The surficial deposits consist mainly of weathered mica schist and sand with localised deposits of quartz pebbles and large boulders.

Rocks of extrusive origin make up the regional geology of the area, consisting of metabasic rocks from the Matchless Belt and also serpentenite deposits. The metabasic rocks of the Matchless Belt consist mainly amphibolite, amphibole schist, metagabbro and ultramafic schist. The Matchless Belt is a laterally continuous belt of metamorphosed mid-ocean ridge basalts within metapelitic schist (Kukla, 1992). The serpentinites are derived from mantle harzburgites which also occur within the metapelitic schist of the Kuiseb Formation (Barnes, 1982). The Matchless Belt occur rough 6 km to the southeast and serpentenite about 1.5 km north of the project area.

The complex geology of the Windhoek area is a result of numerous folding and faulting episodes, including thrusting and rifting, to which the area has been subjected. The metasedimentary formations of the study area strike in an east-northeasterly direction and dip 15-35° to the north-northwest. A number of north-northeast, northeast and northwest striking faults and joints are found in the area forming the major underground water conduits for the area. Mica schist is prone to plastic deformation rather than brittle fracturing and therefore exhibits significantly lower secondary porosity and permeability. Quartzite, and to some degree micaceous quartzite, is subject to brittle deformation and thus exhibits relatively high secondary porosity and permeability due to jointing.

Two main aquifer types are found in the area, namely secondary (fractured rock) aquifers hosted in the mica schist of the Kuiseb Formation, and primary (unconsolidated sediment) aquifers formed in the Klein Windhoek River valley alluvial (Qa). Windhoek has a regional groundwater flow from south to north (Figure 7-4). Groundwater flow is expected to take place through primary porosity in the surface cover, while it is expected to flow along fractures, faults and other geological structures (secondary porosity) present within the underlying formations (hard rock formations). Local flow patterns may vary due to groundwater abstraction.

Water is utilized in the area, with 51 known boreholes in a 5 km radius around the project. The groundwater information was obtained from Department of Water Affairs (DWA) borehole database. This database is generally outdated and more boreholes might be present. The average depth of 28 of the 51 boreholes is 90 m below surface and the yield of 21 of the 51 boreholes ranges between 1 and 23 m³/h. The average groundwater level of 16 of the 51 known boreholes is 33 m below surface, ranging between 5 and 113 m below surface (Table 7-3).

No Municipal production boreholes are situated closer than 2 km from the site. The usage of private boreholes is not clear but they should be considered to be at risk if pollution of the aquifer takes place. In the greater Brakwater area, groundwater is used primarily for domestic and small scale farming activities. Water in the area is often brackish and may be contaminated by runoff from the Klein Windhoek River which flows through the city.

According to the Ministry of Agriculture, Water and Forestry (MAWF, 2006) the project is located inside the Windhoek-Gobabis Subterranean Water Control Area (Extension). This is set forth in the Government Notice 47 of 26 March 1976 (Figure 7-4).

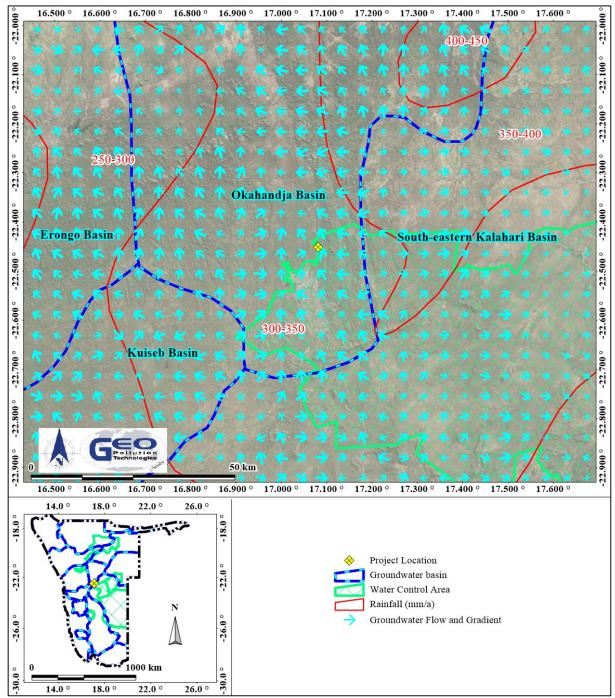


Figure 7-4 Water control area and groundwater flow

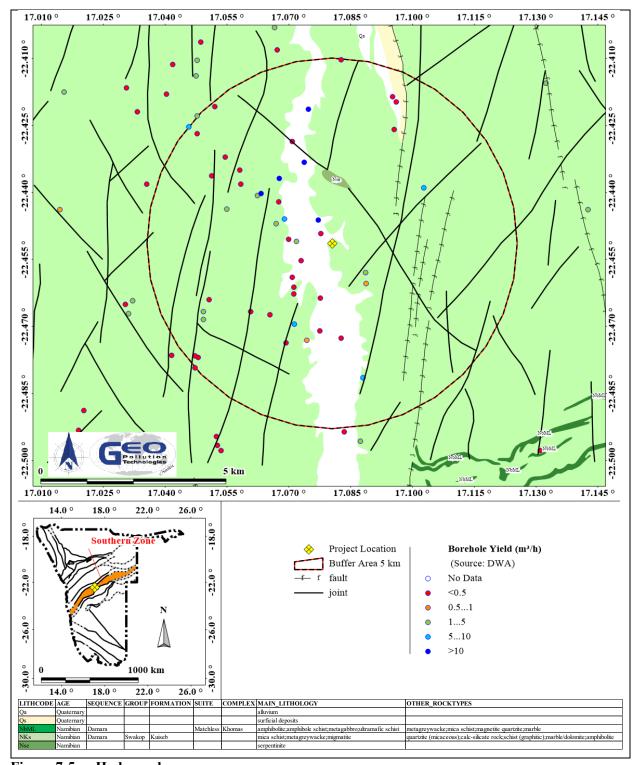


Figure 7-5 Hydrogeology map

Table 7-3 Groundwater statistics

	Depth (m)	Yield (m³/h)	Waterlevel (m)	Waterstrike (m)	TDS (ppm)	SO ₄ (ppm)	NO ₃ (ppm)	F (ppm)		
Datapoints	28	21	16	51	48	48	26	48		
Minimum	13	1	5	0	365	4	0.8	0.3		
Average	90	6	33	8	1411	341.3	10.4	1.1		
Maximum	191	23	113	125	6238	2500	81.0	4.6		
Group A	0-50	>10	0-10	0-10	0-1000	0-200	0-10	0-1.5		
	3	5	2	44	22	26	21	37		
Group B	50-100	5-10	10-50	10-50	1000-1500	200-600	10-20	1.5-2.0		
	15	5	11	4	13	14	2	6		
Group C	100-200	0.5-5	50-100	50-100	1500-2000	600-1200	20-40	2.0-3.0		
	10	11	2	2	5	4	1	4		
Group D	>200	0-0.5	>100	>100	>2000	>1200	>40	>3		
	0	0	1	1	8	4	2	1		
51 boreholes	1 boreholes in a 5.0 km radius from 22.45139°S 17.08050°E									

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.

Implications and Impacts

A medium risk to groundwater is expected due to the shallow, erosion-prone regosol soils and the fractured mica schist geology underlying the site. Groundwater is an important resource in the area and would be at risk if spills are not properly contained, cleaned, and disposed of. Groundwater is the property of the Government of Namibia.

7.5 PUBLIC WATER SUPPLY

Water consumption in Windhoek is well managed by means of water demand management. Nevertheless, water is a scarce resources in Namibia and represents a constraint for sustainable development in future. Consumption increase with the soaring 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 also artificially recharge the Windhoek aquifer developed abstraction boreholes of between 400 and 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 extremely 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

Water pollution in terms of water security in the central areas of Namibia is considered to be a major concern. Surface runoff of pollution into the Swakoppoort Dam may impact water supply.

7.6 FAUNA AND FLORA

This project area is located in the Tree and Shrub Savanna biome and the Acacia Tree and Shrub Savanna sub-biome. It has a highland shrubland vegetation type dominated by *Acacia* spp that grow in its arid environment along with short shrubs and grasses that grow in the shallow soils of

the area's hills. It can further be classified as part of the floristic group of Highlands above 1500 mamsl.

The site itself has previously been impacted by anthropogenic activities. The main tree present on site is *Acacia mellifera*, an indigenous species often encroaching on disturbed areas. Some Camelthorn (*Acacia erioloba*) trees are present (Photo 7-1), which are a protected species. The surrounding area is characterised by relatively high plant diversity, with dense shrubland vegetation and a variety of large trees and shrubs occurring on the adjacent hillside. These areas provide habitat for a range of animal and bird species. An overview of vegetation expected in the area is presented in Table 7-4.

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

Biome	Savanna					
Vegetation type	Thornbush shrubland					
Vegetation structure type	Dense shrubland					
Diversity of higher plants	Highest (Diversity rank = 1) [1 - 7 representing highest to lowest diversity]					
Number of plant species	More than 500					
Percentage tree cover	26-50					
Percentage tree cover	2-5					
Tree height (m)	26-50					
Percentage shrub cover	1-2					
Shrub height (m)	2-10					
Percentage dwarf shrub cover	< 0.5					
Dwarf shrub height (m)	51-75					
Percentage grass cover	0.5-1					
Grass height (m)	0.5-1					
Thornbush shrubland dominant plants	Acacia mellifera, Acacia reficiens, Acacia fleckii, Boscia albitrunca, Lonchocarpus nelsii, Acacia erioloba					

The proximity of the site to the Elisenheim Lifestyle Development, coupled with previous anthropogenic disturbance, decreases the presence of large game in the area. Periodically mammals like kudu, duiker, warthog, baboons, mogoose and porcupines may be observed in the area. Especially during droughts. Birds will especially frequent the Klein Winhoek River area and guinea fowl, francolins, grey louries, hornbills and rock pigeons may be some of the more frequently observed larger bird species.

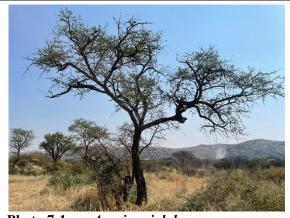


Photo 7-1 Acacia erioloba



Photo 7-2 Shrubs like Acacia mellifera

Implications and Impacts

The site currently supports some plants and small animals which will be removed during construction. No significant biodiversity impacts are anticipated once the facility is operational. However, uncontrolled pollution during construction or operations may still cause damage to surrounding biodiversity.

7.7 DEMOGRAPHIC AND ECONOMIC CHARACTERISTICS

The project area falls within the Windhoek Townlands and in the Windhoek Rural Constituency of the Khomas Region. Demographic characteristics of Windhoek Rural Constituency, Windhoek Urban, the Region and Namibia as a whole are presented in Table 7-5 (National Planning Commission, 2023).

Table 7-5 Demographic characteristics of Windhoek, the Khomas Region and Nationally (Namibia Statistics Agency, 2023; Namibia Statistics Agency, 2023)

	Windhoek Rural	Windhoek Urban	Khomas Region	Namibia
Population (Males)	16,452	236,027	241,085	1,474,224
Population (Females)	13,627	250,142	253,520	1,548,177
Population (Total)	30,079	486,169	494,605	3,022,401
Unemployment (15+ years)	N/A	N/A	21.7%	33.8%
Literacy (15+ years)	N/A	N/A	95.8%	87.3%
Education at secondary level (15+ years)	N/A	N/A	N/A	24.8%

Implications and Impacts

The proposed facility will provide employment to people from the area. Some skills development and training would also be a benefit employees during the construction phase.

7.8 CULTURAL, HERITAGE AND ARCHAEOLOGICAL ASPECTS

There are no churches, mosques or related buildings in close proximity to the site, nor have any archaeological resources been noted. No other structures, sites or spheres of heritage of cultural significance were determined to be in close proximity to the site.

Implications and Impacts

No implications or impacts expected.

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 projects and to identify additional issues which they feel should be addressed in the environmental assessment.

Public participation notices were advertised twice for two weeks in the national papers: Republikein and Namibian Sun on 1 and 8 September 2025. A site notice was placed at the on site. Interested and affected parties were identified and notified of the project. Notification letters were hand delivered to available neighbours as well as the Ministry of Mines and Energy. See Appendix A for proof of the public participation processes. One resident of Elisenheim Lifestyle Estate was registered as an IAP but no concerns regarding the project were raised during the public consultation phase.

9 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, construction (also upgrades, maintenance, etc. – see glossary for

"construction") and potential decommissioning activities of the facility. An EMP based on these identified impacts are also incorporated into this section.

For each impact an Environmental Classification 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 9-1).

Ranking formulas are then calculated as follow:

Environmental Classification = $A1 \times A2 \times (B1 + B2 + B3)$.

The environmental classification of impacts is provided in Table 9-2.

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 9-1 Assessment criteria

Criteria	Score				
Importance of condition (A1) – assessed against the spatial boundaries of human inte affect	rest it will				
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 or condition	an impact				
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	1				
No change/Not applicable	1				
Temporary	2				
Permanent	3				
Reversibility $(B2)$ – defines whether the condition can be changed and is a measure of over the condition	the control				
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				

1 able 9-2 Environmental classification (Fastakia 1998)									
Environmental Classification	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							

Table 9-2 Environmental classification (Pastakia 1998)

9.1 RISK ASSESSMENT AND ENVIRONMENTAL MANAGEMENT PLAN

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

The objectives of the EMP are:

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

Various potential and definite impacts will emanate from the construction, operational and decommissioning 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 related to the construction and operational phases are expected to mostly be of low to medium significance and can mostly be mitigated to have a low significance. The extent of impacts are mostly site specific to local and are not of a permanent nature. Due to the nature of the surrounding areas, cumulative impacts are possible and include noise pollution and traffic impacts.

9.1.1 Planning

During the phases of planning for construction, operations and decommissioning of the facility, it is the responsibility of 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 (maintenance) and operations of the facility are in place and valid.

- Ensure all appointed contractors and employees enter into an agreement which includes the EMP. Ensure that the contents of the EMP are understood by the contractors, subcontractors, employees and all personnel present or who will be present on site.
- ♦ Make provisions to have a Health, Safety and Environmental (HSE) Coordinator to implement the EMP and oversee occupational health and safety as well as general environmental related compliance at the site.
- Make provisions to have a community liaison officer on site who will handle complaints and community input, and through whom, where reasonable, monitoring data can be requested. Communicate the contact details of the community liaison officer to interested and affected parties when the project is initiated.
- Have the following on site to deal with all potential emergencies:
 - o Emergency response plan and HSE manuals;
 - o Adequate protection and indemnity insurance cover for incidents;
 - Relevant safety standards;
 - o Procedures, equipment and materials required for emergencies.
- If one has not already been established, establish and maintain a fund for future ecological restoration of the project site, should project activities cease and the site is decommissioned and environmental restoration or pollution remediation is required.
- Establish and / or maintain a reporting system to report on aspects of construction activities, operations and decommissioning as outlined in the EMP.
- Prepare and submit environmental monitoring reports as per the conditions of the ECC.
- Appoint a specialist environmental consultant to update the EIA and EMP and apply for renewal of the ECC prior to expiry.

9.1.2 Employment

During the construction phase, both skilled and unskilled labour will be required for earthworks and the development of the necessary infrastructure. Unskilled labour will be sourced locally where possible, while specialised contractors will be appointed for technical work to ensure compliance with safety and engineering standards.

Once operational, the facility will continue to create employment opportunities through the appointment of pump attendants, shop staff, and maintenance personnel. Skilled contractors from within Namibia will be utilised for specialised maintenance tasks, while unskilled labour may be sourced from the local community.

Project Activity / Resource	Nature (Status)	(A1) Importance	(A2) Magnitude	(B1) Permanence	(B2) Reversibility	(B3) Cumulative	Environmental Classification	Class Value	Probability
Construction	Employment and contribution to local economy	2	1	2	2	2	12	2	Definite
Daily Operations	Employment contribution to local economy	3	1	3	2	2	21	3	Definite
Indirect Impacts	Decrease in unemployment	3	2	3	2	2	42	4	Definite

Desired Outcome: 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.

Responsible Body:

♦ Proponent

Data Sources and Monitoring:

• Bi-annual summary report based on employee records.

9.1.3 Skills, Technology and Development

During both the construction and operational phases, training will be provided to a portion of the workforce. This will enable the transfer of skills to unskilled labourers for general tasks, while also ensuring that contractors and employees are familiar with safety and operational requirements. The technologies to be implemented at the facility, although standard in the petroleum retail sector, may be relatively new to the local workforce and will therefore support their development and future employability.

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	Probable
Daily Operations	Technological development and transfer of skills	3	1	3	2	2	21	3	Definite
Indirect Impacts	Economic development	3	1	3	2	2	21	3	Definite

<u>Desired Outcome:</u> To see an increase in skills of local Namibians, as well as development and technology advancements in associated industries.

Actions

Enhancement:

- If the skills exist locally, contractors must first be sourced from the town, then the region and then nationally. Deviations from this practise must be justified.
- Skills development and improvement programs to be made available as identified during performance assessments.

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.

9.1.4 Revenue Generation

The project will contribute to national and local revenue streams during the construction and operational phases. During the construction phase, wages and salaries will be paid to both skilled and unskilled workers, creating short-term income opportunities. In the operational phase, the employment of skilled and professional staff will permanent, with their wages and salaries contributing to increased household spending power in the local economy. The retailing of fuel will generate revenue through taxes and levies paid to the national treasury, while the convenience store and associated services will further support the circulation of money within the community through the sourcing of goods and services.

Project Activity / Resource	Nature (Status)	(A1) Importance	(A2) Magnitude	(B1) Permanence	(B2) Reversibility	(B3) Cumulative	Environmental Classification	Class Value	Probability
Construction	Contribution to local economy	2	1	2	2	2	12	2	Definite
Daily Operations	Contribution to local economy	3	2	3	2	2	42	4	Definite
Indirect Impacts	Increase in revenue generated	3	1	3	2	2	21	3	Definite

<u>Desired Outcome:</u> Contribution to national treasury and remuneration in accordance with Namibian law

Actions

Enhancement:

- The Proponent must employ or contract local Namibians where possible.
- Payment of taxes, levies, salaries, etc. in accordance with Namibian law.
- Sourcing of local goods and services as far as is practically possible.

Responsible Body:

♦ Proponent

Data Sources and Monitoring:

• Bi-annual summary report based on employee records.

9.1.5 Fuel Supply

The facility will contribute to ensuring a reliable and convenient supply of fuel to the residents of the Elisenheim Lifestyle Estate, surrounding communities and local businesses.

Project Activity / Resource	Nature (Status)	(A1) Importance	(A2) Magnitude	(B1) Permanence	(B2) Reversibility	(B3) Cumulative	Environmental Classification	Class Value	Probability
Daily Operations	Fuel supply to the nearby community	2	2	3	2	2	28	3	Definite

<u>Desired Outcome:</u> Ensure a secure fuel supply remains available.

Actions

Enhancement:

- Ensure compliance to the petroleum regulations of Namibia which specify adherence to SANS standards for fuel retail facilities.
- Proper management to ensure constant and reliable supply.
- Record supply problems and take corrective actions.
- Communicate any fuel shortages and expected delays in supply at a visible location on site.

Responsible Body:

• Proponent

Data Sources and Monitoring:

• Record supply problems and corrective actions taken and compile a bi-annual summary report.

9.1.6 Demographic Profile and Community Health

The facility will rely on labour for both construction and operational activities. Given the relatively limited scale of the project, it is not anticipated that the development will alter the demographic profile of the local community. During construction and operations, standard occupational health and safety measures will be implemented to protect employees, while awareness and training programmes will help reduce risks associated with communicable diseases and social challenges, sometimes linked to the broader fuel and transport sectors. Spills and leaks may present risks to members of the public especially if groundwater is polluted.

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 increased spending power of employees of contractors	2	-2	2	2	2	-24	-3	Probable
Construction	Increased economic resilience and improved livelihoods of employees of contractors	2	-2	2	2	2	-24	-3	Definite
Daily Operations	Social ills related to unemployment and cross country transport	2	-1	3	2	2	-14	-2	Probable
Daily Operations	Increased economic resilience and improved livelihoods	2	2	3	2	2	28	3	Definite
Indirect Impacts	The spread of diseases	3	-1	3	2	2	-21	-3	Probable

<u>Desired Outcome:</u> To prevent the in-migration and growth in informal settlements and to prevent the spread of diseases such as HIV/AIDS.

Actions:

Prevention:

- Employ only local people from the area, deviations from this practice should be justified appropriately.
- Adhere to all municipal by-laws relating to environmental health which includes, but is not limited to, sand and grease traps for the various facilities and sanitation requirements.

Mitigation:

- Educational programmes for employees on HIV/AIDs and general upliftment of employees' social status.
- Appointment of reputable contractors.

Responsible Body:

♦ Proponent

- Facility inspection sheet for all areas which may present environmental health risks, kept on file.
- Bi-annual summary report based on educational programmes and training conducted.
- Bi-annual report and review of employee demographics.

9.1.7 Health, Safety and Security

Activities associated with both the construction and operational phases will rely on human labour and will therefore expose workers to certain health and safety risks. During construction, risks may include those linked to earthworks, infrastructure development, and the presence of moving vehicles and machinery. In the operational phase, the handling of petroleum products will present the main risks to employees, such as exposure to hazardous chemicals through inhalation or skin contact. Health and safety measures, including training, personal protective equipment, and adherence to the EMP, will be implemented to minimise these risks. Security risks will also need to be managed, with measures put in place to prevent unauthorised entry, theft, and potential acts of 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	2	2	1	-10	-2	Probable
Daily Operations	Physical injuries, exposure to chemicals and criminal activities	2	-2	3	2	2	-28	-3	Probable

<u>Desired Outcome:</u> 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, which includes: colour coding of pipes, operational, safe work and medical procedures, permits to work, emergency response plans, housekeeping rules, MSDS's and signage requirements (personal protective equipment (PPE), flammable etc.).
- All health and safety standards specified in the Labour Act should be complied with.
- Clearly label dangerous and restricted areas as well as dangerous equipment and products, especially during the construction phase.
- Equipment on site must be locked away or placed in a way that does not encourage criminal activities (e.g. theft).
- Provide all employees with required and adequate PPE.
- Ensure that all personnel receive adequate training on operation of equipment/handling of hazardous substances.
- Implementation of maintenance register for all equipment and fuel / hazardous substance storage areas.
- Selected personnel should be trained in first aid and a first aid kit must be available on site. The contact details of all emergency services must be readily available.
- Security procedures and proper security measures must be in place to protect workers and clients.
- Develop emergency response plans for all possible health, safety and security impacts and appoint responsible personnel in key positions to activate and oversee such plans when required.
- Conduct regular health checks and medical surveillance of staff exposed to hazardous substances, in line with occupational health guidelines.

Mitigation:

- For all emergency situations, the appropriate emergency response plan must be implemented as soon as possible in order to minimize the magnitude of impacts or prevent such impacts from developing into more severe impacts.
 - For security incidents, ensure proper reporting, investigation, and follow-up actions to strengthen future prevention measures.

Responsible Body:

♦ Proponent

- Any incidents must be recorded with action taken to prevent future occurrences.
- ♦ A report should be compiled bi-annually of all incidents reported. The report should contain dates when training were conducted and when safety equipment and structures were inspected and maintained.

9.1.8 Traffic

The presence of the facility will result in an increase in traffic flow in the area, particularly associated with customer vehicles and the periodic delivery of fuel by road tankers. This may increase the risk of traffic incidents, especially during fuel offloading activities. During the construction phase, temporary traffic impacts may also occur as a result of heavy vehicles accessing the site for the delivery and removal of construction materials and equipment. These impacts will be managed through appropriate traffic control measures and coordination with the relevant authorities to ensure safe access to and from the site.

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	Definite
Daily Operations	Increase traffic, road wear and tear and accidents	2	-2	3	2	3	-32	-3	Probable

<u>Desired Outcome:</u> Minimum impact on traffic and no transport or traffic related incidents.

Actions

Prevention:

- Erect clear signage regarding access and exit points at the facility.
- Schedule fuel deliveries and construction vehicle movements outside peak traffic hours where possible.
- Tanker trucks collecting and delivering fuel should not be allowed to obstruct any traffic.

Mitigation:

- If any traffic impacts are expected, traffic management should be performed.
- Ensure enough pump attendants are on duty when more patrons than usual are expected, such as before fuel price increases, come into effect.

Responsible Body:

♦ Proponent

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

9.1.9 Air Quality Related Impacts

During the operational phase, fuel vapours will be released into the atmosphere during the refuelling of underground storage tanks as well as at the dispensing points. Prolonged exposure to such vapours may have carcinogenic effects. During the construction phase, dust will be generated where soil surfaces are exposed, which may temporarily affect local air quality.

Project Activity / Resource	Nature (Status)	(A1) Importance	(A2) Magnitude	(B1) Permanence	(B2) Reversibility	(B3) Cumulative	Environmental Classification	Class Value	Probability
Construction	Exposure to dust construction activities and trucks accessing the site	1	-2	2	2	2	-12	-2	Probable
Daily Operations	Exposure to fuel vapours during refuelling, inhalation of exhaust gases from vehicles accessing the site	2	-2	3	2	2	-28	-3	Probable

<u>Desired Outcome:</u> To prevent health impacts related to reduced air quality.

Actions

Mitigation:

- Employees should be informed about the dangers of fuel vapours.
- Vent pipes must be properly placed as per SANS requirements.
- Dust masks should be provided to employees where dust impacts are expected and dust suppression by means of water implemented.
- Refuelling activities should be supervised to minimise spillage and unnecessary vapour release.
- Engines of delivery trucks and construction vehicles should not be left idling unnecessarily on site.
- All fuel storage and dispensing equipment should be maintained to prevent leaks and excessive vapour emissions.

Responsible Body:

Proponent

- Any complaints received regarding fuel vapours or dust should be recorded with notes on action taken.
- Keep a maintenance and inspection log for vent pipes and vapour recovery systems.
- All information and reporting to be included in a bi-annual report.

9.1.11 Fire

Construction and operational activities may increase the risk of fires. Unleaded petrol is highly flammable and, as a static accumulator, may ignite if handled incorrectly.

Project Activity / Resource	Nature (Status)	(A1) Importance	(A2) Magnitude	(B1) Permanence	(B2) Reversibility	(B3) Cumulative	Environmental Classification	Class Value	Probability
Construction	Fire and explosion risk	2	-2	2	2	1	-20	-3	Improbable
Daily Operations	Fire and explosion risk	2	-2	3	2	2	-28	-3	Probable

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

Actions:

Prevention:

- A holistic fire protection and prevention plan must be developed for the site and it should specifically take into account flammable products stored on site. This plan must include an emergency response plan, firefighting plan and a spill recovery plan and should have dedicated assigned personnel to oversee their development and implementation.
- Firefighting equipment must be maintained and regularly serviced.
- Regular personnel training (firefighting, fire prevention and responsible housekeeping practices). The importance of grounding portable fuel tanks, and only dispensing of fuel into authorised containers, must be made clear.
- Ensure all chemicals are stored strictly according to MSDS and SANS instructions. This include segregation of incompatible products.
- Maintain regular site, mechanical and electrical inspections and perform regular maintenance.
- Clean all spills/leaks without delay and dispose of any contaminated material according to their MSDS requirements and at suitable locations to prevent the accumulation of flammable or explosive products on site.
- For fuel storage, 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) and SANS standards for operation and maintenance of the consumer fuel installation should be followed.
- Install and maintain clearly marked emergency shut-off switches at fuel dispensing points.
- Ensure adequate water supply is available on site for firefighting purposes.
- Conduct fire drills at least regularly to test response readiness.

Mitigation:

• For any fire related emergency situation, the appropriate emergency response plan must be implemented as soon as possible in order to minimise the magnitude of impacts or prevent such impacts from developing into more severe impacts.

Responsible Body:

Proponent

- 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 report should be compiled bi-annually of all incidents reported. The report should contain dates when fire drills were conducted and when fire equipment was tested and training given.

9.1.12 Noise

Noise pollution will be generated by heavy and light motor vehicles accessing the site to offload fuel or refuel. During the construction phase, noise will result from heavy vehicles transporting materials, earthmoving machinery, and general building activities.

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	2	-1	2	2	1	-10	-2	Probable
Daily Operations	Noise generated from the operational activities – nuisance and hearing loss		-1	3	2	2	-14	-2	Probable

<u>Desired Outcome:</u> To prevent any nuisance and hearing loss due to noise generated.

Actions

Prevention:

- Follow Health and Safety Regulations of the Labour Act and World Health Organization (WHO) guidelines on maximum noise levels (Guidelines for Community Noise, 1999) to prevent hearing impairment and not to cause a nuisance at nearby receptors.
- All machinery must be regularly serviced to ensure minimal noise production.
- Keep volume of public address systems on a level where neighbours are not impacted on.
- ♦ Manage noise caused by clients loud music etc.
- Restrict construction activities that generate excessive noise to daytime working hours.

Mitigation:

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

Responsible Body:

♦ Proponent

- ♦ Health and Safety Regulations of the Labour Act and WHO
- Maintain a complaints register.
- Bi-annual report on complaints and actions taken to address complaints and prevent future occurrences.

9.1.13 Waste production

Waste will be produced during the construction and operational phases of the facility. This will include building rubble, hazardous waste associated with the handling of hydrocarbon products as well as maintenance waste such as building rubble and discarded equipment contaminated by hydrocarbons. Contaminated soil and water are also considered as hazardous waste. In addition, domestic waste will be generated by the convenience shop and related operations. Waste presents a contamination risk and, if not removed regularly, may become a fire hazard.

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		-2	2	2	2	-12	-2	Definite
Daily Operations	Excessive waste production, littering, contaminated materials	1	-2	3	2	2	-14	-2	Definite

<u>Desired Outcome:</u> To reduce the amount of waste produced and prevent pollution and littering.

Actions

Prevention:

- ♦ Waste reduction measures should be implemented and all waste that can be reused/recycled must be kept separate.
- Ensure adequate waste storage facilities are available.
- Train employees and contractors in proper waste segregation and handling procedures.
- Establish agreements with licensed waste contractors for collection and safe disposal.
- Ensure waste cannot be blown away by wind.
- Prevent scavenging (human and non-human) of stored waste.

Mitigation:

- 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).
- Contaminated soil from spills should be excavated immediately and disposed of at an approved hazardous waste facility.
- Keep records of recycling and recovery initiatives to demonstrate efforts to reduce landfill disposal.
- See the MSDS available from suppliers for disposal of contaminated products and empty containers.
- Liaise with the town council regarding waste and handling of hazardous waste.

Responsible Body:

- ♦ Proponent
- Contractors

- 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.

9.1.14 Ecosystem and Biodiversity Impact

The site is situated at the Elisenheim Lifestyle Estate, where noise impacts will occur during both construction and operations, particularly from vehicles and machinery. As fauna and flora are currently present on the site, their removal will be required during site clearing, resulting in a minor loss of biodiversity at a local scale. The probability of new habitats being created for fauna and flora to establish within the facility once operational will be low. Ecosystem and biodiversity impacts will therefore primarily be associated with the removal of existing vegetation and potential pollution of the surrounding 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	2	2	2	-6	-1	Definite
Daily Operations	Impact on fauna and flora - pollution	2	-1	3	2	2	-14	-2	Improbable

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

Actions.

Prevention:

- Educate all contracted and permanent employees on the value of biodiversity.
- Clearly demarcate construction boundaries to avoid unnecessary clearing beyond the designated footprint.
- Incorporate large Camel-thorn trees, and other protected species on site, into the design of the facility as far as is practically possible.

Mitigation:

- Contain construction material and activities on site.
- Obtain permits for the removal of any protected species during site clearing.
- Report any extraordinary animal sightings to the MEFT.
- Mitigation measures related to waste handling and the prevention of groundwater, surface water and soil contamination should limit ecosystem and biodiversity impacts.
- Prevent 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:

• Any ecologically significant events or sightings to be included in a bi-annual report.

9.1.15 Groundwater, Surface Water and Soil Contamination

Operations will entail the storage and handling of hydrocarbons such as fuels and lubricants. These materials may contaminate surface water, soil, and groundwater. Contamination may result from failing storage facilities and reticulation systems, or from spills and leaks associated with fuel handling, including overfills. During the construction phase, spills and leaks may also occur while hydrocarbons are used or transported on site.

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	2	-1	3	2	1	-12	-2	Probable

<u>Desired Outcome:</u> To prevent the contamination of water and soil.

Actions

Prevention:

- Proper training of operators must be conducted on a regular basis (fuel handling, spill detection, spill control).
- Spill control structures and procedures must be in place according to SANS standards or better and connection of all surfaces where fuel is handled, with an oil water separator.
- Underground storage tanks and pipelines must be fitted with leak detection systems and monitored routinely.
- Regular integrity testing of tanks, pipelines, and oil—water separators must be performed in accordance with manufacturer and regulatory requirements.
- Surfactants (soap) should not be allowed to enter the oil water separator as this will decrease its efficiency.
- The procedures followed to prevent environmental damage during service and maintenance, and compliance with these procedures, must be audited and corrections made where necessary.

Mitigation:

- ♦ Any spillage of more than 200 *l* must be reported to the Ministry of Industries, Mines and Energy.
- Spill clean-up means must be readily available on site as per the relevant MSDS and all spills must be cleaned up immediately.

Responsible Body:

♦ Proponent

- Daily tank inspections and dips to detect product loss due to leaks as soon as possible.
- A report should be compiled bi-annually of all spills or leakages reported. 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 spill was reported to Ministry of Mines and Energy.

9.1.16 Visual Impact

The development of the facility will have a visual impact on the surrounding area, affecting both the aesthetic appearance and, over time, the integrity of the structures. During the operational phase, general upkeep and maintenance will be important to reduce negative visual impacts and to ensure the longevity of the buildings and infrastructure. Future upgrades or improvements will contribute positively to the overall visual character of the facility.

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	Aesthetic appearance and integrity of the site	1	1	3	2	2	7	1	Definite

<u>Desired Outcome:</u> To minimise aesthetic impacts associated with the facility and prevent lighting from being a visual disturbance.

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.
- Lighting should be directed towards the facility and away from residents where possible.
- Minimum lighting necessary for operations to be used at night. The installation of autodimming lights when no movement is detected are desirable.

Responsible Body:

♦ Proponent

Data Sources and Monitoring:

• A report should be compiled every bi-annually of all complaints received and actions taken.

9.1.17 Cumulative Impact

Possible cumulative impacts will arise during both the construction and operational phases of the facility. Construction activities may temporarily increase traffic and noise in the immediate area due to the movement of heavy vehicles and machinery. During the operational phase, cumulative impacts will include increased traffic and associated noise linked to fuel deliveries and customer vehicles accessing the site.

Project Activity / Resource	Nature (Status)	(A1) Importance	(A2) Magnitude	(B1) Permanence	(B2) Reversibility	(B3) Cumulative	Environmental Classification	Class Value	Probability
Daily Operations	The build-up of minor impacts to become more significant	2	-1	3	2	2	-14	-2	Definite

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

Actions

Mitigation:

- ♦ Addressing each of the individual impacts as discussed and recommended in the EMP would reduce the cumulative impact.
- Reviewing bi-annual and annual reports for any new or re-occurring impacts or problems would aid in identifying cumulative impacts and help in planning if the existing mitigations are insufficient

Responsible Body:

♦ Proponent

Data Sources and Monitoring:

• Annual summary report based on all other impacts must be created to give an overall assessment of the impact of the operational phase.

9.2 DECOMMISSIONING AND REHABILITATION

Decommissioning is not foreseen during the validity of the environmental clearance certificate. Decommissioning was however assessed as construction activities include modification and decommissioning. 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 not forming part of post decommissioning use. Any pollution present on the site must be remediated. The impacts associated with this phase include noise and waste production as structures are dismantled. Noise must be kept within Health and Safety Regulations of the Labour Act and WHO standards and waste should be contained and disposed of at an appropriately classified and approved waste facility and not dumped in the surrounding areas. Future land use after decommissioning should be assessed prior to decommissioning and rehabilitation initiated if the land 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.

9.3 ENVIRONMENTAL MANAGEMENT SYSTEM

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

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

10 CONCLUSION

The proposed fuel retail facility at the Elisenheim Lifestyle Estate will provide a reliable supply of fuel and associated convenience services to residents, businesses, and commuters in the area. The development will create employment opportunities during both construction and operations, while also supporting skills development and training of staff. The facility will contribute to the local, regional, and national economy through the circulation of money, support of local businesses, and payment of taxes, levies, and permitting fees.

All planning, construction, and operational activities must be undertaken in line with Namibian legislation and, where applicable, international best practice standards. The necessary permits and approvals must be obtained from the relevant authorities prior to commencement of activities. All hazardous substances, including fuels and lubricants, must be handled and stored in accordance with MSDS requirements, including the use of impenetrable surfaces and segregation of incompatible products. Noise levels should at all times comply with the Health and Safety Regulations of the Labour Act and WHO guidelines to prevent hearing loss and minimise nuisance. Fire prevention and emergency response measures must be in place, with all health and safety regulations adhered to in line with Namibian law and internationally accepted operational standards. Waste generated during both construction and operation must be removed regularly, with recyclable materials separated where possible. Hazardous waste must be disposed of at an approved hazardous waste facility to prevent environmental contamination.

The EMP (Section 9) should be used as an on-site reference document for the operations of the facility. Parties responsible for transgressing of the EMP should be held responsible for any rehabilitation that may need to be undertaken. The Proponent could use an in-house Health, Safety, Security and environment management system in conjunction with the EMP. All operational personnel must be taught the contents of these documents.

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 ECC may be granted to the Proponent. The ECC issued, based on this document, will render it a legally binding document which should be adhered to. Focus could be placed on Section 9, which includes an 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.

11 REFERENCES

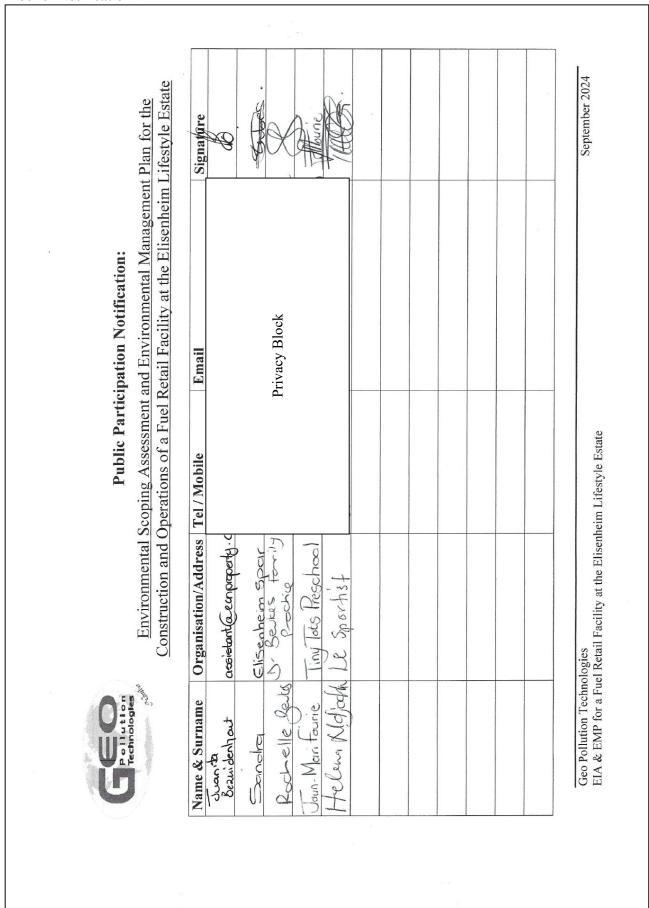
- Africon. 2004. Windhoek Environmental Structure Plan & Environmental Policy. Final Report 100382/1/2004.
- Atlas of Namibia Team, (2022), Atlas of Namibia: its land, water and life, Namibia Nature Foundation, Windhoek.
- Directorate of Environmental Affairs, 2008. Procedures and Guidelines for Environmental Impact Assessment (EIA) and Environmental Management Plans (EMP), Directorate of Environmental Affairs, Ministry of Environment and Tourism, Windhoek.
- Funk, C., Peterson, P., Landsfeld, M., Pedreros, D., Verdin, J., Shukla, S., Husak, G., Rowland, J., Harrison, L., Hoell, A. and Michaelsen, J., 2015, The climate hazards group infrared precipitation with stations A new environmental record for monitoring extremes. Scientific Data, 2, 150066. https://doi.org/10.1038/sdata.2015.66.
- Gelaro, R., McCarty, W., Suárez, M. J., Todling, R., Molod, A., Takacs, L. et al. (2017). The Modern-Era Retrospective Analysis for Research and Applications, Version 2 (MERRA-2). Journal of Climate, 30, 5419-5454. https://doi.org/10.1175/jcli-d-16-0758.1
- http://www.cdc.gov/niosh/ipcsneng/neng0494.html accessed April 2016.
- http://www.sasol.com/sites/default/files/datasheets/safety_data_sheet_08-03-2012_english_0.pdf accessed April 2016.
- https://www.perstorp.com/products/nx 795 accessed April 2016.
- Kottek, M., J. Grieser, C. Beck, B. Rudolf, and F. Rubel, 2006: World Map of the Köppen-Geiger climate classification updated. Meteorol. Z., 15, 259-263. DOI: 10.1127/0941-2948/2006/0130.
- Meteoblue. (2019, March). https://www.meteoblue.com/en/weather/forecast/modelclimate/windhoek-noord namibia 3371346.
- Namibia Statistics Agency. Namibia household Income and Expenditure Survey 2023.
- Namibia Statistics Agency. Namibia 2023 Population and Housing Census Main Report.
- Pastakia, C.M.R.; 1998; The Rapid Impact Assessment Matrix (RIAM) A new tool for Environmental Impact Assessment.

Appendix A: Proof of Public Consultation

- Notified and Registered PartiesProof of Notification
- **♦** Comments or Concerns Received
- Press Notices

Notified and Registered Parties

Organisation	Contact Person
Notified Authorities	
Ministry of Industry, Mines and Energy	Office of the Executive Director
Notified Parties	
Eon Property	Juanita Bezuidenhout
Elisenheim Spar	Sandra
Dr. Beukes Family Practice	Rochelle Beukes
Tiny Tots Pre-School	Juan-Mari Fourie
Le Sportist?	Helena
Registered Parties	
Bronwynn Basson	Elisenheim Resident



Ministry of Industry, Mines and Energy





Tel.: (+264-61) 257411 ф Fax.: (+264) 88626368 Cell.: (+264-81) 1220082 PO Box 11073 ф Windhoek ф Namibia E-Mail: gpt@thenamib.com

To: Interested and / or Affected Party / Neighbour

02 September 2025

Re:

Environmental Scoping Assessment and Environmental Management Plan for the Construction and Operations of a Fuel Retail Facility at the Elisenheim Lifestyle Estate, Windhoek

Petrosol Petroleum Solutions CC (the Proponent) plans to construct a fuel retail facility at the Elisenheim Lifestyle Estate, located north of Windhoek, Khomas Region (Figure 1). The facility will include underground fuel storage tanks, pump islands beneath an overhead canopy and a quick shop with ablution facilities. The development is intended to supply fuel and convenience services to residents and visitors of Elisenheim.

Geo Pollution Technologies (Pty) Ltd (GPT) was appointed by the Proponent to undertake an environmental assessment for the construction and operation of the facility. The environmental assessment is required in order to apply for an environmental clearance certificate (ECC) for the proposed development. The ECC application will be made in terms of the Environmental Management Act, Act No. 7 of 2007 (EMA). A scoping environmental impact assessment (EIA) report and an environmental management plan (EMP) are proposed to be submitted to the Ministry of Environment, Forestry and Tourism's Department of Environmental Affairs (DEA) in support of an application for an ECC.

Project: Environmental Scoping Assessment and Environmental Management Plan for the Construction and Operations of a Fuel Retail Facility in the Elisenheim Lifestyle Estate, Windhoek

Proponent: Petrosol Petroleum Solutions CC

Environmental Assessment Practitioner: Geo Pollution Technologies (Pty) Ltd

The proposed fuel retail facility will be constructed within the Elisenheim Lifestyle Estate, located north of Windhoek. The site is currently undeveloped. The facility will consist of three underground fuel storage tanks, including two with a capacity of 23 m³ each and one with a capacity of 46 m³. Fuel (diesel and unleaded petrol) will be dispensed from three pump islands located beneath an overhead canopy, with provision made for the future addition of a fourth pump island. A quick shop with ablution facilities will also be constructed to provide convenience services to customers.

Fuel will be received by road tankers and offloaded directly into the underground storage tanks through sealed transfer systems. During normal operations, fuel will be dispensed to customers' vehicles by pump attendants, supported by daily activities such as tank dips, fuel reconciliations, and cleaning of the site.

All fuel delivery and dispensing activities will be undertaken within designated areas equipped with spill containment and oil-water separation systems. Routine maintenance of the facility will be required and may include painting, repairs to infrastructure, and servicing of equipment. Any major alterations or expansions to the facility will require approval from the relevant authorities.

Firefighting and safety equipment will be installed throughout the facility in accordance with South African National Standards (SANS) and Namibian legislative requirements to ensure safe operations. Environmental compliance monitoring and public liaison will remain active throughout the facility's operations.



Page 1 of 2

Directors:

P. Botha (B.Sc. Hons. Hydrogeology) (Managing)

Comments and/or Concerns Received

IAP Details	Comment / Concern	Response
Bronwynn Basson	Initial Query:	<u>Initial Response:</u>
Email:	Hi	Good Day Bronwynn,
09/09/2025	As a resident of Elisenheim, I would like to	Please find attached the BID for the
	register as a IAP for the above mentioned project.	Environmental Scoping
	Kind Regards	Assessment and Environmental
	Bronwynn	Management Plan for the
		Construction and Operations of a
		Fuel Retail Facility at the
		Elisenheim Lifestyle Estate,
		Windhoek.
		Additionally, we will register you
		as an I&AP.
		Regards
		Johann Strauss

Press Notice: Die Republikein 01 and 08 September 2025



'Namibië rou saam met julle'

Die NCS het deur die kantoor van sy kommissaris-DIE NUS net deur die Kantoor van sy kommissaris-generaal 'n kennisgewing uitgereik dat alle besoeke aan die korrektiewe dienste op Hardap tot verdere kennisgewing opgeskort is. Dit het onderneem om onverpoos te werk om te verseker dat normale besoekersure sou gou as moontlik weer kan voortgaan. Lucia Iipumba, minister van veiligheid en sekuriteit, Lucia injumna, minister van veiingend en sekurireit, net intussen 'n beroep op die publiek gedoen om hulle daarvan te weerhou om grafiese foto's wat op die ongelukstoneel geneem is, in die openbaar te sirkuleer. Name wat glo aan die slagoffers van die tragiese ongeluk behoort, is ook wyd op sosiale media versprei. Teen druktyd het die ministerie se woordvoerder Margaret Kalo gesê die name van die oorledenes sal egter uit respek eers op 'n latere stadium bekendgemaak

PUBLIC PARTICIPATION NOTICE ENVIRONMENTAL ASSESSMENT: CONSTRUCTION AND OPERATIONAL ACTIVITIES OF A FUEL RETAIL FACILITY AT THE ELISENHEIM ESTATE, WINDOEK

Geo Pollution Technologies (Pty) Lid was appointed by Petrosol Petroleum Solutions CC (the Proponent) to undertake an environmental assessment (EA) for the development of a fuel retail facility at the Elisenheim Lifestyle Estate, located north of Windhoek. The Proponent plans to construct a service station which will include underground fuel storage tanks, pump islands beneath an overhead canopy, as well as a quick shop with ablution facilities. The facility is intended to supply fuel and convenience services to residents and commuters in the estate. Additional and location information pertaining to the erven and proposed operations can be obtained at:

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

The environmental assessment will be conducted according to the Environmental Management Act of 2007 and its regulations as published in 2012.

Interested and affected parties are invited to register with the environmental consultant to be provided with the opportunity to share comments, issues or concerns related to the project, for consideration in the EA. Requests for additional information and comments and concerns should be submitted to Geo Pollution Technologies by 10 September 2025.

André Faul Geo Pollution Technologies Tel: +264-81-1452164







info@msnamibia.org

>>> Westerse tradisies bo jarelange gebruike verkies

SHOPRITE

Watter geloof is dit? Watter

god is dit hierdie?," het San-

Poligamie verwerp, maar selfdegeslaghuwelike bly

Afrikane moet die waardes ondersoek wat deur koloniale invloed op hul afgedwing word, sê die minister van landelike en stedelike ontwikkeling.

> Phillipus Josef

ie minister van landelike en stedelike ontwikkeling James Sankwasa het gewaarsku dat Afrika-tradisies deur Westerse waardes bedreig word. Hy het selfdegeslaghuwelike en ingevoerde gelowe uitgesonder

ingevoerde gelowe uitgesonder as praktyke wat kulturele identiteit uitwis. Volgens die minister moet Afrikane waardes ondersoek wat deur koloniale invloed op hul afgedwing word. Sankwasa sê baie gemeenskappe is gemaak om jarelange gebruike ten gunste van buitelandse praktyke te laat vaar. "Die Bybel is in so'n mate aan ons bekendgestel dat ons as swartmense nie meer weet wat

swartmense nie meer weet wat ons geloof is nie. Sommige volg die Rooms-Katolieke, selfs al is ons nie Rooms nie. Sommige is Nederlands, selfs al is ons nie Nederlands nie," het Sankwasa

Hy het beyraagteken waarom sendelinge poligamie as sonde verwerp het, terwyl dieselfde instellings vandag selfdegeslaghuwelike toelaat.

"Hulle sê dit was verkeerd vir 'n man om met twee vroue te trou. Dit was 'n sonde en jy gaan nie hemel toe nie. Maar vandag, in daardie selfde kerk, kan 'n man voor 'n priester toegelaat word om met 'n ander man te trou. kwasa gevra en 'n dringende

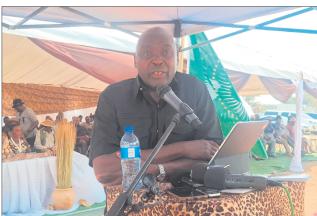
asa gevra en 'n dringende beroep op Namibiërs gedoen om krities na die teenstellings te kyk. Hy het beklemtoon dat tradisionele leiers die verantwoordelikheid het om kultuur, taal en waardes te bewaar, omdat hulle die bewaarders bly van praktyke wat van generasie na generasie oorgedra is. Volgens die minister sal die verlies van tradisies gemeenskappe verswak en hulle kwesbaar

gerig aan leierskap wat onder sy toesig val. Wanneer hy sy ampstermyn voltooi, kan mense maak soos hulle wil, het hy gesê

maar terwyl hy steeds in sy amp is, sal hy nie toelaat dat magte vai

is sainy nie toeiaat dat magie van buite by sterk kulturele waardes inmeng nie. "Vir solank as wat ek in die amp is, sal niemand toegelaat word om te doen wat hulle wil nie," bet Sonlings (groupe Hubert Sonlings) het Sankwasa gemaan. Hy he beklemtoon dat hy sal verseke

dat sake tydens sy ampstermyn reg hanteerword. Hyhet die opmerkings gemaak tydens die langverwagte erkenning van die regering van Hompa Eugen Siwombe Kudumo as die wettige leier van die Ukwangali-gemeenskap wat by die Kahenge-stamkantoor in Kavango-Wes plaasgevind het er 'n einde aan 'n opvolgdispuut var 11 gebring het.



Die minister van landelike en stedelike ontwikkeling, James Sankwasa. FOTO PHILLIP JOSEF



Republikein NUUS Maandag 8 September 2025

>> KONTAKPERSONE

NUUSREDAKTEUR

Henriette Lamprecht 08/ 350 380/ 06/ 297 2000 henriette@republikein. com.na

REPUBLIKEIN@REPUBLIKEIN.COM.NA

GENL. MURTALA MUHAMMEDRYLAAN. POSBUS 3436, WINDHOEK TEL: 06| 297 2000 | VOLG ONS OP: 0 0 0 0 ISSN 1560-9448



Skandeer die QR-kode of WhatsAnn #Ren n +264 85 785 623

Gebruik die kode om aan die daaglikse kompetisie in Sport Wrap deel te neem.

WEBWERFKODE: 7446

'n Publikasie van REPUBLIKEIN PUBLICATION (Pty) Ltd, gedruk deur PMH PRINT MEDIA HUB (Pty)Ltd



BINNELAND: Sonnig en warm in die ||Kharasstreek. Elders sonnig en warm tot baie warm. Winderige toestande kan oor die binneland voorko

KUS: Gedeeltelik bewolk en matig tot warm

GETYE BY WALVISBAAI: H: 13:42 L: 19:37 H: 01:57

VOORUITSIGTE WINDHOEK 15° 15° RUNDU 16° 12° 37° 33° OSHAKATI GOBABIS 32° 31° MADIENTAL 130 110 KEETMANSHOOP WAIVISRAAI 09° 19° 27° JOHANNESBURG 12° KAAPSTAD 110 22° 18° 25° LUANDA 4

SA beeste beweeg steeds onbelemmerd oor Oranie

Volgens Morkel is die beeste intus-sen van die kamp verwyder, maar aar is nog steeds bokke

Basson het woedend in 'n telefoon-Basson het woedend in 'n teletoon-gesprek met Republikein gevra of fle beeste positief vir BKS getoets het. Op die vraag van Republi-kein waarom ongemerkte beeste in beeste met Suid-Afrikaanse orplaatijes noord van die Oranje

norphagies nord van de Oranje-ivier is, het hy benadruk dit is Suid-Afrikaanse gebied. "Julle het geskryf ek is 'n plakker. Ek het nog daardie koerant. F*kof!" et hy woedend geskree en die proep beëindig.

BASSON WAARSKU

Die beweging van vee vanaf Suid-Afrika vind glo steeds onbelemmerd Mirka vind gio steeds onbedemmerd olaas, soos in 'n video van Morkel se skoonseun, Adriaan Mulder ran Sandfontein Lodge, wat hy Woensdag geneem het. Basson het in 'n WhatsApp-stem-poodskraas Muldargeo.' "Advison.

basson fiet in 'n whatsApp-stein-boodskap aan Mulder gesê: "Adriaan, Adriaan, Adriaan, ek wil jou net waarsku, ek is besig om 'n klag te ondersoek. Of dit Suid-Afrikaanse bees of Namibiese bees is, hulle is in boundary'. Dit gaan gevaarlik wees. Sien en los die goed af tot ek Sondag laar kom. Jy vat nie aan die bees nie, y ja nie die bees aan nie, jy neem nie oto's van die beeste nie. Bly weg!" Op dieselfde dag het die Lewenlehaweprodusente-organisasie LPO) 'n kennisgewing uitgereik met 'n inligtingsveldtog van die DVS en die Lewendehawe en Lewendehaweprodukteraad (LLPB) wat van vandag tot 18 September in lie streke van ||Kharas, Hardap en



Ongemerkte beeste noord van die Oranjerivier. FOTO'S VERSKAI



Die bokke is nog steeds in die kamp noord van die Oranjerivier.

Omaheke van stapel gestuur word. "Namate die risiko van BKS in Namibië toeneem, het elke rolspeler in die veewaardeketting 'n plig om ingelig te bly en aktief by te dra tot die handhawing van die land se siektevrye status in die BKS-vrye sone. Dit is van kritieke belang vir vleisuitvoere en dergelike handelsgeleenthede vir Namibië.

"Die doel van hierdie sessies is om inligting deur te gee en ook om te dien as strategiese platforms waar boere en belanghebbendes kan gesels oor die risikofaktore en potensiële gevolge van 'n BKSuitbreking, die rol van produsenuntreking, die fol van produsen-te en die res van die waardeketting, asook die huidige beheermaatreëls wat by grensposte in plek is," lui die verklaring Die vergaderings is daarop gemik

om boere, invoerders, uitvoerders, om boere, invoerders, uitvoerders, vervoermaatskappye, veilingshuise, agente en ander belanghebbendes te bereik, met spesiale klem op boere langs die suidelike grens, wat 'n belangrike rol speel in siektevoor-

koming en -beheerpogings.
"Die Namibiese Landbou-unie
(NLU) en LPO wil alle rolspelers in
die veewaardeketting ernstig versoek
om hierdie vergaderings by te woon en om met 'n positiewe gesindheid DVS te ondersteun in hul optrede om die BKS-vrye sone van Namibië te beskerm," lui die verklaring.

SKEDULE VIR VERGADERINGS Vergaderings vind vanaf 09:00 tot 13:00 plaas en is soos volg geskeduleer: Vandag op Karasburg by die Verre

Suide Boereverenigingsaal, Woens Suide Boereverenigingsaai, woens-dag by die Karasburg kommunale gebied (Bondelswarts) by die Gabis Rooms-Katolieke kerksaal, Donderdag op Aroab by die Aroab Boereverenigingsaal, Vrydag op Keetmanshoop by Central Lodge, Maandag 15 September op Gobabis by die NG-kerksaal, 16 September op Aminuis by die Aminuis-veilings-krale, 17 September by Akanous, Mariental, in die Onder-Nossob Mariental, in die Onder-Nossob Boereverenigingsaal en op 18 September op Mariental by die NLA-veilingskrale. In reaksie sê Morkel "daar is nie meer tyd vir vergaderigs hou nie,

dit is nou tyd vir aksie. Nog meer bla bla bla. Veeartseny moet begin om hul werk te doen. Begin die reëls en regulasies toepas. Vestig 'n lewendehawe-vrye sone langs die rivier. Stir bly vote noor. Enter die rivier. Sit jul voete neer. Enige onwettige diere wat daar geving word, moet van kant gemaak word Bla bla bla gaan niks doen nie.'

STRENG INVOERMAATREËLS

Intussen herinner DVS alle reisi-gers daaraan dat geen produkte van gesplete-hoef diere sonder 'n veeartseny-invoerpermit na Namibië ingevoer mag word nie.

Dit beteken dat die vorige reë lings met Suid-Afrika, wat sekere produkte vir eie gebruik na Namibië toegelaat het, nie meer geldig is nie Indien reisigers egter 'n geldige Namibiese veeartseny-invoerpermit het, mag items soos heelgaa vleis, ingemaakte vleis, verwerkte

viets, ingemaakte viets, verwerkte viets, melk en soortgelyke produkte na Namibië gebring word. "Reisigers word dus verplig om die nodige permitte by die invoerkan-toor in Windhoek aan te vra voordat toorin Windnoek aan te Vra voordat hulle enige van die genoemde goedere na Namibië bring." Vir verdere inligting en navrae, kontak DVS se invoer- en uitvoer-beheer by 061 208 7890/1/2 of LLPB by 061 275 841. - francoise@nmh.com.

PUBLIC PARTICIPATION NOTICE ENVIRONNENTAL ASSESSMENT: CONSTRUCTION AND OPERATIONAL ACTIVITIES OF A FUEL RETAIL FACILITY AT THE ELISENHEIM ESTATE, WINDOEK

AT THE ELISENTERINE STATE, WINDOEK
Geo Pollution Technologies (Pty) Ltd was appointed by
Petrosol Petroleum Solutions CC (the Proponent) to
undertake an environmental assessment (EA) for the
development of a fuel retail facility at the Elisentheim
Lifestyle Estate, located north of Windhoek. The Proponent
plans to construct a service station which will include
underground fiel storage tanks, pump islands beneath an
overhead canopy, as well as a quick shop with ablution
facilities. The facility is intended to supply fiel and
convenience services to residents and commuters in the
estate. Additional and location information pertaining to the
erven and proposed operations can be obtained at: erven and proposed operations can be obtained at

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

The environmental assessment will be conducted according to the Environmental Management Act of 2007 and its regulations as published in 2012.

regulations as published in 2012.

Interested and affected parties are invited to register with the environmental consultant to be provided with the opportunity to share comments, issues or concerns related to the project, for consideration in the EA. Requests for additional information and comments and concerns should be submitted to Geo Pollution Technologies by 10 September 2025.

André Faul Geo Pollution Technologies Tel: +264-81-1452164 Fax: +264-88626368 E-Mail: frf@thenamib.com





Cran se uitvoerende hoof vir regulatoriese regsdienste, Josephine

'Geen rede tot kommer oor WiMAX'

VAN BL. 1

"Dít is waar die saak tans is; ons is besig om saam met Telecom 'n alternatief te probeer vind tot WiMAX wat daardie gebruikers an bedien voor hulle die dien

opskort," verduidelik sy. Shigwedha het bevestig dat WiMAX wel in fases opgeskort WIMAX wel in tases opgeskort sal word en dat hierdie proses in stedelike gebiede sal begin waar daar reeds alternatiewe infra-struktuur is. "Ons sal nie van WIMAX in landelike gebiede kan

ontslae raak tot daar nie 'n alter-

natief in plek is nie, want ons kar



Die uitvoerende hoof van Telecom Namibia, Stanley Shanapinda.

nie mense sommer net van die netwerk afgooi nie," sê sy.

WiMAX is 'n soort telekommu-WIMAX is a soort telekommu-nikasietegnologie wat draadlose data oor lang afstande lewer. Hierdie tegnologie se sterkpunt in die Namibiese konteks is dat sy opvangwydte veel groter as ander soorte tegnologie soos Wi-Fi is en iste desember die volgenie juis daarom kan dit gebruikers

etlike kilometers ver vanaf eer basisstasie bedien.

Met die verbeterings aan lang Met die verbeterings aan lang-termyn-evolusie (LTE) tegnolo-gie, het WiMAX getaan en stadig maar seker verouderd geword. LTE word tans wêreldwyd as die bedryfstandaard aanvaar.

- irene-mari@nmh-hub.com.i

Press Notice: The Namibian Sun 01 and 08 Septembe



HENRIETTE LAMPRECHT

Last Thursday, Namibians won-dered whether they were in the right season and even the right country, after rainfall of up to 45 mm was recorded in some parts of the country. From mist to thunder and lightning, residents were caught off guard just days before the official start of spring, with a video of hail covering the road be-tween Mariental and Maltahöhe widely shared.

widely shared.
The south received the heaviest downpours, with up to 42 mm measured at farm Alt Duwiseb, 90 km south-west of Maltahöhe. South of Keettanone. South of Keet-manshoop, the Löwen River also began flow-ing across the D608. Berghof, south-east of Keetmanshoop, re-corded 32 mm, while Savanna near Grünau received 18 mm and



Huns, outside Keet-manshoop, measured

20 mm. Elsewhere, 18.5 mm was recorded in the Swartrand escarp-ment near Maltahöhe, Keetmanshoop recorded 15 mm, an area 24 km outside the town re-ported 20 mm of downfall, Rosh Pinah 2.4 mm, Buitepos 5 mm Jakkalswater 10 mm, and Nagas southeast of Keetmanshoop, 17

ACCESS TO SOUTH AFRICA CRITICAL

700 tonnes tomatoes destroyed, but Sonop may export again

The suspension caused millions in losses and left employees anxious about jobs and household stability.

JACQUES DU TOIT WINDHOEK

Sonop Farms can once again send its fresh produce across the border after the Pretoria High Court ruled to reinstate the company's suspended South African import

permit.

The ruling brings relief to one of Namibia's largest tomato producers, which had been forced to halt operations and destroy more than 700 tonnes of tomatoes dur-ing the suspension.

The company de-scribed the permit with-

drawal as "incomprehen-sible and unfair", noting it had triggered millions in losses and temporarin losses and temporar-ily left many employees without work. While some reports suggested all Namibian exporters had been affected, Sonop Farms's CEO Albert van der Merwe clarified in a media release published last week that they were the only farm targeted. "Ironically, only Sonop

Farms' permit was with-drawn," he said.



CLEARED: Albert van der Merwe, CEO of Sonop Farms.
PHOTO: CONTRIBUTED

"Contrary to reports that all Namibian pro-ducers were affected, we emphasise that So-nop was the only farm whose permit was can-celled. Other Namibian producers continued to export without interrup-tion," he explained.

Livelihoods safe-

court ruling
Van der Merwe said the
ruling not only secures
our ability to resume exports and limit further
losses but, more importantly it safemands the tantly, it safeguards the livelihoods of our em-



ployees and restores stability for their households."

He added: "The relief felt across our farm today is immense, as the uncer-tainty of the past week has finally lifted."

He noted that beyond the numbers, "it was a deeply distressing time for our employees, many of whom were worried about their jobs and ability to provide for their families."

South African market

remains essential
Although Sonop
Farms is a major supplier to Namibian retailers, its large-scale oper-ations mean that access to the South African

market remains criti cal. "Our pre-season re tail programmes require us to plant volumes that exceed local demand. South Africa remains an essential market for us," van der Merwe ex plained.

Sonop Farms has com-mitted to working with authorities to ensure that similar interruptions do

not happen again. Despite the financial damage, the farm ex-pressed gratitude for the support it received. "We are profoundly grateful to our loval employees retail partners, indus try colleagues, and lega team for their resilience,



Albert van der Merwe (blue shirt), CEO of Sonop Farm:

PUBLIC PARTICIPATION NOTICE ENVIRONMENTAL ASSESSMENT: CONSTRUCTION AND OPERATIONAL ACTIVITIES OF A FUEL RETAIL FACILITY AT THE ELISENHEIM ESTATE, WINDOEK

Geo Pollution Technologies (Pty) Ltd was appointed by Petrosol Petroleum Solutions CC (the Proponent) to undertake an environmental assessment (EA) for the development of a fuel retail facility at the Elisenheim Lifestyle Estate, located north of Windhoek. The Proponent plans to construct a service station which will include underground fuel storage tanks, pump islands beneath an overhead canopy, as well as a quick shop with ablution facilities. The facility is intended to supply fiel and convenience services to residents and commuters in the estate. Additional and location information pertaining to the erven and proposed operations can be obtained at: http://www.thenamb.com/irorects/proicets.html

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

The environmental assessment will be conducted according to the Environmental Management Act of 2007 and its regulations as published in 2012.

Interested and affected parties are invited to register with the environmental consultant to be provided with the opportunity to share comments, issues or concerns related to the project, for consideration in the EA. Requests for additional information and comments and concerns should be submitted to Geo Pollution Technologies by 10 September 2025.

André Faul Geo Pollution Technologies Tel: +264-81-1452164 Fax: +264-88626368 E-Mail: frf@thenamib.com



On 1 September 2025 at 21:00 On The Rocks wraps up an unforgettable journey through Botswana, highlighting the unique experiences and warm hospitality discovered along the way. From a heartfelt conversation with Amber Myburgl at Kukama Bush Camp, to the culinary artistry of Chef Gosalamang at Mochaba Crossing Lodge. The show also takes a look back at the remarkable properties visited, each with its own story, character, and charm. то воок

r 2025

鳳銭県

NTD (M)

NEWSINSHORT

Activist criticises Windhoek for handling of **Groot Aub**

Activist Shaun Gariseb has criticised the City of Windhoek's management of Groot Aub, citing what he says is a lack of financial and strategic capac ity to develop informal settle-

He met residents on Saturday at a community meeting aime at raising awareness of the National Youth Development Fund and addressing longstanding settlement challenges Residents called for Groot Aub to be established as a village council. - ELIOT IPINGE

Man's body found in river, newborn allegedly dumped

Kavango West police said last week that the decomposed body of a man who went miss-ing after being admitted to Nkurenkuru Elcin Hospital was found floating in the Ka-vango River at Nkurenkuru. Beginnal police snykesper. Regional police spokesper-son Chief Inspector Raimbert Muronga said a member of the public spotted the body at around 08:30 on Friday. The deceased was identified as 54-year-old Kakuru Abisai Kamina from Gava village

Kamina from Gava village. who was reported missing on 30 August. Muronga said the cause of

death is not yet known and that his family had been in-

On another matter, Muronga said the body of a newborn baby was discovered dumped in the bush at Kakuro village near Nkurenkuru on Friday hear Nkurenkuru on Friday. He said a 31-year-old man and his girlfriend were ar-rested in connection with the incident. It is alleged the woman delivered the baby woman delivered the bady at home, and the pair then wrapped the body in a plastic bag before dumping it. An au-topsy to establish the cause of death is pending.

- PHILLIPUS JOSEF

Ndama East school illegal -Steenkamp

The education ministry has re-iterated that the Ndama East school is not registered with authorities, despite enrolling over 500 learners. Education minister Sanet

Steenkamp told parliament last week that a fully equipped, legally allocated school with 14 classrooms and two ablu-tion blocks was built at Ndama South in 2023 to accommodate south in 2023 to accommoda learners. She urged parents to enrol their children at the government facility, warning that illegal schools will not be tolerated and education must remain within legal and safe structures. - PHILLIPUS JOSEF

NOT PART OF DECISION-MAKING PROCESS

Shovaleka denies 'hand-picking' Power Consult

Former Nored acting CEO Toivo Shovaleka has underlined that he had no influence over the decision and did not sit on the tender committee.

KENYA KAMBOWE

ormer Nored Toivo Shovaleka says the decision to appoint Power Consult and Mechanical Engineers, owned by his colleague's husband, was taken

ins coneagues musband, was taken before he was appointed. Shovaleka, through his legal rep-resentatives at Trustco Insurance, explained that his role was limited to signing the award letter dated 30 April 2024 and the subsequent contract.

The appointment, the lawyers pointed out, was already deter-mined by the tender committee, and the selection process was com-

ing CEO.
"Our client, acting in the capacity

Our client, acting in the capacity of Acting CEO of Nored, was duly authorised to sign the award letter dated 30 April 2024 and subsequently the contract for the tender," the letter reads.

"Our client was not part of the panel that made the final selection. Moreover, the selection was made before our member was appointed as acting CEO," the lawyers' letter stated

Recovery plan Power Consult and Mechanical Engineers had initially been con-tracted in 2023 to conduct a prepaid meter audit.

paid meter audit.
The audit revealed that Nored had been undercharging its customers, with an estimated N876 million in outstanding debt.
Following this finding, the com-

pany proposed a recovery plan, of-fering two options for remunera-

In an internal memo dated 5 February 2024, the acting man-ager for engineering services,

Nored adopt the commission model, paying Power Consult 13.5% of the amount recovered. This would

translate to just over N\$10 million if the full amount were collected. Shovaleka also addressed ques-tions raised by a Namibian Sun article published last month, which reported that the contract was

reported that the contract was signed on 19 July 2024 between Nored and Power Consult. He clarified that 19 July was a Saturday, when Nored offices were closed, and that he had only stepped in as acting CEO five days later, before being replaced by Lu-cas Kudumo Siremo on 24 July.

Concerns about possible conflicts Simeon Antindi, the husband of Nored executive manager for legal affairs and compliance, Etegameno Indongo-Antindi, owns Power Consult.

Indongo-Antindi at the time said she had no involvement in the ten-der process and dismissed the al-legations.

I can make of it. You probably hav to ask them as to why they are mak-ing such allegations. What is im-portant are the facts, and us law-yers, we work with the facts, not allegations nor speculations," she

Shovaleka has also faced allega Snovaleka has also faced allega-tions that he earned over N\$1 mil-lion in subsistence and travel allow-ances during his tenure, averaging around N\$70 000 per month. Critics claim this was due to his

decision to hold meetings in re-gions such as Rundu, which is considered lucrative in terms of allow-ances and expenses.

Amid these controversies, Na-mibian Sun has seen whistleblow-

minimum sum has seen winistenow-er reports and employee motions of no confidence against members of management, which allege systemic corruption at the company. Board chairperson Johannes Uushini refused to respond to the

allegations

"Just get your details regarding all your questions from the whistle-blower him/herself," he said.

President, PM lead tributes to legendary musician Ras Sheehama

Tributes have poured in from across Namibia from fans, friends, fellow art-ists and senior politicians, including the president, after the sudden death of after the sudden death of Ras Sheehama, the revered reggae musician celebrated for songs of resistance, uni-ty and hope. President Netumbo Nan-

di-Ndaitwah said she was "deeply saddened" by the loss of what she described as "a true legend of Namibian music and culture".

"Ras Sheehama was more Kas Sneenama was more than a reggae artist; he was a voice of hope, resistance and unity who inspired genera-tions before and after inde-pendence. Through his mu-sic, he embodied the spirit sic, he embodied the spirit of freedom and reminded us of art's power to heal, chal-lenge, and uplift." Sheehama, 59, died by su-icide, police confirmed. His

body was discovered early on Friday alongside a note, a

Prime Minister Elijah Ngurare, who in July candidly shared his own battle with suicidal thoughts, described the loss as "immensely pain-

In a message shared on so-cial media, he wrote: "May His Revolutionary Soul Rest In Eternal Peace. I join Her Excellency the President to convey our deepest condolences to the bereaved family and nation."

ity and nation."
The premier added: "Undoubtedly, Ras Sheehama was one of the exceptional trendsetters of Namibia's creative industry. May His legacy of hard work, natural talent and musical insensities." talent and musical ingenuity live on to the present and fu



MAL LOSS: Ras Sh ary Namibian reggae artist ren for his music of hope, resistance and unity. PHOTO: NGANDU TV

ture generations.

Voice for the people

The Namibia Economic Freedom Fighters (NEFF) also issued a statement on

"Ras Sheehama was more than a pioneering reggae artist in Namibia. He was a artist in Namibia. He was a cultural icon, a voice of truth, love, justice, equality and unity. His music transcended race, politics, creed and cultures and served as a uniting force that brought our peoples together."

The statement added:

The statement added: "Through his music, he also told the everyday stories of our people to the world, serving as a true ambassa-dor of Namibian culture' and highlighted his reco

nition in 1996, when Sheehama won the Music Award catego-ry for 'Inotila', leading to his performance at the prestigious the prestigious Le Printemps de Bourges Festival in France. Among art-ists, Namibian

singer, songwriter and producer Neslow reflected on Sheehama's influence. fluence. "I am deeply

saddened by the sadened by the passing of one of Namibia's most iconic veteran artists, a true light who in-spired us to rise, to serve others to serve others and to live with courage and selflessness," he said.

"His art was "His art was more than expression; it was wisdom, strength and love for the people. He touched my life personally, teaching me to stand for what is right, and his legacy will forever live in the spirit of those he inspired. May his soul rest in peace, and may we honour him by carrying forward the values he embodied."

Struggling artists
Many Namibians, particularly those in the creative sector, highlighted the dif-

sector, fignigned the dif-ficulties facing artists in the country, including a lack of institutional support. Musician Riaan Smit paid tribute to his "musical broth-er" and added: "It's a tough life giving your spirit to he life giving your spirit to up-lift the world and sometimes

getting very little back. This man gave a lot more than he received. Rest in peace, Ras, it was a pleasure sharing some beautiful moments together."

Smit also pointed to the financial hardships the financial hardships confronting many artists. "Elder musicians in this country aren't respected or honoured. Even those who inspired through the struggle," he wrote. He cited the steep costs art-ists face of hiring venues to perform their craft. "Namibia doesn't care about the artists. And this

about the artists. And this is the outcome," he added. Another creative, Hella Nghifindaka, wrote on social media: "Oh man! government and corpo-rate industry need to do better for the creatives of our country!" Musician Lieutenant Shitana added his voice, setting that the plicible of

Shitana added his voice noting that the plight or living artists is ignored. "This is all what they like to do: showing love to the dead man instead of showing love to the mar when he was still alive. He cried a long time ago, and all ears were not function-ing. Now they are func-tioning to hear the death of the same man they ig-nored."

PUBLIC PARTICIPATION NOTICE ENVIRONMENTAL ASSESSMENT: CONSTRUCTION AND OPERATIONAL ACTIVITIES OF A FUEL RETAIL FACILITY AT THE ELISENHEIM ESTATE, WINDOEK

AT THE ELISENHEIM ESTATE, WINDOEK
Geo Pollution Technologies (Pty) Ltd was appointed by
Petrosol Petroleum Solutions CC (the Proponent) to
undertake an environmental assessment (EA) for the
development of a fuel retail facility at the Elisenheim
Lifestyle Estate, located north of Windhoek. The Proponent
plans to construct a service station which will include
underground fuel storage tanks, pump islands beneath an
overhead canopy, as well as a quick shop with ablution
facilities. The facility is intended to supply fuel and
convenience services to residents and commuters in the
estate. Additional and location information pertaining to the
erven and proposed operations can be obtained at:

http://www.thenamib.com/ironjects/proriects.btml

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

The environmental assessment will be conducted accord to the Environmental Management Act of 2007 and regulations as published in 2012.

Interested and affected parties are invited to register with the environmental consultant to be provided with the opportunity to share comments, issues or concerns related to the project, for consideration in the EA. Requests for additional information and comments and concerns should be applicable to Co. Publisher Tablespecies bound. be submitted to Geo Pollution Technologies by 10 September 2025.

André Faul Geo Pollution Technologies Tel: +264-81-1452164 Fax: +264-88626368





Appendix B: Consultant's 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 250 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 CC.

Name of Staff : ANDRÉ FAUL

Profession : Environmental Scientist

Years' Experience : 24

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/Biochemistry: 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, OSH-Med 2022 Basic Fire Fighting EMTSS, 2017, OSH-Med 2022

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 +250
Research Reports & Manuals: 5
Conference Presentations: 1