APP-001875

CONSTRUCTION AND OPERATIONS OF THE AGRA REHOBOTH FUEL RETAIL FACILITY

ENVIRONMENTAL SCOPING ASSESMENT REPORT



Assessed by:







| Project: | | ONS OF THE AGRA REHOBOTH | |
|-----------------|---|---|--|
| | FUEL RETAIL FACILITY: ASSESMENT REPORT | ENVIRONMENTAL SCOPING | |
| Report: | Final | | |
| Version/Date: | July 2023 | | |
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| | Assessment Report | , , | |
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| I, H.H.O. Tiemann confirm that the project description contained in which the Proponent provided to Geo Pollution possession of the Proponent that reasonably has decision or the objectivity of this assessment is f hereby approved. | this report is a Technologies or may have | All material information in the the potential of influencing any |
|--|---|--|
| Signed at Windhoek | on the 15 | _day ofAugust2023. |
| Agra Ltd | | 2010/0406 Business Registration/ID No. |
| | | |

EXECUTIVE SUMMARY

Agra Ltd (the Proponent) requested Geo Pollution Technologies (Pty) Ltd to prepare an environmental assessment (EIA) and environmental management plan (EMP) for the construction and operations of a fuel retail facility in Rehoboth, Hardap Region. The Proponent plans to construct a new fuel retail facility on Portion B of the Farm Rehoboth Town and Townlands No. 302. The Proponent's operations will play an important role in providing fuel for the local and surrounding farming community, tourists visiting the town, and the transport sector. The EIA and EMP will be prepared with the purpose of meeting the requirements of Namibian legislation, specifically to apply for an environmental clearance certificate from the Ministry of Environment, Forestry and Tourism.

The environmental assessment is conducted to determine all environmental, safety, health and socio-economic impacts associated with the construction and operations of the new facility. Relevant environmental data has been compiled by making use of secondary data and from a reconnaissance site visit. Potential environmental impacts and associated social impacts were identified and are addressed in this report. Due to the nature and location of the proposed fuel facility, limited impacts are expected on the surrounding environment. The new site is surrounded mainly by undeveloped townland, with the B1 Trunk Road directly east of the site.

The major concerns related to the construction and operations of the facility are that of potential groundwater, surface water and soil contamination and the possibility of fire. This will however be limited by adherence to South African National Standards and to relevant Material Safety Data Sheet instructions. Furthermore, noise levels should meet the minimum requirements of the Health and Safety Regulations of the Labour Act and World Health Organization guidelines on community noise. By appointing local contractors and employees and implementing educational programs, the positive socioeconomic impacts can be maximised while mitigating any negative impacts. It is recommended that environmental performance be monitored regularly to ensure regulatory compliance and that corrective measures be taken if necessary.

The EMP included in section 9 of this document should be used as an on-site reference document during all phases (planning, construction, operations and decommissioning) of the facility. All monitoring and records kept should be included in a report to ensure compliance with the environmental management plan, as may be prescribed by the Ministry of Environment Forestry and Tourism as part of the conditions of the environmental clearance certificate. Parties responsible for transgression of the environmental management plan should be held responsible for any rehabilitation that may need to be undertaken. A health, safety, environment and quality policy or similar could be used in conjunction with the environmental management plan. Operators and responsible personnel must be taught the contents of these documents. Municipal or national regulations and guidelines must be adhered to and monitored regularly as outlined in the environmental management plan.

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LIST OF ABBREVIATIONS

AIDS Acquired Immune Deficiency Syndrome

BE Biological/Ecological

DWA Department of Water Affairs **EA** Environmental Assessment

EIA Environmental Impact Assessment

EMA Environmental Management Act No 7 of 2007

EMP Environmental Management Plan
EMS Environmental Management System

EO Economic/Operational
ES Environmental Classification
GPT Geo Pollution Technologies
HIV Human Immunodeficiency Virus
IAPs Interested and Affected Parties

IUCN International Union for Conservation of Nature

LNAPL Light Non-Aqueous Phase Liquids

MEFT Ministry of Environment, Forestry and Tourism

mm/aMillimetres per annumMSDSMaterial Safety Data SheetPPEPersonal Protective Equipment

ppm Parts per million

SANS South African National Standards WHO World Health Organization

GLOSSARY OF TERMS

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

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

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

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

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

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

Environmental 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 socio-economic 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

Geo Pollution Technologies (Pty) Ltd was appointed by Agra Namibia Ltd (the Proponent) to conduct an environmental impact assessment (EIA) and prepare an environmental management plan (EMP) for the construction and operations of Agra Rehoboth fuel retail facility in Rehoboth, Hardap Region. The Proponent intends construction the facility on Portion B of the Farm Rehoboth Town and Townlands No. 302 next to the B1 main road (Figure 1-1). After construction of the new facility, daily operations typical of fuel retail facilities will continue and this include periodic maintenance and upgrades to ensure that the facility remains compliant to industry standards, specifically South African National Standards (SANS) as prescribed by Namibian law. Construction and operations of the new facility include the following activities:

- Earthworks and installation of belowground infrastructure such as tanks and reticulation.
- Construction activities and concrete works to construct spill control infrastructure, buildings and support infrastructure.
- Installation of pumps, canopy, firefighting equipment and all services such as water supply and sewers.
- Filling of the storage tanks with fuel from road transport tankers.
- Dispensing of fuel to customers.
- Tank dips and fuel volume reconciliation.
- General operational activities and maintenance procedures associated with the new facility.

A risk assessment was undertaken to determine the potential impacts of the construction and operational activities of the new facility on the environment. The environment being defined in the Environmental Assessment Policy and 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 to apply for an environmental clearance certificate in compliance with Namibia's Environmental Management Act (Act No 7 of 2007) (EMA).

Project Justification – Local businesses, residents, tourists and the transport industry require fuel for their daily operations and travels.

Benefits of the new fuel retail facility include:

- Reliable supply of fuel to the local community and various transport and business sectors.
- Employment, skills development and training.
- Revenue generation and an increase in economic resilience in the area through support for diversified business activities and opportunities.
- The new site will be constructed entirely with new tanks, pumps and reticulation according to the latest industry standards.

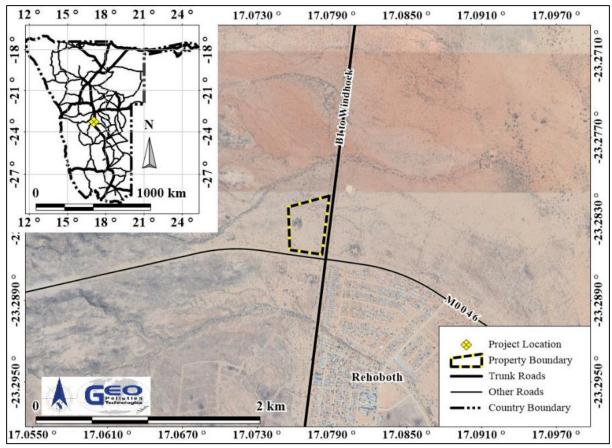


Figure 1-1 Project location

2 SCOPE

The scope of this assessment is to:

- Determine the potential environmental impacts emanating from the construction, operational and decommissioning activities of the fuel retail facility.
- Identify a range of management actions which could mitigate the potential adverse impacts to acceptable levels.
- Comply with requirements of EMA.
- Provide sufficient information to the MEFT to make an informed decision regarding the construction, operations and decommissioning of the facility.

3 METHODOLOGY

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

- 1. Baseline information about the site and its surroundings was obtained from existing secondary information as well as from a reconnaissance site visit.
- 2. As part of the scoping process to determine potential environmental impacts, interested and affected parties (IAPs) were consulted about their views, comments and opinions, all of which are presented in this report.
- 3. Potential environmental impacts emanating from the construction, operations and decommissioning of the facility were determined and possible enhancement measures were listed for positive impacts while mitigation / preventative measures were provided for negative impacts.

4. As per the findings of this scoping report, an environmental management plan (EMP) was incorporated into this report to be submitted to the Ministry of Environment, Forestry and Tourism (MEFT).

4 DEVELOPMENT AND RELATED ACTIVITIES

It is anticipated that the construction of the fuel retail facility will commence once an environmental clearance certificate has been issued by the MEFT and the various additional permits and licences, (such as per the Ministry of Mines and Energy), have been issued by the various regulatory bodies.

4.1 Existing Infrastructure on Site

The proposed location for the new fuel facility is situated on Portion B of the Farm Rehoboth Town and Townlands No. 302, alongside the B1 main road linking Rehoboth to Windhoek. Currently the only infrastructure on site is the existing Agra livestock auction pens. Large parts of the site is covered in vegetation consisting mostly of grasses and some medium sized trees and shrubs. The site will be cleared in order to construct the necessary buildings and infrastructure.

4.2 Proposed Construction Activities

The new fuel retail facility must adhere to South African National Standers (SANS) as specified by Namibian legislation. The proposed design of the facility will likely include four 46 m³ belowground storage tanks for diesel and unleaded petrol. These will be connected to dispensers on pump islands situated in a forecourt area, underneath an overhead canopy. The pump islands and vehicle filling areas will be constructed on a concrete spill slab connected to an oil water separator. Safety systems will include emergency shutoff systems, channelling of storm water in order to prevent its contamination with hydrocarbons and firefighting equipment. Fire extinguishers and emergency stops will be placed throughout and within easy reach of attendants. Additional infrastructure on site will include a retail shop, ablution facilities and a truck port.

Construction activities will include site preparation and earthworks as required by a geotechnical survey. Infrastructure will be constructed and civil works preformed, including utilities like plumbing, electricity and telecommunications. Entrance to the site will be from the D1280 District Road and will be constructed according to the specifications of Roads Authority.

The exact design of the facility will be finalised and approved prior to the commencement of construction. A detailed site layout can thus not be provided at this stage, but since the facility must adhere to SANS as prescribed by Namibian legislation, and the Town Council and Ministry of Mines and Energy must approve the plans, a detailed design is not required for purposes of the ECC application. Figure 4-1 indicates the position of the fuel retail facility with reference to the entire property as well as the general orientation of the facility on the site.

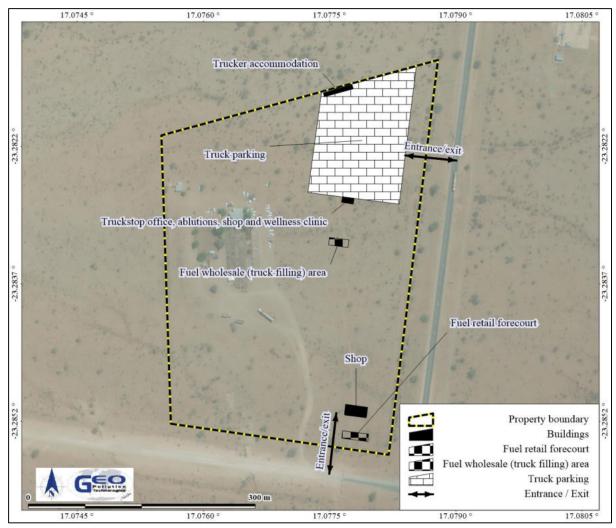


Figure 4-1 Site layout

4.3 OPERATIONAL ACTIVITIES

Unleaded petrol and diesel will be received from tanker trucks and stored in the underground storage tanks. Fuel will be dispensed to customers via the dispensers on the pump islands by pump attendants as required. Regular tank dips and reconciliation of fuel volumes will be performed to detect any possible leaks. The oil water separator will be inspected regularly and cleaned when needed. Any contaminated products will be disposed of at a registered waste oil recycler or approved hazardous waste disposal facility. Additional operations of the facility include the daily activities associated with the shop as well as general care and maintenance of the property. Any domestic waste produced will be stored in an enclosed, temporary waste storage area. From here it will be removed regularly and transported to, and disposed at, an approved municipal waste disposal facility.

5 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 5.1 to Table 5.3 govern the environmental assessment process in Namibia and/or are relevant to the facility.

Table 5.1 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 Environmental Management Act Regulations Government Notice No. 28-30 of 2012 | 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 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) Used Mineral Oil Regulations (Government Notice No. 48 of 1991 Regulations relating to the purchase, sale, supply, acquisition, possession, disposal, storage, transportation, recovery and re-refinement of used mineral oil |
| The Water Act Act No. 54 of 1956 | Remains in force until the new Water Resources Management Act comes into force Defines the interests of the state in protecting water resources Controls water abstraction and the disposal of effluent Numerous amendments |
| Water Resources Management Act Act No. 11 of 2013 | Provide for management, protection, development, use and conservation of water resources Prevention of water pollution and assignment of liability Not in force yet |
| Local Authorities Act Act No. 23 of 1992, Government Notice No. 116 of 1992 | Define the powers, duties and functions of local authority councils Regulates discharges into sewers |

| Law | Key Aspects |
|---|---|
| Public and Environmental Health Act Act No. 1 of 2015, Government Notice No. 86 of 2015 | Provides a framework for a structured more uniform public and environmental health system, and for incidental matters Deals with Integrated Waste Management including waste collection disposal and recycling; waste generation and storage; and sanitation |
| Labour Act | • Provides for Labour Law and the protection and |
| Act No 11 of 2007, Government Notice No. 236 of 2007 | 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 | • Governs the control of noxious or offensive gases |
| Ordinance | Prohibits scheduled process without a registration certificate in a controlled area |
| Ordinance No. 11 of 1976 | • 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 | ♦ Applies to the manufacture, sale, use, disposal and |
| Ordinance No. 14 of 1974 | 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 | ♦ Not in force yet |
| Bill (draft document) | Provides for prevention and control of pollution and waste |
| | • Provides for procedures to be followed for licence applications |

Table 5.2. Municipal by-laws, guidelines and regulations

| Table 5.2. Municipal by-laws, guideline | es ar | ia regulations |
|--|-------|---|
| Rehoboth Town Planning Amendment Government Notice No. 535 of 2013 Regulation No. 453 Rehoboth Town Planning Amendment Schemes Nos. 11 to 15 | • | Lists allowed, consent use and restricted activities on erven zoned for different land uses (residential, business, industrial, etc.) |
| South African National Standards (SANS) 10089 | • | 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 |

Table 5.3 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 |

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 facility 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 facility store and handle hazardous substances in the form of fuel which is permitted by the Ministry of 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 meters at any one location." (More than 30 m³ of fuel will be stored on site).
- 9.5 "Construction of filling stations or any other facility for the underground and aboveground storage of dangerous goods, including petrol, diesel, liquid petroleum gas or paraffin." (The facility is a filling station that stores diesel and unleaded petrol below ground.)

6 ENVIRONMENTAL CHARACTERISTICS

This section lists pertinent environmental characteristics of the study area.

6.1 LOCALITY AND SURROUNDING LAND USE

The proposed new facility will be situated on Portion B of the Farm Rehoboth Town and Townlands No. 302, next to the B1 road (23.284757 °S, 17.076770 °E) (Figure 1-1). Access to and from the site is planned from the B1 Trunk Road and D1280 District Road. Surrounding properties currently consist of mainly undeveloped agricultural land. A residential area is located southeast and opposite the B1 Trunk Road from the site.



Photo 6-1 Project Site



Photo 6-2 Neighbour to the south



Photo 6-3 Residential area to southeast



Photo 6-4 Current entrance to the site

Implications and Impacts

The project location is undeveloped with only an auction pen on site. It is situated in a mostly undeveloped area and its construction will have minimal impact on residents in the area. Once established, the facility will provide fuel and convenience shopping to nearby residents.

6.2 CLIMATE

The general lack of functioning weather stations in Namibia, in especially rural areas, limits the availability of long term, true weather data. As a best possible workaround, long term climate data was obtained from the Atlas of Namibia Project (2002) and the CHIRPS-2 (Climate Hazards Group Infra-Red Precipitation with Station data version 2) database (Funk et al., 2015), see Table 6.1 and Figure 6-1. Atlas of Namibia Project data was compiled from almost 300 rainfall stations across Namibia. The data was contoured in 50 mm intervals prior to 1999 for variable length data sets. The CHIRPS-2 dataset consists of long term rainfall data (1981 to near-present) obtained from satellite imagery and in-situ station data. The resultant dataset provides a reasonably well

represented overview of the climatic conditions and historic rainfall of the general area. True values for single, site specific meteorological events may however differ to some degree.

According to the Köppen-Geiger Climate Classification system the project is located in a hot desert climate (BWh) (http://koeppen-geiger.vu-wien.ac.at/present.htm). This means that the area receives precipitation well below potential evapotranspiration and no more than 200 mm of precipitation annually, with a mean annual temperature of at least 18 °C.

The rain season normally starts in October and last until April, peaking in January to March. Heavier rainfall (single day events) occur between November and April, with a single event of 154.7 mm in January (last 40 years data) being the highest (Table 6.2). The average annual evaporation rate is high at more than 3,200 mm/a (Table 6.1). The average annual rainfall for the last 40 years was calculated as 157 mm/a, with a coefficient of variance of 41% (Table 6.2). This rainfall and coefficient of variance is lower than the Atlas of Namibia Project data of Table 6.1. Daily and seasonal rainfall data (Funk et al., 2015) is presented in Figure 6-1. Seasonal (July to June) total rainfall, centred on the average line for the last 40 years, is presented, with the daily total rainfall and the seasonal cumulative rainfall. From the figure it is clear that since 2010 the Rehoboth area received mostly below average rainfall with the driest years between 2018 and 2020.

Average annual temperature is 19 to 20 °C and the solar radiation index is more than 5.8 kWh/m² for the area. The prevailing wind direction is northeast to southeast with the main component being east winds

Table 6.1 Climate summary (Atlas of Namibia Project, 2002)

| Table 0.1 Chinate summary (Atlas of Namibia 1 Toject, 2002) | | | | | | | |
|---|-------------|--|--|--|--|--|--|
| Average annual rainfall (mm/a) | 200-250 | | | | | | |
| Variation in annual rainfall (%) | 50-60 | | | | | | |
| Average annual evaporation (mm/a) | 3,200-3,400 | | | | | | |
| Water deficit (mm/a) | 2,100-2,300 | | | | | | |
| Average annual temperatures (°C) | 19-20 | | | | | | |
| Average solar radiation (kWh/m²/day) | >5.8 | | | | | | |

Table 6.2 Rainfall statistics based on CHIRPS-2 data (Funk et al., 2015)

| Month | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|--|--|--------|--------|-------|-------|-------|-------|---------|-------|-------|-------|-------|
| Minimum (mm/m) | 5.59 | 4.81 | 7.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Maximum (mm/m) | 167.24 | 152.99 | 110.63 | 53.43 | 11.92 | 0.27 | 0.01 | 0.16 | 6.12 | 12.82 | 42.56 | 25.32 |
| Average (mm/m) | 46.5 | 43.4 | 38.8 | 12.6 | 1.8 | 0.0 | 0.0 | 0.0 | 1.2 | 2.9 | 12.4 | 9.2 |
| Variability (%) | 75.0 | 74.0 | 67.0 | 85.0 | 171.0 | 348.0 | 357.0 | 391.0 | 164.0 | 94.0 | 81.0 | 79.0 |
| Daily maximum (mm) | 38.1 | 34.8 | 32.2 | 22.3 | 11.9 | 0.3 | 0.0 | 0.2 | 5.3 | 7.3 | 11.1 | 13.7 |
| Average rain days | 6 | 7 | 5 | 2 | 1 | 0 | 0 | 0 | 1 | 2 | 3 | 4 |
| Season July - June average: 174 mm Season coefficient of variation: 40 % | | | | | | | | | | | | |
| Data range | 1981-Jul-01 to 2021-Jun-30 Lat: 23.2848°S Long: 17.076 | | | | | | | .0768°E | | | | |

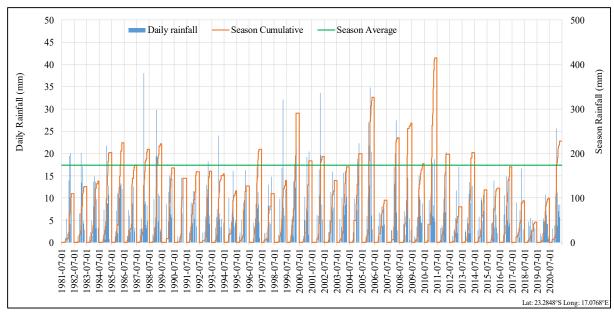


Figure 6-1 Daily and seasonal rainfall from CHIRPS-2 data (Funk et al., 2015)

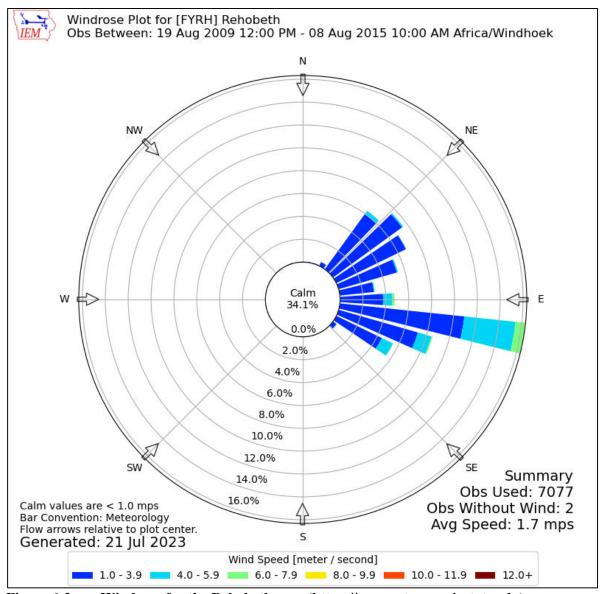


Figure 6-2 Windrose for the Rehoboth area (https://mesonet.agron.iastate.edu)

Implications and Impacts

Water is a scarce and valuable resource in Namibia and the variability in seasonal rainfall makes water an extremely vulnerable resource. Storm water may wash pollutants like uncontained, spilled hydrocarbons or chemicals, or waste into the environment and cause pollution.

6.3 TOPOGRAPHY AND DRAINAGE

Local topography is a flat lying valley with plateau remnants reflecting older land levels. The landscape is characterized as the Kalahari sandveld with deposits of palaeo dunes and pans. Rehoboth is located within the catchment of the Oanob River, an ephemeral river, draining in an eastern direction. The site itself is flat, intersected with a few small drainage lines. Drainage from the site is in a north to north-eastern direction into a larger drainage line which drains towards the east and ultimately into the Oanob River (Figure 6-3). The Oanob River falls in the catchment of the larger Auob River, which flows into the Nossob River further downstream.

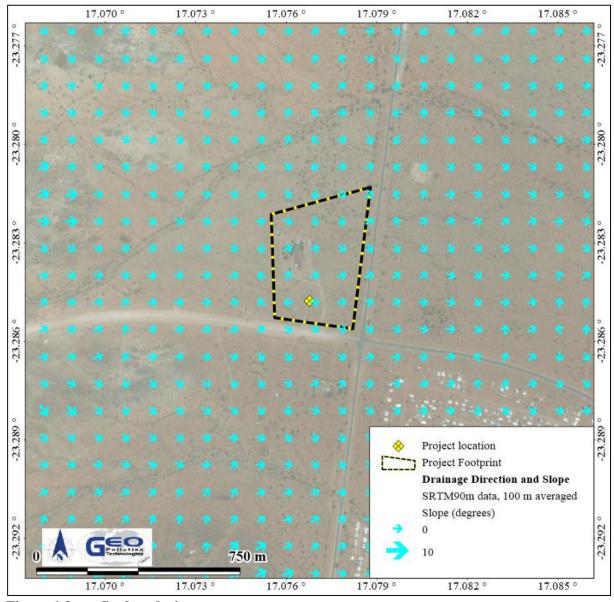


Figure 6-3 Surface drainage

Implications and Impacts

Any pollutants that are not contained and are transported via surface water flow may be transported out of the site to the surrounding environment. Therefore, the storage of fuel must be strictly controlled according to SANS and best practice requirements.

6.4 GEOLOGY AND HYDROGEOLOGY

Rehoboth is situated within the Rehoboth Basement Inlier within the Southern Foreland of the Damara belt. Augengneiss of the Gamsberg Intrusive Suite of Namaquan age is locally overlain by surficial deposits of Quaternary age. Thickness of this surface cover is unknown.

Groundwater flow will be through primary porosity in the Quaternary age deposits, while it will be through secondary porosity (fractures, faults and similar structures) in the underlying rock formations.

The alluvium of the Oanob River form the Oanob Aquifer (21.5 km long by approximately 2.5 km wide) that historically supplied the Rehoboth Town Council with water. Abstraction from this aquifer was reduced after completion in 1990 of the upstream Oanob Dam. Recharge to the aquifer was also reduced after construction of the dam with recharge now mainly taking place when water is released from the dam.

The Oanob Aquifer is currently mostly being used by local farmers but it can still serve as backup supply to Rehoboth.

Table 6.3 indicates the groundwater statistics for a radius of 5 km around the project area. The groundwater information was obtained from Department of Water Affairs (DWA) borehole database and from the Client. The DWA database is generally outdated and more boreholes might be present. Groundwater is widely utilised in the study area, with a total of 7 boreholes within a 5 km radius. The average water level as indicated in Table 6.3 is 2 m below surface. This value is skewed due to the presence of shallow groundwater in Oanob River, just south of Rehoboth, which is continuously fed by the upstream Oanob Dam. Artesian conditions are also found in the Rehoboth town where a hydrothermal aquifer is present. At the project site groundwater is expected to be encountered around 22 m below surface. The groundwater in the area is mostly of excellent quality, but elevated fluoride and sulphate concentrations do occur.

This site does not fall within a water control area. The local authority might impose regulations on drilling of boreholes and the abstraction of water within their area of jurisdiction.

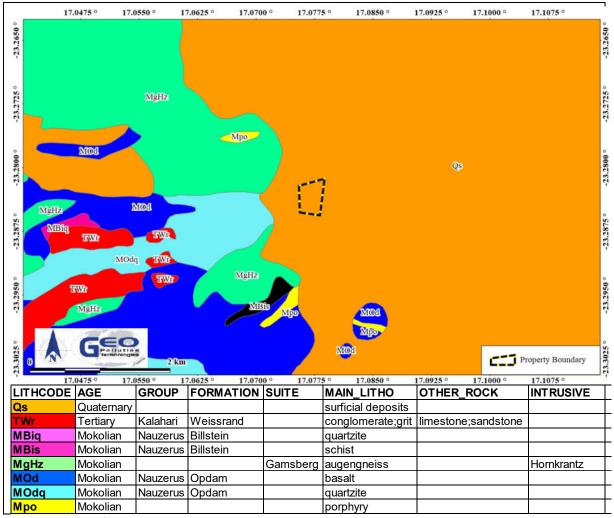


Figure 6-4 Geology

Table 6.3 Groundwater statistics

| Table 0.5 | Groundwai | ei statist | iics | | | | | | | | |
|---------------|---------------------------|---------------|-----------|-------------|--------------|-------------------|-----------------------|-----------|-------------------|------------------|-------------------|
| Query Centre: | Agra Rehoboth; -23.2 | 848°S; 17.070 | 68°E | | | | | | Quer | y Box Radius: | 5.0km |
| George | NUMBER OF KNOWN BOREHOLES | LATITUDE | TONCLLADE | DEPTH (mbs) | YIELD (m3/h) | WATER LEVEL (mbs) | WATER STRIKE (mbs) | TDS (mdd) | SULPHATE (ppm) | NITRATE (ppm) | FLUORIDE (ppm) |
| Data points | 7 | | | 4 | 3 | 4 | 4 | 4 | 4 | 4 | 4 |
| Minimum | | -23.239804 | 17.027814 | 16 | 3 | 1 | 3 | 135 | 16 | 0 | 1 |
| Average | | | | 39 | 5 | 2 | 5 | 1301 | 486 | 0 | 5 |
| Maximum | | -23.329796 | 17.125786 | 90 | 6 | 5 | 8 | 1889 | 720 | 0 | 9 |
| Group A | | | | 75.00% | 0.00% | 100.00% | 100.00% | 25.00% | 25.00% | 100.00% | 50.00% |
| Limit | | | | 50 | >10 | 10 | 10 | 1000 | 200 | 10 | 1.5 |
| Group B | | | | 25.00% | 33.33% | 0.00% | 0.00% | 25.00% | 25.00% | 0.00% | 0.00% |
| Limit | | | | 100 | >5 | 50 | 50 | 1500 | 600 | 20 | 2.0 |
| Group C | | | | 0.00% | 66.67% | 0.00% | 0.00% | 50.00% | 50.00% | 0.00% | 0.00% |
| Limit | | | | 200 | >0.5 | 100 | 100 | 2000 | 1200 | 40 | 3.0 |
| Group D | | | | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 50.00% |
| Limit | | | | >200 | < 0.5 | >100 | >100 | >2000 | >1200 | >40 | >3 |

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

Group A: Water with an excellent quality

Group C: Water with low health risk

Group B: Water with acceptable quality

Group D: Water with a high health risk, or water unsuitable for human consumption

Implications and Impacts

A risk to groundwater pollution exists due to the geological sensitivity of the area. Groundwater remains an important resource and would be at risk if fuel spills are not contained, cleaned and disposed of properly.

6.5 PUBLIC WATER SUPPLY

Rehoboth's main potable water source is Oanob Dam which is located 7 km west of the town. The water is purified and chlorinated in a treatment plant at the dam and pumped via a pipeline to reservoirs in town. Prior to 1990, before the dam was built, water from the Oanob Aquifer was utilised. Water supply is by NamWater via the Town Council

Implications and Impacts

No potential contamination impact on water supply is expected. Water usage by the facility will be mainly for domestic use and is thus not expected to have a negative impact on public water supply.

6.6 FAUNA AND FLORA

The site falls within the Savanna biome having a southern Kalahari vegetation type and a Kalahari shrubland vegetation structure. The diversity of higher plants in the rea is medium with between 150 and 300 plants species (Table 6.4) (Atlas of Namibia Project, 2002). Dominant plants are expected to be *Aristida meridionalis*, *Schmidtia kalahariensis*, *Eragrostis lehmanniana*, *Acacia erioloba*, *Stipagrostis uniplumis* v. *uniplumis*, *Grewia flava*, *Aristida stipitata* s. *spicata* and *Acacia haematoxylon*. General fauna diversity is indicated in Table 6.5.

Table 6.4 General flora data (Atlas of Namibia Project, 2002)

| Biome | Savanna |
|----------------------------|---|
| Vegetation type | Southern Kalahari |
| Vegetation structure type | Kalahari shrubland |
| Diversity of higher plants | Medium (Diversity rank = 4 [1 to 7 representing highest to lowest diversity]) |
| Number of plant species | 150 - 300 |

Table 6.5 General fauna data (Atlas of Namibia Project, 2002)

| Mammal Diversity | 61 - 75 Species |
|-------------------------|-------------------|
| Rodent Diversity | 20 - 23 Species |
| Bird Diversity | 171 - 200 Species |
| Reptile Diversity | 61 - 70 Species |
| Snake Diversity | 25 - 29 Species |
| Lizard Diversity | 28 - 31 Species |
| Frog Diversity | 8 - 11 Species |
| Termite Diversity | 7 - 9 Genera |
| Scorpion Diversity | 16 - 17 Species |

Implications and Impacts

The new fuel facility will lie within a partially disturbed area which is earmarked for the development of the Rehoboth town. Some protected plant species (e.g. *Acacia erioloba*) are present on site. Uncontrolled pollution may and can cause damage to any biodiversity surrounding the site.

6.7 DEMOGRAPHIC AND ECONOMIC CHARACTERISTICS

The project area falls within the Hardap Region and the Rehoboth West Urban Constituency. The Hardap Region has a population of 79,507 people and a density of 0.7 people per km² (National Planning Commission, 2012). The Rehoboth West Urban Constituency has 11,197 inhabitants with an unemployment rate of 30%, about 4% above the Region's unemployment rate, but still lower than the National unemployment rate. Literacy is very high at 97%. Table 6.6 provides demographic information for the Rehoboth West Urban Constituency, the region and nationally.

Table 6.6 Demographic characteristics of Rehoboth, Hardap Region and Nationally (Namibia Statistics Agency, 2014; Namibia Statistics Agency, 2009/2010)

| Rehoboth West Hardap Region Urban Constituency | | | | | | | |
|---|--------|---------|-----------|--|--|--|--|
| Population (Males) | 5,452 | 40,572 | 1,021,912 | | | | |
| Population (Females) | 5,745 | 38,935 | 1,091,165 | | | | |
| Population (Total) | 11,197 | 79, 507 | 2,113,077 | | | | |
| Unemployment (15+ years) | 30% | 26.2% | 33.8% | | | | |
| Literacy (15+ years) | 97% | 90.9% | 87.7% | | | | |

Implications and Impacts

The fuel facility will provide employment to people from the area. Some skills development and training will benefit employees during the construction and operational phases.

6.8 HERITAGE, CULTURAL AND ARCHAEOLOGICAL ASPECTS

There are no known archaeological or culturally significant areas in close proximity to the proposed fuel retail facility.

Implications and Impacts

No expected implications or impacts.

7 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 05 and 12 July 2023. A site notice was placed at the fuel retail facility. Interested and affected parties were identified and notified of the project. Notification letters were hand delivered to available neighbours as well as the Town Council of Rehoboth. See Appendix A for proof of the public participation processes. No concerns regarding the project were raised during the public consultation phase and only one entity as presented in Appendix A registered as IAP for the project.

8 MAJOR IDENTIFIED IMPACTS

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

8.1 Hydrocarbon Pollution

This section describes the most pertinent pollution impacts that are expected from the facility and its operations. Groundwater and soil pollution from hydrocarbon products are major issues associated with the storage and handling of such products. Both forms of pollution are prohibited in Namibia.

When a release of hydrocarbon products takes place to the soil, the Light Non-Aqueous Phase Liquids (LNAPL) will infiltrate into the soil and start to migrate vertically. LNAPL transport in the subsurface environment occurs in several phases, including bulk liquid, dissolved, and vapour phases. Mechanisms that influence transport include the physicochemical properties of the specific compounds present such as density, vapour pressure, viscosity, and hydrophobicity, as well as the physical and chemical properties of the subsurface environment, including geology and hydrogeology. Hydrocarbon liquids are typically complex mixtures composed of numerous compounds, each with its own individual physicochemical and, therefore, transport properties.

If small volumes of spilled LNAPL enter the unsaturated zone (i.e. vadose zone), the LNAPL will flow through the central portion of the unsaturated pores until residual saturation is reached. A three-phase system consisting of water, LNAPL, and air is formed within the vadose zone. Infiltrating water dissolves the components within the LNAPL (e.g., benzene, xylene, and toluene) and transports them to the water table. These dissolved contaminants form a contaminated plume radiating from the area of the residual product. Many components found in LNAPL are volatile and can partition into soil air and be transported by molecular diffusion to other parts of the aquifer. As these vapours diffuse into adjoining soil areas, they may partition back into the water phase and transfer contamination over wider areas. If the soil surface is relatively impermeable, vapours will not diffuse across the surface boundary and concentrations of contaminants in the soil atmosphere may build up to equilibrium conditions. However, if the surface is not covered with an impermeable material, vapours may diffuse into the atmosphere.

If large volumes of LNAPL are spilled, the LNAPL flows through the pore space to the top of the capillary fringe of the water table. Dissolved components of the LNAPL precede the less soluble components and may change the wetting properties of the water, causing a reduction in the residual water content and a decrease in the height of the capillary fringe.

Since LNAPL are lighter than water, it will float on top of the capillary fringe. As the head formed by the infiltrating LNAPL increases, the water table is depressed and the LNAPL accumulate in the depression. If the source of the spilled LNAPL is removed or contained, LNAPL within the vadose zone continue to flow under the force of gravity until reaching residual saturation. As the LNAPL continue to enter the water table depression, it spread laterally on top of the capillary fringe. The draining of the upper portions of the vadose zone reduces the total head at the interface between the LNAPL and the groundwater, causing the water table to rebound slightly. The rebounding water displaces only a portion of the LNAPL because the LNAPL remain at residual saturation. Groundwater passing through the area of residual saturation dissolves constituents of the residual LNAPL, forming a contaminant plume. Water infiltrating from the surface also can dissolve the residual LNAPL and add to the contaminant load of the aquifer.

Decrease in the water table level from seasonal variations may lead to dropping of the pool of LNAPL. If the water table rises again, part of the LNAPL may be pushed up, but a portion remains at residual saturation below the new water table. Variations in the water table height, therefore, can spread LNAPL over a greater thickness of the aquifer, causing larger volumes of aquifer materials to be contaminated.

Hydrocarbon products do biodegrade in the subsurface, although the effectiveness of this process depends on subsurface conditions. The type of hydrocarbon product plays a further role in the duration of biodegradation, with the longer chain components taking much longer to biodegrade.

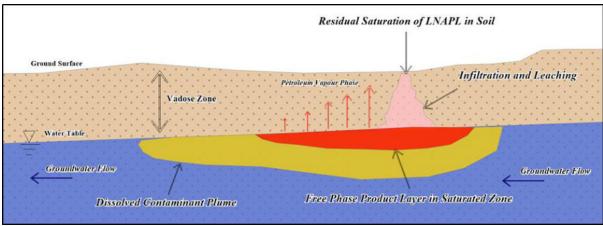


Figure 8-1 Conceptual LNAPL release to the vadose zone

8.2 Noise Impacts

Noise will be a factor during the construction phase of the new fuel retail facility due to large trucks and machinery working on site. Some noise will also exist due to heavy and light motor vehicles accessing the site for delivering and collecting fuel during operations.

8.3 TRAFFIC IMPACTS

Some traffic impacts can be experienced in the vicinity of the fuel retail facility during its construction, especially where construction vehicles gains access from and to the facility. Approval for access to the new site will be obtained from Roads Authority. Traffic flow may be impacted by delivery trucks bringing fuel to the site, potentially resulting in incidents such as collisions, if proper management measures are not in place and the design of the access roads do not meet the required standards as may be prescribed by Roads Authority.

8.4 FIRE

Chemicals and paints used during construction and maintenance may be flammable. Machinery like welders and grinders can cause sparks that can cause fires. Unleaded petrol is extremely flammable and if fuel is not handled according to Material Safety Data Sheet instructions and SANS requirements, a fire risk exist during the operational phase. A fire at this site may spread into the nearby veld where firefighting may be difficult.

8.5 HEALTH

Construction activities and working at heights have inherent health risks. Hydrocarbons are carcinogenic and dermal contact and inhalation of fumes should be prevented.

8.6 ECOSYSTEM AND BIODIVERSITY IMPACT

The proposed location is in a partially disturbed area with the existing Agra auction facilities present on site. Some habitat loss will result from clearing of the area for development. This may include the removal of protected plants and damaging of burrows and nests that may be present on site. Pollution of the environment and groundwater, especially by fuel, can deteriorate the ecosystem structure and function.

8.7 SOCIO-ECONOMIC IMPACTS

Construction activities and operations of the new fuel retail facility will provide additional employment opportunities in the area. The operational phase will create permanent employment opportunities and some training and skills development will take place. Social ills including spread of disease, alcohol misuse, theft, etc., may result from construction personnel and job seekers moving into the area or due to the larger workforce if employees are not sourced locally.

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

Table 9.2 Environmental classification (Pastakia 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 |

| Environmental Classification | Class Value | Description of Class |
|-------------------------------------|-------------|-------------------------------|
| 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 |

9.1 RISK ASSESSMENT AND ENVIRONMENTAL MANAGEMENT PLAN

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

The objectives of the EMP are:

- to include all components of construction, operations and decommissioning activities 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 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 facility are expected to mostly be of medium to low significance and can mostly be mitigated to have a low significance. The extent of impacts are mostly site specific to local and are not of a permanent nature. Due to the nature of the surrounding areas, limited cumulative impacts are possible and include groundwater contamination, waste production, traffic and noise.

9.1.1 Planning

During the phases of planning for construction (including future upgrades, maintenance etc.), continued operations and future 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 operations of the facility are in place and remains valid. This includes the petroleum products licences.
- 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.

- Have the following emergency plans, equipment and personnel on site, where reasonable, to deal with all potential emergencies:
 - o Risk management/mitigation/EMP/Emergency Response Plan and HSE manuals
 - o Adequate protection and indemnity insurance cover for incidents;
 - o Comply with the provisions of all 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 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 bi-annual reporting system to report on aspects of operations, maintenance and decommissioning as outlined in the EMP.
- Submit biannual environmental monitoring reports to the MEFT to allow for environmental clearance certificate renewal after three years. This is a requirement by MEFT.
- Appoint a specialist environmental consultant to update the EIA and EMP and apply for renewal of the environmental clearance certificate prior to expiry.

9.1.2 Revenue Generation

Retailing of fuel contributes to revenue generation which is paid to the national treasury while also contributing to the local economy in terms of increased spending power of employees as well as the sourcing of goods and services. In addition, the operations of the onsite shops and truck stop facilities will also contribute to the generation of revenue. During construction of the new facility, revenue will be generated in the construction industry and its related service providers.

| Project Activity/Resource | Nature (Status) | (A1) Importance | (A2) Magnitude | (B1) Permanence | (B2) Reversibility | (B3) Cumulative | Environmental Classification | Class Value | Probability |
|------------------------------|---|-----------------|----------------|-----------------|--------------------|-----------------|---------------------------------|-------------|-------------|
| Construction | Contribution to local and national economy | 2 | 1 | 2 | 2 | 2 | 12 | 2 | Definite |
| Daily Operations | Contribution to local economy | 2 | 1 | 3 | 2 | 1 | 12 | 2 | Definite |
| Indirect Impacts | Decrease in unemployment, contribution to local economy | 3 | 1 | 3 | 2 | 3 | 24 | 3 | Definite |

<u>Desired Outcome:</u> Contribution to national treasury and provision of employment to local Namibians.

Actions

Enhancement:

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

Responsible Body:

- Contractors
- Proponent

Data Sources and Monitoring:

• Bi-annual summary report based on employee records.

9.1.3 Employment

Continued operations and maintenance of the facility relies on employment. Skilled and unskilled labourers are employed or contracted for various tasks of operations and maintenance. Unskilled labour may be sourced locally while it is expected that skilled contractors within Namibia will be used for specialised work. The presence of the facility therefore contributes to employment creation in the skilled and unskilled labour sector.

| 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 and national economy | 2 | 1 | 2 | 2 | 2 | 12 | 2 | Definite |
| Daily Operations | Employment contribution to local economy | 2 | 1 | 3 | 2 | 1 | 12 | 2 | Definite |
| Indirect Impacts | Decrease in unemployment, contribution to local economy | 3 | 1 | 3 | 2 | 3 | 24 | 3 | Definite |

<u>Desired Outcome:</u> Contribution to the 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:

- Contractors
- Proponent

Data Sources and Monitoring:

• Bi-annual summary report based on employee records.

9.1.4 Skills, Technology and Development

During operations of the facility, training is provided to a portion of the workforce to be able to perform their duties according to the required standards. Skills are transferred to an unskilled workforce for general tasks. Development of people and technology are key to economic development of the town, region and nationally.

| Project Activity/Resource | Nature (Status) | | (A2) Magnitude | (B1) Permanence | (B2) Reversibility | (B3) Cumulative | Environmental Classification | Class Value | Probability |
|------------------------------|--|---|----------------|-----------------|--------------------|-----------------|---------------------------------|-------------|-------------|
| Construction | Employment, technological development and transfer of skills | 2 | 1 | 2 | 2 | 1 | 10 | 2 | Probable |
| Daily Operations | Employment, technological development and transfer of skills | 2 | 1 | 3 | 2 | 2 | 14 | 2 | Definite |
| Indirect Impacts | Transfer of skills and technological development | 2 | 1 | 3 | 2 | 2 | 14 | 2 | Definite |

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

Actions

Enhancement:

- If the skills exist locally, contractors and employees must first be sourced from the town, region, and then nationally. Deviations from this practice must be justified.
- Skills development and improvement programs to be made available as identified during performance assessments.
- Employees to be informed about parameters and requirements for references upon employment.

Responsible Body:

- Contractors
- Proponent

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 reports on all training conducted.

9.1.5 Demographic Profile and Community Health

The facility relies on labour for operations. The scale of the project is limited and it is not foreseen that it will create a change in the demographic profile of the local community. Exposure to factors such as communicable disease like HIV/AIDS as well as alcoholism / drug abuse are often associated with the trucking industry. 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 | In-migration and social ills related to unemployment | 2 | -1 | 2 | 1 | 2 | -8 | -1 | Probable |
| Daily Operations | In-migration and social ills related to unemployment | 2 | -1 | 3 | 2 | 2 | -14 | -2 | Probable |
| Indirect Impacts | The spread of disease | 2 | -1 | 3 | 2 | 2 | -14 | -2 | 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 sanitation requirements.

Mitigation:

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

Responsible Body:

- Contractors
- Proponent

Data Sources and Monitoring:

- 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.

9.1.6 Fuel Supply and Truck Stop Facilities

The new facility will contribute to ensuring a reliable and convenient supply of fuel to the town, local businesses and residents and the transport industry. The facility will provide safe and convenient truck stop facilities to the trucking industry.

| Project Activity/Resource | Nature (Status) | (A1) Importance | (A2) Magnitude | (B1) Permanence | (B2) Reversibility | (B3) Cumulative | Environmental Classification | Class Value | Probability |
|------------------------------|--|-----------------|----------------|-----------------|--------------------|-----------------|---------------------------------|-------------|-------------|
| Daily Operations | Contribution to economy, contribution to the fuel supply in the area | 2 | 1 | 3 | 2 | 2 | 14 | 2 | Definite |
| Indirect Impacts | Secure supply in fuel allowing travel and trade | 3 | 1 | 3 | 2 | 2 | 21 | 3 | Definite |

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

Actions

Mitigation:

- Ensure compliance to the petroleum regulations of Namibia which specify adherence to SANS standards for fuel retail facilities.
- Proper management to ensure constant 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:

- Contractors
- Proponent

Data Sources and Monitoring:

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

9.1.7 Traffic

The presence of the facility will change traffic conditions on the northern outskirts of the town during the construction and operational phases. This may increase the risk of incidents and accidents. Construction activities at the new site may result in temporary traffic impacts as a result of large vehicles accessing the sites for delivery and collection of equipment, machinery, building rubble and waste.

| 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 |
| Relocation | Relocation of the facility reduce possible impacts | 1 | 2 | 3 | 2 | 2 | 14 | 2 | Definite |
| Daily Operations | Increase traffic, road wear and tear and accidents | 1 | -2 | 3 | 2 | 2 | -14 | -2 | Probable |

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

Actions

Prevention:

- Construct access roads according to Roads Authority approved designs.
- Erect clear signage regarding access and exit points at the facility.
- 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.

Responsible Body:

- Contractors
- 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.

9.1.8 Health, Safety and Security

Activities associated with the construction and operational phases rely on human labour and therefore will expose them to health and safety risks. Health and safety risk associated with the construction activities include excavation activities during tank removal and installation, falling from heights and moving vehicles. Similarly, handling of hazardous chemicals (inhalation and carcinogenic effect of some petroleum products), will pose the main risks to employees during the operational phases. Security risks will be related to unauthorized entry, theft and sabotage.

| Project Activity/Resource | Nature (Status) | (A1) Importance | (A2) Magnitude | (B1) Permanence | (B2) Reversibility | (B3) Cumulative | Environmental Classification | Class Value | Probability |
|------------------------------|--|-----------------|----------------|-----------------|--------------------|-----------------|---------------------------------|-------------|-------------|
| Construction | Physical injuries, exposure to chemicals and criminal activities | 1 | -2 | 2 | 2 | 1 | -10 | -2 | Probable |
| Daily Operations | Physical injuries, exposure to chemicals and criminal activities | 1 | -2 | 3 | 2 | 2 | -14 | -2 | Probable |

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

Actions

Prevention:

- ♦ 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 personal protective equipment (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.
- 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 (PPE, flammable etc.).
- 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.

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.

Responsible Body:

- Contractors
- 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.

9.1.9 Fire

Construction and operational activities may increase the risk of the occurrence of fires. Unleaded petrol is extremely flammable and being a static accumulator may ignite if handled incorrectly. Such a fire pose a threat to nearby businesses and infrastructure. Fires at the new site may spread into the nearby veld and can cause devastating veld fires if not rapidly extinguished. Similarly, a veld fire originating from somewhere else, pose a threat to the Proponent's facility.

| 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 | 1 | -2 | 2 | 2 | 1 | -10 | -2 | Probable |
| Daily Operations | Fire and explosion risk | 1 | -2 | 3 | 2 | 1 | -10 | -2 | 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).
- During the construction phase, fires used for cooking or any other purposes, if any, should be restricted to dedicated areas that do not pose risks of fires spreading to the nearby veld.
- 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.
- Maintain a firebreak around the perimeter of the new site.

Mitigation:

• For any fire related emergency situation, 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.

Responsible Body:

- Contractors
- 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.

9.1.10 Air Quality

The operational phase release fuel vapours into the air during refuelling of bulk storage tanks as well as at dispensing points. Prolonged exposure may have carcinogenic effects. Construction and future refurbishment/maintenance activities may cause dust where soil surfaces are exposed or earthworks are conducted.

| Project Activity/Resource | Nature (Status) | (A1) Importance | (A2) Magnitude | (B1) Permanence | (B2) Reversibility | (B3) Cumulative | Environmental Classification | Class Value | Probability |
|------------------------------|---|-----------------|----------------|-----------------|--------------------|-----------------|---------------------------------|-------------|-------------|
| Construction | Excessive dust generated from maintenance and construction activities | 1 | -1 | 2 | 2 | 2 | -6 | -1 | Probable |
| Daily Operations | Fuel vapours | 2 | -1 | 3 | 2 | 1 | -12 | -2 | 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.
- During construction, dust masks should be provided to employees where dust impacts are expected and dust suppression by means of water implemented.

Responsible Body:

- Contractors
- Proponent

- Any complaints received regarding fuel vapours or dust should be recorded with notes on action taken.
- All information and reporting to be included in a bi-annual report.

9.1.11 Noise

Noise pollution may be generated due to heavy and light motor vehicles accessing the site to offload fuel or refuel. Construction and future refurbishment/maintenance activities may result in a temporary increases in noise levels.

| 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, upgrade or refurbishment activities – nuisance and hearing loss | 1 | -2 | 2 | 2 | 1 | -10 | -2 | Probable |
| Daily Operations | Noise generated from the operational activities – nuisance | 1 | -2 | 3 | 2 | 1 | -12 | -2 | Probable |

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

Actions

Prevention:

- Follow the Health and Safety Regulations of the Labour Act's guidelines for limits on noise in the workplace and World Health Organization (WHO) guidelines on maximum noise levels (Guidelines for Community Noise, 1999) to prevent hearing impairment and a nuisance at nearby receptors.
- All machinery must be regularly serviced to ensure minimal noise production.
- Manage noise caused by clients including loud music.

Mitigation:

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

Responsible Body:

- Contractors
- Proponent

- ♦ Health and Safety Regulations of the Labour Act's guidelines for limits on noise in the workplace and World Health Organization (WHO) guidelines on maximum noise levels (Guidelines for Community Noise, 1999).
- Maintain a complaints register.
- Bi-annual report on complaints and actions taken to address complaints and prevent future occurrences.

9.1.12 Waste production

Waste is produced during the construction and operational phases. Waste includes hazardous waste associated with the handling of hydrocarbon products. Maintenance waste may include building rubble and discarded equipment contaminated by hydrocarbon products. Contaminated soil and water is considered as hazardous waste. Domestic waste will be generated by the facility and related operations. Waste presents a contamination risk and when 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 and soils | 1 | -2 | 2 | 2 | 2 | -12 | -2 | Probable |
| Daily Operations | Excessive waste production, littering, contaminated materials | 1 | -2 | 3 | 2 | 2 | -14 | -2 | Probable |

<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.
- 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).
- 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:

- Contractors
- Proponent

- 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.

9.1.13 Ecosystem and Biodiversity Impact

The site shows limited impacts as a result of human activity related to the presence of auction pens of the Proponent. The area earmarked for the fuel facility and truck port is covered by natural vegetation. Such vegetation includes protected species like *Acacia erioloba* (camel thorn) and *Boscia albitrunca* (Shepperd's Tree) which may require removal. Bird nests and animal burrows may also be present. The site is however earmarked for development by the Rehoboth Town Council. Construction and operations may present a pollution risk to the surrounding environment and biophysical features.

| 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 | Improbable |
| Daily Operations | Impact on fauna and flora. Loss of biodiversity | 1 | -1 | 3 | 2 | 2 | -7 | -1 | Improbable |

<u>Desired Outcome:</u> To minimize or avoid pollution of, and impacts on, the ecological environment.

Actions.

Prevention:

- Prior to construction of the new facility, identify protected plant species on site and, where possible, incorporate them into the design of the facility.
- Prior to land clearing, do a systematic site walkover to, as best as possible, locate and remove any slow moving animals like tortoises and chameleons. If any such animals are removed they should be released northwest of the site and away from the urban areas.
- For the construction phase, instruct workers to not deliberately injure or kill any animals perceived as dangerous, like snakes, scorpions, reptiles, etc., which may be present on site. Rather encourage reporting of such animals and arrange for the relocation of the animals to safe habitats.
- Educate all contracted and permanent employees on the value of biodiversity and discourage any form of poaching and/or plant collection in the nearby veld.

Mitigation:

- Obtain permits for the removal of any protected plant species on site.
- Contain construction material and activities (laydown areas) to the site to minimize the impact on surrounding habitats.
- 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 animals.
- The establishment of habitats and nesting sites at the facility should be discouraged where possible.

Responsible Body:

- Contractors
- Proponent

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

9.1.14 Groundwater, Surface Water and Soil Contamination

Operations entails the storage and handling of various hydrocarbons (such as fuels and lubricants). Such material may contaminate surface water, soil and groundwater. Contamination may either result from failing storage facilities and reticulation, or spills and leaks associated construction activities and with fuel handling such as overfills and spills.

| 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 | -2 | 2 | 2 | 1 | -20 | -3 | Probable |
| Daily Operations | Contamination from hazardous material spillages and hydrocarbon leakages | 2 | -2 | 3 | 2 | 1 | -24 | -3 | Probable |

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

Actions

Prevention:

- All construction and or maintenance machines should be maintained to be in a good working condition during operation.
- Employ drip trays and spill kits during construction when onsite servicing/repairs of equipment are needed.
- 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.
- Surfactants (soap) should not be allowed to enter the oil water separator as this will decrease its efficiency.
- ♦ All fuelling should be conducted on surfaces provided for this purpose. E.g. Concrete slabs with regularly maintained seals between slabs.
- The procedures followed to prevent environmental damage during service and maintenance, and compliance with these procedures, must be audited and corrections made where necessary.
- Proper training of operators must be conducted on a regular basis (fuel handling, spill detection, spill control).

Mitigation:

- Any spillage of more than 200 *l* must be reported to the Ministry of 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:

- Contractors
- 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.

9.1.15 Visual Impact

This is an impact that not only affects the aesthetic appearance, but also the integrity of the facility. The general upkeep and maintenance of the facility will not only reduce any negative visual impacts, but also ensure the longevity of the structures and buildings. The new facility will change the character of the environment as one approach the town from the north. The development will however be similar to existing developments along the B1 road in town and is characteristic of typical urban developments.

| 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 | 2 | 2 | 2 | 2 | 12 | 2 | Definite |

<u>Desired Outcome:</u> To minimise negative 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 or downwards 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:

- Contractors
- Proponent

Data Sources and Monitoring:

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

9.1.16 Impacts on Utilities and Infrastructure

Any damage caused to existing infrastructure and services supply like roads, water and electricity where present.

| Project Activity/Resource | Nature (Status) | (A1) Importance | (A2) Magnitude | (B1) Permanence | (B2) Reversibility | (B3) Cumulative | Environmental Classification | Class Value | Probability |
|------------------------------|---|-----------------|----------------|-----------------|--------------------|-----------------|---------------------------------|-------------|-------------|
| Construction | Damage to existing utilities and infrastructure such as pipelines, power lines, roads, etc. | 2 | -2 | 2 | 2 | 2 | -24 | -3 | Probable |

<u>Desired Outcome:</u> No impact on utilities and infrastructure.

Actions

Prevention:

- Appointing qualified and reputable contractors is essential.
- The contractor must determine exactly where amenities and pipelines are situated before construction activities commence (utility clearance e.g. ground penetrating radar surveys).
- Liaison with the suppliers of services is essential.
- Adhere to restrictions on activities that may occur in servitudes.

Mitigation:

• Emergency procedures for corrective action available on file.

Responsible Body:

- Proponent
- Contractors

Data Sources and Monitoring:

• A bi-annual report should be compiled of all incidents that occurred and corrective action taken.

9.1.17 Archaeological, Heritage and Cultural Impact

Although unlikely, some artefacts of archaeological or heritage significance may be unearthed during earthworks for construction.

| Project Activity / Resource | Nature (Status) | (A1) Importance | (A2) Magnitude | (B1) Permanence | (B2) Reversibility | (B3) Cumulative | Environmental Classification | Class Value | Probability |
|--------------------------------|--|-----------------|----------------|-----------------|--------------------|-----------------|---------------------------------|-------------|-------------|
| Construction | Unearthing / finding and damage to artefacts of archaeological, heritage and / or cultural value | 4 | -2 | 2 | 3 | 1 | -48 | -4 | Improbable |
| Daily Operations | Unearthing / finding and damage to artefacts of archaeological, heritage and / or cultural value | 4 | -2 | 2 | 3 | 1 | -48 | -4 | Improbable |

<u>Desired Outcome:</u> To preserve any artefacts of archaeological, heritage or cultural significance.

Actions

Prevention:

• Inform all contractors and employees to be vigilant for any extraordinary finds and to take action not to cause any damage.

Mitigation:

- If any archaeologically important artefact is found a "chance finds procedure" must be initiated which includes stopping any further work that can cause damage and reporting to superiors and the relevant authorities.
- For any human remains, the Namibian Police must be informed as a first action.

Responsible Body:

- Proponent
- Contractors

Data Sources and Monitoring:

• Compile a bi-annual report of all chance finds, proof of reporting to authorities and actions taken.

9.1.18 Cumulative Impact

Possible cumulative impacts associated with the construction, operational and decommissioning phases include increased habitat impacts, traffic and noise in the area.

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

Desired Outcome: To minimise 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:

- Contractors
- 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

It is not expected that the new facility will be decommissioned during the validity of the ECC. Should decommissioning of the site realise in future, decommissioning will entail the complete removal of all infrastructure related to the facility. Any pollution present on the site must be remediated. The impacts associated with this phase include noise and waste production as structures are dismantled. Noise must be kept within the Health and Safety regulations of the Labour Act and WHO guidelines and waste should be contained and disposed of at an appropriately classified and approved waste facility and not dumped in the surrounding areas. Should decommissioning be considered in future, the EMP will have to be reviewed at the time of decommissioning, to cater for changes made to the site and to implement new 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 recognized and certified management system that will ensure ongoing incorporation of environmental constraints. At the heart of an EMS is the concept of continual improvement of environmental performance with resulting increases in operational efficiency, financial savings and reduction in environmental, health and safety risks. An effective EMS would need to include the following elements:

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

10 CONCLUSION

The fuel retail facility will have a positive impact on the various sectors operational in the town and surrounding community. In addition to reliable and convenient fuel the Proponent will contribute to employment, skills transfer and training which in turn develops the local workforce. The proposed facility and its operations will be compliant with legislative requirements, and aid in securing a constant and reliable supply of fuel.

Negative impacts can successfully be mitigated. SANS standards relating to the petroleum industry and prescribed by Namibian law must be followed during construction and operations of the fuel retail facility. Noise pollution should at all times meet the Health and Safety Regulations of the Labour Act and/or WHO guidelines on community noise requirements to prevent hearing loss and not to cause a nuisance. Fire prevention should be adequate, and health and safety regulations should be adhered to in accordance with the regulations pertaining to relevant laws and internationally accepted standards of operation. Any waste produced must be removed from site and disposed of at an appropriate facility or re-used or recycled where possible. Hazardous waste must be disposed of at an approved hazardous waste disposal site. Spill containment infrastructure is key in preventing pollution of the environment and includes drip trays and suitably surfaced areas where fuel is handled.

The EMP should be used as an on-site reference document for the construction and 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) of the MEFT find that the impacts and related mitigation measures, which have been proposed in this report, are acceptable, an environmental clearance certificate may be granted to the Proponent. The environmental clearance certificate issued, based on this document, will render it a legally binding document which should be adhered to.

11 REFERENCES

- Atlas of Namibia Project. 2002. Directorate of Environmental Affairs, Ministry of Environment and Tourism (www.met.gov.na). [Accessed from http://www.unikoeln.de/sfb389/e/e1/download/atlas namibia/index e.htm
- 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.
- https://mesonet.agron.iastate.edu/sites/dyn_windrose.phtml?station=FYRH&network=NA__ASOS&bin0=2&bin1=5&bin2=7&bin3=10&bin4=15&bin5=20&units=mps&nsector=16&fmt=png&dpi=100&year1=2009&month1=1&day1=1&hour1=0&minute1=0&year2=2022&month2=11&day2=17&hour2=0&minute2=0

Namibia Statistics Agency. Namibia household Income and Expenditure Survey 2009/2010.

Namibia Statistics Agency. Namibia 2011 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 Participation |
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Notified Neighbours – Hand Delivered Letters Relocation and Operations of a Fuel Retail Facility in Rehoboth, Hardap Region Signature Public Participation Notification: Environmental Assessment Privacy Block Geo Pollution Technologies Relocation and Operations of a Fuel Retail Facility in Rehoboth, Hardap Region Organisation/Address Tel/Mobile Name & Surname

Town Council Notification Letter



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

10 July 2023

To: Interested and Affected Parties

Re: Environmental Scoping Assessment and Environmental Management Plan for the Relocation and Operations of a Fuel Retail Facility in Rehoboth, Hardap Region

Dear Sir/Madam

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

Project: Relocation and Operations of a Fuel Retail Facility in Rehoboth, Hardap Region

Proponent: Agra Ltd

Environmental Assessment Practitioner: Geo Pollution Technologies (Pty) Ltd

Agra Ltd plans to relocate their fuel facility from its current location at erf 97, corner of Church and Wood Lilly Street, to Portion B of the Farm Rehoboth Town and Townlands No. 302 (Figure 1). The Proponent has and will continue to play an important role in providing fuel for the local and surrounding farming community, tourists visiting the town, and the transport sector. In addition, the facility will act as a truck port providing rest stop space and related facilities (ablutions, takeaways, etc.) for the trucking industry.

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

Registration details and comments should reach Geo Pollution Technologies by 19 July 2023.

To register, please contact: Email: gpt@thenamib.com Fax: 088-62-6368

Should you require any additional information please contact Geo Pollution Technologies at telephone 061-257411.

Thank you in advance.

Sincerely,

Geo Pollution Technologies

André Faul

Environmental Assessment Practitioner

RECEIVED TO SERVICE OF RELIGIOUS AND SERVICE OF SER

Page 1 of 2

Directors:

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

WEDNESDAY 5 JULY 2023

NAMIBIANS HAS ONE MATCH LEFT

U18s hit back with a win

Zack von Wielligh was named player of the match by the Namibian coaching team following the 27-10 win at the Jeppe High School field

ANDREW POOLMAN WINDHOEK

The Namibia Under-18s overcar he Namibia Under-18s overcame a slow start during the first half to win match two against Border Country Districts at the SA Rugby U18 Academy Week in Johannesburg yesterday. Zack von Wielligh was named player of the match by the Namibian coaching team following the 27-10 win at the Jeppe High School field. The Windhoek Gymnasium openside flank was a livewire on defence and also carried well by spinning out of tackles or making metres with let girves.

ys spinning out or tackies or making ine-res with leg drives.

After Monday's opener, in which the Valke stung them with a 28-27 comeback win, the Namibians only led 10-0 at half-time against the Eastern Cape team.

Better play

A penalty and conversion by fly-half Michael Koopman (Walvis Bay Private



BEST. Zack von Wielligh is congratulated as Namibia's player of the m der Country Districts by head coach Herman Grobler. PHOTO: GERT DE WAM

School) and a try by lock Walter Otto (Windhoek Affies) were their only points at that stage. Despite a strong scrum, their ruck possession was very slow and simply played into the hands of the Bor-der defence.

The introduction of JD Rossouw (WBPS) as scrum half after half-time brought an immediate improvement to

the pace and decision-making of the Na-

Rossouw scored one try himself, while counter-attacking full-back Antua Klein (WBPS) and left wing Sammy Sobra-money (WHS) also added five-pointers, along with one more conversion by Koo-pman. The Namibians have one match pman. The Nami left, on Thursday.

SUCCESSFUL END TO ARCHERY CHAMPIONSHIPS

SPORTS REPORTER

Ten Namibian archers participated in the Africa Regional Field Archery Championships hosted in Namibia over the past weekend, from 30 June

till 2 July.

In very cold and windy weather, the Namibian team competed against neighbouring South Africa

neighbouring South Africa and Zambia. In the adult men's freestyle unlimited class, Jannie Meuwesen from Wind-hoek took first place. In the men's bow hunter unlimitmen's bow hunter unlimit-ed class, Rene Rossler from Lüderitz took second place. In the women's hunter un-limited class category, Liezl Schoeman from Windhoek scooped third place, where-as Windhoeker Cobus Bar-nard bagged third place in the young adult male free-style unlimited category. In a press statement, the Archery Association of Na-mibia expressed how proud they are of the archers who practicised. scooped third place, where participated.
"We would also like to

thank our sponsors: Check-ers, Prime Press, Varta and Pupkewitz Mega Build. With you it was possible to host a very successful Africa Championships in Namibia and we appreciate your assistance," read the statement.



archer Jannie Me bagged a gold medal in the men's freestyle unlimited

Namibia off to Fistball World Championships

OLAF MULLER WINDHOEK

Namibian fistball player Dieter Keb-bel recently spoke to Namibia Media Holdings about the upcoming Fistball World Championship in Mannheim, Germany, which starts on 22 July. The world's top teams will compete with one goal in mind – to dethrone the record-breaking world champion, Germany.

Namibia will also be sending a team,

not for the first time. The Namibian Fistball Association (FAN) has participated 15 times in the championship so far.

NMH: What do you expect from the tournament and your perfor-

Mancer Kebbel: I expect high-class fistball, where you can gain a lot of experi-ence. We can't expect too much from he group games and just play our hearts out to prepare for the place-ment games after that. The opening match gives us the chance to experi-ence what it means to play at the top of a fistball world championship, and



bel PHOTO-CONTRIBUTED

we can take this feeling with us into the match against Italy. We would like to really annoy this opponent. The match against Switzerland gives us another opportunity to prepare for the most important part of the World Cup, the one after the group stage.

NMH: The opening game against Germany is a tough one. You have hosted some of the players as guests in recent weeks - what do you think you can do to upset the clear fu-vourites?

Kebbel: The tips from our guests were very valuable. As a defender, the talks with Ida Hollmann helped me perform more confidently and tackle the simple things better on the field. In the match against Johannes Jungclaussen, it was shown to me what is waiting for us with Germany. I am very happy to play against the world champions; it is a chance to compare ourselves with the best. I hope we will do the best we can to play a good opening game against the Germans.

NMH: Afterwards, Italy and Swit-

NMH: Afterwards, Italy and Switzerland.

Kebbel: Against Italy, we have the most hope for a win. In the group stage, the game against Italy is the most important because we can build momentum from a possible win, which will hopefully carry us to the end. Against Switzerland, there is a chance for us to play good fistball at the highest level again without any pressure. I almost think that the game against Switzerland will be the game against Switzerland will be most fun - whether we win or lose It's another chance for us to prove ourselves. against Switzerland will be the

Geo Pollution Technologies (Pty) Ltd was appointed by Agra Ltd to undertake an environmental assessment for the relocation and operations of their fuel relatification in Rehoboth in the Hardap Region. The environmental assessment will be according to the Environmental Adamagement Act of 2007 and its regulations as published in 2012.

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André Faul Geo Pollution Technologies (Pty) Ltd Telephone: +264-61-257411 Fax: +264-88626368





NEWSINSHORT

Teen suffocates in mud

A 16-year-old boy died last Friday after he allegedly suffo-cated while removing mud out of a water hole at litatu village in the Omusati Region's Tsandi constituency. 'It is alleged that the deceased

and four other housemates were removing mud out of a water hole/well. In the process, the deceased and his uncle -who were inside the water hole became unconscious as they began to suffocate," the police

said.
The others who were outside
the well went to seek assistance from the neighbours, but
they only managed to remove
the older man from the water

He was taken to Okatseidhi clinic before being transporte to Tsandi hospital in a critical condition, police said. Divers from the Oshana Region were summoned to remove the deceased's body. The teen's remains were trans-ported to the Okahao police mortuary for a post-mortem. Investigations into the matter continue.

- TUYEIMO HAIDULA

Cattle herder rapes fouryear-old

A four-year-old girl has be-come the latest rape victim in the Oshikoto Region after in the Oshikoto Region after she was alleged repeatedly raped by a cattle herder in the Omuthiya area. The rapes reportedly happened between April and July at un-

known times.

Oshikoto regional commander, Commissioner Teopolina Kalompo-Nashikaku, said the suspect allegedly raped the victim while she was left in his

"The suspect lives in the same hie suspect lives in the same house as the victim and [the rapes occurred] while her grandmother went to the cuca shop," Kalompo-Nashikaku, said.

said. She said the suspect, a 17-year-old Angolan male, has been arrested and is expected to appear before the Ondangwa Magistrate's Court this week. Kalompo-Nashikaku further cautioned parents and guard-ians not to leave their children ians not to leave their children with cattle herders.
- TUYEIMO HAIDULA

FIRES DESTROY 13 SHACKS IN SWAKOPMUND

NIKANOR NANGOLO WALVIS BAY

A total of 13 shacks were gutted in two separate fires in Swakopmund yesterday. No fatalities or injuries yesterday. No fatanties or injuries were reported, but about 16 vic-tims - including four children -were affected by the first fire. According to Inspector Ileni Shapumba, police commander for

community affairs in the Eron-go Region, the first incident hap-pened around 07:55 in Mondesai's Tulinawa near the intersection of Monica Geingos and Stefanus



Shipanga streets.
"The fire started on one of the

erven, where it then spread to two other properties. About 12 shacks burned to ashes."

The second fire erupted in Andimba Toivo Ya Toivo Street in the DRC informal settlement, where one shack was razed.

where one snack was razed.

Shapumba said the owner, who
lives with his girlfriend and three
children, was cooking outside and
quickly went to the neighbour's
house. Upon his return, he allegedly noticed smoke coming from the
direction of his home. direction of his home.

The Namibian Police and the Swakopmund Fire Brigade attend-ed to both incidents. Police investi-gations continue.

MATTER DRAGS ON OVER A DECADE LATER

Mbok case: Only three state witnesses four

Thirteen years after a fraud case against Antonie 'Tony' Mbok and Daniel Nghiwilepo kicked off, it continues to drag on with no end in sight.

IRÉNE-MARI VAN DER WALT WINDHOEK

I fforts to locate 16 state witnesses to testify in a fraud case have largely yielded no

results.
Only three of the 16 witnesses could be found, state prosecutor Taodago Gaweseb told Judge Nate

Taodago Gaweset told Judge Nate Ndauendapo on Monday. The fraud case against Antonie Tony Mbok and Daniel Nghiwile-po has been dragging on for more than a decade. Mbok and his co-accused - in-

cluding Mbok's company - stand accused of 10 charges of fraud relat-

ing to cheques with a combined val-ue of around N\$3.9 million which

ue of around N\$3.9 million which the accused allegedly intercepted. The State claimed the cheques paid into Mbok's company's ac-count were intended for the min-istry of finance. Another defendant, Veronica Thomas, already pleaded guilty to five charges of fraud in 2010 - at the start of the trial - and was ef-fectively sentenced to eight years in prison.

in prison.
On Monday, Gaweseb called two witnesses who testified that they submitted two cheques to the min istry. He explained after these testi-monies that only one more witness could be located, and that this wit-

could be located, and that this wit-ness would only be able to testify on Tuesday [yesterday]. Mbok and Nghiwilepo's legal rep-resentatives, Boris Isaacks and Si-las Kishi-Shakumu, did not object to the application for adjournment. However, they questioned the im-

portance of the remaining 13 wit

Kishi-Shakumu said he wante to discuss the importance of the re maining witnesses with Gaweseb to determine the value of their contributions.

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NUUS

Press Notice: Republikein 5 and 12 July 2023.



Ocean Conversation Namibia het onlangs die jaarlikse robbe-oes veroorde

Kwota van 86 000 vir robbe-oes

"Ons sien vreeslik op teen hierdie tyd van die jaar. Oor die afgelope jare het ons sleepmerke vol bloed by Kaap Kruis gesien. Gewonde

obbe, bang diere.
"Ons het dae deurgebring om hulle
e probeer red, en hulle kon dalk die
olgende dag doodgeslaan of geskiet
word. As hulle nie met rommel dood-

word. As hulle nie met rommel dood-gemaak word nie, word hulle met knuppels en gewere doodgemaak," het die bewaringsorganisasie Ocean Conversation Namibia (OCN) in 'n nuusbrief geskryf. Dit volg op die onlangse aan-kondiging deur die ministerie van visserye en mariene hulpbronne oor 'n kwota om 80 000 Kaapse pelsrob-welpies en 6000 bulle vanjaar te oes. Volgens die ministerie staan die robbevolking tans op 1,6 miljoen en bestaan uit 26 kolonies. Hulle vreet na raming 2 miljoen ton vis per jaar.

pestaan uit 26 kolonies. Hulle vreet na raming 2 miljoen ton vis per jaar. "As jy robbevolkings laat groei, al hulle inderdaad kommersiële noeveelhede vis verbruik. Die pevolking moet op 'n vlak gehou ord wat die ekosisteem kan onderteun," het Romeo Muyunda, die oordvoerder van die ministerie van

toerisme, gesê. Die OCN, 'n private ini-siatief wat hom vir die edding van robbe beywer eur dié te bevry wat in eerommel soos nette erstrengel word, het esê die jaarlikse robbees is hoogs omstrede, oofsaaklik as gevolg van ie manier hoe jong robbe p die sagte deel van die gterkop doodgeslaan

nuppel dood te slaan, is rgaïes en moet verbied argaies en moet verbied word; geen verdere besprekingnie. Robbe kry verkeerdelik die skuld vir visvoorrade wat uitgeput word. Terwyl robbe tot 10% van hul liggaams-10% van hui nggaams-gewig per dag kan vreet, eet hulle hoofsaaklik vis wat nie kommersieel verbruik word nie. Daar is een rede waarom visvoorrade afneem, naamlik oorbevissing. Oor woot vielwotse en Ons moet viskwotas en wanbestuur verminder om volhoubare visvang-praktyke te bereik." Die OCN het opgemerk dat hulle verstaan dat lande soos Namibië op nulpbronne moet kapitaliseer.

Dit is egter oneties om 6 000 gesonde prima alfa-robbulle vir hul geslagsdele dood te maak. Daar bestaan geen ekonomiese vraag na

dooie robwelpies nie.

"Hulle het baie min vleis, wat ongewild lyk vir verbruiksdoeleindes, en baie min vet vir die produksie van omega-robolie

"Oor die afgelope jare is baie min robwelpies geoes en ons verwag dieselfde vir 2023. Vir ons bulle is daar geen goeie nuus nie. Die vraag na diere se geslagsorgiane groei, en daar is versoeke van die robbedryf om die is versoeke van die robbedryt om die kwota te verhoog, Gelukkig bring hulle die grootste deel van hul jaar in die see of by ontoeganklike robkolonies deur, ver weg van mense en wapens. "In die skadu van hierdie verskriklike kwota van 86 000 robbe, lyk ons klein

getal van 181 robbe vir die maand wat van nette bevry is, onbelangrik. Junie was ons suksesvolste maand sedert ons begin het om robbe te red. Dit maak ons hartseer om te dink dat sommige van hulle dalk nie die oesseiseen gan oorleef nie." oesseisoen gaan oorleef nie.'

PUBLIC PARTICIPATION NOTICE

Geo Pollution Technologies (Pty) Ltd was appointed by A ara I td to undertake an environmental assessment for the relocation and operations of their fuel retail facility in Rehoboth in the Hardap Region. The environmental assessment will be according to the Environmental Management Act of 2007 and its regulations as published in 2012

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>> Ouditverslag lig onreëlmatighede uit

Arbeidsministerie betaal steeds afgestorwe werkers

Daar is glo nie meganismes in plek om te verifieer of die ministerie steeds salarisse betaal aan personeellede wat intussen dood is nie.

Republikein

) Ogone Tihage

Oudit deur die kantoor van die ouditeur-generaal het bevind die ministerie van arbeid, nywerheidsbetrekkinge en werkskepping het nie meganismes in plek om te verifieer of hy steeds salarisse betaal aan personeellede wat intussen dood is nie. wat intussen dood is nie

wat intussen dood is nie.
Dié bevindinge word uiteengesit
in die ministerie se ouditverslag vir
die 2022-boekjaar.
"Die oudit het bevind afgestorwe
werknemers wat vergoeding vir
beroepsbeserings ontvang het,
steeds aktief is op die ministerie
se betaalstaatmodule en dat hulle
'n maandelikse voordeel betaal is
selfs ná die sterfdatum," lui die
ouditverslag.
Ouditeur-generaal Junias Kandjeke
het opgemerk die ministerie kan nie

het opgemerk die ministerie kan nie vasstel wie – onder personeellede aan wie hy vergoeding betaal – is

dood nie.
"Die rekeningbeampte het aangedui alhoewel die begunstigdes op die ministeriële betaalstaat is, het die ministerie nie toegang tot inligting



Voormalige werknemers van die arbeidsministerie - wat intussen dood is ontvang steeds salarisse. FOTO VERSKA

m te bepaal of hulle nog lewe of nie," lui die verslag.

SSC-VERIFIKASIE

SSC-PERFIRASIE
Luidens die ouditverslag maak die
ministerie staat op die rekords van
die Maatskaplike Voorsorgkommissie
(SSC) om te verifieer watter van sy
werknemers dood is.

"Die ministerie is tans besig met

die samestelling van 'n databasis die samesteiling van 'n databasis van alle vergoedingstoekennings wat aktief is op die betaalstaat-stelsel deur die insameling van alle inligting wat die SSC vry-gestel het. Dit sodat die ministerie jaarliks betaalstaatverifikasie kan uitvoer om soortgelyke situasies

in die toekoms te vermy," luiden die verslag. Ander ouditkwessies wat uitgelig is

sluit in hoe die ministerie sy inkoms gemotiveer het.

"Die inkomste vir die 2021-'22-boel jaar wat deur die rekenpligtig beampte vermeld word, verskil va die inkomste vir die 2021-'22-boek jaar wat in die inkomstegrootboe weerspieël word.

"Daar word aanbeveel dat die reke pligtige beampte moet verseker da die inkomste wat aangemeld word nie moet verskil van die inkomste wat in die inkomstegrootboel gereflekteer word nie," het die oud teur-generaal geskryf.





Minister

okumente het besonderhede aan die lig gebring oor dubbele betalings wat die plaaslike kantoor sowel as die Unesco-hoofkantoor aan die miister gemaak het, insluitend hoe lie agentskap onsuksesvol probeer iet om van die geld van die minister

erug te kry. Rekords toon dat die kommissie eer as N\$22 000 in haar persoonike bankrekening inbetaal het, en sy et nog US\$1 000 (sowat N\$18 850)

> Chat 'n bietiie

van Unesco se hoofkantoor ontvang. Die fondse was haar daaglikse ver-blyftoelae vir haar deelname aan 'n paneelbespreking in New York op 6

en 7 Maart.

en / Maart. Met haar aankoms het sy glo nie haar verblyf- en reistoelaag van Unesco ontvang nie, wat haar genoop het om na die Namibië Nasionale Kommissie vir Unesco (Natcom) in Windhoek uit te reik.

Die kommissie, wat tans vanuit die ministerie se kantoor werk, het N\$22 321,52 na haar Standard Bank-rekening oorgeplaas

'n Versoekbrief om fondse oor te dra lui: "Hierdie betaling is vir haar daaglikse verblyftoelae sowel as dié van haar assistant vir twee dae. Die geld sal aan Natcom terugbetaal word met die terugkeer van die minister.'

Terwyl die minister se reis slegs vir twee dae was, het sy tot 12 Maart in

New York gebly
Volgens'n ingeligte bron het die mi-nisterie vir hierdie bykomende dae betaal. Luidens die verklaring kan politieke ampsdraers of personeel pointere ampsaraers of personeer geleenthede op uitnodiging of as deel van die aktiwiteite verwant aan die ministerie se mandaat bywoon. Om reistoelaes te bepaal, word drie tipes uitbetaal, naamlik die regering betaal alles, die regering of gasheer betaal net verblyf, of alle koste word deur die gasheer gedek. 'n Gepaste toelaag

word volgens regeringskoerse uitge-werk en direk in die reisiger se rekening inbetaal.

'NIKS VERDAG'

Alfred van Kent, die uitvoerende direkteur van hoër onderwys, het die volgende verduideliking gegee: "Wanneer geleenthede gereël word wanneer gereennede gereet word of aktiwiteite binne ons raamwerk bygewoon word, nader die staats-instellings sowel as die ministerie mekaar om met die verwante koste te help."

Die ministerie sê in 'n verklaringdie minister is formeel no 'n anntal ge-

minister is formeel na 'n aantal geleenthede uitgenooi wat volgens die regering se interne prosesse goedge

keur en gefinansier is. Dit beklem toon ook die verskil tussen Unesc en die Nasionale Kommissie vi Unesco (Natcom). Laasgenoemde 'n Namibiese funksjonele eenhei

'n Namibiese funksionele eenhei-wat onder die ministerie val en wa volgens die verklaring "nie geld va projekte herlei het om die ministe te betaal nie".

"Die ministerie wil graag die nasi verseker dat die interne administra tiewe prosesse gevolg is in alle beta lings wat gemaak is," het Van Ken

bygevoeg, "Die ministerie bly verbind to die stryd teen korrupsie en om 'n eties nasie te bou."



Dié tak het afgewaai en op 'n munisipale werker en sy werksvoertuig geval.



en Lüderitz in die sand vasgesit, FOTO VERSKAF

WINDHOEK

In Windhoek is Erastus Shondili, 'n munisipa-le werker, Maandag om-streeks 10:30 beseer toe 'n reusetak van 'n boom afgewaai en op hom en sy

werksvoertuig beland het. Shondili was besig om op die sypaadjie in Robert Mugaberylaan 'n pyp te herstel toe die ongeluk gebeur het. Werknemers van

Paragon het komberse bymekaargemaak om Shondili teen die koue en wind te beskerm.

KOUE

Op die plaas Vaalgrass – sowat 50 kilometer suidwes van Windhoek – was dit sowat twee w gelede -10 °C en toe het

kapok geval.

Volgens Cindy Meiburg
was dit Maandagoggend C
C met 'n skynbare temperatuur van -8 °C.

"Dit voel die week kouer
en die wind waai ons
deurmekaar. Ek het a

my groente toegemaak e Maandag om 07:30 het m besproeiingstelsel aan gegaan en die water he gevries. Om 11:00 was di nog steeds hard gevries, het sy gesê.

By Privaatskool Elnata op Stampriet is die leer linge Maandagoggend ii bibberkoue terugverwel kom. Die sportvelde wa met ys bedek

Op Henriëtte Le Grang se plaas wat tussen Stein hausen en Summerdowi geleë is, was die kwil Maandag -3°C. Op Barbara Gouws se

plaas tussen Stamprie en Gochas is -3 °C gemee In die Okahandia-or gewing en by die Daar Viljoendam buite Wind hoek het die kwik op -°C gestaan.

- tanja republikein.com



Geo Pollution Technologies (Pty) Ltd was appointed by Agra Ltd to undertake an environmental assessment for the relocation and operations of their fuel retail facility in Rehoboth in the Hardap Region. The environmental assessment will be according to the Environmental Management Act of 2007 and its regulations as published in 2012.

The Proponent's existing facility on erf 97, corner of Church and Wood Lilly Street, will be demolished, while a new facility and Wood Lilly Street, will be demolished, while a new facility will be constructed on Portion B of the Farm Rehbooth Town and Townlands No. 302. The facility will have underground storage tanks connected to dispensers underneath an overhead canopy. Operations will involve the receipt of diesel and unleaded petrol from road tankers, dispensing fuel to customers, and administrative tasks like tank dips and fuel volume reconciliations. More details regarding the project is

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

All interested and/or affected parties are invited to regist with the environmental consultant. By registering you a provided with the opportunity to share any comments, issue or concerns related to the project, for consideration in environmental assessment. Please register with, and provi comments to, Geo Pollution Technologies by 19 July 2023.

Geo Pollution Technologies (Pty) Ltd Telephone: +264-61-257411 Fax: +264-88626368 E-Mail: gpt@thenamib.com



Padtragedie

Ek sit dink aan die wit kniekoppe, en 'n bewe wat deur jou lyf tot by eerste pouse hardloop...self die oggend gewaai voor skool was maar onsmaaklik in

"Dit bring my dan by gewoond raak aan goed en sommer blatant dinge begin aanvaar "Ons doen dit in elke

area van ons lewe, ons raak eers astrant en op-standig en dan leer ons maar met dit saam leef. "Ons kyk rondom ons en

standaarde is maar wat dit is, diens bestaan nie meer is, diens bestaan nie meer nie, paaie se gate verniel ons bande. . . maar ons aanvaar maar dat dit die nuwe norm is. "Persoonlike bande

en vriendskappe word lewend gehou deur WhatsApps en sosiale media anders as die Sa-terdag braai en byme-

kaarkom, dis maar die nuwe trant... as ons dar wel bymekaar kom, is di asof daar te min ure is asof daar te min ure ir 'n dag is om weer op te vangen dan vra ek mysel maar hoekom...hoekon 'verlang' ons mekaar maar maak nie tyd vii mekaar nie? Hoekom mekaar nie? Hoekon aanvaar ons maar alle net terwyl ons hele mens wees wil gil van frustrasie . wat het van ons 'fight geword? Is dit ouderdon of net pure laksheid? "Die bene raak oud, e

die koue val my aan, maa ek glo daar is nog bietji 'fight' in my... "Anders verlang e

maar net julle troppie er ek weet nie lekker of drie dae genoeg gaan wees o op te vang nie, ek voel e het 'n halfdag met elkee

"Mag die week gesa wees wees met vrede ei vreugde. Pas jouself ei oune op en wees goe vir mekaar. Mooi loop

CASTLE

Republikein

Site Notice



Registered Interested and Affected Parties

| Name | Organisation | Date Registered |
|------------------|---|-----------------|
| Nelimona Iipinge | Namibian Environment and Wildlife Society | 12 July 2023 |

Appendix B: 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 180 Environmental Impact Assessments including assessments of the petroleum industry, harbour expansions, irrigation schemes, township establishment and power generation and transmission. André's post graduate studies focussed on zoological and ecological sciences and he holds a M.Sc. in Conservation Ecology and a Ph.D. in Medical Bioscience. His expertise is in ecotoxicological related studies focussing specifically on endocrine disrupting chemicals. His Ph.D. thesis title was The Assessment of Namibian Water Resources for Endocrine Disruptors. Before joining the environmental assessment profession he worked for 12 years in the Environmental Section of the Department of Biological Sciences at the University of Namibia, first as laboratory technician and then as lecturer in biological and ecological sciences.

CURRICULUM VITAE ANDRÉ FAUL

Name of Firm : Geo Pollution Technologies (Pty) Ltd.

Name of Staff : ANDRÉ FAUL

Profession : Environmental Scientist

Years' Experience : 22

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 - LSM OSH-Med, 2022 Basic Industrial Fire Fighting OSH-Med, 2022

PROFESSIONAL SOCIETY AFFILIATION:

Environmental Assessment Professionals of Namibia (Practitioner and Executive Committee Member)

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: +180
Research Reports & Manuals: 5
Conference Presentations: 1