

FINAL: ENVIRONMENTAL MANAGEMENT PLAN (EMP)



***FOR THE PROPOSED CONSTRUCTION AND
OPERATION OF A FUEL RETAIL FACILITY ON Erf
8002, WINDHOEK: C/O WIKA AND SEAN MCBRIDE***

Prepared by:



Prepared For:
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PROJECT DETAILS

TITLE: FINAL ENVIRONMENTAL MANAGEMENT PLAN FOR THE PROPOSED CONSTRUCTION AND OPERATION OF A FUEL RETAIL FACILITY ON Erf 8002, WINDHOEK: C/O WIKA AND SEAN MCBRIDE

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DECLARATION

I hereby declare that:

- a. I have the knowledge of and experience in conducting assessments, including knowledge of the Acts, regulations, and guidelines that are relevant to the proposed exploration project.
- b. I have performed the work relating to the application in an objective manner, even if this results in views and findings that are not favorable to the applicant.

Mr. Mvula Elia

Position: Environmental Assessment Practitioner (EAP)

REPORT/DOCUMENT CONTROL FORM

**PROJECT NAME: CONSTRUCTION AND OPERATION OF A FUEL RETAIL FACILITY
ON Erf 8002, WINDHOEK: C/O WIKA AND SEAN MCBRIDE**

Document Title:	ENVIRONMENTAL MANAGEMENT PLAN FOR THE PROPOSED CONSTRUCTION AND OPERATION OF A FUEL RETAIL FACILITY ON Erf 8002, WINDHOEK: C/O WIKA AND SEAN MCBRIDE
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ABBREVIATIONS AND ACRONYMS

EMP	Environmental Management Plan
EIA	Environmental Impact Assessment
ECC	Environmental Clearance Certificate
EC	Environmental Commissioner
EPL	Exclusive Prospecting License
MEFT	Ministry of Environment, Forestry and Tourism
DWA	Department of Water Affairs
DEAF	Department of Environmental Affairs and Forestry
CENC	Contractor Environmental Coordinator
PM	Project Manager
PP	Project Proponent
I&Aps	Interested and Affected Parties
EAs	Environmental Assessments
ECC	Environmental Clearance Certificate

1. ENVIRONMENTAL MANAGEMENT PLAN

1.1. BACKGROUND

Paddock Investments CC intends to construct and operate a fuel retail facility in the town's CBD. In this respect the proponent has appointed Acacia Enviro Consulting cc to undertake an Environmental Assessment, formulate an Environmental Management Plan (EMP) and apply for an Environmental Clearance Certificate (ECC) to the Ministry of Environment, Forestry and Tourism (MEFT): Directorate of Environmental Affairs and Forestry (DEAF) for the intended development.

This document forms part of the application to the DEAF's office for an ECC for the proposed fuel retail facility (service station) establishment, according the guidelines and statutes of the Environmental Management Act No.7 of 2007 and the Environmental Impacts Regulations (GN 30 in GG 4878 of 6 February 2012).

1.2. SUMMARY OF THE PROPOSED ACTIVITIES

The construction of the proposed development has following phases: construction, operations and with unlikelihood of decommissioning. Below are some of the activities that will take place during the construction and operational phase of the proposed fuel retail facility:

- Installation of fuel pipelines;
- Construction of dispensing pump and installation of pumps;
- Excavation for the pipeline trenches;
- Installation of electrical supply equipment;
- Construction of spill control measures;
- Construction of associated building and other infrastructure;
- Installation and operations of a mobile consumer fuel installation;
- General operational activities and maintenance procedures associated with the fuel retail facility.
- Filling of the underground storage tanks road transport
- Dispensing of fuels into motor vehicles

1.3. WHAT IS AN EMP

An Environmental Management Plan (EMP) can be defined as *“an environmental management tool used to ensure that undue or reasonably avoidable adverse impacts of the construction, operation and decommissioning of a project are prevented; and that the positive benefits of the projects are enhanced”*.

EMPs are therefore important tools for ensuring that the management actions arising from Environmental Impact Assessment (EIA) processes are clearly defined and implemented through all phases of the project life-cycle (construction, operation and decommissioning).

1.4. TERMS OF REFERENCE

The Environmental Scoping Assessment conducted by Junior Baiano Industrial producing both ESA and EMP reports documenting the following:

- A complete description of the existing site proposed for development;
- Significant environmental issues of concern that were based on the baseline data compiled by the environmental assessment team, which took into consideration social, cultural and heritage information;
- An assessment of the public perception on the proposed development.
- Identification of Policies, Legislation and Regulations relevant to the project;
- Prediction of the likely short, medium and long-term impact of the development on the environment, including direct, indirect and cumulative impacts, and their relative importance to the design of the development's facilities;
- Identification of any mitigation actions to be taken to minimize predicted adverse impacts and provide associated costs where applicable and practical;
- Development of an environmental monitoring plan which will ensure that the mitigation measures are adhered to during the implementation phase;

1.5. OBJECTIVES OF THIS EMP

The Environmental Management Plan (EMP) provides a detailed plan of action required in implementation of the mitigation measures for minimizing and maximizing the identified negative and positive impacts respectively. This EMP gives commitments including financial and human resources provisions for effective management of the likely environmental liabilities during and after the exploration. The specific objectives of this EMP are:

- Ensuring compliance with regulatory authority stipulations and guidelines;
- To formulate measures that will mitigate the adverse impacts of the proposed project on various environmental components, which have been identified during the environmental impact assessment.
- To formulate measures to protect environmental resources where possible.
- To formulate measures to enhance the value of environmental components where possible.
- Responding to changes in project implementation not considered in the EIA;
- Responding to unforeseen events; and
- Providing feedback for continual improvement in environmental performance.

1.6. SCOPE OF THIS EMP

To achieve the above objectives, the scope of this EMP will include the followings:

- Definition of the environmental management objectives to be realized during the life of a project (i.e. Planning, Construction, Operation and/or decommissioning phases) in order to enhance benefits and minimize adverse environmental impacts.
- Description of the detailed actions needed to achieve these objectives, including how they will be achieved, by whom, by when, with what resources, with what monitoring/verification measures, and to what target or performance level.
- Clarification of institutional structures, roles, communication and reporting processes required as part of the implementation of the EMP.
- Description of requirements for record-keeping, reporting, review, auditing and updating of the EMP.

1.7. HIERACHY OF MITIGATION MEASURES IMPLEMENTATION

This EMP have adopted a hierarchy of methods for mitigating significant adverse effects identified in order of preference and as follows:

- i. Enhancement, e.g. provision of new habitats;
- ii. Avoidance, e.g. sensitive design to avoid effects on ecological receptors;
- iii. Reduction, e.g. limitation of effects on receptors through design changes, and;
- iv. Compensation, e.g. community benefits

1.8. MITIGATION MEASURES IMPLEMENTATION

The EMP provides a detailed plan of action required in the implementation of the mitigation measures for minimizing and maximizing the identified negative and positive impacts respectively. The EMP also provides the management actions with roles and responsibilities requirements for the implementation of environmental management strategies by the proponent through the contractors and subcontractors who will be part and parcel of the proposed project

1.9. WHAT ARE THE LEGAL IMPLICATIONS AND OBLIGATIONS UNDER THIS PLAN?

The EMP will be sent to the Directorate of Environmental Affairs and Forestry (DEAF) of the Ministry of Environment, Forestry and Tourism (MEFT) for approval. Once the DEAF is satisfied with the contents of the EMP, they will issue an Environmental Clearance Certificate (ECC) to the Proponent to go ahead with the proposed project (construction and operation of a fuel retail facility on erf 8002, windhoek: c/o wika and sean mcbride). The ECC is linked with the recommendations of the Environmental Management Plan.

Once the ECC is issued, the EMP becomes a legally binding document and each role-player including contractors and sub-contractors are made responsible to implement the relevant sections of the EMP and is required to abide by the conditions stipulated in this document.

2. POLICY, LEGAL AND ADMINISTRATIVE FRAMEWORK

An important part of the Environmental Assessment is identifying and reviewing the administrative, policy and legislative situation concerning the proposed activity, to inform the proponent about the requirements to be fulfilled in undertaking the proposed activities. This section looks at the legislative framework within which the proposed development will operate under.

The focus is on the compliance with the legislation during the planning, construction and operational phases. All relevant legislation, policies and international statutes applicable to the project are highlighted in Table 2: Relevant legislation, policies and international statutes applicable to the project below as specified in the Environmental Management Act, 2007 (Act No.7 of 2007) and the regulations for Environmental Impact Assessment as set out in the Schedule of Government Notice No. 30 (2012). Table 1 shows an explanation is additionally provided regarding how these provisions apply to this project

Table 1: Legal instruments relevant to this project

Law	Key Aspects
<p>The Namibian Constitution</p>	<ul style="list-style-type: none"> - Promote the welfare of people - Incorporates a high level of environmental protection - Incorporates international agreements as part of Namibian law
<p>Environmental Management Act Act No. 7 of 2007, Government Notice No. 232 of 2007</p>	<ul style="list-style-type: none"> - 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
<p>Environmental Management Act Regulations Government Notice No. 28-30 of 2012</p>	<ul style="list-style-type: none"> - Commencement of the Environmental Management Act - List activities that requires an environmental clearance certificate - Provide Environmental Impact Assessment Regulations
<p>Petroleum Products and Energy Act Act No. 13 of 1990, Government Notice No. 45 of 1990 (Government Notice No. 155 of 2000)</p>	<ul style="list-style-type: none"> - Regulates petroleum industry - Makes provision for impact assessment - Petroleum Products Regulations <p style="text-align: center;">Prescribes South African National Standards (SANS) or equivalents for construction, operation and decommissioning of petroleum facilities (refer to Government Notice No. 21 of 2002)</p>
<p>The Water Act Act No. 54 of 1956</p>	<ul style="list-style-type: none"> - Remains in force until the new Water Resources Management Act comes into force - Defines the interests of the state in protecting water resources - Controls the disposal of effluent - Numerous amendments
<p>Water Resources Management Act Act No. 11 of 2013</p>	<ul style="list-style-type: none"> - Provide for management, protection, development, use and conservation of water resources - Prevention of water pollution and assignment of liability - Not in force yet
<p>Local Authorities Act Act No. 23 of 1992, Government Notice No. 116 of 1992</p>	<ul style="list-style-type: none"> - Define the powers, duties and functions of local authority councils - Regulates discharges into sewers
<p>Public Health Act Act No. 36 of 1919</p>	<ul style="list-style-type: none"> - Provides for the protection of health of all people

<p>Public and Environmental Health Act Act No. 1 of 2015, Government Notice No. 86 of 2015</p>	<ul style="list-style-type: none"> - 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.
<p>Labour Act Act No 11 of 2007, Government Notice No. 236 of 2007</p>	<ul style="list-style-type: none"> - Provides for Labour Law and the protection and safety of employees - Regulations relating to the health and safety of employees at work
<p>Atmospheric Pollution Prevention Ordinance Ordinance No. 11 of 1976</p>	<ul style="list-style-type: none"> - Governs the control of noxious or offensive gases - Prohibits scheduled process without a registration certificate in a controlled area - Requires best practical means for preventing or reducing the escape into the atmosphere of noxious or offensive gases produced by the scheduled process
<p>Hazardous Substances Ordinance Ordinance No. 14 of 1974</p>	<ul style="list-style-type: none"> - Applies to the manufacture, sale, use, disposal and dumping of hazardous substances as well as their import and export - Aims to prevent hazardous substances from causing injury ill-health or the death of human beings
<p>Explosives Act Act No 26 of 1956</p>	<ul style="list-style-type: none"> - Regulates the manufacture, storage, sale, transport, import, export, use and possession of explosives. - Numerous Amendments
<p>Pollution Control and Waste Management Bill (draft document)</p>	<ul style="list-style-type: none"> - Not in force yet - Provides for prevention and control of pollution and waste - Provides for procedures to be followed for licence applications
<p>Atomic Energy and Radiation Protection Act Act No. 5 of 2005, Government Notice No. 50 of 2005</p>	<ul style="list-style-type: none"> - Provide for adequate protection of the environment and of people in current and future generations against the harmful effects of radiation by controlling and regulating the production, processing, handling, use, holding, storage, transport and disposal of radiation sources and radioactive materials. - Provides for authorisation, licences and registrations with regard to import into or export from Namibia any radiation source or nuclear material or transport any radiation source or nuclear material - Provides for regulations (Government Notice No. 221 of 2011) with regard to radiation protection and waste disposal.
<p>Road Traffic and Transport Act Government Notice No. 282 of 1999</p>	<ul style="list-style-type: none"> - Provides for the control of traffic on public roads and the regulations pertaining to road transport Act No. 52 of 1999

Road Traffic and Transport Regulations Government Notice No 53 of 2001	- Prohibits the transport of goods which are not safely contained within the body of the vehicle; or securely fastened to that vehicle, and which are not properly protected from being dislodged or spilled from that vehicle
Foreign Investment Act 27 of 1990 (as amended by Foreign Investment Amendment Act 24 of 1993)	- Provides for the promotion of foreign investment in Namibia - Considers environmental impacts associated with foreign investments.

3. ANTICIPATED ENVIRONMENT IMPACTS

3.1. POSITIVE IMPACTS

3.1.1. SKILLS, TECHNOLOGY AND DEVELOPMENT

During various phases of construction and operations, training will be provided to a portion of the workforce associated with the fuel retail facility. Skills are transferred to an unskilled workforce for general tasks. The technology required for the development of the facility is often new to the local industry, aiding in operational efficiency. Development of people and technology are key to economic development.

Table 2: Enhancement actions for Skills, Technology and Development created by the proposed project

Project Phase	Actions (Enhancement)
Construction/ Operation	<ul style="list-style-type: none"> • If the skills exist locally, contractors must first be sourced from the town, then the region and then nationally. Deviations from this practice must be justified. • Skills development and improvement programs to be made available as identified during performance assessments

Desired Outcome: To see an increase in skills in Windhoek, as well as development and technology advancements in associated industries.

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.

3.1.2. REVENUE GENERATION AND EMPLOYMENT

The change in land use has led to changes in the way revenue is generated and paid to the national treasury. An increase of skilled and professional labour has and will continue to take place due to the operations of the facility. Employment is sourced locally while skilled labour/contractors may be sourced from other regions.

Table 3: Enhancement actions for revenue generated and employment created by the proposed project

Project Phase	Actions (Enhancement)
Construction/ Operation	<ul style="list-style-type: none">• 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.

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

Responsible Body:

- Proponent

Data Sources and Monitoring:

Bi-annual summary report based on employee records.

3.2. NEGATIVE IMPACTS

3.2.1. DEMOGRAPHIC PROFILE AND COMMUNITY HEALTH

The project is reliant on labour during both construction and the operational phase. The scale of the project is limited and it is not foreseen that it has created a change in the demographic profile of the local community. Community health may be exposed to factors such as communicable disease like HIV/AIDS and alcoholism/drug abuse. An increase in foreign people in the area may potentially increase the risk of criminal and socially/culturally deviant behavior.

Table 4: Prevention/Mitigation actions for Impacts of the proposed project on demographic profile and community health

Project Phase	Actions (Prevention/Mitigation)
Construction/ Operation	<ul style="list-style-type: none">• Employ only local people from the area where possible, deviations from this practice should be justified appropriately.• Adhere to all municipal by-laws relating to environmental health which includes but is not limited to sand and grease traps for the various facilities and sanitation requirements.• Educational programmes for employees (especially truck drivers) on HIV/AIDs and general upliftment of employees' social status.• Appointment of reputable contractors.

Desired Outcome: To prevent the in-migration and growth in informal settlements, prevent the spread of communicable disease and prevent / discourage socially deviant behaviour.

Responsible Body:

- 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.

3.2.2. TRAFFIC

Construction vehicle will access the proposed development from Sean McBride and Mandume Ndemufayo Avenue. The site is easily accessible, with very good visibility. The construction of the proposed fuel facility is expected to have a minimal impact on the movement of traffic along these roads, the construction vehicles will be at the site only periodically. During the construction there will be no diversion or closure of the road expected, however a slow nuisance might be experienced by the motorists using the specific road, this is likely to arise from the slow-moving construction vehicles.

Table 5: Prevention/Mitigation actions for Impacts of the proposed project on traffic

Project Phase	Actions (Prevention/Mitigation)
Construction/ Operation	<ul style="list-style-type: none"> • Motorist delivering or collecting goods should not be allowed to obstruct any traffic in surrounding areas and the town, where feasible motorists must not move or travel to the site during the peak hours (07H00 to 09H00 and 16H00-18H00). • Speed limit warning signs must be erected to minimize accidents • Adhere to The Road Traffic and Transport Regulations, 2001 and all other applicable legislation related to road transport and maximum axle loads. • If any traffic impacts are expected, traffic management should be performed to prevent these. • Use temporary traffic control devices such as barricades, cones, and signs can be used to direct traffic around the construction site and to prevent unauthorized access to the site. • The placement of signs to warn and direct traffic will mitigate traffic impacts. • Identify vehicles on which hazardous substances are to be transported and handle all dangerous or hazardous goods according to MSDS instructions and under supervision of trained staff. Ensure the correct documentation (e.g., dangerous goods declaration, TREMCARD, etc.) is provided in the vehicle. Verify that the driver of the vehicle has undergone appropriate training.

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

Responsible Body:

- Proponent

Data Sources and Monitoring:

- The Road Traffic and Transport Regulations, 2001
- Any complaints received regarding traffic issues should be recorded together with action taken to prevent impacts from repeating itself.
- A report should be compiled every 6 months of all incidents reported, complaints received, and action taken.

3.2.3. HEALTH, SAFETY AND SECURITY

Every activity associated with the construction and operational phase is reliant on human labour and therefore exposes them to health and safety risks. Activities such as the operation of machinery, unsafe stacking, falling from heights and handling of hazardous chemicals (inhalation and carcinogenic effect of hydrocarbons and other potential chemicals), poses the main risks to employees. Employees could get exposed through skin contact with fuel and inhalation fuel particulates during handling of such products. If not contained, windblown dust of certain ores and chemicals may further pose health risk to nearby receptors such as residents. Security risks are related to unauthorized entry, theft and sabotage.

Table 6: Prevention/Mitigation actions for Impacts of the proposed project on Health, Safety and Security

Project Phase	Actions (Prevention/Mitigation)
Construction/ Operation	<ul style="list-style-type: none">• Clearly label dangerous and restricted areas as well as dangerous equipment and products.• Equipment that will be locked away on site must be placed in a way that does not encourage criminal activities (e.g., theft).• Provide all employees with required and adequate personal protective equipment (PPE).• Firefighting equipment and first aid kit should be made available and must be serviced regularly.• Ensure that all personnel receive adequate training on operation of equipment.• Personnel to be trained in correct chemical handling procedures, the dangers of chemical exposure, and potential risks of injuries on site.

	<ul style="list-style-type: none"> • All health and safety standards specified in the Labour Act should be complied with. • Implementation of maintenance register for all equipment and fuel/hazardous substance storage areas. • All hazardous substances should be handled according to the Material Safety Data Sheets (MSDS). • 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. • Maintain a MSDS file on site at a readily accessible location. The MSDS file must continuously be updated and the relevant personnel informed and trained as per the MSDS content. • Security procedures and proper security measures must be in place to protect workers and other equipment that remain at the site. • Strict security that prevents unauthorised entry during all phases should be practiced, with access logs for vehicles and personnel.
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Desired Outcome: To prevent injury, health impacts and theft.

Responsible Body:

- Proponent
- Contractors

Data Sources and Monitoring:

- Any incidents must be recorded with action taken to prevent future occurrences.
- A report should be compiled every 6 months of all incidents reported. The report should contain dates when trainings were conducted and when safety equipment and structures were inspected and maintained.

3.2.4. FIRE AND EXPLOSION

Operational and development activities may increase the risk of the occurrence of fires. Hydrocarbons are volatile under a certain condition and their vapour in specific concentrations are flammable, therefore if precautions are not followed it may result in fire and subsequent safety risks. Certain products that may be kept on site can be flammable in nature and can even become explosive when exposed to incompatible materials. Diesel stored in the consumer fuel installation also presents a fire risk.

Table 7: Prevention/Mitigation actions for possible fire and explosion from the proposed project

Project Phase	Actions (Prevention/Mitigation)
Construction/ Operation	<ul style="list-style-type: none"> • Emergency response procedures should be in place so as to alert the employees on how to react to fire and explosions incidents. • Ensure all chemicals are stored strictly according to MSDS and SANS instructions. This includes segregation of incompatible products. • Maintain regular site, mechanical and electrical inspections and maintenance. Clean all spills/ leaks. • 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). • Follow SANS standards for operation and maintenance of the consumer fuel installation. All dispensers must be equipped with devices that cut fuel supply during fires. • A holistic fire protection and prevention plan is needed for flammable products and the consumer fuel installation. This plan must include an emergency response plan, firefighting plan and spill recovery plan, and should include specific substances handled at the site. • Ensure sufficient water is available all the time for firefighting purposes • Maintain firefighting equipment, good housekeeping and personnel training (firefighting, fire prevention and responsible housekeeping practices). • An incident reporting procedure should also be implemented to make the employees aware of how, when and to whom to report fire and explosion incidents • It is recommended that electrical wiring of the facility is properly installed and approved by qualified electrician who issues a certificate of

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

Responsible Body:

- Proponent
- Contractors

Data Sources and Monitoring:

- A register of all incidents must be maintained on a daily basis. This should include measures taken to ensure that such incidents do not repeat themselves.
- A report should be compiled every 6 months of all incidents reported. The report should contain dates when fire drills were conducted and when fire equipment was tested and training given.

3.2.5. NOISE

An increase in noise pollution will be observed during the construction phase as a result of construction activities. Noise pollution will result from heavy duty equipment and machinery. Given the location of the proposed site the noise pollution will not have major impact to the third parties.

Table 8: Prevention/Mitigation actions for possible noise impacts from the proposed project

Project Phase	Actions (Prevention/Mitigation)
Construction/ Operation	<ul style="list-style-type: none"> • The World Health Organization (WHO) guideline on maximum noise levels (Guidelines for Community Noise, 1999) to prevent hearing impairment for workers on site should be followed during the construction and operational phases. • The facility should meet WHO standards for noise at industrial areas during daytime operating hours (07h00 to 17h30). • The facility should further strive to meet WHO standards at the nearby residential properties to prevent a nuisance during daytime operations as well, this is daytime noise levels not exceeding 55 dB. • All machinery must be regularly serviced to ensure minimal noise production. Confine noise generating operational activities to daytime hours as far as possible. • During the design phase, the facility should be designed to minimize

	<p>noise impacts. This could include using noise barriers or sound-absorbing materials to reduce noise levels.</p> <ul style="list-style-type: none"> • Hearing protectors as standard PPE for workers in situations with elevated noise levels. • Ensure that equipment and machinery are regularly maintained to reduce noise levels. This includes regular inspection and repair of equipment, as well as replacing older equipment with newer, quieter models. • Use of Sound Barriers: Use sound barriers such as walls, fences, or acoustic curtains to reduce the noise transmission to nearby residential areas. These barriers should be placed as close to the source of noise as possible and should be made of sound-absorbing materials. • Use low-noise equipment such as electric-powered tools instead of diesel-powered ones. Electric tools are much quieter and can significantly reduce noise pollution.
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Desired Outcome: To prevent any nuisance and hearing loss due to noise generated.

Responsible body:

- Proponent
- Contractors

Data Sources and Monitoring:

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

3.2.6. DUST AND AIR QUALITY

Air quality around the site might get impacted during construction activities, dust may be produced by vehicles accessing the facility and also by excavation activities. The air quality will get impacted by exhaust fumes from vehicles. Hydrocarbon vapours will be released during the delivery and dispensing, as liquid displaces the gaseous mixtures in the tanks. The entire site is however going to be covered with interlocked paving during the operational phase, therefore dust and air quality impacts is expected to be minimal during construction phases.

Table 9: Prevention/Mitigation actions for possible dust generated and impacts on air quality from the proposed project

Project Phase	Actions (Prevention/Mitigation)
Construction/ Operation	<ul style="list-style-type: none"> • Agency for Toxic Substances and Disease Registry (United States of America) sets the Minimum Risk Level of contaminants in air that is expected not have any health risk over a specified duration of exposure. Air quality at the site, or receptors on any part of the route of transport and at receptors may not increase above these limits. • All chemical/ore bulk bags or containers must be inspected prior to handling to ensure they are not damaged. Forklift operators to be suitably trained to ensure construction materials carefully and safely handled. • All truck loads must be suitably covered to prevent the escape of dust from the load. This includes empty trucks that may still contain some dust. • Appoint reputable contractors for transporting of construction materials who prioritise a “zero dust policy”. • All handling of bulk chemicals/ore which present a risk of windblown dust must be handled in an enclosed warehouse, to prevent dust from escaping the site. • Dust suppression in the warehouse and during construction activities when required. • Cease any operations with immediate effect once dust plumes that cannot be contained becomes visible. Operations can commence once sufficient mitigation measures have been implemented or when the cause of dust disseminates. • All trucks transporting construction materials and delivering fuel must be service regularly and make use of technology to reduce emissions. This includes selective catalytic reduction, diesel particulate filters and diesel oxidation catalysts. • Discourage engine idling at the project site. • Ensure that fuel is delivered in the fore court containment area, and cannot contaminate land

	<ul style="list-style-type: none"> • Regular monitoring of air quality can help to identify potential issues and ensure that appropriate measures are taken to maintain good air quality. • Employees should be trained on the importance of maintaining good air quality and the measures that can be taken to achieve this. Awareness campaigns can also be conducted to educate customers and other stakeholders on the importance of good air quality and the measures being taken to achieve this. • Use vapour recovery equipment and techniques to avoid air pollution and minimize fuel loss • Site notices to be erected on and around the site to inform visitors and surrounding residents. • Avoid construction operations during windy days. • Regular testing of dust levels during construction period (PPM), maintain dust levels at minimum by monitoring construction activities, stop operations if dust levels are high.
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Desired Outcome: To prevent nuisance and health impacts and to maintain the integrity of the built environment.

Responsible body:

- Proponent
- Contractors

Data Sources and Monitoring:

- Any mineral ore that may be handled as loose product, must be sampled irregularly, once every 6 months, by an independent specialist for asbestos. If asbestos is detected, all operations must cease immediately and only be continued under very strict and approved health and safety procedures related to the handling of asbestos containing material.
- Any complaints received regarding dust and emissions along the transport routes and sites must be recorded, investigated and rectified.
- Any incidents must be recorded with action taken to prevent future occurrences.
- A report should be compiled every 6 months of all incidents reported and monitoring performed. The report should contain dates when safety equipment and structures were inspected and maintained.

3.2.7. WASTE (SOLID & LIQUID) PRODUCTION

Various waste streams are and will be generated during the construction and operational phase of the fuel retail facility. Waste may include hazardous waste associated with the handling of hydrocarbon products and other chemicals and contaminated packaging material. Construction waste may include building rubble, pipe cuttings, oil spills, or leakages of petroleum product might occur during the construction phase. Domestic waste is generated by the facility and related operations. Waste presents a contamination risk and when not removed regularly may become a fire hazard. Contaminated soil and water are considered as a hazardous waste. If correct measures are not followed, and if contaminated equipment is washed there, wash water from the proposed wash bay may become contaminated and end up in the municipal sewers.

Table 10: Prevention/Mitigation actions for possible solid and liquid waste generated by the proposed project

Project Phase	Actions (Prevention/Mitigation)
Construction/ Operation	<ul style="list-style-type: none"> • Waste reduction measures should be implemented and all waste that can be re-used / recycled must be kept separate. • Ensure adequate disposal storage facilities are available. Ensure waste cannot be blown away by wind. • Prevent scavenging (human and non-human) of waste storage. • The consumer fuel installation should be according to SANS standards or better. • All drains leading directly into sewers must be closed off, and locked where possible, to prevent any unwanted products from entering sewers should an accidental spill, pipe burst, valve malfunction, etc. occur. Where drains are present to drain wash water, these should only be opened during times of washing. • 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 material safety data sheets available from suppliers for disposal of contaminated products and empty containers. • No waste should be burned on site. • No disposal of /or burying of waste on site should be conducted.

	<ul style="list-style-type: none"> • Liaise with the municipality regarding waste and handling of hazardous waste. Due to the nature of some hazardous materials they, or the containers they are packed in, should be disposed of in an appropriate way at an appropriately classified waste disposal facility. See the material safety data sheets available from suppliers for disposal methods. • The contractor shall institute a waste control and removal system for the site. • Solid and liquid hazardous waste shall be stored in separate containers, and hazardous waste should be disposed of at the approved hazardous waste disposal site at Kupferberg. • Awareness of hazardous nature of various type of waste should be enforced
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Desired Outcome: To reduce the amount of waste produced, and prevent pollution and littering.

Responsible Body:

- Proponent
- Contractors

Data Sources and Monitoring:

- 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 repo

3.2.8. ECOSYSTEM AND BIODIVERSITY IMPACT

The proposed fuel retail facility will have minimal impacts on ecosystem and biodiversity. The nature of the operational activities is such that the probability of creating a habitat for flora and fauna to establish is low therefore no significant impact on the biodiversity of the area is predicted. Future development may require an increase in lighting on the site at night. Excessive lighting used at night and especially those that are directed upwards may blind birds that fly at night. This may result in disorientation of birds and collisions with structures. Further impacts will mostly be related to pollution of the environment.

Table 11: Prevention/Mitigation actions for Impacts of the proposed project on the ecosystem and biodiversity

Project Phase	Actions (Prevention/Mitigation)
Construction/ Operation	<ul style="list-style-type: none"> • All the major trees will be preserved, and the layout plan will fit into the environment without affecting the trees. • Ground disturbance will only be limited to boundary area to avoid affecting a large area. • Upon completion of construction activities more trees and lawn should be planted on and around the site to restore the site into a status that is environmentally friendly. • When necessary a permit must be obtained from the Directorate of Forestry before removing a major tree species. • Report any extraordinary ecological sightings to the Ministry of Environment Forestry and Tourism. • Mitigation measures related to waste handling and the prevention of groundwater, surface water and soil contamination should limit ecosystem and biodiversity impacts. • Avoid scavenging of waste by fauna. • The establishment of habitats and nesting sites at the facility should be avoided where possible. • Limit clearing of vegetation to those areas within the footprint of construction. • Disturbance of areas outside the designated working zone is not allowed. • No vegetation should be removed outside the designated project area. • Lights used at night should be directed downwards to the working surfaces.

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

Responsible Body:

- Proponent

Data Sources and Monitoring:

- All information of extraordinary ecological sightings to be included in a bi-annual report.

3.2.9. GROUNDWATER, SURFACE WATER AND SOIL CONTAMINATION

Operations entail the storage and handling of various potentially hazardous substances (such as fuels and lubricants, and other chemicals) which present a contamination risk. Contamination may either result from failing storage facilities, or spills and leaks associated with the handling of hazardous substances. Such material may contaminate surface water, soil and groundwater. In an event of groundwater contamination, the shallow groundwater may lead to a rapid lateral spread of pollutants, especially hydrocarbons. This will further have potential impacts on underground utilities and may negatively impact neighbouring properties.

Table 12: Prevention/Mitigation actions for Impacts of the proposed project on groundwater, surface water and soil

Project Phase	Actions (Prevention/Mitigation)
Construction/ Operation	<ul style="list-style-type: none"> • Consumer fuel installation should be installed with proper spill control structures and procedures according to SANS standards or better. • All fueling and storage of hazardous substances should be conducted on spill proof 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 on-site personnel must be conducted on a regular basis (refueling, handling of hazardous substances, spill detection, spill control). • Spill clean-up means must be readily available on site as per the relevant MSDS. • Emergency Response Plans and Spill Contingency Plans must be in place and include all chemicals being handled. These should be updated as new chemicals are added to those being handled. • Any spill must be cleaned up immediately. • Proper containment mechanisms should be in place to contain any spillages that might occur during the operation of the fuel retail facility. • All hazardous waste, such as contaminated materials, hydrocarbons and

empty chemical containers should be disposed of at a suitably classified hazardous waste disposal facility.

- Remove leaking vehicles from the project location immediately.
- Ensure all storm water drains or channels are clear of litter obstructing material. Excess sedimentation, rubble and any other waste materials present in the waterway must be removed and disposed of in a suitable manner to ensure proper drainage runoff.
- Fuel should be stored in tanks that are designed and maintained to prevent leaks and spills. The tanks should be inspected regularly and any signs of wear or damage should be addressed immediately. The fuel should be handled carefully to avoid spills or leaks during transfers.
- Secondary containment systems such as double-walled tanks or spill containment systems can prevent petroleum products from reaching the ground or surface water in case of a spill or leak.
- Regular maintenance and inspection of the fuel station's equipment and systems can help identify and address any potential issues before they become larger problems. Inspections should be conducted by qualified professionals who can identify any leaks or other problems.
- Any hazardous waste generated by the fuel station should be disposed of properly, in accordance with local regulations. This includes used oil, filters, and other materials that may contain petroleum products.
- Fuel retailer facility owners and operators should implement best practices for preventing pollution, such as training employees on proper handling and disposal procedures, establishing emergency response plans, and monitoring the site for signs of contamination.

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

Responsible Body:

- Proponent
- Contractors

Data Sources and Monitoring:

- 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.

3.2.10. HERITAGE IMPACTS

The site proposed for the development of the fuel retail facility has no known heritage areas envisaged to be impacted the development of the facility, however during construction the contractor might come across the archaeological features or objects related to cultural values during the construction activities

Table 13: Prevention/Mitigation actions for Impacts of the proposed project on heritage

Project Phase	Actions (Prevention/Mitigation)
Construction/ Operation	<ul style="list-style-type: none"> • Education and awareness campaigns can to the employees during construction to increase their understanding of the cultural significance of heritage sites and artifacts and to know what to do if they encounter the cultural values objects. This can help to reduce accidental damage, and promote responsible behavior in relation to cultural resources. • If remains or object with cultural values (e.g., bones, weapons, ancient cutlery) are uncovered at the proposed development site or surroundings, it must be barricaded off. • The relevant authorities (i.e., police and National Heritage Council of Namibia) should be contacted immediately.

Desired Outcome: Take responsible of the objects of heritage values, archeological features by notifying the relevant authorities.

Responsible body

- Proponent
- Contractor

Data Sources and Monitoring

- A note to register any heritage values, objects of cultural values or archeological features should be kept. This should include the date, location and immediate action taken to notify the relevant authorities.

- Any complaints received regarding heritage values, cultural values or archaeological features should be recorded with notes on action taken.

3.2.11. VISUAL IMPACT

This is an impact that not only affects the aesthetic appearance, but also the integrity of the facility. The site is within an area zoned for business purposes, and falls in line with the development in the area. The facility and future development of the site falls in line with the urban character. A change in the landscape character as well as lighting used at night may therefore be aesthetically pleasing for other business in the surroundings.

Table 14: Prevention/Mitigation actions for Impacts of the proposed project on Aesthetic of the project area

Project Phase	Actions (Prevention/Mitigation)
Construction/ Operation	<ul style="list-style-type: none"> • Regular waste disposal, good housekeeping and routine maintenance on infrastructure will ensure that the longevity of structures is maximised and a low visual impact is maintained. • All structures and infrastructures constructed on site should be line with the visual character of the landscape as far as practically possible. • All lighting used at the south eastern and southwestern boundary of the site (floodlights) should be directed away from the residential properties. • Noise barriers should be designed / painted to align with the existing landscape character.

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

Responsible Body:

- Proponent
- Contractors

Data Sources and Monitoring:

- A report should be compiled every 6 months of all complaints received and actions taken.

3.2.12. GREENHOUSE GAS EMISSIONS

The construction and operation of a fuel retail facility can contribute to greenhouse gas (GHG) emissions in several ways:

Energy consumption: Fuel retail facilities require energy for lighting, heating/cooling, and powering equipment. The production of electricity can generate GHG emissions if it is generated from fossil fuels.

Transportation: Fuel is transported to the retail facility, usually by trucks or tankers. The transportation of fuel can generate GHG emissions if the vehicles used to transport the fuel run on fossil fuels.

Fuel production: The production of fuel generates GHG emissions. This includes the extraction and processing of crude oil, as well as the refining of the crude oil into gasoline and diesel.

Fuel storage and handling: Fuel must be stored and handled at the retail facility, which can result in emissions from fuel evaporation

Table 15: Prevention/Mitigation actions for the possible greenhouse gas emission from the proposed

Project Phase	Actions (Prevention/Mitigation)
Construction/ Operation	<ul style="list-style-type: none">• Adopt the use of ethanol blended fuels wherever necessary.• Design an operation system that cuts on fuel consumption.• Promote the use of energy efficient machinery, equipment and electricals during construction and operation•

Desired Outcome: To minimise the emissions of greenhouse gases emissions associated with the facility.

Responsible Body:

- Proponent
- Contractors

Data Sources and Monitoring:

- A greenhouse gas inventory report should be compiled in collaboration with the MEFT's climate change unit on the amount of fuel burned annually from operating the retail facility. This will feed into the National Greenhouse Inventory report to the United Nations Framework Convention on Climate Change (UNFCCC)
- Namibia's 4th Biennial Update Report to the UNFCCC
- Namibia's 4th National Communication to the UNFCCC
- Namibia's Nationally Determined Contribution

3.2.13. CUMULATIVE IMPACT

Possible cumulative impacts associated with the construction phase are short lived for the duration of construction. They include increase in traffic from the vehicle transporting construction materials to the site, decrease in air quality at the site might also be experienced. There are also cumulative impacts that may arise during operational phase such as increase in traffic frequenting the site and along the sections of roads leading to the fuel retail facility. Possible increase in the emission from vehicles exhaust that are visiting the proposed fuel retail facility. The cumulative effect of lighting on birds due to port related developments may also increase the risk of collisions and interference with bird flight paths at night.

Table 16: Prevention/Mitigation actions for accumulative Impacts of the proposed project

Project Phase	Actions (Prevention/Mitigation)
Construction/ Operation	<ul style="list-style-type: none">• Addressing each of the individual impacts as discussed and recommended in the EMP would reduce the cumulative impact.• Reviewing biannual and annual reports for any new or re-occurring impacts or problems would aid in identifying cumulative impacts and help in planning if the existing mitigations are insufficient

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

Responsible Body:

- Proponent

Data Sources and Monitoring:

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

4. ENVIRONMENTAL MANAGEMENT PLAN ORGANIZATION AND IMPLEMENTATION

During the construction phase, contractors, as well as site-in-charge, will be responsible for implementing all the mitigation measures mentioned above. In the operational phase, the work will be continued along with post monitoring. In the preceding sections, the environmental aspects which may be affected by the proposed project have been categorized into negative and positive impacts. As an extension of the preceding sections, this section summarizes the objectives, indicators to be observed, schedules to adhere to, and the roles and responsibilities of various stakeholders to the EMP. The following tables give the mitigation measure to be undertaken during the exploration & operational phase respectively with the agency responsible for implementation.

The following abbreviations are used to indicate who is responsible for what impact mitigation objective:

- **Contractor Environmental Coordinator** **CENC**
- **Site Foreman** **SF**
- **Project manager** **PM**
- **Project Proponent** **PP**
- **Environmental Commissioner** **EC**

Table 17: Project Planning and Implementation

Objectives	Indicators	Schedule	Responsibility
Establish a strong environmental protocol from project implementation to final closure to ensure the least possible impacts on the environment	Resources (Financial, human, equipment and safety gear) are provided for the awareness, meetings, monitoring, and reporting.	At the beginning of the quarrying phase.	PP
To maximize the economic spin-off into the local economy.	Expedite the appointment of a senior person to assume the responsibility of an environmental coordinator (ENC)	At the planning stage or at the beginning of the implementation phase of the quarrying phase	PP

5. MONITORING THE EMP

Monitoring of the EMP performance for the proposed project by the Contractor emphasizes early dictation, reporting, and corrective action. It is divided into three parts, namely:

- Monitoring of project activities and actions to be undertaken by the Environmental Coordinator (ENC) appointed by the Contractor.
- The Environmental Coordinator (ENC) shall report all incidents and situations which have the potential of jeopardizing compliance of statutory provisions as well as provisions of this EMP to the Project Proponent.
- The Environmental Coordinator (ENC) shall take corrective prompt measures, adequate and long-lasting in addressing non-compliance activities or behavior.

To ensure compliance of the Contractor ENC to the implementation of the EMP, it is highly recommended that an External Environmental Expert is appointed by the proponent to ensure the implementation of the EMP. The tables (5-9) provided below are to be used for monitoring purposes by the Contractor's ENC.

Table 18: Solid waste disposal: wire, paper, drill bits, and human waste

Mitigation	Compliance	Follow up Action Required	By Whom	When	Date Completed
Are disposal drums/bins available or full?					
Is there any litter around the site and its surroundings?					

Table 19: Oil spillage or used oil

Mitigation	Compliance	Follow up Action Required	By Whom	When	Date Completed
Are disposal drums available or full?					

Is there any oil spills around the site and its surroundings?					
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Table 20: Land and Soil Disturbance

Mitigation	Compliance	Follow up Action Required	By Whom	When	Date Completed
Are there any deviations from the provisions of the EMP on land and soil disturbance?					
Are car track barricades in place?					

Table 21: Dust generation on-site and gravel roads stretch

Mitigation	Compliance	Follow up Action Required	By Whom	When	Date Completed
Are there any deviations from the provisions of the EMP on dust pollution?					
Are the fume and particulate levels acceptable?					

Table 22: Biodiversity (fauna and flora)

Mitigation	Compliance	Follow up Action Required	By Whom	When	Date Completed
Are there any deviations from the provisions of the EMP on biodiversity?					
It is traipses harvesting plant taking place feeding of animal or introduction of animals?					

Table 23: Noise and vibrations on-site

Mitigation	Compliance	Follow up Action Required	By Whom	When	Date Completed
Are there any deviations from the provisions of the EMP on noise and vibration on-site?					
Are there any complaints from the surroundings neighbor about noise emanating from the sites or tracks transporting materials/produce?					

Table 24: Compliance

Mitigation	Compliance	Follow up Action Required	By Whom	When	Date Completed
Are there any deviations from the provisions of the EMP on noise and vibration on-site?					
Are there any complaints from the surroundings neighbor about noise emanating from the sites or tracks transporting materials/produce?					

6. ENVIRONMENTAL CODE OF CONDUCT

The Code of Conduct outlined in this section of the EMP applies and is not limited to, subcontractors, visitors, permanent and temporal workers. Therefore, anybody who finds him or herself within the boundaries of the proponent must adhere to the Environmental Code of Conduct as outlined in this section of the EMP.

- The Contractor ENC will implement on-site environmental guidelines and has the authority to issue warnings as well as discipline any person who transgresses environmental rules and procedures. Persistent transgression of environmental rules will result in a disciplinary hearing and thereafter continued noncompliance behavior will result in permanent removal from the construction sites.

Natural environment management guidelines

- a. Never feed, tease or play with, hunt, kill, destroy or set devices to trap any wild animal (including birds, reptiles and mammals), livestock or pets. Do not bring any wild animal or pet to the construction sites;
- b. Do not pick any plant or take any animal out of the construction area EVER. You will be prosecuted and asked to leave the project area;

- c. Never leave rubbish and food scraps or bones where it will attract animals, birds or insects. Rubbish must be thrown into the correct rubbish bins or bags provided;
- d. Protect the surface material by not driving over it unnecessarily;
- e. Do not drive over, build upon, or camp on any sensitive habitats for plants and animals;
- f. Do not cut down any part of living trees/bushes for firewood;
- g. Do not destroy bird nest, dens, burrow pits, termite hills, etc. or any other natural objects in the area.

Vehicle use and access guidance

- i. Never drive any vehicle without a valid license for that particular vehicle and do not drive any vehicle that appears not to be road-worthy;
- ii. Never drive any vehicle when under the influence of alcohol or drugs;
- iii. DO NOT make any new roads without permission. Stay within demarcated areas;
- iv. Avoid U-Turns and large turning circles. 3-point turns are encouraged. Do not ever drive on rocky slopes;
- v. Stay on the road, do not make a second set of tracks and do not cut corners;
- vi. DO NOT SPEED - 30 km per hour for normal vehicles and 20km per hour for heavy trucks on gravel roads and around the site;
- vii. No off-road driving is allowed;
- viii. Vehicles may only drive on demarcated roads;

Control of dust guidance

- a. Do not make new roads or clear any vegetation unless instructed to do so by your Contractor or the Environmental Coordinator or Site Manager;
- b. Do not try to disturb the surface of the natural landscape as little as possible.
- c. Do not speed on gravel roads and around the construction sites, and adhere to the speed limits.
- d. Apply water to suppress dust were the generation of the dust on either gravel roads or construction sites is beyond control.

Health and safety guidance

- a. Drink lots of water every day, but only from the freshwater supplies;
- b. Take the necessary precautions to avoid contracting the HIV/AIDS virus;
- c. Never enter any area that is out of bounds, or demarcated as dangerous or wander off without informing or permission of team leader;

- d. Never climb over any fence or trespass on private property without permission of the landowner or consultation with the Environmental Coordinator, Site Manager.
- e. Report to your Contractor if you see a stranger or unauthorized person in the construction area;
- f. Do not remove any vehicle, machinery, equipment or any other object from the construction campsite or along with the profile or at a seismic testing station without permission of your Contractor or Site Manager;
- g. Wear protective clothing and equipment required and according to instructions from your Contractor or Site Manager;
- h. Don not engages in sexual relations with minors and also adheres to zero tolerance to spread HIV/AIDS.

Preventing pollution and dangerous working conditions guidance

- I. Never throw any hazardous substance such as fuel, oil, solvents, etc. into streams or onto the ground;
- II. Never allow any hazardous substance to soak into the soil;
- III. Immediately tell your Contractor or Environmental Coordinator when you spill or notice any spillage of hazardous substance anywhere in the field or camp;
- IV. Report to your Contractor or Environmental Coordinator when you notice any container, which may hold a hazardous substance, overflow, leak or drip;
- V. Immediately report to your Contractor or Environmental Coordinator when you notice overflowing problems or unhygienic conditions at the ablution facilities, vehicles, equipment and machinery, containers and other surfaces.

Disposal of solid and liquid waste guidance

- a. Learn to know the difference between the two main types of waste, namely: General Waste; and Hazardous Waste.
- b. Learn how to identify the containers, bins, drums or bags for the different types of wastes. Never dispose of hazardous waste in the bins or skips intended for general waste or construction rubble;
- c. Never burn or bury any waste on the camp or in the field;
- d. Never overfill any waste container, drum, bin or bag. Inform your Contractor or the Environmental Coordinator/ Site Manager if the containers, drums, bins or skips are nearly full;
- e. Never litter or throwaway any waste on the site, in the field or along any road.

- f. No illegal dumping;
- g. Littering is prohibited.

Dealing with environmental complaints guidance

- a. If you have any complaint about dangerous working conditions or potential pollution to the environment, immediately report this to the Environmental Coordinator
- b. If any person complains to you about noise, lights, littering, pollution, or any other harmful or dangerous condition, immediately report this to your Contractor.

Environmental Personnel Register

Table 11 presents the Environmental Personnel Register to be signed by every person who receives or attends the Environmental Awareness Training or who has the training material explained to him or her or in possession of the training material.

Table 25: Environmental Personnel Register

Date	Name	Company	Signature

7. CONCLUSION AND RECOMMENDATIONS

7.1. CONCLUSION

The fundamental principle behind environmental assessments (EAs) is to ensure a balance in social, economic and environmental needs, particularly when proposed projects are of such a nature that they negatively affect some needs at the expense of the other. Ultimately, EAs should enhance proposed projects' propensity towards being more beneficial and important by suggesting measures, designing and implementing programs and plans to that effect.

Against this background, it is anticipated that this project will be beneficial and important to the proponent, national economy, the local social conditions, and the local economy if the guidelines and mitigation measures suggested in this EMP are implemented. However, it should be acknowledged that disturbance to the environment will be incurred, but that will be minimal and within legally acceptable levels.

This EMP should be viewed as a framework for integrating mitigation measures and applicable legal tools to ensure both compliance and sustainability. It is therefore very important that the proponent provides adequate resources (human, financial, tangible and intangible assets) for the implementation of the plan.

7.2. RECOMMENDATION

The proposed quarry project may go ahead provided that all the provisions of the EMP, as well as all issued permits, are followed. Recommended actions to be implemented by the proponent as part of the management of the likely impacts through implementations of the EMP are:

- Contract an Environmental Coordinator / Consultant / suitable in-house resources person to lead and further develop, implement and promote environmental culture through awareness-raising of the workforce, contractors and sub-contractors in the field during the whole duration of the proposed mining program period;
- Provide with other support, human and financial resources, for the implementation of the proposed mitigations and effective environmental management during the planned mining activities;
- Develop a simplified environmental induction and awareness program for all the workforce, contractors and sub-contractors;
- Where contracted service providers are likely to cause environmental Impacts, these will need to be identified and contract agreements need to be developed with costing provisions for environmental liabilities;
- Implement internal and external monitoring of the actions and management strategies developed during the mineral exploration and possible mining duration and a final Environmental Monitoring report be prepared by the Environmental Coordinator / Consultant / Suitable in-house resource person and to be submitted to the regulators and to end the proposed quarry project;

- Develop and implement a monitoring program that will fit into the overall company's Environmental Management Systems (EMS) as well as for any future EIA for possible quarrying projects.

It is hereby recommended that proponent take all the necessary steps to implement all the recommendations of the EMP for the successful implementation and completion of the proposed construction and operation of a fuel retail facility on erf 8002, windhoek: c/o wika and sean mcbride .

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