

**APP-0010350**

**OPERATIONS OF ETOSHA TRADING POST FUEL RETAIL  
FACILITY ON FARM MONTE BELLO, OUTJO DISTRICT**

**UPDATED ENVIRONMENTAL MANAGEMENT PLAN**



**Assessed by:**



**Assessed for:**



June 2022



<b>Project:</b>	<b>UPDATED ENVIRONMENTAL MANAGEMENT PLAN FOR THE ETOSHA TRADING POST FUEL RETAIL FACILITY ON FARM MONTE BELLO, OUTJO DISTRICT</b>	
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<b>Report Approval</b>	 <b>André Faul</b> Conservation Ecology	

I KH. Coetzuizen acting as the Proponent's representative (Talení Africa Tourism Holdings (Pty) Ltd), hereby confirm that we approve the Environmental Management Plan as presented in this document. All material information in the possession of the proponent that reasonably has or may have the potential of influencing the Environmental Management Plan was provided to the consultant.

Signed at Sossusvlei Lodge on the 21 day of June 2022.

KH. Coetzuizen  
Talení Africa Tourism Holdings (Pty) Ltd

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Company Registration Number



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## **LIST OF ABBREVIATIONS**

<b>AIDS</b>	Acquired Immune Deficiency Syndrome
<b>EIA</b>	Environmental Impact Assessment
<b>EMP</b>	Environmental Management Plan
<b>EMS</b>	Environmental Management System
<b>HIV</b>	Human Immunodeficiency Virus
<b>LNAPL</b>	Light Non-Aqueous Phase Liquids
<b>MEFT</b>	Ministry of Environment, Forestry and Tourism
<b>MSDS</b>	Material Safety Data Sheet
<b>PPE</b>	Personal Protective Equipment
<b>SANS</b>	South African National Standards
<b>WHO</b>	World Health Organization

## **GLOSSARY OF TERMS**

**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.

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

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

**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.

**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.



## **1 OBJECTIVES OF THE EMP**

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Taleni Africa Tourism Holdings (Pty) Ltd (the Proponent) requested Geo Pollution Technologies (Pty) Ltd to update the existing environmental management plan (EMP) of their Etosha Trading Post fuel retail facility. Etosha Trading Post is located on Farm Monte Bello (Farm No FMA/00456), along the C38 Main Road in the Outjo District. The updated EMP will be submitted to the Ministry of Environment, Forestry and Tourism (MEFT) to renew the facility's existing environmental clearance certificate (ECC). The renewed ECC is required for operations and general care and maintenance of the fuel retail facility. Operations of the facility include filling of the underground storage tanks with fuel from road transport tankers, dispensing of fuel to customers, tank dips and fuel volume reconciliation, as well as general operational activities and maintenance procedures associated with a fuel retail facility and associated infrastructure. The establishment also hosts a shop and tyre repair facility.

The EMP provides management options to ensure impacts 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 management measures provided in the EMP should be adhered to during the various phases of the operation of the facility. All personnel taking part in the operations of the facility should be made aware of the contents in this section, so as to plan the operations accordingly and in an environmentally sound manner.

The objectives of the EMP are:

- ◆ to include all components of operations and general care and maintenance 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 operational personnel.

## **2 THE IMPLEMENTATION OF THE EMP**

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The sections below outline the management of the environmental elements that may be affected by the activities associated with the various phases of the facility. These phases are as follows:

- ◆ Planning Phase
- ◆ Care and Maintenance Phase
- ◆ Decommissioning Phase

The EMP is a living document that must be prepared in detail, and regularly updated, by the Proponent as the project progress and evolve. Impacts addressed and mitigation measures proposed are seen as minimum requirements which have to be elaborated on where appropriate. Delegation of mitigation measures and reporting activities should be determined by the Proponent and included in the EMP.

All monitoring results must be reported on as indicated. Reporting is important for any future renewals of the ECC and must be submitted to the Ministry of Environment, Forestry and Tourism. Renewal of ECC will require bi-annual reports based on the monitoring prescribed in this EMP.

Various potential and definite impacts will emanate from the operations, care and maintenance, and decommissioning phases. The majority of these impacts can be mitigated or prevented. The impacts as well as prevention and mitigation measures are listed below. The general guidance and impact descriptions provided below are based on the findings of the initial EIA and risk assessment carried out by Geo Pollution Technologies (Faul et al., 2019).

## 2.1 PLANNING

During the phases of planning for operations, care and maintenance, and possible 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 risk are minimised. The following actions are recommended for the planning phase and should continue during various other phases of the project:

- ◆ Ensure that all necessary permits from the various ministries, local authorities and any other bodies that governs the construction activities and operations of the project remain valid.
- ◆ Ensure relevant sections of the EMP are communicated with, and understood by, the contractors, sub-contractors, employees and all personnel present or who will be present on site.
- ◆ Make provisions to have a Health, Safety and Environmental 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:
  - Risk management / mitigation / EMP/ Emergency Response Plan and HSE Manuals
  - Adequate protection and indemnity insurance cover for incidents;
  - Comply with the provisions of all relevant safety standards;
  - Procedures, equipment and materials required for emergencies.
- ◆ Maintain a fund or insurance for future pollution remediation if ever required.
- ◆ Establish and / or maintain a reporting system to report on aspects of operations and care and maintenance as outlined in the EMP.
- ◆ Submit bi-annual reports to the MEFT to allow for ECC renewal after three years. This is a requirement by MEFT.
- ◆ Appoint a specialist environmental consultant to update the EMP and apply for renewal of the ECC prior to expiry.

## 2.2 MANAGEMENT OF IMPACTS: OPERATIONS AND CONSTRUCTION

The following section provide management measures for both the operational phase as well as care and maintenance activities related to the project.

### **2.2.1 Revenue Generation and Employment**

The facility is located along a popular tourist route to Etosha National Park. It may therefore be expected that a large percentage of tourists visit the area and region, and will be in need of fuel. Operations of the facility therefor supports tourism and generates revenue, as well as provide related employment.

The change in land use lead to changes in the way revenue is generated and paid to the national treasury. An increase in skilled and professional labour takes place due to the operations of the facility.

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

#### **Actions**

##### **Mitigation:**

- ◆ The proponent must employ Namibians where possible and if the skills exist locally, employees must first be sourced from the Outjo District, then the region, and then nationally.
- ◆ Deviations from this practice must be justified.

##### **Responsible Body:**

- ◆ Proponent

##### **Data Sources and Monitoring:**

- ◆ Bi-annual summary report based on employee records.

### **2.2.2 Skills, Technology and Development**

During various phases, training is provided to a portion of the workforce to allow them to operate and maintain various features of the fuel retail facility according to the required standards. Skills are transferred to an unskilled workforce for general tasks. The technology required for the facility is often new to the local industry, aiding in operational efficiency. Development of people and technology are key to economic development.

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

#### **Actions**

##### **Mitigation:**

- ◆ 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.
- ◆ Employees to be informed about parameters and requirements for references upon employment.
- ◆ The proponent must employ Namibians where possible. Deviations from this practice should be justified appropriately.

##### **Responsible Body:**

- ◆ Proponent
- ◆ Contractors

##### **Data Sources and Monitoring:**

- ◆ Record should be kept of training provided.
- ◆ Ensure that all training is certified or managerial reference provided (proof provided to the employees) inclusive of training attendance, completion and implementation.
- ◆ Summarise all training (formal and informal) in a bi-annual report.

### **2.2.3 Demographic Profile and Community Health**

The facility relies on labour for operations and maintenance. The scale of the project is limited and it is not foreseen that it has created a significant 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 behaviour. However, such trends have not been observed since the site became operational. Spills and leaks may present health risks to employees and members of the public.

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

#### **Actions:**

##### **Prevention:**

- ◆ Employ only local people from the area, deviations from this practice should be justified appropriately.
- ◆ Adhere to all local authority by-laws relating to environmental health.

##### **Mitigation:**

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

#### **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 employee demographics, educational programmes and training conducted.

#### **2.2.4 Fuel Supply**

The operations of the facility mainly aid in securing fuel supply to tourists visiting the area, but also to the transport industry, business and farms in the area. According to local knowledge, Etosha National Park experiences fuel shortages during the tourist seasons. Secure and continued fuel supply will therefore contribute to the tourism sector and ensure visitors to Etosha National Park have a secure and reliable supply of fuel.

**Desired Outcome:** Ensure a secure fuel supply remains available.

#### **Actions**

##### **Mitigation:**

- ◆ Ensure compliance to the petroleum regulations of Namibia.
- ◆ Proper fuel management to ensure constant supply.
- ◆ Record supply problems and take corrective actions.

##### **Responsible Body:**

- ◆ Proponent

##### **Data Sources and Monitoring:**

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

### **2.2.5 Traffic**

The facility may have increased the traffic flow to the site through the provision of fuel. This may increase the risk of incidents and accidents, mainly at the turn-off from the main road to the facility.

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

#### **Actions**

##### **Prevention:**

- ◆ Erect clear signage regarding access and exit points at the facility.

##### **Mitigation:**

- ◆ Tanker trucks delivering fuel should not be allowed to obstruct any traffic.
- ◆ If any traffic impacts are expected, traffic management should be performed to prevent these.
- ◆ The placement of signs to warn and direct traffic will mitigate traffic impacts.

#### **Responsible Body:**

- ◆ Proponent

#### **Data Sources and Monitoring:**

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

### 2.2.6 Health, Safety and Security

Every activity associated with the operational phase is reliant on human labour and therefore exposes them to health and safety risks. Activities such as the operation of machinery and handling of hazardous chemicals (inhalation and carcinogenic effect of some petroleum products), poses the main risks to employees. Security risks are related to unauthorized entry, theft and sabotage.

**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.
- ◆ 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).
- ◆ 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.
- ◆ Any semi-purified water outlets must be clearly labelled or locked to prevent accidental human consumption thereof.

##### **Mitigation:**

- ◆ 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.).
- ◆ Selected personnel should be trained in first aid and a first aid kit must be available on site. The contact details of all emergency services must be readily available.
- ◆ Security procedures and proper security measures must be in place to protect workers and clients, especially during cash in transit activities.
- ◆ Reduce the amount of cash kept on site to reduce the risk of robberies.
- ◆ Strict security that prevents unauthorised entry.

##### **Responsible Body:**

- ◆ Proponent
- ◆ Contractors

##### **Data Sources and Monitoring:**

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



### 2.2.7 Fire

Operational and maintenance activities may increase the risk of the occurrence of fires which may spread into the nearby veld. Fuel, especially unleaded petrol, is highly flammable and therefore presents a fire and explosion risk.

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

#### **Actions:**

##### **Prevention:**

- ◆ A holistic fire protection and prevention plan is needed. This plan must include an emergency response plan, firefighting plan and spill recovery plan.
- ◆ Maintain firefighting equipment, good housekeeping and personnel training (firefighting, fire prevention and responsible housekeeping practices).
- ◆ Ensure all chemicals are stored according to MSDS and SANS instructions.
- ◆ Maintain regular site, mechanical and electrical inspections and maintenance.
- ◆ Clean all spills / leaks timeously.
- ◆ 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 facility.
- ◆ All dispensers must be equipped with devices that cut fuel supply during fires.
- ◆ Clean and maintain a fire break around the property.

##### **Mitigation:**

- ◆ In case of a fire, the firefighting plan must be initiated immediately and all emergency procedures must be performed as practiced during training. This includes notifying the fire brigade, engaging emergency stops, using firefighting infrastructure, evacuation, etc.

##### **Responsible Body:**

- ◆ Proponent
- ◆ Contractors

##### **Data Sources and Monitoring:**

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

### 2.2.8 Air Quality

Fuel vapours are released into the air during refuelling of bulk storage tanks as well as at filling points. Prolonged exposure may have carcinogenic effects. Dust may be generated during windy periods.

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

#### **Actions**

##### **Prevention:**

- ◆ All buildings and offices should be well ventilated.
- ◆ Vent pipes on all tanks must be according to SANS requirements.

##### **Mitigation:**

- ◆ Personnel issued with appropriate masks where excessive dust or vapours are present.
- ◆ A complaints register should be kept for any dust related issues and mitigation steps taken to address complaints where necessary e.g. dust suppression.
- ◆ Employees should be coached on the dangers of fuel vapours.

##### **Responsible Body:**

- ◆ Proponent
- ◆ Contractors

##### **Data Sources and Monitoring:**

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

### **2.2.9 Noise**

Noise pollution will exist due to heavy motor vehicles accessing the site to offload fuel or refuel. Construction (maintenance and upgrades) may generate excessive noise. A fuel retail facility is a 24 hour operation which means that vehicle noise is generated throughout the day and night.

**Desired Outcome:** To prevent any nuisance and hearing loss due to elevated noise levels.

#### **Actions**

##### **Prevention:**

- ◆ Follow World Health Organization (WHO) guidelines on maximum noise levels to prevent hearing impairment.
- ◆ All machinery must be regularly serviced to ensure minimal noise production.
- ◆ Manage noise caused by clients – loud music etc.

##### **Mitigation:**

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

##### **Responsible Body:**

- ◆ Proponent
- ◆ Contractors

##### **Data Sources and Monitoring:**

- ◆ WHO Guidelines; Labour Act Regulations
- ◆ Maintain a complaints register.
- ◆ Bi-annual report on monitoring and complaints, and actions taken to address complaints and prevent future occurrences.

### **2.2.10 Waste production**

Various waste streams are produced during the operational phase. Waste may include hazardous waste associated with the handling of hydrocarbon products (such as waste in the oil/water separator). 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. Construction waste may include building rubble and discarded equipment contaminated by hydrocarbon products. Contaminated soil and water is considered as a hazardous waste.

**Desired Outcome:** 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 re-used / recycled must be kept separate.
- ◆ Ensure adequate temporary 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).
- ◆ The spill catchment traps and oil water separator should be cleaned regularly and waste disposed of appropriately. Surfactants (soap) may not be allowed to enter the oil water separator.
- ◆ See the material safety data sheets available from suppliers for disposal of contaminated products and empty containers.

##### **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.
- ◆ The oil water separator must be regularly inspected and all hydrocarbons removed once detected. Outflow water must comply with effluent quality standards.
- ◆ All information and reporting to be included in a bi-annual report.

### **2.2.11 Ecosystem and Biodiversity Impact**

The facility is an existing site surrounded by a relatively undisturbed environment. No real additional impacts on the biodiversity of the area are expected from operations of the facility. Impacts are therefore mostly related to pollution of the environment. Poaching an illegal collection of plant and animal materials may also occur.

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

#### **Actions.**

##### **Prevention:**

- ◆ Ensure waste cannot be blown away by wind.
- ◆ Educate all contracted and permanent employees on the value of biodiversity.
- ◆ Harvesting and poaching of fauna and flora by employees should be discouraged. This includes prohibitions or regulations on the collection of firewood.
- ◆ Regular inspection of fences or river courses at and around the project location for snares or any other illegal activities.

##### **Mitigation:**

- ◆ Report any extraordinary animal 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.
- ◆ Employ deterrent measures to prevent birds from utilising structures on site for purposes of nesting.
- ◆ Avoid scavenging of waste by animals.

##### **Responsible Body:**

- ◆ Proponent

##### **Data Sources and Monitoring:**

- ◆ All information related to extraordinary sightings or problems with animals to be included in a bi-annual report.

### **2.2.12 Groundwater, Surface Water and Soil Contamination**

Operations entail the storage and handling of hydrocarbons which present a contamination risk. Contamination may either result from failing storage facilities, pumps and pipelines, or spills and leaks associated with the handling of fuel. Such material may contaminate surface water, soil and groundwater. The facility will provide fuel to public vehicles which may further present contamination risks through overfills, spills and leakages. Modern retail facilities are well designed to reduce leakages and spillages from contaminating soil and water.

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

#### **Actions**

##### **Prevention:**

- ◆ Spill control structures, equipment, spill kits 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.
- ◆ 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).
- ◆ The sewage treatment plant must be regularly inspected and serviced to ensure proper working condition.

##### **Mitigation:**

- ◆ Any spillage of more than 200 litre 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.
- ◆ Any spill must be cleaned up immediately.
- ◆ The spill catchment traps and oil water separator should be cleaned regularly and waste disposed of at a suitably classified hazardous waste disposal facility.
- ◆ Surfactants (soap) may not be allowed to enter the oil water separator e.g. no soap usage on spill control surfaces.
- ◆ Adhere to the effluent standards as determined by the effluent disposal permit.

##### **Responsible Body:**

- ◆ Department of Water Affairs, Ministry of Agriculture, Water and Land Reform
- ◆ Proponent
- ◆ Contractors

##### **Data Sources and Monitoring:**

- ◆ Effluent Disposal Permit.
- ◆ Inspection holes at the ends of the tanks must as a minimum be inspected every 14 days and measurements must be recorded for future reference. Inspection must include the evaluation of LNAPL on the water surface, if liquid is present.
- ◆ 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..

### **2.2.13 Visual Impact**

This is an impact that not only affects the aesthetic appearance, but also the integrity of the facility. Bright lights used at night may impact on nearby tourism establishments.

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

#### **Actions**

##### **Mitigation:**

- ◆ Regular waste disposal, good housekeeping and routine maintenance on infrastructure will ensure that the longevity of structures are maximised and a low visual impact is maintained.
- ◆ The design of fuel retail facility, being aimed at the tourism sector, should remain integrated into the surrounding natural environment as far as is safe and practically possible, to improve the aesthetic appearance and minimise the impact on the existing landscape character.
- ◆ At night, the minimum lighting required for security purposes should be used to prevent impacts on neighbouring tourism establishments. Lights should be directed downwards and away from especially Etosha Safari Lodge and Etosha Safari Camp, which is located in the line of sight of Etosha Trading Post.

##### **Responsible Body:**

- ◆ Proponent
- ◆ Contractors

##### **Data Sources and Monitoring:**

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

#### **2.2.14 Cumulative Impact**

Possible cumulative impacts associated with the operational phase include increased traffic, dust and noise in the area. Being isolated cumulative impacts are expected to be unlikely.

**Desired Outcome:** To minimise cumulative all 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 biannual and annual reports for any new or re-occurring impacts or problems would aid in identifying cumulative impacts and help in planning if the existing mitigations are insufficient

##### **Responsible Body:**

- ◆ Proponent

##### **Data Sources and Monitoring:**

- ◆ Bi-annual reports based on all other impacts will provide an overall assessment of the impact of the operational and maintenance phases.



### **2.3 DECOMMISSIONING AND REHABILITATION**

Decommissioning is not foreseen during the validity of the ECC. Decommissioning was however assessed as construction activities may include modification and decommissioning. Should decommissioning occur at any stage, rehabilitation of the area may be required. Decommissioning will entail the complete removal of all infrastructure including buildings and underground infrastructure. 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 WHO standards and waste should be contained and disposed of at an appropriately classified and approved waste facility and not dumped in the surrounding areas. Future land use after decommissioning should be assessed prior to decommissioning and rehabilitation initiated if the land would not be used for future purposes. The EMP for the facility will have to be reviewed at the time of decommissioning to cater for changes made to the site and implement guidelines and mitigation measures.

### **2.4 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

## **3 CONCLUSION**

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The above updated EMP, if properly implemented will help to continually minimise adverse impacts on the environment. Where impacts occur, immediate action must be taken to reduce the escalation of effects associated with these impacts. To ensure the relevance of this document to the specific stage of project, it needs to be reviewed throughout all phases.

The EMP should continue to be used as an on-site reference document during all phases of the project, and auditing should take place in order to determine compliance with the EMP for the proposed site. Parties responsible for transgression of the EMP should be held responsible for any rehabilitation that may need to be undertaken.

Monitoring reports must be submitted to the Ministry of Environment, Forestry and Tourism every six months (bi-annually) to allow for the future renewal of the ECC.

## **4 REFERENCES**

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Faul A, Botha P, Coetzer W, Short S; 2019 March; Construction and Operations of a Fuel Retail Facility on Farm Monte Bello, Outjo District: Environmental Assessment Scoping Report