

RENEWAL ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN

**FOR THE PROPOSED CONSTRUCTION OF A FUEL RETAIL FACILITY, LIGHT
INDUSTRIAL WAREHOUSES, RETAIL OUTLETS
AND A SUPERMARKET**

AT

ONAANDA VILLAGE, OMUSATI REGION.



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ABBREVIATION

DEA	Department of Environmental Affairs
EA	Environmental Assessment
EAP	Environmental Assessment Practitioner
ECC	Environmental Clearance Certificate
ECO	Environmental Compliance Officer
EIA	Environmental Impact Assessment
EMA	Environmental Management Act (No. 7 of 2007)
EMP	Environmental Management Plan
ECS	EnvironClim Consulting Services
MET	Ministry of Environment and Tourism
SABS	South African Bureau of Standards
SM	Site Manager
VOC	Volatile organic compounds
SANS	South African National Standard
GDP	Gross Domestic Product



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1. INTRODUCTION

Dayola Investment cc is a family business that owns a village house on an area of approximately 10 hectares piece of land at Onaanda Village, in Elim Constituency, Omusati region. The village is situated 40km west of Oshakati, on the C41 Oshakati-Okahao road and a further 15km on D3619 gravel road South of C41 road (See Figure 1 (A)). It is now the intention of the family under Dayola Investment cc to use portion of their field to establish business activities. The company obtained consent from the Uukwambi Traditional Authority (UTA) to transform their portion of communal land into commercial activities.

The company plans to establish a Fuel Retail Facility, Light warehouses, small outlet shops and a Supermarket on their piece of land. Statutory obligation under the Land Reform Act, Act No 11 of 2007, requires that, an Environmental Clearance Certificate (ECC) must first be obtained for the establishment of commercial activities on communal land. Further, handling and storage of hydrocarbons is a listed activity under the Environmental Management Act 2007 (Act No. 7 of 2007) (EMA) that may not be undertake without an ECC. EnvironClim Consulting Services (ECS) was therefore appointed by Dayola investment to carry out an Environmental Impact Assessment (EIA) and develop an Environmental Management Plan for the proposed project. The project shall cover an estimated area 1.6 hectares.

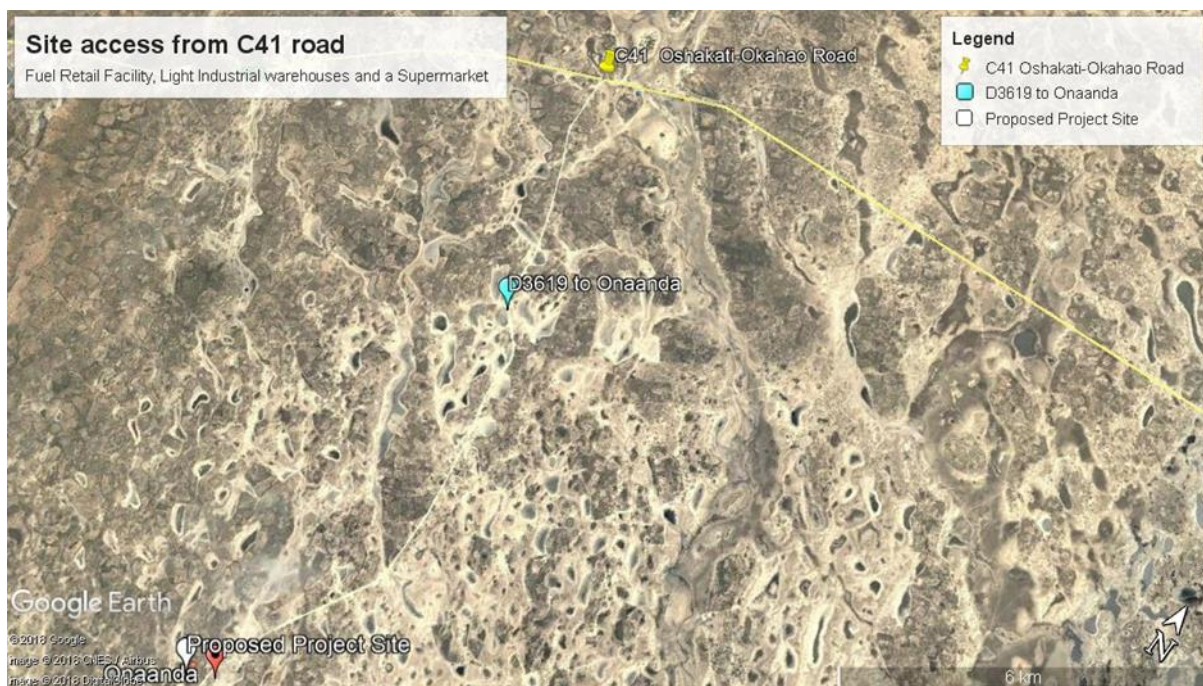


Figure 1 (A)



Figure 1 (B)

Figure 1 (A&B). The proposed Fuel Retail Facility at Onaanda in Omusati Region

2. PURPOSE OF THE EMP

This Environmental Management Plan (EMP) is a risk strategy that contains logical and practical framework, monitoring programs, mitigation measures, and management control strategies to minimize potential environmental impacts to insignificant level. It further stipulates the roles and responsibility of persons involved in the project. This EMP includes developed mitigation measures for the proposed construction and operation of the Fuel Retail Facility, shops outlets and a supermarket.

3. COMPLIANCE TO THE EMP

This EMP is a legally binding document as given under the provisions of the Environmental Management Act, 2007 (Act No. 7 of 2007). The project proponent and its contractors must therefore adhere to the framework of this document. It should be noted further that the EMP is

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a living document subject to changing environments and new information that may be available in the future, hence it must be amended accordingly with the provision of the EMA.



4. LEGAL AND POLICY FRAMEWORK

The proposed project shall be established and operated under the provision of the relevant statutory framework of Namibian and international laws of which Namibia is signatory.

Table 1. Legal Requirements for the proposed project

Legislation	Summary	Applicability
The Namibian Constitution	The Namibian constitution is the supreme law of the country which is committed to sustainable development. Article 95(1) of the Constitution of Namibia states that:- “The State shall actively promote and maintain the welfare of the people by adopting policies aimed at ... The maintenance of ecosystems, essential ecological processes and biological diversity of Namibia and utilization of living natural resources on a sustainable basis for the benefit of all Namibians, both present and future”.	To undertake the EIA in order to maintain the ecological process and diversity of ecosystem
The Environmental Management Act	The Environmental Management Act No 7 of 2007 aims to promote the sustainable management of the environment and the use of natural resources and to provides for a process of assessment and control of activities which may have significant effects on the environment; and to provide for incidental	Legal requirement to undertake an EIA

	<p>matters. The acts provide a list of activities that may not be undertake without an environmental clearance certificate.</p> <p>Further, the Act ensures that;</p> <ul style="list-style-type: none"> (a) Potential threats are considered timeously (b) A comprehensive stakeholder’s consultation is conducted, and all Interested and affected parties are given an opportunity to comment on the project (c) Decision are robust by considering the above-mentioned activities 	
<p>Atmospheric Pollution Prevention Ordinance Act No.11 of 1976)</p>	<p>This Ordinance serves to control air pollution from point sources, but it does not consider ambient air quality. This ordinance is being repealed by the proposed Pollution Control and Waste Management Bill. Any person carrying out a ‘scheduled process’ which are processes resulting in noxious or offensive gases typically pertaining to point source emissions have to obtain a registration certificate from the Department of Health.</p>	<p>Generation of Greenhouse Gases by the fuel</p>
<p>Draft Pollution Control and Waste Management Bill</p>	<p>This Bill serves to regulate and prevent the discharge of pollutants to air and water as well as providing for general waste management. The Bill will repeal the Atmospheric Pollution Prevention Ordinance (11 of 1976) when it comes into force. The Bill also provides for noise, dust or odour control that may be considered a nuisance. Further, the Bill advocates for duty of care with respect</p>	<p>Possible Fuel Spill and Leakages may pollute ground and surface water.</p>

	to waste management affecting humans and the environment and calls for a waste management licence for any activity relating to waste or hazardous waste management.	
Environmental Policy framework (1995)	This policy subjects all developments and project to environmental assessment and provides guideline for the Environmental Assessment. Its provision mandate that Environmental Assessment take due consideration of all possible impacts and incorporate them in the development or planning stages.	Provision of the EIA and guidelines
The Occupational Safety and Health Act No. 11 of 2007;	<p>Safety: A safety risk is a statistical concept representing the potential of an accident occurring, owing to unsafe operation and/or environment. In the working context “SAFETY” is regarded as “free from danger” to the health injury and to properties.</p> <p>Health: Occupational Health is aimed at the promotion and maintenance of the highest degree of physical, mental and social wellbeing of workers in all occupations. This is done by ensuring that all work-related hazards are prevented and where they occur, managed.</p>	<p>Handling of fuel has a high fire and explosion risk</p> <p>Provision of clean ablution facility, Routine health check-ups for employees, HIV/AIDS Awareness etc.</p>

<p>Public Health Act No. 36 of 1919</p>	<p>The Act serves to protect the public from nuisance and states that no person shall cause a nuisance or shall suffer to exist on any land or premises owned or occupied by him or of which he is in charge any nuisance or other condition liable to be injurious or dangerous to health.</p>	<p>Ensure public safety from noise, dusts, and air pollution.</p>
<p>Water Resources Management Act (2004)</p>	<p>This Act provides a framework for managing water resources based on the principles of integrated water resources management. It provides for the management, development, protection, conservation, and use of water resources. Furthermore, any watercourse on/or in close proximity to the site and associated ecosystems should be protected in alignment with the listed principles.</p>	<p>Ensure well-constructed storm water systems, ensure pollution control mechanism to avoid water pollution</p>
<p>Water Act No, 54 of 1956</p>	<p>This act states that, all water resources belong to the State. It prevents pollution and promotes the sustainable utilization of the resource. To protect these resources, this act requires that permits are obtained when activities involve the following;</p> <ul style="list-style-type: none"> (a) Discharge of contaminants into water sources such as pipe, sewer, canal, sea outfall and (b) Disposal of water in a manner that may cause detrimental impact on the water resources 	<p>Contaminated water, such as sewage sludge must not be dumped into water bodies</p>

Petroleum Product and Energy Act No, 13 of 1990	This Act provides a framework for handling and distribution of petroleum products which may include purchase, sale, supply, acquisition, possession, disposal, storage or transportation thereof.	Safe handling of the fuel
Labour Act No. 11 of 2007	This Act aims to regulate labour in general and includes the protection of the health, safety and welfare of employees. The 1997 Regulations relating to the Health and Safety of employees at work sets out the duties of the employer, welfare and facilities at the workplace, safety of machinery, hazardous substances, physical hazards, medical provisions, construction safety and electrical safety.	Follow legal labour requirements such as safety, remuneration etc
Regional Council Act, 1992 (Act No. 22 of 1992)	The Regional Councils Act legislates the establishment of Regional Councils that are responsible for the planning and coordination of regional policies and development. The main objective of this Act is to initiate, supervise, manage and evaluate development at regional level.	Observe the regional by laws
Soil Conservation Act No. 76 of 1969	This act promotes the conservation of soil, prevention of soil erosion.	Coordinate movement of construction vehicle to prevent soil erosion. Ensure conservation of topsoil.
Hazardous Substances Ordinance No. 14 of 1974	This ordinance gives provision to control the handling of hazardous substance in all circumstances, such as manufacturing, imports and exporting of these to ensure human and environmental safety.	Handling of fuel, fire and explosion risks

<p>National Heritage Act No. 27 of 2004</p>	<p>The Act makes provision for the protection and conservation of places and objects of heritage significance and the registration of such places and objects. Part V Section 46 of the Act prohibits removal, damage, alteration or excavation of heritage sites or remains, while Section 48 sets out the procedure for application and granting of permits such as</p>	<p>Earth work such as scrapping, and excavation may unearth archaeological material.</p>
<p>Word's Best Practises</p>	<p><i>Precautionary Approach Principle</i></p> <p>This principle is worldwide accepted when there is a lack of sufficient knowledge and information about the possible threats to the environment. Hence if the anticipated impacts are greater, then precautionary approach is applied. In this project, there are no eminent uncertainty however in cases when they arise, this approach should be applied.</p> <p><i>Polluter Pays Principle</i></p> <p>This principle ensures that proponents takes responsibility of their actions. Hence in cases of pollution, the proponent bears the full responsibility to clean up the environment.</p>	<p>Fuel Filling services are well known in Namibia. Fuel contains Volatile Organic Compounds (VOCs) are cancerous and their amount that causes cancer are poorly documented. Therefore, precaution must be taken when dispensing fuel to vehicles.</p> <p>In the event spillage or leakages, owner must be responsible to clean up the environment.</p>

5. ROLES & RESPONSIBILITIES

5.1. Environmental Compliance Officer (ECO)

The Ministry of Environment, Forestry and Tourism is the custodian of environmental protection. The Environmental Compliance Officer shall be an appointed Environmental Officer from the Directorate of Environmental Affairs entrusted to enforce compliance as per the provision of the EMA. The ECO may carry out inspection at any given time to enforce compliance. Depending on his/her work schedule, the ECO shall visit the site any time for environmental inspection and monitoring.

5.2. The Proponent

Dayola Investment cc shall resume the overall responsibility of environmental management through adequate implementation of the environmental management plan. Additionally, it shall be a full responsibility of Dayola investment to implement the following activities.

- Appoint a site Manager;
- Ensures that all workers and contractors are conversant with the Environmental Management Plan (EMP) and are inducted on safety measures regarding handling of hydrocarbons;
- Ensure a safe and healthy working environment;
- Provide workers with appropriate Personal Protective Clothing (PPE);
- Monitor the employees works with regard to safety;
- Ensure good environment performance and compliance;
- Appoint an environmental officer or Environmental Practitioner to carry out environmental audits.



5.3. Site Manager (SM)

The Site Manager shall represent Dayola Investment cc. He/she will be responsible for monitoring daily operations and ensure adequate adherence of workers and contractors to the EMP. The Site Manager must ensure that a copy of the EMP is available on site all times and ensure every worker is conversant with the EMP.

5.4. Employees and Contractors

All stakeholders, especially employees and contractors must;

- Adhere to the EMP;
- Ensure to wear personal protective clothing at all time when working;
- Report worn out PPE and request for replacement;
- Adhere to the Company rules and policies.

6. DISCIPLINARY ACTION

The EMP is a legally binding document. Non-compliance to the EMP must result in punitive legal action against the Proponent such as;

- Suspension of work;
- Financial penalties.

The disciplinary action shall be determined as per the provision of EMA and relevant statutory framework. Under Section 27 (4), *Any person who contravenes subsection (3) commits an offence and is on conviction liable to a fine not exceeding N\$500 000 or to imprisonment for a period not exceeding 25 years or to both such fine and such imprisonment*".



7. THE ENVIRONMENTAL MANAGEMENT PLAN

The scope of this EMP is with reference to the EIA for Construction, Operational and Decommissioning phase of the proposed project. This EMP is structured by considering Social, Environmental, Safety and Occupational Health aspects associated with this project as summarised in table 2 below.

Table 2 : Environmental Social Management Plan (ESMP)

Activity	Objectives
A – Staff Induction	Induction
	Communication
B – Health and Safety	General safety at workplace FIRE RISKS
	Ablution facilities / Septic Tanks Management
	Dust and Noise Exposure
C – Pollution and Waste Management	Material waste, Domestic waste, Building rubbles etc.
	Vehicle emissions, Dust and Noise
	Fuel Spill and Leakages Oil and Lubricant leakages
D – Environment	Soil
	Water
	Biodiversity Rehabilitation
E – Cultural Heritage	Archaeology or Heritage
F – Socio-Economic	Employment
	Alcohol and Drug Abuse
	Working hours



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	Capacity building
	HIV / AIDS





SECTION A: STAFF INDUCTION

Table 3. Staff Induction Mitigation Measures

Environmental or Social Aspects	Objective	Proposed Mitigation Measures	Monitoring Indicators	Responsibility
Staff Induction	To ensure that all staff / employees are familiar with the requirements of the EMP	<ol style="list-style-type: none"> All employees and Contractors must go through a comprehensive induction course on all the provisions of the EMP. There must be an annual induction course for all the workers. New employees must not start work without 	<p>Induction Minutes and Attendance Register, Signed by each staff member</p> <p>Induction Report</p>	Management or Site Manager

Environmental or Social Aspects	Objective	Proposed Mitigation Measures	Monitoring Indicators	Responsibility
		going through the induction course.		
	Disciplinary	<ol style="list-style-type: none"> 1. Company must adopt a disciplinary system to discipline staff for non-compliance, such as not using ablution facilities and disposing off waste uncontrollably etc. 2. Strict measure must be put in place, any employee found contravening provisions of the EMP, must be granted a warning letter. 	<p>Disciplinary meetings and actions</p> <p>Disciplinary letters / Warnings</p>	Management or Site Manager



Environmental or Social Aspects	Objective	Proposed Mitigation Measures	Monitoring Indicators	Responsibility
	Availability of the EMP on site for ease of reference	1. Ensure that a copy of the EMP is kept on site and accessible	Physical view of the EMP	Management or Site Manager
Communication	To ensure effective communication	1. The project must develop a communication strategy 2. Correspondences must be in writing 3. The contact numbers for the Site Manager and Team Leaders must be available displayed onsite in case of emergencies.	Communication Strategy Letters, e-mail, Notices, Minutes Display of site manager and emergency numbers on site	Management or Site Manager



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Environmental or Social Aspects	Objective	Proposed Mitigation Measures	Monitoring Indicators	Responsibility
		4. There must be an alarm bell for emergency communication		

SECTION B: HEALTH AND SAFETY

Table 4. Health and Safety Measures to be implemented

Environmental / Social Aspects	Objective	CONSTRUCTION PHASE Proposed Mitigation Measures	Monitoring Indicators	OPERATIONAL PHASE Proposed Mitigation Measures	Monitoring Indicators	Responsibility
Safety	Adhere to the Health and Safety Regulations, Government Notice 156/1997 (GG 1617).	<ol style="list-style-type: none"> The proponent must develop a health and safety plan; A compulsory safety induction course must be given to all employees. Each employee must be provided with personal protective 	<p>Health and Safety included and reflected in the Induction Minutes</p> <p>Visual Inspection</p>	<ol style="list-style-type: none"> All electrical installation should be done under SANS standards and by a certified and qualified electrician; Ensure all workers are inducted on the dangers of fire and explosions risks and 	<p>Certification of completion by approved personnel</p> <p>FIRE risk induction minutes</p>	Management or Site Manager

Environmental / Social Aspects	Objective	CONSTRUCTION PHASE Proposed Mitigation Measures	Monitoring Indicators	OPERATIONAL PHASE Proposed Mitigation Measures	Monitoring Indicators	Responsibility
		<p>equipment (PPE) and must be worn all the time during working and when on site.</p> <p>4. There must be clear health and safety signs at designated sites such as, NO SMOKING “DANGER”, “ENTRANCE PROHIBITED” etc.</p>	<p>Visual Signs available</p>	<p>the emergency response;</p> <p>3. The service station should be kept clean and free from fire causing agents</p> <p>4. No naked fires should be allowed at the service station, provide designated and secure place for smoking;</p> <p>5. Install all possible firefighting equipment such as</p>	<p>Visual Inspection</p> <p>Availability fire extinguishers and evidence training (e.g. minutes,</p>	

Environmental / Social Aspects	Objective	CONSTRUCTION PHASE Proposed Mitigation Measures	Monitoring Indicators	OPERATIONAL PHASE Proposed Mitigation Measures	Monitoring Indicators	Responsibility
				<p>water horse pipes, portable fire extinguishers, dry powder and should be monitored regularly for expiry, workers must be trained to use these appliances.</p> <p>6. Vehicle engines must be switched off during re-fuelling;</p> <p>7. Install visible safety signs such as NO</p>	<p>training pictures etc.).</p> <p>Visible signs</p>	

Environmental / Social Aspects	Objective	CONSTRUCTION PHASE Proposed Mitigation Measures	Monitoring Indicators	OPERATIONAL PHASE Proposed Mitigation Measures	Monitoring Indicators	Responsibility
Health			Record of hearing loss	USE OF CELLPHONE, NO SMOKING, SWITCH OF ENGINE, and NO LIGHTING etc. 8. Carry out random fire drills and assess the responsive of workers and emergency responsive units 1. The installation of Underground	Number of effective drill reports Installation certifications	

Environmental / Social Aspects	Objective	CONSTRUCTION PHASE Proposed Mitigation Measures	Monitoring Indicators	OPERATIONAL PHASE Proposed Mitigation Measures	Monitoring Indicators	Responsibility
		6. Supply safe drinking water. 7. Ensure adequate, hygienic and user-friendly ablution facilities for all staff; 8. Segregate Male and female toilets with a ration of 1:30 and 1:15 for male and females respectively. 9. Appoint a cleaner or rotate cleaning	Visual inspection Clean toilets at all time	islands to reduce long term exposure to VOCs; 4. Workers, especially the attendants must go for yearly health checks ups; 5. All vehicles to be refuelled must always have their engine switched off; 6. Provide employees with protective clothing	Report of health check ups Visible signs Visual inspection Clean toilets at all time	

Environmental / Social Aspects	Objective	CONSTRUCTION PHASE Proposed Mitigation Measures	Monitoring Indicators	OPERATIONAL PHASE Proposed Mitigation Measures	Monitoring Indicators	Responsibility
		responsibilities among workers. 10. Inspect ablution facilities regularly. 11. Supervisors must undergo an occupational health and first aid course.	Proof of Certification	7. Ablution facility must be cleaned and kept in hygiene condition at all time. 8. Employ a toilet cleaner or promote self-employment initiative for cleaning the toilets.		
Noise	To reduce noise in the surrounding environment	1. All vehicle and machinery engines must be off when not in use; 2. Adhere to minimum speed limit of 40km	Record of public complaints	1. No engine revving must take place at service station, and at surrounding areas	Record of public complaints	Management / Site Manager

Environmental / Social Aspects	Objective	CONSTRUCTION PHASE Proposed Mitigation Measures	Monitoring Indicators	OPERATIONAL PHASE Proposed Mitigation Measures	Monitoring Indicators	Responsibility
		3. Purchase/hire equipment with low noise emission; 4. Where possible, fit silencers on vehicle exhaust; 5. Operation must be limited to day-time only (06h00-17h00); 6. Workers must not be subjected to excessive noise above the threshold of 85dB;		2. Elect signs such as <i>NO HOOTING AT NIGHT</i>		

Environmental / Social Aspects	Objective	CONSTRUCTION PHASE Proposed Mitigation Measures	Monitoring Indicators	OPERATIONAL PHASE Proposed Mitigation Measures	Monitoring Indicators	Responsibility
		7. Worker must be provided with appropriate PPE such as industrial earmuffs;				
Dust / Air Pollution	The reduce fugitive dust from project operation	1. Movement of heavy vehicles must strictly be restricted within the site; 2. Only use a one-way lane to access the site; 3. Adhere to the minimum speed limit of 30 or 40km/hour;		1. During sweeping of the forecourt, fine water sprinkles must be used to avoid fugitive dusts 2. Vehicle engines must be switched off during re-fuelling;	Record of public complain	Management / Site Manager

Environmental / Social Aspects	Objective	CONSTRUCTION PHASE Proposed Mitigation Measures	Monitoring Indicators	OPERATIONAL PHASE Proposed Mitigation Measures	Monitoring Indicators	Responsibility
		4. Do not excavate, offload sand during heavy winds; 5. Trucks carrying sand must be covered; 6. Sand stockpiles must be covered or regularly water sprayed; 7. On site where soil is loosen by vehicle movement, apply dust suppression method such as water spraying;		3. Only use unleaded gasoline and low sulphur diesel;	Product specifications	

Environmental / Social Aspects	Objective	CONSTRUCTION PHASE Proposed Mitigation Measures	Monitoring Indicators	OPERATIONAL PHASE Proposed Mitigation Measures	Monitoring Indicators	Responsibility
		8. Cement and concrete must be mixed with concrete mixers and not manually in the open; 9. Workers must not be exposed to excess dust and should be provided with appropriate PPE such as dust mask and earmuffs; 10. Adhere to the Labour act, non-toxic human dust				

Environmental / Social Aspects	Objective	CONSTRUCTION PHASE Proposed Mitigation Measures	Monitoring Indicators	OPERATIONAL PHASE Proposed Mitigation Measures	Monitoring Indicators	Responsibility
		<p>exposure levels may not exceed 5mg/m³ for respiratory dust and 15mg/m³ for total dust;</p> <p>11. Cement bags must be stored and disposed of properly and may not be shaken in the open.</p>				

SECTION C: POLLUTION CONTROL AND WASTE MANAGEMENT

Table 5. Waste Management Mitigation Measures

Environmental / Social Aspect	Objectives	CONSTRUCTION PHASE Proposed Mitigation Measures	Monitoring Indicator	OPERATIONAL PHASE Proposed Mitigation Measures	Monitoring Indicator	Responsibility
Vehicle Emissions	Reduce greenhouse gas (GHG) emissions from vehicles / machinery	1. All vehicles and equipment must be kept in good working condition and serviced frequently to prevent leakage and emission of poisonous smoke etc.	Vehicle servicing records Reports of smoke emissions from machinery	Negligible		Management / Site Manager

Environmental / Social Aspect	Objectives	CONSTRUCTION PHASE Proposed Mitigation Measures	Monitoring Indicator	OPERATIONAL PHASE Proposed Mitigation Measures	Monitoring Indicator	Responsibility
		2. Switch off engines when vehicle is not operations	Visible signs			
Waste Generation	To prevent littering	1. The construction site must have sufficient wheelie bins and skip containers for onsite waste disposal; 2. The waste must be segregated and be disposed of at an approved disposal site; 3. No waste should be buried on site or	Waste bins and skip containers	1. Provide sufficient skip bins for solid waste 2. The waste must be segregated and be disposed of at an approved disposal site;	Waste bins and skip containers	Management / Site Manager

Environmental / Social Aspect	Objectives	CONSTRUCTION PHASE Proposed Mitigation Measures	Monitoring Indicator	OPERATIONAL PHASE Proposed Mitigation Measures	Monitoring Indicator	Responsibility
		<p>anywhere in the surrounding;</p> <p>4. Provide temporarily toilets to workers in a ration a 1:15 and 1:30 for females and Males respectively.</p> <p>5. Effluent from these toilets must be disposed of at the nearest and approved waste treatment plant of oxidation ponds.</p>	<p>Visible temporarily toilets</p> <p>Record of effluent disposal</p>			



Environmental / Social Aspect	Objectives	CONSTRUCTION PHASE Proposed Mitigation Measures	Monitoring Indicator	OPERATIONAL PHASE Proposed Mitigation Measures	Monitoring Indicator	Responsibility
		6. Acts of secretion in the open must never be allowed.				
Surface and ground water contamination / pollution	To prevent soil and water pollution	<ol style="list-style-type: none"> 1. Vehicle and machinery to be used must be in good condition and well service to avoid leakages of oils and lubricants; 2. All stationary vehicles and machinery must have drip trays to 	<p>Service records</p> <p>Visible drip trays</p>			Management / Site Manager

Environmental / Social Aspect	Objectives	CONSTRUCTION PHASE Proposed Mitigation Measures	Monitoring Indicator	OPERATIONAL PHASE Proposed Mitigation Measures	Monitoring Indicator	Responsibility
		collect leakages of oils and lubricant; 3. Oils, lubricants and hydrocarbons must be stored in a proper storage facility with concrete bunds. Or impermeable lined materials 4. Although not expected to be significant, i.e oil drops of less than 500ml, if it occurs, contaminated soils	Proper storage with concrete bund surface Bioremediation chamber			

Environmental / Social Aspect	Objectives	CONSTRUCTION PHASE Proposed Mitigation Measures	Monitoring Indicator	OPERATIONAL PHASE Proposed Mitigation Measures	Monitoring Indicator	Responsibility
		must be collected and be treated with bioremediation since the nearest hazardous waste site is more 300km away.				
Septic Tanks	Ensure adequate domestic sewer management	Not applicable during construction		<ol style="list-style-type: none"> 1. The tanks must be installed at the free underground water place; 2. The tanks must be made of concrete reinforced wall and plastered with 	Visual inspection	Management / Site Manager

Environmental / Social Aspect	Objectives	CONSTRUCTION PHASE Proposed Mitigation Measures	Monitoring Indicator	OPERATIONAL PHASE Proposed Mitigation Measures	Monitoring Indicator	Responsibility
				waterproof cement to ensure zero leakages; 3. Install adequate ventilation system to ensure high productivity of anaerobic bacteria; 4. Implement a daily monitoring system of the tank levels 5. The tank canopy must be slightly elevated from		

Environmental / Social Aspect	Objectives	CONSTRUCTION PHASE Proposed Mitigation Measures	Monitoring Indicator	OPERATIONAL PHASE Proposed Mitigation Measures	Monitoring Indicator	Responsibility
				<p>normal surface to ensure that the area does not flood;</p> <p>6. When removing sludge, ensure that small amount is left that would act as seedling for the incoming sludge;</p> <p>7. Do not dumps oil and grease on the septic tanks;</p> <p>8. Sludge must be dumped at</p>		

Environmental / Social Aspect	Objectives	CONSTRUCTION PHASE Proposed Mitigation Measures	Monitoring Indicator	OPERATIONAL PHASE Proposed Mitigation Measures	Monitoring Indicator	Responsibility
				appropriate and approved sites.		
Oil Spills	To prevent oil spill from tanks and during re-fuelling	1.		<ol style="list-style-type: none"> 1. Workers must be properly trained to dispense fuel; 2. The fuelling pipes nozzle should be fitted with a spill detector or conform with SANS standard; 3. The fuelling tanks must be installed on concrete bund 	<p>Training records</p> <p>Visual inspection</p> <p>Visual Inspection</p>	Management / Site Manager

Environmental / Social Aspect	Objectives	CONSTRUCTION PHASE Proposed Mitigation Measures	Monitoring Indicator	OPERATIONAL PHASE Proposed Mitigation Measures	Monitoring Indicator	Responsibility
				<p>off with a danger tape and guarded by a security personnel;</p> <p>7. The fore court must be made of concrete bunds, with drainage system to cater for any spills;</p> <p>8. Drainage system must be inspected regularly to ensure that there is no blockage</p>	<p>Visual inspections</p> <p>Visual inspections</p>	

Environmental / Social Aspect	Objectives	CONSTRUCTION PHASE Proposed Mitigation Measures	Monitoring Indicator	OPERATIONAL PHASE Proposed Mitigation Measures	Monitoring Indicator	Responsibility
				9. There must be an immediate spill response kit on site and additional measure such as oil retention booms	Spill kit always available	

Environmental / Social Aspect	Objectives	CONSTRUCTION PHASE Proposed Mitigation Measures	Monitoring Indicator	OPERATIONAL PHASE Proposed Mitigation Measures	Monitoring Indicator	Responsibility
Oil leakage	To prevent fuel leakages			1. All underground installation must conform with the SANS standards of safety 2. Implement oil leakages monitoring tools such as, Automatic Gauging System and Monitoring wells	Visible Monitoring wells	Management and Site Manager

SECTION D: ENVIRONMENT

Table 6. Environmental Mitigation Measures to be implemented

Aspect	Objective	CONSTRUCTION PHASE Proposed Mitigation Measure	OPERATIONAL PHASE Proposed Mitigation Measure	Monitoring Indicator	Responsibility
Biodiversity	To protect the flora and fauna Note: (Refer to the EIA, the area is free of biodiversity)	1. The area must be cordoned off to avoid safety risk to animals 2. Crawling animals must not be killed unless it poses danger to human life	Negligible, however no animals must be allowed to be onsite.		Management / Site Manager
Soil Erosion	To prevent soil erosion	1. Loose soil must be sprayed with water to avoid being windblown; 2. It is highly recommended that construction must not take place during rainfall			Management / Site Manager

Aspect	Objective	CONSTRUCTION PHASE Proposed Mitigation Measure	OPERATIONAL PHASE Proposed Mitigation Measure	Monitoring Indicator	Responsibility
		season; neither during heavy winds; 3. Excavated topsoil must be well stored and compacted to avoid wind erosion; 4. Movement of all vehicles must strictly be within the project site; 5. All excavated areas must be levelled to prevent slopes.			
Soil Compaction	To prevent flooding at the surrounding areas.	1. Design a storm water system that would channel surface run off to the flood			Management / Site Manager

Aspect	Objective	CONSTRUCTION PHASE Proposed Mitigation Measure	OPERATIONAL PHASE Proposed Mitigation Measure	Monitoring Indicator	Responsibility
		plain “ <i>Ishanas</i> ” alternatively; 2. Construct water pond that would collected run off water from the project site			
Water Resource	Conservation of water resource	1. Use water in the <i>Ishanas</i> for construction.	1. Apply to NamWater for tap water.	Tap water	Management / Site Manager

SECTION E: HERITAGE AND ARCHEOLOGICAL SITES

Table 7. Archaeology and Heritage Mitigation Measures

Environment / Social Aspect	Objectives	CONSTRUCTION PHASE Proposed Mitigation Measure	OPERATION PHASE Proposed Mitigation Measure	Monitoring Indicator	Responsibility
Heritage Resources / artefacts	Preserve Heritage and Archaeological materials	<ol style="list-style-type: none"> Workers must be trained on the possible find of archaeological material in the area; Implement a chance find and steps to be taken when archaeological material finding (Heritage e.g. rock painting and drawings), 	Apply mitigation measure developed for construction phase.	Sighting report/s of heritage resources / artefacts	Management / Site Manager

Environment / Social Aspect	Objectives	CONSTRUCTION PHASE Proposed Mitigation Measure	OPERATION PHASE Proposed Mitigation Measure	Monitoring Indicator	Responsibility
		<p>human remains or artefacts) are unearthed</p> <ul style="list-style-type: none"> • Stopping the activity immediately • Informing the operational manager or supervisor • Cordoned of the area with a danger tape and manager to take appropriated pictures. • Manager/supervisor must report the finding to the nearest Namibian police or alternatively the 			



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Environment / Social Aspect	Objectives	CONSTRUCTION PHASE Proposed Mitigation Measure	OPERATION PHASE Proposed Mitigation Measure	Monitoring Indicator	Responsibility
		National Forensic Laboratory (+264 61 240461).			

SECTION F: SOCIO ECONOMIC

Table 8. Social Economic Mitigation Measures

Environmental / Social Aspects	Objectives	CONSTRUCTION PHASE Proposed Mitigation Measures	OPERATIONAL PHASE Proposed Mitigation Measures	Monitoring Indicator	Responsibility
Employment	Promote benefits to the local resident	<ol style="list-style-type: none"> 1. Ensure that all general work is reserved for local people unless in circumstances where specialized skills are required. 2. Fair compensation and labour practise as per Namibian Labour Laws must be followed. 	<ol style="list-style-type: none"> 1. Ensure that all general work is reserved for local people unless in circumstances where specialized skills are required; 2. Locals must be trained to acquire necessary skills; 3. Fair compensation and labour practise as per 	Employee structure and proportion of local employment	Management or Site Manager

Environmental / Social Aspects	Objectives	CONSTRUCTION PHASE Proposed Mitigation Measures	OPERATIONAL PHASE Proposed Mitigation Measures	Monitoring Indicator	Responsibility
			Namibian Labour Laws must be followed.		
HIV/AIDS	To prevent the spread of HIV/AIDS	<ol style="list-style-type: none"> 1. Provide HIV / AIDS awareness at induction. 2. Avail Condoms at site. 	Apply mitigation measure given for construction phase		
COVID 19	To prevent the spread of Covid 19.	<ol style="list-style-type: none"> 1. Adhere to all Covid 19 regulations and protocol. 2. Maintain the wearing of face mask, social distance and sanitising. 3. Ensure that employee's temperature are checked. 4. Report any case of suspected employee with sign of Covid 19 to the nearest health facility. 	Apply Covid 19 regulation and health protocols provided by the state.	Suspected employee and contacts	Management or Site Manager

Environmental / Social Aspects	Objectives	CONSTRUCTION PHASE Proposed Mitigation Measures	OPERATIONAL PHASE Proposed Mitigation Measures	Monitoring Indicator	Responsibility
Alcohol and Drug use	Prevent alcohol and drug use	<ol style="list-style-type: none"> Ban the use of alcohol and drugs at workplace Teach employees about dangers alcohol and substance abuse All employees must be screen with the breathalyser to avoid intoxicated personnel on site 	Apply mitigation measure developed for construction phase	Drunk / Misbehaving employees Breathalyser report Monitor presence of alcohol at the construction site	Management or Site Manager
Working hours	Adhere to the Labour Act No. 11 of 2007	1. Operate within the prescribed working days and hours as per the Namibian Labour laws and regulations	Apply mitigation measure developed for construction phase	Labour unrest / Demonstration	Management or Site Manager

8. DECOMMISSIONING PHASE

At this moment, project decommissioning is not inevitable. However, in circumstances where the project has to be decommissioned, necessary application to relevant authority must be made. A qualified personnel must be appointed to study and develop a decommissioning plan. Therefore, the project owners must implement the following mitigation measures;

- The proponent must submit a decommissioning plan to the office of the Environmental Commissioner for approval;
- Project decommissioning must not take place during the rainy season;
- Install signs to inform the public about project closure;
- The project areas must be cordoned off with a danger tape;
- A qualified project engineers must be hired to oversee the project decommissioning
- Hire environmental specialist to monitor possible contamination during decommissioning;
- Ensure that all tanks are empty before removal and all contaminated materials must be properly cleaned before their disposal;
- Ensure that all underground installation is removed;
- Provide workers with all necessary PPE;
- Generated waste must be disposed of at approved sites;
- After the removal of the underground installations, the pit must be left open. Take soil samples from the pit to examine potential contamination.
- When contamination is detected, the soil in the pit must be dug out and be treated before disposing it off to an approved site;
- The site must be rehabilitated and flattened to its natural state;

9. CONCLUSION AND RECOMMENDATIONS

The proposed project had various components that were assessed for possible environmental impacts. Construction of a filling station is a listed activity according to EMA, as well as turning the agricultural land into commercial activities is a listed activity which may not be undertaken without ECC. Further, the proposed construction of the septic tanks system for sewage handling and storage is also a listed activity. Impact ranging from possible land degradation, possible pollution of surface and ground water were analysed, and practical mitigation measures recommended. With adequate implementation of the proposed mitigation measures, the possible impacts were found insignificant.

The major component of the project is the proposed establishment of the fuel retail facility. Operation of the filling station are conducted under the SANS and international standards. All possible impacts were identified, and mitigation measures proposed were given with high confidence. With adequate implementation of the recommended mitigation measures, all impacts were reduced to insignificant levels.

With the information provided, and environmental set up of the proposed project, it is recommended that the Environmental Clearance Certificate shall be renewed to necessitate the commencement of the project and with continuous changing of the environment, regular monitoring must be put in place, therefore, the proponent must appoint an Environmental Practitioner of his choice to continuously carry out environmental audits for submission to the office of Environmental Commissioner.

