

## **8. DRAFT ENVIRONMENTAL MANAGEMENT PLAN (EMP)**

### **8.1 Introduction**

This Environmental Management Plan (EMP) has been drafted as part of the Scoping Report which was compiled in terms of the Environmental Assessment for the proposed fuel service station development facility by proponent. The content thereof has been tailored according to the Regulations of the Environmental Management Act, 2007 (Act No 7 of 2007) Regulation No 30 of 2012 listing No 8(j) (aa) (bb) (cc). The aim thereof is to provide management measures to address the effects on the environment that have been identified in the Scoping Report.

The proposed service station establishment will have environmental impacts as indicated in the previous chapter. This section is aimed at describing The Environmental Management Plan for impacts associated with proposed fuel service station establishment project. The EMP stipulates the management of environmental programs in a systematic, planned and documented manner. The EMP below includes the organizational structure, planning and monitoring for environmental protection at the proposed Okatana Village (old Omutshona mini market) area development and other areas of its influence. The aim is to ensure that the proponent maintains adequate control over the project construction and operations in order to:

- To prevent negative impacts where possible;
- Reduce or minimise the extent of impact during project life cycle;
- Prevent long term environmental degradation.

This EMP has been divided into the following parts:

- Construction and Operations Environmental Management Plan (COEMP)
- Environmental Monitoring Plan (EMP)

### **8.2 EMP Administration**

There is a strong need to clearly outline the roles and responsibilities of all stakeholders to ensure that the EMP is fully implemented. There is also a need for the proponent to appoint an overall responsible person (project manager) to ensure the successful implementation of the EMP as highlighted below:

Table 7: Roles and Responsibilities in EMP Implementation

ROLE	ENVIRONMENTAL RESPONSIBILITIES
Project Manager	<ul style="list-style-type: none"> <li>• Enforce the EMP implementation to contractors and all project workers.</li> </ul>
Environmental Control Officer	<ul style="list-style-type: none"> <li>• Implement, review and update the EMP.</li> <li>• Ensure all reporting and monitoring required under EMP is undertaken, documented and distributed as needed</li> <li>• Conduct environmental site training (tool box talks) and inductions with the support of an environmental consultant.</li> <li>• Conducts environmental audit at work site with the support of environmental consultant.</li> <li>• Close out all non-conformances.</li> <li>• Ensure materials being used on site are environmental friendly and safe.</li> </ul>
The Department of Environmental Affairs	<ul style="list-style-type: none"> <li>• Approve the EMP and any amendments to the EMP.</li> <li>• Approve reports of environmental issues and non-conformances as issued.</li> <li>• Review and approve environmental reports submitted as part of EMP implementation.</li> </ul>
Environmental Consultant	<ul style="list-style-type: none"> <li>• Conduct and monitor actions required by the EMP if required</li> <li>• Conduct environmental site training (tool box talks) and inductions if assistance is required</li> <li>• Conducts environmental audit at work site</li> <li>• Ensure materials being used on site are environmental friendly and safe.</li> </ul>

ROLE	ENVIRONMENTAL RESPONSIBILITIES
Site/Project Engineers	<ul style="list-style-type: none"> <li>• Control and monitor actions required by the EMP.</li> <li>• Report all environmental issues to HSE Manager.</li> <li>• Ensure documented procedures are followed and records kept on site.</li> <li>• Ensure any complaints are passed onto the management within 24 hours of receiving the complaint.</li> </ul>
Workers	<ul style="list-style-type: none"> <li>• Follow requirements as directed by site engineers.</li> <li>• Report any potential environmental issues to site engineer/project manager, indicating spilt oil, excess waste, excessive dust generation, dirty water running off the site and other possible non-conformances</li> <li>• Compliance with the environmental specifications and enforce adherence,</li> <li>• Communicate all environment related incidents with the EO and distribute internally to avoid repeats,</li> <li>• Maintain a record of activities relevant to environmental management.</li> </ul>

### 8.3 Environmental Management Requirements (Legal Permits and Licenses)

The following are management actions that should be adhered to by the proponent, at all times. These management actions cover the construction, operational and decommissioning phases of the fuel service station. All activities should be carried out in line with this Environmental Management Plan (EMP), as may be applicable to the specific phase and activities carried out.

This section of the EMP details the various management processes, from where the operations are currently to its end, concerning the effective management of all operational areas. Please refer to Chapter 3 (of the Scoping Report) for detailed legislative and permit requirements considered for this EMP. The EMP is laid out as follows:

- Planning and Design;
- Construction and Operations Contract Preparation Management Requirements; and
- Operations and maintenance Mitigation Requirements

**Table 8: Legal Framework in terms of permitting and licensing requirements and institutional contact persons**

ASPECT	LEGISLATIVE INSTRUMENT	MANAGEMENT REQUIREMENTS	CONTACT PERSONS
Environmental	Environmental Management Act 7 of 2007 EIA Regulations (EIAR) GN 57/2007 (GG 3812)	The Amendment, transfer or renewal of the Environmental Clearance, every three years thereafter.	Mr. Timoteus Mufeti (The Environmental Commissioner)  Tel: 061-284 2701  OR  Environmental Assessment Unit Mr. Damian Nchindo, Tel: <b>061 284 2717</b> , Email: <a href="mailto:damian.nchindo@met.gov.na">damian.nchindo@met.gov.na</a>
Petroleum Products	Petroleum Products and Energy Act (No. 13 of 1990) Regulations (2001)	The relevant petroleum products (fuel) storage and distribution licenses/permits should be applied for.	<b>Ms. Maggy Shino (Petroleum Commissioner)</b> Petroleum Affairs at the Ministry of Mines and Energy  Tel: +264 61 284 8209

ASPECT	LEGISLATIVE INSTRUMENT	MANAGEMENT REQUIREMENTS	CONTACT PERSONS
			Email: <a href="mailto:Maggy.Shino@mme.gov.na">Maggy.Shino@mme.gov.na</a>
Water Resources	The Water Act 54 of 1956  The Water Resources Management Act No. 11 of 2013	An effluent/wastewater discharge permit should be applied for and obtained.	Contact: <b>Mr. F. Witbooi (Deputy Director)</b> , Department of Water Affairs & Forestry (DWA): Directorate of Water Resources Management: Water Policy and Water Law Administration.  Tel: 061 208 7158, Email: <a href="mailto:Franciskus.Witbooi@mawf.gov.na">Franciskus.Witbooi@mawf.gov.na</a>
Road access	Road Traffic and Transport Act, No. 22 of 1999	Application for all the relevant permits (access road) in order to undertake activities involving road transportation or access onto existing roads.	Contact: <b>Mr. Eugene de Paauw (Specialist Road Legislation, Advice &amp; Compliance), Roads Authority</b>  Tel: 061 284 7027, Email: <a href="mailto:dePaauwe@ra.org.na">dePaauwe@ra.org.na</a>  Ministry of Works and Transport
Archaeology	National Heritage Act 27 of 2004	All protected heritage resources (e.g. human remains etc.) discovered, need to be reported immediately to the National Heritage Council (NHC) and require a permit from the NHC before they may be relocated.	Contact: <b>Dr A. M. Nankela (Chief Archaeologist &amp; Rock Art Specialist)</b>  Tel: 061 301 903, Email: <a href="mailto:archeology@nhc-nam.org">archeology@nhc-nam.org</a>
Labour	Labour Act 11 of 2007 Health and Safety Regulations (HSR) GN156/1997 (GG1617).	Adhere to all applicable provisions of the Labour Act and the Health and Safety regulations.	Labour Law  Advice:  Tel: 061-309 957

## 8.4 Summary of the Potential Impacts and Mitigation Measures

Table 9: Summary of Potential Impacts and Mitigation Measures

No.	Potential Impact	Mitigation measures
<b>CONSTRUCTION PHASE</b>		
1	Dust and Gaseous Emission	<ul style="list-style-type: none"> <li>i. Water will be sprinkled regularly to arrest dust emission;</li> <li>ii. Use of well-maintained vehicles and machinery;</li> <li>iii. Construction workers shall wear nose masks/respirators when and where necessary.</li> </ul>
2	Noise pollution	<ul style="list-style-type: none"> <li>i. Construction workers will be provided with appropriate PPEs;</li> <li>ii. Operations will be scheduled in such a way that noise operations are carried out at the same time;</li> <li>iii. Machines not in use will always be switched off (Switch off approach);</li> <li>iv. Equipment and machinery fitted with mufflers will be used where applicable;</li> <li>v. Construction works will be done during the day (0800hrs-1700hrs);</li> <li>vi. Regular maintenance and repair of machinery;</li> <li>vii. The project site will be hoarded.</li> </ul>
3	Runoff and water logging	<ul style="list-style-type: none"> <li>i. An adequate drainage system will be provided;</li> <li>ii. Site will be graded appropriately to avoid water logging.</li> </ul>
4	Water Resources pollution	<ul style="list-style-type: none"> <li>i. All site facilities to be connected to municipal sewage systems or up-to-standard septic system and waste water discharge systems and are in good working condition to avoid groundwater contamination in the case of leakages from sewage systems.</li> <li>ii. No wastewater / effluent will be allowed to leave the site premises without proper control. These should be disposed of in accordance with municipal waste water discharge standards.</li> <li>iii. At least three tank observation wells (TOWs) to a depth of 10 m will be drilled and installed around the fuel station. These wells will be used to detect possible pollution from the tanks in groundwater.</li> <li>iv. Regular maintenance and monitoring of underground storage tanks should be done to detect early spills or leakages.</li> </ul>
5.	Vibrations	<ul style="list-style-type: none"> <li>i. low vibration equipment will be used where applicable;</li> <li>ii. Vibration intensive operations will be carried out at times that are not sensitive vibration(day time);</li> <li>iii. Vibration intensive operation will not be carried out in the same time.</li> </ul>
6	Solid Waste generation	<ul style="list-style-type: none"> <li>i. Collect, segregate and dispose waste responsibly;</li> <li>ii. Contract a licensed waste handler to dispose the wastes.</li> </ul>
7	Energy consumption	<ul style="list-style-type: none"> <li>i. Machines shall be regularly repaired and maintained to enhance their energy efficiency.</li> </ul>
8	Noise pollution	<ul style="list-style-type: none"> <li>ii. Regular repair &amp; maintenance of machines;</li> <li>iii. Noise mapping and adoption of the arising report will be conducted;</li> </ul>

No.	Potential Impact	Mitigation measures
		iv. Machines fitted with mufflers and/or quieter ones shall be used where applicable.
9	Fire hazard	<ul style="list-style-type: none"> <li>i. The employees will be regularly trained;</li> <li>ii. Prohibition of smoking and the carrying of matches and lighters;</li> <li>iii. Set up a fire fighting team;</li> <li>iv. A fire detection and an alarm system shall be installed;</li> <li>v. A water tank(10,000Litres) reserved for firefighting shall be put up;</li> <li>vi. Fire extinguishers for the various classes of possible fire will be put in easily accessible area.</li> </ul>
10	Safety and Health Concerns	<ul style="list-style-type: none"> <li>i. All workers will be provided with the appropriate PPEs;</li> <li>ii. Enclose the construction site;</li> <li>iii. The standard operating and emergency response procedures will be posted in the processing area;</li> <li>iv. Clearly marked and obstruction free fire exits will be provided;</li> <li>v. Fire extinguishers and first aid kits will be placed in easily accessible location;</li> <li>vi. Only competent staff will be employed to manage the company's operation;</li> <li>vii. Electrical installation shall be of high quality and sound construction;</li> <li>viii. Very high hygiene standards will be observed;</li> <li>ix. There shall be a changing room for the employees;</li> <li>x. Good housing keeping shall be observed;</li> </ul>
11	Solid Waste generation	<ul style="list-style-type: none"> <li>i. The various waste types will be collected and segregated before being disposed by a licensed waste handler;</li> <li>ii. adequate waste bins for temporary disposal of the various waste types will be provided;</li> <li>iii. Measures to reduce, recycle and reuse where appropriate will continuously be put in place during project operation;</li> <li>iv. Metal cuttings will be sold off to scrap metal dealers;</li> <li>v. Good housekeeping will be practiced;</li> <li>vi. Reduce reuse and recycle where appropriate.</li> </ul>
12	Liquid Waste generation	<ul style="list-style-type: none"> <li>i. Use water sparingly;</li> <li>ii. Sanitary effluent will be discharged into septic tank/soak pit which will be emptied monthly by licensed waste disposal firm;</li> <li>iii. There shall be adequate sanitary facilities.</li> </ul>
13	Resource over-utilisation	<ul style="list-style-type: none"> <li>i. Building material will be used in a sustainable manner;</li> <li>ii. Energy saving programs will be adopted;</li> <li>iii. Water shall be used sparingly.</li> </ul>
14	Soil contamination: Oil and chemical spills	<ul style="list-style-type: none"> <li>i. Avoid oil and chemical leakages;</li> <li>ii. Machine and equipment to be used will be in good condition to avoid leakages;</li> <li>iii. Oil and chemicals e.g. solvents will be properly and responsibly handled stored and disposed.</li> </ul>
15	Runoff and water logging	i. An adequate drainage system will be provided;

No.	Potential Impact	Mitigation measures
		ii. Site will be graded appropriately to avoid water logging.
16	Vibrations	i. Low vibration equipment will be used where applicable; ii. Vibration intensive operations will be carried out at times that are not sensitive vibration (day time); iii. Vibration intensive operation will not be carried out in the same time.
<b>OPERATION PHASE</b>		
1	Solid Waste generation	i. The various waste types will be collected and segregated before being disposed by a licensed waste handler; ii. adequate waste bins for temporary disposal of the various waste types will be provided; iii. Measures to reduce, recycle and reuse where appropriate will continuously be put in place during project operation; iv. Metal cuttings will be sold off to scrap metal dealers.
2	Liquid Waste generation	i. Use water sparingly; ii. Sanitary effluent will be discharged into a sewer line network; iii. There shall be adequate sanitary facilities.
3	Health and Safety Concerns observed;	i. All worker will be provided with the appropriate PPEs; ii. The standard operating and emergency response procedures will be posted in the processing area; iii. Clearly marked and obstruction free fire exits will be provided; iv. Fire extinguishers and first aid kits will be placed in easily accessible location; v. Only competent staff will be employed to manage the company's operation; vi. Electrical installation shall be of high quality and sound construction; vii. Very high hygiene standards will be9. There shall be a changing room for the employees;
4	Fire hazard	i. The employees will be regularly trained on ways of fighting fire; ii. Prohibition of smoking and the carrying of matches and lighters; iii. Install warning signs on the facility e.g. DO NOT SMOKE, SWITCH ENGINE, SWITCH OFF iv. Set up a fire fighting team; v. A fire detection and an alarm system shall be installed; vi. A water tank(10,000Litres) reserved for firefighting shall be put up vii. Fire extinguishers for the various classes of possible fire will be put in easily accessible area. iii. Keep well services and working fire hydrants ix. Keep dry sand buckets in place in case of outbreaks x. Keep the facility dry of any fuel or oil spillage
5	Noise pollution	i. Regular repair & maintenance of machines;



No.	Potential Impact	Mitigation measures
		<ul style="list-style-type: none"> <li>ii. Noise mapping and adoption of the arising report will conducted;</li> <li>iii. Machines fitted with mufflers and/or quieter ones shall be used where applicable.</li> </ul>
6	Socio economic Impacts	<ul style="list-style-type: none"> <li>i. Consultation over issues of concern with all stakeholders.</li> </ul>
<b>DECOMMISSIONING PHASE</b>		
1	Solid Waste generation	<ul style="list-style-type: none"> <li>i. Collect, segregate and dispose waste responsibly</li> </ul>
2	General	<ul style="list-style-type: none"> <li>ii. Inform stakeholders</li> <li>iii. Inform the relevant authorities.</li> <li>iv. Rehabilitate/restore the site to its original state as much as is practical</li> <li>v. Provide a public “NOTICE” on the ongoing works.</li> </ul>
3	loss of employment	<ul style="list-style-type: none"> <li>i. Social security for employees should be put in place in anticipation for cases like these.</li> <li>ii. In the event that the proponent decides to stop operations, appropriate retrenchment procedures should be followed.</li> </ul>
4	Occupation safety	<ul style="list-style-type: none"> <li>i. Providing workers with appropriate protective clothing and facilities like helmets, safety masks, overalls and respirators, gloves, heavy duty shoes, fire-resistant clothing, etc.</li> <li>ii. The dismantling exercise should be carried out separately to avoid accidents to people who might be on the ground.</li> <li>iii. Train the site workers on basic first aid methods.</li> <li>v. Provide first aid kit on site in case of small cuts/bruises.</li> </ul>
5	Dust	<ul style="list-style-type: none"> <li>i. Providing workers with protective gadgets like dust masks and ear muffs.</li> <li>ii. Sprinkling water on concrete surfaces to be demolished in case of excessive dust.</li> </ul>
6	Landform	<ul style="list-style-type: none"> <li>i. Rehabilitate the land to its original form by filling the excavations and planting trees or grass in the affected areas.</li> </ul>

Direct unfavourable effects on the natural environment were considered to be manageable through the prudent implementation of the proposed mitigation measures given above. Considering the above potential negative impacts of the project, this Environmental Management Plan (EMP) was designed with appropriate mitigation measures as stated above and presented in the monitoring section (8.2) under Table 10). These plans considered the potential negative impacts, mitigation measures, and responsible parties, monitoring

indicators and frequency of monitoring of such measures.

## 8.5 Monitoring Plan

Monitoring will be required for the lifetime of the proposed Fuel Service Station project and should include the Site Preparation and Construction Phases as well as the Operation Phase, as outlined in the table below: Monitoring is vital to ensure that effective implementation of recommended measures yield the desired results and improved where necessary for the protection of the environment.

**Table 10: Matrix Summary of Environmental Impacts of each phase, impact type and mitigation, responsibility and the monitoring plan**

TYPE	RECOMMENDED MITIGATION MEASURE	RESPONSIBILITY	MONITORING TOOL	FREQUENCY
<b>CONSTRUCTION PHASE</b>				
Dust and Gaseous emission	Water will be sprinkled regularly to arrest dust emission	Contractor	Inspection	Daily
	Construction wear nose masks/respirators when and where necessary	Contractor	Inspection	Daily
	Use of well-maintained vehicles and machinery workers shall wear nose masks/respirators when and where necessary	Contractor & Proponent	Inspection/ maintenance	Daily

TYPE	RECOMMENDED MITIGATION MEASURE	RESPONSIBILITY	MONITORING TOOL	FREQUENCY
Noise Pollution	Construction workers will be provided with appropriate PPEs	Contractor	Inspection	Daily
	"Switch off" approach (machines not in use will always be switched off.	Contractor	Inspection	Daily
	Operations will be scheduled in such a way that noisy operations are carried out at the same time	Contractor	Inspection/Daily Work Plans	Daily
	Equipment and machinery fitted with mufflers will be used where applicable	Contractor	Inspection	Daily
	Regular maintenance and repair of machinery	Contractor	Inspection and service	Once
	Construction works will be done during the day	Contractor	Inspection and service	Daily (except Sunday & Public holidays)

TYPE	RECOMMENDED MITIGATION MEASURE	RESPONSIBILITY	MONITORING TOOL	FREQUENCY
Vibration	Low vibration equipment will be used where applicable	Contractor	Inspection	Daily
	Vibration intensive operations will be carried out at times that are not sensitive vibration(day time)	Contractor	Inspection	Daily
	Vibration intensive operation will not be carried out in the same time	Contractor	Inspection	Daily
Runoff & water logging	An adequate drainage system will be provided	Contractor	Inspection	Once
	Site will be graded appropriately to avoid water logging	Contractor	Inspection	Once
Soil contamination: Oil and chemical spills	Avoid oil and chemical leakages	Contractor	Inspection	Daily
	Machine and equipment to be used will be in good condition to avoid leakages.	Contractor	Maintenance Reports	Monthly
	Will be properly and responsibly handled, stored and disposed	Contractor	Inspection	Daily

TYPE	RECOMMENDED MITIGATION MEASURE	RESPONSIBILITY	MONITORING TOOL	FREQUENCY
Water resources contamination	At least three tank observation wells (TOWs) to a depth of 10 m should be drilled and installed around the fuel station. These wells will be used to detect possible pollution from the tanks in groundwater. Regular maintenance and monitoring of underground storage tanks should be done to detect early spills or leakages before they reach to groundwater resources	Proponent	Inspection (using a photo ionization (PID) detector)	Monthly
Resource consumption	Building material will be used in a sustainable manner	Contractor	Observation	Daily
	Energy saving programs will be adopted	Contractor	Observation/ Reports	Daily
	Water shall be used sparingly	Contractor	Observation	Daily
Solid Waste Generation	Waste would be segregated then collected by a designate waste handler	Contractor	Contract Agreements	Once

TYPE	RECOMMENDED MITIGATION MEASURE	RESPONSIBILITY	MONITORING TOOL	FREQUENCY
	Metal cuttings would be collected and sold to scrap metal dealers.	Contractor	Receipts	Monthly
	Reduce reuse and recycle where appropriate	Contractor	Observations	Daily
Safety & Health Concerns	Enclose the construction site.	Contractor	Observations	Once
	Construction workers will be provided with appropriate PPEs for related work.	Contractor	Inspection	Daily
	Well-equipped first Aid kits will be provided.	Contractor	Inspection	Monthly
	Fire-fighting infrastructure	Contractor	Inspection	Weekly
<b>OPERATIONAL PHASE</b>				
Liquid Waste Generation	Water will be used sparingly	Proponent/Management	Observation	Daily
	Sanitary effluent will be discharged into a Septic tank/Soak-pit. The latter will be emptied monthly by a licensed waste disposal firm.	Proponent.	Inspection.	Monthly
	There shall be adequate sanitary facilities	Management	Inspection	Weekly

TYPE	RECOMMENDED MITIGATION MEASURE	RESPONSIBILITY	MONITORING TOOL	FREQUENCY
Safety and Health Concerns	All workers will be provided with the appropriate PPEs.	Proponent	Observation	Daily
	The standard operating and emergency response procedures will be posted in the processing area.	Proponent	Observation	Daily
	Clearly marked and obstruction free fire exits will be provided.	Proponent	Inspection	Once
	Fire extinguishers and first aid kits will be placed at easily accessible locations on site.	Proponent	Inspection	Once
	Only competent staff will be employed to manage the company's operations	Management	Inspection	Periodically as and when necessary
Fire Hazard	The employees will be regularly trained	Proponent	Certificates	Annually
	Prohibition of smoking and the carrying of matches and lighters	Proponent	Warning signs/Notices	Once
	Set up a fire fighting team.	Proponent	List of team members	Once



TYPE	RECOMMENDED MITIGATION MEASURE	RESPONSIBILITY	MONITORING TOOL	FREQUENCY
	Fire detection and an alarm system shall be installed.	Proponent	Inspection	Once
	A water tank(10,000Litres) reserved for firefighting shall be put up	Proponent	Inspection	Once
	Fire extinguishers for the various classes of possible fire will be put in easily accessible areas	Proponent	Inspection	Once
Noise pollution	Regular repair & maintenance of machines	Proponent	Repair reports	Monthly
	Noise mapping and adoption of the arising report will conducted	Proponent	Noise survey report	Annually
	Machines fitted with mufflers and/or quieter ones shall be used where applicable	Proponent	Observation	Quarterly
Socio-economic Impacts	Consultation over issues of concern with all stakeholders	Proponent	Minutes of meeting	Quarterly
Energy consumption	Machines shall be regularly repaired and maintained to enhance their energy efficiency	Proponent	Maintenance reports	Monthly

TYPE	RECOMMENDED MITIGATION MEASURE	RESPONSIBILITY	MONITORING TOOL	FREQUENCY
<b>DECOMMISSIONING PHASE</b>				
Solid Waste generation	Collect, segregate and dispose waste responsibly	Proponent	Observation	Daily
General	Inform stakeholders	Proponent	Communication/memos	Once
	Inform the relevant authorities.	Proponent	Approval letters.	Regularly
	Rehabilitate/restore the site to its original state as much as is practical	Proponent	Site observation	Periodically
loss of employment	Social security for employees should be put in place in anticipation for cases like these.	Proponent	NASA Records	Once
	In the event that the proponent decides to stop operations, appropriate retrenchment procedures should be followed.	Proponent	Reports	Once
Occupation safety	Providing workers with protective clothing and facilities like helmets, safety (heavy duty) boots, overalls, gloves, safety masks, respirators, etc.	Proponent	Inspection	
	The dismantling exercise should be carried out separately to avoid accidents to people who might be on the ground.	Proponent	Inspection	

TYPE	RECOMMENDED MITIGATION MEASURE	RESPONSIBILITY	MONITORING TOOL	FREQUENCY
	Train the site workers on basic first aid methods.	Proponent	Inspection	
	Provide first aid kit on site in case of small cuts/bruises.	Proponent	Inspection	
Dust	Providing workers with protective gadgets like dust masks and ear muffs.	Proponent	Inspection	Daily
	Sprinkling water on concrete surfaces to be demolished in case of excessive dust.	Proponent	Inspection	Daily
Landform	Rehabilitate the land to its original form by filling the excavations and planting trees or grass in the affected areas.	Proponent	Site Observation	Periodically

## 9. CONCLUSION AND RECOMMENDATIONS

The Environmental Impact Assessment (EIA) process for the fuel service station development has been undertaken in accordance with the EIA Regulations published in Government Notice No. 30, in terms of Section 56 of the Namibia Environmental Management Act, 2007 (Act No. 7 of 2007).

The EIA process was also conducted based on the Environmental Consultant's experience and most importantly the inputs from the local members of the public (Interested and Affected Parties (I&APs)), i.e. comments and concerns raised during the EIA process (public consultation).

The public consultation process has therefore been inclusive, and every effort has been made to include representatives of all stakeholders in the process.

Furthermore, the proposed project design has integrated mitigation measures with a view to ensuring compliance with all the applicable laws and procedures. During project implementation and occupation, Sustainable Environmental Management (SEM) will be ensured through avoiding inadequate/inappropriate use of natural resources, conserving nature sensitively and guaranteeing a respectful and fair treatment of all people working on the project, general public at the vicinity and inhabitants of the project.

In relation to the proposed mitigation measures that will be incorporated during construction phase, the development's input to the society; and cognition that the project is economically and environmentally sound, establishments are considered beneficial and important. It is our considerable opinion that the proposed development is a timely venture that will subscribe to proponent's timely investment and also the government's intention to subsidize fuel in Namibia.

Consequently, following conclusions and recommendations have been reached and made by Mafuta Environmental Consultants (MEC), respectively:

MEC are confident that the identified potential negative impacts associated with the proposed fuel service station and related activities were found to be more of medium significance rating. The project can be allowed to go ahead with the implementation provided the outlined mitigation measures are adhered to. Major concerns should nevertheless be focused towards minimizing the occurrence of impacts that would degrade the general environment. Therefore, these impacts can be mitigated by effectively implementing the

recommended management action measures and continual monitoring as recommended herein.

Thus, from all the findings (specifically from the general public identified during consultation period) of this report, it is recommended that the development be authorised as the local public is really positive and looking forward to see development in their area.

It is therefore, recommended that the fuel station construction and operations on the project site be granted an Environmental Clearance Certificate, and provided that the following crucial recommendations are adhered to:

- All mitigations provided in this EMP should be implemented as stipulated and **where required and improvements should be effectively made in order to achieve environmental sustainability goals**. Thus, **satisfying the requirements of and compliance with the EMA No. 7 of 2007, its 2012 EIA Regulations and the environmental clearance certificate conditions**.
- All required environmental management permits, licenses and approvals for the construction and operations are obtained as required (please refer to the Permitting and Licensing in **Table 8** of this document);
- The Proponent and all their workers comply with the legal requirements governing this type of project and its associated activities;
- Environmental monitoring requirements recommended are adhered to; and
- All the necessary environmental (water and biodiversity) and social (occupational health and safety) components are protected as recommended and respective precautions/mitigation measures provided are adhered to.

To sum up the main recommendations for the prevention and mitigation of adverse impacts, these are as follows:-

- The Proponent should follow the guidelines as set by the relevant governing departments to safeguard and envisage environmental management principles during construction and operation/occupation phases of the proposed project;
- Water resources pollution preventive measures should be included in the project designs and set up during construction in preparation for the operational phase. These

measures include storm water management such as drainages; soak ways and low-liquid infiltration surfaces.

- Groundwater monitoring in the tank observation wells (TOWs) should at the fuel station should be conducted on a monthly basis;
- It is important that warning/ informative sign (bill boards) be erected at the site. These should indicate the operation hours and when works are likely to be started and completed. The signs should be positioned in a way to be easily seen by the public and mostly motorists;
- All solid waste materials and debris resulting from construction activities should be disposed off at approved dumpsites;
- All construction materials e.g. pipes, pipe fittings, sand just to mention a few should be sourced/procured from bonafide/legalized dealers;
- During construction all loose top soils should be compacted to prevent any erosion;
- Other appropriate soil erosion control measures can be adapted. Any stockpiles of earth should be enclosed, covered or sprinkled with water during dry or windy conditions to minimize generation of dust particles into the air;
- Once earthworks have been done, restoration of the worked areas should be carried out immediately by backfilling, landscaping/ levelling and planting of suitable tree species;
- Proper and regular maintenance of construction machinery and equipment will reduce emission of hazardous fumes and noise resulting from friction of metal bodies;
- Maintenance should be conducted in a designated area and in a manner not to interfere with the environment;
- A fully equipped first aid kit and other safety measures should be provided within the site;
- The contractor should have workmen's compensation cover and is required to comply with workmen's compensation Act as well as other relevant ordinances, regulations and Union Agreements; and
- The contractor should provide adequate security during the construction period.