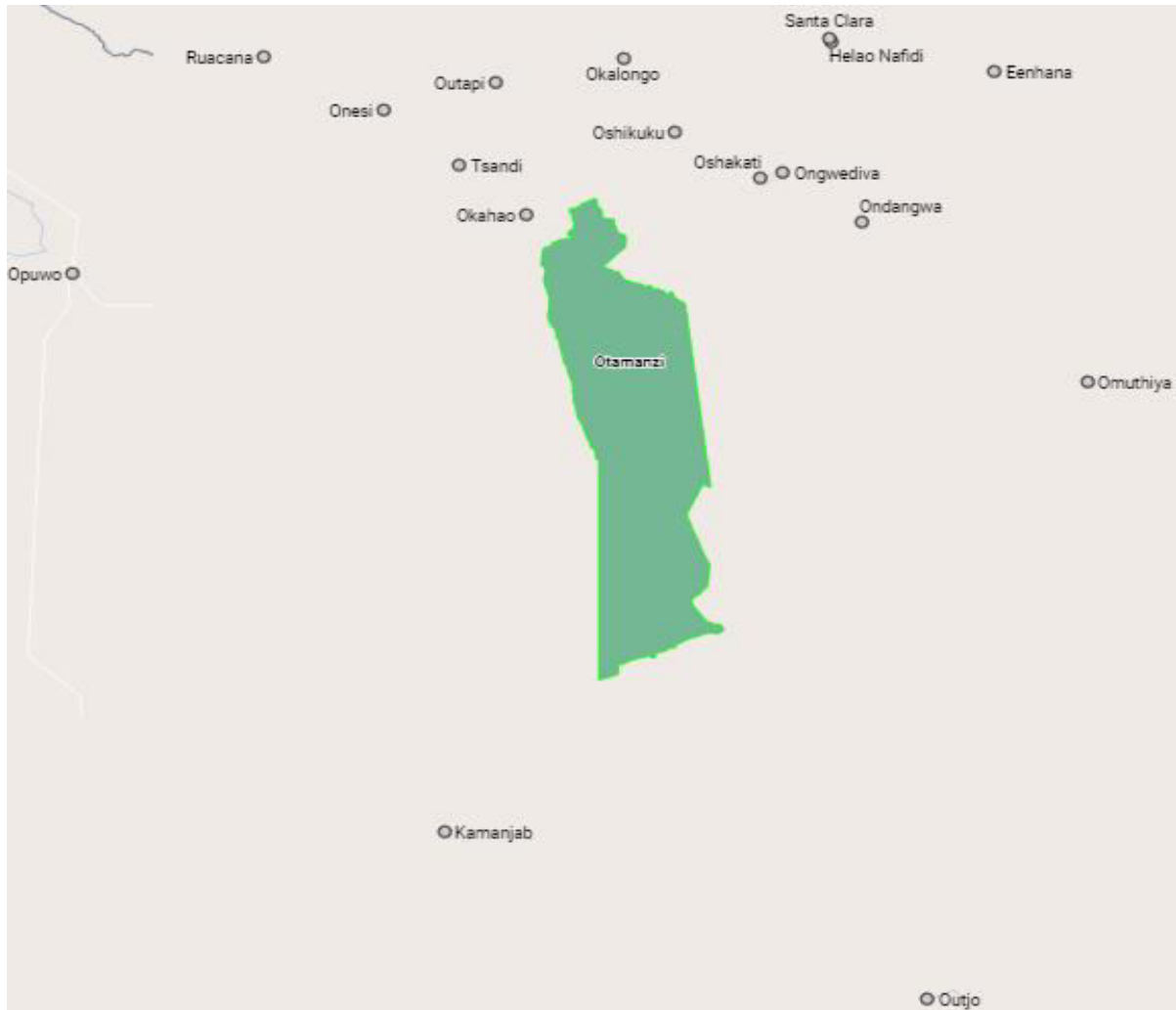


# ENVIRONMENTAL SCOPING AND EMP REPORT: PETROLEUM CONSUMER INSTALLATION AT OTAMANZI VILLAGE IN OMUSATI REGION



MAP OF OTAMANZI

ZED INVESTMENT CC

P.O. Box 400

Windhoek

Namibia

Cell: 0818154402 / 0812469290

Email: [ziileka2@gmail.com](mailto:ziileka2@gmail.com)

<b>TABLE OF CONTENTS</b>	<b>PAGE</b>
LIST OF FIGURS	3
LIST OF TABLES	3
LIST OF ANNEXTURES	3
1. BACKGROUD INFORMATION ON PROJECT	5
2. LOCATION	5
3. LANDOWNERSHIP AND SIZE	5
4. CURRENT UTILIZATION OF SITE	5
5. POPULATION	5
6. POLUTION POTENTIAL	9
7. SCALE OF OPERATION	9
8. TERMS OF REFERENCES	9
9. APPROCH TO THE STUDY	10
10. LEGISLATIVE FRAMEWORK	11
11. ENVIRONMENTAL MANAGEMENT PLAN	17
11.1 IMPACTS TO BE ASSESSED	17
11.2 PROPOSED MITIGATION	18
12. CONCLUTION AND RECOMMEDATION	22

## LIST OF FIGURES

FIGURE 1: MAP OF OMUSATI REGION IN NAMIBIA	6
FIGURE 2: MAP OF OTAMANZI CONSITUENCY IN OMUSATI REGION	7
FIGURE 3: GOOGLE MAP FOR SITE AREA	7
FIGURE 4: GROUND MAP	7

## LIST OF TABLES

TABLE 1: PUBLIC PARTICIPATION ACTIVITIES	12
TABLE 2: A SUMMARY OF THE LEGAL FRAMEWORK	32
TABLE 3: A SUMMARY OF THE PROJECT'S IMPACTS	17
TABLE 4: EMP MITIGATION MEASURES	19

## LIST OF ANNEXURES

ANNEXURE A: PUBLIC NOTICES	
ANNEXURE B: EMAIL NOTES	
ANNEXURE C: MINUTES	
ANNEXURE D: ATTENDANCE REGISTER	
ANNEXURE E: REGIONAL COUNCIL SUPPORTING LETTER	
ANNEXURE F: LAND OWNERSHIP FROM THE HEADMAN	
ANNEXURE G: CV OF EAP	
ANNEXURE H: EAP LETTER OF INTENT	

## EXECUTIVE SUMMARY

Environmental Impact Assessment (EIA) is required to obtain Environmental Clearance Certificate for Petroleum Consumer Installation at (-1 ha area) Otamanzi Village, Omusati Region. The land within the vicinity of the site is predominately characterized by farming activities. In terms of the Regulations of the Environmental Management Act (No 7 of 2007), an Environmental Impact Assessment has to be done to address the following ‘Listed Activity’:

### *HAZARDOUS SUBSTANCE TREATMENT, HANDLING AND STORAGE*

*9.1 The manufacturing, storage, handling or processing of a hazardous substance defined in the Hazardous Substances Ordinance, 1974. 9.2 Any process or activity which requires a permit, licence or other form of authorisation, or the modification of or changes to existing facilities for any process or activity which requires an amendment of an existing permit, licence or authorisation or which requires a new permit, licence or authorisation in terms of a law governing the generation or release of emissions, pollution, effluent or waste.*

The positive impacts are to store and handle 2000 litres of petroleum and lubricant products. Petroleum and lubricant products are for farming purposes. It minimizes travelling distances as well as labour time, as the owner has to fill tanks of farming vehicles, from commercial fuel stations, which is +/- 100km to the farm. Moreover, it also yields to high productivity.

The negative impact associated with the project is the impact on bushes around the site

Therefore, Environmental Commissioner of the Ministry of Environment, Forestry and Tourism is herewith requested to:

1. Accept the Environmental Impact Assessment;
2. Approve the Environmental Management Plan;
3. Issue an Environmental Clearance Certificate for the Petroleum Consumer Installation at (-1ha area) Otamanzi Village, Omusati under the following “Listed activity”:

### *HAZARDOUS SUBSTANCE TREATMENT, HANDLING AND STORAGE*

*9.1 The manufacturing, storage, handling or processing of a hazardous substance defined in the Hazardous Substances Ordinance, 1974. 9.2 Any process or activity which requires a permit, licence or other form of authorisation, or the modification of or changes to existing facilities for any process or activity which requires an amendment of an existing permit, licence or authorisation or which requires a new permit, licence or authorisation in terms of a law governing the generation or release of emissions, pollution, effluent or waste.*

## 1. BACKGROUND INFORMATION ON PROJECT

ZED Investment and Environam Consultants Trading conduct an Environmental Impact Assessment and Environmental Management Plan to obtain Environmental Clearance Certificate for Petroleum Consumer Installation at (-1 ha area) Otamanzi Village, Omusati Region.

The Environmental Management Act (No. 7 of 2007) and the Environmental Impact Assessment Regulations (GN 30 in GG 4878 of 6 February 2012) stipulate that an Environmental Impact Assessment (EIA) report and Management Plan are required as the following 'Listed Activity' is involved:

### *HAZARDOUS SUBSTANCE TREATMENT, HANDLING AND STORAGE*

*9.1 The manufacturing, storage, handling or processing of a hazardous substance defined in the Hazardous Substances Ordinance, 1974. 9.2 Any process or activity which requires a permit, licence or other form of authorisation, or the modification of or changes to existing facilities for any process or activity which requires an amendment of an existing permit, licence or authorisation or which requires a new permit, licence or authorisation in terms of a law governing the generation or release of emissions, pollution, effluent or waste.*

The Environmental Impact Assessment below comprises information on the location, population, pollution potential, scale of operation, scoping, environmental and socioeconomic impacts, public consultation, applicable legislation, and Environmental Management Plan.

## 2. LOCATION

The site is located at Otamanzi Village, Otamanzi Constituency in Omusati Region, which is approximately 60 km south of Okahao. The Global Positioning System is -18.003038, 15.25019.

## 3. LAND OWNERSHIP AND SIZE

The land belongs to ZED Investment and is situated in a communal area. ZED Investment acquire the land from Ongandjera Traditional Authority. The size of allocated area is about (1ha) 1hecter. The general area is largely undeveloped, with only surrounded by bushes, mainly mopani shrubs.

## 4. CURRENT UTILIZATION OF SITE

Currently, the land is undeveloped, there is no building structure, only mopani shrubs. There is an existing mahangu field which lies approximately about 500 m from the site, hence there is no need to relocate the field.

## 5. POPULATION

Otamanzi Constituency is the third largest constituency in Omusati region. Most of the inhabitant live in poverty or extreme poverty. There are no large shops or fuel service station available, hence many people travelling long distances such as Okahao town or Oshakati town for their basic needs. Most households depend manly on wood for cooking.

Region	Constituency	Female	Male	Total	Area in square meter	Population Density
Omusati	Otamanzi	7,400	6,100	13,500	2358	5.7

Census: 2011



Figure 1: Map of Omusati Region in Namibia

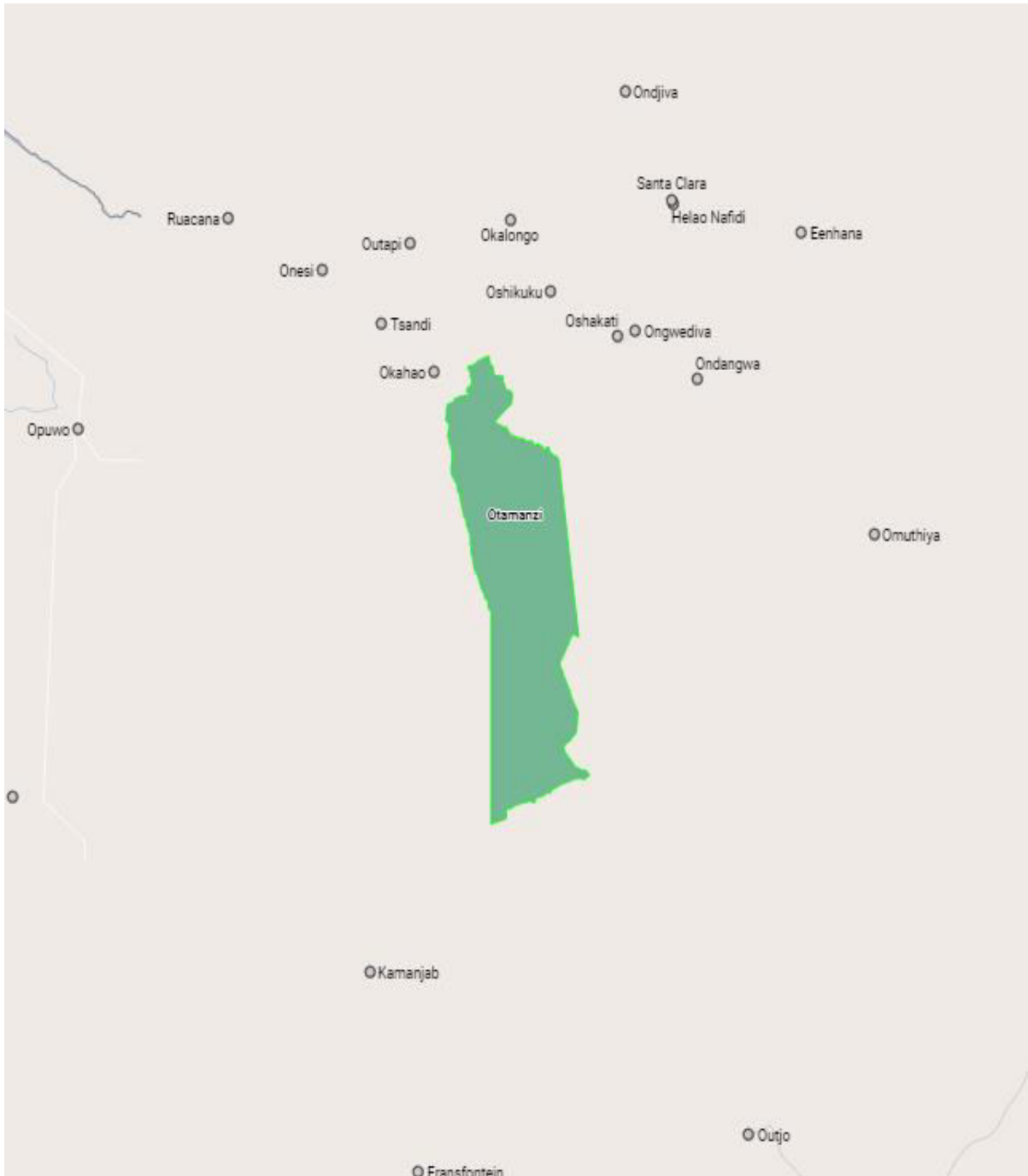


Figure 2: Map of Otamanzi in Omusati Region



Figure 3: Google map for site area: ZED (-18.003038, 15.25019).

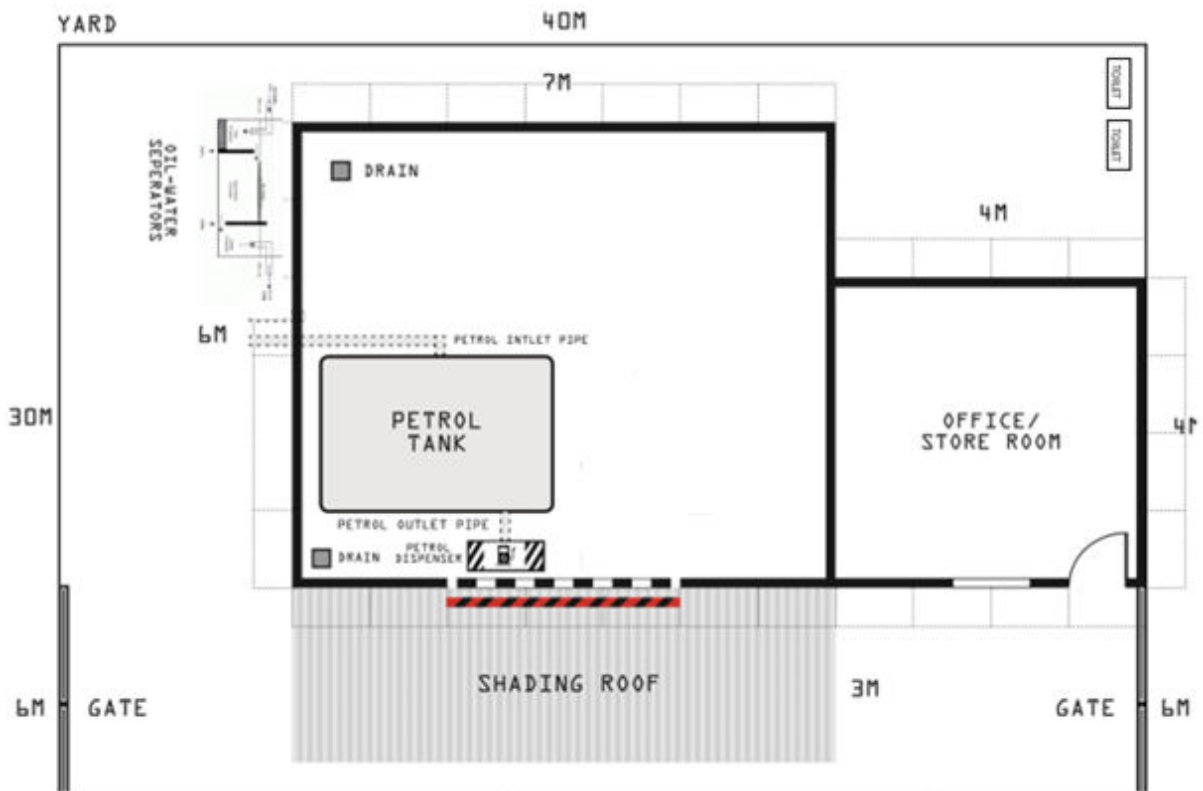


Figure 4: Ground map



## 6. POLLUTION POTENTIAL

The project will store and handle limited amount 2000 litres of petrol and lubricants. Spilled petrol can pollute air, water, and soil at levels that are harmful to life if improperly managed. Since petrol and lubricant will be used in operation of vehicles, the spillage can be reduced. The operation of the project does not give off dust or emissions as compared to petroleum electricity generation plants, which emit greenhouse gases and other noxious gases. The operational activity on disposed of spillage of oil and petrol as well as other waste on site will be controlled and managed as required by Public Health Act (Act No. 36 of 1919) and Atmospheric Pollution Prevention Ordinance (No. 11 of 1976).

## 7. SCALE OF OPERATION

The project will store and handle a capacity of 2000 litres of petrol and lubricant products for farming purpose. This capacity is enough to sustain farming activities for the project on long-term basis. Currently, the vehicles of project travel about 120km to fill in petrol tanks, almost on weekly basis, which is costly. The installation of petroleum and lubricant products near the farm, will reduce transport time, alternatively increase the farming production output. The impact of environmental activities is very minimal, because the scale of the project is small.

## 8. TERMS OF REFERENCE

Terms of reference followed as stipulated under Environmental Management Act in conducting an Environmental Impact Assessment and Management Plan in order to obtain Environmental Clearance Certificate to implement the project are as follow:

The aim of the environmental impact assessment was:

- To comply with Namibia's Environmental Management Act (2007) and its regulations;
- To ascertain existing environmental conditions on the site, in order to determine its environmental sensitivity;
- To inform Interested and Affected Parties (I&APs) and relevant authorities of the details of the proposed development and to provide them with an opportunity to raise issues and concerns;
- To assess the significance of issues and concerns raised;
- To compile a report a Scoping report and Environmental Management Plan (EMP); and
- To plan management guidelines in an EMP, in order, to minimize and mitigate potentially negative impacts.

The tasks undertaken for the Environmental Impact Assessment are desktop assessment, site assessment, scoping, vegetation (fauna and flora), land use, surface and ground water, air quality, agricultural, and storage and handling of hazardous substances and public participation.

The EIA and EMP from the assessment will be submitted to the Environmental Commissioner for consideration for Environmental Clearance Certificate to be approved and issued for the listed activity: HAZARDOUS SUBSTANCE TREATMENT, HANDLING AND STORAGE.

The public consultation process as per the guidelines of the Act has conducted. The methods of collection of data on the site and surrounding area have been followed.

Interested, affected parties and community were invited to register in terms of the assessment process to give input, issues, comments and opinions regarding the activities of the project.

## 9. APPROACH TO THE STUDY

The following activities were included in the study:

### a) Desktop assessment

Documents related to the natural environment and land use activities were reviewed such as literature and legislation to determine possible environmental concerns.

### b) Site assessment

The project site and neighbourhood areas were assessed through several site visits to investigate and understand possible impacts on site.

### c) Scoping of site

Scoping was done based on the desk top study, site assessment and public participation for environmental impacts by considering location, population and scale of operation for the project.

### d) Vegetation (Fauna and Flora)

The project site in rural area. This area predominantly consists of marula, makalani and mopani trees. There are no vulnerable and endangered species or wildlife animals seen around the site apart from goats grazing in the area, there may be smaller vertebrae fauna associated with the site, however if a ground layer of grass and shrubs can be maintained within parts of the plant, many smaller species will benefit. Few bushes may need to be cleared, however, even though - 1hactre land is earmarked for the development it is not the entire portion of land that will be developed, hence the undeveloped portions (+/-400 square meter) should maintain the vegetation.

### e) Land use change

The surrounding area close to the site is home to local communal farmers. The site of the project does not directly affect the grazing of herds and the activities of communal farming.

### f) Surface and ground water

There are no perennial natural surface water resources near the site and given the current status of the site, there are currently no visible surface water bodies to be considered during the operational stage. Ground water impacts can be encountered during the operational stage through accidental spillages of oil, fuels and other waste that could seep underground.

### g) Air quality

The area has good air quality; although there is insignificant impacts of dust and emissions from the movement of vehicles, it can be properly managed. The operation of the project does not give off dust or emissions as compared to petroleum electricity generation plants, which

emit greenhouse gases and other noxious gases. The operation on site will be controlled and managed as per the Public Health Act (Act No. 36 of 1919) and Atmospheric Pollution Prevention Ordinance (No. 11 of 1976).

#### h) Agricultural

Most of farmers around the project site, farm many types of crop products such as maize, sorghum and ground nuts. The community is also involved in herding animals such as cattle, donkeys, goats, chickens as well as pigs as a form the predominant activities. The project will improve the agricultural activities because most residents of Otamanzi depend mostly on subsistence farming.

#### i) Storage and Handling of Hazardous Substances

Hazardous substances are regarded by the Hazardous Substance Ordinance (No. 14 of 1974) as those substances which may cause injury or ill-health to or death of human beings by reason of their toxic, corrosive, irritant, strongly sensitizing or flammable nature or the generation of pressure thereby in certain circumstances.

It covers handle, use, disposal, dump and waste as well as import of such substance. During the operation period, the use, handle and on-site storage of petroleum and lubricant products, spillage and disposal could have a negative impact on the surrounding environment. Oil and water separator will be installed, and oil and waste will be disposed in accordance with Public Health Act (Act No. 36 of 1919) and Atmospheric Pollution Prevention Ordinance (No. 11 of 1976).

#### j) Public participation

The main aim of the public meeting was to provide I&APs and stakeholders with information regarding the project and the EIA process. The following public notices were issued:

Otamanzi Constituency Office: Three public notices were posted on a Public Notice Board at Otamanzi Constituency Office in Omusati Region and one on site.

WhatsApp group: The public notice was also posted on WhatsApp group for Otamanzi Constituency Office.

Otamanzi Headman location: Public notices were posted on Otamanzi Headman location.

The notice boards and WhatsApp group were notifying about the EIA study, how they register as I&APs, commenting and submitting their comments, issues and concerns, the date of the public meeting and venue.

Two public meetings were held on the 20th June 2020 at 10h00 and on the 08th August 2020 at 10h00 at Otamanzi Constituency Office. A description of the project was presented and opportunity given for those present to give their comments, issues and concerns. Minutes of the meeting and attendance register are attached.

Table 1: Public Participation Activities

<b>ACTIVITY</b>	<b>REMARKS</b>
Placement of site notices/poster at Otamanzi Constituency Office two consecutive weeks	See <b>Annexure A</b>
Placement of site notices/poster at Otamanzi Headman location	See <b>Annexure A</b>
Written notice to Interested and Affected Parties via Email	See <b>Annexure B</b>
Minutes of the meetings	See <b>Annexure C</b>
Attendance register	See <b>Annexure D</b>

## 10. LEGISLATION FRAME WORK

The project is a listed activity in terms of the Environmental Management Act (No. 7 of 2007) and the Environmental Impact Assessment Regulations (GN 30 in GG 4878 of 6 February 2012) as the following 'Listed Activity':

### *HAZARDOUS SUBSTANCE TREATMENT, HANDLING AND STORAGE*

*9.1 The manufacturing, storage, handling or processing of a hazardous substance defined in the Hazardous Substances Ordinance, 1974. 9.2 Any process or activity which requires a permit, licence or other form of authorisation, or the modification of or changes to existing facilities for any process or activity which requires an amendment of an existing permit, licence or authorisation or which requires a new permit, licence or authorisation in terms of a law governing the generation or release of emissions, pollution, effluent or waste.*

Table 2: A summary of the legal framework considered to be relevant to the environmental assessment process

<b>LEGISLATION/POLICIES</b>	<b>RELEVANT PROVISIONS</b>	<b>RELEVANCE TO THE PROJECT</b>
The Constitution of the Republic of Namibia as Amended	Article 91 (c) provides for duty to guard against “the degradation and destruction of ecosystems and failure to protect the beauty and character of Namibia.”  Article 95(l) deals with the “maintenance of ecosystems, essential ecological processes and biological diversity” and sustainable use of the country’s natural resources.	Sustainable development should be considered as forefront in this project.

Environmental Management Act No. 7 of 2007 (EMA)	Section 2 outlines the objective of the Act and the means to achieve that.  Section 3 details the principle of Environmental Management	The development should be informed by the EMA.
Environmental Assessment Policy of Namibia 1994	The Environmental Assessment Policy of Namibia states Schedule 1: Screening list of policies/ plans/ programmes/ projects subject to environment must be accompanied by an EIA. The responsible Authority enforcing the law is the Ministry of Environment and Tourism (MET) Directorate of Environment. The policy provides a definition to the term “Environment” broadly interpreted to include biophysical, social, economic, cultural, historical and political components and provides reference to the inclusion of alternatives in all projects, policies, programmes and plans.	An Environmental Impact Assessment is compulsory.  All the environmental impacts should be assessed and considered in order to reduce their impact to the environment.
Environmental Management Act No. 07 of 2007	Requires that projects with significant environmental impact are subject to an environmental assessment process (Section 27). The Act aims at: <ul style="list-style-type: none"> <li>• Promoting the sustainable management of the environment and the use of natural resources by establishing principles for decision-making on matters affecting the environment;</li> <li>• To provide for a process of assessment and control of projects which may have significant effects on the environment;</li> <li>• To provide for incidental matters.</li> </ul>	The development should be informed by the Environmental Management Act on how to develop and operate the project considering environmental aspects.
Draft Procedures and Guidelines for conducting EIAs and compiling EMPs (2008)	Part 1, Stage 8 of the guidelines states that if a proposal is likely to affect people, certain guidelines should be considered by the owner in the scoping process.	The EA process should incorporate the aspects outlined in the guidelines.

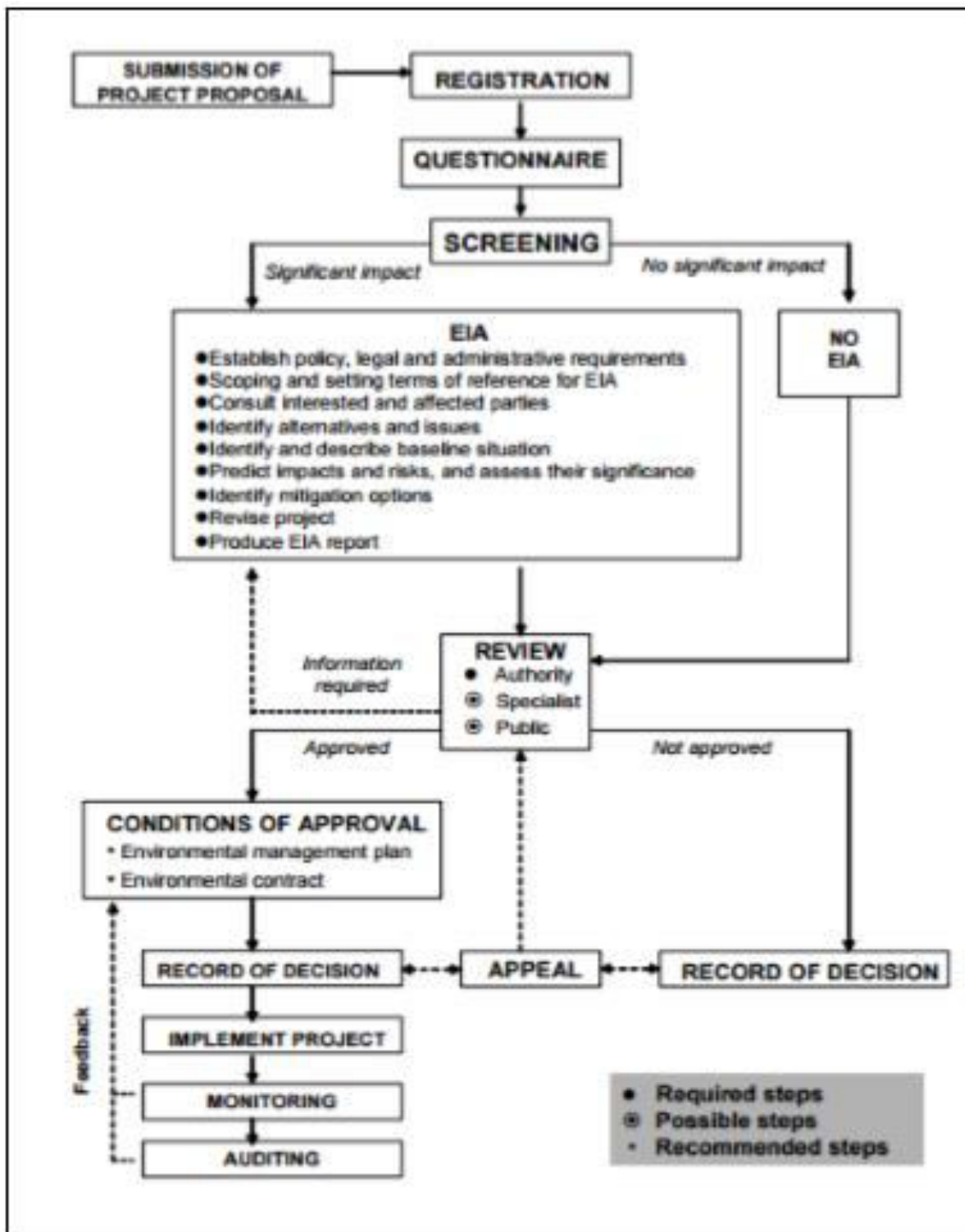
Hazardous Substance Ordinance (No. 15 of 1973)	The Ordinance applies to the manufacture, sale, use, disposal and dumping of hazardous substances, as well as their import and export and is administered by the Minister of Health and Social Welfare. Its primary purpose is to prevent hazardous substances from causing injury, ill-health or the death of human beings. This ordinance will be replaced by the Pollution Control and Waste Management Bill once it comes into force.	The project proponent will make it priority on how to store and handle hazardous substances on site. Waste oil should be disposed according to legal framework.
Atmospheric Pollution Prevention Ordinance, 1976	Amongst other the bill aims to “prevent and regulate the discharge of pollutants to the air, water and land” Of particular reference to the Project is: Section 21 “(1) Subject to subsection (4) and section 22, no person shall cause or permit the discharge of pollutants or waste into any water or watercourse.” Section 55 “(1) No person may produce, collect, transport, sort, recover, treat, store, dispose of or otherwise manage waste in a manner that results in or creates a significant risk of harm to human health or the environment.	The project proponent must make sure the emissions of petroleum particles on air is reduced during operational period on site and to ensure that the emission comply to regulation for not to threaten public health.
Soil Conservation Act 76 of 1969	The act makes provision for combating and for the prevention of soil erosion, it promotes the conservation, protection and improvement of the soil, vegetation, sources and resources of the Republic of Namibia.	This project has a minimal impact on the locality of the surrounding structures and existing soil and vegetation.

Namibia Vision 2030	Vision 2030 states that the solitude, silence and natural beauty that many areas in Namibia provide are becoming sought after commodities and must be regarded as valuable natural assets.	Care should be taken that the development does not lead to the degradation of the natural beauty of the area.
The Ministry of Environment and Tourism	MET has recently developed a policy on HIV and AIDS. In addition, it has also initiated a programme aimed at mainstreaming HIV and gender issues into environmental impact assessments.	The project proponent has to adhere to the guidelines provided to manage the aspects of HIV/AIDS.

(MET) Policy on HIV & AIDS		
Local Authorities Act No. 23 of 1992	The Local Authorities Act prescribes the manner in which a town or municipality should be managed by the Village, Town or Municipal Council	The development has to comply to provisions of the Local Authorities Act.
Labour Act no 11 of 2007	Chapter 2 details the fundamental rights and protections.  Chapter 3 deals with the basic conditions of employment.	The project proponent should comply with the labour law as stated in the Labour act.
National Heritage Act No. 27 of 2004	The Act is aimed at protecting, conserving and registering places and objects of heritage significance.	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
Public Health Act no 36 of 1919	Section 119 prohibits persons from causing nuisance.	The project proponent should comply with these legal requirements.
Nature Conservation Ordinance no 4 of 1975	Chapter 6 provides for legislation regarding the protection of indigenous plants	Indigenous, vulnerable and endangered species should be managed within the legal frameworks.

This EA process will be undertaken in accordance with the EIA regulations.

Figure 5: A Flow Chart provides an outline of the EIA process to be followed as per the EIA Regulations.



Flow Chart for EIA process (EIA Flowchart for Namibia, SELH, 2012).



## 11. ENVIRONMENTAL MANAGEMENT PLAN (EMP)

Environmental Management Plan (EMP) has been compiled in the Scoping Report for Environmental Clearance Certificate for Petroleum Consumer Installation at (- 1ha area) Otamanzi Village, Omusati Region. The content of EMP is tailored with Regulations of Environmental Management Act, 2007 (Act No 7 of 2007).

List Activity: *HAZARDOUS SUBSTANCE TREATMENT, HANDLING AND STORAGE*

*9.1 The manufacturing, storage, handling or processing of a hazardous substance defined in the Hazardous Substances Ordinance, 1974. 9.2 Any process or activity which requires a permit, licence or other form of authorisation, or the modification of or changes to existing facilities for any process or activity which requires an amendment of an existing permit, licence or authorisation or which requires a new permit, licence or authorisation in terms of a law governing the generation or release of emissions, pollution, effluent or waste.*

The EMP is to address the environmental effects and impacts associated with Petroleum Consumer Installation that have been identified in the scope and their management measures.

### 11.1 IMPACTS TO BE ASSESSED

Preliminary assessment focused on the interaction of the project (positively or negatively) has impact on environmental and socioeconomic influences/issues. Key issues have been identified during stakeholders meeting and from members of the public, for further analysed during the impact assessment stage.

Table 3: A summary of the project's environmental and socioeconomic impacts

IMPACTS	NEGATIVE		POSITIVE		NEUTRAL
	Short Term	Long Term	Short Term	Long Term	
PLANNING AND DESIGN STAGE					
1. Legal framework				X	
2. Land use change	X				
CONSTRUCTION STAGE					
3. Pressure on existing infrastructure	X				
4. Heritage					X
5. Vegetation	X				
6. Surface and ground water	X				
7. Air quality	X				
8. Agricultural	X				

OPERATIONAL STAGE					
9. Surface and ground water	X				
10. Air Quality	X				
11. Noise	X				
12. Oil waste		X			
13. Public health and safety	X				
14. Visual				X	

## 11.2 PROPOSED MITIGATION MEASURES

It is established that petroleum installation will have environmental impacts as indicated in the scope. Therefore, EMP is intent to guarantee and achieve the implementations of the EIA findings through the provision of project construction environmental management plan, waste management plan and operation management plan.

Moreover, EMP indicated that the management of environmental programs should be in a systematic, planned and documented manner.

The EMP is designed according to planning and monitoring for environmental protection and pollution. Therefore, the proponent should maintain and adequate take over the controlling and administering the operational of the project by:

- Preventing, minimising or avoiding negative impacts where possible;
- Reducing or avoiding the extent of impact during project life cycle;
- Preventing long term environmental degradation.

The following table outline the environmental impacts and their mitigation measures.

Table 4: EMP impact and mitigation measures

<b>PLANNING AND DESIGN STAGE</b>	
<b>Impact</b>	<b>Mitigation Measures</b>
Legal Framework	<p>Comply to the following legal and policy instruments:</p> <ul style="list-style-type: none"> <li>• Environmental Management Act (No 7 of 2007), which regulates the environmental impact assessment process.</li> <li>• Regulations of Environmental Management Act, 2007 (Act No 7 of 2007).: HAZARDOUS SUBSTANCE TREATMENT, HANDLING AND STORAGE</li> </ul> <p>9.1 The manufacturing, storage, handling or processing of a hazardous substance defined in the Hazardous Substances Ordinance, 1974. 9.2 Any process or activity which requires a permit, licence or other form of authorisation, or the modification of or changes to existing facilities for any process or activity which requires an amendment of an existing permit, licence or authorisation or which requires a new permit, licence or authorisation in terms of a law governing the generation or release of emissions, pollution, effluent or waste.</p> <ul style="list-style-type: none"> <li>• Water Act No. 54 of 1956 dealing with the prohibition of pollution of underground and surface waters bodies.</li> <li>• Nature Conservation Ordinance no 4 of 1975 which provides for legislation regarding the protection of indigenous plants.</li> </ul>
Land use change	<ul style="list-style-type: none"> <li>• Maintain the grass and small shrubs found on the site and only remove vegetation that has an impact on the development.</li> <li>• Do not use herbicides to manage plant growth.</li> <li>• Introduce additional vegetation and landscaping to supplement lost vegetation.</li> <li>• Clearly demarcate or fence off the plant area to prevent unwanted movement of people and animals into the site.</li> </ul>
Heritage sites	<ul style="list-style-type: none"> <li>• The project management should be made aware of the provisions of the National Heritage Act regarding the prompt reporting of archaeological finds.</li> <li>• In the event of such finds, construction must stop and the project management or contractors should notify the National Heritage Council of Namibia immediately.</li> </ul>

<b>CONSTRUCTION STAGE</b>	
<b>Impact</b>	<b>Mitigation Measures</b>
Pressure on existing infrastructure	<ul style="list-style-type: none"> <li>• Ensure that the workforce is provided with temporary toilets during the construction phase.</li> <li>• Waste from the temporary toilets should be disposed of at the nearest approved Wastewater Treatment Works in the area.</li> </ul>
Vegetation (Fauna and Flora)	<ul style="list-style-type: none"> <li>• Do not clear the entire development site, but rather keep the few individuals' trees/shrubs not directly affecting the developments as part of the landscaping.</li> <li>• Recommend the planting of local indigenous species of flora to replace any tree or shrubs that are removed.</li> <li>• Fencing should be such that it allows for smaller animals to enter and move freely into and out of the site, thus enabling gene flow where possible and practical.</li> <li>• Maintain the ground layer of grass and shrubs within parts of the plant</li> </ul>
Air quality	<ul style="list-style-type: none"> <li>• All loose material should be kept on site for the shortest possible time.</li> <li>• During high wind conditions the contractor must make the decision to cease works until the wind has calmed down.</li> <li>• Cover any stockpiles with plastic to minimise windblown dust.</li> <li>• Provide workers with dust masks.</li> </ul>
Noise	<ul style="list-style-type: none"> <li>• No amplified music should be allowed on site.</li> <li>• Inform immediate neighbours of construction activities to commence and provide for continuous communication.</li> <li>• Limit construction times to acceptable daylight hours.</li> <li>• Provide protective equipment such as ear muffs and ear plug to workers.</li> </ul>
Health, Safety and Security	<ul style="list-style-type: none"> <li>• Provide free condoms in the workplace throughout construction and project operation.</li> <li>• Facilitate access to antiretroviral medication.</li> <li>• Clearly demarcate dangerous areas and no-go areas on site.</li> <li>• The contractor must comply with all applicable occupational health and safety requirements. The workforce should be provided with all necessary Personal Protective Equipment where appropriate.</li> </ul>

<b>OPERATIONAL STAGE</b>	
<b>Impact</b>	<b>Mitigation Measures</b>
Surface and ground water	<ul style="list-style-type: none"> <li>• No dumping of waste products of any kind in or in close proximity to surface water bodies should be allowed.</li> <li>• Personnel should be given ablution facilities at the construction sites that are located at least 30 m away from any surface water and these should be regularly serviced.</li> </ul>
Impacts on soil	<ul style="list-style-type: none"> <li>• Maintain the grass found on the site and only remove vegetation that has an impact on the development.</li> <li>• Appropriate erosion control structures must be put in place where soil may be prone to erosion.</li> <li>• Checks must be carried out at regular intervals to identify areas where erosion is occurring. Appropriate remedial action is to be undertaken where ever erosion is evident.</li> </ul>
Health, Safety and Security	<ul style="list-style-type: none"> <li>• Ensure that all personnel are properly trained depending on the nature of their work.</li> <li>• Provide first aid kit and a properly trained person to apply first aid when necessary.</li> <li>• The workforce should be provided with all necessary Personal Protective Equipment where appropriate.</li> <li>• The proponent must comply with all applicable occupational health and safety requirements.</li> </ul>
Hazardous Substances	<ul style="list-style-type: none"> <li>• All chemicals and other hazardous substances must be stored and maintained in accordance with the Hazardous Substances Ordinance (No. 14 of 1974), with all relevant licences and permits to be obtained where applicable.</li> <li>• Water and oil separator will be installed on the site.</li> <li>• Given the potential harm to human health during handling and use of any of hazardous substances it is essential that all staff be trained with regards to the proper handling of these substances as well as First Aid in the case of spillage or intoxication.</li> <li>• Storage areas for all substances should be bunded and capable to hold 120% of the total volume of a given substance stored on site.</li> </ul>
Social	<ul style="list-style-type: none"> <li>• Ensure locals enjoy priority in terms of job opportunities, for skills that are available locally, to the extent possible.</li> </ul>

## 12. CONCLUSION AND RECOMMEDATION

This Environmental Management Plan (EMP) have been developed in order to minimise the impact on the environment during construction and operation as to guide the construction and operational stages of the project, to ensure that the project is operated with less or minimum environmental impact.

During the operational stage, it has been assessed that the project has long term negative impact on oil waste to ground water. Taking into consideration the scale of the project, the spillage of oil could be controlled as oil and water separator will be installed. The impacts will, however, be significantly reduced as oil and water separator will play a significant role on reducing the impacts as recommended on mitigation measures in the EMP.

The EIA and EMP were conducted and complied based on the evidence provided. Taking into consideration the evidence produced during the assessment process; it is very undoubtful that this project will have any significant negative impacts on the environment. Based on all impacts assessed and their mitigation measures, it is recommended that a clearance certificate be issued for this project.