

Appendix: D

Application No. **APP-002354**

**ENVIRONMENTAL MANAGEMENT PLAN (EMP)
FOR THE CREATION OF A PUBLIC ROAD
(STREET) AT ERF 542 EXTENSION 1,
OSHIKUKU, OMUSATI REGION**

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DOCUMENT INFORMATION

PROJECT NAME: Creation of a public road (street) at Erf 542, Extension 1, Oshikuku, Omusati region.

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List of acronyms

EAP:	Environmental Assessment Practitioner
ECC:	Environmental Clearance Certificate
EIA:	Environmental Impact Assessments
EMA:	Environmental Management Act
EMP:	Environmental Management Plan
I&APs:	Interested and Affected Parties
GN:	Government Notice
MAWF:	Ministry of Agriculture, Water and Forestry
MET:	Ministry of Environment and Tourism
NamWater:	Namibia Water Corporation
NORED:	Northern Electricity Distributor
OTC:	Oshikuku Town Council
NSA:	Namibia Statistic Agency
MURD	Ministry of Urban and Rural Development

1. Introduction and Background

1.1 Introduction

Toya Urban Planning Consultants cc has been appointed by the proponent, Mr. Sevelinus Nakale to apply for the subdivision of Erf 542 located in Extension 1, Oshikuku., into seven portions and a remainder. As a result of this subdivision, a public road (street) will be created to provide access to the newly created erven.

In terms of the Environmental Management Act of 2007 (Schedule 5.1) and its regulations (GN No. 30 of 2012), the construction of a public road or a road which caters for more than one lane of traffic in both directions cannot take place without an Environmental Clearance Certificate (ECC) being obtained.

Green Gain Environmental Consultants cc has been appointed as an independent Environmental Assessment Practitioner (EAP) to conduct an Environmental Impact Assessment (EIA) and apply for the ECC with the Ministry of Environment, Forestry and Tourism (MEFT). The study conducted conformed to the requirements of the Environmental Management Act No.07 of 2007 and its Regulations (GN No. 30 of February 2012). The study was conducted in a multidisciplinary approach which includes baseline study, review of existing information and consultation of Interested and Affected Parties (I&APs) and relevant stakeholders.

1.2 Objectives of the EMP

The EMP has the following objectives:

- To provide information on the potential negative impacts associated with the present and future brick manufacturing activities.
- Present mitigation measures for the identified negative impacts and enhancement measures for the positives impacts.
- To provide guidelines for the management and monitoring of the identified environmental issues.
- To provide guidelines to the responsible persons to follow appropriate contingency plans in the case of various possible impacts.

2. Project Description

The development site (Erf 542) measures approximately 4,293m² in extent and is in Extension 1, Oshikuku and can found on the geographical coordinates 17.65889" South, 15.47694" East, along the street to Oshikuku district hospital.

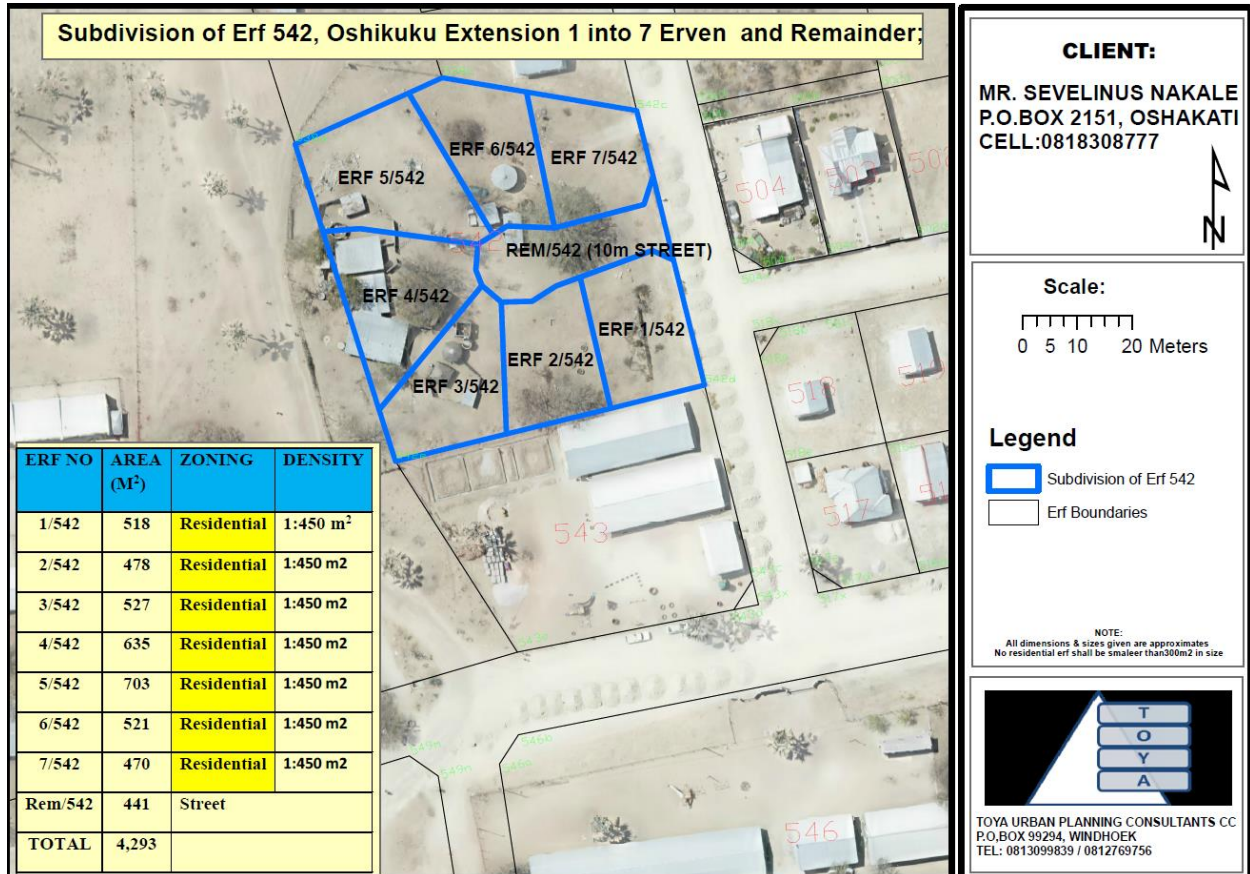


Figure 1: The proposed activity

3. Responsibilities

It is the responsibility of the proponent to ensure the successful implementation of this EMP and any condition to be imposed by the Ministry of Environment, Forestry and Tourism (MEFT). However, the implementation of this EMP also requires the involvement of various role players, each with specific responsibilities to ensure that the project is operated in an environmentally sensible manner.

3.1 The Proponent

Responsibilities

- a) Oversee the implementation of the final EMP after approval by DEA and ensure the project comply with the EMP and conditions therein.
- b) Appoint the responsible official/s to take the responsibility of the following.
 - Provide Environmental training and awareness on the EMP to all contractors, sub-contractors and employees involved in the construction.
 - Conduct regular inspections and monitoring during construction phase.
 - Review of the on-site environmental management and implementation of the EMP by the maintenance team or Contractor and sub-contractors.
- c) In the absence of this appointments, the proponent shall collectively take responsibility.

3.2 Contractor and sub-contractors

It is expected that various contractors and sub-contractors will be appointed at various times and for various tasks throughout the life cycle of this project. All appointed contractors shall ensure to comply with the EMP and its conditions. The proponent must ensure that a copy of the EMP is given to all contractors before commencement of any work at the project. The contractor upon receiving this EMP should ensure.

- To undertake their activities in an environmentally sensible manner and within the context of this EMP
- To undertake good housekeeping practices during duration of the activities
- To ensure that adequate environmental awareness training takes place in the language of the employees.

3.3 Authorities

- **Local Authority -Oshikuku Town Council (OTC)** should provide supervisory and monitoring roles to ensure that the project comply with its by-laws and building standards. OTC shall take over the implementation of this EMP during the operation phase of the proposed road.
- **Competent authority -Ministry of Urban Rural Development (MURD)** must provide approval for the proposed road, through the NAMPAB during the registration of the town planning procedures as per the Town Planning Ordinance (Ordinance 188 of 1965).
- **Regulatory Authority -Ministry of Environment, Forestry and Tourism (MEFT)** must provide approval for the ECC and, when necessary, conduct compliance monitoring to observes any non-compliance.

4. Legal framework

The proponent must ensure compliance with that all project activities complies the following legislations.

LEGISLATION	PROVISION
Constitution of the Republic of Namibia (1990)	The articles 91(c) and 95 (i) commits the state to actively promote and sustain environmental welfare of the nation by formulating and institutionalizing policies to accomplish the sustainable objectives which include: <ul style="list-style-type: none"> - Guarding against overutilization of biological natural resources, - Limiting over-exploitation of non-renewable resources, - Ensuring ecosystem functionality, - Maintain biological diversity.
Environmental Management Act No. 07 of 2007	The purpose of this Act is to promote the sustainable management of the environment and the use of natural resources by establishing principles for decision-making on matters affecting the environment; to provide for a process of assessment and control of projects which may have significant effects on the environment; and to provide for incidental matters. The Act gives legislative effect to the Environmental Impact Assessment Policy. Moreover, the act also provides procedure for adequate public participation during the environmental assessment process for the interested and affected parties to voice and register their opinions and concern about the proposed project.
Water Resources Management Act 2004	The Water Resources Management Act (No 11 of 2013) stipulates conditions that ensure effluent that is produced to be of a certain standard. There should also be controls on the disposal of sewage, the purification of effluent, measures should be taken to ensure the prevention of surface and groundwater pollution and water resources should be used in a sustainable manner.
Pollution Control and Waste Management Bill	This Bill serves to regulate and prevent the discharge of pollutants to air and water as well as providing for general waste management. This Bill will license discharge into watercourses and emissions into the air.
Labour Act (No 11 of 2007)	135 (f): “the steps to be taken by the owners of premises used or intended for use as factories or places where machinery is used, or by occupiers of such premises or by users of machinery in connection with the structure of such buildings of otherwise in order to prevent or extinguish fires, and to ensure the safety in the event of fire, of persons in such building;” (Ministry of Labour and Employment Creation)

<p>Noise Control Regulations (Labour Act)</p>	<p>It is essential to ensure that before any development project is approved and undertaken, an assessment or evaluation of expected noise level is done.</p>
<p>Town and Regional Planners Act, 1996 (Act No. 9 of 1996)</p>	<p>This Act establishes the Namibian Council for Town and Regional Planners, defines functions, and powers of the Council and provides for the registration of town and regional planners and the supervision over their conduct. The Minister may, on recommendation of the Council prescribe the kinds of work of a town and regional planning nature which shall be reserved for town and regional planners. The Act also defines improper conduct and defines disciplinary powers of the Council. Furthermore, the Act provides for the establishment of national, regional, and urban structure plans, and the development of zoning schemes. It also deals with a variety of related land use control issues such as the subdivision and consolidation of land and the establishment and extension of urban areas.</p>
<p>Town Planning Ordinance (No. 18 of 1954)</p>	<p>Subdivision of land situated in any area to which an approved Town Planning Scheme applies must be consistent with that scheme (S31).</p>
<p>Oshikuku Town Planning amendment Scheme No.2</p>	<p>Identify different land use categories, zoning, use and consent use.</p> <p>“Public Open Space” is referring to as a land which is under or will be under the ownership of the local authority, which is not leased nor will it be leased on a long-term basis, and which is utilized or will be utilized as an open space or a park, garden, picnic area, playground or square and includes a public place.</p>

Local Authorities Act (No. 23 of 1992)	The purpose of the Local Authorities Act is to provide for the determination, for purposes of local government, of local authority councils; the establishment of such local authority councils; and to define the powers, duties, and functions of local authority councils; and to provide for incidental matters.
Soil Conservation Act 76 of 1969	The Soil Conservation Act stipulates that the combating and preventing of soil erosion should take place; the soil should also be conserved, protected, and improved, vegetation and water sources and resources should also be preserved and maintained. When proper mitigation measures are followed along the construction and implementation phase of the project, the natural characteristics of the property is expected to have a moderate to low impact on the environment.

5. PROPOSED MITIGATION MEASURES

It is the core responsibility of the proponent to ensure the successful implementation of this EMP during the planning & design and construction phase and adhere to any condition to be imposed by the competent authority or by the regulatory authority. The proponent must ensure that a copy of the EMP is given to all contractors before commencement of any work at the project.

Table 1: Mitigation Measures during Construction

Environmental Impacts	Mitigation Measures	Roles and Responsibilities	
		Implementation	Monitoring
Impact on Biodiversity (flora and fauna)	<ul style="list-style-type: none"> Vegetation clearance must be limited to project site. No animal including small mammals i.e., ground-burrowing squirrel etc. be killed on purpose. 	Contractor	Proponent
Pollution to surface and groundwater	<ul style="list-style-type: none"> No discharge of pollution in the watercourse Clean up all leakage or spills (if occur) Temporary construction housing must be provided with ablution facility that may be connected to municipal sewage system. Sewage pipelines must be of required standard and No Asbestos material may be used 	Contractor	Proponent
Visual intrusion	<ul style="list-style-type: none"> The site must be kept clear of building rubble and other waste. All material must be stored away from the site or in a temporary storeroom. The construction site must be condoned off during the entire construction period. 	Contractor	Proponent
Provision for Traffic management	<ul style="list-style-type: none"> Make provision for road traffic control measures. Provide traffic regulation during construction phase. Limit speed for construction vehicles 	Contractor	OTC

	<ul style="list-style-type: none"> • Make use of flagmen to regulate traffic. 		
Water and Energy demand Management	<ul style="list-style-type: none"> • Commit to minimizing the use of water during construction phase. • Make provision for renewable energy (Solar) • Prevent contamination of surface water runoff 	Contractor	Proponent
Waste Management	<ul style="list-style-type: none"> • The site should be always kept tidy. • No waste may be buried or burned on site or anywhere else. • All domestic and general construction waste produced daily should be cleaned and contained daily. • Separate waste containers/bins for hazardous and domestic/general waste must be provided onsite. • Provide refuse bins and ensure regular waste collection (weekly) 	Contractor	Proponent
Impact on Soil	<ul style="list-style-type: none"> • Gravel sand to be used for road construction must be from approved burrow pits or authorized suppliers. • Do not park vehicle or implement with leaks for too long at the site. • All vehicles must be serviced offsite. • Contaminated soil must be cleaned up. • Spoil heaps should be flattened to the similar adjacent ground, to prevent soil erosion, thus encouraging natural vegetation. • All surfaces hardened due to construction must be ripped and material imported thereon must be removed 	Contractor	Proponent
Public and Occupational safety risks	<ul style="list-style-type: none"> • All employees must be provided with PPE. • The site must be cordoned off and be out of bound for animal and people. • Provide signage at the construction site. • Employees must be given training in line with their job 	Contractor	Proponent
Employment creation	<ul style="list-style-type: none"> • Employ as many local people as possible 	Proponent	OTC
Economic prosperity	<ul style="list-style-type: none"> • Local contractors must be given a priority. • Materials should be sourced from local suppliers in the first attempt 	Proponent	OTC

Table 2: Mitigation measures during Operation phase

Environmental Issue/Impacts	Mitigation Measures	Roles and Responsibilities	
		Implementation	
Pollution of groundwater	<ul style="list-style-type: none"> • No direct discharge of pollution (wastewater or solid waste) into the watercourse • Use environmentally friendly deicer for road marking. • Clean-up all leakages, spillages • Do not discharge waste directly in the soil 	Contractor	OTC
Impact of surface drainage	<ul style="list-style-type: none"> • Provide routine maintenance to drainage channels 	OTC	
Impact on water	<ul style="list-style-type: none"> • Prevent contamination surface water. • Enforce water conservation measures during road maintenance works 	OTC	
Impact to the soil	<ul style="list-style-type: none"> • Use environmentally friendly deicer for road marking. • Avoid, prevent any case of soil erosion by ensuring proper stormwater management. 	OTC	
Aesthetic view of the area	<ul style="list-style-type: none"> • The site must be clear of litter. • All waste must be removed and disposed of to the landfill site. • Plant ornamental vegetation to enhance the aesthetic view. • Provide routine maintenance to the road infrastructures, signatures markings etc. 	OTC	
Traffic impacts	<ul style="list-style-type: none"> • Ensure road signs and markings at the intersection to the existing roads. • Provide and maintain pedestrian crossing 	OTC	
Waste generation	<ul style="list-style-type: none"> • Provide street liter bins. • Ensure regular picking up and street sweeping 	OTC	

6. Conclusion

Although the implementation of this EMP requires a multitude of administration components, the proponent should play a pivotal role in the implementation of this EMP as outlined in the report. The proponent should therefore ensure proper coordination with other stakeholders i.e., authorities, contractors etc and may provide training to contractors and sub-contractors on the content of this EMP. The preparation of this EMP is based on the current information provided, any changes or deviation from the initial plan of this project shall trigger changes to this EMP.

The proponent should also ensure to avail necessary resources and synergies to enable the implementation of this EMP. Upon approval by the authorities, the EMP shall be considered a legally binding document and any deviation or transgression from this EMP is punishable by law as per the Environmental Management Act, No. 07 of 2007. A copy of this EMP shall be always kept by the proponent or responsible person. Lastly, this EMP is valid until the project's successful implementation.