

**ENVIRONMENTAL MANAGEMENT PLAN (EMP) FOR THE
PROPOSED SUBDIVISION OF THE ERF 7881, KUISEBMOND
EXTENSION 10, AND CREATION OF A STREET (PUBLIC
ROAD), WALVIS BAY, ERONGO REGION**

Prepared For

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February 2024

DOCUMENT INFORMATION

PROJECT NAME: Proposed subdivision of Erf 7881, Kuisebmond Ext 10,
and Creation of a Street (Public Road), Walvis Bay
Erongo region

DOCUMENT TYPE: Environmental Management Plan

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APPLICATION: APP002963

PERIOD: February 2024

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List of acronyms

DEAF:	Directorate of Environmental Affairs and Forestry
EAP:	Environmental Assessment Policy
EIA:	Environmental Impact Assessments
EMA:	Environmental Management Act
EMP:	Environmental Management Plan
I&APs:	Interested and Affected Parties
MAWLR	Ministry of Agriculture, Water, and land Reform
MEFT:	Ministry of Environment, Forestry and Tourism
MSDS:	Material Safety Data Sheet
MURD:	Ministry of Urban and Rural Development
NORED	Northern Regional Electricity Distributor
NSA:	Namibia Statistic Agency
PPE:	Personal Protective Equipment

1. Introduction and Background

1.1 Introduction

Eco Engineering Services cc hereinafter referred to as the proponent has purchased the property (Erf 7881) located in Kuisebmond Extension 10 for the purpose of housing development. The property measures approximately 3115.82m² and is currently zoned "General Residential". Thus the proponent intends to subdivide the Erf into individual erf for residential property development and has appointed a registered town planner to apply town planning procedures as follows.

- Subdivision of the Erf 7881 into 10 Portions and Remainder.
- Rezoning of 9 Portions (PNT 1-9) from General Residentials to "Single Residentials".
- Rezoning of Portion 10 from General Residential to Street to provide access to Portion 9, 10 & 3.

The subdivisions of the Erf will result into the creation of a street (public road) to provide access to the newly created ervens. In terms of the Environmental Management Act, No. 07 of 2007, and its Regulations (No. 03 of February 2012) the creation of a street (public road) cannot be undertaken without an Environmental Impact Assessment study being carried out.

The EMP was prepared as part of the EIA process with the purpose of ensuring that the management actions arising from Environmental Impact Assessment (EIA) processes are clearly defined and implemented through all phases of the project life cycle.

The implementation of the EMP is the ultimate responsibility of the proponent. However, all parties that have roles to play in the proposed activities should be made aware of the contents of the EMP, to plan the relevant activities that the project will include accordingly and in an environmentally sound manner.

1.2 Objectives of the EMP

The EMP has the following objectives:

- To provide information on the potential negative impacts associated with the proposed creation of an access road to the existing municipal roads
- Identify negative environmental impacts associated with the proposed road creation on the biophysical and socio-economic of the area.
- Present mitigation measures for the identified negative impacts and enhancement measures for the positive 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. 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.

2.1 The Proponent

Responsibilities

- a) Appoint a relevant qualified Town Planner who will
 - apply town planning procedures in line with relevant legislations
 - Oversee the implementation of the final EMP after approval by DEAF and ensure the project comply with the EMP and conditions therein.
 - Ensure that the proposed subdivision by the planner is done in compliance to this EMP and the Townships and Division of Land Ordinance 11 of 1963.
- 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 the 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 these appointments, the Proponent shall take the responsibility.

2.2 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, especially during the construction and operation phase. 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 the commencement of any work on the project. The contractor upon receiving this EMP should ensure.

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

2.3 Local Authority: Walvis Bay Municipality

Walvis Bay Municipality as a concerned Local Authority (LA) for this project has the following roles to play.

- Give consent to the proposed subdivision (already obtained)
- Ensure the subdivision and proposed layout are in line with the relevant by-laws and the Urban and Regional Planning Act
- Oversee the construction and maintenance of the envisaged road (street)
- Ensure the installation of Traffic regulatory signs on the junctions.
- Approve the erection of traffic regulatory signages.
- If necessary, make amendments on the traffic regulations in favour the new access point.

3. 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)	<p>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:</p> <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	<p>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.</p>
Water Resources Management Act 2004	<p>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.</p>
Pollution Control and Waste Management Bill	<p>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.</p>
Labour Act (No 11 of 2007)	<p>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>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 or urban areas.</p>
<p>Land Survey Act 33 of 1993</p>	<p>To regulate the survey of land; and to provide for matters incidental thereto.</p>
<p>Townships and Division of Land Ordinance 11 of 1963, as amended</p>	<p>The objective of this Ordinance is to consolidate and amend the laws relating to the establishment of townships and to provide for the regulation and control of the development and subdivision of land and for matters incidental thereto.</p>
<p>Local Authorities Act (No. 23 of 1992)</p>	<p>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.</p>
<p>Soil Conservation Act 76 of 1969</p>	<p>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.</p>

4. 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: Potential impacts and mitigation measures during the planning phase

Environmental Impacts	Mitigation Measures	Roles and Responsibilities	
		Implementation	Monitoring
Legal compliance	<ul style="list-style-type: none"> The HN Town Planning Scheme should be amended to include the newly created street. Approval should be obtained from the Urban and Regional Planning Board 	Town Planner	Walvis Bay Municipality
Impact on Biodiversity (flora and fauna)	<ul style="list-style-type: none"> Large trees should be incorporated in the designs (should be left out) Provision should be made for storm water management on the created road. This can be achieved by making provision for culverts or storm water channel 	Developer/Proponent	Walvis Bay Municipality
Provision for Traffic management	<ul style="list-style-type: none"> The road width is sufficient enough to accommodate traffic on both side Make provision for sufficient pedestrian crossing over the new road. 	Town Planner	Walvis Bay Municipality
Land use effects	<ul style="list-style-type: none"> Provision should be made for service lines to cross the new road i.e., provision for sleeves in order to avoid future land use effects during the operation phase. 	Developer	Walvis Bay Municipality

Table 2: Potential impacts and Mitigation measures during construction phase

Environmental Impacts	Mitigation Measures	Roles and Responsibilities	
		Implementation	Monitoring
Impact on Biodiversity (flora and fauna)	<ul style="list-style-type: none"> • Only vegetation directly affected must be cleared • No animal including small mammals i.e., ground-burrowing squirrel etc. be killed on purpose. • Make provision for culverts to allow free flow of stormwater during rainy season. 	Town planner Contractor	Walvis Bay Municipality
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	Walvis Bay Municipality
Provision for Traffic management	<ul style="list-style-type: none"> • Make provision for road traffic control measures i.e., intersections. • Provide traffic regulation during construction phase. • Insert speed calming measures • Make use of flagmen to regulate traffic 	Town Planner Contractor	Walvis Bay Municipality
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 • Prevent contamination of surface water runoff 	Contractor	Walvis Bay Municipality
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. 	Contractor	Walvis Bay Municipality

	<ul style="list-style-type: none"> • Separate waste containers/bins for hazardous and domestic/general waste must be provided onsite. • Provide refuse bins and ensure regular waste collection (weekly) 		
Impact on Soil	<ul style="list-style-type: none"> • Gravel sand to be used for road construction must be from approved borrow 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	Walvis Bay Municipality
Public and Occupational safety risks	<ul style="list-style-type: none"> • All employees must be provided with Personal Protective Equipment (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	Walvis Bay Municipality
Employment creation	<ul style="list-style-type: none"> • Employ as many local people as possible 	Proponent	Walvis Bay Municipality
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	Walvis Bay Municipality

Table 3: 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 	Walvis Bay Municipality
Impact of surface drainage	<ul style="list-style-type: none"> • Provide routine maintenance to drainage channels 	Walvis Bay Municipality
Impact on water	<ul style="list-style-type: none"> • Prevent contamination surface water. • Enforce water conservation measures during road maintenance works 	Walvis Bay Municipality
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. 	Walvis Bay Municipality
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. 	Walvis Bay Municipality
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 	Walvis Bay Municipality
Waste generation	<ul style="list-style-type: none"> • Provide street liter bins. • Ensure regular picking up and street sweeping 	Walvis Bay Municipality

5. Conclusion

Although the implementation of this EMP requires a multitude of administration of different role players, 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 and may provide training to contractors and sub-contractors on the content of this EMP.

The proponent should also ensure to avail necessary resources and synergies to enable the implementation of this EMP. Upon approval by the authority, 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.