

# THE MUNICIPALITY OF WALVIS BAY

**DRAFT  
ENVIRONMENTAL MANAGEMENT PLAN FOR  
THE TOWNSHIP ESTABLISHMENT OF  
NARRAVILLE EXTENSION 16**

September 2020

# Document Controls

<b>Business Name</b>	Municipality of Walvis Bay				
<b>Project Title</b>	Township Establishment of Narraville Extension 16				
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# 1 INTRODUCTION

Narraville Extension 16 came about in December 2016 when NAMPAB recommended that Narraville Extension 13 was too big and should be split into two extensions to be known as Narraville Extension 13 and Narraville Extension 16. Narraville Extension 13 was issued with an Environmental Clearance Certificate (ECC) (attached as Annexure A) in 2015 which has expired before the planning process was completed.

An application to renew the ECC and the split Narraville Extension 13 was submitted to the Ministry of Environment Forestry and Tourism (MEFT) (Application No.001262). Upon submission of this application, MEFT requested for an updated Environmental management Plan (EMP).

An EMP is a site-specific plan developed to ensure that the contractor comply with the environmental conditions of approval for the project and that the environmental risks are properly managed. In actual fact, the EMP is the essential link between environmental impacts assessment and project activities. It is to ensure that environmental impacts identified during the assessment stage are properly managed on site and control measures are implemented.

This EMP is developed to outline measures that need to be implemented in order to minimize adverse environmental degradation associated with the installation of bulk services such as water, electricity and sewerage at Narraville Extension 16, in Walvis Bay. It serves as a guide for the construction contractor and the respective workforce on their roles and responsibilities concerning environmental management on the site and it provides a framework for environmental monitoring throughout the construction period.

Since that this EMP provides guidance in managing and maintaining potential environmental impacts associated with the installation of bulk services to a minimum, it should be noted that this EMP becomes a legally binding requirement which will form the basis of the environmental contract between the Municipality of Walvis Bay, Construction Contractors and or Project Manager, Ministry of Environment, Forestry and Tourism (MEFT) and any other relevant authority. This EMP will help the Construction Contractor/Project Manager to map progress toward achieving continual improvements. In this way, the tabulated mitigatory measures will assist Construction Contractor, the MEFT and the Municipality of Walvis Bay (MWB) in ensuring that impacts to the environment are minimized during the installation of bulk services in this EMP.

The main aspects covered during the EMP development process in meeting the above mentioned requirement are to:

- ✓ Encourage good management practices through planning and commitment to environmental and socio-economic issues;
- ✓ Define how the management of the environment is reported and performance evaluated;
- ✓ Provide rational and practical environmental guidelines to minimize disturbance of the natural environment;
- ✓ Prevent or minimize all forms of pollution;
- ✓ Protect available indigenous flora and fauna;
- ✓ Prevent soil erosion of effected areas;
- ✓ Comply with all applicable laws, regulations, standards and guidelines for the protection of the environment;
- ✓ Adopt the best practicable means available to prevent or minimize adverse environmental impacts;
- ✓ Develop waste management practices based on prevention, minimization, recycling, treatment or disposal of waste;
- ✓ Describe all monitoring procedures required to identify impacts on the environment, and

Train employee and contractors with regard to safety and environmental obligations

This environmental management plan was written to guide short-term goals and decision making and will provide environmental related guidelines. By having this plan in place, the Construction Contractor will have means to make good decisions. With public input, the plan helps agencies measure public opinion. It can help to guide future management decisions, especially when citizens are affected. It creates focus within an agency, guiding it through management changes.

## **2 OVERALL EMP RESPONSIBILITY**

The Project Manager/Construction Contractor is the designated responsible person in terms of construction site regulations for the contractor and will also be responsible for environmental

control on site during the bulk services installation period. Ideally it is suggested that a pre-construction meeting should be held in order to reach an agreement on specific roles of the various parties and possible penalties for non-compliances.

## **2.1 Training and Induction of Employees**

In terms of the Environmental Management Act No. 7 of 2007 and the Labour Act No. 15 of 2004 the developer and contractor have a responsibility to ensure that all those people involved in the project are aware of and familiar with the environmental, health and safety requirements for the project (this includes sub-contractors, casual labour, etc.) and in compliance to the EMP. This EMP shall be part of the terms of reference for all contractors, sub-contractors and suppliers. All contractors, sub-contractors and suppliers have to give some assurance that they understand the EMP and that they will undertake to comply with the conditions therein. All senior and supervisory staff members shall familiarize themselves with the full contents of the EMP. They shall know and understand the specifications of the EMP and shall be able to assist other staff members in matters relating to the EMP. It is further suggested that Construction Contractor establishes environmental, health and safety performance objectives and targets for the project.

## **2.2 Environmental Monitoring**

Environmental monitoring must be undertaken on a regular basis by both the WBM and MEFT. This monitoring will be undertaken in order to ensure compliance with all aspects of this EMP. In order to facilitate communication among all stakeholders, it is vital that a suitable chain of command is structured that will ensure that the recommendations have the full backing of the construction teams.

## **2.3 EMP Amendments and Instructions**

No EMP amendments (relaxation or revision of any mitigation measure) shall be allowed without approval from the relevant authority (i.e. MEFT). Motivations for amendments to the EMP may be discussed with the MEFT and WBM. These amendments or instructions issued by both the MEFT and WBM shall be implemented within the specified time frame.

## **2.4 Mitigation Measures**

Specified activities that pose potential environmental impacts and environmental management mitigation measures to be implemented during construction are tabulated below. The regulation

of construction activities and the general conduct of the workforce is an essential component of this EMP.

MITIGATION MEASURES RELATED TO THE ESTABLISHMENT OF THE CONTRACTORS LAYDOWN AREA	RESPONSIBILITY
<p>Potable water must be made available at all times at various points within the Contractor's area. There is a need to provide portable chemical toilets. An adequate number of waste receptacles must be available at strategic locations for gathering all types of refuse, and to minimize littering - for disposal at the existing Walvis Bay landfill site. Recycling and the provision of separate waste receptacles for different types of waste must be encouraged. A dedicated source of water for dust suppression purposes must be determined during site establishment. Chemical toilet should also be provided.</p>	<p>Project Contractor &amp; Service Contractors</p>

MITIGATION MEASURES RELATED TO THE MAINTENANCE OF THE CONTRACTORS LAYDOWN AREA IMPACTS	RESPONSIBILITY
<p>The Contractor must monitor and manage the drainage of the site to avoid standing water and soil erosion.</p>	<p>Project Contractor &amp; Service Contractors</p>
<p>The general cleanliness of the site and compliance with the WBM waste disposal requirements and health regulations will form part of the site inspections. Where possible, waste must be collected for recycling programmes provided that the original contents of the containers are not hazardous. Scrap metal (components, sheet metal, nails and tins) must be stored in a designated scrap metal container (e.g. a skip). When the scrap metal container is full, the scrap metal must either be collected by a scrap metal dealer or transferred to an appropriate disposal site. Hazardous substance containers, contaminated substrates and materials used in the clean-up of spillages must be stored in a designated, impermeable container (e.g. a skip). The hazardous substance containers, contaminated soil, clean-up materials, etc. must be transferred to the Walvis Bay municipal hazardous disposal site on a regular basis. A contingency</p>	<p>Project Contractor, WBM Officers – Building Inspectors</p>

<p>plan for any spills must be in place. Contractors must ensure that no spillage occurs, and must be cleaned and cleared and the contents carefully stored and transported when removing off-site. All spills must be recorded in the incident management system.</p>	
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MITIGATION MEASURES RELATED TO CONSTRUCTION ACTIVITIES IMPACTS	RESPONSIBILITY
<p>Manually concrete mixing is to be undertaken on a hard surface covered in plastic sheeting so that concrete waste and runoff can be contained. All concrete waste is to be collected, recycled if possible, and removed from the site for disposal at existing WBM Landfill site. On completion of construction, all leftover construction materials are to be removed from the working area. The materials must be disposed of at the existing WBM Landfill site, sold / donated. Materials should be prepared and stored away. Implement best available technological measures to prevent seepage of liquid materials into ground where it could contaminate groundwater. Ensure prompt cleaning up of accidental/incidental spillages. Ensure that any machinery / equipment is maintained in a good operating condition to prevent the contamination of hydrological features by diesel, grease, oil, etc. derived from the working area. Create specially designated areas for vehicle, machinery and equipment maintenance.</p>	<p>Project Contractor &amp; Service Contractors</p>

MITIGATION MEASURES RELATED TO SAFETY	RESPONSIBILITY
<p>Material stockpiles must be stable and well secured to avoid collapse and possible injury to workers / local residents. Flammable materials should be stored as far as possible from any sensitive receptors. No materials are to be stored in unsuitable or high-risk areas. All trenches should be demarcated.</p>	<p>Project Contractor &amp; Service Contractors</p>
<p>Material Safety Data Sheets (MSDS's) shall be readily available on site for all chemicals and hazardous substances to be used on site. Where possible and available MSDS's should include additional information on</p>	<p>Project Contractor, WBM Officers – Building Inspectors</p>



<p>ecological impacts and measures to minimize and mitigate against any negative environmental impacts in the result of an accidental spill. Temporary hazardous storage and refueling areas must be bounded with an impermeable liner to protect groundwater quality. Temporary storage areas containing hazardous substances / materials must be clearly signed. Staff handling hazardous substances / materials must be aware of their potential impacts and follow appropriate safety measures.</p>	<p>and Environmental Health Practitioners</p>
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<p>MITIGATION MEASURES RELATED TO THE EDUCATION OF SITE STAFF ON GENERAL AND ENVIRONMENTAL CONDUCT Y</p>	<p>RESPONSIBILITY</p>
<p>Ensure that all site personnel have a basic level of environmental awareness training. Translators are to be used if necessary. No alcohol / drugs to be allowed on site and driving under the influence of alcohol is prohibited. No firearms allowed on site or in vehicles transporting staff to / from the site (unless used by security personnel). Prevent excessive noise. Construction staff is to make use of the facilities provided for them, as opposed to ad hoc alternatives..</p>	<p>Project Contractor WBM Officers - Health Practitioners</p>

<p>MITIGATION MEASURES RELATED TO POLLUTION MANAGEMENT AND CONTROL IMPACTS</p>	<p>RESPONSIBILITY</p>
<p>Excavation, handling and transport of materials must be avoided under high wind conditions or when a visible dust plume is present. During high wind conditions, dust suppression measures will be required. Soils stockpiles are to be located in sheltered areas where they will not be exposed to the erosive effects of the wind. Appropriate dust suppression measures must be used when dust generation is unavoidable (dampening with water). Disturbance of the residents in the vicinity of the construction areas will have to be taken into account during the construction period. The sitting of areas for delivery of equipment and materials must take into account the noise generated by the vehicle as well as noise generated by off-loading equipment. Jackhammers and their associated compressors exhibit continuous</p>	<p>Project Contractor &amp; Service Contractors</p>

<p>noise that could impact on nearby residents. Where possible acoustic treatment of the jackhammers must include silencers on the exhausts. Concrete mixers must be sited to minimize the impact on nearby residents. All vehicles and equipment must be properly maintained to reduce unnecessary noise. Factors to take into account are the arriving and departing traffic; loading and unloading of equipment and materials, and day-to-day operations. All soil that is contaminated must be removed and stored in a skip until it can be disposed of at the WB municipal hazardous disposal site. All wastewater and polluted runoff from contaminated areas must be channeled into appropriately sized, designed and located collection sump. All equipment that may leak on an impermeable surface should be stored with watertight drip trays to catch any pollutants. The drip trays must be cleaned regularly, and must not be allowed to overflow. Chemicals collected in the drip trays must be collected and disposed of in an appropriate manner (MSDS).</p>	
<p>Contaminated liquids and sediments from the wastewater management system must be disposed of at WB municipal hazardous waste disposal site. All liquid fuels (e.g. diesel and petrol) which are stored in tanks or drums must have a 110% volume bund wall around the tanks to prevent liquids from escaping in the event of a spill or leak. Any person delivering fuels or other chemicals to the site must be aware of the appropriate storage / drop-off locations and the environmental controls that apply. The handling and storage of hazardous materials must be in accordance with the MSDS and must be restricted to designated areas. Additional areas / sites required for the storage or handling of hazardous substances must be assessed. An inventory of all fuels and hazardous substances to be used and stored on the site, and must ensure that they know the effects of these substances on their staff and the environment. Quantities of fuels and chemicals stored on site must be appropriately stored and handled so as to minimize the risk of spills. All fuels and chemicals must be confined to specific and secured areas. Chemicals must be stored in a bounded area with an impermeable base (e.g. concrete or plastic lining). The accidental or negligent spillage of any fuels or potentially hazardous substances must be cleaned up</p>	<p>Project Contractor, Service Contractors, WBM - Hazardous Waste Inspector</p>

immediately using the most appropriate methodologies, equipment and materials and by specialist where required. Necessary materials and equipment and chemicals should be available on the site to deal with spills of any of the hazardous materials present.	
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MITIGATION MEASURES RELATED TO SOCIO-ECONOMIC ENVIRONMENTAL IMPACTS	RESPONSIBILITY
Local labour (male and female, skilled and unskilled) should be employed as a priority. Workers are to be made aware that employment is only temporary and will cease at the end of the contract period. Where possible, employment of local persons should be used for capacity building.	Project Contractor & Service Contractors
Surrounding communities are to be informed of any inconveniences caused by the construction activities. A complaints line or person is to be made available and incidents are to be addressed and recorded. I&AP's need to be made aware of the existence of the complaints register and the methods of communication available to them.	Project Contractor, Service Contractors, WBM Officers – Environmental Officer

MITIGATION MEASURES RELATED TO NOISE POLLUTION	RESPONSIBILITY
Noise pollution will exist due to heavy vehicles accessing the sites with building materials, and machinery flattening the dunes and creating new roads. Cement mixing, drilling and excavating will be some additional noise producing activities.  The World Health Organization (WHO) guideline on maximum noise levels (Guidelines for Community Noise, 1999) to prevent hearing impairment can be followed during the construction phase. This limits noise levels to an average of 70 db over a 24 hour period with maximum noise levels not exceeding 110 db during the period. It is recommended that any complaints regarding noise be registered	Project Contractor, Service Contractors, WBM Officers – Environmental Health Practitioners

MITIGATION MEASURE RELATED TO WASTE PRODUCTION AND ABLUTION FACILITY	RESPONSIBILITY
<p>The ability of products and building rubble to act as a waste which must be cleaned up or removed off-site.</p> <p>The contractor must ensure that adequate temporary disposal facilities are available at the construction site. Products that can be re-used or re-cycled should be kept separate. Waste should be disposed of regularly and at the municipal disposal site.</p> <p>Mobile chemical ablution facilities should be made available to anybody working at the site. The ratio of the number of these ablution facilities to the number of employee's onsite should be discussed and agreed upon with the Local Authority in terms of the Labour Act as well as Environmental Health Act. Waste from this ablution facility needs to be appropriately disposed of at the municipal sewage treatment plant regularly.</p>	<p>Project Contractor &amp; Service Contractors</p>

### 3 OVERALL CONCLUSION AND RECOMMENDATIONS

In order for the general provisions of this EMP to be fully implemented the following general conditions be enforced by the WBM are proposed:

- The EMP to be binding on all the parties involved in the construction phase and be enforceable at all levels of the contract operational management within the project;
- The EMP to be deemed a binding commitment by the parties to act within the intent and spirit of sound environmental management and to cooperate and enforce the specifications contained therein, as and where necessary, and
- In order to ensure strict adherence to this EMP the WBM, with the assistance of the Project Manager/Construction Contractor, will bear the ultimate responsibility of implementation

Strict adherence to the EMP recommendations made in this report as well as compliance to all relevant legislation should be the daily management and operation norms during the installation of the bulk services (water, sewer and electricity).

**Annexure A** - Environmental Clearance Certificate previously issued

**Annexure B** - NAMPAB's decision

**Item****Date**

261/2016  
17/4/1/W5/2 Ext 13

06 December 2016

**NARRAVILLE EXTENSION 13: ESTABLISHMENT OF THE TOWNSHIP ON FARM NO. 65 (A PORTION OF THE FARM WANDERDÜNEN NO. 23) (MUNICIPALITY OF WALVIS BAY) (Nar. A/13-MD-8CC-V2)**

The Board recommended that matter be referred back to the applicant for the following reasons:

- submit a checklist;
- split the application into two farms;
- to finalise the incorporation of farm boundaries;
- to follow the decision of NAMPAB and finalise it;
- submit diagrams to the Surveyor General for approval;
- submit date stamped layout plans on a larger natural scale (A2);
- indicate the correct True North on the layout plans;
- provide a separate erf list on A4 paper; and
- provide a better locality plan indicating the whole Farm Wanderdünen and the proposed subdivisions.