

**ENVIRONMENTAL MANAGEMENT PLAN (EMP) FOR THE
PROPOSED CLOSURE AND REZONING OF ERF 1970 FROM
“PUBLIC OPEN SPACE” TO “INSTITUTIONAL” EXTENSION 9,
OUTAPI, OMUSATI REGION.**

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PROJECT NAME ENVIRONMENTAL MANAGEMENT PLAN FOR THE PROPOSED CLOSURE AND REZONING OF ERF 1970, FROM “PUBLIC OPEN SPACE” TO “INSTITUTIONAL”, EXTENSION 9, OUTAPI, OMUSATI REGION.

DOCUMENT ENVIRONMENTAL MANAGEMENT PLAN (EMP)

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LIST OF ACRONYMS

CLB	Communal Land Board
DEA	Directorate of Environmental Affairs
DWA	Directorate of Water Affairs
EAP	Environmental Assessment Policy
EAP	Environmental Assessment Practitioner
ECC	Environmental Clearance Certificate
EIA	Environmental Impact Assessment
EMA	Environmental Management Act
EMP	Environmental Management Plan
I&APs	Interested and Affected Parties
MAWF	Ministry of Agriculture Water and Forestry
MET	Ministry of Environment and Tourism
MoEAC	Ministry of Education Arts and Culture
MoHSS	Ministry of Health and Social Services
MoLER	Ministry of Labor and Employee Relations
MWT	Ministry of Works and Transport
NamWater:	Namibia Water Corporation (Pty) Ltd
PHE	Public Health and Environmental Act
TA	Traditional Authority

1. INTRODUCTION AND BACKGROUND

1.1 Introduction

Melrose College Academy, hereinafter referred to as the proponent were allocated Erf 1970 located in Extension 9, Outapi, Omusati region. Erf 1970, measures approximately and is currently zoned “Public Open Space. In terms of the Townships and Division of Land Ordinance 11 of 1963 and the Outapi Town Planning Scheme, town planning procedures should be applied by applying for the Closure and Rezoning of the Erf as a Public Open Space to Institutional to accommodate the intended activities.

As such the proponent was requested to carry out the following activities.

- Closure and Rezoning of Erf 1970 from its current zoning “Public Open Space” to Institutional
- Installation of Municipal services as per the Town Council standard and approvals
- Construction of an Institutional building and associated infrastructure
- Operation of the Melrose Academy College

In terms of the Schedule 5.1 (a) of the Environmental Impact Assessment Regulations of February 2012, the Closure and rezoning of land from (a) Public Open Space to any other land use, cannot be undertaken without an EIA being carried out and an ECC being obtained, hence this study. Green Gain Consultants cc has been appointed to conduct the required EIA study and apply for the ECC for the proposed activities.

This EMP synthesizes the proposed mitigation and monitoring measures, laid out according to the various stages of the project life cycle, with clearly defined follow-up actions and responsibilities assigned to specific actors. It provides a link between the impacts identified in the EIA process and the required environmental management on the ground during the project implementation and operation. It is important to note that an EMP is a legally binding document and has been drafted by the Environmental Management Act (No. 7 of 2007) and its Environmental Impact Assessment Regulations (2012). This is not a stand-alone document but should be read in conjunction with the main report (Environmental Impact Assessment Report). Once approved by the authority, the EMP shall be a legally binding document.

1.3 Purpose of the EMP

This EMP was prepared for the Rezoning and Closure of the Erf as well as for the Planning & Design, Construction and Operation phase of the proposed school facility. The EMP has the following objectives:

- To provide the proposed mitigations measures and actions to remedy the identified environmental issues;
- To provide guidelines for the management and monitoring of the identified environmental issues;
- Provide framework for monitoring of certain aspects so as to ensure effectiveness of the proposed mitigation measures; and
- To provide guidelines to the responsible persons to follow appropriate contingency plans in the case of various possible impacts.

2. RESPONSIBILITIES

It is the core responsibility of the proponent to ensure the successful implementation of this EMP and any condition to be imposed by the competent authority and the Ministry of Environment and Tourism. The implementation of the EMP also requires the involvement of various role players, each with specific responsibilities to ensure that the development is operated in an environmentally sensitive manner.

2.1 The Proponent

Responsibilities

- a) Implement the final EMP after approval by DEA and ensure the project comply with the conditions therein.
- b) Provide for Environmental Training and awareness of the EMP to all contractors, sub-contractors and employees
- c) Notify MET and EAP of any proposed changes to the proposed school
- d) Appoint an Environmental Control Officer (ECO) to take the responsibility of the following:
 - Conduct monitoring and review of the on-site environmental management and implementation of the EMP by the Contractor and sub-contractors.
 - To audit the implementation of the EMP on a regular basis

2.2 Proponent: Resident Engineer

The proponent should appoint a Proponent or a resident Engineer. The Proponent will be delegated by the proponent to oversee the implementation of the project during the planning & design and construction phases. The Proponent will ensure that all contractor and sub-contractors are complying with the content of this EMP. The Proponent must ensure that all contractors, sub-contractors and all employees involved are aware of this EMP by providing a brief training. The Proponent will also keep record of incidences during and take corrective actions i.e. issuing of penalties in case of transgressions etc. during project implementation.

2.3 The Contractor and Sub-contractors

It is expected that various contractors and sub-contractors will be appointed at various stages and for various tasks during different phases of this project. All appointed contractors and sub-contractors involved in the project shall ensure to comply with the EMP and its conditions, thus the proponent must ensure that a copy of the EMP is given to all contractors involved. 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 duration of their activities; and
- To ensure that adequate environmental awareness training takes place in the language of their employees.

2.4 Authorities

The authorities listed below should provide supervisory and monitoring roles in order to ensure compliance the relevant legislation as outlined in Section 4.

- Outapi Town Council
- Ministry of Environment, Forestry and Tourism (MEFT)
- Ministry of Education, Arts and Culture (MEAC)
- Ministry of Health and Social Services

3. ENVIRONMENTAL MANAGEMENT REQUIREMENTS

The successful implementation of this EMP is depends on various factors, training and awareness, a good record keeping, enforcements and monthly reporting.

3.1 Environmental awareness training

All employees, contractors and sub-contractors involved in any work at the project should be briefed on their obligation towards environmental protection and methodologies in terms of the EMP prior to work commencing. The briefing should be done by the proponent prior to any work in the form of an onsite talk. Record of such trainings should be kept.

3.2 Record keeping

There should be an up to date filing system for the project whereby method statements, environmental incidents report, training records, audit reports and public complaints register are kept. It is advised that photographs of the site should be taken as a visual reference. These records should be kept for a minimum of **two (2) years**.

3.3 Enforcements: Non-compliance and penalties

This EMP upon approval by MET shall be considered a legally bidding. In cases of transgressions and non-compliance to the EMP, the transgressor should be liable to a penalty fine. Transgressions should be recorded in a dedicated register, and be filed. The Proponent shall issue the penalties in terms of the severity of the environmental damages.

Adherence to this EMP during the operation of the project will ensure that the environmental impacts associated with the project will be mitigated to a greater extent thus promoting sustainable development. The commitment and co-operation of the identified responsible person(s) will ensure effective implementation of the EMP.

3.4 Environmental Reports

The proponent shall, in the project completion report, indicate the environmental performance and matter of incidental. The EAP shall conduct regular monitor of project activities during all project phases and keep records. These records may be required by the competent authority when deemed necessary.

4. LEGAL REQUIREMENTS

As part of implementation of this EMP, the proponent must comply with the requirements of various national legislations and municipal by-laws as outlined in the Scoping Report and also briefly presented here below.

Table 1: Applicable National Laws

LEGISLATION	PROVISION AND REQUIREMENTS
Constitution of the Republic of Namibia (1990)	<p>National objectives</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.
Local Authorities Act, No. 23 of 1992 as amended	<p>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>According to Section 94 of the Act, the collection and disposal of waste is the responsibility of local and regional authorities. The Act also gives power to the Local Authorities to establish by-laws.</p>
Environmental Management Act, No.07 of 2007	<p>Ensuring that the significant effects of activities on the environment are considered carefully and in time. 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.</p> <p>The proponent shall inform the competent authority of any changes to the proposed school facilities, to see if an EIA is required or not.</p>
Public Health and Environmental Act, 2015	<p>The objectives of the PHE Act are to;</p> <ul style="list-style-type: none"> • Promote public health and wellbeing • Prevent injuries, diseases and disabilities • Protect individuals and communities from public health risks • Encourage community participation in order to create a healthy environment • Provide for early detection of diseases and public health risks <p>Section 2 requires that a). "Every local authority must take necessary reasonably and applicably measures to maintain its local authority area at all times in a hygienic and clean condition" b). Prevent occurrence of a health nuisance, unhygienic condition, an offensive condition or any condition which could be harmful or dangerous to the health of a person within its local authority or the local authority area of another local authority"</p>
Labour Act (No 11 of 2007)	<p>To establish a comprehensive labour law for all employers and employees; to entrench fundamental labour rights and protections. Regulate basic terms and conditions of employment; ensure the health, safety and welfare of employees; to protect employees from unfair labour practices; to regulate the registration of trade unions and employers' organisations; to regulate collective labour relations; to provide or the systematic prevention and resolution of labour disputes;</p> <p>Any employment provided whether by the proponent or by contractor at this site i.e. Security Services must be in accordance with the Labour Act.</p>
Employment Service Act, 8 of 2011	<p>To provide for the establishment of the National Employment Service; to impose reporting and other obligations on certain employers and institutions; to provide for the licensure and regulation of private employment agencies; and to deal with matters incidental thereto.</p>

	<p>Any employment provided whether by the proponent or by contractor at this site must be in accordance with the Labour Act.</p>
<p>Water Resources Management Act 2004</p>	<p>This Act provides provision for the control, conservation and use of water for domestic, agricultural, urban and industrial purposes. In addition the Act clearly gives provision that pertain with license or permit that required abstracting and using water as well as for discharge of effluent.</p> <p>The effluent of human waste under this framework is the main focus; the use of mobile toilets during construction phase should be properly positioned. Permanent ablution facilities for the school should be connected to the septic tank and a Wastewater discharge permit should be obtained from MAWF. No discharge of raw wastewater in the open environment is allowed</p>
<p>National Heritage Act 27 of 2004</p>	<p>The Act provide for the protection and conservation of places and objects of heritage significance and the registration of such places and objects; to establish a National Heritage Council; to establish a National Heritage Register; and to provide for incidental matters.</p> <p>Any material of cultural, heritage or archaeological importance shall be reported to the National Heritage Council (NHC) in accordance with this Act</p>
<p>National Forestry Act, No. 12 of 2001</p>	<p>This Forest Act 12 of 2001 requires that tree species and any vegetation within 100m from a watercourse may not be removed without a permit (S22 (1)).</p> <p>Ensure compliance to the requirement of this Act to avoid transgression. Protected species observed at the site must be incorporated in the design and be part of the landscape</p>
<p>Atmospheric Pollution Prevention Ordinance, no. 11 of 1976</p>	<p>To provide for the prevention of the pollution of the atmosphere, and for matters incidental thereto. The Ordinance deals with administrative appointments and their functions; the control of noxious or offensive gases; atmospheric pollution by smoke, dust control, motor vehicle emissions; and general provisions.</p> <p>According to the Ordinance, the Local Authority shall control and prevent atmospheric air pollution or emission of noxious or offensive gases by smoke.</p>
<p>Townships and Division of Land Ordinance 11 of 1963</p>	<p>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>The proponent is a Local Authority. The need and desirability for the proposed subdivision has been approved.</p>

5. IMPLEMENTING THE EMP: ROLES AND RESPONSIBILITIES

The proponent should play a pivotal role in implementing this EMP. This section provide a manner in which the EMP is to be implemented and also outlining responsibilities of all parties involved perform their respective roles in accordance with this EMP.

Table 3: Management Plan: Planning and Design

Environmental Issue/Impacts	Mitigation Measures	Roles and Responsibilities	
		Implementation	Monitoring
Legal compliance	<ul style="list-style-type: none"> Obtain approval of the proposed Rezoning from Outapi Town Council Approval should be obtained from the Urban and Regional Planning Board for the intended Closure and Rezoning 	Town Planner	Outapi Town Council
Groundwater pollution due to poor planning and placement of school facilities and use of construction materials	<ul style="list-style-type: none"> School structures such as toilets should be connected to septic tank system Sewage pipes to be used must be non-hazardous and rust free (i.e. polythene instead of asbestos) The school ground should be interlocked Obtain Wastewater Discharge Permit from MAWF 	Design Contractor	Proponent
Health Safety issues (fire, disease control, student behavior management)	<ul style="list-style-type: none"> Ablution facilities must be a distance from the classrooms and should be well ventilated School design should make provision for the location of the supervising staff's offices in order to implement special supervisory measures Make provision for dropping and picking zones and parking areas to avoid traffic congestion and reduce accidents on the road 	Design Contractor	Proponent
Indoor safety	<ul style="list-style-type: none"> The structure of the facility should not have any openings in the ground or on the walls in order to avoid any venomous animals such as scorpions or snakes to hide there The tiles should be non-slip while the type of paint easily maintained and cleaned. Stairs should have a railing and be accessible to handicapped and special needs students. It is preferable to have two sets of stairs at each end of the hallway. 	Design Contractor	Proponent, MoEAC

	<ul style="list-style-type: none"> • There should be several entrances/exits for the school. • Material coating for the walls and desks should be harmless, with no sharp edges. • Ensure that there are no sharp corners that students may be exposed to 		
Visual intrusion	<ul style="list-style-type: none"> • Materials used should blend in with the surrounding environment (i.e. natural or firebricks are recommended) • Landscaping with indigenous plants and incorporate existing trees to enhance the view 	Design Contractor	Proponent, MWT
Provision for student with special need	<ul style="list-style-type: none"> • Provision of access Ramps and special desks, • Provisions for the optically challenged and hearing impaired need to be available at the schools, • Provisions for the optically challenged and hearing impaired need to be available at the schools, • Provision for toilets for handicapped with wide doors and side railings. 	Design Contractor	Proponent
Protection from intruders	<ul style="list-style-type: none"> • Build a high fence around the school and provide a guardhouse near the entrance. • If possible, installing surveillance cameras may also serve to improve control of the entrances and exits. 	Design Contractor	Proponent
Protection from earthquake	<ul style="list-style-type: none"> • Although this impact is unpredictable, it must be taken into consideration when designing the structure of the building. 	Design Contractor	Proponent
Provision for Traffic management	<p>Include in bidding documents that the contractor should:</p> <ul style="list-style-type: none"> • Limit the use of vehicles to the site and avoid unnecessary trips • Set up a time schedule for transporting material with the purpose of avoiding traffic congestion 	Design Contractor	Proponent
Water and Energy demand Management	<ul style="list-style-type: none"> • Include in bidding documents that the contractor should commit to minimizing the use of water during construction works • Make provision for Rainwater harvesting through gutters and storage drums • Make provision for renewable energy (Solar) • Incorporate Green Building Codes as per the Green Building Council 	Design Contractor	Proponent

Student psyche inside classroom	<ul style="list-style-type: none"> • Select stimulating colors for the classroom walls • Give preference to natural ventilation whenever possible taking into consideration that windows should be wide enough to allow sunlight to enter but not enough to allow too much heat during the summer • Include air conditioning wherever possible • Provide natural lighting whenever possible in accordance with Building Council Codes • Design trees outside classroom windows whenever possible 	Design Contractor	Proponent
Public health and Safety provision	<ul style="list-style-type: none"> • Include a medical examination room in the school design 	Design Contractor	MoHSS
Sanitary facilities	<ul style="list-style-type: none"> • Provide 1 toilet facility for every 40 students, or as in accordance with Ministry of Education requirements • Provide ventilation in toilets in accordance with the 	Design Contractor	Proponent, MoHSS

Table 4: Management Plan: Construction

Environmental Issue/Impacts	Mitigation Measures	Roles and Responsibilities	
		Implementation	Monitoring
Impact on biodiversity (flora and fauna)	<ul style="list-style-type: none"> • Only vegetation that are directly affected by the project may be cleared. • The initial design must include open spaces for planting trees and shrubs. • Protected species should be marked and incorporated in the development as part of the landscaping/gardening. • No animal must be trapped, killed for any purpose of whatsoever. 	Building Contractor	Proponent
Impact on groundwater	<ul style="list-style-type: none"> • No direct discharge of pollution (waste water or solid waste) into waterbodies. • Effluent from toilets should be discharged in the Outapi Town Council sewage treatment plant. • With regards to temporary settlement at the site (if allowed), the Proponent must ensure that contractors have proper temporary sanitation measures on site and any spillage must be monitored and attended to • Do not use floor materials that can easily crack or leaks after construction, instead a concrete cast floor is recommended 	Building Contractor	Proponent, MAWF
Impact on soil	<ul style="list-style-type: none"> • Avoid too much compaction of soil by setting designated access roads for heavy vehicles. • Minimize soil exposure time during construction • Minimize the use of chemicals such as lubricants, solvents, and petroleum products 	Building Contractor	Proponent, MAWF
Waste generation	<ul style="list-style-type: none"> • All waste generated must be contained and properly dumped at the nearest municipal or any formal waste dumping sites. • The contractor’s managers must create awareness among all employees regarding waste disposal in order to avoid illegal dumping. 	Building Contractor	Proponent,
Management of Dust and atmospheric pollution	<ul style="list-style-type: none"> • Avoid too much dust by sprinkle the construction site with water regularly. • Ensure proper maintenance of vehicles and equipment to minimize release of fumes and other pollutants in the air. 	Building Contractor	Proponent, MET

	<ul style="list-style-type: none"> • Mix material in an enclosed space • Cover material when transporting • Prohibit open burning in accordance with Air Pollution Control Ordinance 		
Traffic Management	<ul style="list-style-type: none"> • Avoid using busy roads especially during rush hours, i.e. early mornings (06:00-08:00AM) and late afternoon (05:00-06:00PM). • The contractors must ensure to use clear road signs at construction sites to minimize risks of accidents. • Limit the use of vehicles to the site and avoid unnecessary trips 	Building Contractor	Proponent, MWT
Noise and Vibration Management	<ul style="list-style-type: none"> • Abide by the time and noise limits specified in Noise Control Regulations • Provide employees with Personal Protective Equipment (i.e. earmuffs) 	Building Contractor	Proponent,
Occupation health and Safety	<ul style="list-style-type: none"> • Personal protective equipment like dust mask is must be provided to all employees working in the likely dusty areas. • Proper signage in accordance at construction site • Provision of firefighting measures in accordance with Labor Act • Appoint Safety Officer in accordance with Labor Act • Provide fencing around the construction site at all times 	Building Contractor	Proponent, MoHSS
Workers' sanitation	<ul style="list-style-type: none"> • One sanitary facility (1 toilet with shower, 1 washing basin, 1 urinal) per 25 workers • Sanitary facilities to be covered, easily accessible, ventilated, well lit, maintained, and sanitized • Ensure safe drinking water for employees 	Building Contractor	Proponent, MAWF
Water Demand	<ul style="list-style-type: none"> • Commit to minimizing the use of water during construction works • Recycle water for construction activities 	Building Contractor	Proponent, NamWater
Archaeological resources	<ul style="list-style-type: none"> • Should there be any suspected archaeological findings during construction, it must be reported to the NHC in accordance with National Heritage Act. 	Building Contractor	Proponent, NHC
Employment opportunities (+ve)	<ul style="list-style-type: none"> • Give priority to local people 	Proponent	Proponent, MLEC

Table 5: Proposed Mitigation Measures: Operation

Environmental Issue/Impacts	Mitigation Measures	Roles and Responsibilities	
		Implementation	Monitoring
Impact on groundwater	<ul style="list-style-type: none"> No direct discharge of pollution (waste water or solid waste) into the watercourse. Effluent from septic tank should be discharged in the Outapi Town Council sewage treatment plant. Obtain Waste discharge permit from MAWF. Ensure that sanitary facilities are frequently cleaned and regularly monitored. Proper maintenance of floors and walls to fill cracks Only use cleaning detergents that are environmentally friendly Do not store dangerous goods i.e. fuel at school yard Do not operate vehicle maintenance workshops within the school yard Monitor sewer connection and ensure adherence to standards 	Proponent	Outapi Town Council
Student psyche inside classroom	<ul style="list-style-type: none"> Involved the students in the decoration of their classrooms 	Proponent	Outapi Town Council
Water and Energy demand	<ul style="list-style-type: none"> Harvest rainwater for use in gardening and other activities Provide solar panels to provide energy Enforce energy and water conservation measures 	Proponent	Outapi Town Council
Indoor and outdoor safety	<ul style="list-style-type: none"> Provide constant monitoring of student activities 	Proponent	Outapi Town Council
Waste generation	<ul style="list-style-type: none"> All waste generated must be contained and properly dumped at the nearest municipal or any formal waste dumping sites. Encourage waste segregation through a 3bin system (Tins, Paper, Plastics) Encourage recycle of waste 	Proponent	Outapi Town Council

Injury from car accidents	<ul style="list-style-type: none"> • Install proper signage wherever possible • Provide speed bumps and zebra crossings if possible 	Proponent	Outapi Town Council
Safety in workshops and laboratories	<ul style="list-style-type: none"> • Provide constant monitoring of student activities in the workshops and laboratories • Students should wear gloves and have access to a first aid kit 	Proponent	Outapi Town Council
Public Health and Safety	<ul style="list-style-type: none"> • Appoint a Safety Officer who should monitor all health and safety issues at school • Appoint a medical examination officer at school • Ensure general cleanliness of the building, most importantly the sanitary facilities 	Proponent	Outapi Town Council
Employment opportunities (+ve)	<ul style="list-style-type: none"> • Give priority to local people 	Proponent	MoLER

