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TOWN, REGIONAL PLANNERS AND ENVIROMENTAL CONSULTANTS

PREPARED FOR:	DIRECTORATE OF EDUCATION, INNOVATION, SPORTS, ARTS AND CULTURE, OMAHEKE REGIONAL COUNCIL
PROJECT NAME:	**ENVIRONMENTAL MANAGEMENT PLAN** FOR THE SUBDIVISION OF THE REMAINDER OF FARM GOBABIS TOWNLANDS NO. 114 INTO PORTION 181 AND THE REMAINDER AND THE ENVIRONMENTAL IMPACT ASSESSMENT FOR THE REZONING AND CONSTRUCTION OF A SECONDARY SCHOOL IN EPAKO, GOBABIS
APPLICATION NO.:	**251106006622**
DATE:	12 FEBRUARY 2026
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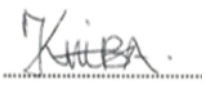
AUTHOR SIGNATURE:	

EXECUTIVE SUMMARY

This Environmental Management Plan (EMP) has been developed to guide the environmentally responsible implementation of the proposed subdivision, rezoning, and construction of a public secondary school on Portion 181 of the Remainder of Farm Gobabis Townlands No. 114, located in Epako, Gobabis. The project aims to address the growing demand for secondary education within the Omaheke Region and support the broader socio-economic development agenda of the Gobabis Municipality and the regional government.

The project site covers approximately 20 hectares, bordered by the Epako Cemetery to the north, open land to the east and south, and an existing municipal road to the west. The development will include educational facilities such as classrooms, laboratories, administrative buildings, ablution facilities, sports grounds, parking areas, internal access roads, and supporting service infrastructure.

The EMP outlines potential environmental impacts associated with both construction and operational phases, including dust and noise emissions, soil disturbance, waste generation, traffic movements, and increased demand for water and sanitation services. These impacts are generally of low to moderate significance and can be effectively mitigated through the measures proposed in this plan.

Key environmental considerations include the site's semi-arid climate, sandy-loam soils, and savanna vegetation, none of which host sensitive ecological or heritage features. The social environment is characterized by high population density in Epako, where improved institutional services, particularly education, are urgently needed.

This EMP provides a comprehensive framework for impact mitigation, monitoring, and compliance. It prescribes the responsibilities of the contractor, Environmental Control Officer (ECO), and the proponent throughout the project life cycle. With proper implementation of this EMP, the proposed secondary school development is expected to result in long-term positive socio-economic benefits while minimizing adverse environmental impacts.

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ABBREVIATIONS

EMP	Environmental Management Plan
EIA	Environmental Impact Assessment
ECC	Environmental Clearance Certificate
MEFT	Ministry of Environment, Forestry and Tourism
ECO	Environmental Control Officer
OHS	Occupational Health and Safety
PPE	Personal Protective Equipment
GN	Government Notice
SMT	School Management Team
DEA	Directorate of Environmental Affairs
RKPC	Ritta Khiba Planning Consultants
MWT	Ministry of Works and Transport

1. INTRODUCTION

1.1 Background

The Environmental Management Plan (EMP) forms part of the Environmental Impact Assessment (EIA) process undertaken for the proposed subdivision of the Remainder of Farm Gobabis Townlands No. 114 into Portion 181 and the remainder, and the rezoning and construction of a new secondary school in Epako, Gobabis. The project is initiated by the Omaheke Regional Council through the Directorate of Education, Innovation, Sports, Arts and Culture, in response to the growing demand for formal secondary education within the Gobabis municipal area.

The EMP provides a practical framework for environmental protection and management during the planning, construction, and operational phases of the development. It ensures compliance with the Environmental Management Act (No. 7 of 2007) and its Regulations, thereby supporting sustainable development principles in Namibia.

1.2 Purpose of the EMP

The primary purpose of this Environmental Management Plan is to:

a) Provide clear, actionable mitigation measures for all identified environmental impacts
b) Safeguard environmental quality and promote responsible resource use during construction and operation
c) Guide contractors, the proponent, and all personnel involved in the project on the environmental requirements
d) Ensure compliance with national legislation, municipal by-laws, and environmental best practice
e) Protect the socio-economic well-being of surrounding communities
f) Establish roles, responsibilities, and reporting procedures for effective environmental management

The EMP therefore acts as an operational tool to ensure that the project is implemented in an environmentally sustainable manner.

1.3 Scope of the EMP

This EMP covers the environmental management requirements for:

a) Site preparation and clearing;
b) Construction of buildings, services, and associated infrastructure;
c) Installation of utilities (water, sewer, electricity, stormwater systems);
d) Operational activities once the school is functional;
e) Rehabilitation measures where necessary;
f) Environmental monitoring, reporting, and compliance requirements;

It applies to all contractors, subcontractors, service providers, and project stakeholders involved in the development.

1.4 Objectives of the EMP

The key objectives include:

a) Preventing or minimizing negative environmental impacts;
b) Promoting compliance with the Environmental Management Act and other national regulations;
c) Enhancing positive socio-economic impacts such as job creation and improved educational services;
d) Ensuring environmental protection throughout the project lifecycle;
e) Establishing a clear chain of responsibility for environmental management;
f) Providing a reference document for the Environmental Control Officer (ECO);

1.5 Methodology for Developing the EMP

The EMP has been informed by:

a) Baseline environmental information collected in the study area;
b) Site visits and observations;
c) Consultations and public participation inputs;
d) The legislative requirements governing listed activities in Namibia;
e) Best-practice guidelines for environmental management in construction and institutional developments;

The EMP is a living document and may be revised when necessary to reflect new information or changing project conditions.

1.6 Structure of the EMP

The EMP consists of the following components:

1. Introduction
2. Project Description
3. Legal and Regulatory Framework
4. Environmental Baseline
5. Impact Identification and Assessment
6. Environmental Mitigation Measures
7. Monitoring and Reporting Plan
8. Emergency Preparedness and Response
9. Roles and Responsibilities
10. Decommissioning Considerations

2. PROJECT DESCRIPTION

2.1 Overview of the Proposed Development

The proposed project involves the subdivision of the Remainder of Farm Gobabis Townlands No. 114 into Portion 181 and the remainder, followed by the rezoning and development of Portion 181 for the establishment of a public secondary school in Epako, Gobabis. The project supports the regional education infrastructure framework, addresses current overcrowding in existing schools, and aims to create long-term opportunities for socio-economic development.

2.2 Location of the Project Site

a) **Town:** Gobabis
b) **Suburb / Area:** Epako Township
c) **Region:** Omaheke Region, Namibia
d) **Coordinates:** -22.43472 S 19.00111 E
e) **Land Parcel:** Portion 181 (to be subdivided from the Remainder of Farm Gobabis Townlands No.114)

2.2.1 Surrounding Land Uses

a) **North:** Epako Cemetery
b) **East & South:** Undeveloped open land
c) **West:** Municipal access road and urban developments

The project site is situated within a rapidly growing residential zone, making it an ideal location for institutional infrastructure.

2.3 Nature and Scope of the Proposed Activity

2.3.1 Key Components of the Development

The secondary school facilities will include:

a) Classroom blocks
b) Science and computer laboratories
c) Administrative block
d) Ablution facilities
e) Sports grounds and recreational areas
f) Internal access roads and parking areas
g) Perimeter fencing
h) Water, electricity, and sewerage connections
i) Stormwater management systems

j) Waste collection and storage facilities

2.3.2 Construction Activities

a) Site clearing and leveling
b) Excavation and foundation work
c) Building construction
d) Installation of services and utilities
e) Landscaping and greening
f) Occupational health and safety management
g) Implementation of environmental mitigation measures

2.3.3 Operational Activities

a) Daily educational operations
b) Waste management and sanitation
c) Traffic movement of staff, learners, and service vehicles
d) Facility maintenance and grounds management

2.4 Project Size and Duration

a) **Total land area:** ±20 hectares
b) **Construction footprint:** ±2 hectares for core facilities
c) **Construction duration:** Estimated 6–12 months
d) **Operational lifespan:** Long-term public service facility
e) **Learner capacity:** ±800–900 learners
f) **Employment:**
    - Temporary: Construction workers, contractors, suppliers
    - Permanent: Teachers, administrators, maintenance staff

2.5 Project Motivation

The development responds to:

a) Increasing school enrolment in Epako and Gobabis
b) Pressure on existing secondary schools
c) Regional and national goals of expanding access to quality education
d) Spatial development priorities of the Gobabis Municipality

The project is therefore considered socially and economically desirable, with manageable environmental impacts.

3. LEGAL AND REGULATORY FRAMEWORK

3.1 Introduction

The implementation of the proposed subdivision, rezoning, and construction of a secondary school in Epako, Gobabis must comply with Namibia's environmental and land-use legislation. This section outlines the key laws, policies, regulations, and institutional requirements applicable to the project. The purpose is to ensure that all stages of the project; planning, construction, and operation are conducted within the boundaries of national statutory obligations and environmental best practice.

3.2 Key Legislation

3.2.1 The Environmental Management Act (EMA), No. 7 of 2007

The Environmental Management Act is the principal environmental law in Namibia. Its objectives include:

a) Promoting sustainable development
b) Preventing, mitigating, and monitoring environmental impacts
c) Ensuring public participation in environmental decision-making
d) Requiring Environmental Clearance Certificates (ECCs) for listed activities

Relevance to the project: Subdivision of land, rezoning, and construction of institutional facilities triggers listed activities under the *Environmental Impact Assessment Regulations (2012)*, requiring an EIA and EMP to obtain an ECC from the Environmental Commissioner.

3.2.2 Environmental Impact Assessment Regulations (GN No. 30 of 2012)

These regulations operationalize the EMA and outline:

a) Requirements for EIAs
b) The process for obtaining an ECC
c) Public participation obligations
d) Roles of the Proponent, Environmental Consultant, and Environmental Commissioner

Relevance: This development is a listed activity, requiring compliance with the Environmental Impact Assessment process and approval prior to any construction in terms of section 56 of the Environmental Management Act, 2007 (Act No. 7 of 2007).

3.2.3 Local Authorities Act, No. 23 of 1992

Provides for:

a) Local authority administration
b) Regulation of land use
c) Building plan approvals
d) Municipal service provision (water, sewerage, waste management)

Relevance: The Gobabis Municipality must approve the subdivision, rezoning, service installation, and building plans.

3.2.4 Urban and Regional Planning Act, No. 5 of 2018

This Act guides:

a) Spatial planning
b) Rezoning and subdivision processes
c) Land development control
d) Compliance with structure and zoning plans

Relevance: The rezoning of Portion 181 to "Institutional" must be carried out in accordance with this Act.

3.2.5 Public and Environmental Health Act, No. 1 of 2015

Aims to protect public health by regulating:

a) Waste management
b) Sanitation
c) Water quality
d) Disease prevention

Relevance: Construction sites must maintain proper hygiene standards, and the operational school must comply with sanitation and health regulations.

3.2.6 Water Act (1956) / Draft Water Resources Management Act

Regulates:

a) Use and protection of water resources
b) Prevention of water pollution
c) Sustainable use of groundwater

Relevance: The project must ensure proper wastewater management, stormwater handling, and prevent contamination of water sources.

3.2.7 Labour Act, No. 11 of 2007

Ensures:

a) Worker health and safety
b) Fair labour practices
c) Safe working conditions on construction sites

Relevance: Contractors must enforce occupational health and safety measures to prevent accidents.

3.2.8 National Heritage Act, No. 27 of 2004

Provides for:

a) Protection of archaeological, cultural, and historical sites
b) Requirements for reporting chance finds

Relevance: A chance-find procedure must be implemented during construction, although no heritage resources were identified in the EIA.

3.2.9 Forestry Act, No. 12 of 2001

Regulates:

a) Protection of indigenous vegetation
b) Removal or destruction of protected tree species

Relevance: Vegetation clearing must be minimized, and any removal of protected species requires a permit.

3.3 Compliance Requirements

To meet legal obligations, the Proponent must ensure:

a) Environmental Clearance Certificate obtained prior to construction
b) Implementation of the Environmental Management Plan (EMP)
c) Appointment of a qualified Environmental Control Officer (ECO)
d) Adherence to Gobabis Municipality regulations
e) Proper solid waste management in line with national health standards
f) Safe construction practices complying with the Labour Act
g) Reporting of any unexpected archaeological discoveries
h) Maintenance of public safety around the construction area

3.4 Institutional Roles

a) **Ministry of Environment, Forestry and Tourism (MEFT)** – Issues ECC and monitors compliance
b) **Gobabis Municipality** – Approves rezoning, subdivision, and building plans; provides services
c) **Omaheke Regional Council** – Project proponent and responsible for compliance
d) **Environmental Control Officer (ECO)** – Monitors daily environmental compliance during construction
e) **Contractors/Sub-contractors** – Implement mitigation measures

4. ENVIRONMENTAL BASELINE DESCRIPTION

4.1 Introduction

This section describes the existing (pre-development) environmental conditions of the project area to establish a baseline against which potential impacts can be assessed. The baseline environment includes the physical, biological, social, and economic characteristics of the site and its surroundings within Epako, Gobabis. Understanding these parameters ensures that environmental sensitivities are adequately considered and that mitigation measures are appropriately designed.

4.2 Physical Environment

4.2.1 Climate

The Gobabis area experiences a semi-arid climate, characterized by:

a) Hot summers with temperatures regularly exceeding 30°C
b) Cool to mild winters, with night temperatures occasionally dropping below 5°C
c) Seasonal rainfall, primarily between November and March
d) Average annual precipitation between 350 mm and 400 mm
e) High evaporation rates, typical of the Omaheke Region

4.2.2 The climate influences:

a) Dust generation potential
b) Soil moisture dynamics
c) Vegetation characteristics
d) Construction scheduling and worker safety

4.2.3 Topography

The project site consists of:

a) Generally flat to gently undulating terrain
b) Minor natural drainage lines but no major watercourses
c) Land suitable for construction with minimal earth shaping required

This topography presents low sensitivity and minimal constraints for development.

4.2.4 Geology and Soils

The soil profile in the area is dominated by:

a) Sandy-loam soils, typical of Gobabis
b) Moderate erodibility, especially when vegetation is removed
c) Low organic matter content due to arid conditions

Implications of the soil characteristics include:

a) Potential for wind erosion if not managed
b) Need for controlled excavation and re-vegetation
c) Good drainage properties for construction stability

4.2.3 Hydrology

a) The site does not contain any permanent rivers or wetlands.
b) Runoff only occurs during intense seasonal rainfall events.
c) Groundwater is present at deeper levels and is an important regional water source.
d) Key implications:
e) Low surface water sensitivity.
f) Stormwater management remains essential to prevent localized flooding and erosion.

4.3 Biological Environment

4.3.1 Flora (Vegetation)

The area falls within the Kalahari Acacia–Boscia Savanna, characterized by:

a) Sparse to moderate shrub and tree cover.
b) Dominant species likely including *Acacia erioloba*, *Acacia mellifera*, and hardy grass species.
c) Mostly disturbed or secondary vegetation due to surrounding urban expansion.

Key baseline findings:

a) No protected or endangered plant species were identified during the EIA.
b) Vegetation is not highly sensitive, but unnecessary clearing should still be avoided.

4.3.2 Fauna (Wildlife)

Common fauna expected in the area include:

a) Small mammals (e.g., rodents).
b) Reptiles typical of arid environments (e.g., lizards, geckos).
c) Bird species including both residents and seasonal migrants.

Key considerations:

a) No rare or Red List species were recorded.
b) The site's proximity to urban development reduces ecological sensitivity.
c) Construction activities may temporarily disturb small wildlife.

4.4 Social Environment

4.4.1 Population and Community Characteristics

Epako, where the site is located, is one of the most densely populated parts of Gobabis. Key demographic characteristics include:

a) Surrounding Gobabis population estimated at 35,452 people
b) Population density significantly increased due to rapid urbanization
c) Younger population structure with high school enrolment demand

The social baseline demonstrates a clear need for educational infrastructure.

4.4.2 Existing Land Use

The site is currently:

a) Undeveloped and underutilized
b) Zoned as "Undetermined" but earmarked for institutional use
c) Adjacent to Epako Cemetery (north), municipal road (west), and open land (east & south)

The surroundings include:

a) Residential areas
b) Municipal infrastructure
c) Institutional and public service facilities

4.4.3 Economic Conditions

Gobabis' local economy is driven by:

a) Public sector employment
b) Retail and service industries
c) Agriculture in the wider Omaheke Region

The development of the school is expected to:

a) Create temporary construction jobs
b) Support long-term employment for teachers and staff
c) Stimulate local business activity
d) Improve long-term human capital development

4.5 Cultural and Heritage Environment

a) No known heritage, archaeological, or culturally significant sites were found within the project footprint.
b) The site borders a community cemetery, but construction does not extend into cemetery boundaries.
c) A Chance Find Procedure will be implemented as a precaution during construction.

This ensures compliance with the National Heritage Act (2004).

4.6 Baseline Summary

The baseline environment at the proposed school site in Epako is characterized by:

a) Low ecological sensitivity
b) High social demand for educational services
c) Moderate to low environmental risks
d) Absence of protected species or critical natural habitats
e) Urban-influenced landscape suitable for institutional development

Overall, the baseline supports the feasibility of the project, if mitigation measures outlined in later sections of the EMP are implemented.

5. IMPACT IDENTIFICATION AND ASSESSMENT

5.1 Construction Phase Impacts

Table 1: Construction Phase - Negative Impacts

Impact	Description	Nature	Extent	Duration	Intensity	Probability	Significance (Pre-Mitigation)	Reversibility	Mitigation Potential
Soil disturbance & erosion	Excavation loosens sandy-loam soils leading to erosion	Negative	Local	Short-term	Medium	Likely	Medium	High	High
Dust generation	Dust from clearing, vehicles, windy semi-arid climate	Negative	Local	Short-term	Medium	Likely	Medium	High	High
Noise pollution	Machinery and vehicle noise affecting residents	Negative	Local	Short-term	Low–Medium	Likely	Low–Medium	High	High
Waste generation	Rubble, packaging, scrap, domestic waste	Negative	Local	Short-term	Medium	Likely	Medium	High	High
Water/soil contamination	Risk from oils, fuel spills, poor sanitation	Negative	Local	Short-term	Medium	Possible	Medium	High	High
Biodiversity disturbance	Clearing vegetation; disturbance to small fauna	Negative	Site-specific	Short-term	Low	Likely	Low	High	High
Temporary traffic impacts	Construction vehicles affecting local road flow	Negative	Local	Short-term	Low	Likely	Low	High	High
Health & safety risks	Risk of injury, heat exposure, machinery accidents	Negative	Local	Short–medium term	Medium–High	Likely	Medium–High	Moderate	High

Table 2- Construction Phase - Positive Impact

Impact	Description	Nature	Extent	Duration	Significance
Employment creation	Jobs for local labour during construction	Positive	Local/Regional	Short-term	Medium
Local procurement	Purchase of materials/services	Positive	Local	Short-term	Medium
Skills development	Short-term training, construction skills	Positive	Local	Short-term	Medium

5.2 Operational Phase Impacts

Table 3: Operational Phase - Negative Impacts

Impact	Description	Nature	Extent	Duration	Intensity	Probability	Significance (Pre-Mitigation)	Mitigation Potential
Increased water & sanitation demand	Higher usage by learners and staff	Negative	Local	Long-term	Medium	Likely	Medium	High
Solid waste generation	School domestic waste	Negative	Local	Long-term	Medium	Likely	Medium	High
Traffic increase	Drop-off/pick-up congestion	Negative	Local	Long-term	Low–Medium	Likely	Low–Medium	Medium
Operational noise	School activities producing noise	Negative	Local	Long-term	Low	Likely	Low	Medium

Table 4: Operational Phase - Positive Impacts

Impact	Description	Nature	Extent	Duration	Significance
Improved access to education	Increased secondary school capacity	Positive	Regional	Long-term	High
Long-term employment	Teachers, admin & maintenance staff	Positive	Local/Regional	Long-term	High
Community upliftment	Better social services, youth development	Positive	Regional	Long-term	High
Alignment with spatial planning	Supports planned institutional land use	Positive	Local	Long-term	High

5.3 Cumulative Impacts

Table 5:Cumulative Impact Assessment

Cumulative Impact	Description	Nature	Significance	Notes
Increased service demand	Greater water, waste, road pressure from growing Epako population	Negative	Low–Medium	Manageable with municipal coordination
Urban expansion	Transformation of undeveloped land into urban institutional use	Neutral/Positive	Medium	Area already zoned/earmarked
Socio-economic upliftment	Long-term improvement in education capacity	Positive	High	Major community benefit

5.4 Summary of Impact Significance After Mitigation

Table 6:Residential Impact Summary

Impact Type	Pre-Mitigation Significance	Post-Mitigation Significance	Residual Risk
Dust	Medium	Low	Low
Noise	Low–Medium	Low	Low
Soil erosion	Medium	Low	Low
Traffic	Low	Low	Low
Waste	Medium	Low	Low
Water contamination	Medium	Low	Low
Biodiversity disturbance	Low	Low	Low
Socio-economic benefits	High	High	Very beneficial

6. MITIGATION MEASURES

6.1 Mitigation Matrix

Table 7: Construction Phase Mitigation Matrix

Impact	Mitigation Measures	Responsible Party	Monitoring Indicators	Monitoring Frequency
Dust Generation	- Water roads & cleared areas - Cover trucks transporting sand - Limit vegetation clearing - Enforce 40 km/h speed limit	Contractor	- Dust visible? (Y/N) - Watering logs - Speed control records	Daily
Noise Pollution	- Maintain all machinery - Limit work to 07:00–18:00 - No idling of machinery	Contractor	- Community complaints - Noise level observations	Weekly

Soil Erosion	- Avoid over-excavation - Stabilize loose soil - Direct stormwater away from excavations	Contractor	- Erosion present? (Y/N) - Runoff paths controlled	Weekly, after rainfall
Waste Generation	- Provide bins/skips - Segregate recyclables - Appoint licensed waste collector	Contractor; Municipality	- Waste logs - Cleanliness of site	Daily
Water/Soil Contamination	- Spill kits on site - Impermeable flooring under fuel storage - Train staff on spill response	Contractor; ECO	- Spill report log - No leaks (Y/N)	Continuous
Biodiversity Disturbance	- Minimize clearing - No off-road driving - No hunting/poaching	Contractor; ECO	- Vegetation clearing limited - Wildlife sightings logged	Weekly
Traffic Impacts	- Signage at site - Enforce safe access/exit points - Flag persons where needed	Contractor	- Traffic incidents - Traffic flow maintained	Weekly
Health & Safety Risks	- Provide PPE - Toolbox talks daily - Appoint safety officer	Contractor	- PPE compliance - Number of incidents	Daily

Table 8: Operational Phase Mitigation Matrix

Impact	Mitigation Measures	Responsible Party	Indicators	Frequency
Water Demand	- Install low-flow taps - Routine maintenance - Water-saving awareness	School Management	- Monthly water bills	Monthly
Waste Generation	- Daily collection - Recycling program - Secure waste storage	School; Municipality	- Clean grounds - Waste logs	Daily
Traffic Congestion	- Staggered drop-off times - Designated pick-up zones	School; Traffic Dept	- Flow during peak hours	Daily during term
Operational Noise	- Schedule events responsibly - Maintain boundaries/fencing	School	- Noise complaints	Termly
Safety & Security	- Access control - Secure fencing - Emergency response plan	School Management	- Incident reports	Monthly

6.2 Environmental Management Actions Table

This table is the actionable checklist used by contractors and the ECO during site inspections.

Table 9: Environmental Management Actions - Construction Phase

Environmental Aspect	Action Required	Performance Target	Responsibility	Evidence / Records
Site Clearing	Clear only approved areas	No unnecessary clearing	Contractor	ECO site reports
Topsoil Management	Strip, store & reuse topsoil	Topsoil stockpiled & protected	Contractor	Soil stockpile photos

Dust Suppression	Wet surfaces, cover loads	Dust kept to minimum	Contractor	Watering schedule
Noise Control	Maintain equipment, limit hours	Noise within acceptable levels	Contractor	Maintenance logs
Stormwater Control	Direct runoff safely	No ponding or erosion	Contractor	Stormwater inspection sheets
Waste Handling	Segregate & store waste properly	No littering on site	Contractor	Waste pickup receipts
Hazardous Substances	Use drip trays; spill kits on site	No spills; immediate clean-up	Contractor	Spill incident register
Machinery Fueling	Refuel only on impermeable surface	Zero soil contamination	Contractor	Refueling area inspection
Worker Safety	PPE provided & worn	Zero major incidents	Contractor	Safety induction records
Community Health	Secure site; fencing	No unauthorized entry	Contractor	Site fencing photos
Biodiversity Protection	Avoid harming wildlife	No fauna deaths recorded	Contractor/ECO	Fauna disturbance log

Table 10: Environmental Management Phase - Operational Phase

Aspect	Action Required	Performance Target	Responsibility	Evidence
School Waste	Provide bins everywhere	Litter-free grounds	School Admin	Inspection forms
Water Usage	Maintain fixtures; promote savings	Reduced water use	School Admin	Municipal bills
Sanitation	Clean ablutions daily	Hygienic facilities	School Admin	Cleaning logs
Traffic Management	Dedicated drop-off zones	Safe traffic flow	School + Traffic Authority	Traffic observations
Emergency Preparedness	Fire extinguishers, drills	Safe school environment	School	Emergency drill reports
Public Health	Pest control, hygiene standards	Zero pest infestations	School	Pest control records

6.3 Summary of Mitigation Effectiveness

Table 11: Mitigation Effectiveness

Impact Category	Expected Residual Impact After Mitigation
Dust	Low
Noise	Low
Waste	Low
Soil erosion	Low
Traffic	Low
Biodiversity	Low
Socio-economic benefits	High positive

7. ENVIRONMENTAL MONITORING PLAN

7.1 Introduction

The Environmental Monitoring Plan outlines the monitoring activities required to ensure that all mitigation measures in the EMP are properly implemented and effective. Monitoring is essential for ensuring compliance with the Environmental Management Act (No. 7 of 2007), preventing environmental degradation, and enabling early corrective action.

This plan applies to all project phases:

- **Pre-Construction**
- **Construction**
- **Operation**

7.2 Monitoring Objectives

The objectives of environmental monitoring are to:

a) Evaluate compliance with the EMP
b) Identify deviations and implement corrective measures early
c) Protect the natural and social environment
d) Document environmental performance
e) Ensure transparency and accountability
f) Provide evidence for MEFT and the Gobabis Municipality during audits

7.3 Monitoring Roles

a) **Environmental Control Officer (ECO):** Leads monitoring and reports to the Proponent
b) **Contractor:** Implements mitigation actions and provides daily records
c) **Proponent (Omaheke Regional Council):** Oversees compliance and authorizes corrective actions
d) **Gobabis Municipality:** May conduct independent inspections

7.4 Construction Phase Monitoring Plan

Table 12: Construction Monitoring Requirements

Environmental Aspect	Monitoring Activity	Indicators to be Checked	Frequency	Responsible Person	Records Required
Site Clearing & Vegetation Loss	Inspect clearing boundaries	Only approved areas cleared	Weekly	ECO	Site inspection reports
Noise Levels	Observe machinery noise	Compliance with working hours; machinery maintained	Weekly	ECO	Maintenance records
Soil Erosion	Inspect slopes, runoff paths	No erosion gullies forming	Weekly & after rain	ECO	Erosion observation sheets
Stormwater Management	Check drainage paths	No ponding/flooding	Weekly	Contractor	Stormwater inspection forms
Waste Management	Check waste segregation & storage	Clean site; bins available	Daily	Contractor	Waste logs, disposal receipts
Hazardous Materials	Inspect fuel storage & spill kits	Drip trays used; no leaks	Daily	Contractor / ECO	Spill register
Worker Safety (OHS)	Check PPE, site safety signage	100% PPE compliance	Daily	Contractor	Toolbox talk records
Traffic Safety	Observe access control	No accidents; signage in place	Weekly	Contractor	Traffic incident reports
Biodiversity Protection	Observe wildlife disturbance	No poaching/harassment of fauna	Weekly	ECO	Wildlife sighting log

7.5 Operational Phase Monitoring Plan

Table 13: Operational Monitoring Plan

Environmental Aspect	Monitoring Activity	Indicators	Frequency	Responsible	Records Required
Water Use Efficiency	Review water bills; inspect fixtures	Reduced consumption; no leaks	Monthly	School Admin	Municipal water bills
Waste Management	Inspect bins, storage, cleanliness	Litter-free grounds	Daily	School Admin	Waste collection records
Sanitation & Hygiene	Inspect ablution facilities	Clean, functional, odor-free	Daily	School Admin	Cleaning logs
Traffic Management	Monitor pick-up/drop-off flow	Safe and orderly movement	Daily (school days)	School + Traffic Dept	Traffic monitoring notes
Noise Levels	Assess noise from activities	No community complaints	Termly	School	Complaint register
Safety & Security	Check fencing, access control	Intact fence; secure gate	Weekly	School	Security reports
Fire Safety	Inspect extinguishers & alarms	Functional equipment	Quarterly	School	Fire equipment log
Public Health	Pest control checks	No infestation	Monthly	School	Pest control contractor logs

7.6 Reporting Requirements

Daily Reports by Contractor

a) Watering logs
b) PPE compliance
c) Waste handling notes
d) Spill incidents

Weekly ECO Monitoring Reports

Must be submitted to the Proponent and include:

a) Compliance status
b) Site photographs
c) Non-conformances detected
d) Corrective actions recommended

Monthly Environmental Summary Reports

Prepared by the ECO and submitted to:

a) Proponent (Omaheke Regional Council)
b) Gobabis Municipality (if required)
c) MEFT upon request

These reports must include:

a) Summary of all environmental issues
b) Effectiveness of mitigation measures
c) Training conducted
d) Incidents and corrective actions
e) Recommendations for improvement

7.7 Non-Compliance and Corrective Action

If non-compliance is detected:

1. Contractor is informed immediately
2. Corrective action must be implemented within 24–72 hours depending on severity
3. ECO issues a Corrective Action Report (CAR)
4. Repeated non-compliance may lead to:
    - Penalties
    - Work stoppage

- Removal of non-compliant personnel

Serious cases (e.g., hazardous spills) must be reported to MEFT immediately.

7.8 Environmental Audits

a) MEFT or Gobabis Municipality may conduct random audits

b) The Proponent must ensure all records are up to date

c) A formal audit may be required at any time during ECC renewal

7.9 Monitoring Summary Table

Table 14:Monitoring Summary Overview

Project Phase	Key Monitoring Items	Frequency	Main Responsibility
Construction	Dust, waste, erosion, noise, OHS, traffic	Daily - Weekly	ECO & Contractor
Operation	Water use, sanitation, waste, noise, safety	Daily - Monthly	School Admin
Emergency Events	Spills, accidents, fires	Immediate	All parties
Audit	Full environmental audit	As required	MEFT / Proponent

8. ROLES AND RESPONSIBILITIES

8.1 Introduction

This section defines the roles and responsibilities of all stakeholders involved in the planning, construction, operation, and monitoring of the proposed secondary school project in Epako, Gobabis. Clear assignment of responsibilities ensures effective implementation of the Environmental Management Plan (EMP), compliance with the Environmental Management Act (EMA No. 7 of 2007), and accountability throughout the project lifecycle.

The successful execution of the EMP depends on coordinated efforts between the Proponent, Contractor, Environmental Control Officer (ECO), Gobabis Municipality, and school management once the facility becomes operational.

8.2 Key Project Stakeholders and Their Responsibilities

8.2.1 Proponent

Omaheke Regional Council – Directorate of Education, Innovation, Sports, Arts & Culture

The Proponent is the entity legally responsible for ensuring compliance with all environmental legislation and for enforcing proper implementation of the EMP.

Responsibilities

a) Ensure overall environmental compliance of the project.
b) Appoint a qualified Environmental Control Officer (ECO).
c) Provide necessary resources for environmental management (PPE, waste facilities, signage, etc.).
d) Review and approve ECO reports and recommend corrective actions.
e) Facilitate cooperation between the contractor, ECO, and authorities.
f) Ensure that all permits, authorizations, and the Environmental Clearance Certificate (ECC) remain valid.
g) Maintain communication with MEFT and the Gobabis Municipality.

8.2.2 Environmental Control Officer (ECO)

The ECO is the environmental oversight representative appointed by the Proponent. Their role is to monitor compliance and guide environmental best practices.

Responsibilities

a) Conduct routine site inspections and audits.
b) Ensure day-to-day compliance with the EMP.
c) Identify non-compliances and issue Corrective Action Reports.
d) Maintain detailed environmental records (photos, inspection sheets, logs).
e) Provide training and awareness to contractor staff.
f) Report environmental performance to the Proponent monthly.
g) Stop work in areas where serious environmental harm may occur.
h) Monitor implementation of mitigation measures throughout construction.
i) Liaise with MEFT or external auditors when required.

8.2.3 Contractor / Sub-Contractors

The Contractor and all subcontractors are responsible for implementing mitigation measures on site.

Responsibilities

a) Implement all EMP mitigation and monitoring measures.
b) Maintain safe and clean construction practices.
c) Provide PPE and enforce its use.
d) Conduct daily toolbox talks and keep safety logs.
e) Manage waste, fuel, chemicals, and hazardous materials responsibly.
f) Maintain machinery to prevent leaks, excessive noise, or emissions.
g) Comply with construction hours and site boundaries.
h) Immediately report environmental incidents to the ECO.
i) Ensure all staff understand environmental requirements.

8.2.4 Gobabis Municipality

As the local authority, the Municipality ensures alignment with local planning frameworks and enforces municipal service regulations.

Responsibilities

a) Approve subdivision, rezoning, and building plans.
b) Ensure access to municipal services (water, sewerage, waste collection).
c) Conduct periodic inspections related to public health and safety.
d) Respond to community complaints related to infrastructure impacts.
e) Coordinate traffic management measures around the school area.

8.2.5 Ministry of Environment, Forestry & Tourism (MEFT)

Directorate of Environmental Affairs (DEA)

MEFT is the authority responsible for ensuring compliance with the Environmental Management Act.

Responsibilities

a) Review and grant the Environmental Clearance Certificate (ECC).
b) Conduct compliance audits or inspections when necessary.
c) Enforce corrective measures where non-compliance is identified.
d) Oversee the EMP implementation at the national regulatory level.

8.2.6 School Management (Operational Phase)

Once the school becomes operational, the School Management Team (SMT) assumes responsibility for implementing the EMP during the operational phase.

Responsibilities

a) Maintain hygiene standards in sanitation facilities.
b) Supervise proper solid waste handling and storage.
c) Manage school traffic flows during peak hours.
d) Ensure ongoing safety and security on school grounds.
e) Maintain emergency response procedures (fire, medical, security).
f) Document operational environmental issues and respond promptly.
g) Comply with municipal and national public health requirements.

8.2.7 General Public / Community

Community members in Epako may also contribute to monitoring.

Responsibilities

a) Report environmental concerns through proper channels.
b) Participate in public feedback if required by MEFT or Municipality.
c) Respect construction site boundaries and safety measures

8.3 Summary Responsibility Matrix

Table 15:Summary of EMP Responsibilities

Stakeholder	Key Responsibilities
Proponent	Oversight, appoint ECO, ensure compliance, communication with authorities
ECO	Monitoring, reporting, training, compliance checks, corrective actions
Contractor	Implement mitigation, maintain safety, manage waste, keep records
Gobabis Municipality	Planning approvals, municipal service oversight, inspections
MEFT	ECC issuance, environmental audits, enforcement
School Management	Operational waste, hygiene, safety, traffic control
Community	Reporting issues, cooperating during construction

9. EMERGENCY PREPAREDNESS AND RESPONSE PLAN

9.1 Introduction

The Emergency Preparedness and Response Plan outlines procedures to prevent, manage, and respond to environmental or safety emergencies that may arise during the construction and operation of the secondary school in Epako, Gobabis.

The plan ensures rapid response, minimizes harm, and protects human life, property, and the environment.

An effective emergency plan requires:

a) Clear communication channels
b) Proper training of all personnel
c) Availability of emergency equipment
d) Clear responsibilities and reporting structures
e) Coordination with the Gobabis Municipality and national emergency services

9.2 Objectives of the Emergency Plan

The primary objectives are to:

a) Protect workers, learners, and the general public from harm
b) Prevent or reduce environmental pollution from emergency incidents
c) Ensure fast and organized responses to emergencies
d) Facilitate communication with relevant authorities
e) Minimize property damage and operational disruption
f) Provide accountability and clear procedures

9.3 Types of Potential Emergencies

9.3.1 Construction Phase Emergencies

a) Fuel or chemical spills
b) Fire outbreaks (machinery, storage areas)
c) Worker injuries or medical emergencies
d) Structural collapse or trench failure
e) Severe weather impacts (windstorms, flooding)
f) Traffic accidents involving construction vehicles
g) Electrical faults or electrocution
h) Snake or wildlife encounters

9.3.2 Operational Phase Emergencies

a) Fire in classrooms, hostels (if any), or admin blocks
b) Medical emergencies involving learners or staff
c) Violence, security breaches, or vandalism
d) Gas leaks (science labs, kitchens)
e) Water supply contamination
f) Infectious disease outbreaks
g) Storm damage (roofing, infrastructure)
h) Accidents on school grounds

9.4 Emergency Equipment Requirements

Construction Phase

a) Fully stocked spill kits (absorbents, sand, booms)
b) Fire extinguishers (CO_2, foam, dry chemical)
c) First aid kits at multiple site points
d) Fire beaters and water buckets
e) Warning signage (hazard, fire assembly points)
f) Emergency contact list displayed visibly
g) PPE: gloves, masks, safety boots, helmets

Operational Phase

a) Fire extinguishers in all buildings
b) Smoke detectors and alarms
c) First aid kits in admin block & designated rooms
d) Fire assembly points for learners
e) Emergency lighting
f) Emergency exits clearly marked
g) Communication radios or PA system
h) Visitor control & access systems

9.5 Emergency Response Procedures

9.5.1 Fuel or Chemical Spill Response

Steps:

1. Stop the source of the spill immediately.
2. Evacuate area if fumes are hazardous.
3. Use spill kits to contain and absorb.
4. Prevent spill from entering stormwater drains.
5. Notify ECO and Contractor Site Manager.
6. Collect contaminated absorbent and store for proper disposal.
7. Record incident in spill register and report to Proponent.

9.5.2 Fire Response Procedure

Steps:

1. Raise alarm immediately.
2. Evacuate all workers/learners to assembly point.
3. If safe, use appropriate extinguisher (CO_2 for electrical, foam for fuel).
4. Contact Gobabis Fire Brigade.
5. ECO/School Safety Officer to secure area.
6. Conduct headcount at assembly point.
7. Report fire incident and document cause.

9.5.3 Medical Emergency Procedure

Steps:

1. Provide immediate first aid.
2. Call emergency medical services.
3. Transport injured person safely if needed.
4. Inform Proponent and safety officer.
5. Record incident and corrective action.

9.5.4 Severe Weather and Flooding Procedure

Steps:

1. Cease all outdoor work or school activities.
2. Secure loose materials and equipment.
3. Guide learners/workers indoors.
4. Inspect site/school grounds after event for hazards.
5. Record damage and repair requirements.

9.5.5 Violence/Security Incident Procedure (Operational Phase)

Steps:

1. Alert security personnel and lock external gates.
2. Move learners to safe areas.
3. Call Police if necessary.
4. Document incident.
5. Parents notified if required.

9.5.6 Traffic Accident Procedure

Steps:

1. Stop all movement and secure the area.
2. Attend to injured persons.
3. Notify emergency services.
4. Report incident to ECO/School Management.
5. Implement corrective measures (signage, control).

9.6 Communication Plan

Emergency Contact List (Displayed On-Site & On Notice Boards)

a) Ambulance / EMS
b) Gobabis Municipality Fire Brigade
c) NamPol (Police)
d) Proponent Project Manager
e) ECO
f) Contractor Site Manager
g) School Principal (Operational Phase)

Workers and staff must receive induction training that includes all emergency contacts.

9.7 Training & Awareness

Construction Phase

a) All workers must undergo environmental & safety induction
b) Weekly toolbox talks (OHS + emergency topics)
c) Spill response training for fuel handlers
d) Fire drills once every 3 months

Operational Phase

a) Termly fire and evacuation drills for learners
b) First-aid training for selected staff
c) Hazard awareness for teachers and students
d) Lab safety training for science teachers

9.8 Emergency Assembly Points

a) Clearly marked assembly points must be established
b) Accessible to workers and learners at all times
c) Must be shown during induction and evacuation drills

9.9 Incident Reporting Procedure

All incidents must be documented and reported through the following steps:

1. Immediate notification to ECO/School Safety Officer
2. Completion of Incident Report Form
3. Investigation within 24–48 hours
4. Corrective and preventative actions implemented
5. Follow-up inspection by ECO
6. Reporting to MEFT if required (major incidents only)

9.10 Review of Emergency Plan

The Emergency Preparedness and Response Plan must be reviewed:

a) Annually
b) After any major emergency
c) When new hazards are identified
d) When recommended by MEFT or safety auditors

10. DECOMMISSIONING PLAN

10.1 Introduction

Although the secondary school in Epako, Gobabis is intended to operate indefinitely, unforeseen circumstances may arise requiring partial or full decommissioning of infrastructure. This Decommissioning Plan provides a framework to guide environmentally responsible closure, rehabilitation, and post-operation monitoring should the need arise. The plan aligns with the Environmental Management Act (No. 7 of 2007) and best-practice environmental management principles applicable in Namibia.

10.2 Objectives of the Decommissioning Plan

The objectives are to:

a) Ensure safe and environmentally sound closure of the project site
b) Prevent pollution during removal of buildings, waste, and services
c) Restore the site to a stable, non-hazardous condition
d) Protect public health and safety
e) Ensure proper handling and disposal of demolition waste
f) Minimize long-term environmental liabilities for the Proponent
g) Provide guidance for rehabilitation of affected areas

10.3 Decommissioning Scenarios

Possible decommissioning scenarios include:

Full Decommissioning

Closure of the entire school and removal of all infrastructure.

Partial Decommissioning

Removal of selected buildings (e.g., temporary structures), renovation, or redevelopment of certain sections.

Change of Land Use

If the site is repurposed for another institutional or community service function, requiring partial demolition and reconfiguration.

10.4 Decommissioning Activities

Decommissioning may involve:

a) Removal of portable items (furniture, equipment, signage)
b) Deconstruction or demolition of buildings
c) Removal of service infrastructure (pipes, cables, tanks)
d) Treatment and disposal of asbestos (if any in future expansions)
e) Management and disposal of all demolition waste
f) Removal of contaminated soil (if spills occurred during operation)
g) Site grading and stabilization
h) Rehabilitation through re-vegetation
i) Securing the site post-closure

10.5 Environmental Impacts During Decommissioning

Potential impacts include:

Impact	Description	Significance (Pre-Mitigation)
Dust emissions	From demolition and debris handling	Medium
Noise pollution	Heavy machinery, breaking of materials	Medium
Waste generation	Large quantities of rubble, steel, plastics	Medium–High
Soil contamination	From fuels, lubricants, demolition materials	Medium
Safety risks	Worker injury, falling debris, hazardous materials	High
Traffic impacts	Increased movement of waste removal vehicles	Low
Landscape alteration	Visual disturbance from demolition	Low

10.6 Mitigation Measures

Dust and Air Quality Control

a) Water spraying on demolition surfaces
b) Covering trucks transporting rubble
c) Demolition during low-wind conditions where possible

Noise Reduction

a) Use of silenced machinery
b) Limit demolition to 07:00–18:00
c) Notify community in advance

Waste Management

a) Segregate demolition waste (metal, concrete, timber)
b) Recycle materials where possible
c) Use licensed waste transporters
d) Dispose of non-recyclable waste at an approved municipal landfill

Handling of Hazardous Materials

a) Identify any future hazardous materials (asbestos, chemicals)
b) Removal by certified specialists
c) Proper PPE for workers
d) Document all hazardous material disposal

Soil Protection

a) Prevent oil or fuel leaks
b) Use drip trays and spill kits
c) Remove contaminated soil if required

Safety and Security

a) Establish exclusion zones
b) Ensure all workers have PPE
c) Secure the site from public access
d) Demolition supervised by a structural engineer

Site Rehabilitation

a) Level and stabilize disturbed areas
b) Replace topsoil where needed
c) Plant indigenous vegetation to prevent erosion

10.7 Decommissioning Monitoring Plan

Aspect	Monitoring Activity	Frequency	Responsible Party
Dust	Visual checks for excessive dust	Daily	ECO / Contractor
Waste	Verify proper segregation & disposal	Daily	Contractor
Noise	Observe noise levels	Daily	ECO
Safety	Check PPE compliance, site security	Daily	Contractor
Soil & Spill Control	Inspect for leaks, spills	Daily	ECO
Hazardous Materials	Ensure legal handling and disposal	As required	Specialist contractor

10.8 Post-Decommissioning Rehabilitation

Post-closure rehabilitation includes:

a) Removal of any temporary structures
b) Landscaping to blend site with surrounding land uses
c) Planting indigenous species such as acacia shrubs or grasses
d) Ensuring the site is stable and drainage is functioning
e) Eliminating erosion hotspots
f) Removal of all construction debris

10.9 Site Handover or Future Use

After decommissioning, the site may be:

a) Returned to the Gobabis Municipality
b) Repurposed for another institutional or community function
c) Held in reserve for future development

A final Site Rehabilitation Report will be submitted to:

a) MEFT (Directorate of Environmental Affairs)
b) Gobabis Municipality
c) Omaheke Regional Council

This report will confirm full compliance with the decommissioning plan.

10.10 Decommissioning Responsibilities Summary

Stakeholder	Responsibilities
Proponent	Authorize decommissioning, fund works, appoint ECO
ECO	Monitor compliance, record incidents, approve rehabilitation
Contractor	Perform demolition, handle waste, maintain safety
Municipality	Approve waste disposal, conduct inspections
Specialists	Remove hazardous materials if required