

Environmental Management Plan

for:

The subdivision of Portion 34 of Rehoboth Town and Townlands No.302 into 42 Portions and the Remainder and creation of 15m wide roads.

Proponents:

The Karoo-Ochse (Central) (Pty)



October 2025



Document Sheet

Project Name	Environmental Management Plan (EMP)
Report Title	The subdivision of Portion 34 of Rehoboth Town and Townlands No.302 into 42 Portions and the Remainder
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List of Acronyms

DEA: Directorate of Environmental Affairs

EA: Environmental Assessment

EM: Environmental Management

ECC: Environmental Clearance Certificate

ECO: Environmental Control Officer

EIA: Environmental Impact Assessment

EMA: Environmental Management Act

EMP: Environmental Management Plan

I&APS: Interested and Affected Parties

IMP: Impact Management Plan

MEFT: Ministry of Environment, Forestry and Tourism

PR: Proponent's Representative



CHAPTER ONE: BACKGROUND

1.1 Introduction

Karoo-Ochse Auctioneers (Pty) Ltd, a premier livestock auction house, has played a pivotal role in Namibia's agricultural landscape for the past 20 years. Established and led by Willy Bayer, the company has built a strong reputation for its commitment to agriculture, livestock trade, and community growth. The Bayer family, deeply rooted in the principles of integrity, tradition, and land stewardship, has guided Karoo-Ochse in fostering sustainable agricultural practices while connecting livestock sellers and buyers.

Situated in Rehoboth, a town with a rich history and cultural heritage, Karoo-Ochse has become a cornerstone of the region's agricultural economy. Rehoboth, originally founded as a mission station in the late 19th century, has evolved into a thriving community that blends tradition with modern development. Its strategic location and unique character make it an ideal setting for Karoo Acres, a project that embodies a vision of sustainable rural living and responsible land use.

As part of its ongoing commitment to growth and sustainability, Karoo-Ochse (Central) (Pty) Ltd, hereinafter referred to as the proponent, proposes the subdivision of Portion 34 of Rehoboth Town and Townlands No. 302 into 42 portions and a remainder. This development aligns with the proponent's long-term vision of fostering agricultural and rural development while ensuring responsible land use management.



1.2 Background

The Karoo-Ochse (Central) (Pty) hereinafter referred to as the proponent intend to undertake the following activities:

The subdivision of Portion 34 of Rehoboth Town and Townlands No.302 into 42 Portions and the Remainder, and creation of roads.

The above development is listed activity in terms of the Environmental Management Act (No. 7 of 2007) and Environmental Impact Assessment Regulations (Government Notice No. 30 of 2012).

Harmonic Town Planning Consultants is appointed to undertake an Environmental Scoping Assessment (ESA), formulate an Environmental Management Plan (EMP), and apply for an Environmental Clearance Certificate (ECC) to the Ministry of Urban and Rural Development and the Directorate of Environmental Affairs (DEA) for the subdivision of Portion 34 of Rehoboth Town and Townlands No.302 into 42 Portions and the Remainder. In this respect, this document forms part of the application to be made to the office of DEA for an Environmental Clearance Certificate for the proposed rezoning according to the guidelines and statutes of the Environmental Management Act No.7 of 2007 and the Environmental Impact Regulations (GN 30 in GG 4878 of 6 February 2012).

This Environmental Management Plan (EMP) has been developed in accordance with the requirements of Namibia's Environmental Management Act, No. 7 of 2007. The Act mandates the establishment of environmental management strategies for projects that may have an impact on the environment. As a dynamic and adaptive framework, this EMP must be reviewed and updated periodically to ensure its continued relevance in addressing changing environmental conditions and evolving project requirements.

1.3 Key Goals of the Environmental Management Plan (EMP)

This EMP is structured to achieve the following key outcomes:

- Ensure that the project adheres to all relevant environmental laws and regulations at both national and international levels, with particular emphasis on the Environmental Management Act, No. 7 of 2007.
- Assess potential environmental and socio-economic effects of the project and implement appropriate measures to minimize adverse impacts throughout all project phases, including pre-construction, construction, operation, and decommissioning.



- Promote an environmentally responsible framework that balances social, economic, and ecological considerations, ensuring long-term benefits for local communities and the surrounding environment.
- Establish a structured system for tracking key environmental indicators, enabling continuous assessment, reporting, and enhancement of environmental performance throughout the project's duration.
- Develop transparent mechanisms for involving key stakeholders, such as local communities, government agencies, and environmental specialists, fostering inclusive and well-informed decision-making.



CHAPTER TWO: PROJECT DESCRIPTION

2.1 Locality

Portion 34 of Rehoboth Town and Townlands No. 302 is located in the Hardap Region of Namibia, northwest of Rehoboth and directly south of the Oanob Road, a gravel road that provides access to the site. The geographical coordinates of the site are approximately 23.299198°S latitude and 17.040333°E longitude. This location offers strategic accessibility while maintaining proximity to Rehoboth, making it suitable for the proposed development.

The total area of the site measures 199.6524 hectares. Portions 1 to 42 will vary in size from 1 to 10 hectares, while the Remainder will measure 115.9786 hectares.

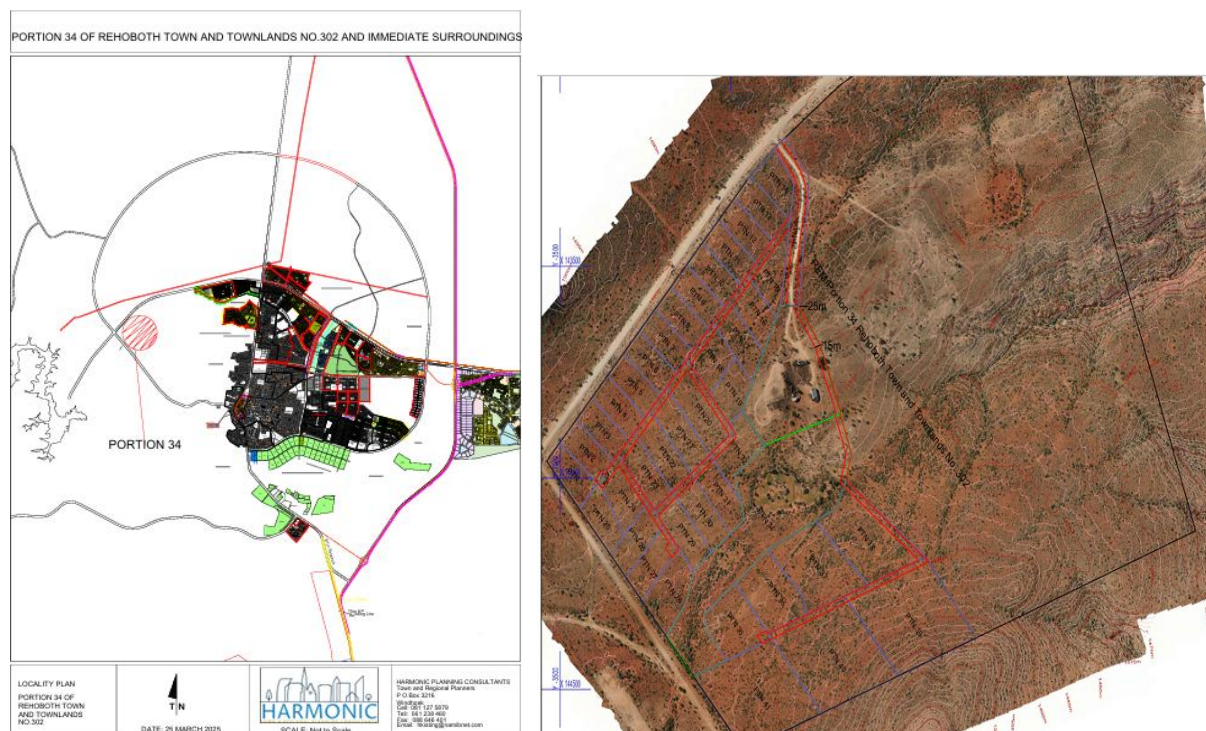


Figure 1: Location of Portion 34 of Rehoboth Town and Townlands No.302

2.2 Project Description

Portion 34 of Rehoboth Town and Townlands No. 302 is owned by Karoo-Ochse (Central) (PTY) LTD, Registration No. 2001/365. The Rehoboth Town Council has approved the subdivision of Portion 34 into 42 portions and the Remainder. Currently, the site accommodates auction pens, an auction hall, and related facilities.

The proposed development aims to facilitate the release of small-scale agricultural land in Rehoboth through a structured property development initiative. The project will enable the sale of subdivided plots to both the general public and institutional investors, promoting economic activity and sustainable land use. In addition to agricultural purposes, the plots will also



accommodate residential use, supporting urban agriculture and fostering self-sufficiency among residents. This development is envisioned to contribute to local food security, economic growth, and increased land accessibility, aligning with broader regional development goals.

2.3 Services and Infrastructure

Portion 34 of Rehoboth Town and Townlands No. 302 currently has a NamWater connection, which serves the existing facilities on-site. However, with the subdivision and creation of additional plots, a larger water connection will be required to supply water to each individual plot. Drilling of private boreholes is prohibited, as bulk water will be provided by NamWater.

Sewer infrastructure at the site is currently serviced by a septic tank for the auction pens. For the proposed development, individual plot owners will be responsible for installing self-contained septic tanks on their properties. In terms of energy supply, all plots will operate off-grid, utilising a combination of solar and gas systems to meet electricity and heating needs. This sustainable approach to infrastructure provision ensures efficient resource use while promoting environmentally friendly development practices.

2.4 Roads

The developer will construct a network of 15-meter-wide gravel roads, utilizing the existing 20-meter-wide road to provide access to the newly subdivided plots. These access roads are specifically designed to accommodate agricultural transport, ensuring smooth movement of equipment and goods. The road layout will divert in opposite directions within the subdivision, ensuring equal accessibility to all portions. The terrain is flat, with clear sight distances on both sides of the road, which eliminates the potential for traffic complications and ensures safe and efficient traffic flow throughout the development.



CHAPTER THREE: COMPLIANCE AND LEGAL FRAMEWORK

This chapter outlines the regulatory framework applicable to the proposed project. **Table 1** provides a list of applicable national legislation and **Table 2** provides an overview of applicable policies.

3.1 Context for Implementing the EMP

Environmental management is not only about the final outcome of the project, but also about how daily operations are conducted. Compliance with environmental standards is required throughout the entire process, from start to finish, ensuring that all activities meet the necessary environmental guidelines. The Environmental Management Plan (EMP) is a crucial tool for reducing or preventing any negative environmental and social effects linked to the project. However, without regular audits and proper monitoring, its effectiveness will be compromised.

3.2 Listed Activities

The proposed project falls under several Listed Activities as outlined in the Environmental Management Act, 2007 (Act No. 7 of 2007) (referred to as the EMA) and the Environmental Impact Assessment Regulations, 2007 (GN No. 30 of 2011) (referred to as the EIA Regulations).

These Listed Activities cannot be carried out without first obtaining an Environmental Clearance Certificate (ECC), which necessitates the completion of an Environmental Impact Assessment (EIA). The EIA process includes the preparation of an EIA Scoping Report and an Environmental Management Plan (EMP), both of which must be submitted to the Ministry of Environment and Tourism (MET) as part of the ECC application.

Table 1: Listed Activities to the Proposed Development

Listed Activity	Activity Description	Relevance to the Proposed Development
Activity 5 Land Use and Development Activities	5.1 (d) The rezoning of land from – use for nature conservation or zoned open space to any other land use.	The proposed land is in its natural state and is intended to be used for small scale agricultural and residential.



Activity 10 Infrastructure	10.1 (b) The construction of – Public roads.	Roads will be developed as part of the project's infrastructure improvements
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3.3 Applicable Legislation

Legal provisions that have relevance to various aspects of these developments are listed in Table 2 below.

Table 2: Legislation Applicable to the Proposed Development

Legislation/Policies	Relevant Provisions	Relevance to Project
The Constitution of the Republic of Namibia (1990)	Article 91 (c) provides for the duty to guard against “the degradation and destruction of ecosystems and failure to protect the beauty and character of Namibia.” Article 95(l) deals with the “maintenance of ecosystems, essential ecological processes and biological diversity” and sustainable use of the country's natural resources.	The proposed development must have sound environmental management objectives
Environmental Management Act No. 7 of 2007 (EMA)	The purpose of this Act is to promote the sustainable management of the environment and the use of natural resources by establishing principles for decision-making on matters affecting the environment; to provide for a process of assessment and control of projects that may have significant effects on the environment; and to provide for incidental matters.	The development should be informed by the EMA.



	The Act gives legislative effect to the Environmental Impact Assessment Policy. Moreover, the act also provides the procedure for adequate public participation during the environmental assessment process for the interested and affected parties to voice and register their opinions and concerns about the proposed project.	
Environmental Assessment Policy of Namibia (1995)	The Policy seeks to ensure that the environmental consequences of development projects and policies are considered, understood, and incorporated into the planning process and that the term ENVIRONMENT is broadly interpreted to include biophysical, social, economic, cultural, historical, and political components	This EIA considers this term of Environment.
EIA Regulations Government Notice 28, 29, and 30 of EMA (2012)	Government Notice 29 Identifies and lists certain activities that cannot be undertaken without an environmental clearance certificate. Government Notice 30 provides the regulations governing the environmental assessment (EA) process.	The following listed activity is triggered by the proposed development: Activity 5.1 (a) Land Use and Development Activities
Draft Procedures and Guidelines for conducting EIAs and compiling EMPs (2008)	Part 1, Stage 8 of the guidelines states that if a proposal is likely to affect people, certain guidelines should be considered by the proponent in the scoping process.	The EA process should incorporate the aspects outlined in the guidelines.
Water Act No. 54 of 1956	Section 23(1) deals with the prohibition of pollution of	The pollution of water resources should be



	underground and surface water bodies.	avoided during the construction and operation of the development.
Water Resources Management Act No. 11 of 2013	Part 12 deals with the control and protection of groundwater Part 13 deals with water pollution control	The pollution of water resources should be avoided during the construction and operation of the development. Should water need to be abstracted, a water abstraction permit will be required from the Ministry of Water, Agriculture, and Forestry.
Town and Regional Planners Act, 1996 (Act No. 9 of 1996)	This Act establishes the Namibian Council for Town and Regional Planners, defines the functions, and powers of the Council, and provides for the registration of town and regional planners and the supervision over their conduct. The Minister may, on recommendation of the Council prescribe the kinds of work of a town and regional planning nature which shall be reserved for town and regional planners. The Act also defines improper conduct and defines disciplinary powers of the Council. Furthermore, the Act provides for the establishment of national, regional, and urban structure plans, and the development of zoning schemes. It also deals with	A registered Town Planner has been appointed for this project.



	a variety of related land use control issues such as A registered Town Planner has been appointed for this project. the subdivision and consolidation of land and the establishment and extension of urban areas.	
Urban and Regional Planning Act No. 5 of 2018	To consolidate the laws relating to urban and regional planning; to provide for a legal framework for spatial planning in Namibia; to provide for principles and standards of spatial planning; to establish the urban and regional planning board; to decentralise certain matters relating to spatial planning; to provide for the preparation, approval, and review of the national spatial development framework, regional structure plans, and urban structure plans; to provide for the preparation, approval, review, and amendment of zoning schemes; to provide for the establishment of townships; to provide for the alteration of boundaries of approved townships, to provide for the disestablishment of approved townships; to provide for the change of name of approved townships;	The proposed development must adhere to the provisions regarding the subdivision and rezoning of land.



	to provide for the subdivision and consolidation of land; to provide for the alteration, suspension, and deletion of conditions relating to land; and to provide for incidental matters.	
Land Survey Act 33 of 1993	To regulate the survey of land; and to provide for matters incidental thereto.	Surveying procedures must be applied accordingly.
Local Authorities Act (No. 23 of 1992)	The Local Authorities Act prescribes the manner in which a town or municipality should be managed by the Town or Municipal Council.	The development must comply with provisions of the Local Authorities Act.
Labour Act No.11 of 2007	Chapter 2 details the fundamental rights and protections. Chapter 3 deals with the basic conditions of employment.	Given the employment opportunities presented by the development, compliance with the labour law is essential.
Soil Conservation Act 76 of 1969	Act to consolidate and amend the law relating to the combating and prevention of soil erosion, the conservation, improvement, and manner of use of the soil and vegetation, and the protection of the water sources	The proposed activity should ensure that soil erosion and soil pollution are avoided during construction and operation.



CHAPTER FOUR: IMPACT ASSOCIATED WITH THE SITE

This chapter provides an analysis of the anticipated environmental and socio-economic impacts associated with the proposed development. The assessment is structured around key site components expected to be affected during the implementation phase, with specific emphasis on infrastructure development, land use modifications, biodiversity, and water resources.

4.1 Infrastructure Development

Infrastructure development constitutes a fundamental aspect of the proposed project and is expected to result in substantial alterations to the site. These changes are anticipated to generate both positive and negative impacts, which are examined in detail in the subsequent sections.

4.1.1 Positive Impacts

The proposed development is expected to yield a range of socio-economic benefits, particularly in enhancing livelihoods and contributing to local economic growth within the Rehoboth area and the broader Hardap Region. Key positive impacts anticipated from the infrastructure and land use development are outlined in the table below:

Table 3: Summary of Key Positive Impacts

Positive Impact	Description
Job Creation	The project will generate employment opportunities during both the construction and operational phases. These will include positions for unskilled and skilled labour, thereby contributing to a reduction in unemployment and boosting household incomes in the region.
Local Economic Growth	The introduction of new residential and small-scale agricultural activities is expected to stimulate local economic activity. Increased demand for goods and services may encourage small business development and attract further investment into the area.
Infrastructure Improvement	The development will include essential infrastructure such as internal roads, water supply, sanitation, and electricity connections. These upgrades will improve access to basic services for future residents.



Positive Impact	Description
Skills Development	During the implementation phase, local labourers will have opportunities to acquire practical skills and training, which can enhance long-term employability and support workforce development in the construction and agricultural sectors.

4.1.2 Negative Impacts

While the proposed development offers several socio-economic benefits, it also presents potential environmental and social challenges that must be addressed through proactive planning and effective mitigation strategies. The table below highlights key negative impacts likely to arise during the infrastructure development phase:

Table 4: Key Negative Impacts Associated with Infrastructure Development

Negative Impact	Description
Dust and Air Pollution	Construction activities, such as land clearing, earthworks, and movement of heavy machinery, are expected to generate dust and air pollutants. These may lower air quality and pose health risks to workers and nearby residents. Mitigation measures such as regular water spraying and enforcing vehicle speed limits on site should be implemented.
Noise Pollution	The use of construction equipment and heavy vehicles will produce elevated noise levels, which could disturb future residents, nearby communities, and local fauna. Limiting construction to specific hours and using noise-reducing equipment can help minimize this impact.
Land Disturbance	Site preparation and infrastructure installation will require vegetation clearing, potentially leading to habitat loss and soil erosion. Measures such as preserving existing trees where possible, replanting vegetation, and rehabilitating disturbed areas should be considered.
Water Demand and Pollution	Construction will increase the demand for water, which may place pressure on local water supply systems. There is also a risk of contamination of surface and groundwater from construction waste, fuels, and chemicals.



Negative Impact	Description
	Proper waste disposal, spill containment, and water conservation practices must be enforced.

4.2 Land Use Changes

The proposed development is expected to bring substantial changes to current land use patterns in the area. The project site, which is primarily undeveloped, will be transformed to support small-scale agricultural activities alongside residential development. While this development presents socio-economic opportunities, it will also result in notable environmental and community impacts that need to be carefully managed.

Table 5: Anticipated Land Use Changes and Impacts

Impact	Description
Loss of Open Space	The shift from a natural, open landscape to a more structured setting with agricultural plots and residential dwellings will reduce the amount of undeveloped land. This may impact local biodiversity and the natural functions of the land, such as water infiltration and habitat provision. Preserving portions of natural vegetation where possible will help minimize ecological disruption.
Increased Pressure on Local Resources	The introduction of new residents and farming activities will increase demand for local services such as water supply, sanitation, and electricity. Proper planning is essential to ensure sustainable resource use and service delivery.
Changes in Land Ownership and Use Patterns	As development progresses, the patterns of land ownership and usage may evolve, particularly where land is subdivided or allocated for residential and agricultural purposes. It is important to ensure that all land transactions are conducted transparently and in compliance with legal and land rights, to prevent disputes and protect the interests of landholders.



4.3 Biodiversity

The project site Portion 34 of Rehoboth Town and Townlands No. 302—is largely undeveloped and consists of open land with sparse natural vegetation typical of the Rehoboth area’s semi-arid environment. While the land is not classified as a biodiversity hotspot, it may still support small wildlife species such as reptiles, rodents, insects, and a variety of hardy plant species adapted to dry conditions.

Given its proximity to existing infrastructure, including auction pens and access roads, much of the site has already experienced human influence. However, the proposed subdivision and future use for small-scale agriculture and residential development may still introduce localized impacts on biodiversity.

Table 6: Key Impacts on Biodiversity

Impact	Description
Loss of Vegetation	Clearing of land for farming and housing will result in the removal of natural shrubs, grasses, and other hardy vegetation. Although vegetation is not dense, it plays a role in soil stability and supports some fauna. Efforts should be made to retain existing trees where possible and replant indigenous species post-development.
Disturbance to Small Wildlife	Increased movement, construction noise, and eventual residential activity may disturb small mammals, reptiles, and birds common in the area. While large-scale displacement is unlikely, disturbances can be minimized by phasing development and limiting unnecessary clearing.
Human-Wildlife Interaction	As people begin to live and farm on the plots, occasional encounters with snakes, jackals, or other small wildlife may occur, especially during early site clearing. Educating residents on coexisting with local wildlife and proper waste management can help reduce conflict.



CHAPTER FIVE: ROLES AND RESPONSIBILITIES

This section describes the duties and responsibilities of essential personnel involved in the daily management of activities to ensure the successful execution of the EMP.

5.1 Roles and Responsibilities

Assigning specific roles is essential for maintaining accountability in project execution. The primary stakeholders responsible for implementation include:

- a) **Environmental Compliance Officer (ECO):** Representing the Ministry of Environment, Forestry, and Tourism (MEFT) or an appointed independent environmental officer, this individual oversees environmental monitoring and auditing.
- b) **Proponent:** This refers to the project owner or manager responsible for overall project direction and decision-making.
- c) **Site Manager:** Tasked with overseeing the project's daily operations and ensuring smooth on-site management.

5.1.1 Environmental Compliance Officer (ECO)

The Environmental Compliance Officer (ECO) is responsible for overseeing environmental monitoring and auditing to ensure adherence to the Environmental Management Plan (EMP). This individual must possess sufficient environmental expertise to interpret the EMP and understand the environmental aspects relevant to the project.

The key responsibilities of the ECO include:

- Conducting monitoring and auditing activities to verify compliance with the EMP.
- Carrying out site inspections before project activities commence and at regular intervals (e.g., monthly, quarterly, or annually) throughout the project's duration. Depending on the risk level, some projects may require more frequent inspections.
- Performing unannounced spot checks and submitting compliance or non-compliance reports to the Ministry of Environment, Forestry and Tourism (MEFT) or other relevant authorities.
- Preparing reports, including Progress Reports following site inspections, Compliance Reports in cases of non-compliance, and a Rehabilitation Report upon completion of specific activities.
- Maintaining close communication with key stakeholders, such as the Site Manager and the Environmental Commissioner.



- Providing guidance on environmental management issues, incidents, or emergencies that arise during the project.
- Recommending corrective actions in response to non-compliance.
- Conducting audits and monitoring activities, which may involve investigations, structured observations, data measurement, and evaluation over time.

3.1.2 Responsibilities of the Proponent

The Proponent is responsible for the following:

- **Appointing a Site Manager (SM):** Designate an SM to manage and oversee daily operations at the site.
- **Environmental Management Coordination:** Work closely with the SM and Environmental Control Officer (ECO) to address any environmental concerns, incidents, or emergencies.
- **Compliance with the EMP:** Ensure that all site activities align with the Environmental Management Plan (EMP) at all times.
- **Awareness and Compliance:** Make sure that subcontractors and site visitors understand and adhere to the relevant EMP requirements based on their roles.
- **Communication Strategy:** Establish a clear communication framework that connects the Proponent, SM, site workers, ECO, and other key stakeholders.
- **Organisational Structure:** Develop a structured approach to:
 - Maintain clear communication channels.
 - Define a hierarchy for the efficient implementation of the EMP.
 - Prevent conflicting or contradictory instructions.
 - Ensure that all environmental instructions and official communications follow the established structure.
 - Assign EMP-related responsibilities to individuals with the necessary expertise and experience for effective execution

3.1.3 Responsibilities of the Site Manager

The Site Manager (SM) is responsible for:

- Ensuring that all teams assigned to work on-site comply with the Environmental Management Plan (EMP).



- Keeping a copy of the EMP available on-site at all times, as it may be required for inspection by regulatory authorities.
- Conducting an induction session for all staff before they start work, ensuring they understand the EMP requirements.
- Taking necessary precautions to prevent any irreversible environmental damage.
- Ensuring that all activities are carried out within the designated project zones, as indicated by site maps and boundary markers (such as pegs or tape).



Chapter Six: ENVIRONMENTAL MANAGEMENT PLAN

The Environmental Management Plan (EMP) presents a structured approach for addressing and reducing any negative environmental and social effects associated with the project throughout its various stages namely, pre-construction, construction, operation, and eventual decommissioning. Its primary goal is to enhance the positive environmental, social, and economic contributions of the project while keeping adverse effects to a minimum. This chapter serves as a detailed guide for impact mitigation, environmental monitoring, and assigning responsibilities, all in alignment with relevant environmental laws and sustainable development principles.

6.1 Purpose of the EMP

The main goals of this EMP are to:

- Recognize possible environmental impacts across all phases of the project.
- Recommend practical steps to avoid or lessen these impacts.
- Define clear roles and responsibilities for carrying out the EMP.
- Outline a monitoring system to ensure that all mitigation strategies are properly implemented.

The plan is divided according to project phases to ensure that appropriate and phase-specific actions are taken at each stage.

6.1.1 Planning Phase

During the planning phase, the project design should be thoroughly assessed for potential environmental issues, with immediate corrective actions taken if necessary. Community engagement is vital to ensure local concerns are considered and addressed. Additionally, a contingency plan must be in place to handle any unforeseen environmental or community-related issues that may arise later in the project, ensuring a proactive and inclusive approach throughout the project lifecycle.

6.1.2 Site Preparation

To effectively guide the implementation of mitigation measures, the site preparation process for the proposed development can be divided into specific stages. These stages represent key activities that require targeted environmental management actions, as outlined in



Table 7: Phases of Activities

Phase	Description
Phase 1	Construction of access roads and designated routes.
Phase 2	Clearing of the site and mobilization of construction equipment.
Phase 3	Decommissioning – This includes the removal of construction waste and unused materials, site clean-up, landscaping, and environmental rehabilitation once service installations are completed.

6.1.3 Construction and Operational Phase

To facilitate effective monitoring and management during the construction and operational stages, the EMP is organized into various themes. Each theme outlines key components, including:

- **Potential Impacts:** Identifying possible environmental consequences.
- **Environmental Management Objectives:** Setting clear goals for managing impacts.
- **Mitigation Measures/Actions:** Specifying the necessary actions to address and minimize impacts.
- **Monitoring and Compliance Indicators:** Defining the criteria for tracking progress and ensuring compliance.
- **Responsible Parties:** Assigning accountability for implementing the measures.

6.2 Impact Themes and Recommended Mitigation Actions

The EMP is organized into several themes, providing a concise reference for the recommended corrective actions during both the construction and operational phases (.These themes cover specific aspects of the project and offer a targeted approach to managing environmental, social, and operational impacts:

EMP Themes	Specific Themes
Staff Induction	• Site demarcation • Induction process • Communication protocols
Health and Safety	• General workplace safety



	• Road safety • Dust and noise control
Pollution and Waste Management	• Disposal of solid waste
Socio economic	• Wastewater management (including ablution facilities) • Oil spills • Vehicle emissions • Employment opportunities • Alcohol and drug use management • Working hours regulation • Safety and security
Rehabilitation	➤ Clean-up and restoration of the site to maintain its original or natural appeal

Section A: Staff Induction

Potential Sources of Impact

- ✓ Employment of personnel without formal contracts
- ✓ Inadequate induction processes
- ✓ Ineffective communication
- ✓ Lack of formal presentation and awareness of the Environmental Management Plan (EMP)

Impact	Objective	Mitigation Measures	Indicators for Monitoring and Compliance	Responsible Party
Recruitment	To ensure that all personnel are formally employed in accordance with the Labour Act (Act No. 11 of 2007), with clearly defined terms and conditions of employment.	All employees shall be issued with signed employment contracts specifying the nature of employment, duration, and remuneration	Copy of staff contracts	Proponent / Site Manager
Staff Induction	To ensure that all employees are adequately informed of their roles and responsibilities, and are	A formal induction session shall be conducted for all staff prior to the commencement of duties.	Induction Minutes and Attendance Register, Signed by each and every staff member	Site Manager



	familiar with the provisions of the EMP, including environmental, health, and safety requirements.	Employees operating heavy machinery or specialized equipment (e.g. trucks, loaders, jack hammers, compressors) must receive appropriate safety training and be made aware of potential operational hazards. Induction sessions shall be reviewed and repeated on a quarterly basis to reinforce key messages and address any issues of non-compliance.	Staff members appointed at a later stage should also undergo induction Quarterly minutes	
	Availability of the EMP on site for ease of reference.	Ensure that a copy of the EMP is kept on site and accessible by team leaders.	Availability of EMP on site and accessibility by team leaders.	Site Manager
	Punitive measures for staff, to ensure compliance	Adopt a disciplinary system to discipline staff for non-compliance, for offences such as littering, speeding, safety risk (both to themselves and to others), not using ablution facilities, etc.	Number of fines issued daily / per month	Site Manager
Communication	Ensure effective communication throughout the project lifespan.	Develop a communication strategy (Channel & medium of communication) All correspondence should be written and signed off by witnesses (e.g Site Manager / team leaders) The contact numbers for the Site Manager and Team Leaders must be available	Communication Strategy Letters, e-mail, Notices, Minutes List of contact numbers available on site	Site Manager



		onsite (displayed) in case of emergencies.		
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Section B: Occupational Health and Safety

Potential Sources of Impacts

- ✓ Insufficient awareness among employees or contractors regarding general health and safety risks.
- ✓ Potential safety hazards linked to the operation and handling of equipment.
- ✓ Failure to provide employees with appropriate Personal Protective Equipment (PPE).
- ✓ Non-compliance by employees with established site safety protocols.

Impact	Objective	Mitigation Measures	Indicators of Monitoring and Compliance	Responsible Party
General Occupational Health and Safety of the employees	To ensure safe working conditions and adhere to the Health and Safety Regulations, Government Notice 156/1997 (GG 1617)	Develop a Health and safety Plan Identify potential hazards to minimize potential health and safety risks Provide adequate and appropriate personal protective equipment for all workers Training on relevant aspects of occupational health and safety	Health and Safety Plan Hazard risk report and Safe work condition audit Adequate protective gear for all staff (issue register) Training schedule, attendance register, report, pictures, etc	Site Manager
Accidents and Incidents	To ensure safe working conditions	Document and report occupational injuries, illness and fatalities, including near misses. Investigate causes and take appropriate action to eliminate risks where possible. Provide adequate access to first aid and medical assistance in cases of work-related accidents or injuries.	Accidents and incidents register (including near misses) Root causes analysis report. Incident review (cause and elimination of hazard) First aid kit availability and adequacy audit report	Site Manager



Road Safety	To prevent traffic hazards / inconveniences from earth moving machinery during and construction perio	Signage for vehicles and earth moving machinery All trucks transporting materials (e.g sand / gravel) should be covered with suitable material (e.g net, tarpaulin, canvas etc)	Public Complaints / Incident report/s	Site Manager
Dust and Noise	To mitigate dust and noise impacts to both employees and the public	Adopt applicable dust suppression measures to mitigate dust impacts, Provide dust masks and ear muffs to all employees operating in a dusty or noisy environment	Dust and Noise Incident Reports Issue register	Site Manager
Fire Risk/Hazard	To mitigate fire risks	Avail sufficient fire extinguishers and train staff on how to use them. Demonstrate the use of fire extinguishers and fire hydrants.	Availability of fire extinguishers and service record Training report, attendance register, pictures, etc	Site Manager

Section C: Pollution and Waste Management

Potential Sources of Impacts:				
✓ Poor waste disposal (often considered insignificant e.g. littering, oil spills, cement mixers, wash, wastewater, etc ✓ Leaking or broken sewerage pipes ✓ Storage of unwanted waste (e.g. old / waste tyres)				
Impact	Objective	Mitigation Measures	Indicators for Monitoring and Compliance	Responsible Party
Waste water	To avoid effluent discharge into the environment	Refer to regulations on effluent disposal and recommended septic tank and drainage design Be on the look-out and repair any leaking or broken sewer pipes.	No leakage of sewer pipes	Site Manager or dedicated Plumber



Solid Waste	To prevent pollution and maintain a clean environment	Classify waste into different categories e.g. Material waste (wood, steel, corrugated iron etc), Building rubble (concrete), Garden Waste (tree stumps, branches etc), and Domestic Waste (Litter – cans, plastics, tissues etc) Ensure appropriate waste collection and removal from the site and dispose at appropriate municipal waste disposal sites.	Scattered waste, Littering and any other unsightly waste at the site (eyesore)	Site Manager / dedicated Waste Disposal Officer
	Reduce greenhouse gas (GHG) emissions from poorly maintained or malfunctioning equipment	All vehicles and equipment shall be kept in good working order and serviced regularly (in accordance with the servicing frequency of the specific machinery), in order to prevent emission of poisonous smoke etc	Vehicle servicing records Reports of smoke emissions from machinery	Site Manager
	Ensure waste oil is managed appropriately and pollution is prevented at all costs	Provide concrete bunding for fuel storage and transfer on site. The bunding should be bigger than the fuel storage tank/s to allow a bit of working space around tank/s (e.g 20% bigger than the tank/s) Use of sheeting to prevent soil contamination (e.g. during vehicle servicing) Waste oil should not be stored onsite indefinitely and should be recycled (transfer to oil recycling companies) If an oil spill occurs, collect the contaminated soil, store in	Concrete bunding at all fuel storage and handling sites Drums or containers for oil recycling and proof of oil transfer to recycling companies	Site Manager



		drums and dispose at appropriate waste disposal site (e.g. Municipal disposal site)		
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Section D: Socio-Economic

Sources of impacts:

- ✓ Unfair labour practices and unwillingness to recruit locals
- ✓ Drug and alcohol abuse

Impact Description	Objective	Mitigation Measures	Indicators for Monitoring and Compliance	Responsible Party
Employment opportunities for locals	Promote benefits to local communities	Recruit locals for unskilled labour Where possible, procure materials from local suppliers	Employee structure and proportion of local employment	Site Manager
Alcohol abuse and Drug use	Prevent alcohol and drug use at the site	Ban and warn the employees against alcohol abuse and consumption of prohibited substances e.g drugs at the site Provide awareness on the dangers and health impacts of alcohol abuse and drugs	Drunk / Misbehaving employees Monitor presence of prohibited substances	Site Manager
Security	Orientation of workers about security for both equipment and themselves	Orientate workers about security for equipment and themselves & provide contact numbers for Police and other	Proof of security orientation and emergency contact numbers	Site Manager



		emergency services e.g. Ambulance		
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6.3 What is Rehabilitation

Rehabilitation refers to the process of restoring and taking all necessary steps to reduce, minimize, or mitigate the damage caused by development activities. The goal is to make the land suitable for future use or to enhance its appearance so that it does not become an eyesore. This process may include activities such as refilling excavated pits with overburden, re-vegetating the land, removing unwanted infrastructure, and cleaning up pollution. In essence, rehabilitation involves repairing the environment after it has been disturbed.

6.3.1 Designing a Rehabilitation Plan

A rehabilitation plan outlines a series of actions aimed at mitigating the negative impacts associated with a particular development. Effective rehabilitation requires proactive planning and the integration of these activities throughout the entire lifecycle of a project. This means that rehabilitation efforts should begin at the very start of the project. The environmental features of the project area are crucial in shaping an effective rehabilitation plan, as they determine the most appropriate restoration methods to apply.

Section E: Rehabilitation

Sources of impacts:

- ✓ Landscape alteration due to lack of rehabilitation
- ✓ Loss of topsoil due to lack of restoration measures
- ✓ Construction pits may become a death trap for animals
- ✓ Waste (Left over of broken equipment, material offcuts etc)

Impact Description	Objective	Mitigation Measures	Indicators for Monitoring and Compliance	Responsible Party
Habitat alteration and permanent environmental scars of the and construction operations	To minimize habitat alteration and environmental scars	Limit environmental damages e.g. the overburden may be collected and piled and used for re-filling of pits Plant indigenous trees to fill the gaps for trees removed during construction	Re-filling of and construction pits with the overburden. Indigenous Trees planted	Site Manager



	Landscaping	Landscaping – refers to re-shaping man-made landforms to blend in with the environment and in order to limit the damage to the natural landscape	Landscaping efforts and modification towards natural state	Site Manager
Waste discarded all over the place	Clean up	Remove any foreign objects (including infrastructure), that is not needed at site upon project completion	Clean-up after project closure	Site Manager



CHAPTER SEVEN: CONCLUSION

The management actions included in this report aim to assist in the avoidance, management, and/or mitigation of potential impacts on the environment that may result from the proposed activities.

Arising from the analysis by the consultants, the proposed project is going to create permanent land cover/use change on the proposed project site. The document has thus provided adequate mitigation measures for the identified impacts for sustainable land development because land must develop, but with land development, there should not be environmental degradation, thus the EMP provides for the sustainable land development for the proposed development.



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