Tortoise Environmental Consultants(TEC)
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ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN (ESMP)

FOR THE PROPOSED SAND MINING NEAR MURURANI SETTLEMENT, KAVANGO WEST REGION

Prepared for:
Edstorm Trading CC

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DOCUMENT INFORMATION		
Title	Environmental and Social Management Plan (ESMP) Report - For Proposed Sand Mining from Existing Borrow Pit near Mururani settlement, Kavango West Region	
ECC Application Reference number	**APP- 006714**	
Listed Activity	**Activity 3: Mining and Quarrying Activities:** 3.2 The Other forms of mining or extraction of any natural resources whether regulated by law or not	
Location	Mururani, Kavango West Region	
Proponent	Edstorm Trading CC CC/2020/07955 P. O. Box 1156, Ondangwa Contact person: Mr. Thim Uusiku	
	Signature	**Date**
		25th November 2025
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1 EAP – Environmental Assessment Practitioner

ACRONYMS

DEA	Department of Environmental Affairs
DSR	Draft Scoping Report
EA	Environmental Assessment
EAP	Environmental Assessment Practitioner
ECC	Environmental Clearance Certificate
ECO	Environmental Compliance Officer
EIA	Environmental Impact Assessment
EIF	Environmental Investment Fund
EMA	Environmental Management Act (No. 7 of 2007)
EMP	Environmental Management Plan
ESR	Environmental Scoping Report
I&APs	Interested and Affected Parties
MEFT	Ministry of Environment, Forestry and Tourism
SM	Site Manager
TEC	Tortoise Environmental Consultant

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1. INTRODUCTION

1.1. Project Background and Location

The proposed project involves the harvesting of sand from an existing borrow pit near Mururani to support the construction of a new pipeline and appurtenances at Mururani Settlement.

The location of the borrow pit is shown in figure 1.1 below.

Table 1-1: GPS Coordinates

Latitude	Longitude
-18.769722	**18.950000**

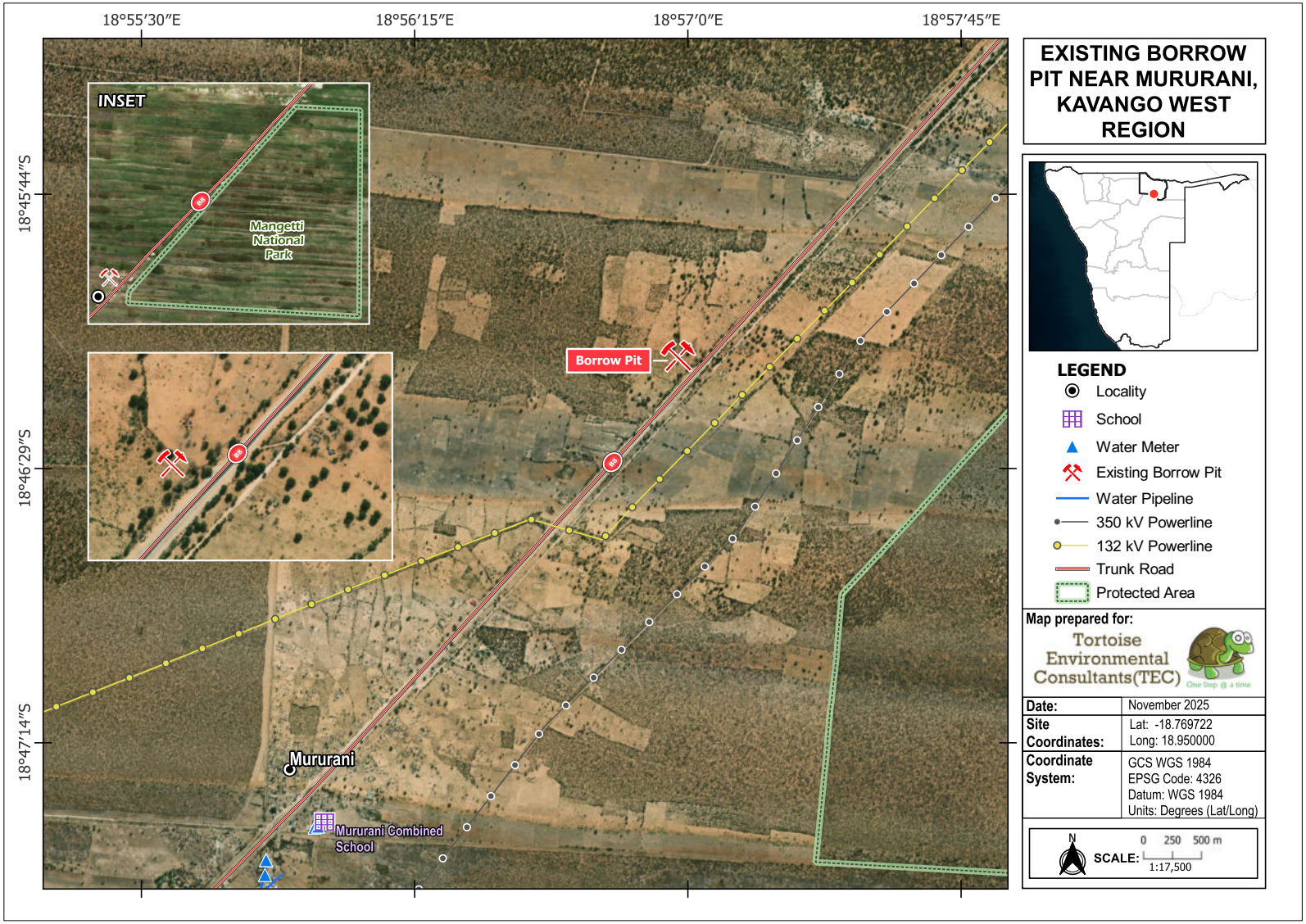

Figure 1-1: Locality map

2. PROJECT INFORMATION

2.1 Project description

The proposed sand mining will take place in an existing borrow pit (figure 2.1).

Figure 2-1: Project site

2.2 Estimated Sand Volume

Volume of Sand Required: 60 Tractor Loads x 250 cubic per load: 60 x 250=15,000 cubic.

Figure 2-2:The Tractor that will be used to transport the sand

3. ENVIRONMENTAL MANAGEMENT PLAN CONTEXT

This document constitutes the Environmental Management Plan (EMP), for the proposed sand mining.

3.1 EMP Requirements

The Environmental Management Act (also referred to as the EMA), stipulates that for each developmental project, which is listed under the EIA regulations, an Environmental Impact Assessment (EIA) should be conducted.

The EMP should conform to the provisions of the Environmental Management Act (EMA), Act No. 7 of 2007 and EIA regulations of 2012 (Government Notice: 30).

The EIA Regulations defines a '*Management Plan*' as:

"…a plan that describes how activities that may have significant impacts on the environment are to be mitigated controlled and monitored."

Table 3-1: EMP Requirements as outlined in Section 8 of the EIA Regulations

Requirement
(j) a draft management plan, which includes – *(aa) information on any proposed management, mitigation, protection or remedial measures to be undertaken to address the effects on the environment that have been identified including objectives in respect of the rehabilitation of the environment and closure;* *(bb) as far as is reasonably practicable, measures to rehabilitate the environment affected by the undertaking of the activity or specified activity to its natural or predetermined state or to a land use which conforms to the generally accepted principle of sustainable development; and* *(cc) a description of the manner in which the applicant intends to modify, remedy, control or stop any action, activity or process which causes pollution or environmental degradation remedy the cause of pollution or degradation and migration of pollutants.*

3.2 What is an EMP?

The Environmental Management Plan (EMP) is a tool used to mitigate potential environmental risks associated with the proposed project/activity and provides a risk management strategy and logical framework for the implementation of the activities associated with the proposed project.

The EMP recommends mitigation measures in order to ensure that the proposed activities are conducted in an environmentally friendly manner and in accordance with the provisions of the Environmental Management Act and EIA regulations.

Furthermore, the EMP outlines specific roles and responsibilities for role-players against which they can be evaluated, and non-compliance is punishable.

3.3 EMP Objective

The objective of the EMP is to prevent/minimize (where possible), unacceptable and adverse environmental, social or economic impacts that may arise from the proposed development. Overall, the EMP aims to minimise negative impact/s (real, potential or perceived) that may result from the proposed sand mining.

The objective of the EMP is to prevent / minimize, unacceptable and adverse environmental, social or economic impacts identified during the EIA process. Overall, the EMP aims to minimise negative impact/s (real, potential or perceived) that may result from the proposed activities, throughout the project lifespan.

The aim of the EMP is to ensure that the proposed activities are conducted in accordance with the following:

i. Environmental Management Act (No. 7 of 2007),
ii. EIA regulations of 2012 (GN: 30), and
iii. International standards, and
iv. Best environmental practices (benchmarks)

3.4 EMP Scope

The EMP does not only focus, and it is not limited to the proposed sand mining. It includes the bigger picture and serves as the guiding tool to protecting the natural, bio-physical and socio-economic environment on both the specific site and the surrounding area. The bigger picture is important because some impacts may not be confined to the project site.

3.5 Possible adjustments to the EMP

The EMP is an open-ended document and may be considered inconclusive. In other words, the EMP should allow room for adjustments if new information becomes available at a later stage, in which new/additional mitigation measures may become necessary.

The necessity of possible adjustments to the EMP at a later stage may be attributed to:

a) Lack of information at the time of drafting the initial EMP,
b) Evolution or addition of new activities, or
c) Unintended omission of potential impacts during the initial EIA scoping exercise and development of the initial EMP.
d) Development of industry best practices.

This implies that, in addition to the information contained herein, any other relevant information that may surface during the establishment and operations, through internal monitoring or auditing by the Environmental Compliance Officers (ECOs), can be added to the EMP (evolution of activities), and such changes or inclusions will be binding to the proponent and all contractors / sub-contractors.

3.6 Implementation Framework and Accountability to the EMP

For effective implementation of the EMP, the Institutional roles are presented below. However, the institutional framework, as well as the specific roles and responsibilities are defined and broken down in Sections 4 and 5 respectively.

Table 3-2: Role players, Institutional Framework

Role-player	Company / Institution	Role
Proponent	Edstorm Trading CC	Compliance to the EMP
Environmental Consultant	Tortoise Environmental Consultants (TEC)	Development of the EMP
Environmental Compliance Officer/s (ECO)	Ministry of Environment, Forestry and Tourism – Department of Environmental Affairs (DEA)	Monitoring Compliance with EMP: ➢ Un-announced spot checks, ➢ Corrective measures, warnings, penalties/fines, license suspension, etc
Public	Interested and affected parties (I&APs)	Report to the ECO, any activity of environmental concern (e.g. Pollution, safety risks, etc.)

4. ROLES AND RESPONSIBILITIES

This section outlines the roles and responsibilities of the key personnel responsible for the day-to-day management of activities to ensure effective implementation of the EMP.

4.1 Roles and Responsibilities

To ensure accountability, it is necessary to assign responsibilities. The key role-players for project implementation are;

a) The **Environmental Compliance Officer (ECO)** representing the Ministry of Environment, Forestry and Tourism (MEFT), or an appointed independent environmental officer, who is responsible for monitoring and auditing.

b) **The Proponent**: Owner / Project Manager.

c) **The Site Manager** the person responsible for the day-to-day management of the project.

4.1.1 The Environmental Compliance Officer (ECO):

The ECO refers to the party responsible for the environmental monitoring and auditing to ensure that the provisions of the EMP are complied with.

The ECO shall have adequate environmental knowledge to understand and interpret the EMP and pertaining environmental aspects associated with the project. The specific tasks of the ECO are as follows:

- To undertake all monitoring and auditing activities in-order to ensure compliance with the EMP.
- Conduct site inspection prior to the commencement of activities; and at reasonable intervals (e.g. every month, quarterly or annually), throughout the duration of the project. Depending on the risks, some projects may be inspected more frequently (e.g. every month).
- Conduct regular inspections (unannounced spot checks) and shall submit compliance or non-compliance reports to the respective authorities (MEFT or any other relevant authority).
- Compile Progress Reports immediately after site inspections, Compliance Reports, pertaining to any non-compliance incident/s, and a Rehabilitation Report following the conclusion a specific activity.
- The ECO shall liaise closely with all key stakeholders i.e. the Site Manager and the Environmental Commissioner.
- Shall provide guidance on any environmental management issues, incidents or emergencies that may arise throughout the project lifespan.
- Shall assist in providing recommendations for remedial action in the event of non-compliance.
- Auditing or monitoring activities may involve investigation, as well as structured observation, measurement, and evaluation of environmental data over a period of time.

4.1.2 The Proponent:

The specific responsibilities of the Proponent are as follows:

- Appoint a Project Manager (PM) to oversee the daily onsite activities.
- Liaise closely with the PM and ECO on any environmental management issues, incidents or emergencies.
- Ensure that all activities on and around the site are conducted in accordance with the requirements of the EMP at all times.
- Ensure that all sub-contractors and visitors to the site are conversant with the requirement of the EMP, relevant to their roles on site.
- Shall develop a **communication strategy** between The Proponent, Site Manager, workers, the ECO and any other relevant stakeholder.
- Shall develop an **organisational structure** to ensure that:
  - There are clear channels of communication;
  - There is an organisational hierarchy for effective implementation of the EMP; and
  - Conflicting or contradictory instructions are eliminated;
  - Ensure that all instructions and official communications regarding environmental matters shall follow the organisational structure as determined
  - Ensure that that EMP requirements are assigned to specific people / positions with the capacity and experience required for implementation.

4.1.3 The Site Manager:

The **Site Manager (SM)** should:

- Ensure that each team recruited to work at the sites, adheres to the EMP;
- Ensure that a **copy of the EMP is kept on site at all times and as it may be requested by authorities conducting spot checks at any time**.
- Ensure that all staff attend an induction session before the commencement of any work on site and that they are adequately informed of the requirements of the EMP;
- Shall take special care to prevent irreversible damage to the environment;
- Ensure that activities are within the boundaries of the proposed zones as specified in the Site Map and boundary markings (visible pegs, tape etc).
- Accident/ Incident reporting to Proponent within 24 hours of occurrence
- Ensure that staff is controlled through the implementation of appropriate security measures,

4.2 Instructions

All instructions and official communications shall follow the organizational structure as determined by the proponent. Based on the adopted structure, it is essential that the responsibilities outlined be assigned to specific parties with adequate capacity and experience required to implement the EMP.

4.3 Disciplinary Actions

The EMP is a legally binding document. Non-compliance with the EMP may result in disciplinary action being taken against the Proponent. Such actions may take the form of;

- Financial penalties, legal action, fines, and/ or Suspension of work.

The disciplinary actions shall be determined according to the nature and extend of the non-compliance, and exact penalties are to be weighed against the severity of the incident.

5. POTENTIAL IMPACTS AND MITIGATION MEASURES

5.1 Impact Themes and Recommended Mitigation Measures

The EMP has been categorised into different themes, which serve as a quick guide to the recommended EMP remedial actions during the operation stages (Table 5.1 to 5.7).

EMP Themes	Specific Aspects
A – Socio-economic Impacts	Access
	Employment
	Local economy
B – Staff induction	EMP availability
	Staff induction
	Recruitment
C – Health and Safety	General safety at workplace
	Alcohol abuse and Drug use
	Fire Risk / Hazard
D – Pollution and Waste Management	Wastewater
	Ablution facilities
	Solid Waste Disposal
	Oil Spills
E – Excavation works	Excavation activities
	Access road
	Burrow pit
	Site demarcation
	General notice board
F – Community Health and Safety	Exposure of young children to alcohol and drug use
	Teenage pregnancies
	HIV / AIDS
G – Cultural Heritage	Heritage resources / artefacts
H – Rehabilitation	Clean-up and maintain natural / original appeal

SECTION A: SOCIO – ECONOMIC

Table 5-1: Identified socio-economic impacts

Potential Impacts:

- ✓ Improved access to essential services
- ✓ New employment opportunities (both during construction and operation of the project)
- ✓ Rural development

Aspect	Objective	Measures to enhance positive impacts	Indicators for Monitoring and Compliance	Responsible Party
Employment	Create employment opportunities	• Ensure recruitment of locals during operation	• Employment records (contracts)	Proponent / Contractor
Local economy	Opportunity for new value chains	• Rehabilitation of the burrow pit to potential use for agricultural purposes (livestock, aquaculture, tree planting)	• Income levels and livelihood improvements	Proponent / Local Authority

SECTION B: STAFF INDUCTION

Table 5-2: Mitigation measures pertaining to staff Recruitment and Induction

Potential Sources of Impacts:

- ✓ No formal presentation of the EMP and employees are not aware of the content and risks associated with the activities / actions
- ✓ Lack of adequate induction to inform the workers about the Do's and Don'ts
- ✓ Employees working without employment contracts (recipe for labour disputes)

Aspect	Objective	Mitigation Measures	Indicators for Monitoring and Compliance	Responsible Party
EMP availability	Availability of the EMP on site for ease of reference	• Ensure that a copy of the EMP is kept on site and accessible to team leaders	• Availability of EMP on site and accessibility to team leaders	Site Manager
Staff Induction	To ensure that all staff / employees are conversant with the requirements of the EMP	• Induction for all staff / employees on the provisions of the EMP before work commencement. • Staff members appointed at a later stage should also undergo induction	• Induction Minutes and Attendance Register, Signed by each staff member • Quarterly minutes	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
	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 emergency services e.g. Ambulance	• Proof of security orientation and emergency contact numbers	Site Manager

Recruitment	• To ensure that all workers have employment contracts (Labour Act No. 11 of 2007) • To ensure adherence to Labour Act No. 11 of 2007 during all phases of the project	• Formalize recruitment of all staff with Contracts, stating nature of employment, duration and remuneration to protect both parties and to avoid labour disputes later.	• Copy of staff contracts	Proponent / Site Manager

SECTION C: OCCUPATIONAL HEALTH AND SAFETY

Table 5-3: Mitigation measures pertaining to Health and Safety

Potential Sources of Impacts:

- ✓ Inadequate awareness of employees or contractors on general health and safety risks
- ✓ Safety hazards associated with the equipment handling
- ✓ Employees not receiving the correct Personal Protective Equipment (PPE)
- ✓ Employees not adhering to safety rules implemented at the site
- ✓ Inadequate staff accommodation

Aspect	Objective	Mitigation Measures	Indicators for Monitoring and Compliance	Responsible Party
General Occupational Health and Safety	To ensure safe working conditions per Health and Safety Regulations, Government Notice 156/1997 (GG 1617)	• Provide adequate and appropriate personal protective equipment for all workers • Training on relevant aspects of occupational health and safety.	• Adequate protective gear for all staff (issue register) • Training schedule, attendance register, report, pictures, etc	Site Manager
Staff Accommodation	To ensure adequate and safe staff accommodation	• Provide adequate housing and safety (including protection against insects e.g mosquitos)	• Adequate housing	Site Manager
Alcohol abuse and Drug use	Prevent alcohol and drug use at the project site	• Warn employees against alcohol abuse and use of prohibited substances e.g drugs.	• Drunk / Misbehaving employees • Monitor presence of prohibited substances.	Site Manager
Fire Risk / Hazard	To mitigate fire risk	• 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 D: POLLUTION AND WASTE MANAGEMENT

Table 5-4: Mitigation measures pertaining to Waste Management

Potential Sources of Impacts: ✓ Poor waste disposal (often considered insignificant e.g. littering, oil spills, wash, wastewater, etc ✓ Leaking or broken sewerage pipes ✓ Storage of unwanted waste (e.g. old / waste tyres)				
Aspect	**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 (regardless of how small it may be perceived)	• No leakage of sewer pipes	Site Manager or dedicated Plumber
Ablution facilities	• To avoid open defecation, environmental pollution and washing of faecal waste into water streams	• Recommend Flushing toilets with provision of a containerized septic tank, honey sucked for disposal at approved oxidation ponds, or • Adequate pit latrines: Ventilated (closed air-vent), slab (removable), toilet pot (closed).	• Ablution facilities (Flushing toilets) • Containerised septic tank	Site Manager
Solid Waste	• To prevent pollution and maintain a clean environment	• Adequate solid waste management (contain – drums / bins, sort, burn combustible materials and recycle non-combustible materials). • 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

Oil Spills	• Ensure waste oil is managed appropriately and pollution is prevented at all costs	• Build a concrete bunding around fuel tanks that is at least 20% larger than the tanks to allow safe working space and prevent spills from spreading. • 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 drums and dispose at appropriate waste disposal site (e.g. Municipal disposal site).	• 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

SECTION E: EXCAVATION WORKS

Table 5-5: Mitigation measures pertaining to excavation works and burrow pits

Sources of impacts:

- ✓ Loss of top fertile soil
- ✓ Dust and noise
- ✓ Risk of people and animals falling into borrow pits and drowning (if it collects water)

Aspect	Objective	Mitigation Measures	Indicators for Monitoring and Compliance	Responsible Party
Excavation activities	**To prevent loss of top fertile soil**	• Develop and implement excavation procedure for topsoil soil trimming and stockpile	• Overburden for possible rehabilitation	Site Manager
	Dust and noise	• Adopt applicable dust suppression measures. • Provide dust masks and earmuffs to all employees operating in a dusty or noisy environment. • Adherence to site standard/safe operating procedure (cover trucks when transporting sand) • Prevent abnormal noise from earthmoving machinery *(below the recommended noise levels of - 85dB (A)).* • Alert the community and public of noisy undertakings prior (e.g blasting).	• Dust fallout and dust chemical analysis • Use of respirable dust samplers, • Community complaints	Site manager

Access Roads	**Prevent driving all over the place**	• Access roads are established already • New roads may only be established if extremely necessary (An amendment to the EMP must be done) • Access roads should be repaired and maintained at acceptable standards • All driving must strictly be on access roads	• Car tracks and access roads established	Site Manager
Borrow pit	**Prevent risk of people and livestock falling into the pit**	• Fence off the borrow pit and put a notice board to warn the community against entering. • Smoothen the borrow pit edges to ensure that the angles are not steep sloped, but rather gentle sloped at less than < 30° slope angles. • Borrow pit edges should be gentle so that there is no tipping point, where people or livestock can fall in.	• Fenced off borrow pits	Site manager
Site demarcation	**Contain all project activities within the site boundaries**	• The burrow pit must be clearly demarcated by means of pegs/markers at all corners of the site and along its boundaries (where practical).	• Site Demarcation	Site Manager
General notice board	**To notify and warn the public of the project activities**	• A general notice board is on site, and must be well maintained	• Notice Board – Visible and Clear	Site Manager

SECTION F: COMMUNITY HEALTH AND SAFETY

Table 5-6: Mitigation measures pertaining to Community health and safety

Sources of impacts:

- ✓ Lack of awareness on HIV-AIDS
- ✓ Teenage pregnancies
- ✓ Exposure to alcohol and drug use

Aspect	Objective	Mitigation Measures	Indicators for Monitoring and Compliance	Responsible Party
Exposure to alcohol and Drug use	Prevent negative influence of workers on children regarding alcohol abuse and drug use.	• Educate workers on appropriate behavior in local communities. • Prohibit workers from supplying or influencing minors with substances.	• Reports or complaints from community or schools	Site Manager
Teenage pregnancies	To prevent sexual exposure of young girls to workers	• Conduct sexual health awareness (workers and the community) • Discourage pursuing young girls by workers	• Awareness report, attendance register, pictures, etc	Site Manager
HIV / AIDS	Provide HIV / AIDS awareness to employees	• Provide HIV / AIDS awareness at induction • Avail Condoms (e.g in toilets)	• Availability of condoms at and construction site	Site Manager

SECTION G: CULTURAL HERITAGE

Table 5-7: Mitigation measures pertaining to Cultural Heritage impacts

Sources of impacts: ✓ Disregard of Cultural Heritage and artefacts				
Aspect	**Objective**	**Mitigation Measures**	**Indicators for Monitoring and Compliance**	**Responsible Party**
Heritage Resources / artefacts	Reduce the impacts of and construction and associated earthworks on heritage resources / artefacts	• Heritage remains or artefacts discovered on site must be reported to the National Museum (+264 61 276800) or the National Forensic Laboratory (+264 61 240461) • No artefacts must be removed or be interfered with prior to authorisation from the Namibian National Heritage Council (NHC) • Recovery of heritage remains or artefacts discovered and removal thereof should be directed by the National Museum	Sighting report/s of heritage resources / artefacts	Site Manager

6. REHABILITATION

6.1 Importance of Rehabilitation

Socio-economic development is very important for our livelihood and provides services, income and employment opportunities, and hence activities such as crushers are vital and necessary for development.

However, such developmental activities should be conducted in a thoughtful and forward-looking manner. Therefore, to ensure that the land remains valuable for other land uses in the future, rehabilitation should be part and parcel of such developmental activity right from the beginning and throughout the project lifespan.

6.2 What is Rehabilitation?

Rehabilitation is the process of repairing and taking all the necessary actions to limit, minimize and mitigate the damage caused by the developmental activity, in-order to make the land suitable for other uses or to simply beautify the affected area (so that it does not become an eyesore).

Rehabilitation can also be referred to as the measures taken to repair damaged environments (example refilling of excavated pits with the overburden, re-vegetating, removal of unwanted infrastructure, cleaning up pollution etc.).

6.3 Designing a Rehabilitation Plan

A rehabilitation plan refers to a set of steps or measures to be taken in-order to ensure that negative impacts associated with the development at hand are mitigated. This however requires prior planning and integration of rehabilitation activities throughout the project lifespan. Meaning, rehabilitation measures should be taken right from the beginning of the project.

The environmental characteristics of an area where a project is located plays a vital role in designing a rehabilitation plan.

6.4 Conclusion

Construction activities should be undertaken in a responsible and environmentally friendly manner. Although balancing the demands of development and nature is not always clear cut, the importance of minimal disturbance to the natural environment is of utmost importance to safeguard the environment

SECTION H: REHABILITATION

Table 6-1: Potential impacts and Mitigation measures pertaining to Rehabilitation, animal exposure and closure

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

7. ENVIRONMENTAL PERFOMANCE MONITORING

7.1 Environmental Performance Monitoring Plan - Overview

The purpose of this Environmental Performance Monitoring Plan is to ensure that the operational activities of the feedlot are conducted in compliance with the Environmental Management Plan (EMP), relevant environmental legislation, and best environmental practices.

Objectives:

- To ensure compliance with the EMP, Environmental Clearance Certificate (ECC), and applicable regulations.
- To assess the effectiveness of mitigation measures implemented.
- To ensure that environmental impacts are identified and managed proactively.
- To maintain accurate records for reporting and auditing purposes.

7.2 Reporting and Documentation

Bi-annual Reports will be compiled by the ECO or an appointed consultant and submitted to the Ministry of Environment, Forestry and Tourism (MEFT).

The report will include:

- Summary of monitoring results.
- Non-compliance incidents and corrective measures taken.
- Photographic evidence and data logs.
- Recommendations for improvement.

All monitoring data and reports will be stored on-site and made available during audits or inspections.

7.3 Auditing and Review

Internal audits will be conducted annually to assess the EMP implementation. The Environmental Monitoring Plan will be reviewed and updated as needed, based on audit findings, regulatory changes, or operational adjustments.

8. CONCLUSION

8.1 EMP requirements and Procedures

The aim of the EMP is to ensure legal compliance to prevent environmental fatal flaws. Various best practice and mitigation measures have been identified to avoid and reduce effects as far as reasonably practicable across the proposed project, as well as ensure the environment is protected and unforeseen effects are avoided.

On condition that mitigation measures specified in this EMP are fully implemented, an Environmental Clearance Certificate (ECC) is recommended.

However, Non-compliance is punishable.

The key role-players are defined under section 4 should:

- ***Read*** the ESMP (particularly the Project Manager) and ensure that they are fully conversant with provisions of the EMP,
- If need be, ***Ask for clarity*** from the Environmental Assessment Practitioner (EAP), Environmental Compliance Officer (ECO) or relevant authority,
- Ensure implementation of the recommended mitigation measures, and
- Communicate defaults / challenges to the ECO as soon as possible.

The ECO should monitor (conduct periodic and unannounced EMP audits) in-order to ensure compliance against the recommended mitigation measures.

8.2 Compliance to the EMP

Once approved by the Environmental Commissioner, EMP become binding to the proponent, and all contractors / sub-contractors. This implies that each and every entity that may have any kind of engagement or involved in / with the proposed project activities ought to familiarise themselves with the mitigations measures as outlined in the ESMP, as these as part of the license conditions.

REFERENCES

Ministry of Environment and Tourism. (2008). *Draft Procedures and Guideline for Environmental Impact Assessment (EIA) and Environmental Management Plan (EMP)* . Widnhoek: Government of Namibia.